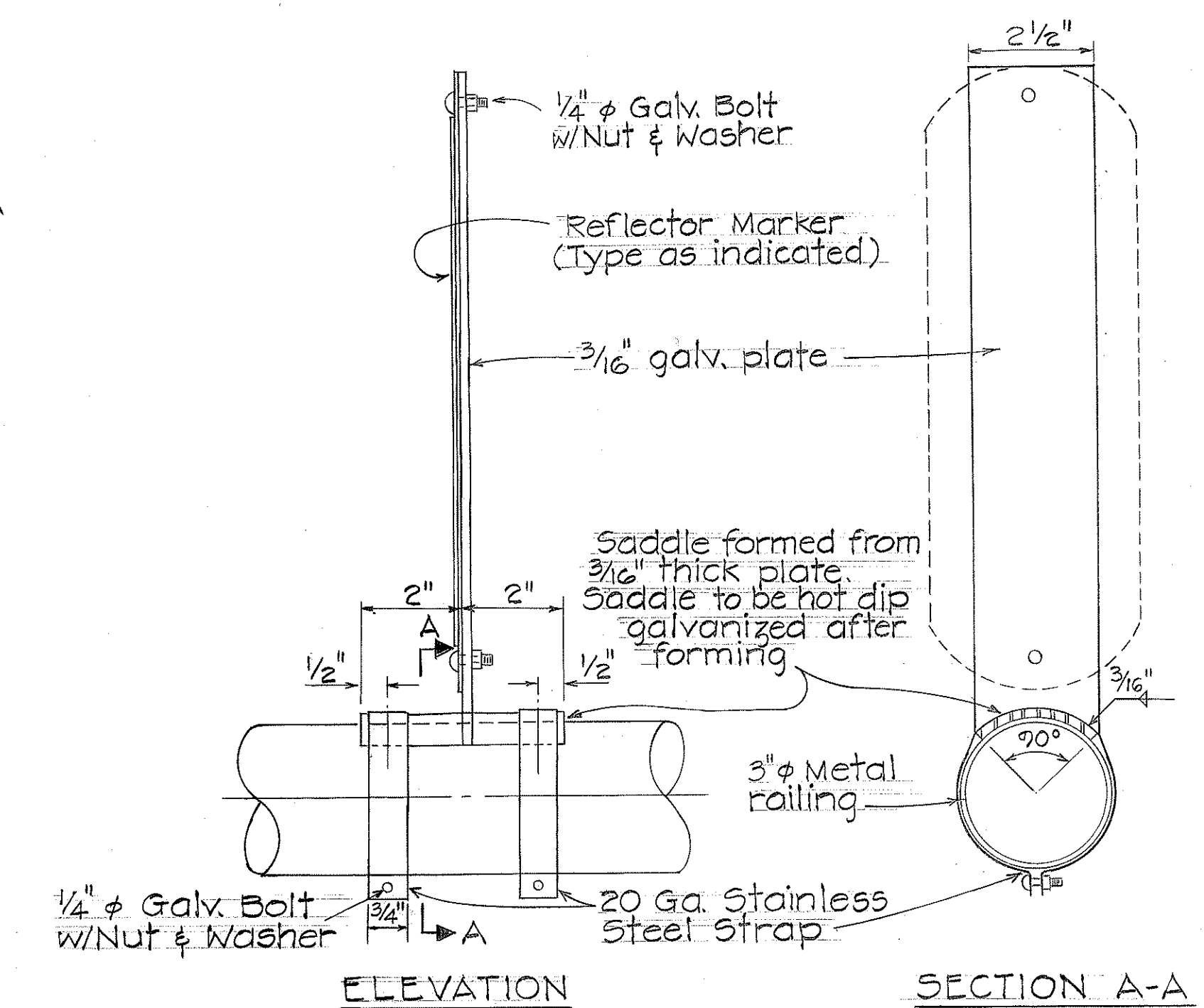
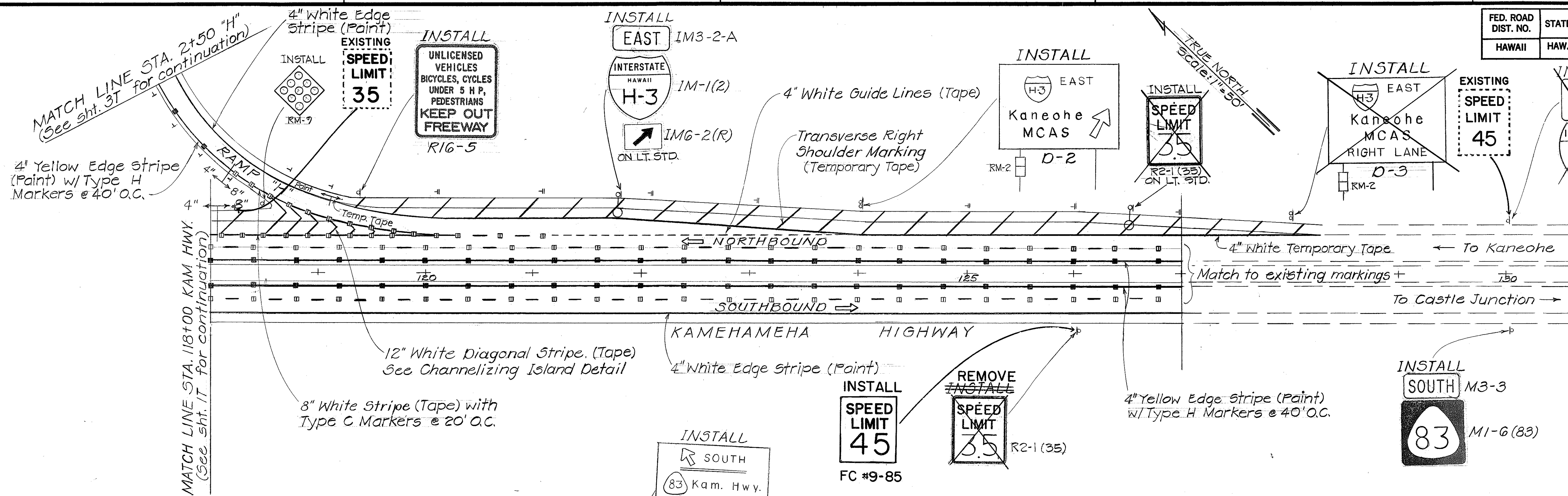


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 242 | 328 |

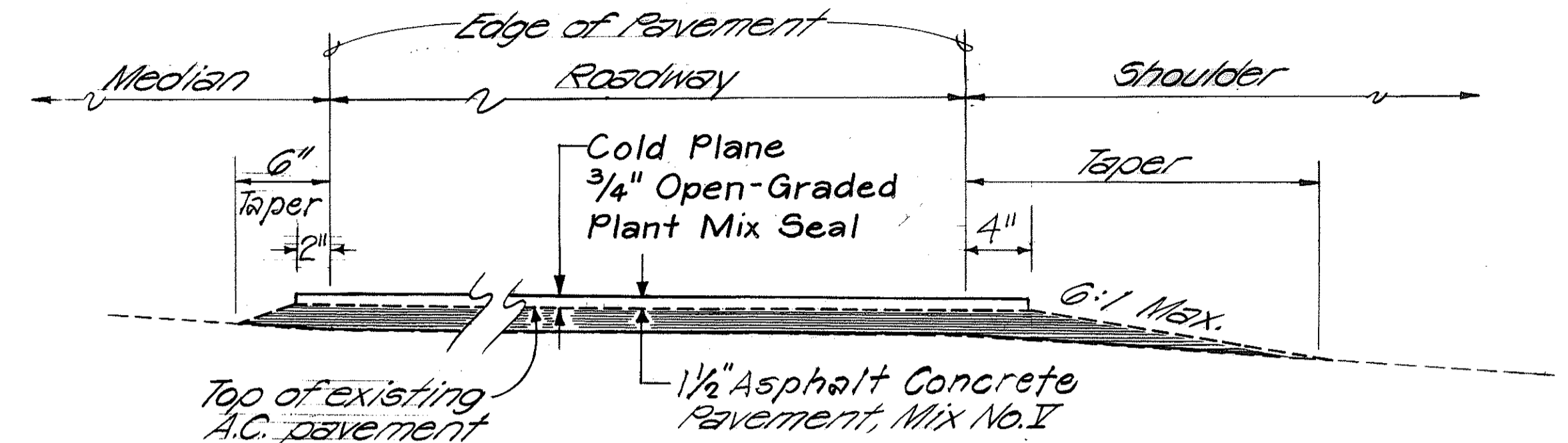
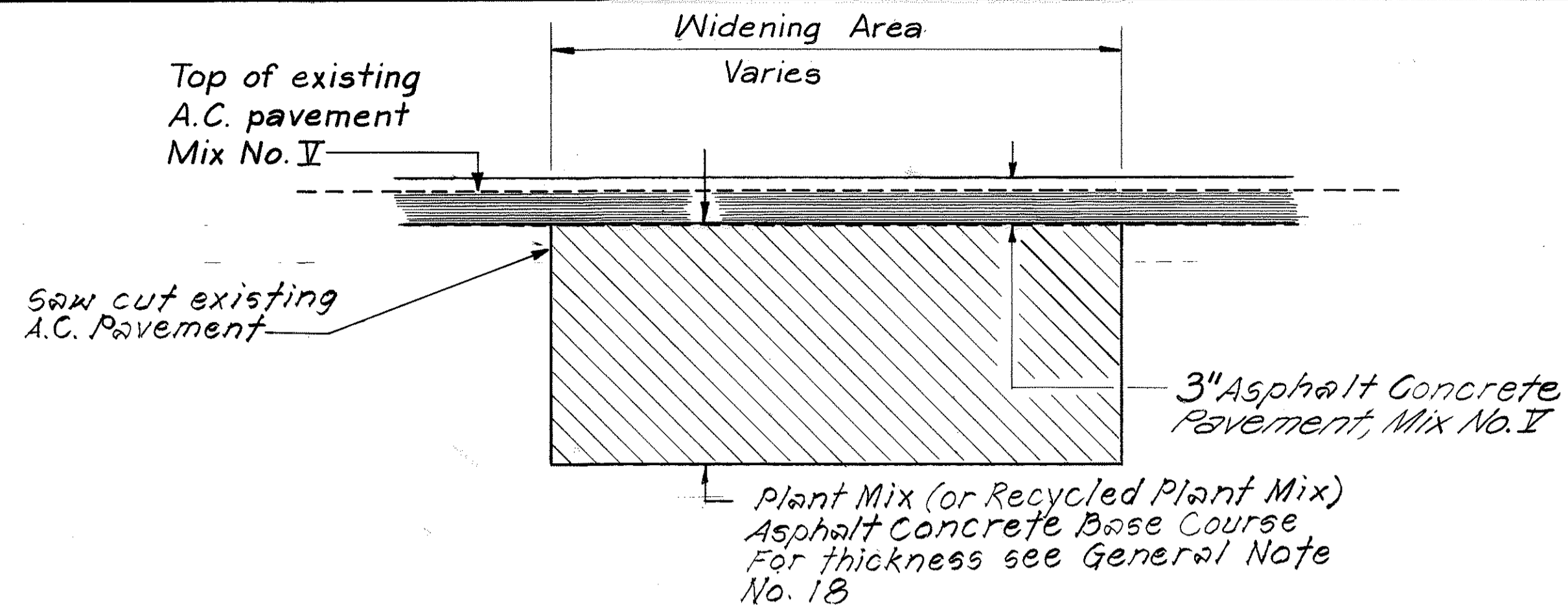


TYPICAL DETAIL - REFLECTOR MARKER MOUNTED ON BRIDGE RAILING
Not to Scale

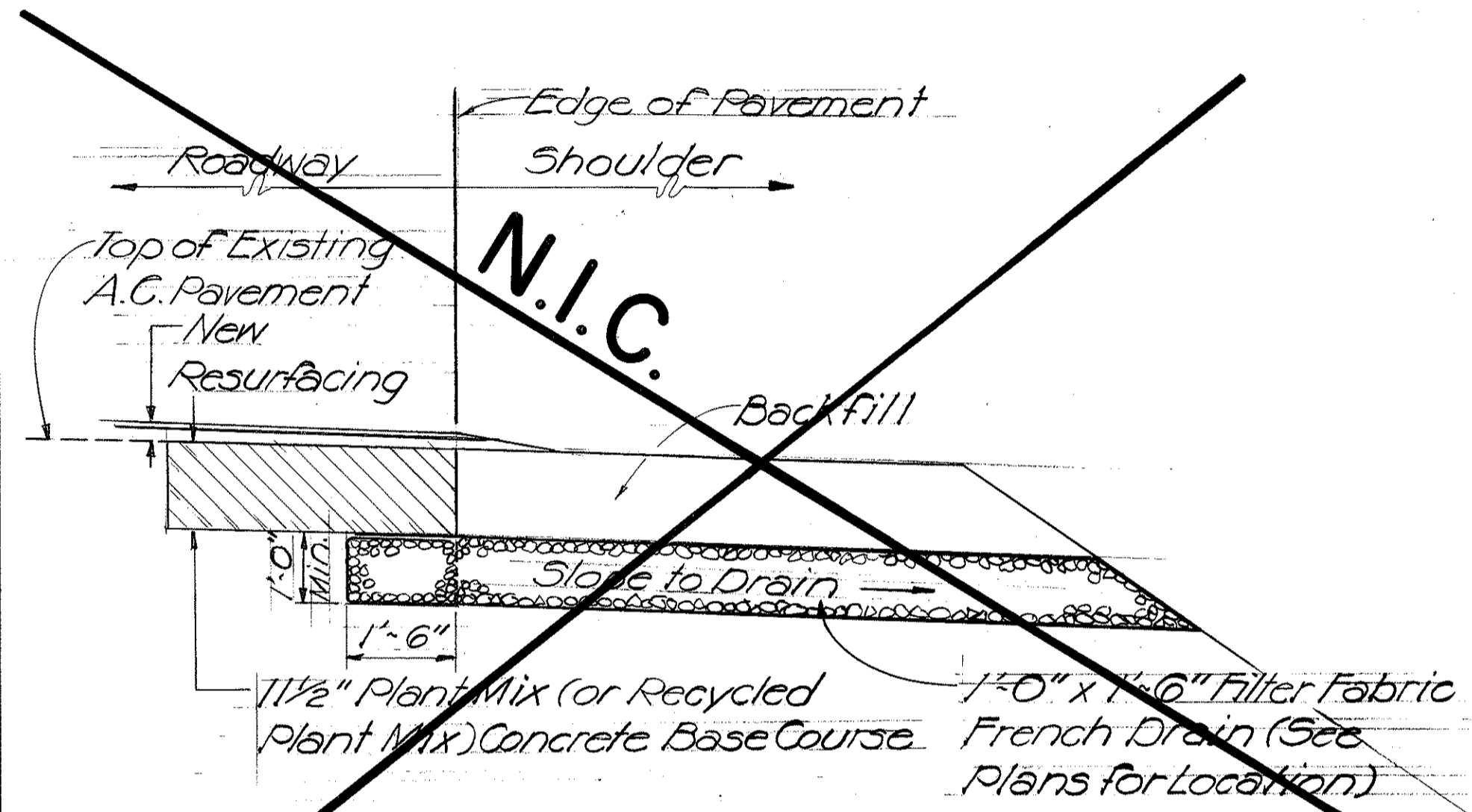
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
TRAFFIC SIGNS AND PAVEMENT MARKINGS
HALEKOU INTERCHANGE
F.A.I. PROJ. I-H3-1(24):11
SCALE: As Noted DATE: SEPT. 1982
SHEET No. 27 OF 28 SHEETS

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

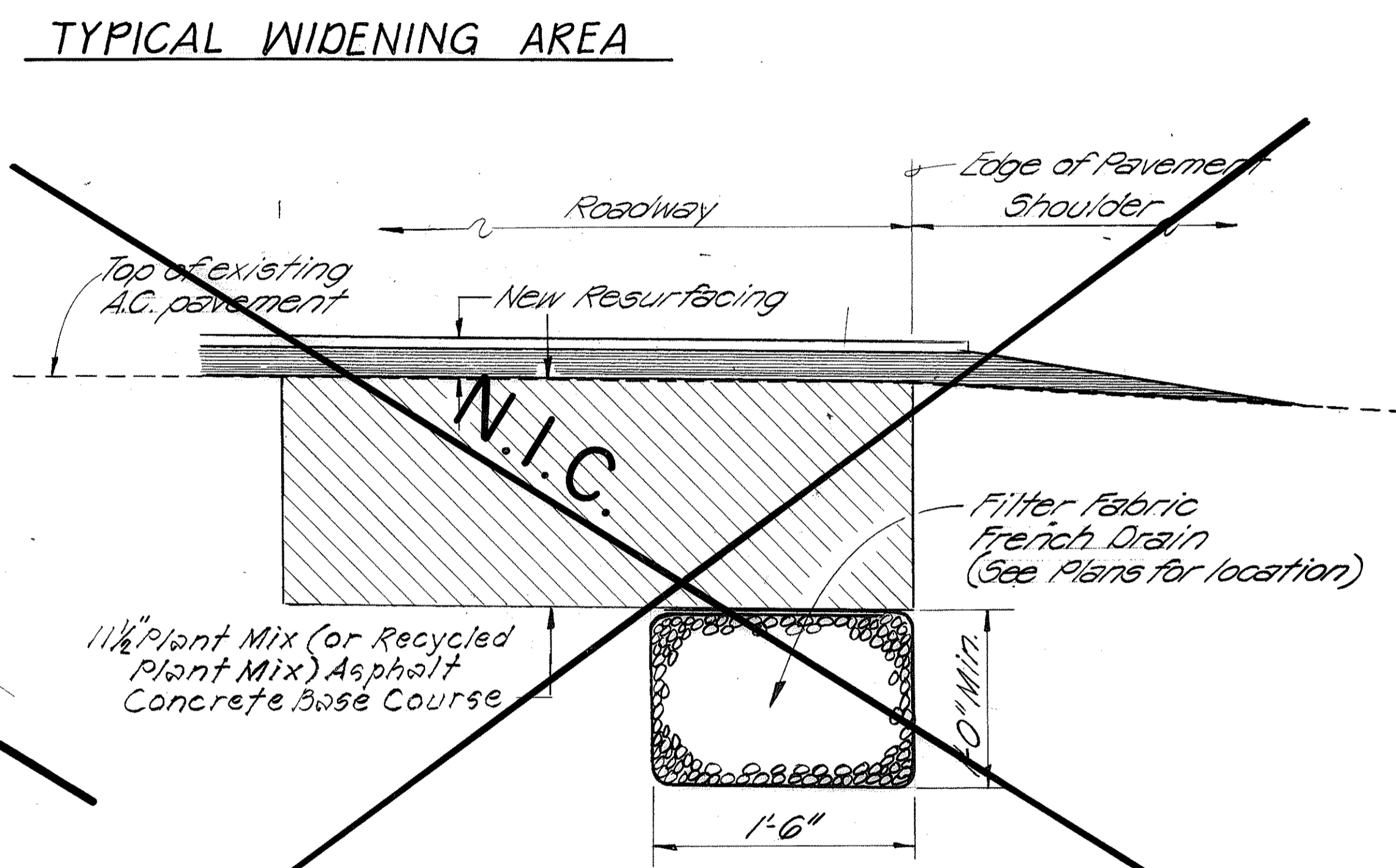
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-IR-H3-1(24)-11 | 1989 | C.0242S-1 | 328 |



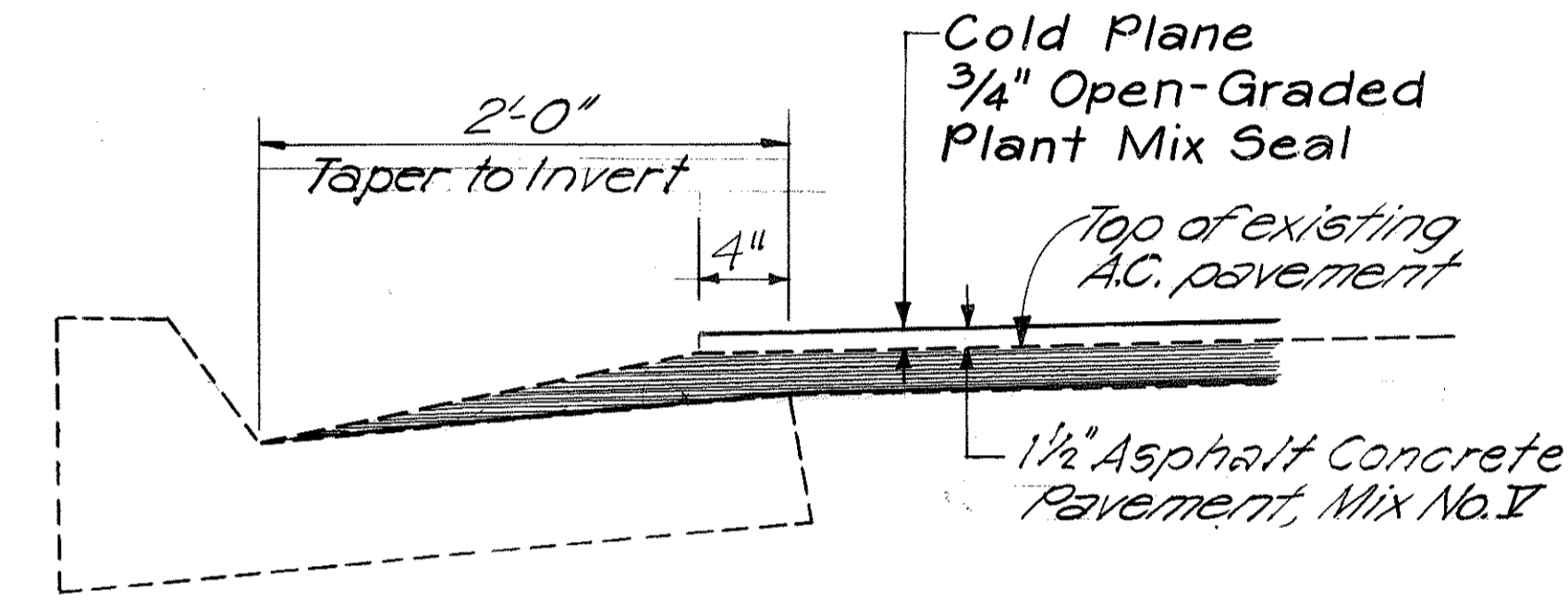
TYPICAL ROADWAY SECTION



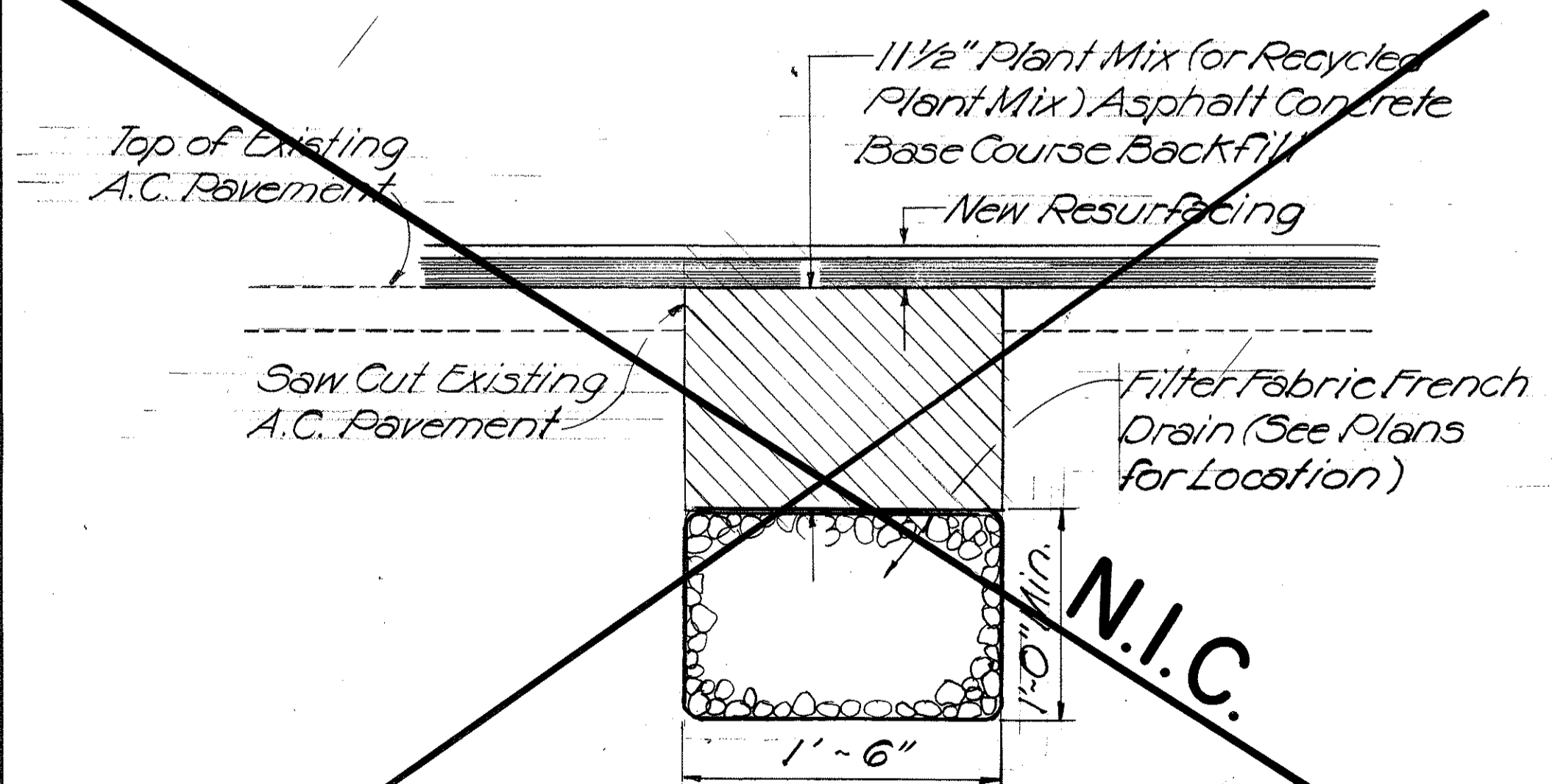
TYPICAL FILTER FABRIC FRENCH DRAIN OUTLET SECTION



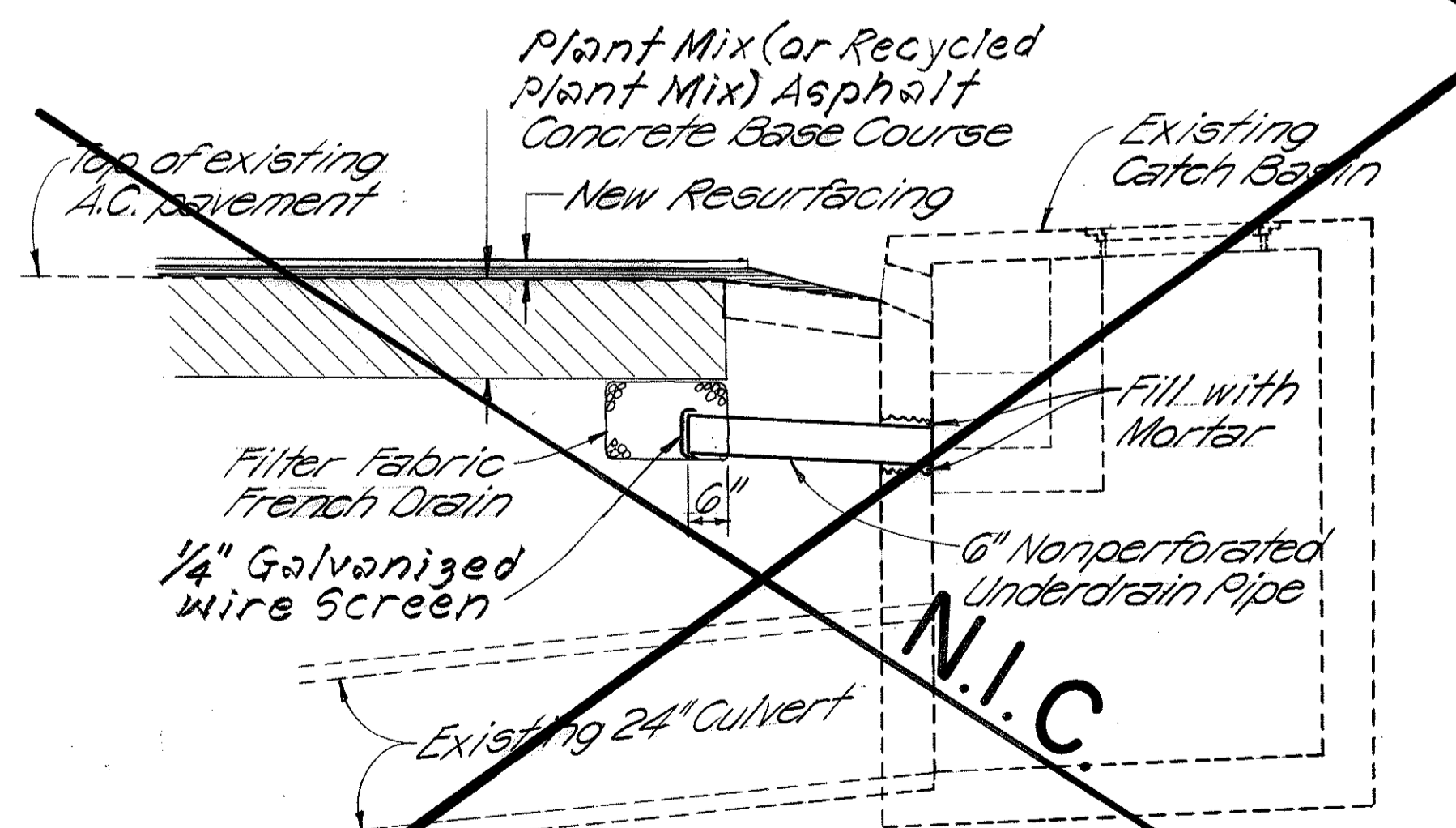
TYPICAL FILTER FABRIC FRENCH DRAIN SECTION UNDER RECONSTRUCTION AREA



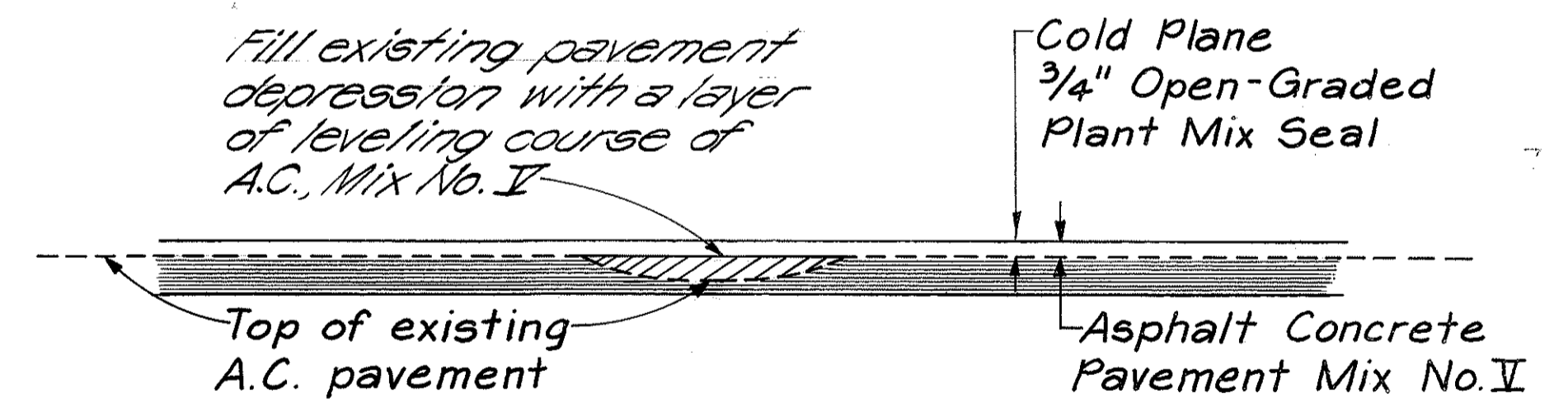
CURB AND GUTTER SECTION



TYPICAL FILTER FABRIC FRENCH DRAIN SECTION



6" NONPERFORATED UNDERDRAIN PIPE CONNECTION TO EXISTING CATCH BASIN AT STA. 143+78 ± LT.



TYPICAL LEVELING COURSE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS

KAMEHAMEHA HIGHWAY RESURFACING

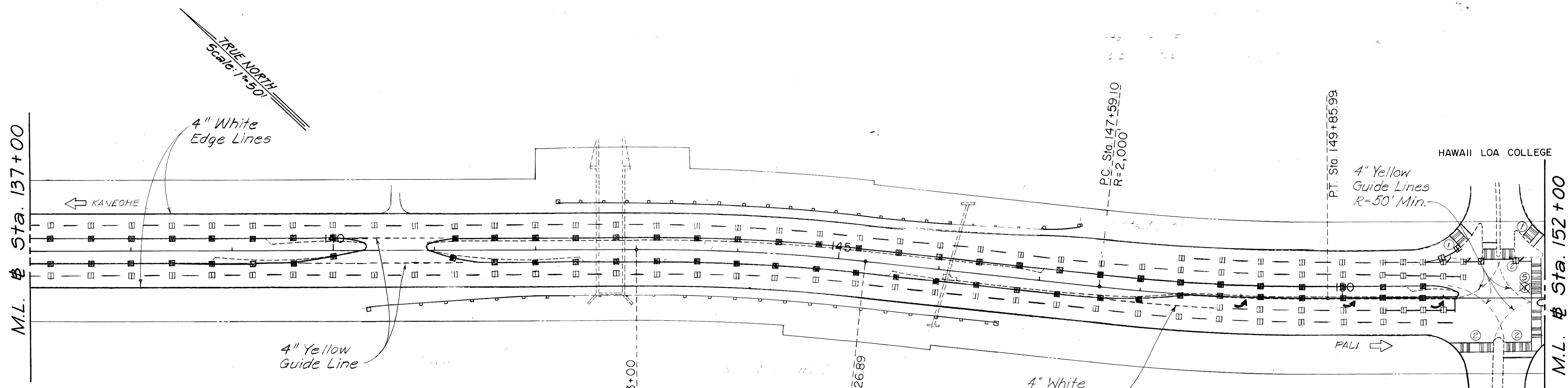
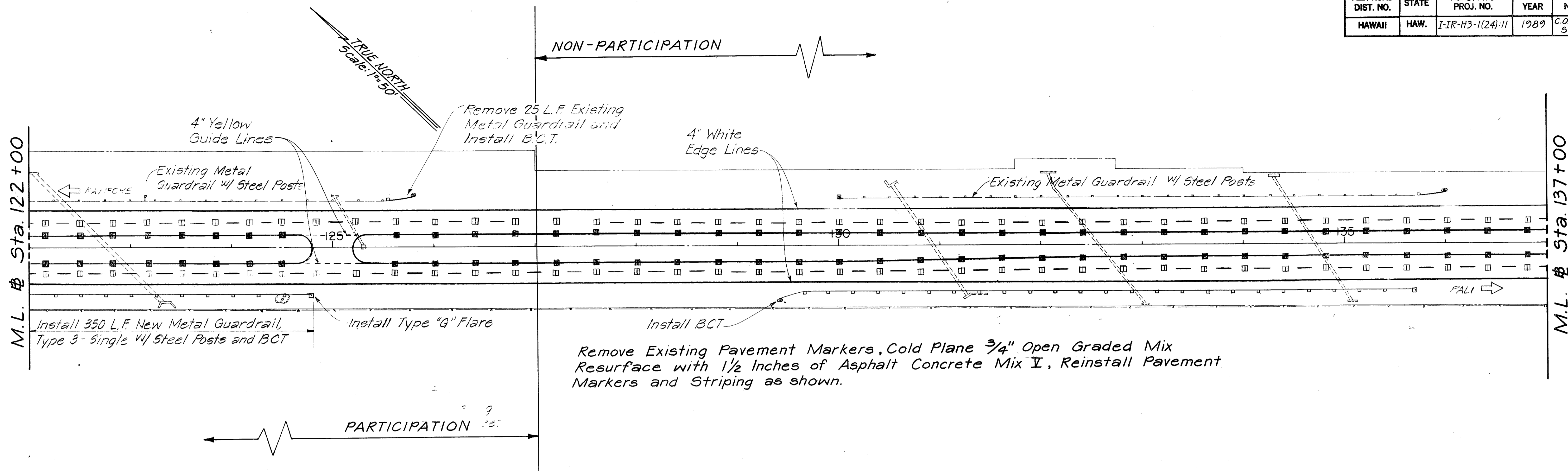
Sta. 127+00 to Pali Highway

F.A.I. Proj. No. I-IR-H3-1(24)-11

Not to Scale

SHEET No. 1 OF 1 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-IR-H3-1(24)-11 | 1989 | C.0242S-2 | 328 |



| | |
|-------------------|--|
| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| DESIGNED BY | |
| NOTED BY | |
| CHECKED BY | |

| DATE | REVISION |
|------|----------|
| | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

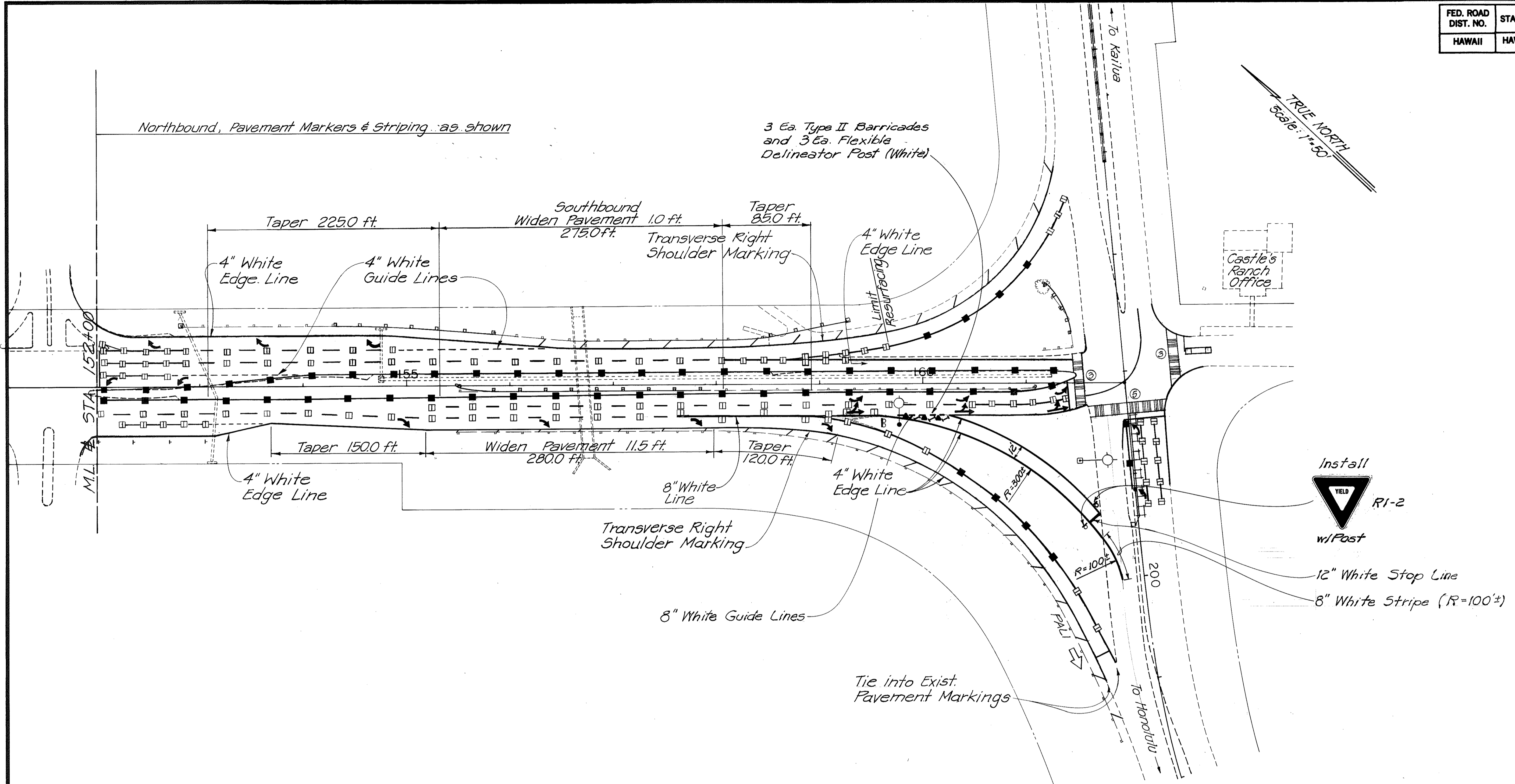
**GUARDRAIL AND
PAVEMENT MARKINGS**

KAMEHAMEHA HIGHWAY RESURFACING
Sta. 127+00 to Pali Highway
F.A.I. Proj. No. I-IR-H3-1(24)-11

Scale: 1" = 50'

SHEET No. OF SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|---------------|--------------|
| HAWAII | HAW. | I-IR-H3-1(24)-11 | 1989 | C0.242 5-3 | 328 |



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKINGS,
STRIPING AND WIDENING**

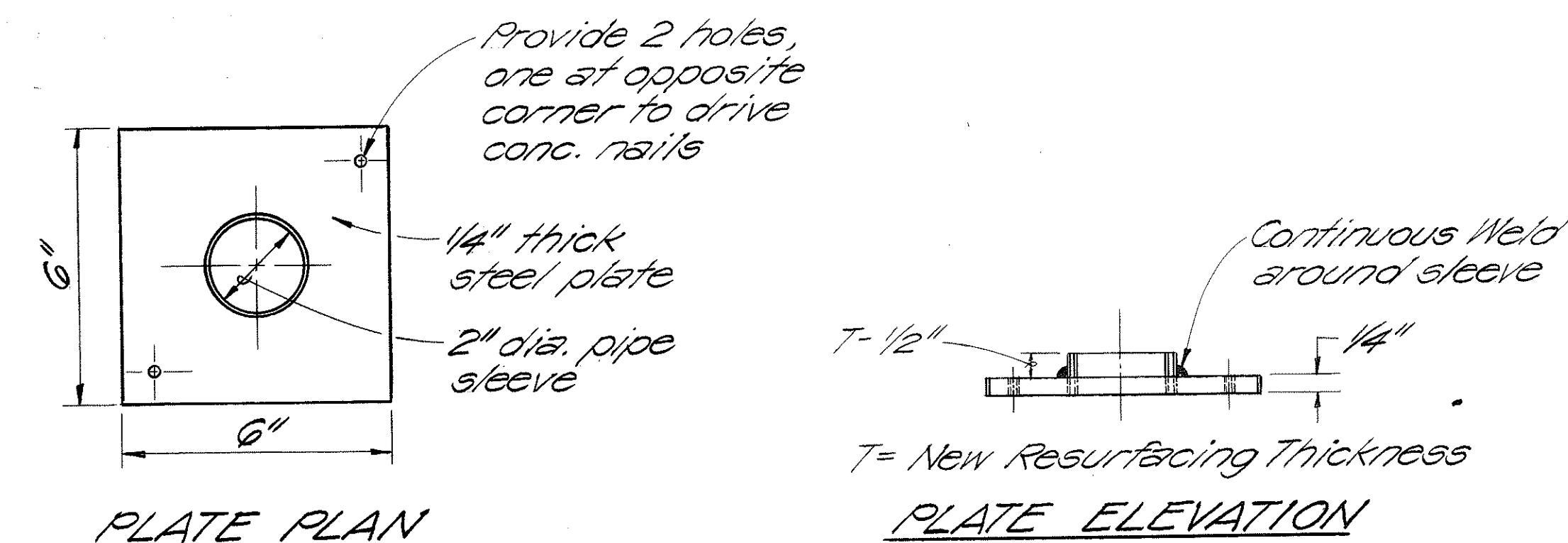
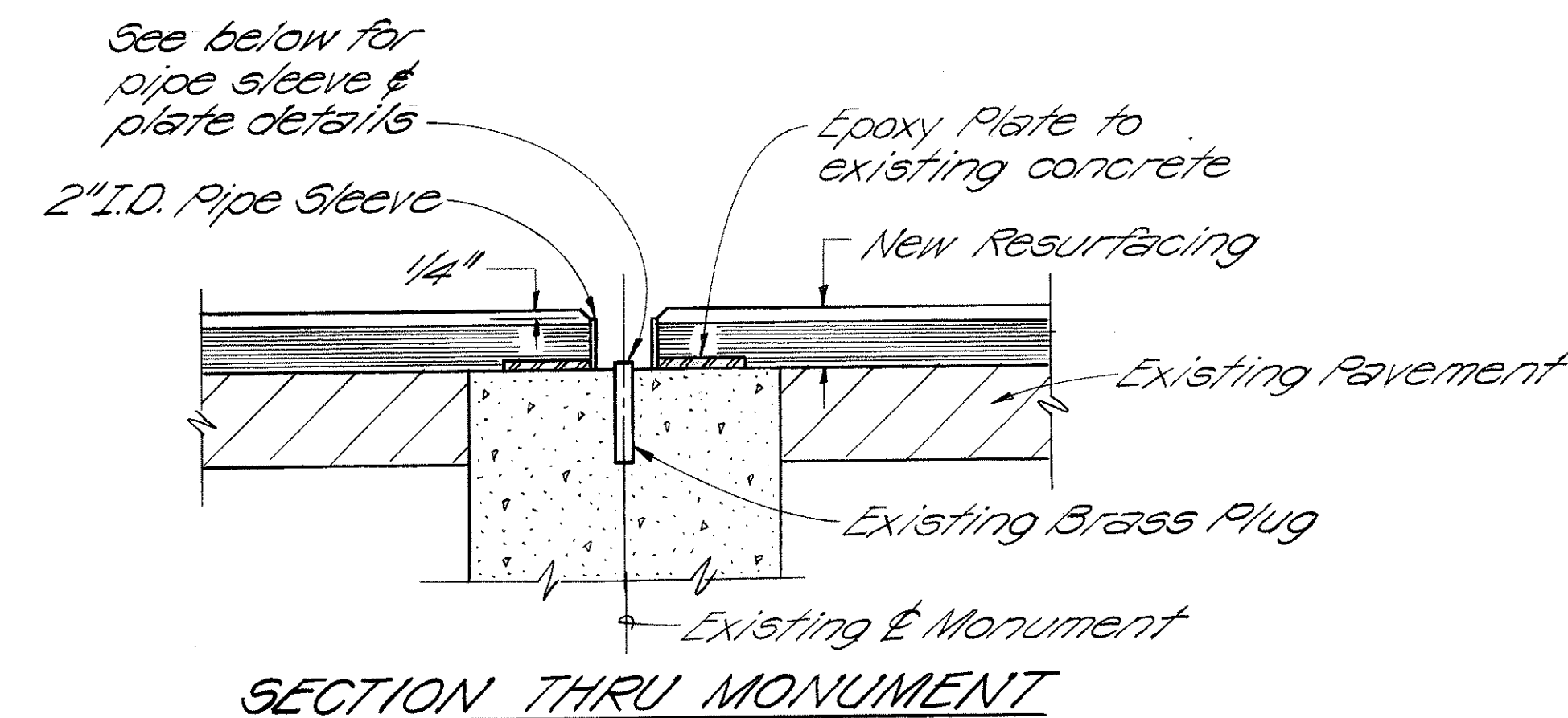
KAMEHAMEHA HIGHWAY RESURFACING

Sta. 127+00 to Pali Highway
F.A.I.P. No. I-IR-H3-1(24)-11
Scale: 1" = 50'

SHEET NO. OF SHEETS

C0.242S-3

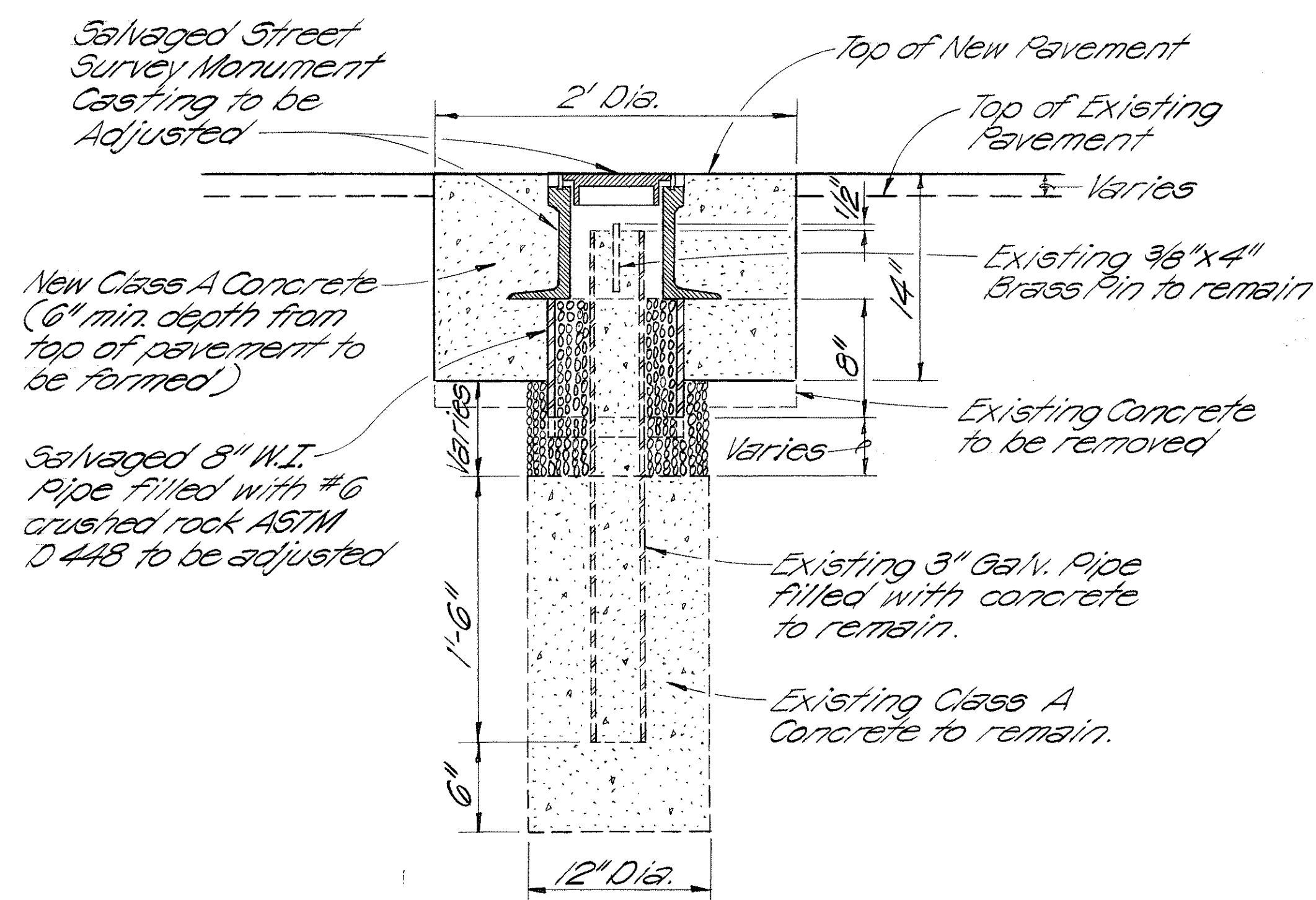
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | I-IR-H3-1(24):11 | 1989 | C.0242S-4 | 328 |



DETAIL FOR PRESERVING CENTERLINE MONUMENT

Not to Scale

NOTE:
Adjustment of Centerline Monuments shall not be paid for separately, but shall be considered incidental to the various contract items.



TYPICAL STREET SURVEY MONUMENT ADJUSTMENT

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADJUSTMENT & PRESERVING OF MONUMENTS

KAMEHAMEHA HIGHWAY RESURFACING
Sta. 127+00 to Pali Highway
F.A.I. Proj. No. I-IR-H3-1(24):11

Scale as noted

SHEET No. 1 OF 1 SHEETS

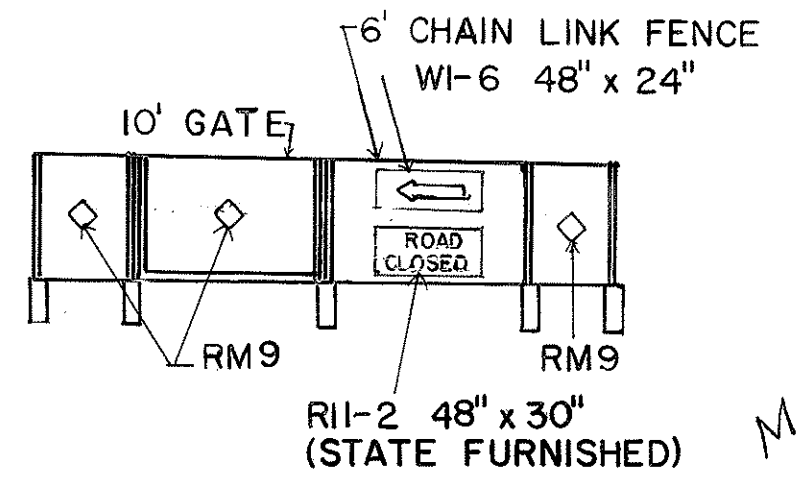
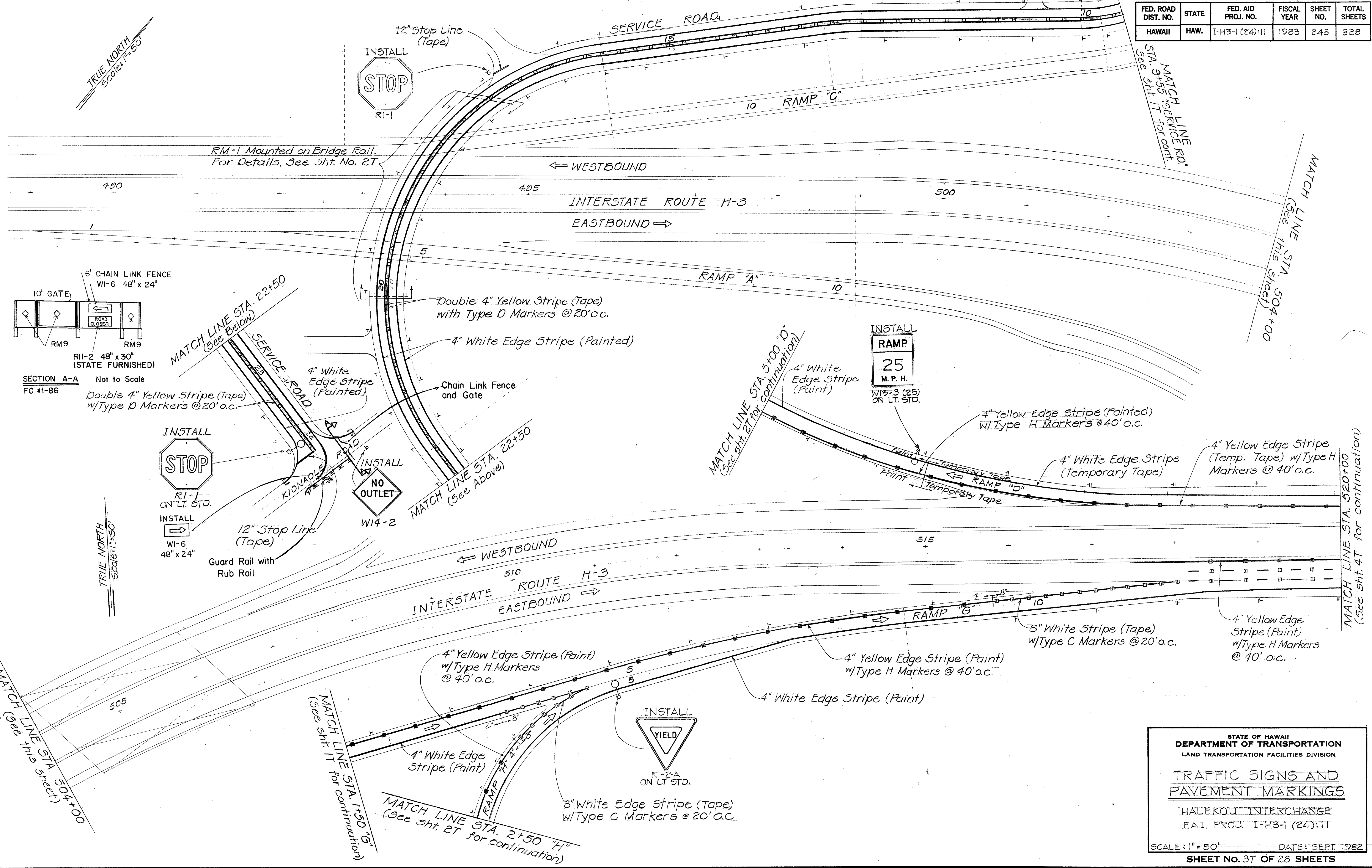
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1 (24):11 | 1983 | 243 | 328 |

TRUE NORTH
Scale: 1"=50'

MATCH LINE "SERVICE RD."
STA. 9+55
See Sht. 17 for cont.

MATCH LINE (See this sheet)
STA. 504+00

MATCH LINE STA. 520+00
(See Sht. 4T for continuation)



SECTION A-A Not to Scale
FC #1-86
Double 4" Yellow Stripe (Tape)
w/Type D Markers @ 20' o.c.

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

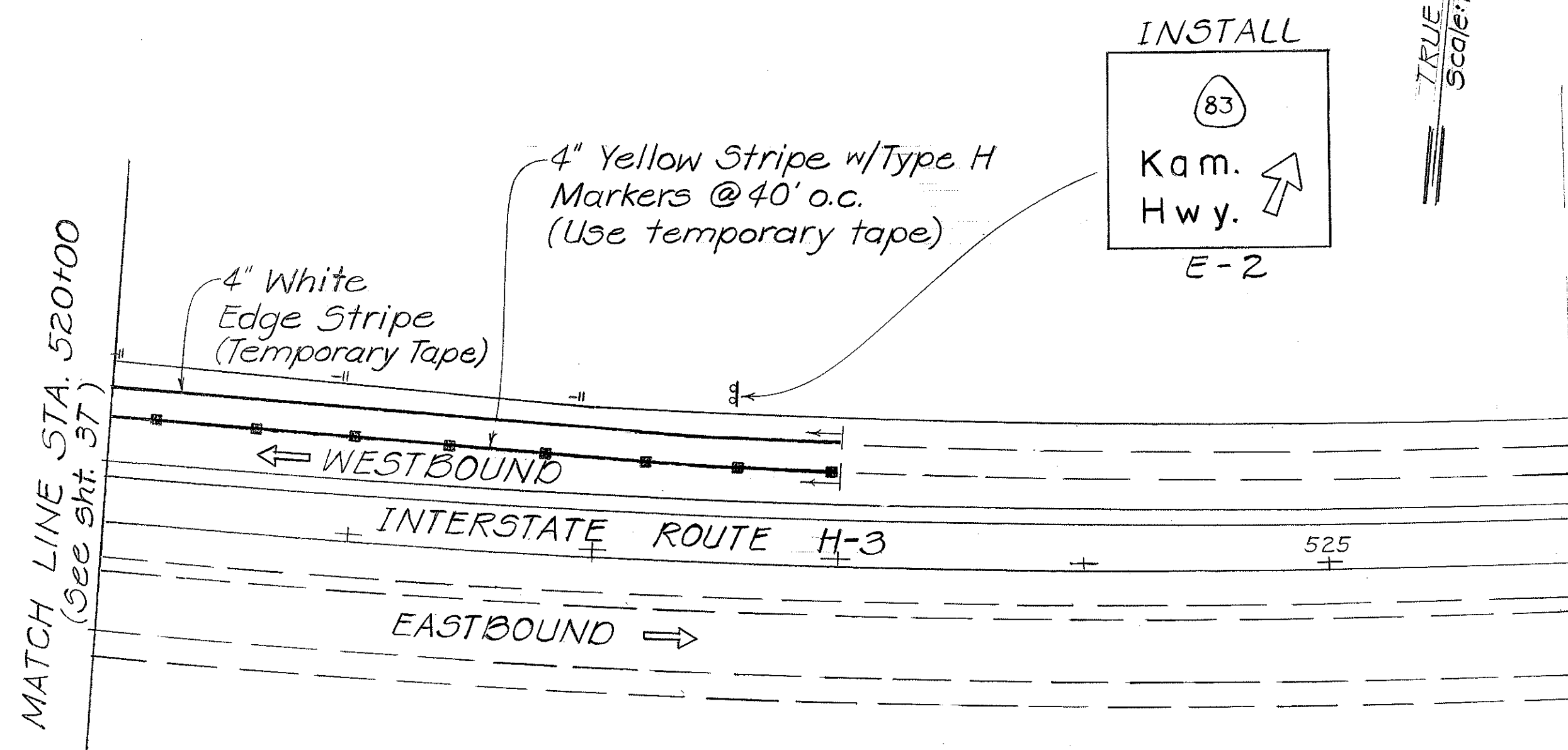
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNS AND PAVEMENT MARKINGS

HALEKOU INTERCHANGE
F.A.I. PROJ. I-H3-1 (24):11

SCALE: 1"=50' DATE: SEPT. 1982
SHEET NO. 37 OF 28 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 244 | 238 |



| DESCRIPTION | QUANTITY |
|------------------------------|-----------------|
| Raised Pavement Marker: | |
| Type "A" | 720 Each |
| Type "C" | 255 " |
| Type "D" | 102 " |
| Type "H" | 300 " |
| Type "J" | 44 " |
| 4" Pavement Striping (Paint) | 22,370 Lin. Ft. |
| 4" Pavement Striping (Tape) | 1,010 " " |
| 8" Pavement Striping (Tape) | 1,450 " " |
| 12" Pavement Striping (Tape) | 365 " " |
| 4" Temporary Tape | 3,300 " " |
| 12" Temporary Tape | 1,680 " " |
| 4" Double Yellow Tape | 1,655 " " |
| Pavement Arrow (Tape) | 7 Each |

| TYPE | DESCRIPTION | QUANTITY | | |
|-----------|-----------------------|-----------|----------|--------------|
| | | W/POST(S) | W/O POST | MISC. |
| R1-1 | STOP | 3 | 1 | |
| R1-1-A | STOP | 1 | | |
| R1-2-A | YIELD | | 1 | |
| R2-1(35) | SPEED LIMIT 35 | 2 | 2 | |
| R3-3 | NO TURNS | 2 | 1 | |
| R3-4 | NO U TURN | 2 | | |
| R5-1-A | DO NOT ENTER | 2 | 2 | |
| R5-9 | WRONG WAY | | 1 | |
| R6-1(L) | ONE WAY | | 2 | |
| R6-5 | KEEP OUT FREEWAY | 2 | | |
| R6-6 | U TURN AHEAD | 1 | | |
| R6-7 | U TURN OK | 1 | | |
| W3-1a-A | ⊘ | 1 | | |
| W4-1(R) | ↑ | 1 | | |
| W13-3(25) | RAMP 25 MPH | | 1 | |
| W14-2 | NO OUTLET | 1 | | |
| IM-1(2) | H3 | 4 | 1 | |
| IM2-1 | JCT | | 2 | |
| IM3-2-A | EAST | | 3 | |
| IMG-2(R) | ↗ | | 1 | |
| IMG-3 | ↑ | | 1 | |
| M1-6(83) | STATE ROUTE MKR. - 83 | 2 | | |
| IM5-1(L) | ↙ | | 1 | |
| M3-1 | NORTH | | 1 | |
| M3-3 | SOUTH | | 1 | |
| RM-1 | REFL. MKR. - SINGLE | 106 | 2 | 12 on Bridge |
| RM-2 | REFL. MKR. - DOUBLE | 30 | 2 | |
| RM-9 | REFL. MKR. | 4 | | |

SIGNING & PAVEMENT MARKING NOTES

- The final locations of all signs shall be approved by the Engineer.
- Locations of all new pavement markings shall be staked out by the Contractor for approval by the Engineer prior to installation.
- All existing signs & pavement markings not incorporated in the final traffic pattern shall be removed unless otherwise specified or directed by the Engineer.
- Existing signs that are being replaced shall not be removed until new signs are installed as replacements, or the message is no longer applicable.
- All striping shall be paint or tape as specified on plans.

LEGEND

- □ □ □ 4 ea. Type "A" pavement markers.
- □ □ □ Type "C" pavement marker.
- □ □ □ 4 ea. Type "J" pavement markers.
- □ □ □ Type "D" pavement marker.
- □ □ □ 4" double yellow stripe w/ Type "D" pavement markers 20'-0" o.c.
- □ □ □ 4" yellow stripe w/ Type "H" pavement markers 40'-0" o.c.
- □ □ □ 8" white stripe w/ Type "C" pavement markers 20'-0" o.c.
- PASSING PROHIBITED ZONE (SHT. DT300)
- □ □ □ 4 ea. Type "J" pavement markers.
- □ □ □ 4" yellow stripe
- □ □ □ Type "H" pavement marker.
- ↖ Pavement arrow
- ⊘ Reflector Marker (RM-1)
- ⊞ Reflector Marker (RM-2)

12/22/82 Revised RM-1 reflector marker quantity in "Traffic Sign Summary" schedule, per Addendum No. 1.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

**TRAFFIC SIGNS AND
PAVEMENT MARKINGS**

HALEKOU INTERCHANGE
F.A.I. PROJ. I-H3-1(24):11

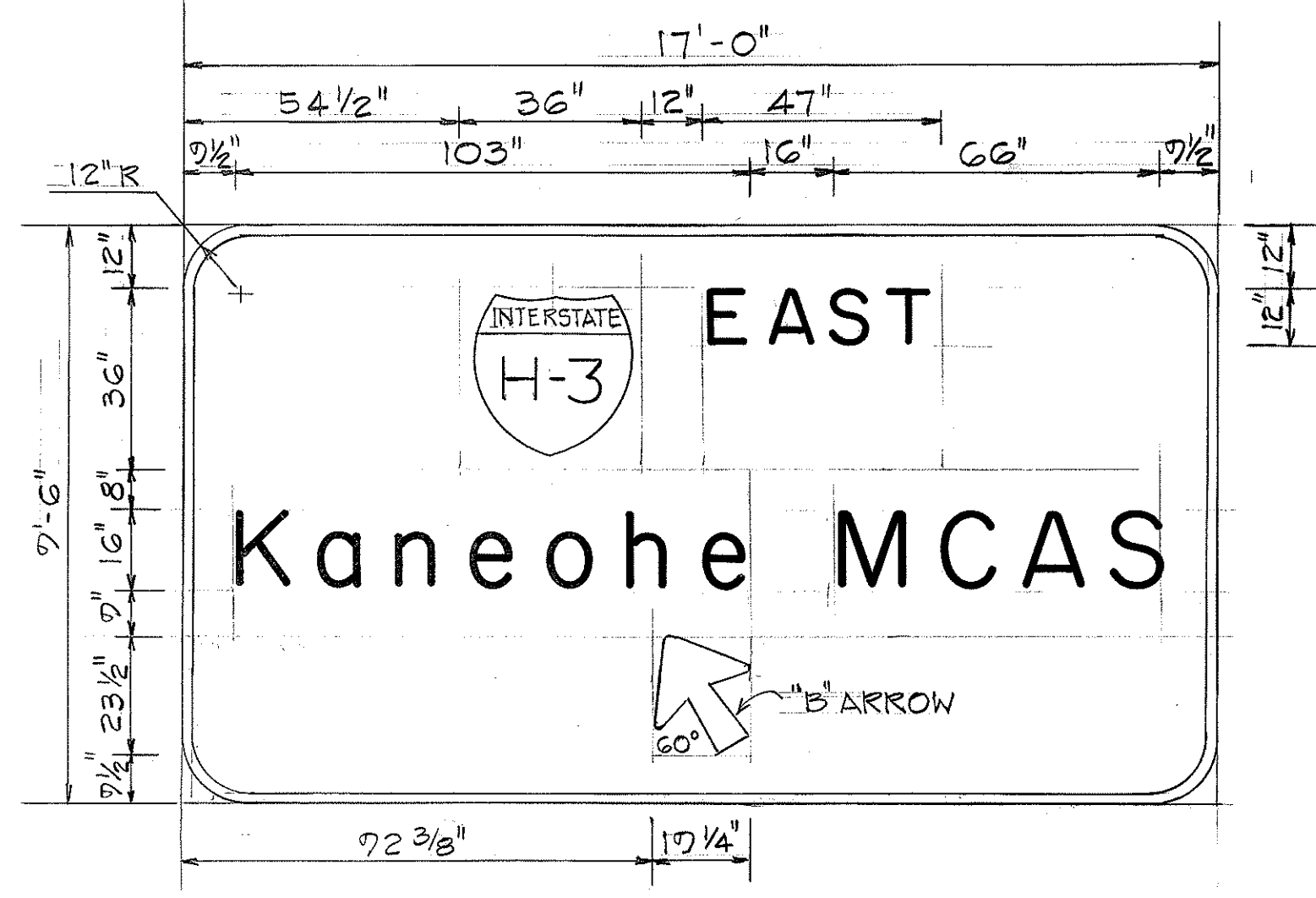
SCALE: 1" = 50' DATE: SEPT. 1982
SHEET No. 47 OF 28 SHEETS

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

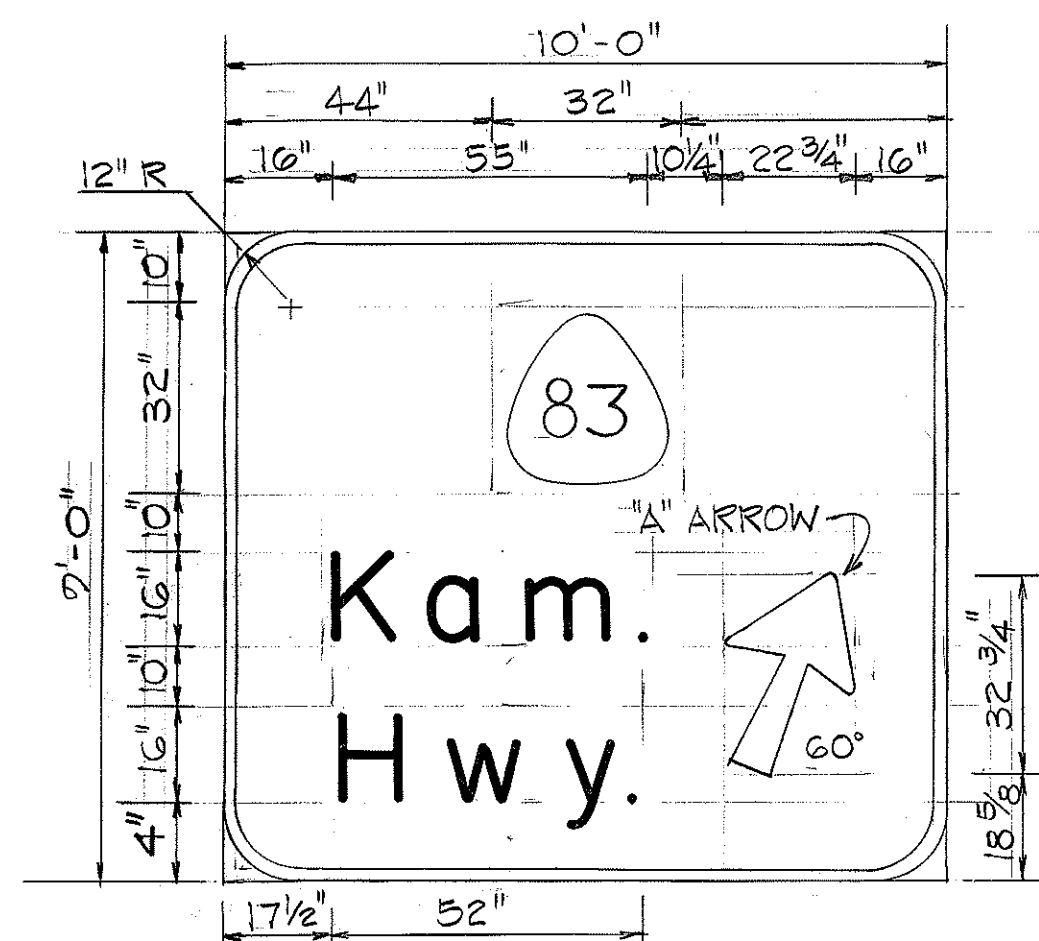
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 245 | 328 |

PANEL LAYOUT NOTES

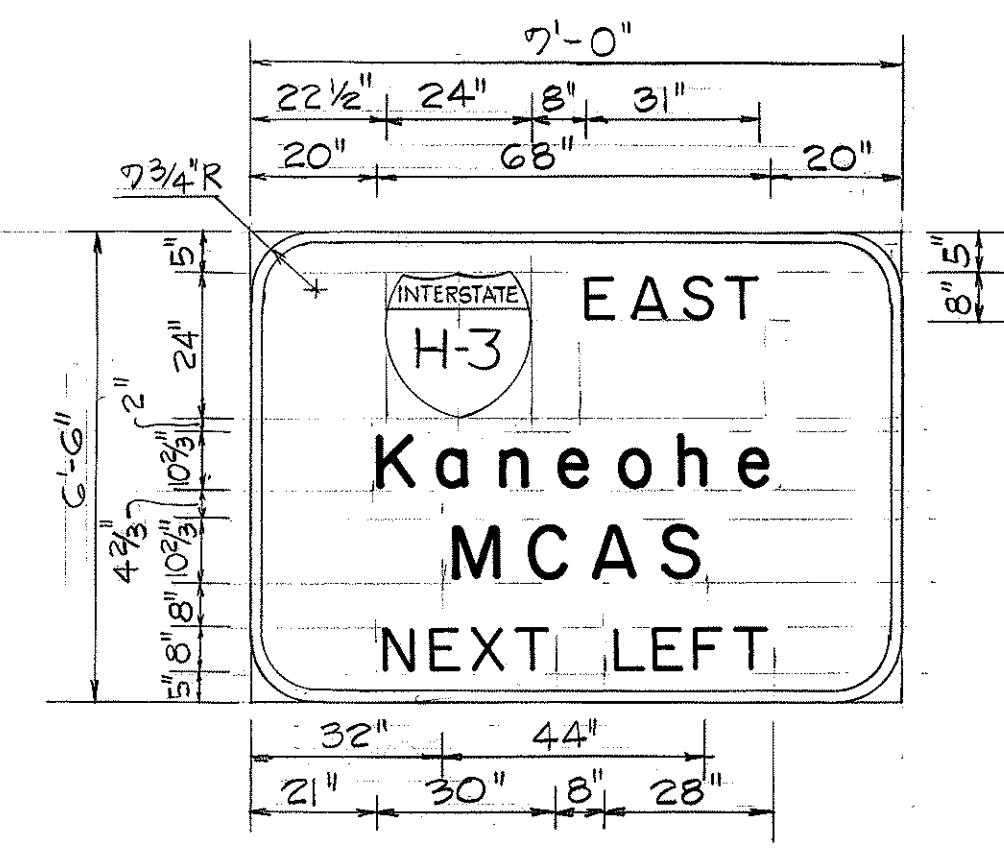
- SIGNS SHALL CONFORM TO THE LATEST EDITIONS AND AMENDMENTS OF THE FOLLOWING FHWA PUBLICATIONS:
 - "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD).
 - "STANDARD HIGHWAY SIGNS".
 - "STANDARD ALPHABETS FOR HIGHWAY SIGNS".
- USE SERIES "E" (M) LETTERS UNLESS OTHERWISE NOTED.
- BORDERS SHALL BE 2" WIDE UNLESS OTHERWISE NOTED.
- ARROWS, INTERSTATE AND STATE ROUTE MARKER SYMBOLS SHALL CONFORM TO DETAILS AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE MUTCD.



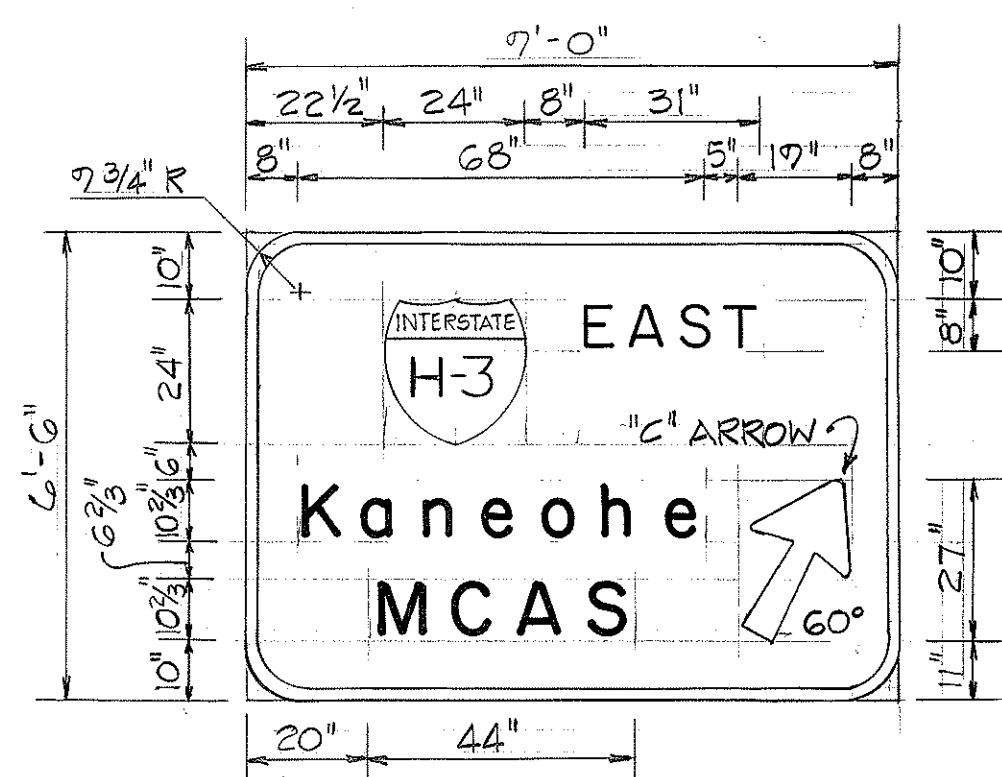
SIGN E-1



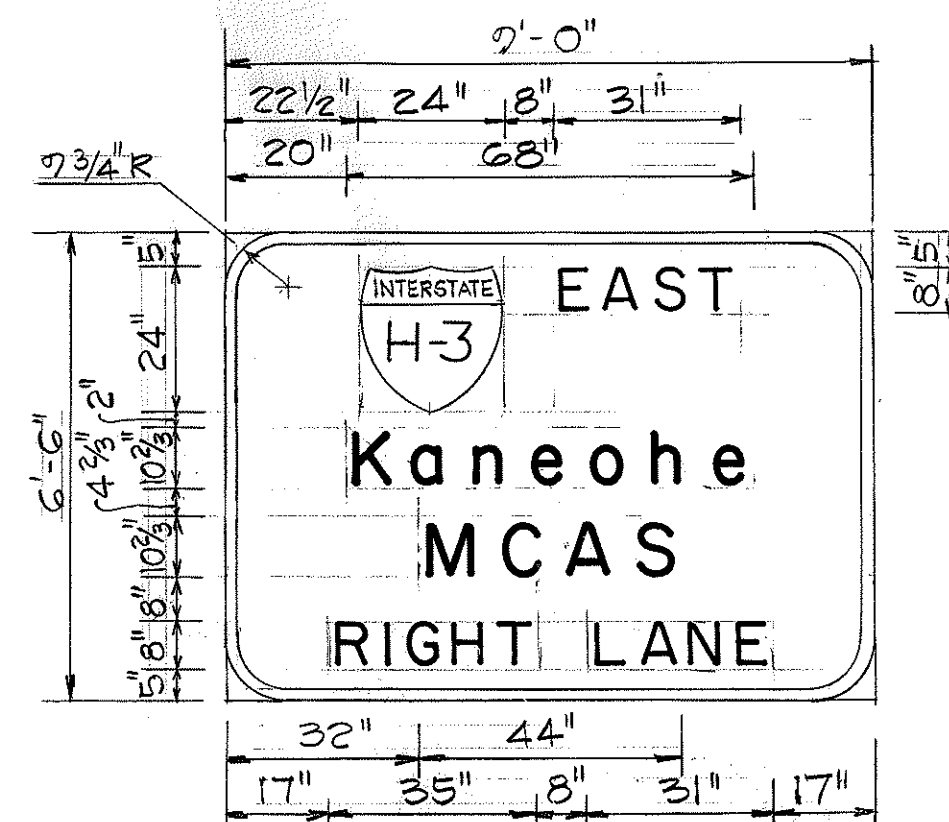
SIGN E-2



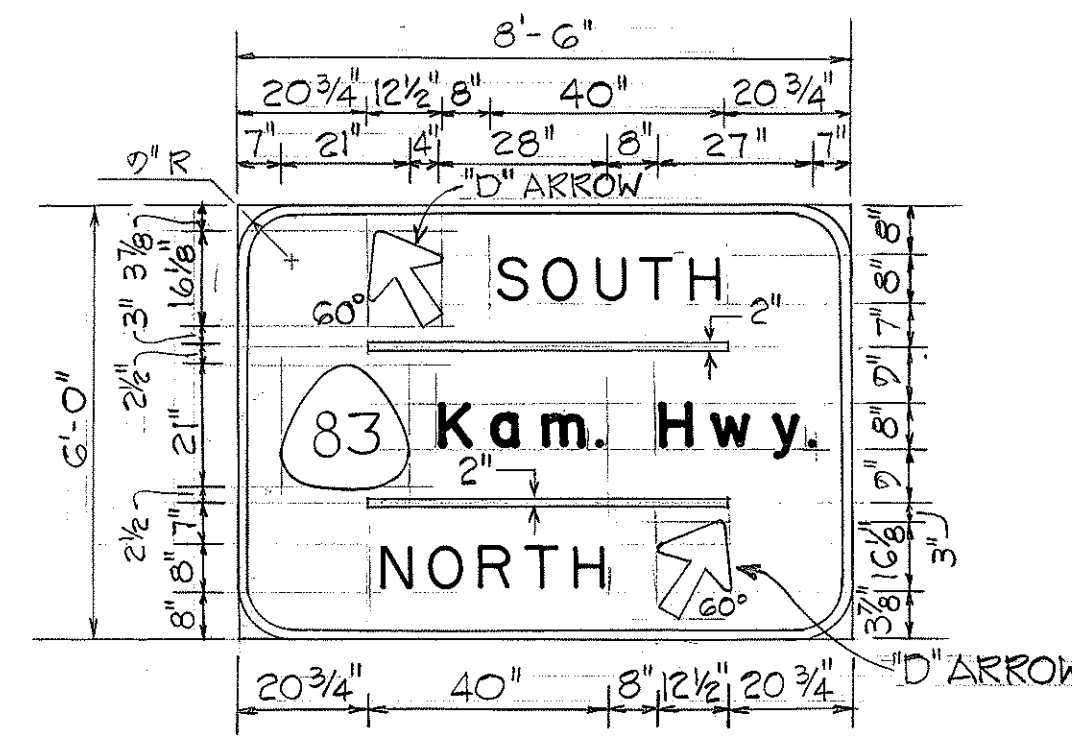
SIGN D-1



SIGN D-2



SIGN D-3



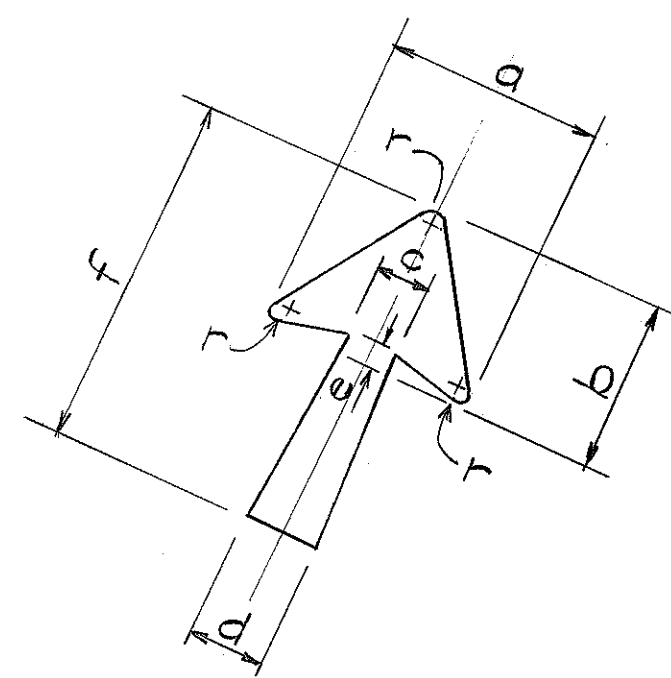
SIGN D-4

DESTINATION SIGN SUMMARY

| TYPE | DESCRIPTION | AREA (SQ. FT.) |
|------|--------------------------|----------------|
| D-1 | Kaneohe MCAS, NEXT LEFT | 58.50 |
| D-2 | Kaneohe MCAS | 58.50 |
| D-3 | Kaneohe MCAS, RIGHT LANE | 58.50 |
| D-4 | Kam. Hwy., NORTH, SOUTH | 51.00 |
| | TOTAL | 226.50 |

EXPRESSWAY SIGN SUMMARY

| TYPE | DESCRIPTION | AREA (SQ. FT.) |
|------|--------------|----------------|
| E-1 | Kaneohe MCAS | 161.50 |
| E-2 | Kam. Hwy. | 90.00 |
| | TOTAL | 251.50 |



ARROW DETAIL N.T.S.

| ARROW DIMENSIONS IN INCHES | | | | | | | |
|----------------------------|--------|---------|-------|-------|--------|--------|-----|
| TYPE | a | b | c | d | e | f | r |
| A | 22 1/4 | 17 | 5 3/8 | 7 1/8 | 1 3/4 | 35 5/8 | 1 |
| B | 21 7/8 | 14 1/4 | 5 | 6 3/4 | 1 3/4 | 25 | 1 |
| C | 18 1/4 | 14 | 4 1/2 | 6 | 1 1/2 | 27 1/4 | 3/4 |
| D | 14 1/4 | 7 13/16 | 3 3/8 | 4 1/2 | 1 5/16 | 17 1/4 | 3/4 |

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PANEL LAYOUT

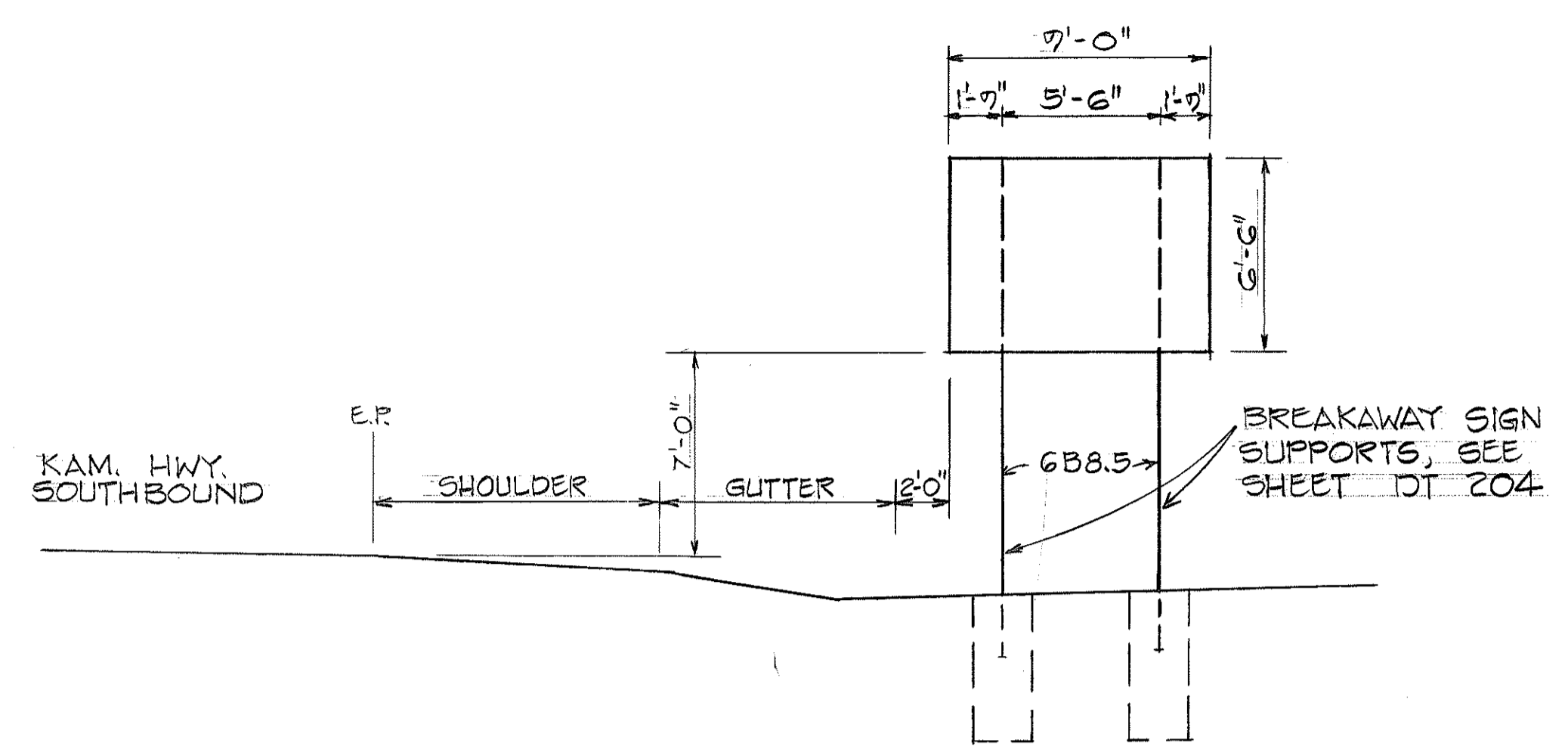
HALEKOU INTERCHANGE
 F.A.I. PROJ. No. I-H3-1(24):11

SCALE: 3/8" = 1'-0" DATE: SEPT. 1982
 SHEET No. 57 OF 28 SHEETS

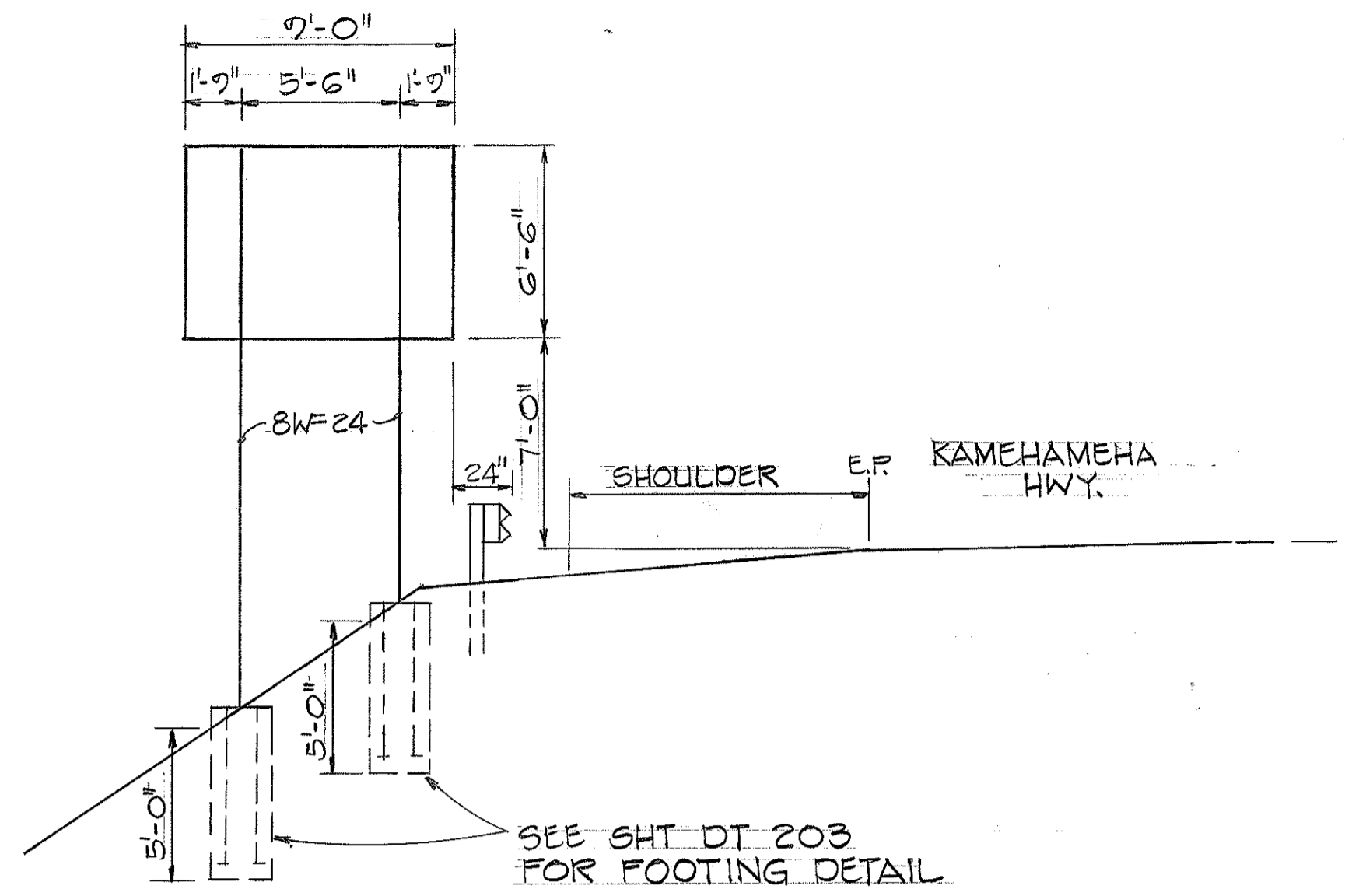
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 246 | 328 |

FRAME LAYOUT NOTES

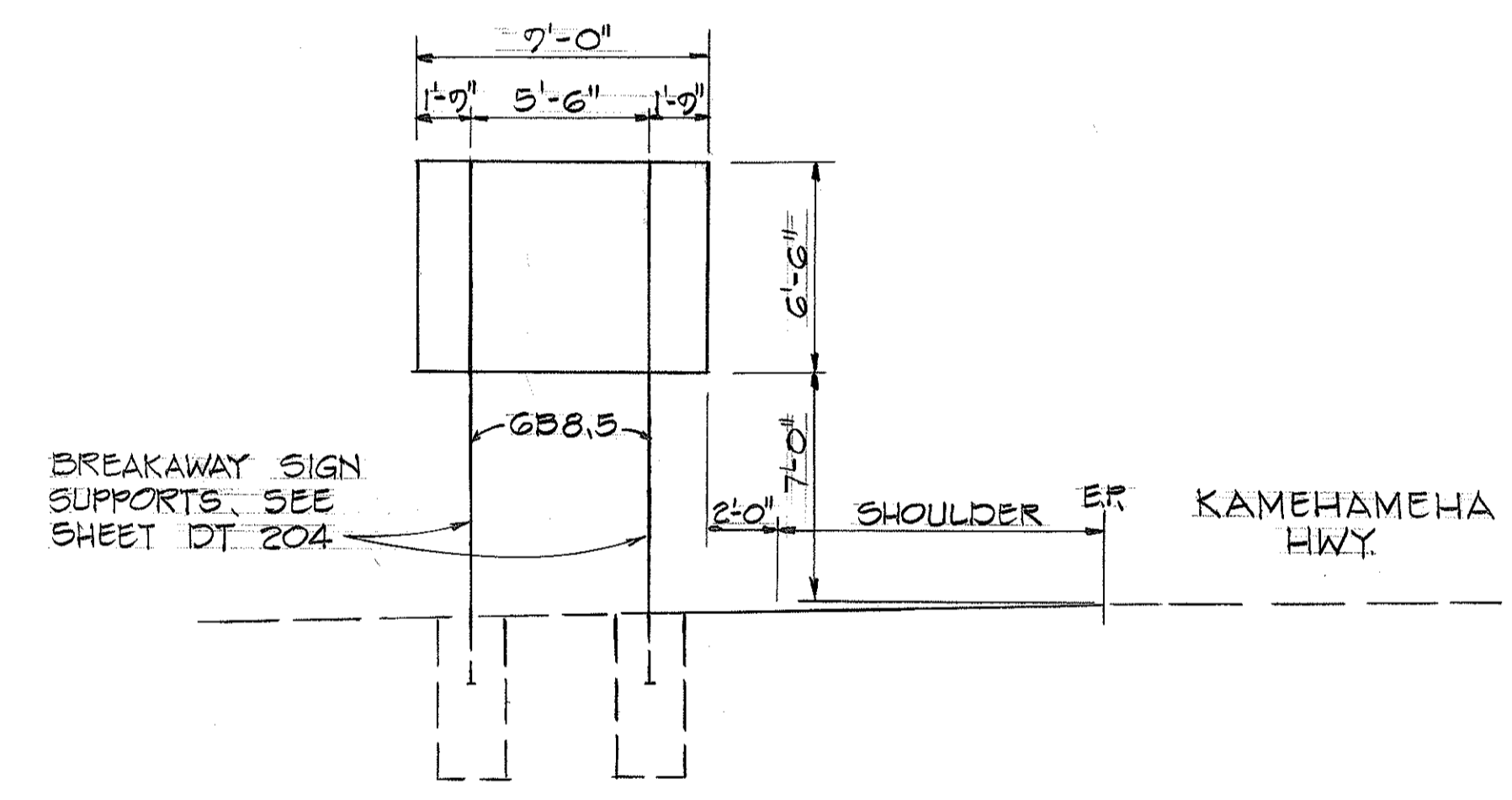
1. THE FINAL LOCATIONS OF SIGN FRAMES AND PANELS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE BRIDGE PLAN FOR SIGN E-1 FRAME LAYOUT.
3. THE AMOUNT AND CENTER-TO-CENTER SPACING OF SIGN LUMINAIRES SHALL BE IN ACCORDANCE WITH THE LUMINAIRE MANUFACTURER'S INSTRUCTIONS. MAXIMUM CENTER-TO-CENTER SPACING OF LUMINAIRES SHALL BE 10'-0" FOR LUMINAIRE DETAILS SEE SHEET DT 208.
4. THE CLEARANCE BETWEEN THE HIGHEST POINT ON THE PAVEMENT AND THE LOWEST POINT ON THE OVERHEAD SIGN LUMINAIRES SHALL BE 17'-0" EXCEPT OTHERWISE NOTED.



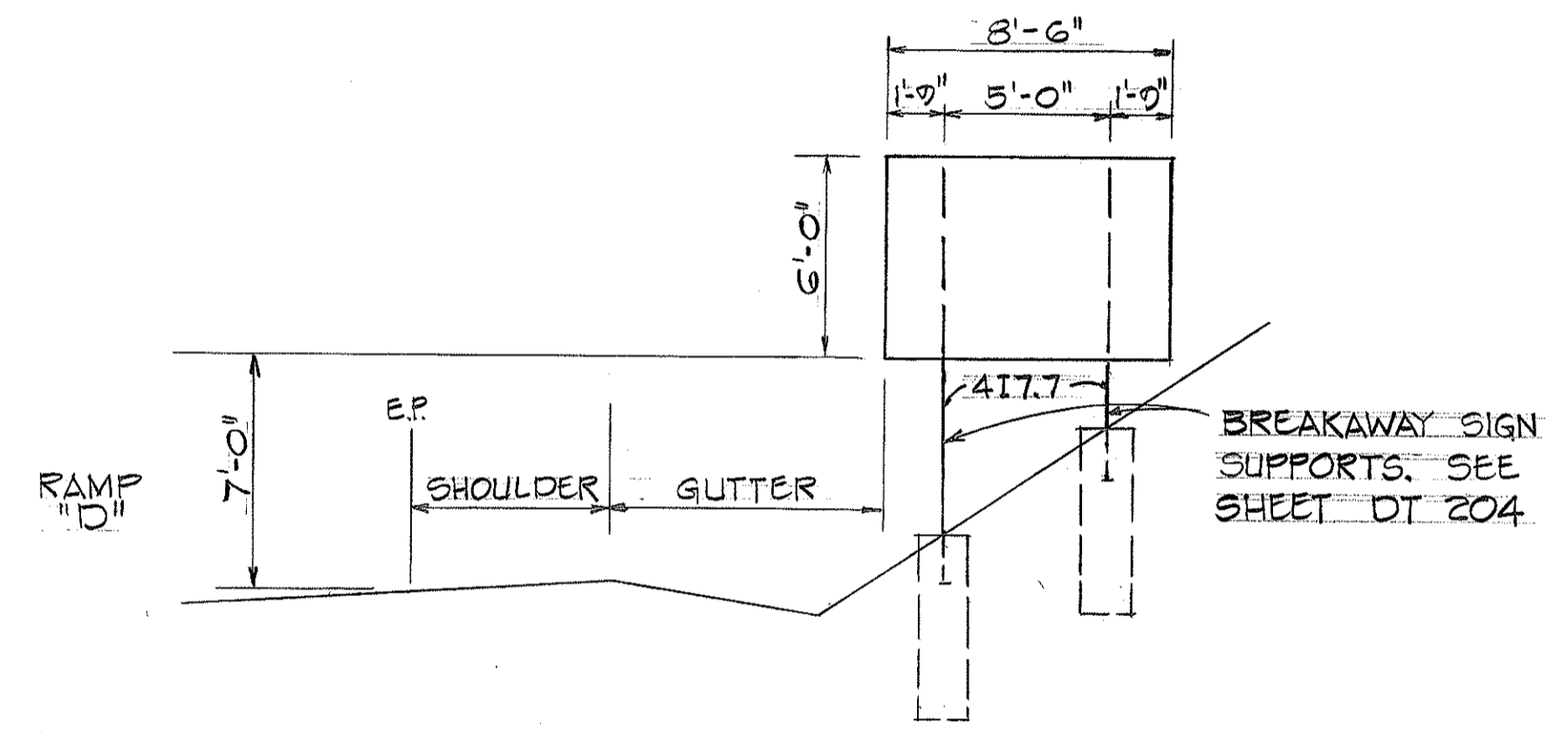
SIGN D-1
STA. 103+00 RT
KAMEHAMEHA HWY SB



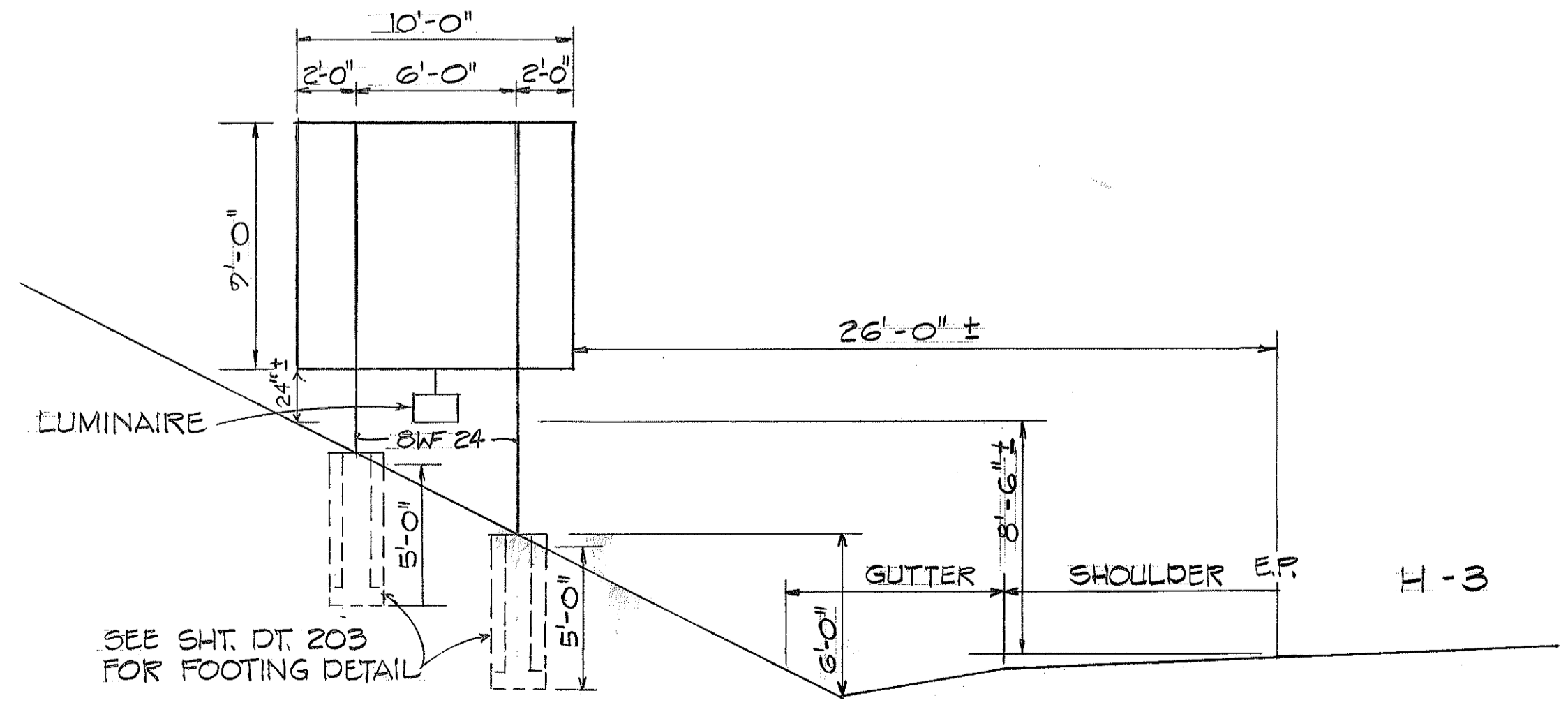
SIGN D-2
STA. 124+00 LT.
KAMEHAMEHA HWY N.B.



SIGN D-3
STA. 128+00 LT.
KAMEHAMEHA HWY NB.



SIGN D-4
RAMP "D" STA. 10+50 RT.



SIGN E-2
H-3 # STA. 522+50 LT.

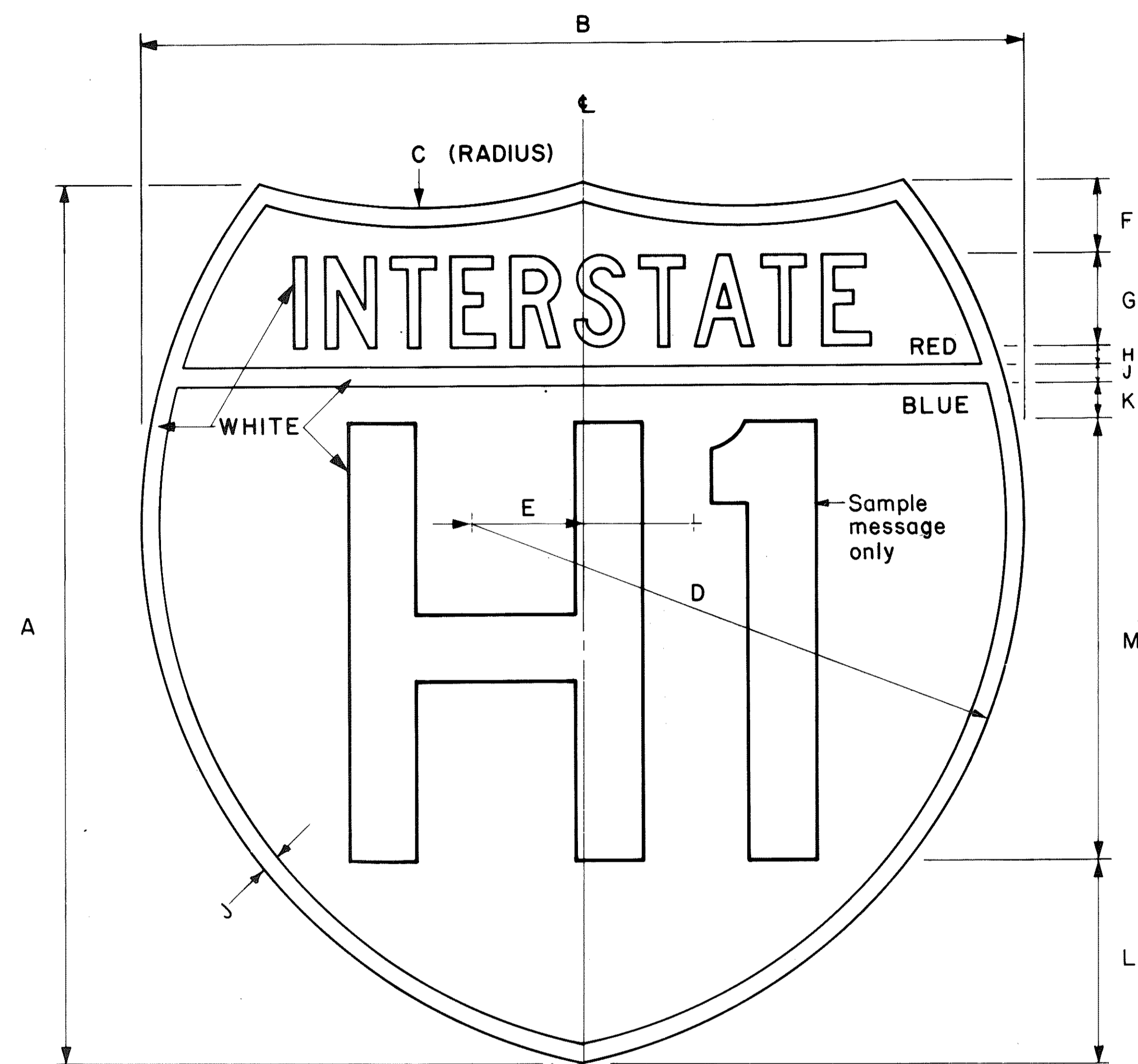
| | |
|-------------------|------|
| ORIGINAL PLAN | DATE |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| DESIGNED BY | |
| NOTE BOOK | |
| QUANTITIES BY | |
| CHECKED BY | |
| No. | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FRAME LAYOUT

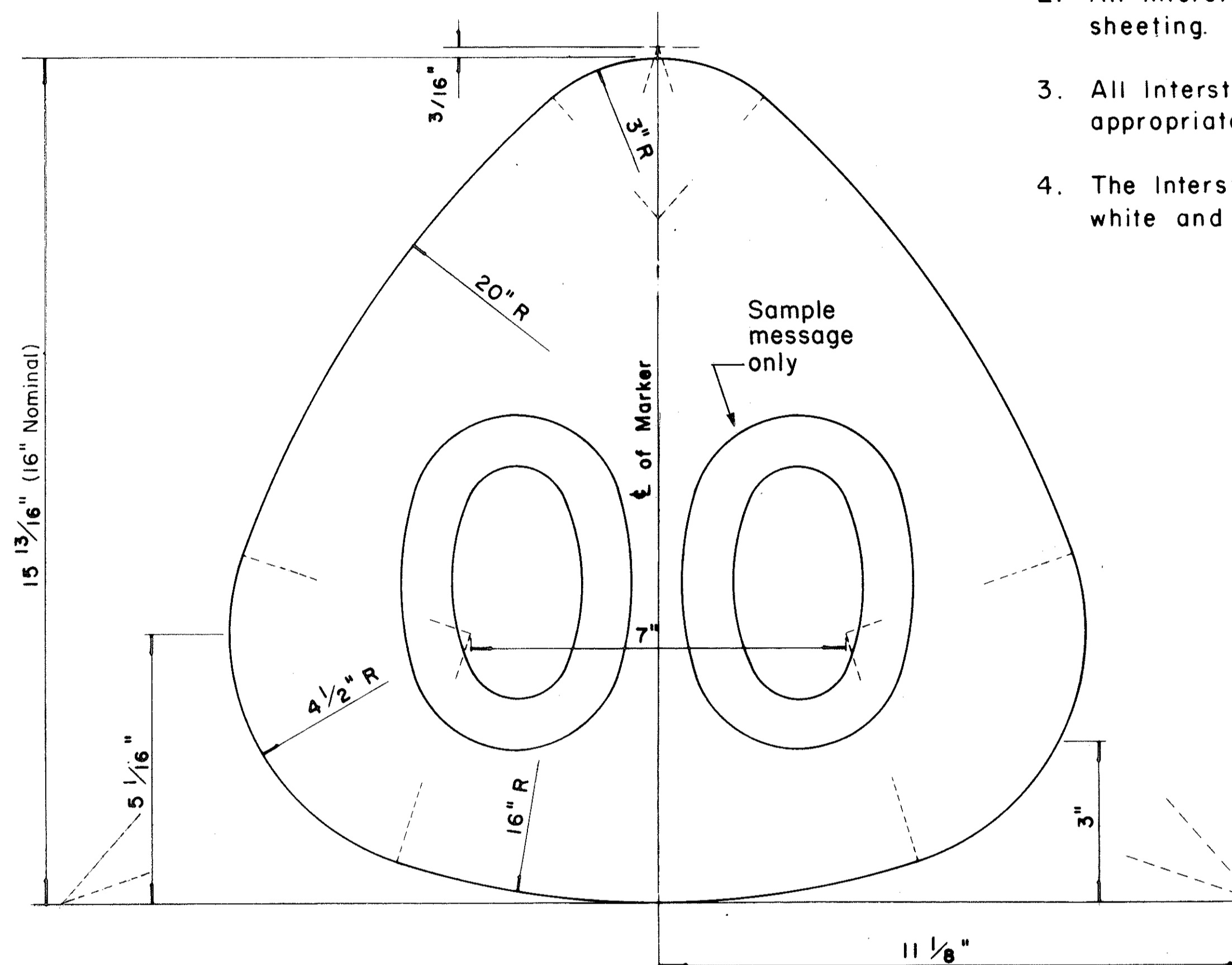
HALEKOU INTERCHANGE
F.A.I. PROJ. NO. I-H3-1(24):11

SCALE: 1"=5' DATE: SEPT. 1982
SHEET NO. 67 OF 28 SHEETS



INTERSTATE ROUTE MARKER
IM-1()

Scale: 3/8" = 1"



STATE ROUTE MARKER FOR GUIDE SIGNS

Scale: Half Size

NOTE: INTERSTATE ROUTE MARKER

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

NOTE: STATE ROUTE MARKER

- State Route Markers on Guide signs shall have black numerals on a white reflectorized background mounted on a flat aluminum cut-out.
- Numerals shall conform to the latest FHWA publication: "Standard Alphabets for Highway Signs".
- Cut-outs shall be fastened on sign panel with aluminum blind rivets. See Standard Specifications.

INTERSTATE ROUTE MARKER SCHEDULE (INCHES)

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
INTERSTATE ROUTE MARKER
AND
STATE ROUTE MARKER FOR
GUIDE SIGNS

Scale: As shown

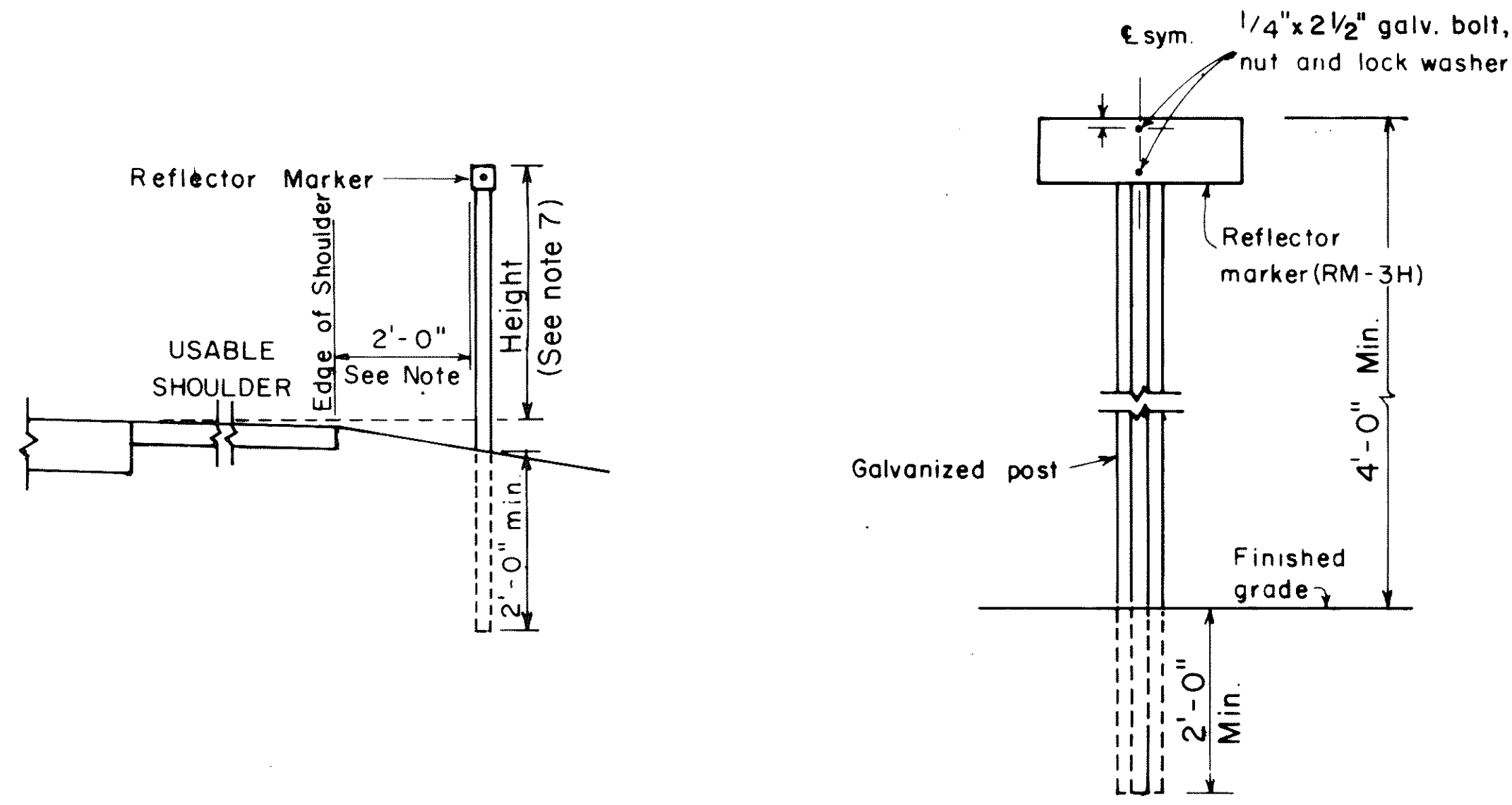
SHEET No. 7T OF 28 SHEETS

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

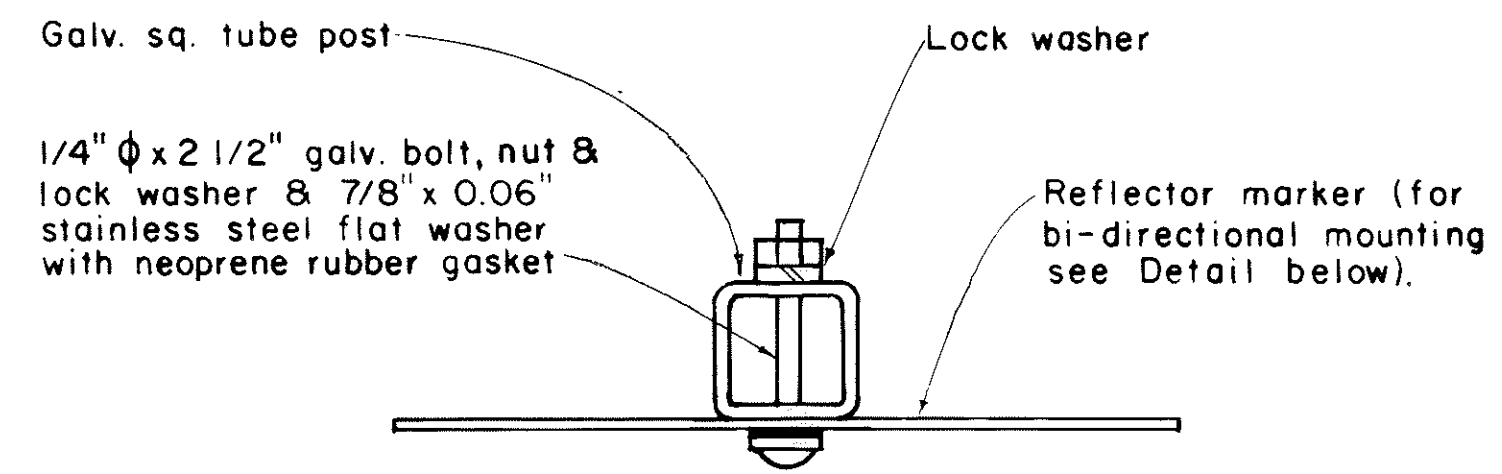
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 143-1(24) | 1983 | 248 | 328 |

GENERAL NOTES:

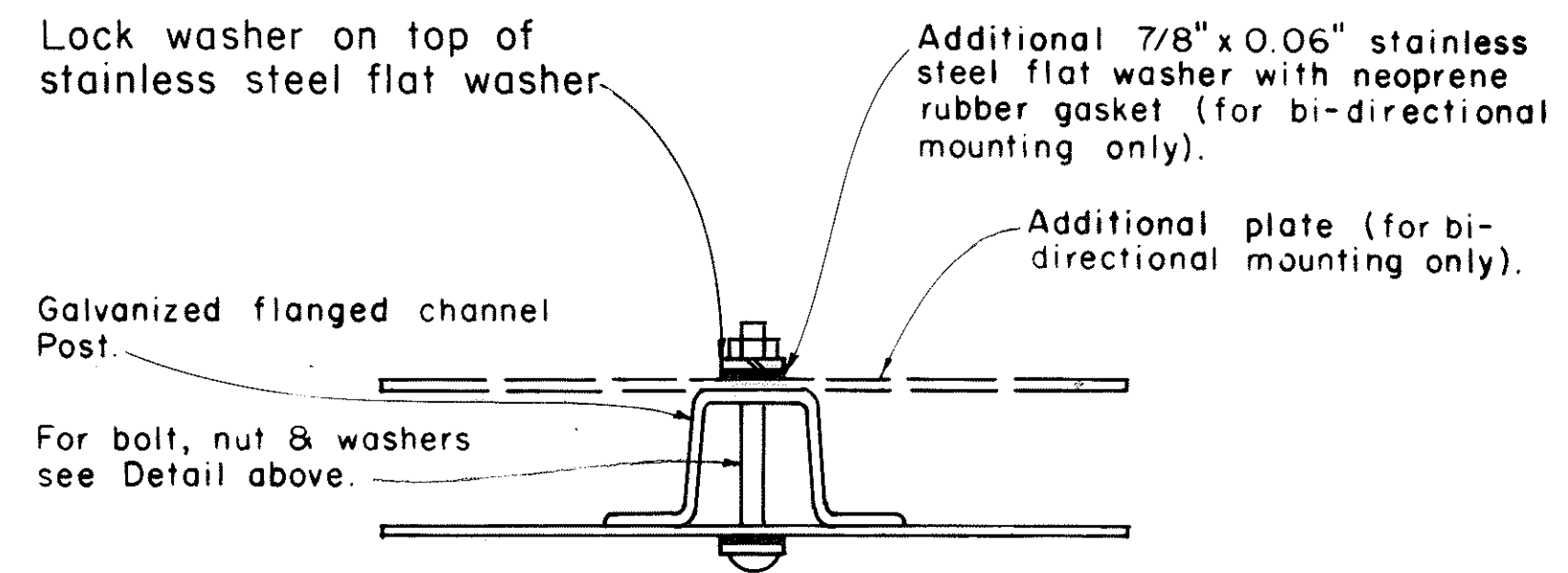
1. Clearance markers (RM-3, RM-4) shall be installed with the inner edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. "H" indicates horizontal mounting of reflector marker.
4. Reflector markers RM-1 and RM-2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



REFLECTOR MARKER MOUNTING DETAIL

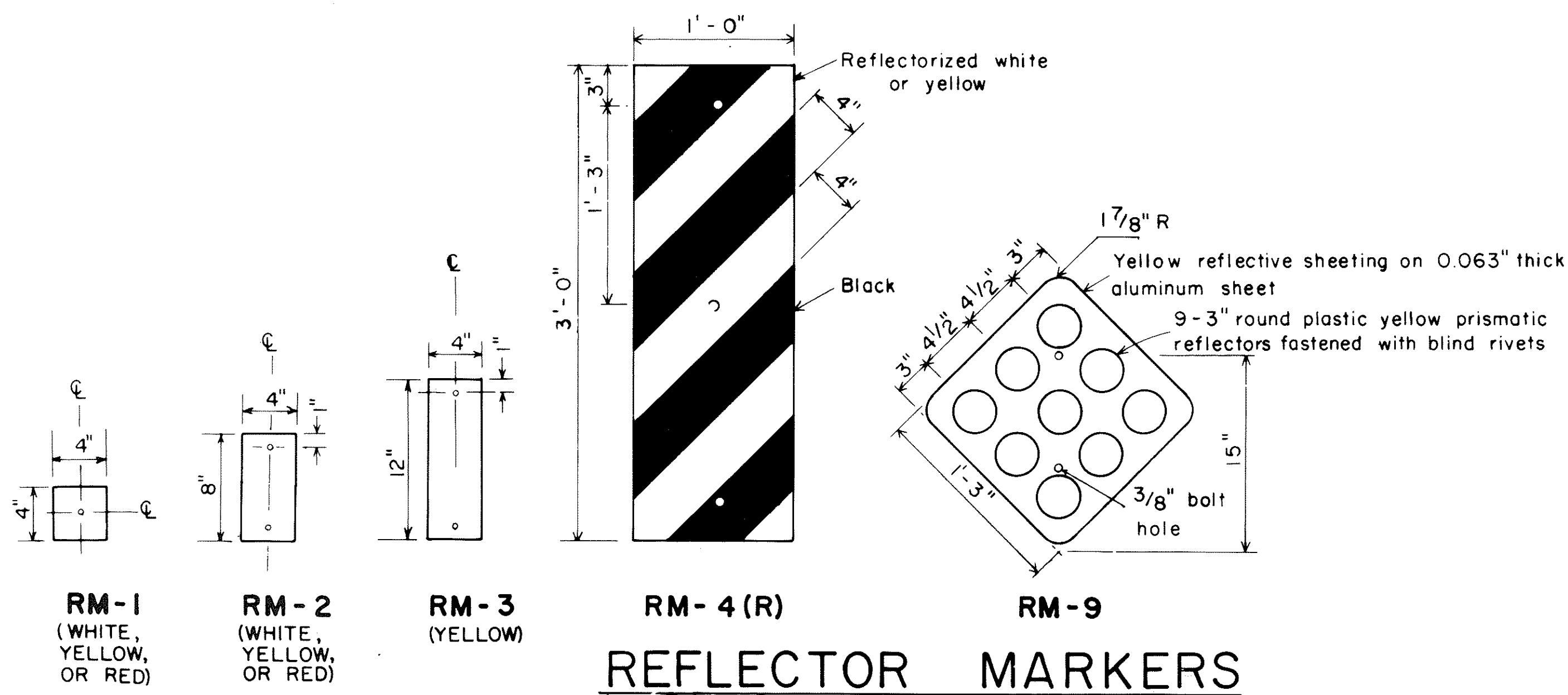


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



REFLECTOR MARKERS

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS

MISCELLANEOUS REFLECTOR MARKERS

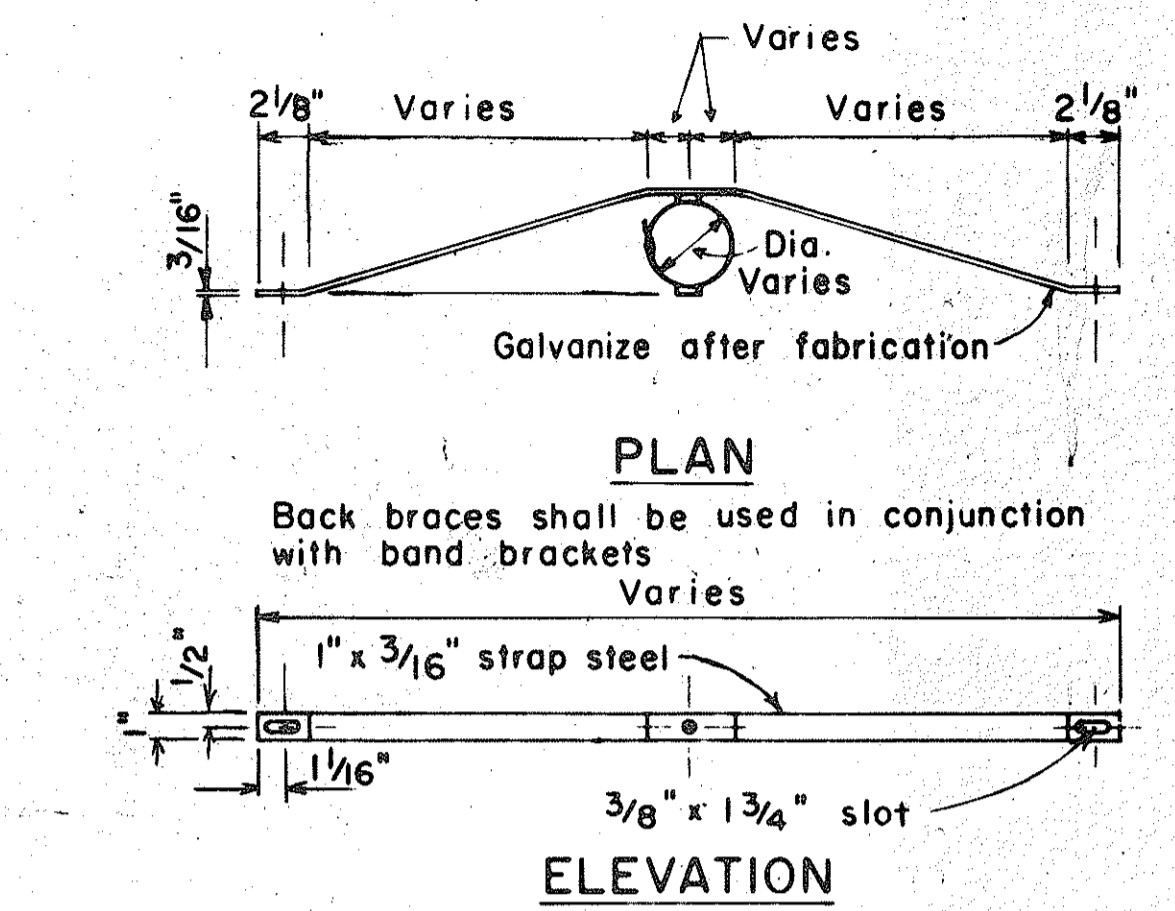
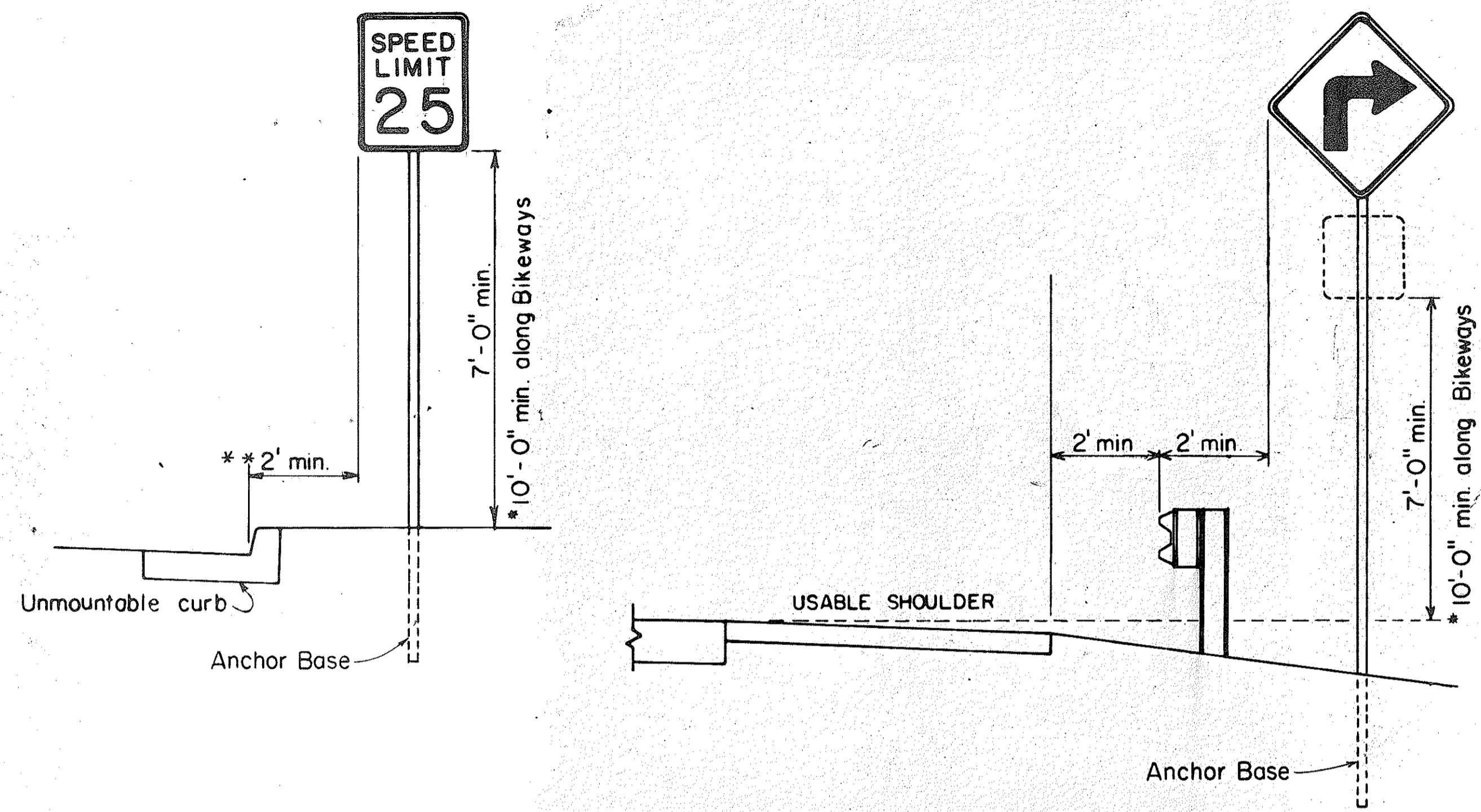
Not to scale

SHEET NO. 8T OF 28 SHEETS

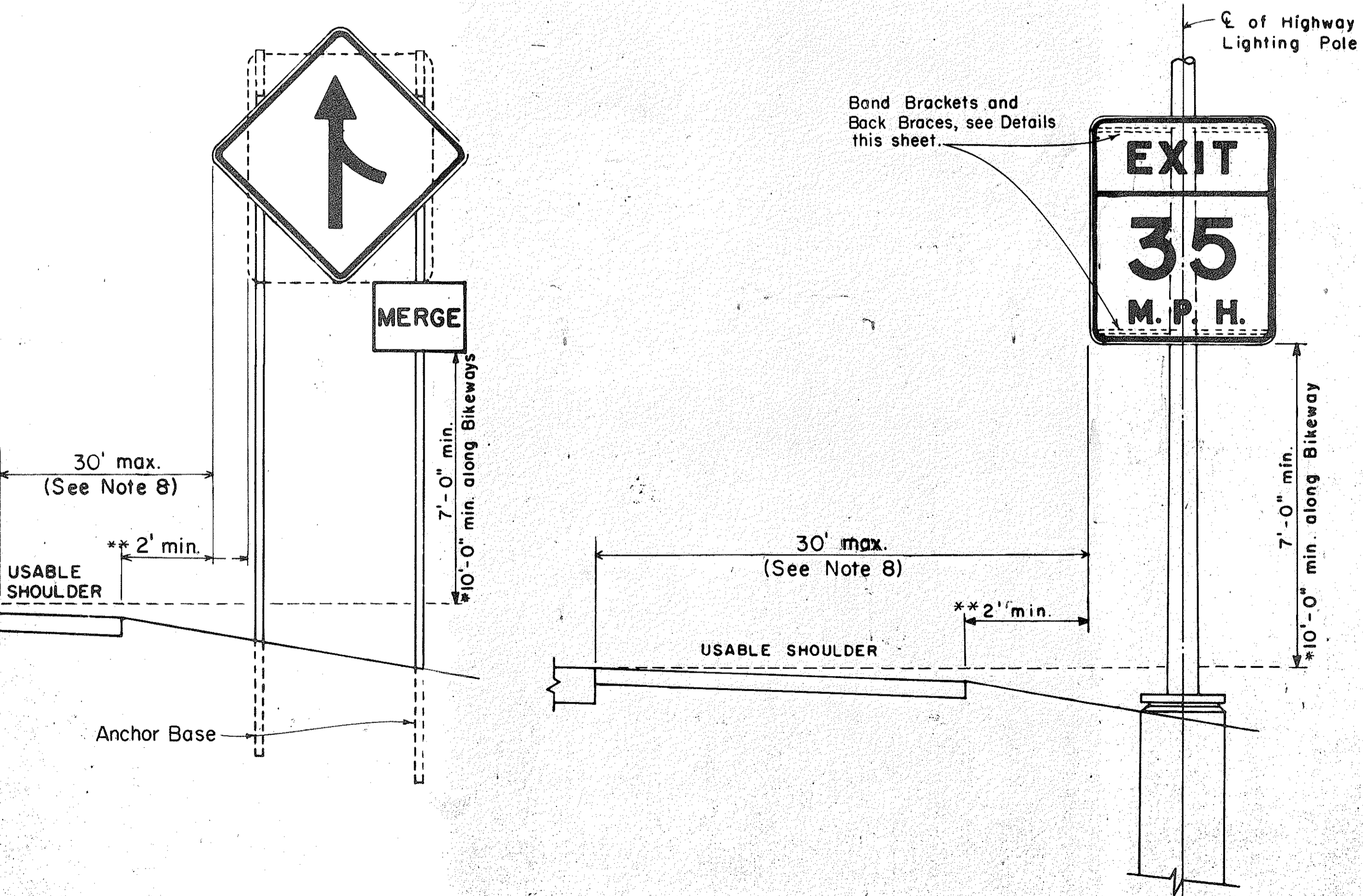
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | 5-H2-(24)11 | 1983 | 249 | 228 |

GENERAL NOTES

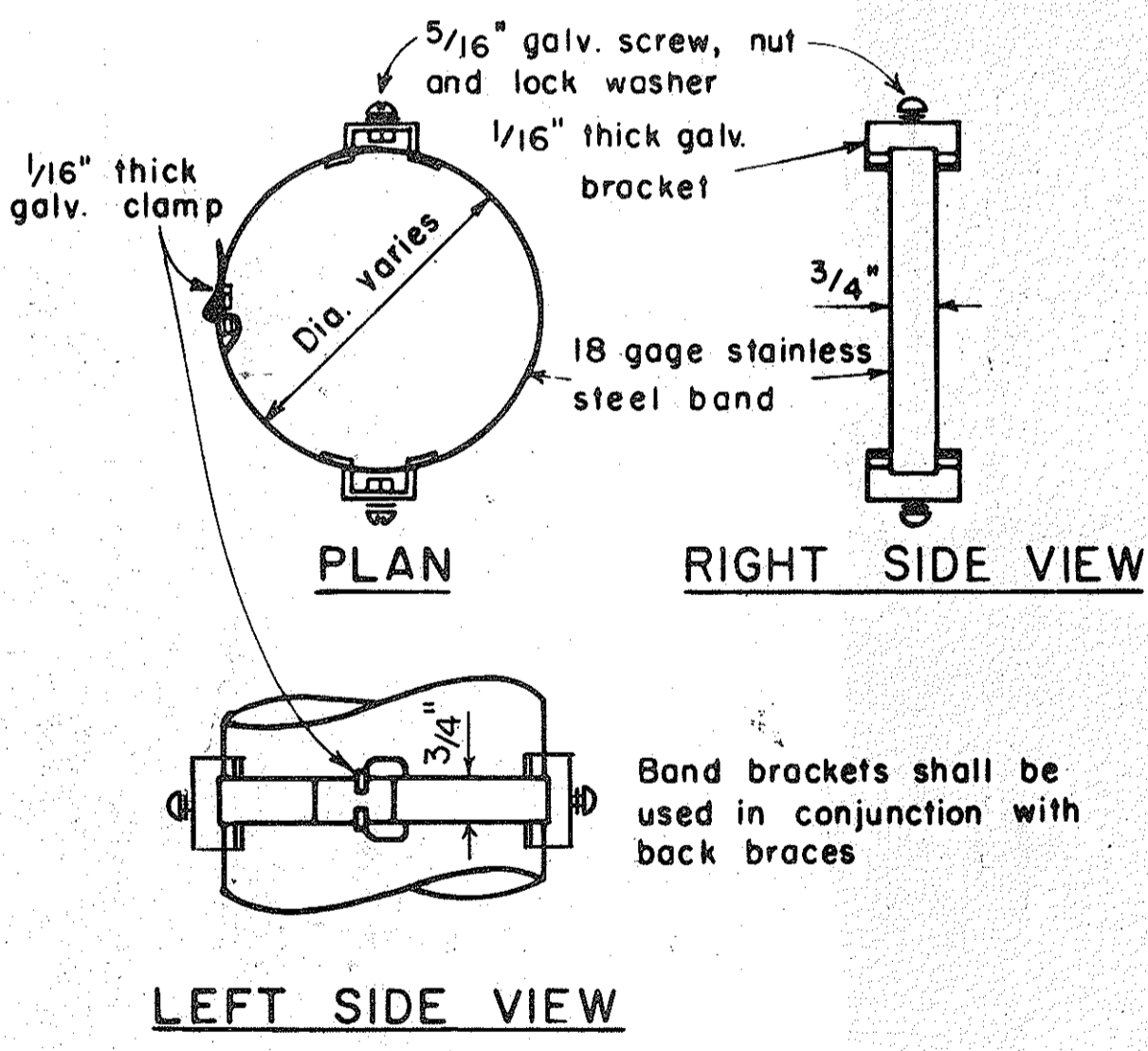
- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on other than two sign posts (i.e. on highway lighting poles) as follows:
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band brackets and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shall be shown on the plans.
- * 7. See plans for special details of signs along bikeways.
- ** 8. 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.



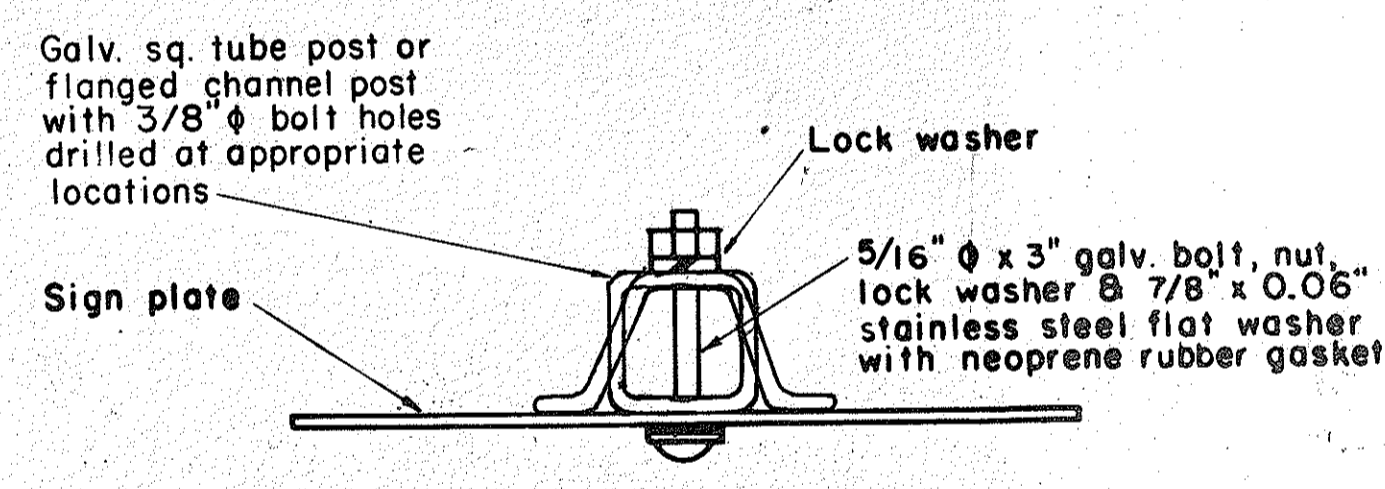
BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



BAND BRACKET



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS

NOT TO SCALE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|----------|
| 1 | Supersedes Sht. DT-100 approved 12/30/69 | H.T. | 11/15/77 |
| 2 | Revised depth of signpost | H.T. | 5/2/79 |
| 3 | Added Notes No. 8 & No. 9 | H.T. | 5/18/79 |
| 4 | Revised Gen. Note #4 & Mounting Details | H.T. | 4/25/80 |
| 5 | Revised General Notes, Lateral Sign Locations and Mounting Details | H.T. | 5/15/81 |
| 6 | Added Note 10. Minor revisions to notes and details. | H.T. | 9/22/82 |

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

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977
 SHEET NO. 21 OF 28 SHEETS DT 100

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 250 | 328 |

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

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 4.

GENERAL NOTES

- Sign posts and base posts shall be flanged channel type structural steel conforming to ASTM A 499 and galvanized in accordance with ASTM A 123.
NOMINAL DIMENSIONS:
2.50 lbs./ft. - 3.125" x 1.562"
4.00 lbs./ft. - 3.500" x 1.750"
- Retainer - Spacer Strap shall be AISI 1020 steel and galvanized in accordance with ASTM A 123.
- Retainer and Connector Bolts shall be 5/16 - 18 UNC x 1.75" long hex. head, integral flange conforming to ASTM A 354 Grade BC. Nuts shall be 5/16 - 18 UNC hex. head, integral flange conforming to ASTM A 563 Grade D. All bolts and nuts shall be cadmium plated per Federal spec. QQP 416 B, Class 2, Type 2.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = A x B x H
Therefore, if sign area (A x B) is known,
Maximum H = $\frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area (A x B) = $\frac{\text{Factor}}{H}$

APPROVAL RECOMMENDED:

Eiichi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

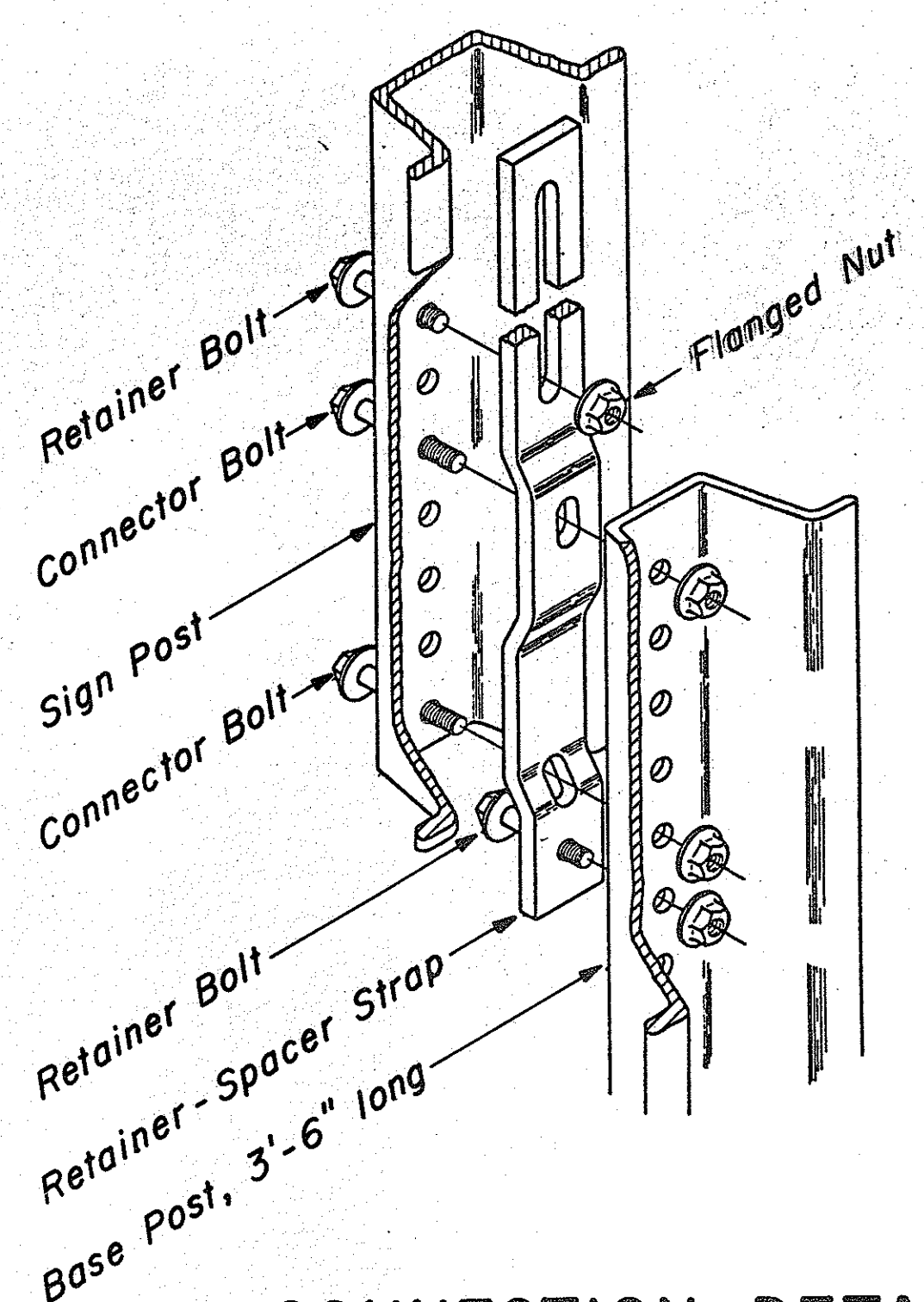
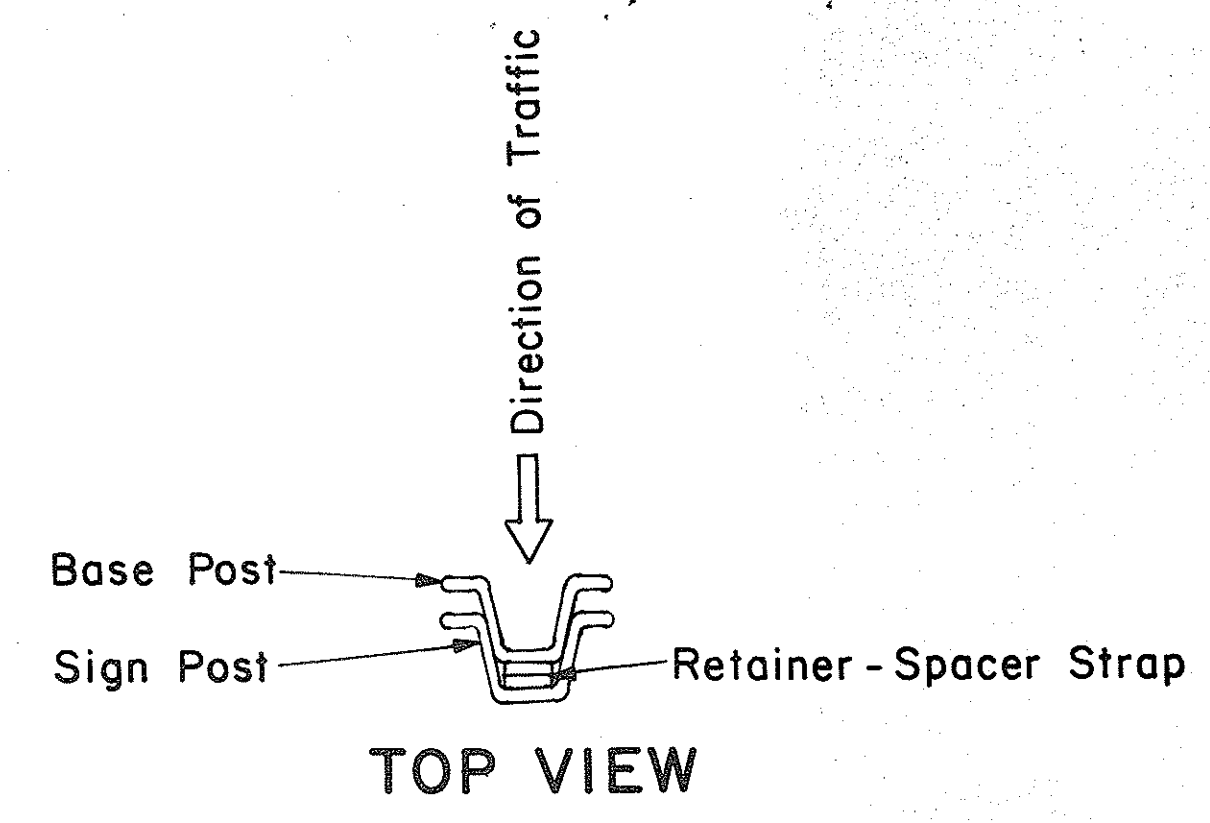
APPROVED:
Harold S. Salschi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
GALVANIZED FLANGED CHANNEL
SIGN POST MOUNTING

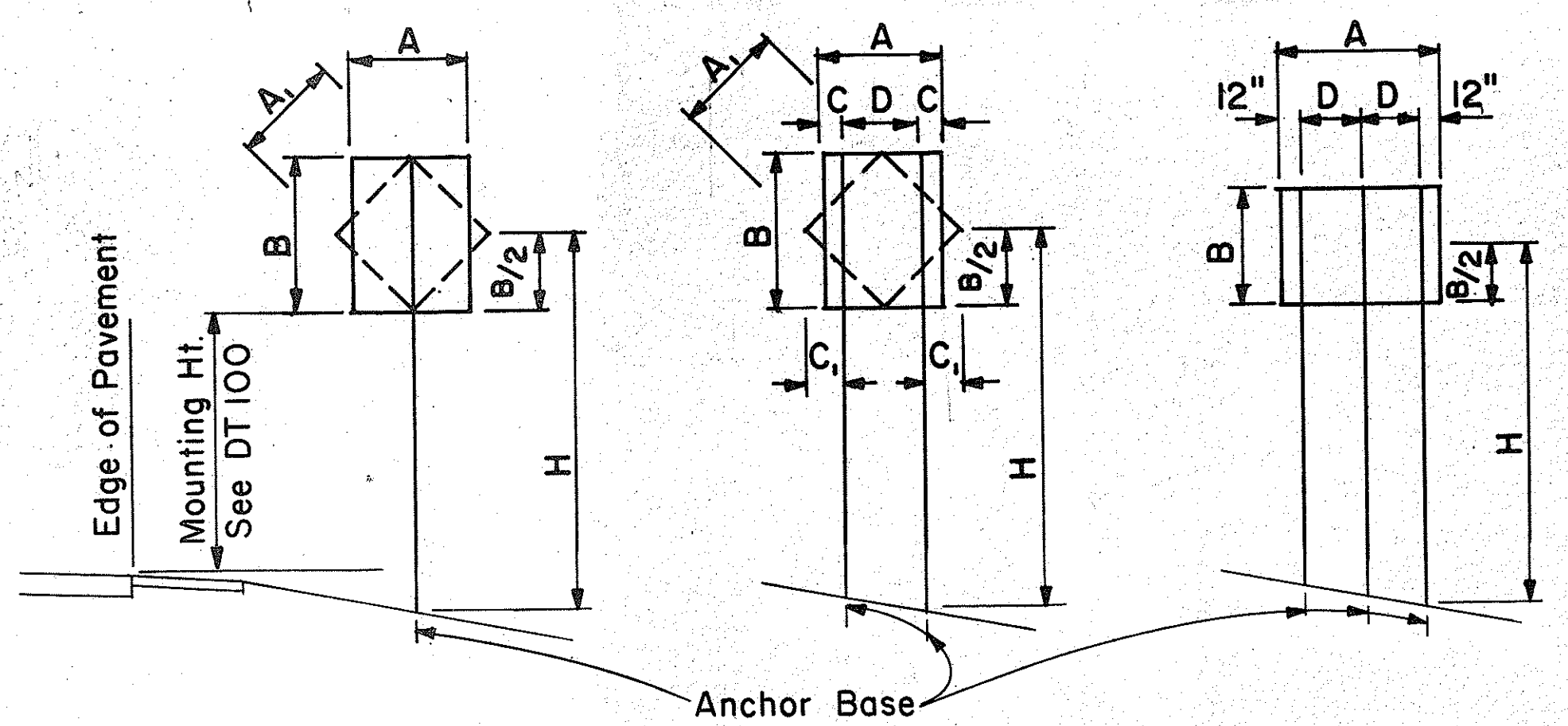
Scale: As Shown Date: Sept. 1982

SHEET No. 107 OF 28 SHEETS DT 100A



CONNECTION DETAIL

Not to Scale



1-POST Sign area 10 sq. ft. and less
2-POST Sign area greater than 10 sq. ft. or A = 48" - 60"
3-POST A = greater than 60"

TYPICAL INSTALLATION

Not to Scale

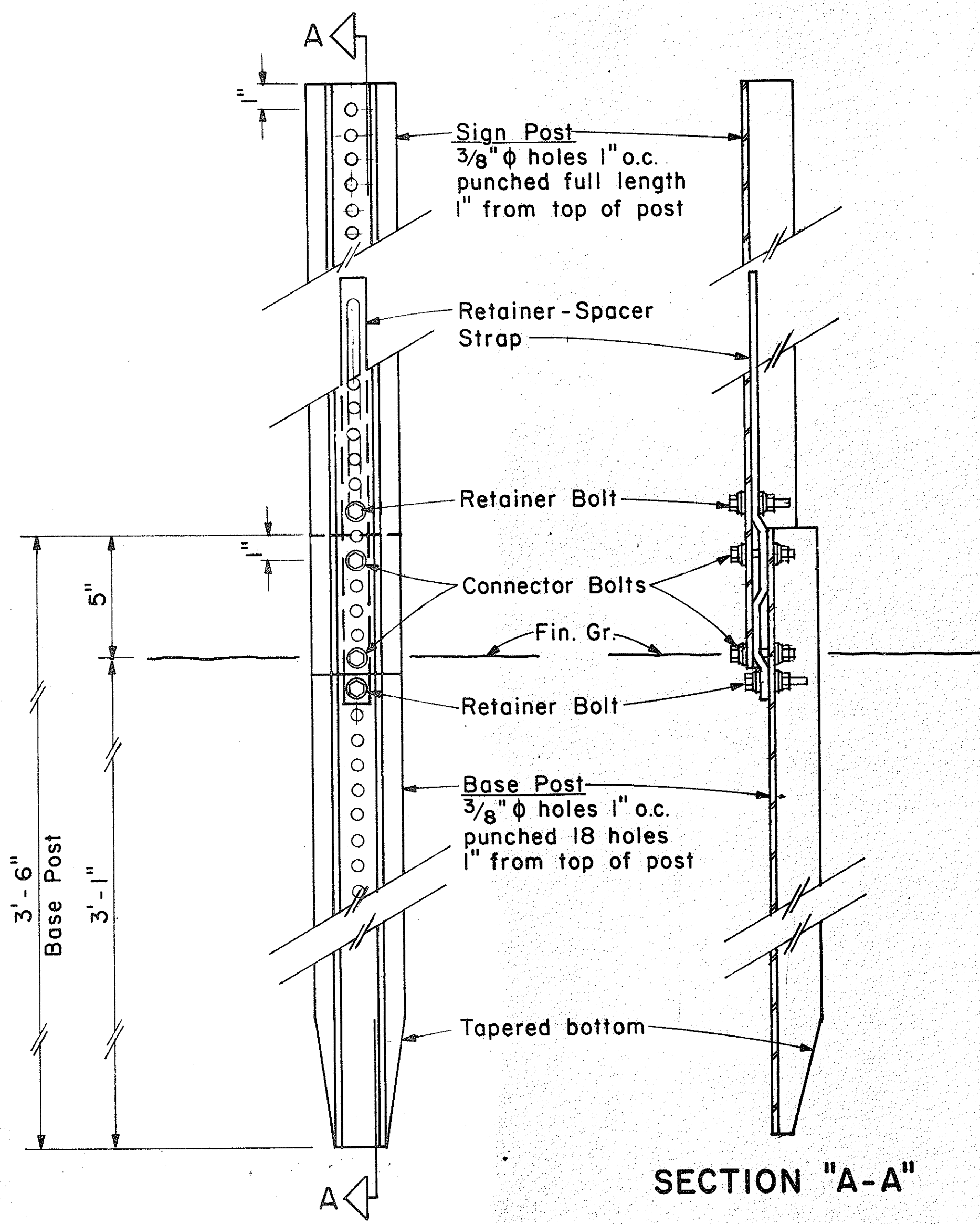
| FLANGED CHANNEL: 1-POST INSTALLATION | | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|--------------------------------------|--------------------|------------------------------------|------|------|------|------|------|-----------------------|
| Post Size | A x B x H (Factor) | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2.50 lbs./ft. | 57 | 8.14 | 7.13 | 6.33 | 5.70 | 5.18 | 4.75 | A x B (Area, sq. ft.) |
| 4.00 lbs./ft. | 112 | - | - | - | - | - | 9.33 | |

| FLANGED CHANNEL: 2-POST INSTALLATION | | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|--------------------------------------|--------------------|------------------------------------|-------|-------|-------|-------|-------|-----------------------|
| Post Size | A x B x H (Factor) | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2.50 lbs./ft. | 124 | 17.71 | 15.50 | 13.77 | 12.40 | 11.27 | 10.33 | A x B (Area, sq. ft.) |
| 4.00 lbs./ft. | 241 | 34.43 | 30.13 | 26.78 | 24.10 | 21.91 | 20.08 | |

| FLANGED CHANNEL: 3-POST INSTALLATION | | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|--------------------------------------|--------------------|------------------------------------|-------|-------|-------|-------|-------|-----------------------|
| Post Size | A x B x H (Factor) | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2.50 lbs./ft. | 187 | 26.71 | 23.38 | 20.78 | 18.70 | 17.00 | 15.58 | A x B (Area, sq. ft.) |
| 4.00 lbs./ft. | 362 | 51.71 | 45.25 | 40.22 | 36.20 | 32.91 | 30.17 | |

WINDLOAD CHARTS

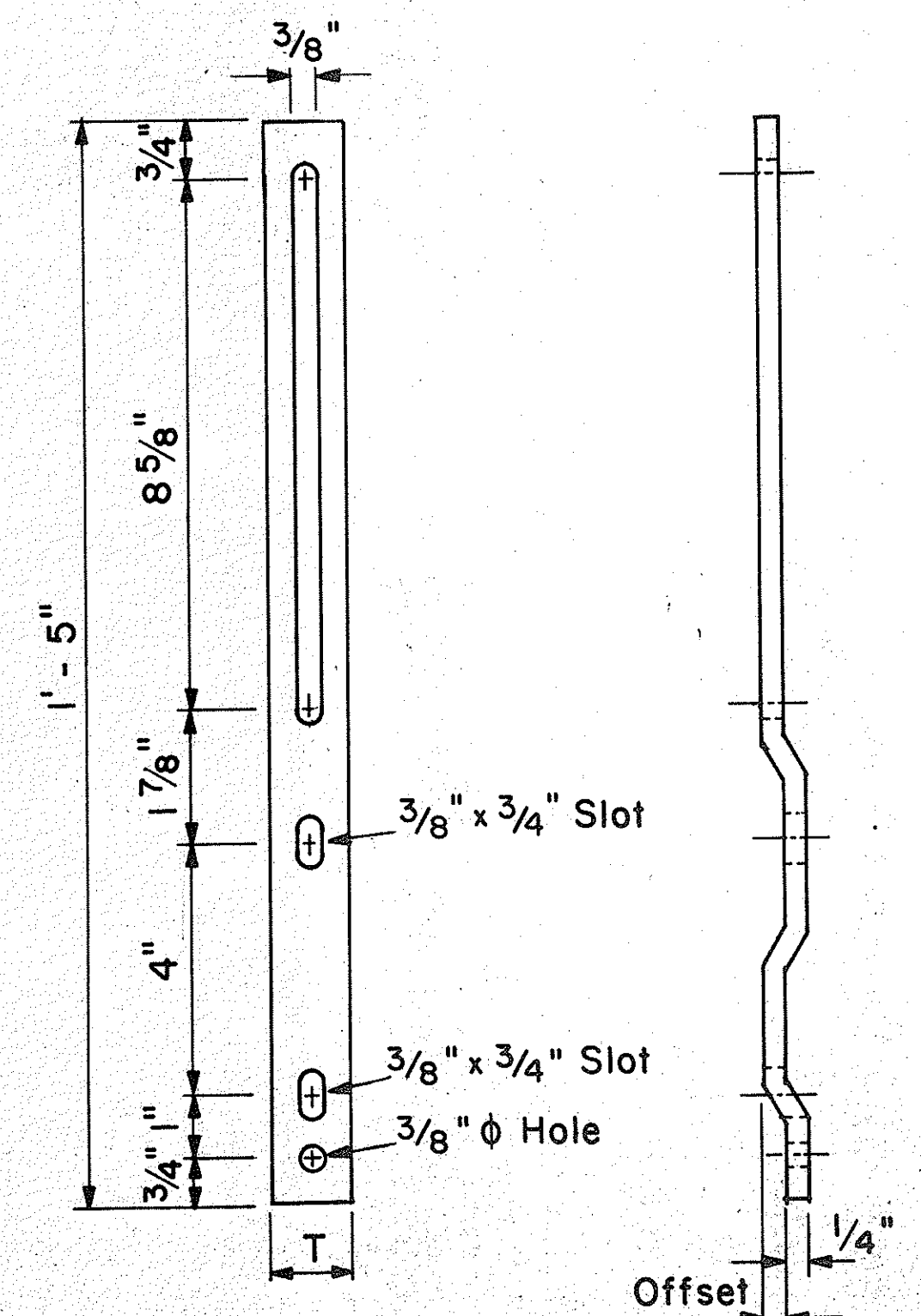
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
| | | | |



BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



RETAINER-SPACER STRAP

Not to Scale

| RETAINER-SPACER STRAP | | |
|-----------------------|-------|--------|
| Post Size | T | Offset |
| 2.50 lbs./ft. | 1.00" | 0.145" |
| 4.00 lbs./ft. | 1.12" | 0.280" |

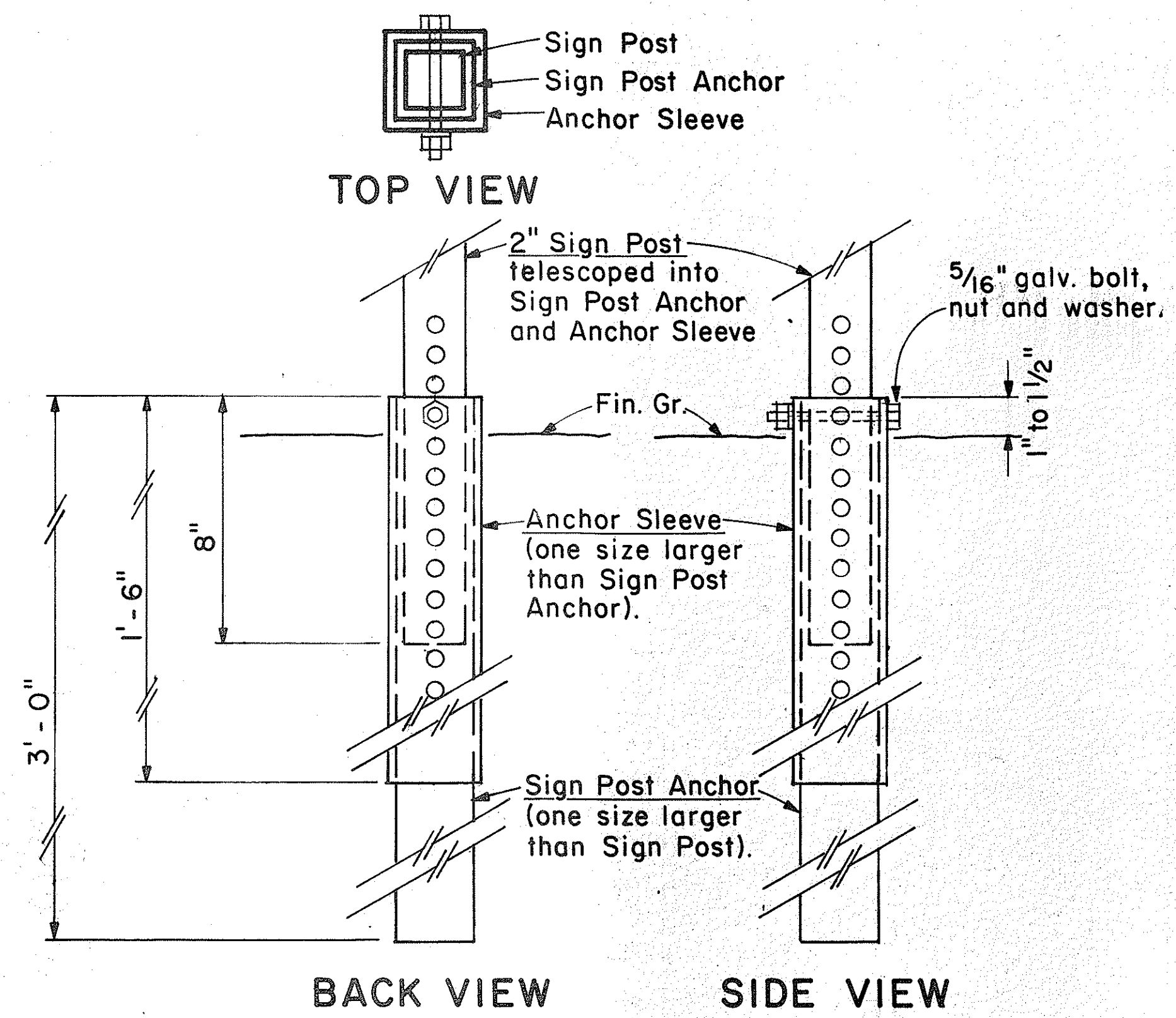
DATE
 DESIGNED BY
 CHECKED BY
 QUANTITIES BY
 TRACED BY
 DRAWN BY
 SURVEY PLOTTED BY
 ORIGINAL PLAN
 No.

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

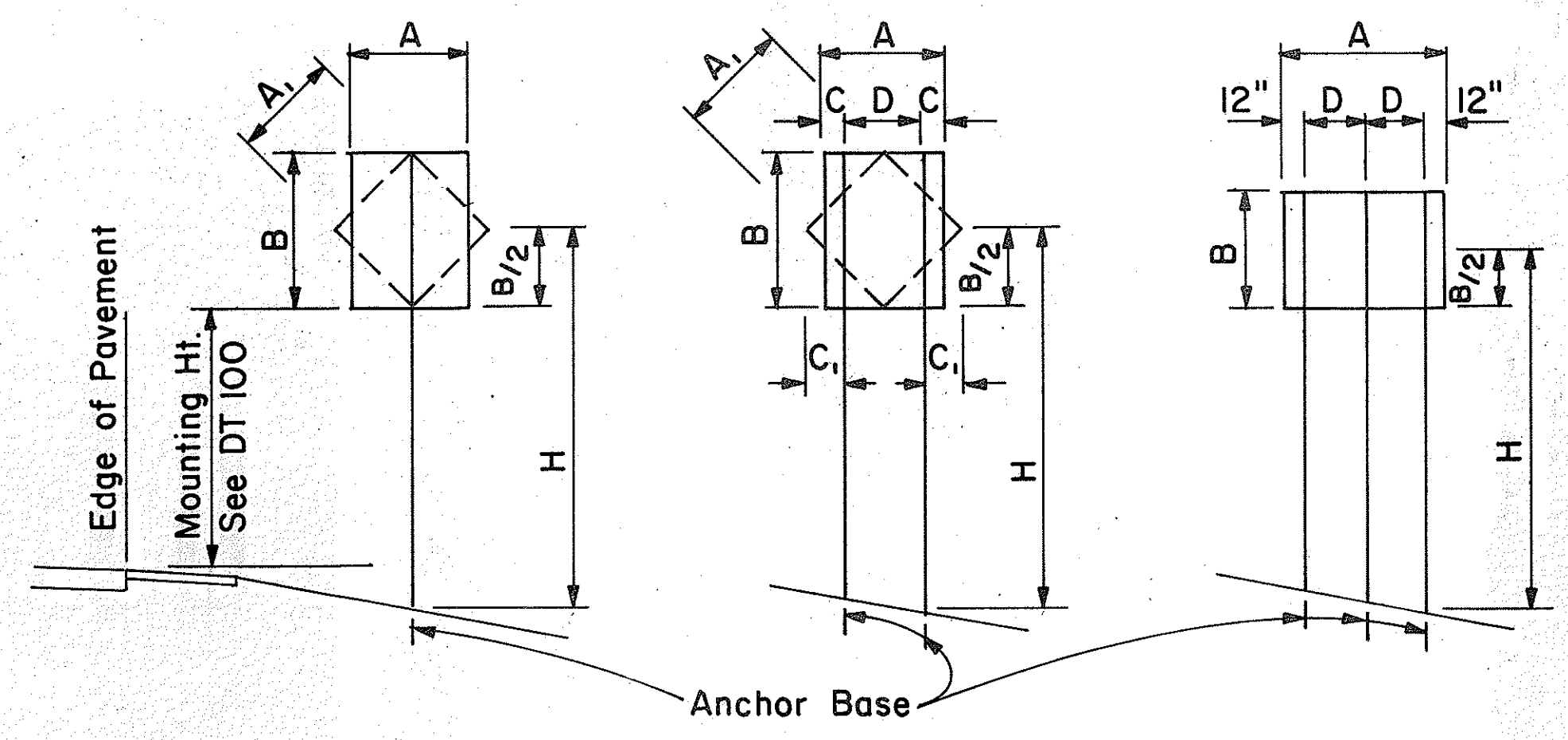
NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 2.

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 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,
 $Maximum\ sign\ area\ (A \times B) = \frac{Factor}{H}$



2" SIGN POST INSTALLATION



1-POST Sign area 10 sq. ft. and less
2-POST Sign area greater than 10 sq. ft. or A=48"-60"
3-POST A = greater than 60"

TYPICAL INSTALLATION

Not to Scale

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

A x B (Area, sq. ft.)

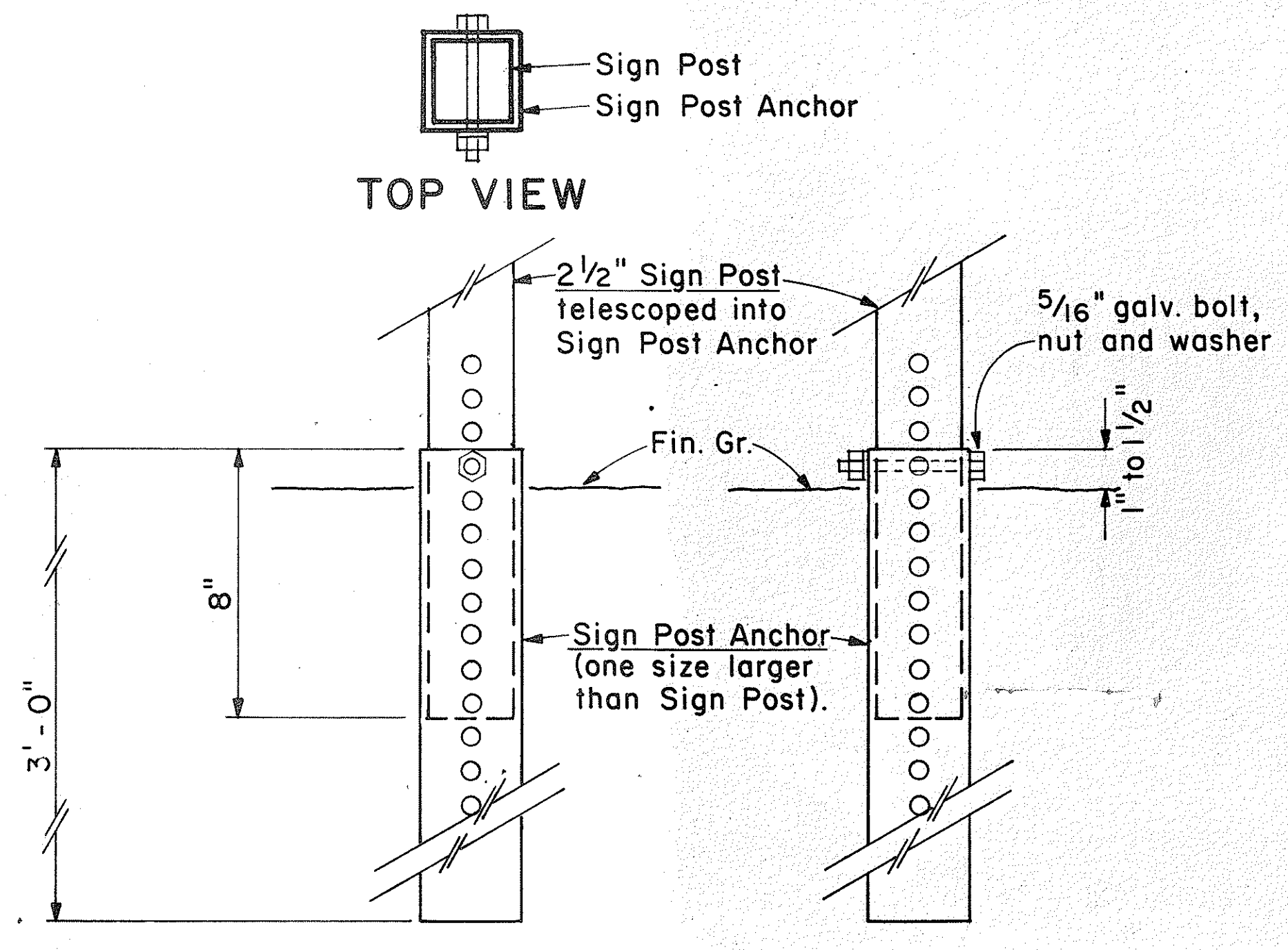
| SQUARE TUBE: 2-POST INSTALLATION | | | | | | | |
|----------------------------------|--------------------|------------------------------------|------|------|------|------|------|
| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | |
| | | 7 | 8 | 9 | 10 | 11 | 12 |
| 2" | 122 | 17.4 | 15.2 | 13.5 | 12.2 | 11.0 | 10.1 |
| 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 |

A x B (Area, sq. ft.)

| SQUARE TUBE: 3-POST INSTALLATION | | | | | | | |
|----------------------------------|--------------------|------------------------------------|------|------|------|------|------|
| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | |
| | | 7 | 8 | 9 | 10 | 11 | 12 |
| 2" | 183 | 26.0 | 22.8 | 20.3 | 18.2 | 16.6 | 15.2 |
| 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 |

A x B (Area, sq. ft.)

WINDLOAD CHARTS



2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

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

APPROVAL RECOMMENDED:
Eishi Tanaka 9/2/82
TRAFFIC ENGINEER DATE

APPROVED:
Herbert S. Saito 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

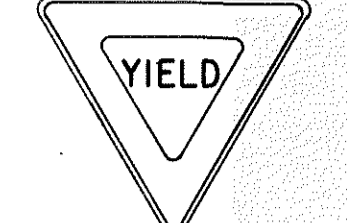
Scale: As Shown Date: Sept. 1982

SHEET NO. 117 OF 28 SHEETS DT 100B


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1-133(24) | 1972 | 252 | 328 |



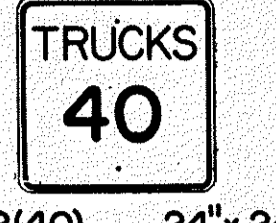
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



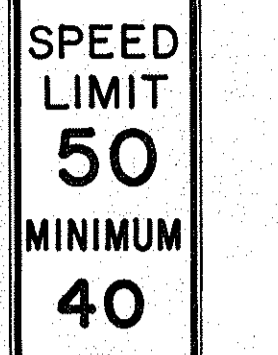
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



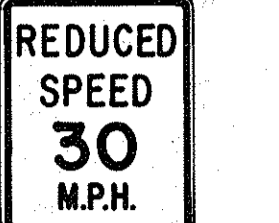
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



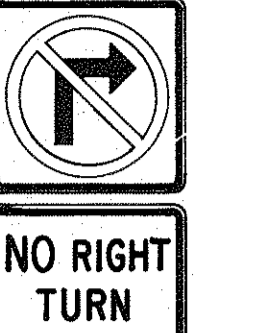
R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"




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"



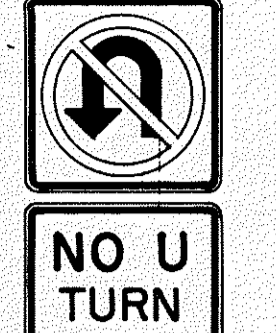
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"




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 48" x 48"
48" x 36"




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



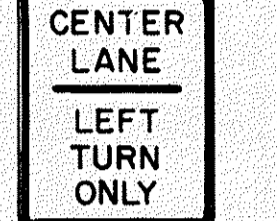
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"




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"



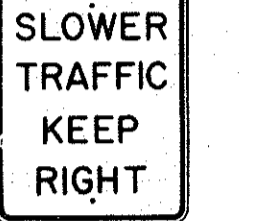
R3-9 24" x 30"



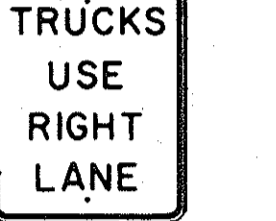
R4-1 24" x 30"




R4-2 24" x 30"



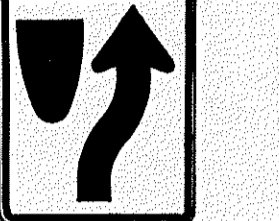
R4-3 24" x 30"
R4-3-A 48" x 60"



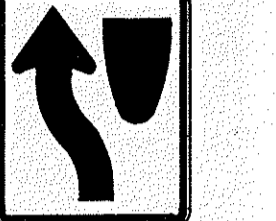
R4-5 24" x 30"



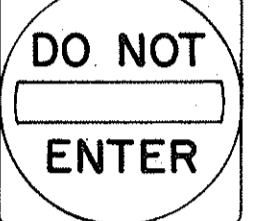
R4-6(500) 24" x 30"




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



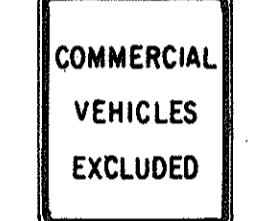
R4-8 24" x 30"
24" x 18"




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




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



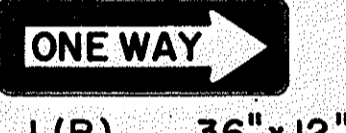
R5-4 24" x 30"




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




R5-9 36" x 24"



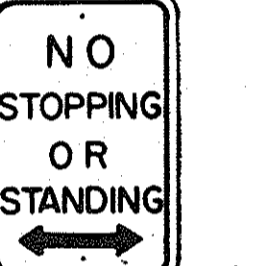
R6-1(R) 36" x 12"




R6-2(R) 18" x 24"



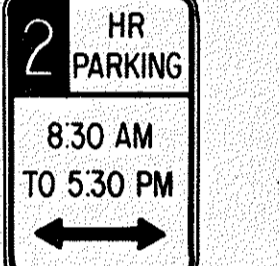
R7-1 12" x 18"
R7-1-A 24" x 30"




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



R7-1-7(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"



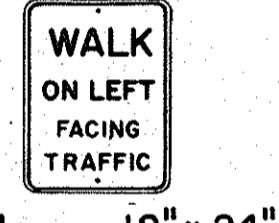
R8-5 24" x 30"




R8-6 24" x 30"




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



R9-1 18" x 24"



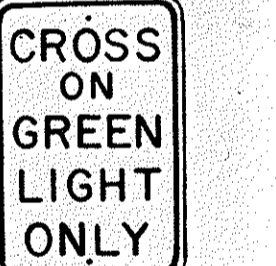
R9-2 12" x 18"




R9-3 12" x 18"



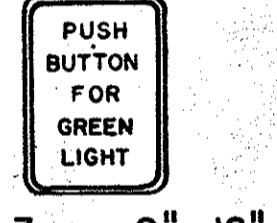
R9-4 18" x 24"




R10-1 12" x 18"



R10-2 12" x 18"



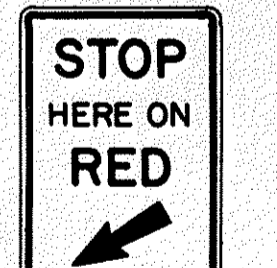
R10-3 9" x 12"



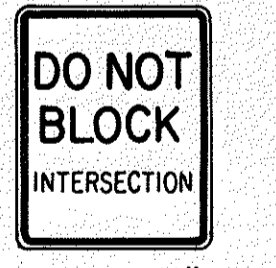
R10-4 9" x 12"




R10-5 24" x 30"



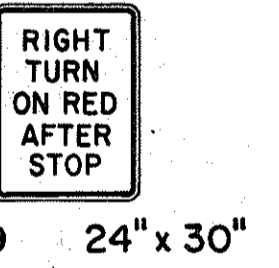
R10-6 24" x 36"




R10-7 24" x 30"



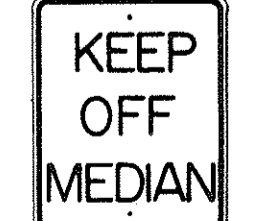
R10-8 24" x 30"




R10-9 24" x 30"



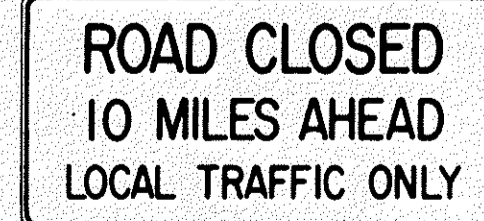
R10-10 24" x 30"



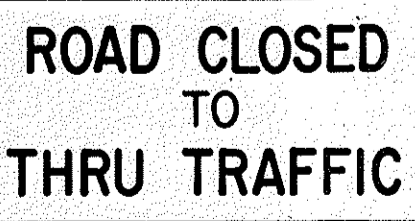
R11-1 24" x 30"




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:
Eisaku Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Valent Zaksen 3-28-72
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|----------|
| 1 | Supersedes Sht. DT 101 Approved 12-30-69 | H. | 3/20/72 |
| 2 | Revised General Note 1. | H. | 10/16/74 |
| 3 | Added General Note 5 | H. | 6/9/79 |

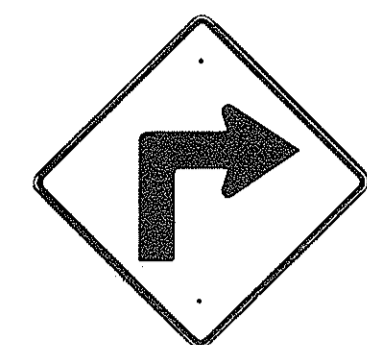
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 12T OF 28 SHEETS DT 101

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

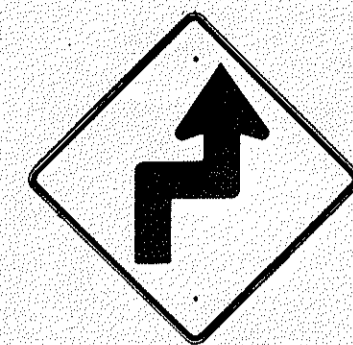
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII * | HAW. | 1-113-1(24) III | 1983 | 253 | 328 |



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



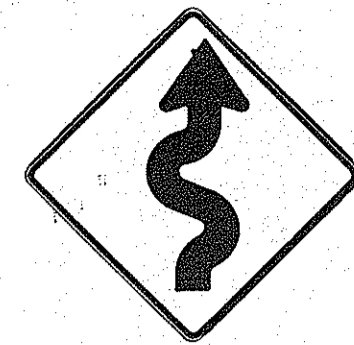
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



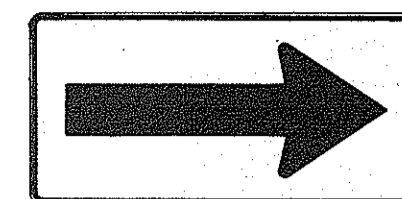
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



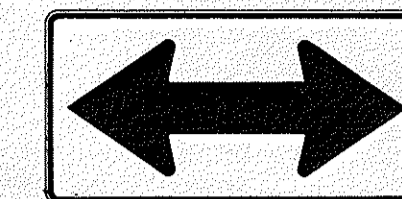
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



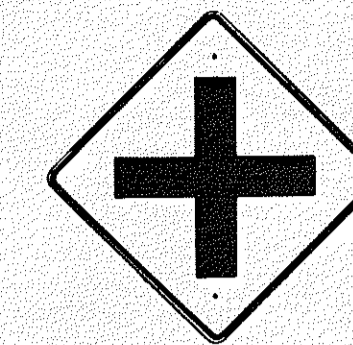
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



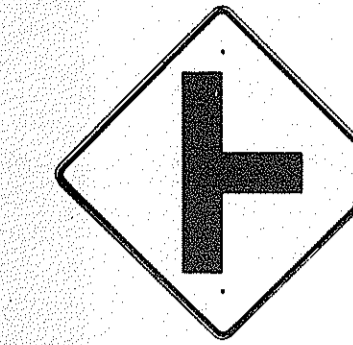
W1-6 48"x24"



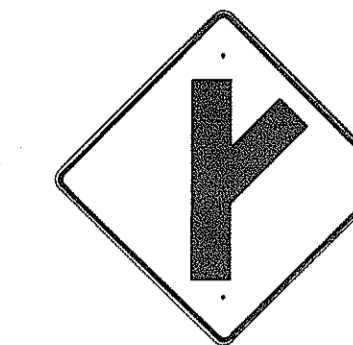
W1-7 48"x24"



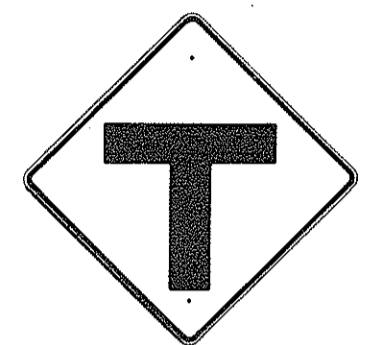
W2-1 30"x30"
W2-1-A 48"x48"



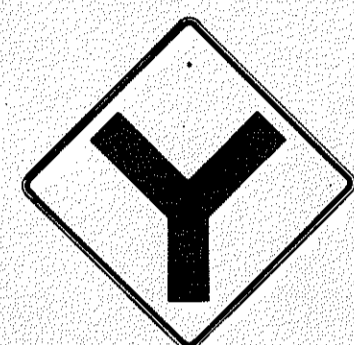
W2-2 30"x30"
W2-2-A 48"x48"



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



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



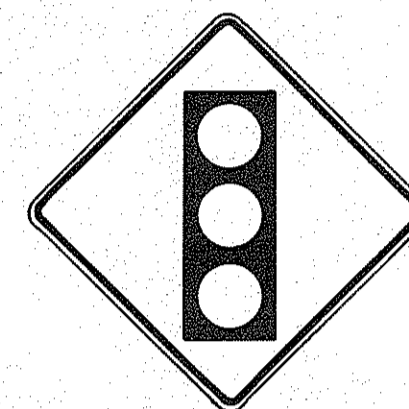
W2-5 30"x30"
W2-5-A 48"x48"



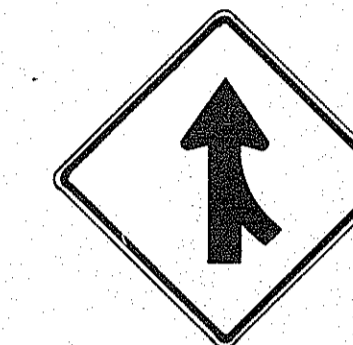
W3-1 30"x30"
W3-1-A 36"x36"



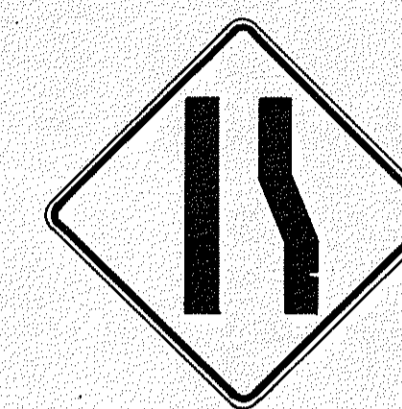
W3-2 30"x30"
W3-2-A 36"x36"



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"



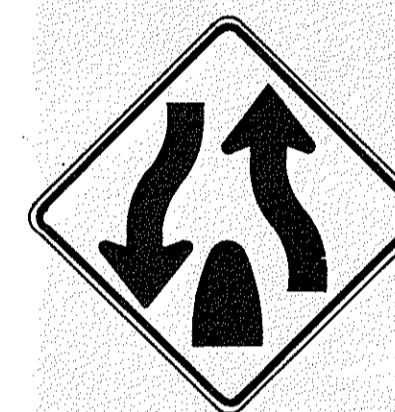
W5-2 30"x30"
W5-2-A 36"x36"



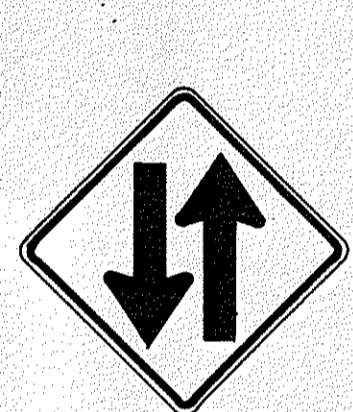
W5-3 36"x36"



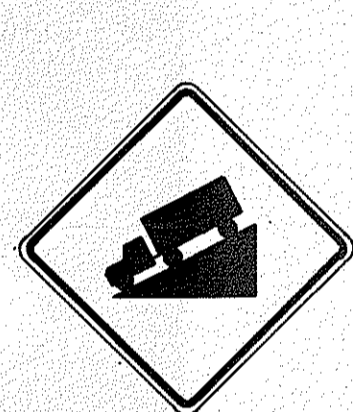
DIVIDED HIGHWAY
W6-1 36"x36"
24"x18"



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"



W7-2 24"x18"



W8-1 30"x30"
W8-1-A 36"x36"



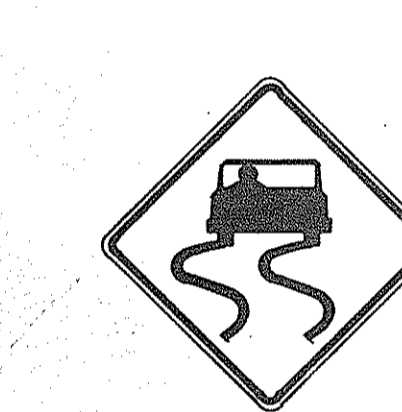
W8-2 30"x30"
W8-2-A 36"x36"



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"



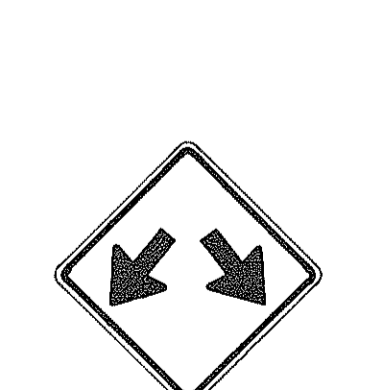
PED XING
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



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



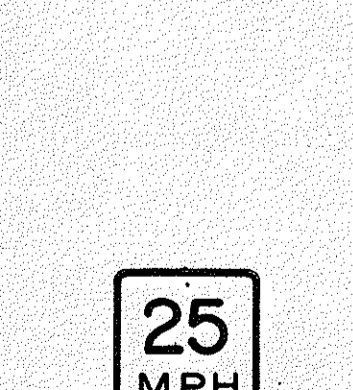
FARM MACHINERY
W11-5 30"x30"
24"x18"
W11-5-A 36"x36"
24"x18"



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



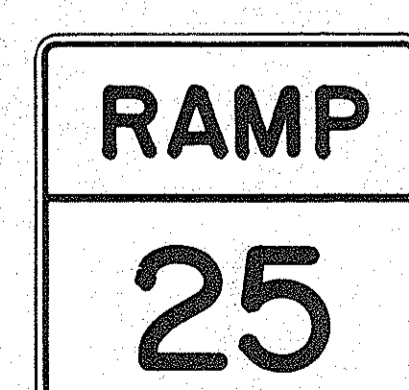
LOW CLEARANCE
W12-2(12'-6") 36"x36"
24"x18"



25 M.P.H.
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:
E. J. Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Robert B. Davis 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 | MA | 9-16-75 |
| 4 | Revised General Note 5 | H.T. | 9-14-76 |
| 5 | Added Note 1 | H.T. | 11-9-79 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

SHEET No. 137 OF 28 SHEETS DT 102

NOTE

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

| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY | _____ |
| CHECKED BY | _____ |
| NOTE BOOK | _____ |
| NO. | _____ |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 113-1(24) | 1978 | 254 | 323 |

General Notes

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

ALL WAY R1-4 18" x 6"

REDUCED SPEED AHEAD R2-5d(35) 24" x 30"
R2-5d(35)-A 48" x 60"

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

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

BUS STOP R7-107(R) 12" x 24"

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

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

NO PEDESTRIAN CROSSING R9-3a 18" x 18"
18" x 12"
R9-3a-A 24" x 24"
24" x 18"

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

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

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

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

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

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

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

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

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

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

U TURN AHEAD 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"

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

ADVANCE GREEN W15-2 24" x 24"

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

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

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

SCHOOL BUS STOP AHEAD S2-1 36" x 36"

SCHOOL BUS STOP AHEAD S3-1 30" x 30"

8:00 AM TO 3:30 PM S4-1 24" x 10"

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

SCHOOL S4-3 24" x 8"

WHEN FLASHING S4-4 24" x 10"

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

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

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

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

APPROVED:
Robert Z. Zakeishis 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. | 11/9/79 |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
 SHEET No. 147 OF 23 SHEETS. DT 103

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 112-1(24) | 1983 | 255 | 328 |



CW20-1a 48"x 48"



CW20-2d 48"x 48"



CW20-3b 48"x 48"



CW20-4d 48"x 48"



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



CW20-7c 48"x 48"



CW21-1 30"x 30"



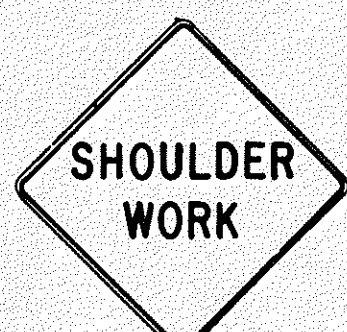
CW21-2 30"x 30"



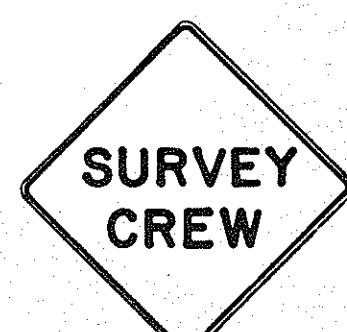
CW21-3 36"x 36"



CW21-4 36"x 36"



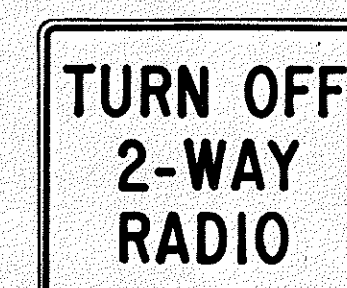
CW21-5 30"x 30"



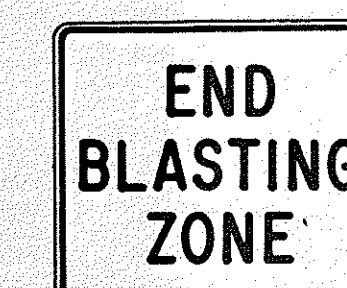
CW21-6 30"x 30"



CW22-1b 48"x 48"



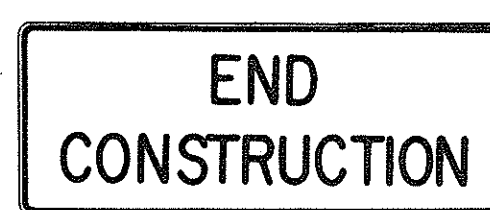
CW22-2 42"x 36"



CW22-3 42"x 36"



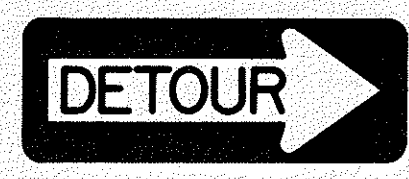
CG20-1(5) 60"x 36"



CG20-2 60"x 24"



CM4-9(R) 30"x 24"



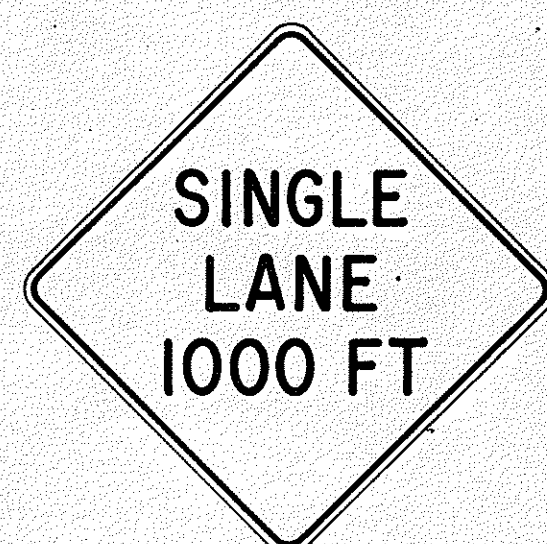
CM4-10(R) 48"x 18"



CG20-4 36"x 18"



CW23-1 36"x 36"



CW23-2b 48"x 48"



CW23-3(R) 48"x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All construction signs shall be reflectorized.
- All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT, c-500 FT and d-AHEAD.

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

APPROVED:
Shigeru Sakai 3/23/72
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|---|-------------|----------|
| 1 | Supersedes Sht. DT 104 Approved 12-30-69 | H.T. | 3/25/72 |
| 2 | Revised General Note 1 | H.T. | 10/16/74 |
| 3 | Revised General Note 2 | H.T. | 9-16-75 |
| 4 | Revised General Note 2 and sign CG20-1(5) | H.T. | 9-14-76 |

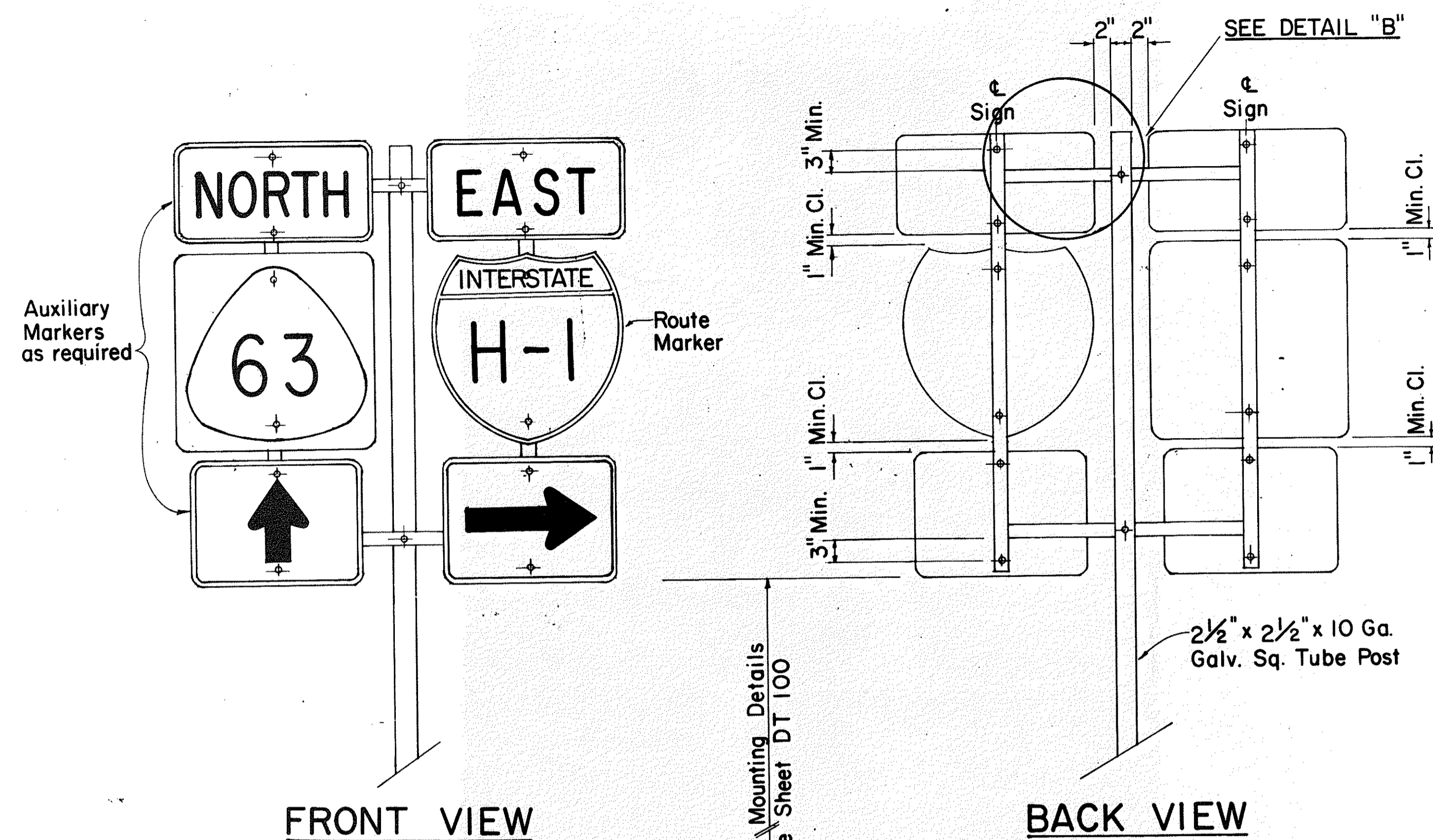
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE
SHEET No. 15T OF 28 SHEETS DT 104

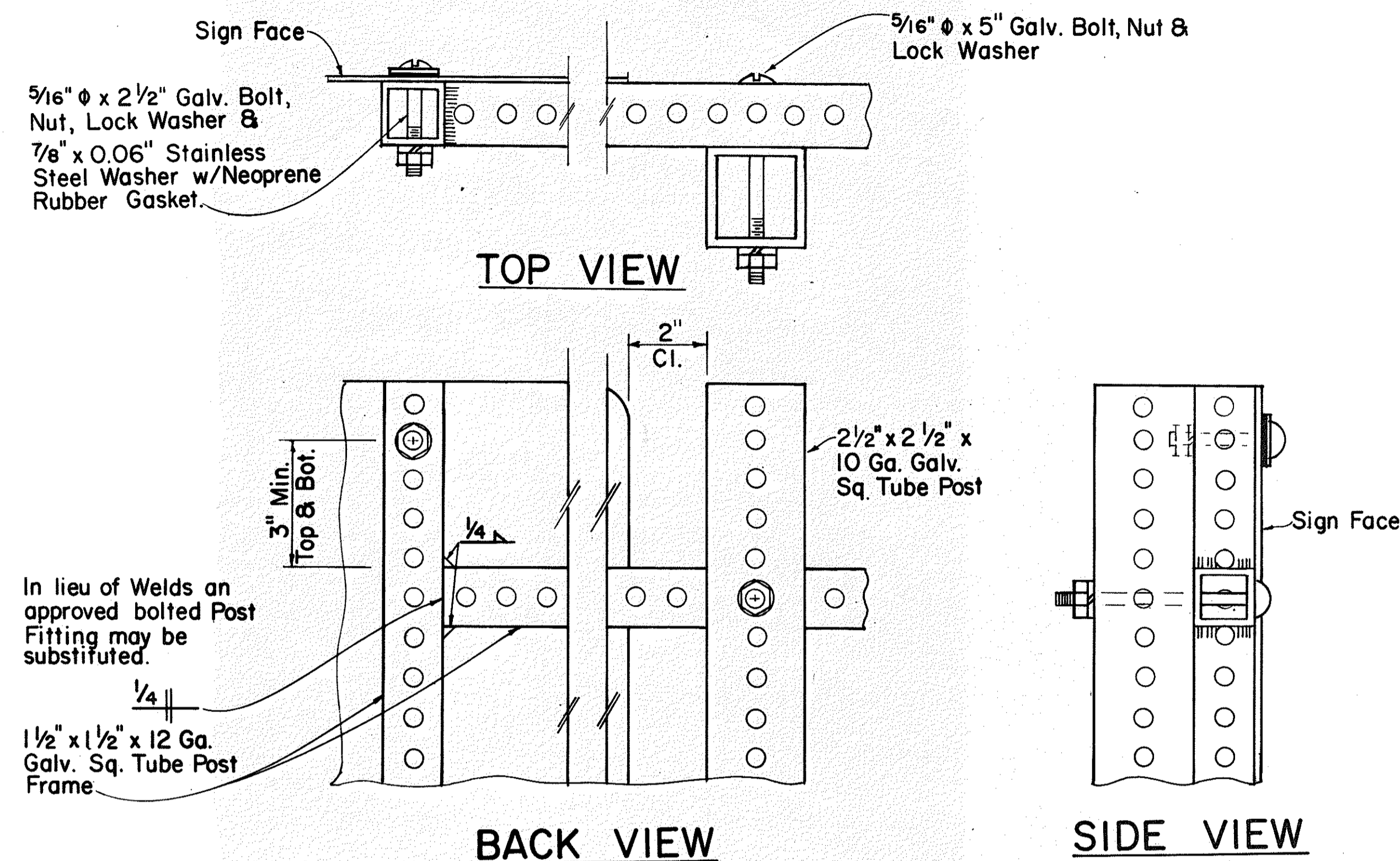
| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY | _____ |
| DESIGNED BY | _____ |
| QUANTITIES BY | _____ |
| CHECKED BY | _____ |
| ORIGINAL PLAN | _____ |
| NOTE BOOK | _____ |
| No. | _____ |

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | I-43-1(24)11 | 1983 | 257 | 328 |



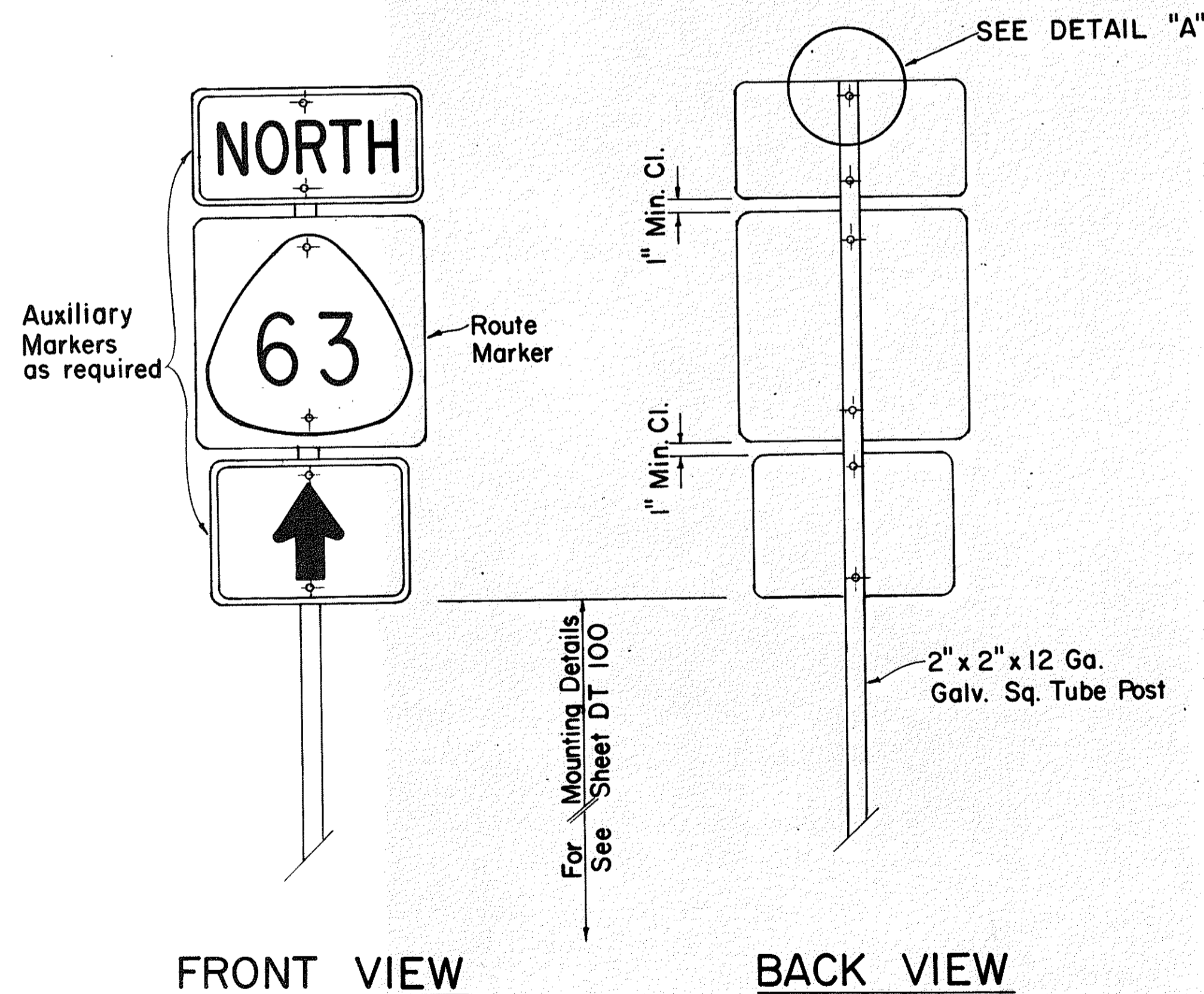
TYPE "B" ASSEMBLY

SCALE: 1" = 1'-0"



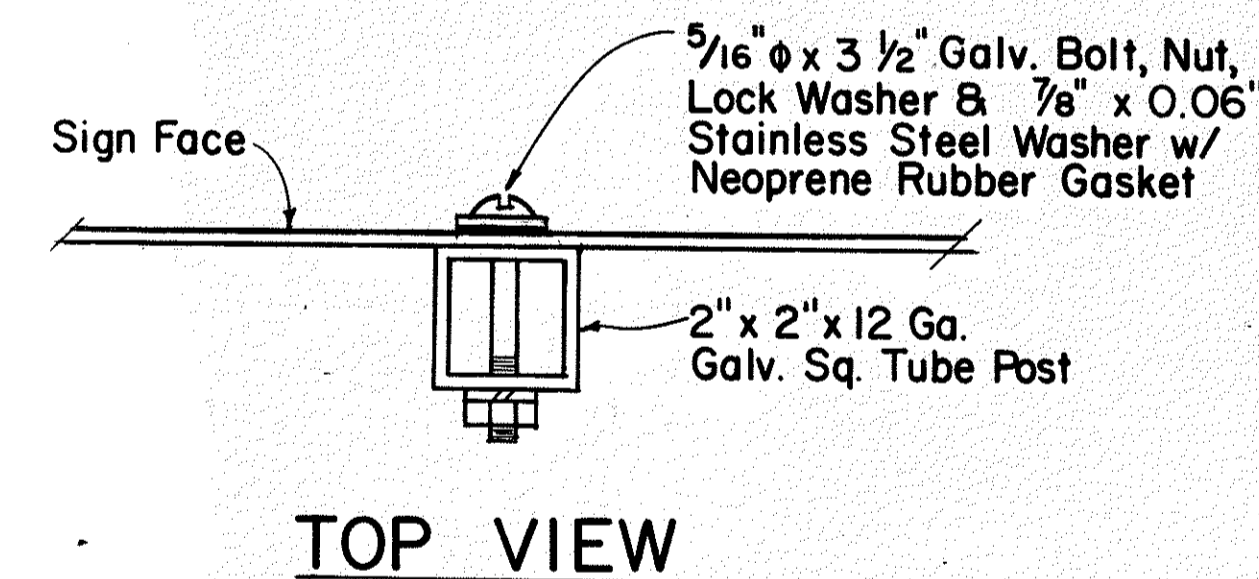
DETAIL "B"

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 Zaleishi 1/31/80
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

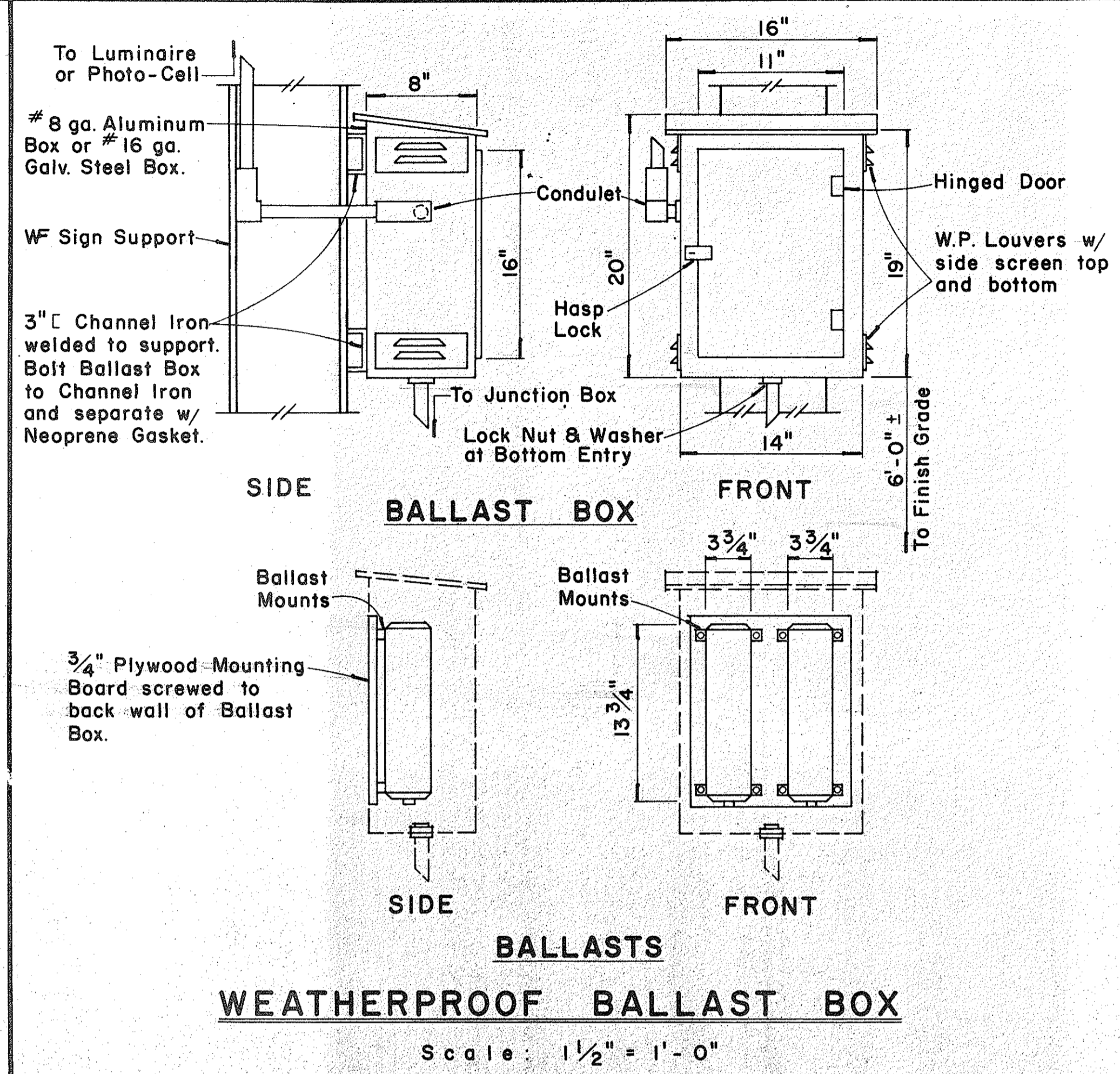
STANDARD DETAILS
ROUTE MARKER
ASSEMBLIES

SCALE: AS SHOWN
SHEET No. 177 OF 28 SHEETS DT 107

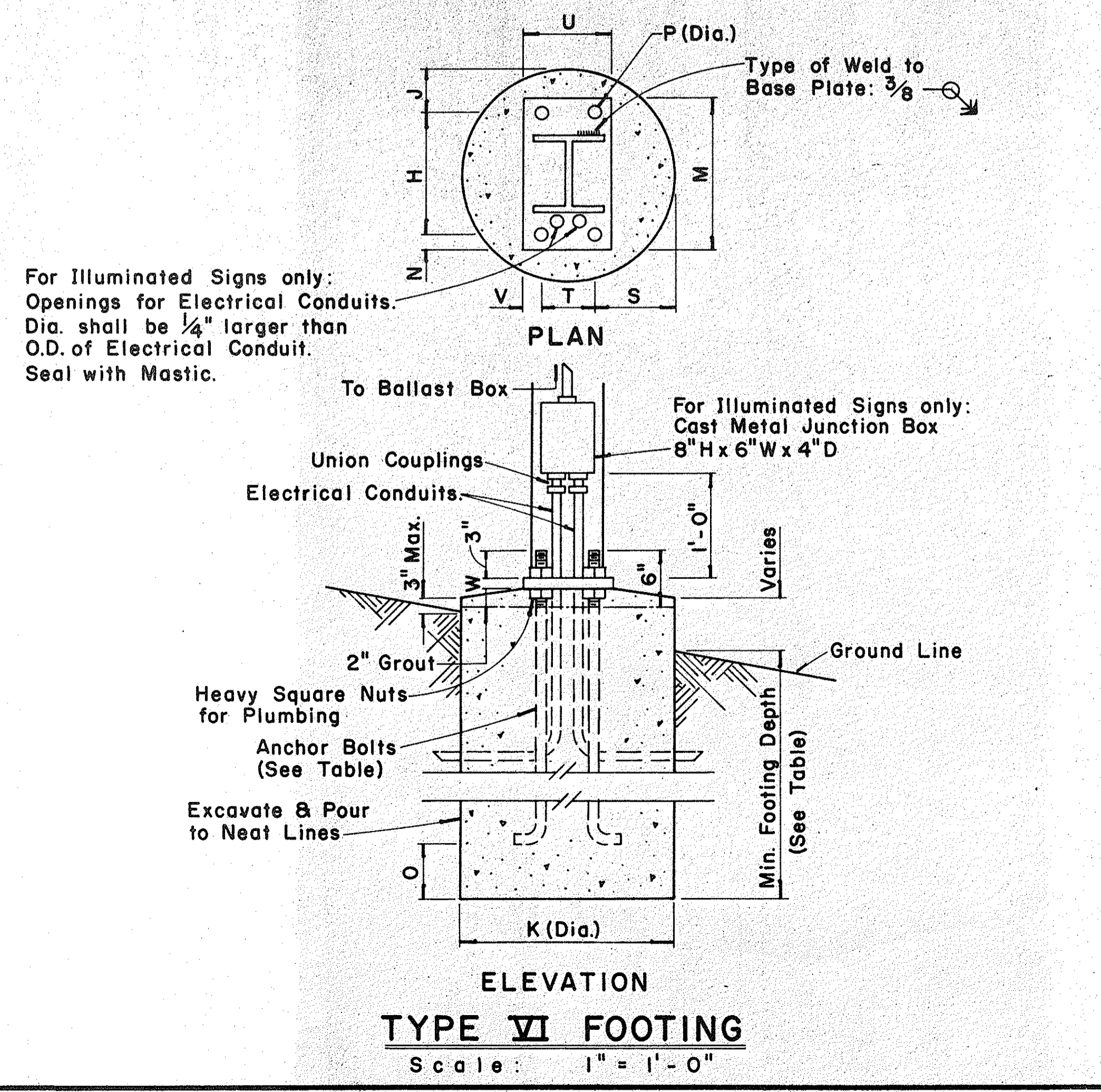
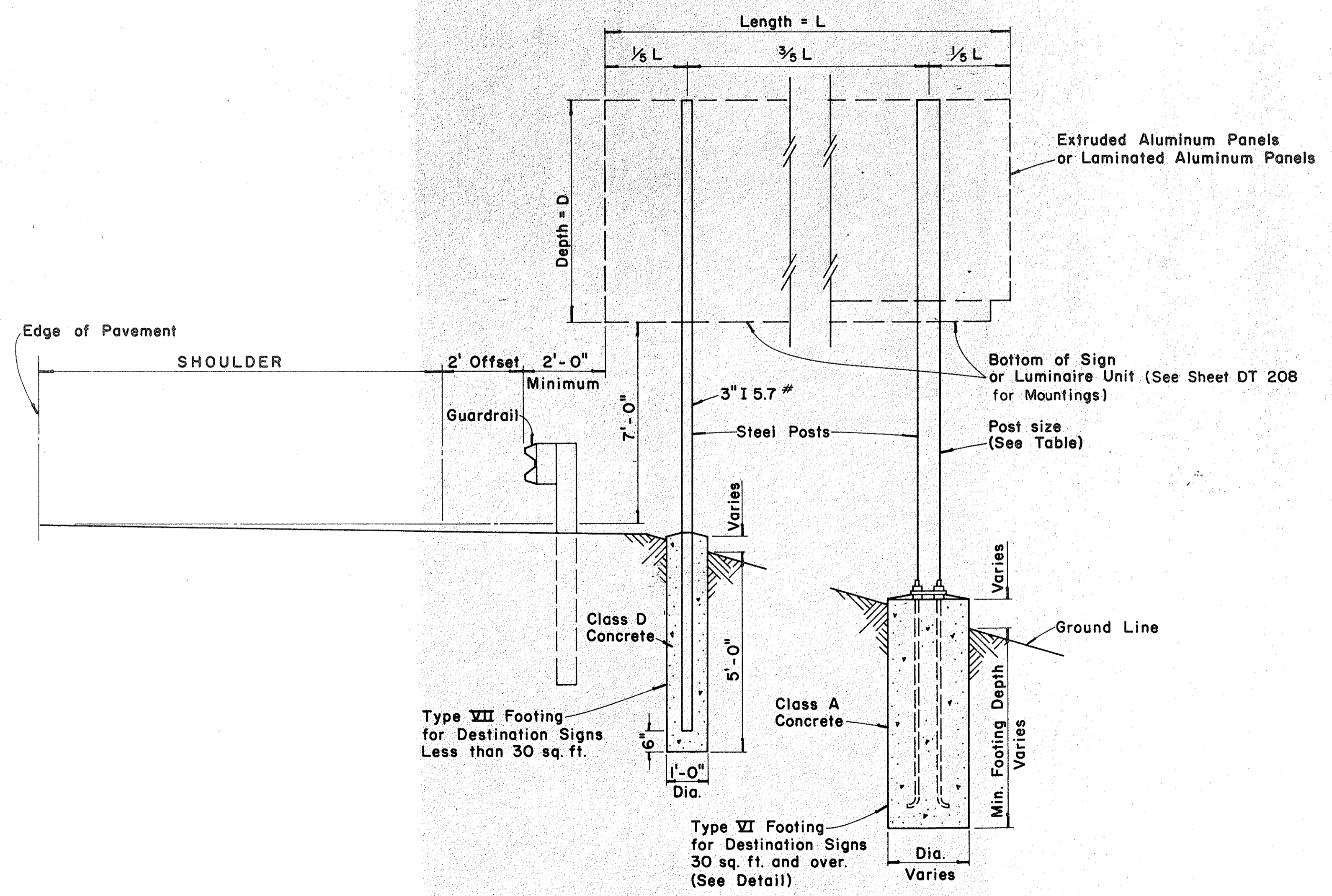
| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY | _____ |
| DESIGNED BY | _____ |
| QUANTITIES BY | _____ |
| CHECKED BY | _____ |
| ORIGINAL PLAN | _____ |
| NOTE BOOK | _____ |
| No. | _____ |

* For moment calculations only. Post shall be from top of foundation to top of sign.
 ** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4 1/2 feet.

| POST SIZE | MAXIMUM SIGN AREA | POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN * | DIMENSIONS | | | | | | | | | | | ANCHOR BOLT DIA. | MINIMUM FOOTING DEPTH | | |
|-----------|-------------------|---|------------|--------|-----|---------|--------|----|--------|---------|--------|-----|--------|------------------|-----------------------|--------|--------|
| | | | H | J | K | M | N | O | P | S | T | U | V | | W | CUT | FILL** |
| 8 J 10 | 50 sq. ft. | 14' | 14" | 5" | 24" | 17 1/4" | 1 5/8" | 6" | 1 1/4" | 9" | 6" | 10" | 2" | 1" | 1 1/8" Ø | 4 1/2' | 4 1/2' |
| 8 WF 24 | 90 sq. ft. | 21' | | | | | | | | | | | | | | | 5' |
| 8 WF 35 | 190 sq. ft. | 15' | 16 1/2" | 6 3/4" | 30" | 20" | 1 3/4" | 6" | 1 3/8" | 11 3/4" | 6 1/2" | 10" | 1 3/4" | 1" | 1 1/4" Ø | 6' | 7' |
| 10 WF 45 | 190 sq. ft. | 25' | | | | | | | | | | | | | | | |
| 10 WF 45 | 200 sq. ft. | 25' | | | | | | | | | | | | | | | |
| 12 WF 50 | 230 sq. ft. | 25' | | | | | | | | | | | | | | | |
| 12 WF 50 | 250 sq. ft. | 23' | | | | | | | | | | | | | | | |



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1-13-(24) | 1983 | 258 | 328 |



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

APPROVED:
John J. Salvo 12-29-69
 ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------------------------------|-------------|--------|
| 1 | Add note for luminaire mounting. | H.F. | 6/3/80 |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS
 Scale: As Shown
 SHEET No. 18T OF 28 SHEETS DT 203

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 143-1(24)11 | 1983 | 260 | 328 |

(OVERHEAD SIGNS)
SUPPORT SPACING TABLE

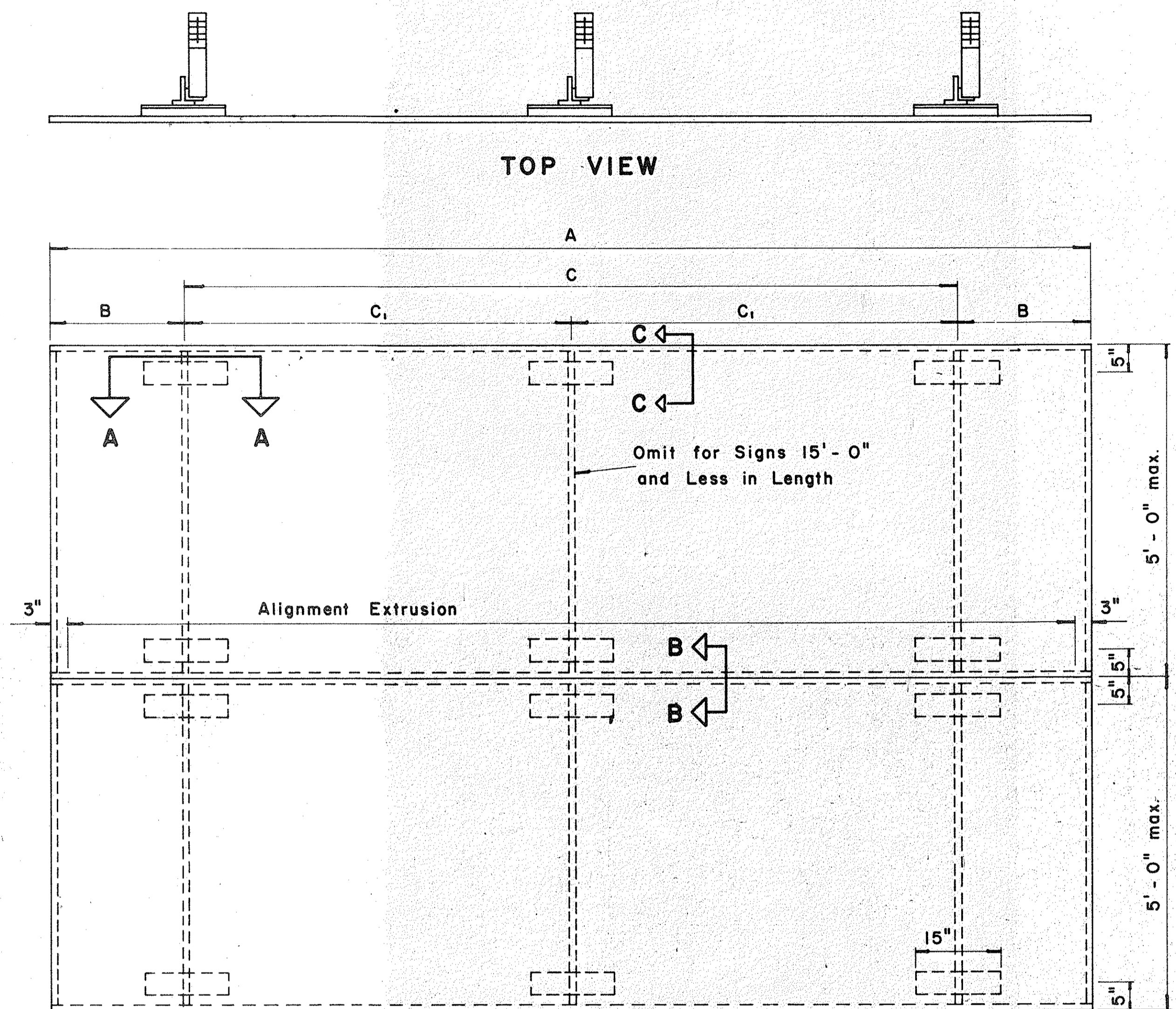
| PANEL THICK. | LENGTH OF SIGN | NO. OF SUPPORTS | OVERHANG | SUPPORT SPACING |
|--------------|----------------|-----------------|----------|---------------------|
| | A | | B | C or C ₁ |
| 1" | 6'-0" | 2 | 12" | 48" |
| 1" | 6'-6" | 2 | 15" | 48" |
| 1" | 7'-0" | 2 | 15" | 54" |
| 1" | 7'-6" | 2 | 18" | 54" |
| 1" | 8'-0" | 2 | 18" | 60" |
| 1" | 8'-6" | 2 | 20" | 62" |
| 1" | 9'-0" | 2 | 22" | 64" |
| 1" | 9'-6" | 2 | 23" | 68" |
| 1" | 10'-0" | 2 | 24" | 72" |
| 1" | 10'-6" | 2 | 24" | 78" |
| 1" | 11'-0" | 2 | 24" | 84" |
| 1" | 11'-6" | 2 | 27" | 84" |
| 1" | 12'-0" | 2 | 30" | 84" |
| 1" | 12'-6" | 2 | 30" | 90" |
| 1" | 13'-0" | 2 | 30" | 96" |
| 1" | 13'-6" | 2 | 30" | 102" |
| 1" | 14'-0" | 2 | 30" | 108" |
| 1" | 14'-6" | 2 | 36" | 102" |
| 1" | 15'-0" | 2 | 36" | 108" |
| | | | | |
| 1" | 15'-6" | 3 | 24" | 69" |
| 1" | 16'-0" | 3 | 24" | 72" |
| 1" | 16'-6" | 3 | 24" | 75" |
| 1" | 17'-0" | 3 | 24" | 78" |
| 1" | 17'-6" | 3 | 24" | 81" |
| 1" | 18'-0" | 3 | 24" | 84" |
| 1" | 18'-6" | 3 | 27" | 84" |
| 1" | 19'-0" | 3 | 27" | 87" |
| 1" | 19'-6" | 3 | 27" | 90" |
| 1" | 20'-0" | 3 | 30" | 90" |
| 1" | 20'-6" | 3 | 30" | 93" |
| 1" | 21'-0" | 3 | 30" | 96" |
| 1" | 21'-6" | 3 | 33" | 96" |
| 1" | 22'-0" | 3 | 36" | 96" |
| 1" | 22'-6" | 3 | 36" | 99" |
| 1" | 23'-0" | 3 | 36" | 102" |
| 1" | 23'-6" | 3 | 36" | 105" |
| 1" | 24'-0" | 3 | 36" | 108" |

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

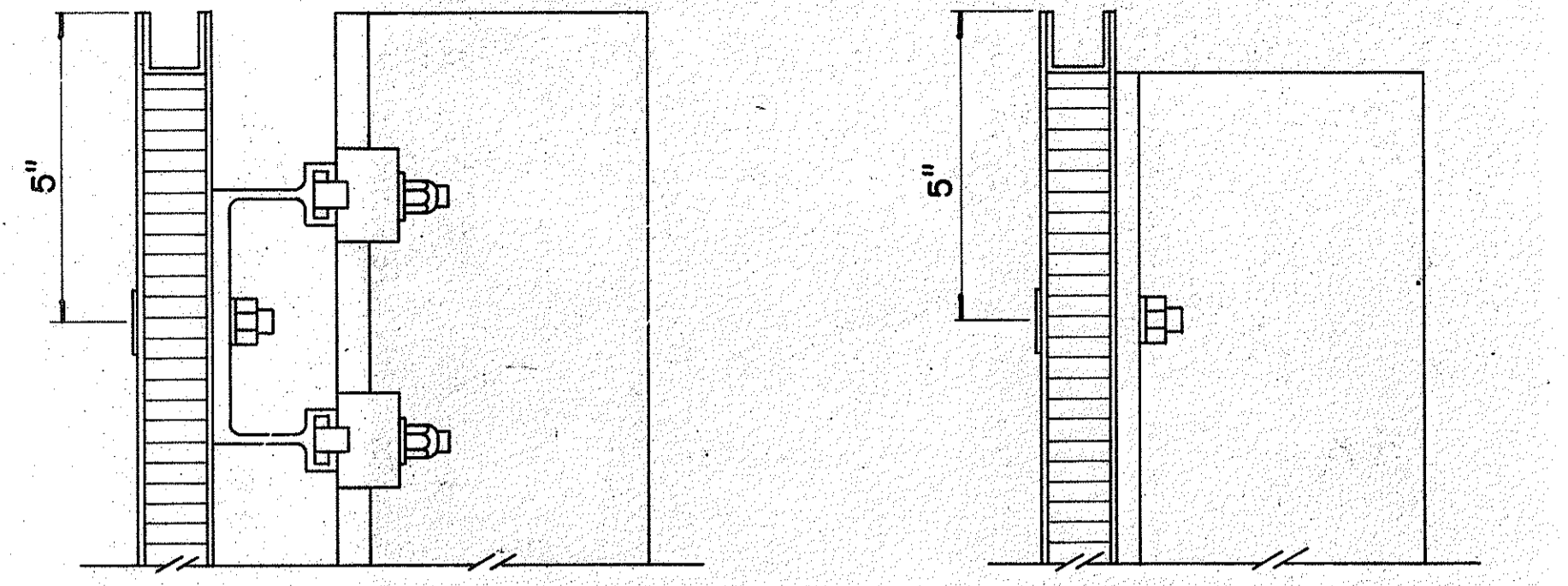
APPROVED:
John S. Sals 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

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

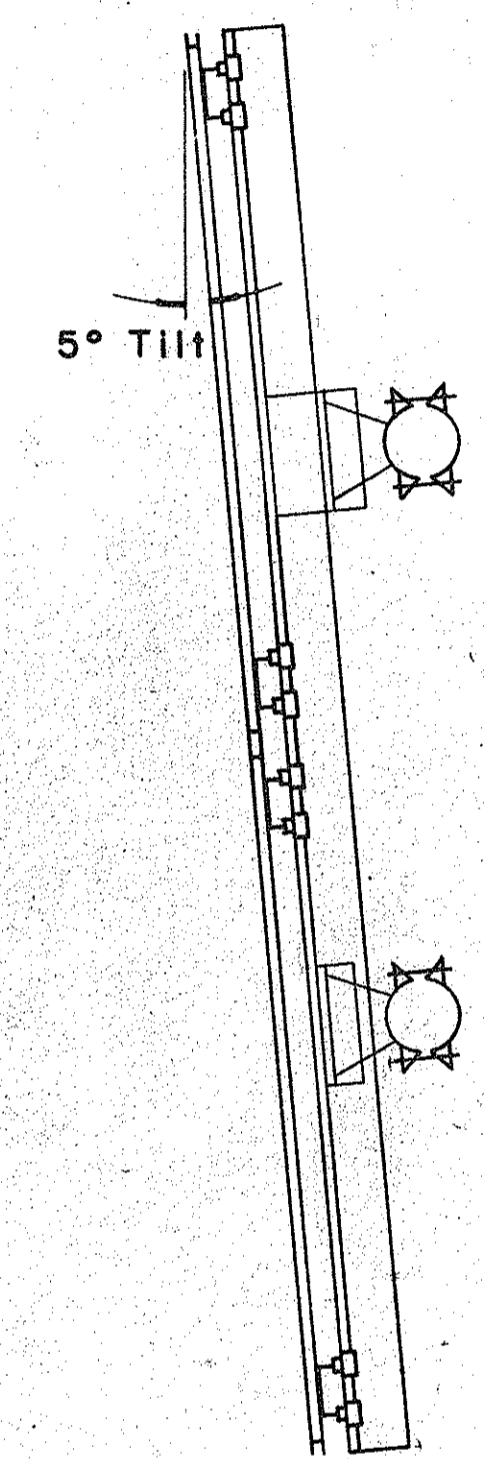
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(OVERHEAD)
Scale: As Shown



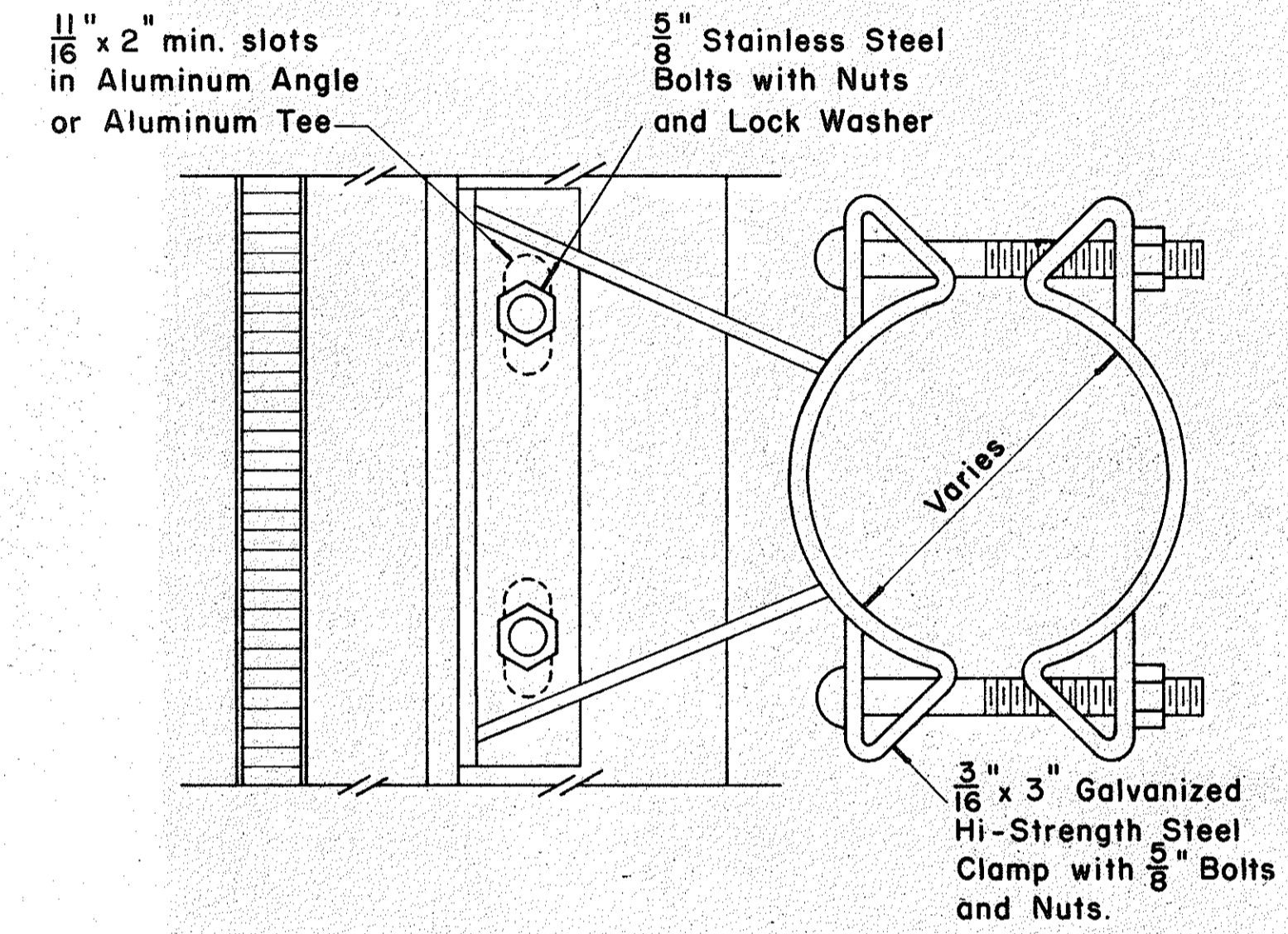
ELEVATION
TYPICAL SIGN ASSEMBLY
Scale: $\frac{3}{4}$ " = 1'-0"



SECTION "C-C"
Scale: $\frac{3}{8}$ " = 1"
SECTION "C-C" (Alternate)
Scale: $\frac{3}{8}$ " = 1"

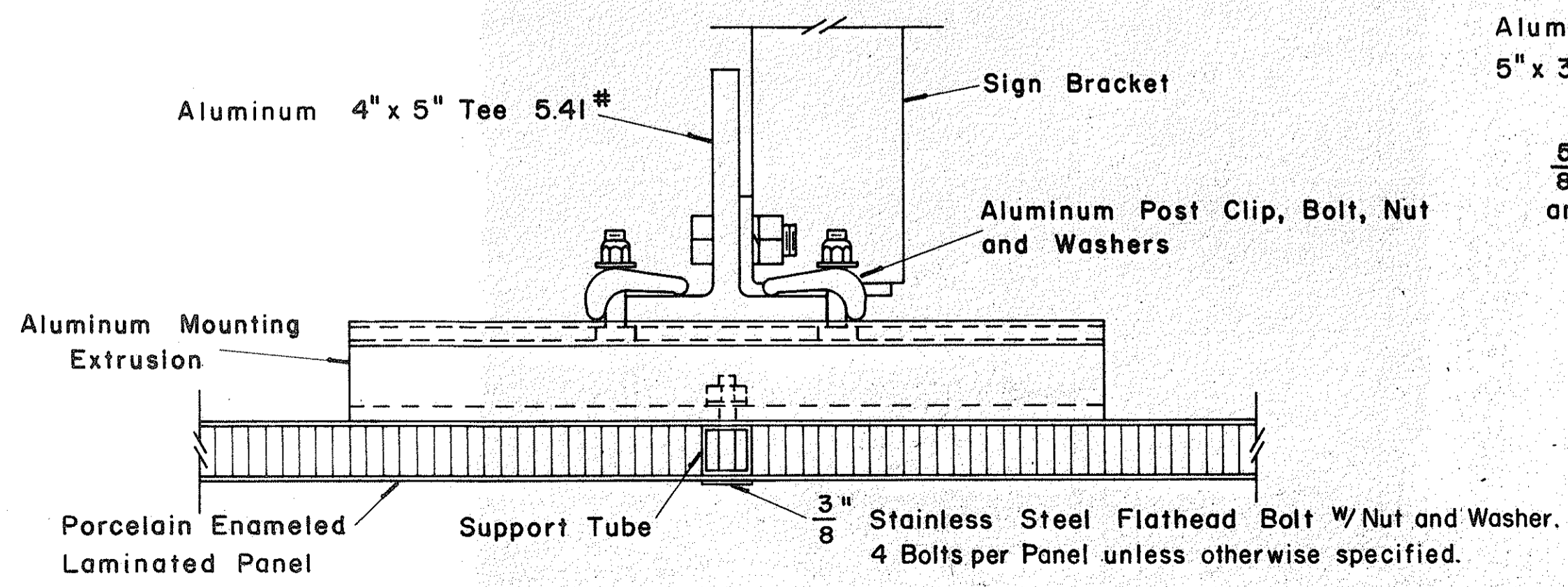


SIDE VIEW

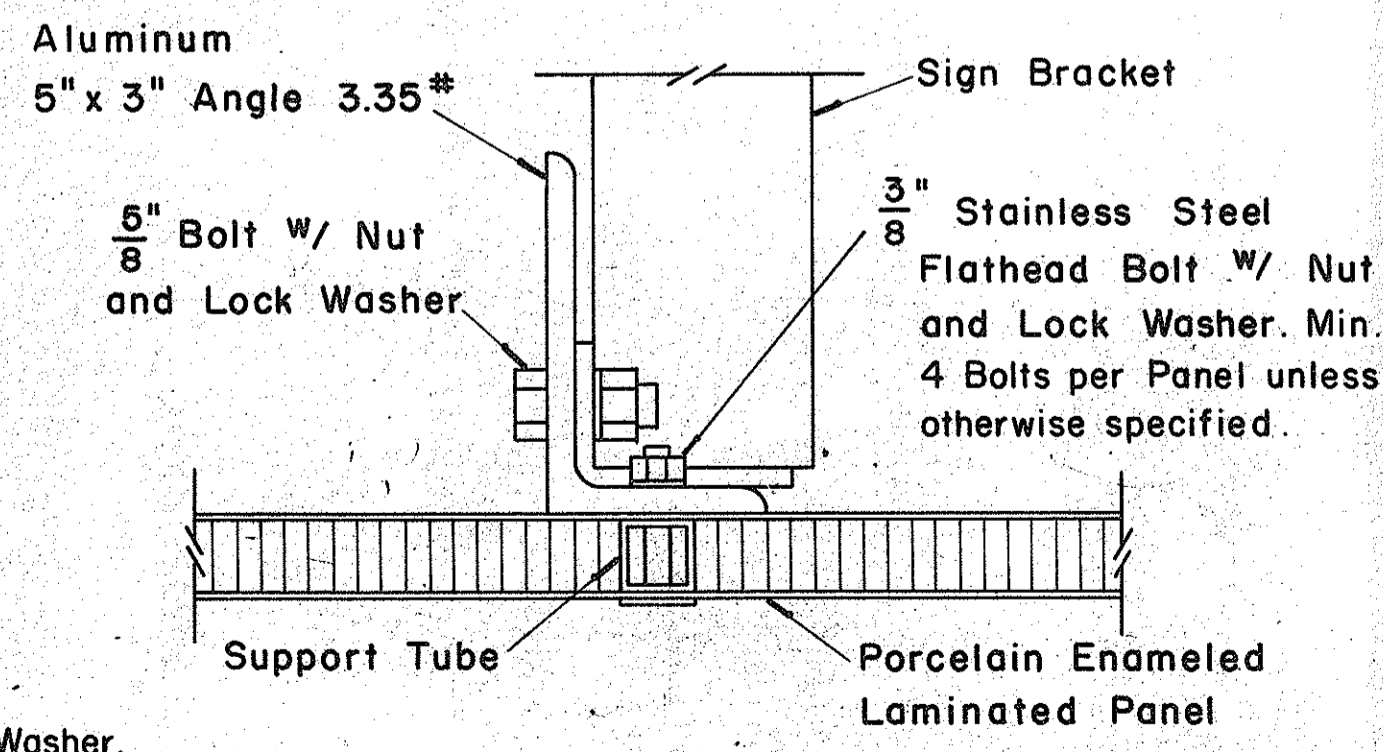


SIGN BRACKET ASSEMBLY
Scale: $\frac{3}{8}$ " = 1"

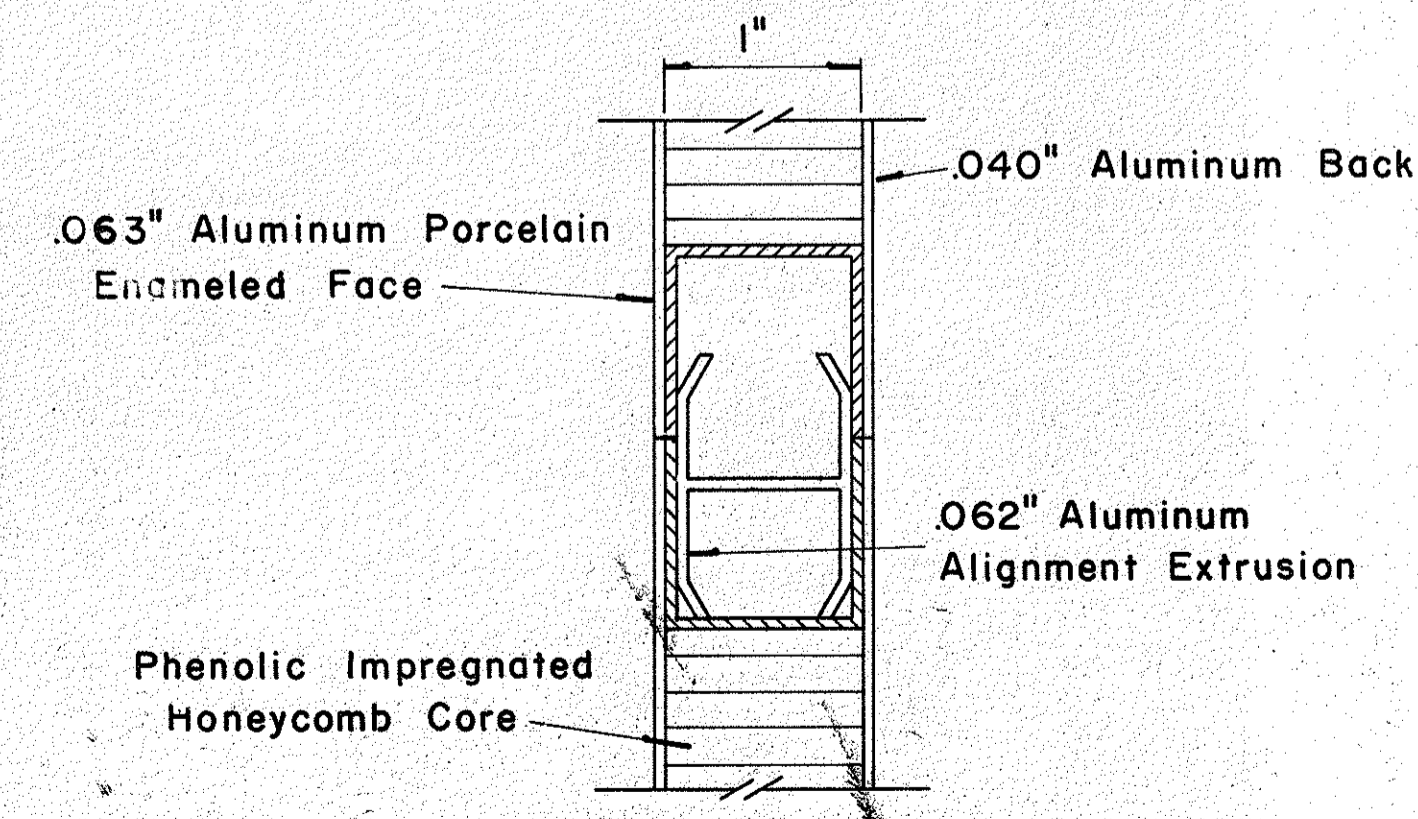
NOTE: For additional details of Sign Bracket Assembly, see Standard Detail Sheet "Overhead Sign Supports."



SECTION "A-A"
Scale: $\frac{3}{8}$ " = 1"



SECTION "A-A" (Alternate)
Scale: $\frac{3}{8}$ " = 1"



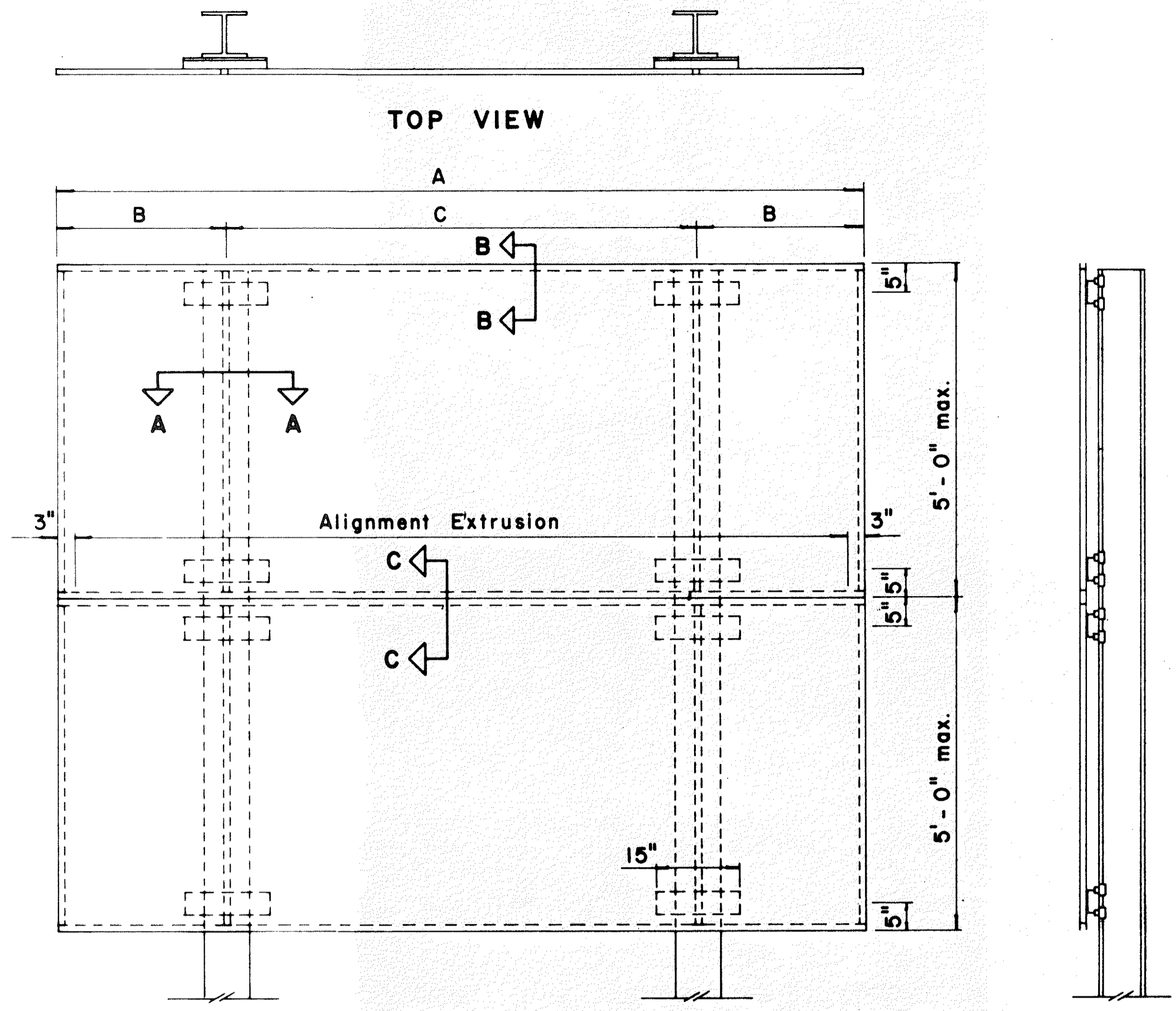
CLOSURE DETAIL
SECTION "B-B"
FULL SCALE

DATE
DESIGNED BY
CHECKED BY
NO.

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 103-1(28) | 1968 | 26 | 328 |

(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

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

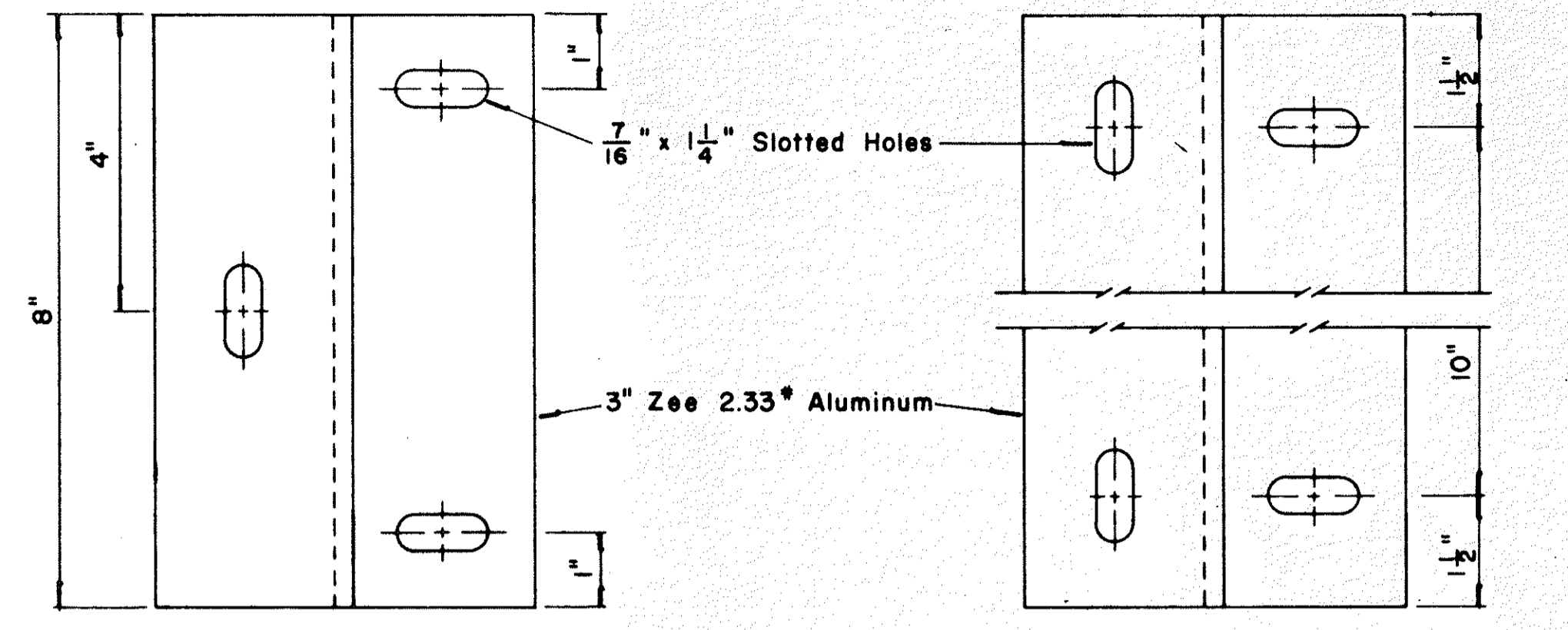


ELEVATION

SIDE VIEW

TYPICAL SIGN ASSEMBLY

Scale: 3/4" = 1'-0"

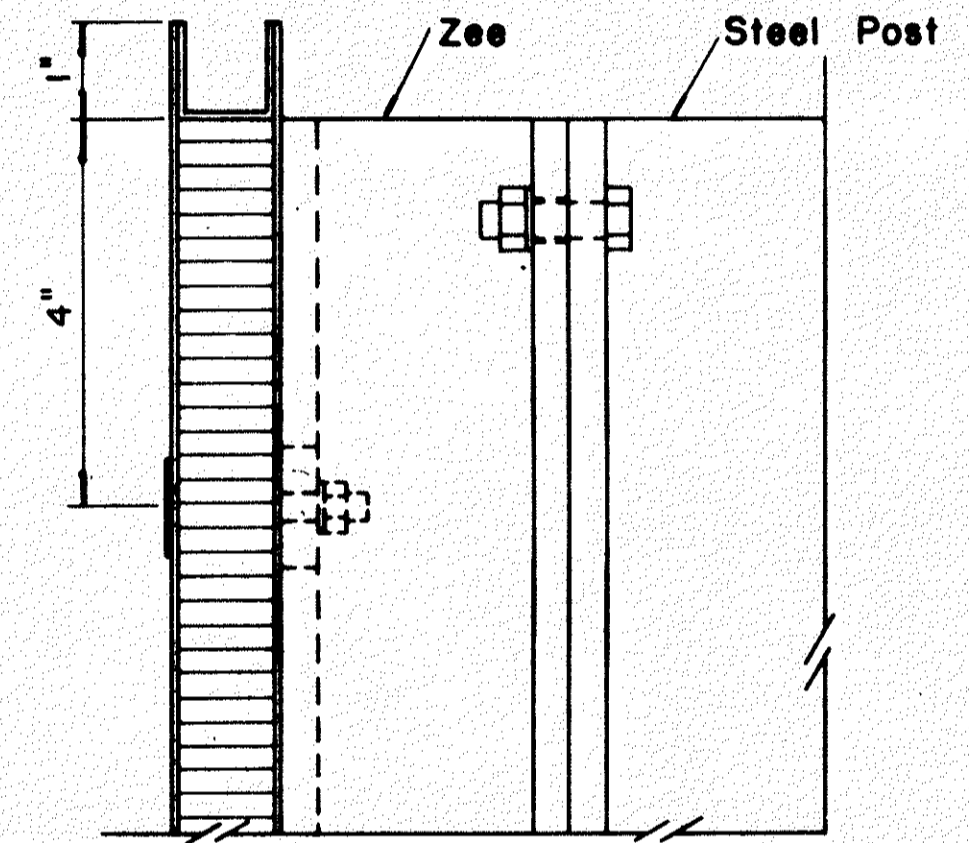
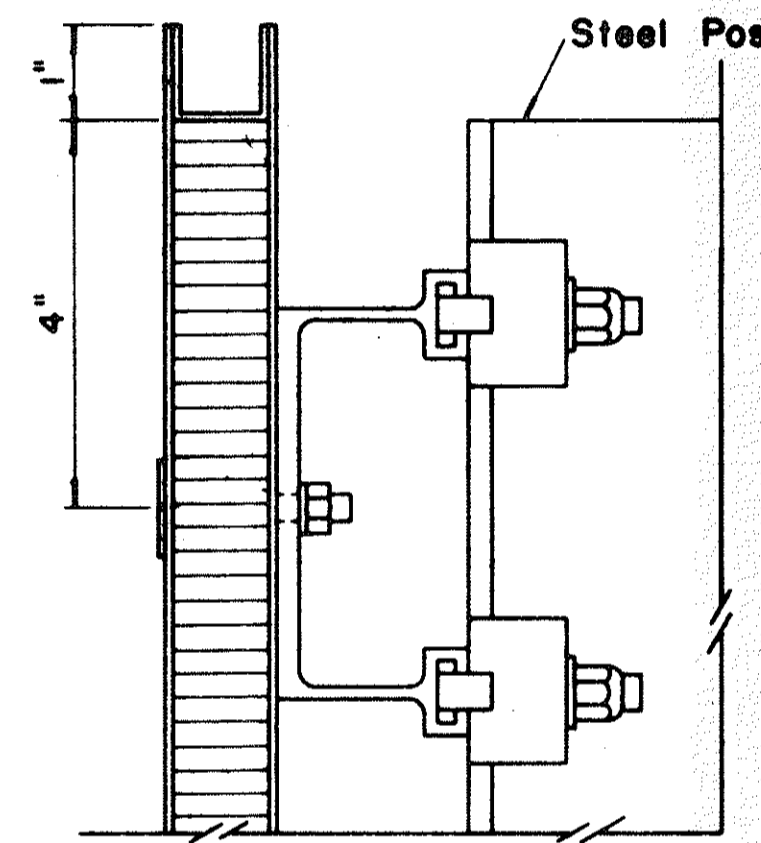


END MOUNTING

INTERMEDIATE MOUNTING

ZEE MOUNTING DETAILS

Scale: 1/2" = 1"

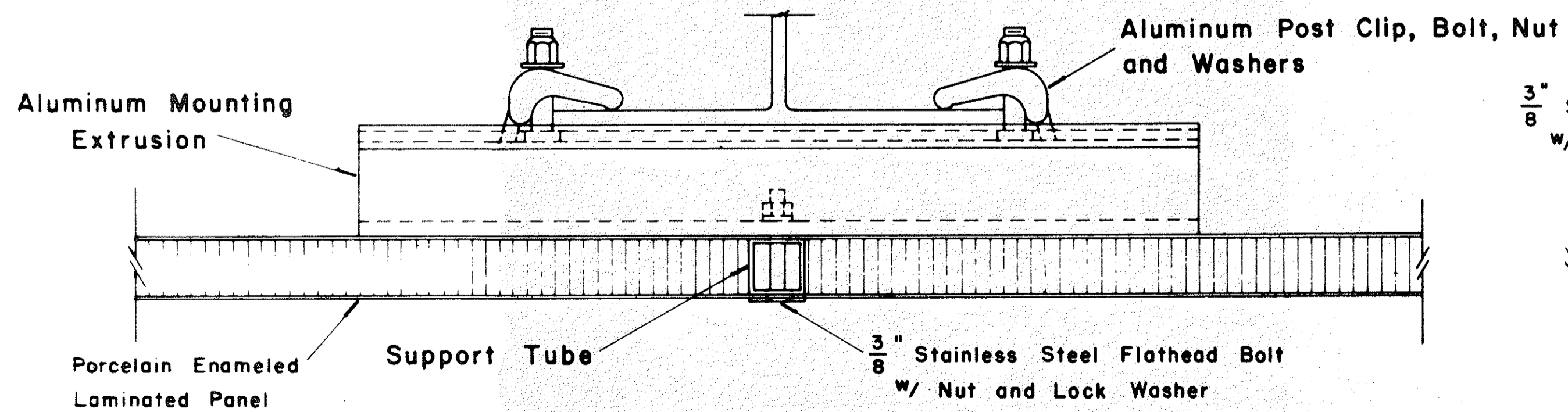


SECTION "B-B"

SECTION "B-B" (Alternate)

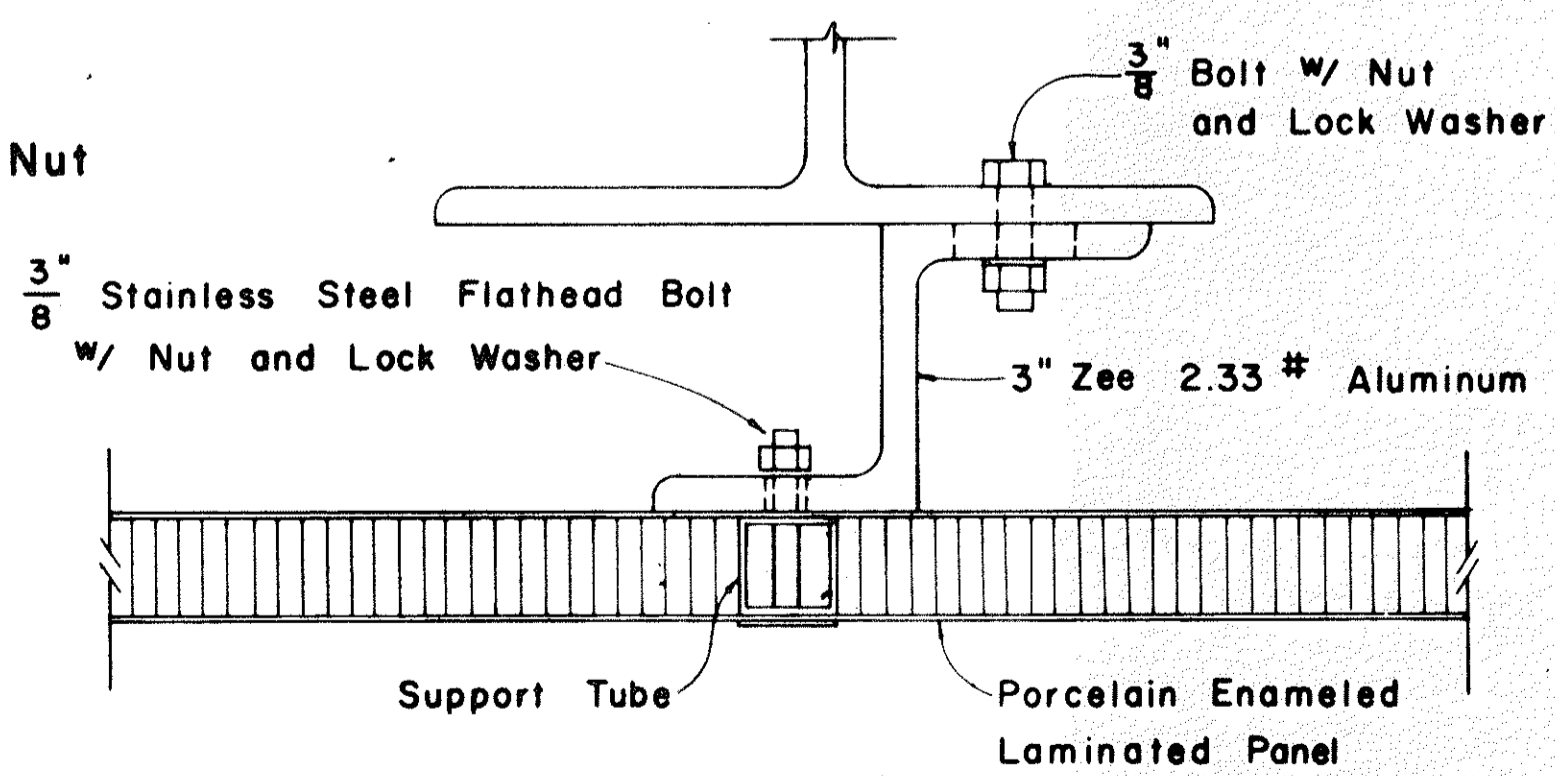
Scale: 1/2" = 1"

Scale: 1/2" = 1"



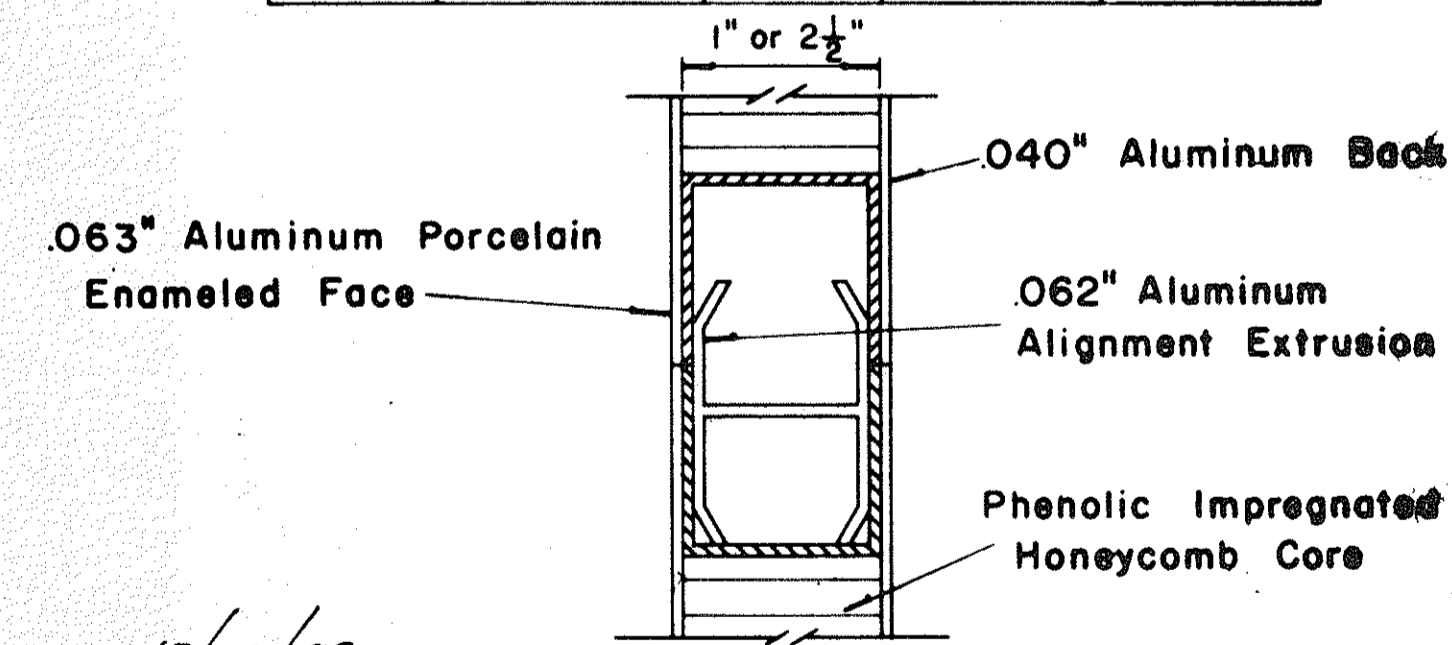
SECTION "A-A"

Scale: 1/2" = 1"



SECTION "A-A" (Alternate)

Scale: 1/2" = 1"



CLOSURE DETAIL SECTION "C-C"

FULL SCALE

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

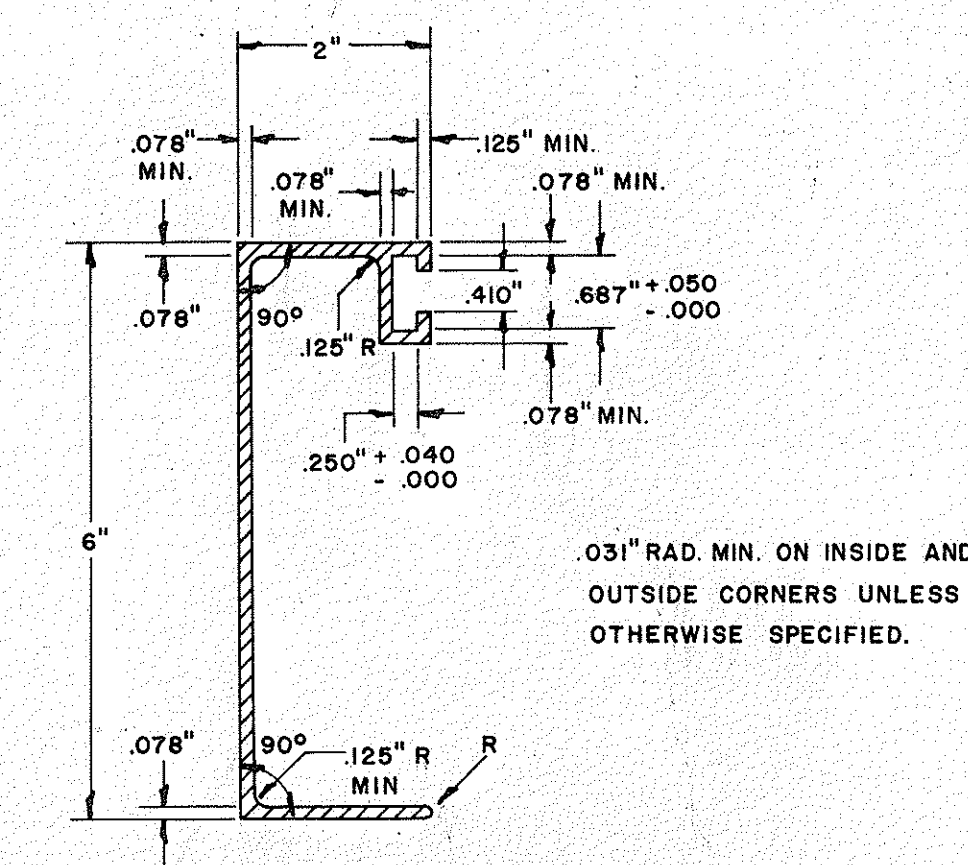
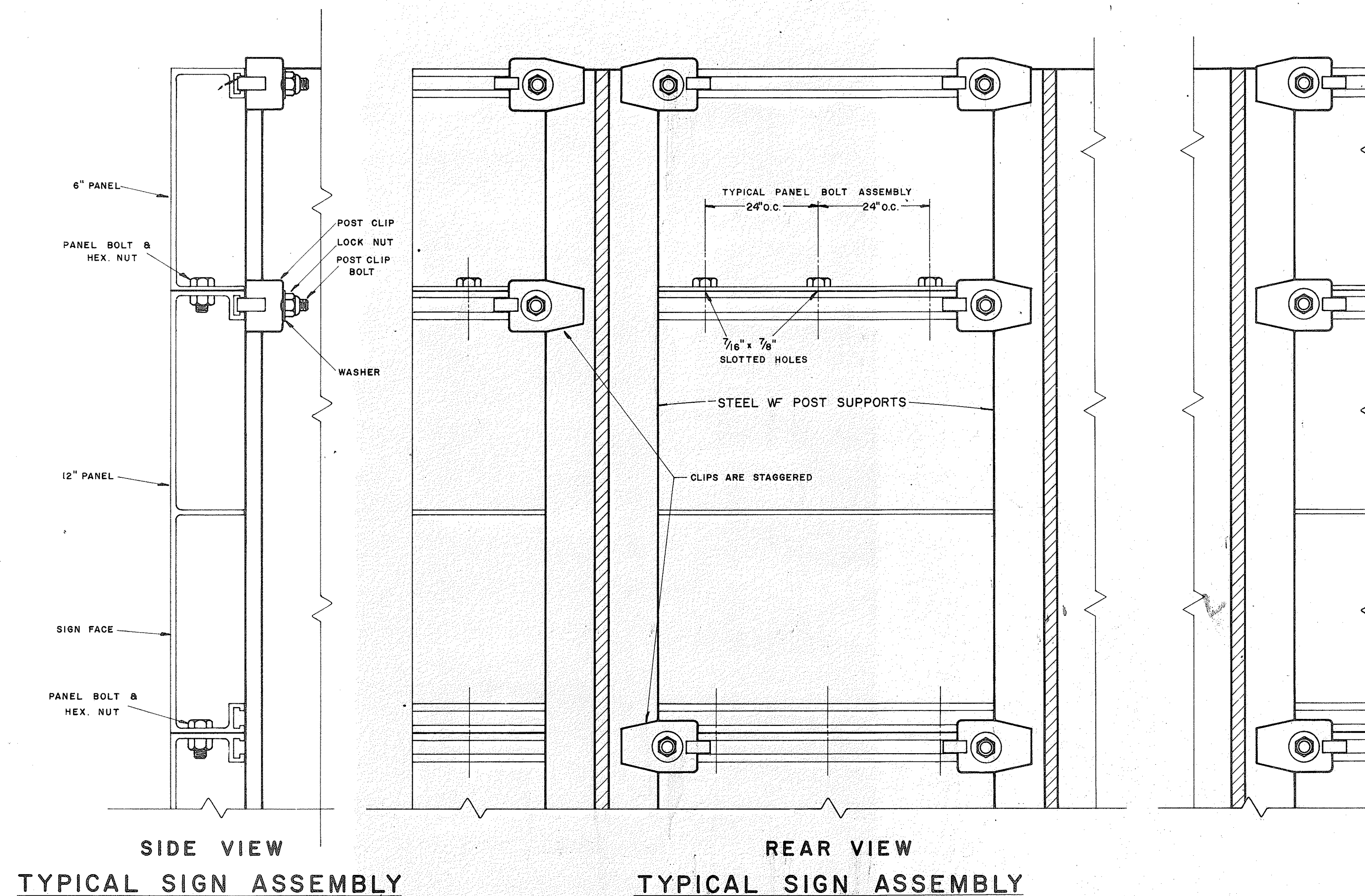
APPROVED:
John J. S. [Signature] 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

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

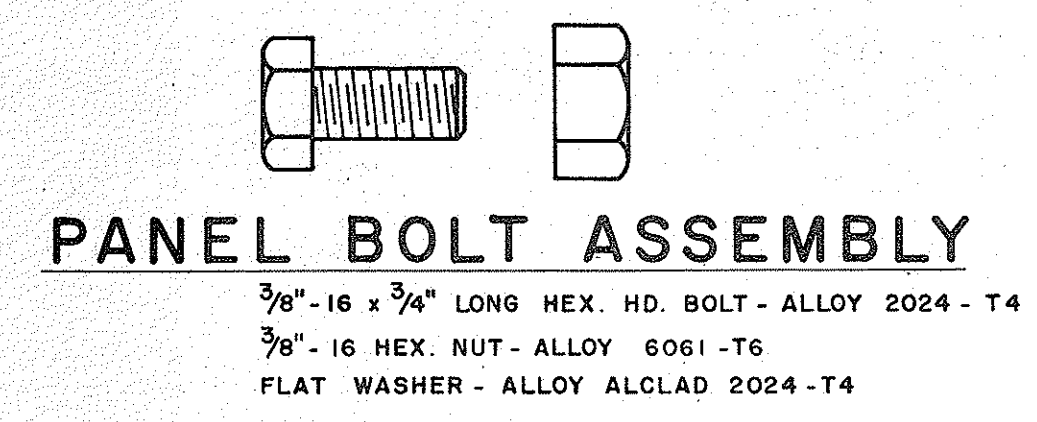
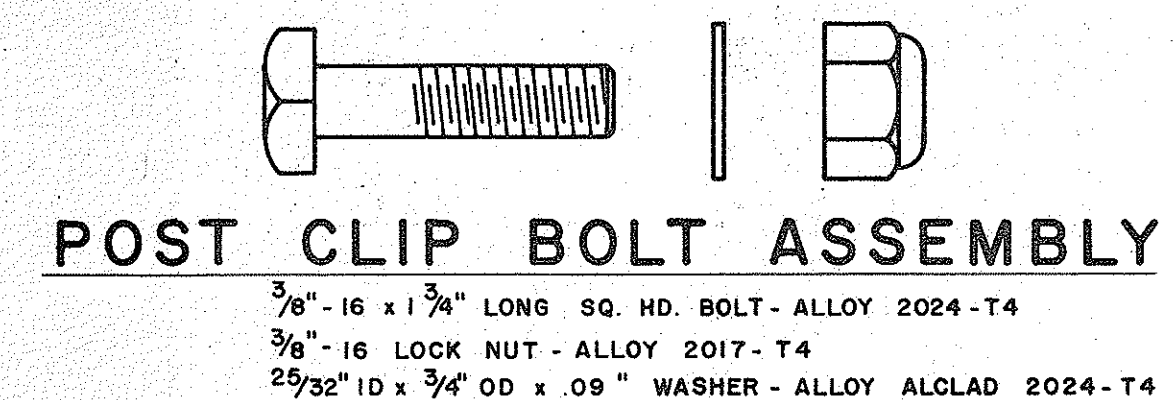
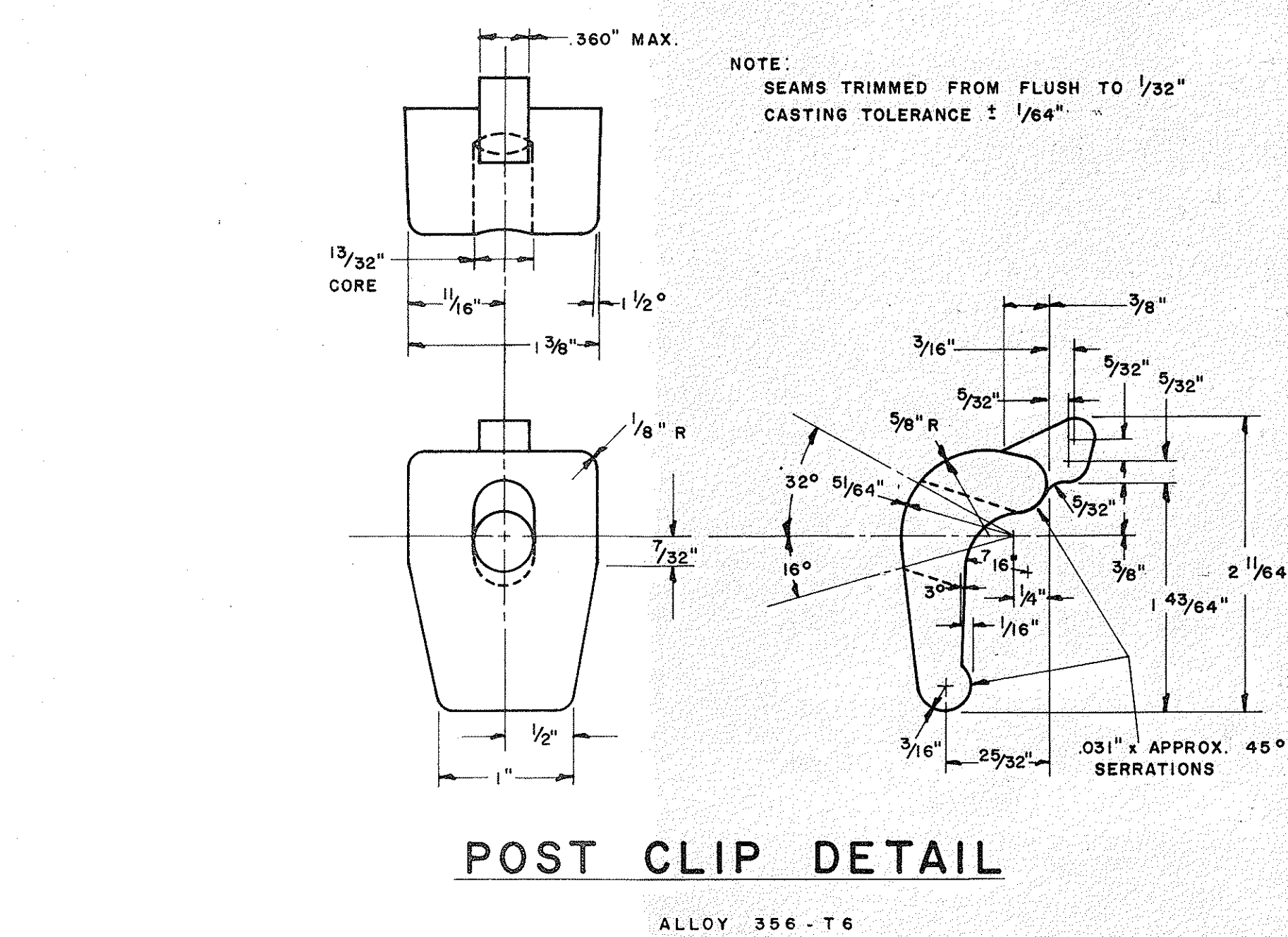
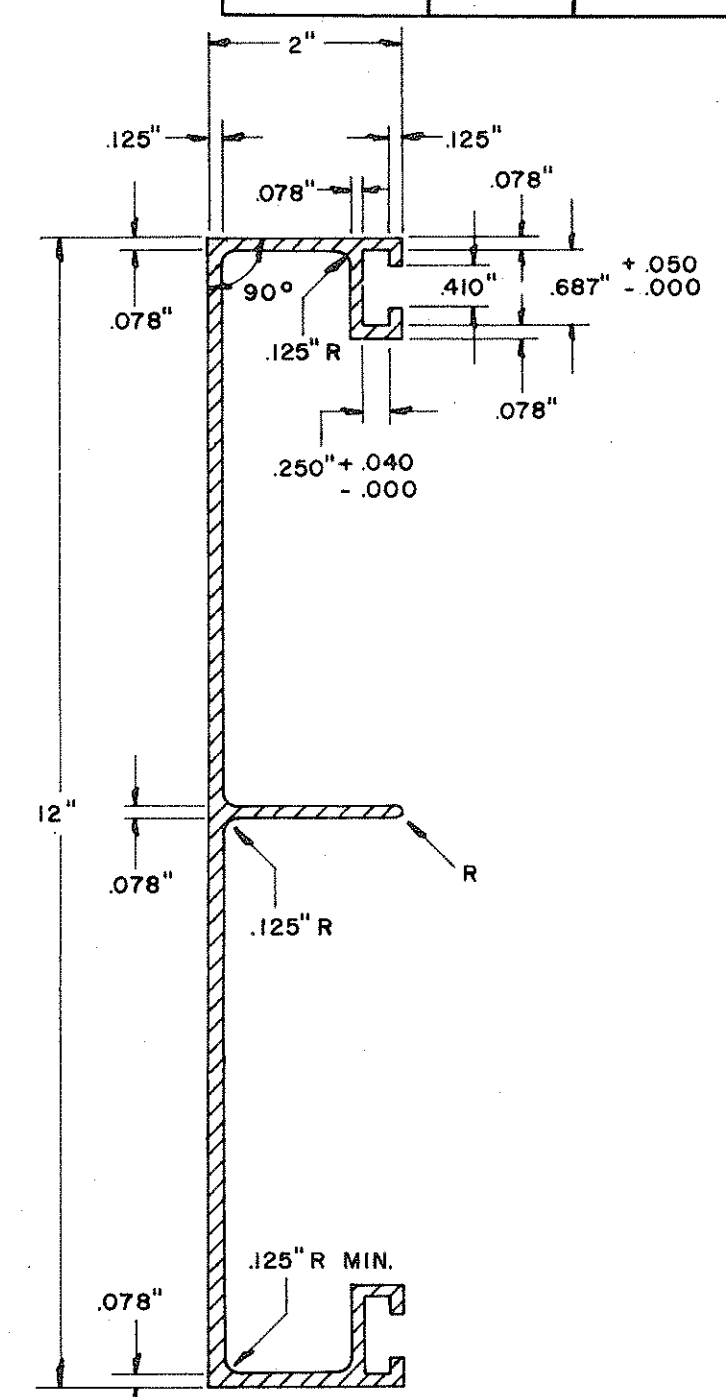
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(GROUND MOUNTED)
Scale: As Shown

SURVEY PLOTTED BY
 ORIGINAL PLAN
 NOTE BOOK
 QUANTITIES BY
 CHECKED BY

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1-13-1(24) | 1983 | 262 | 323 |



SOLID EXTRUDED SIGN PANEL DETAILS



NOTE: Extruded Aluminum Panels to be used for Destination Signs with Reflective Sheeting Background

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/89
TRAFFIC ENGINEER DATE

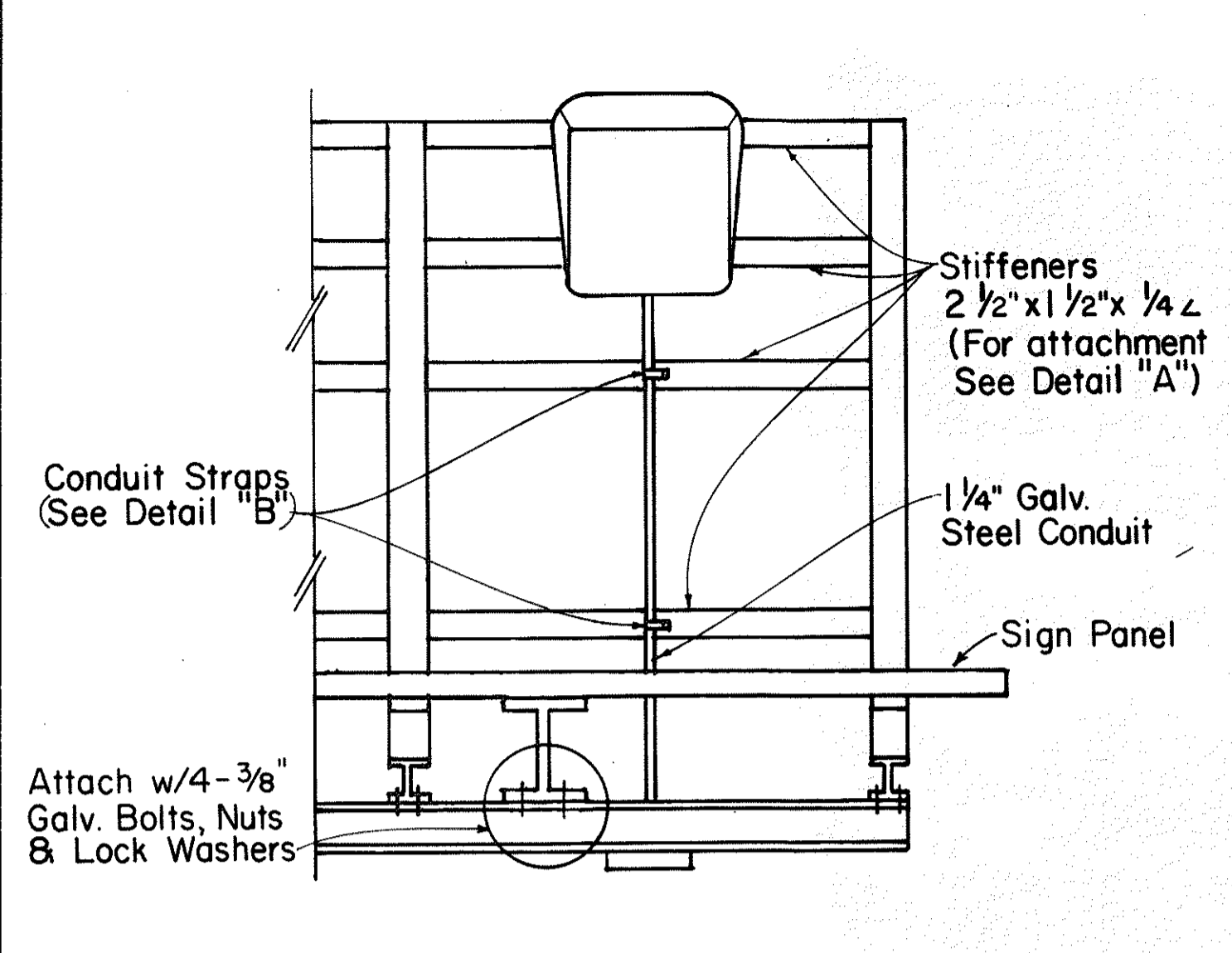
APPROVED:
[Signature] 12-30-89
ASSISTANT CHIEF, ENGINEERING DATE

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

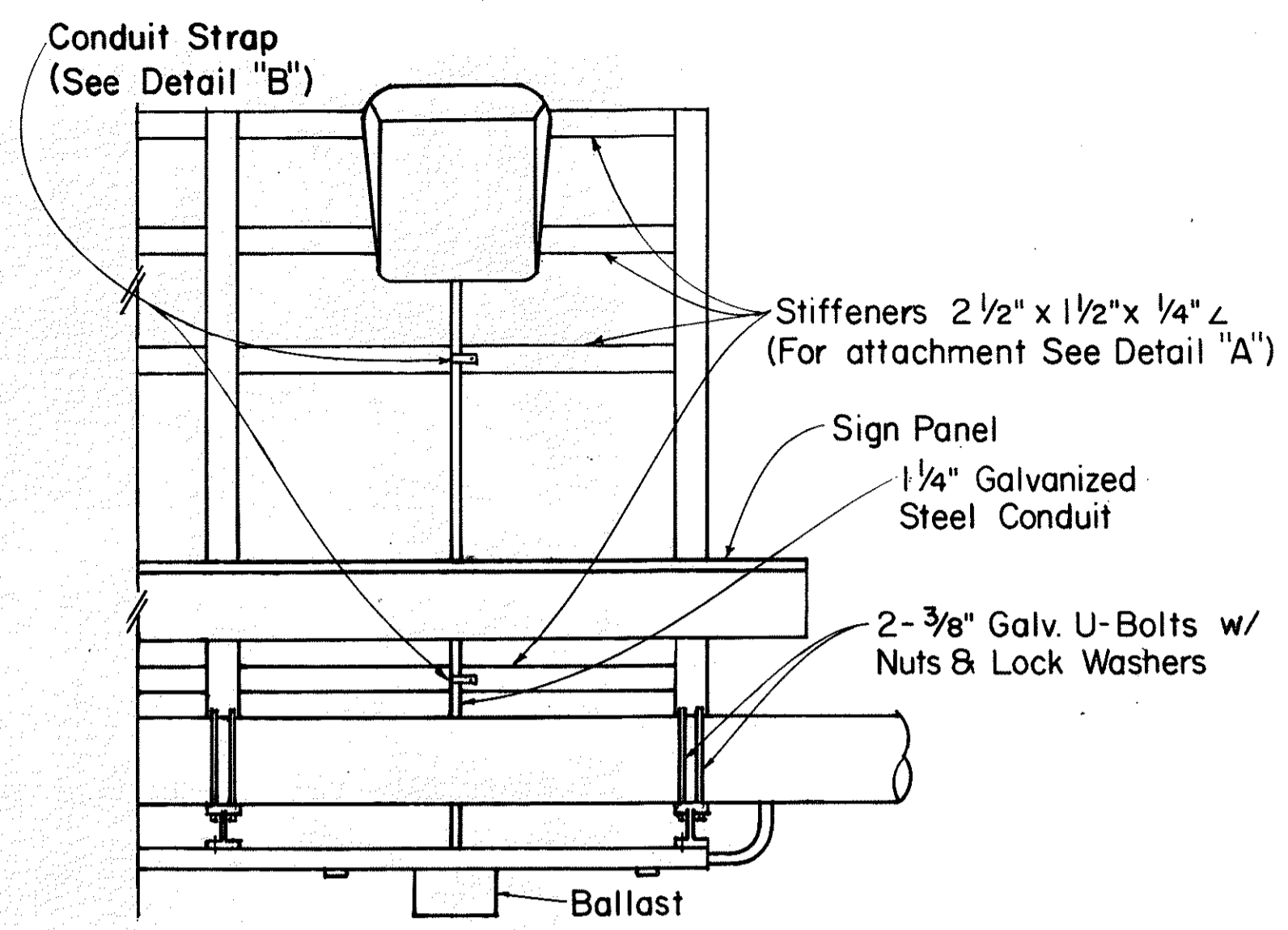
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
SOLID ALUMINUM
EXTRUDED SIGN PANEL
AND
ACCESSORY DETAILS
SCALE:

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 133-1(24) | 1983 | 263 | 328 |

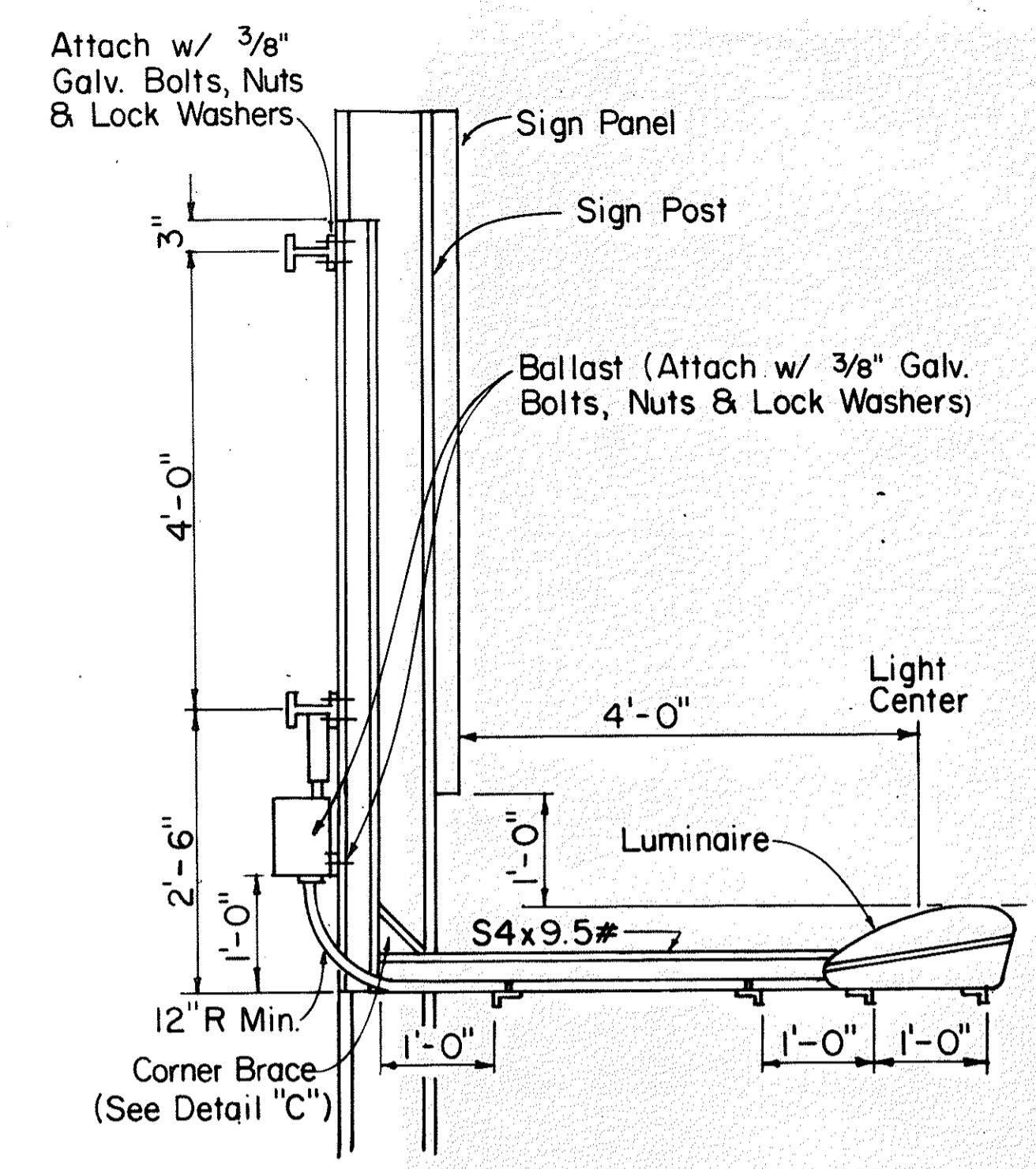


GROUND MOUNTED

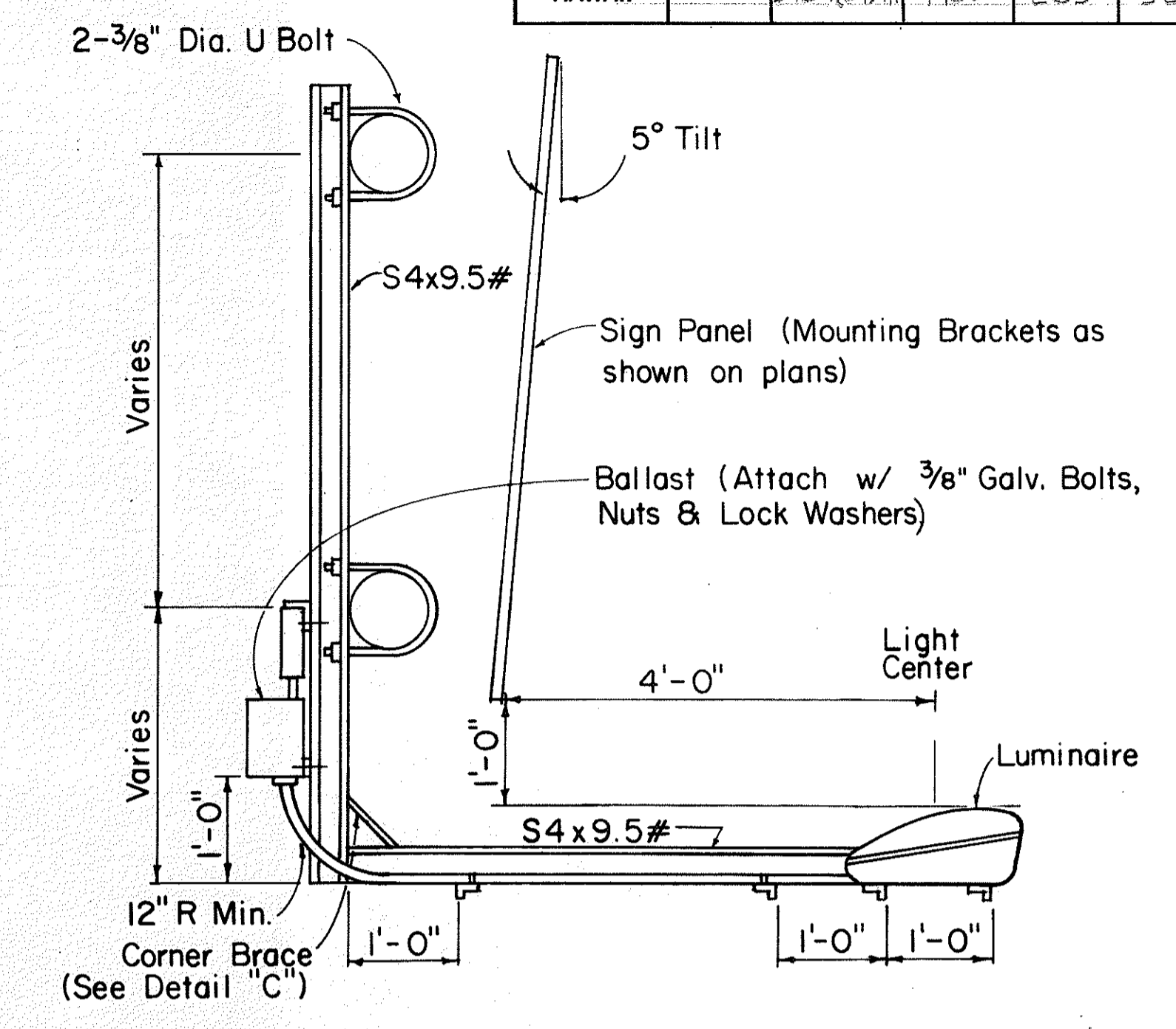


OVERHEAD MOUNTED

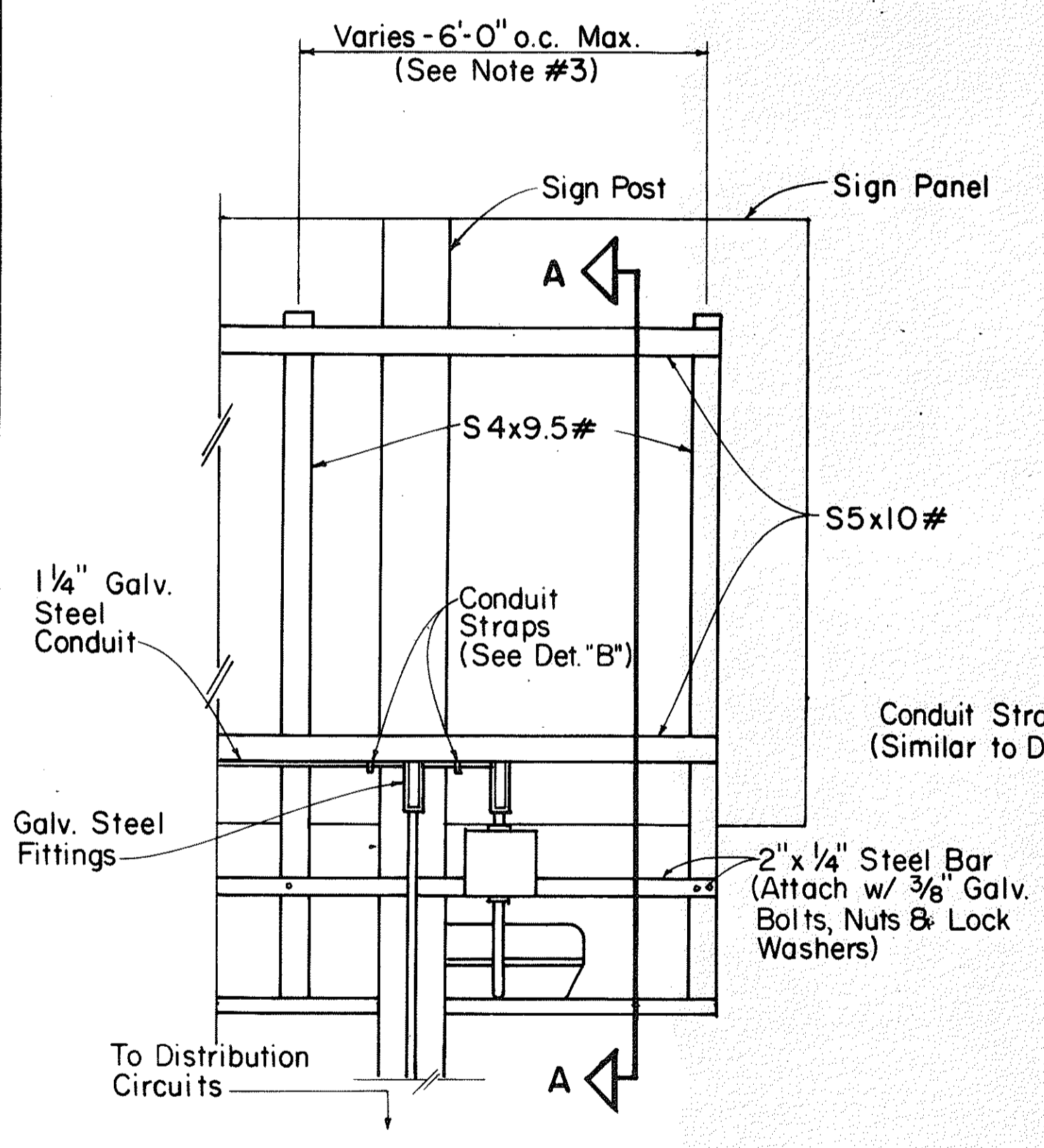
TOP VIEW



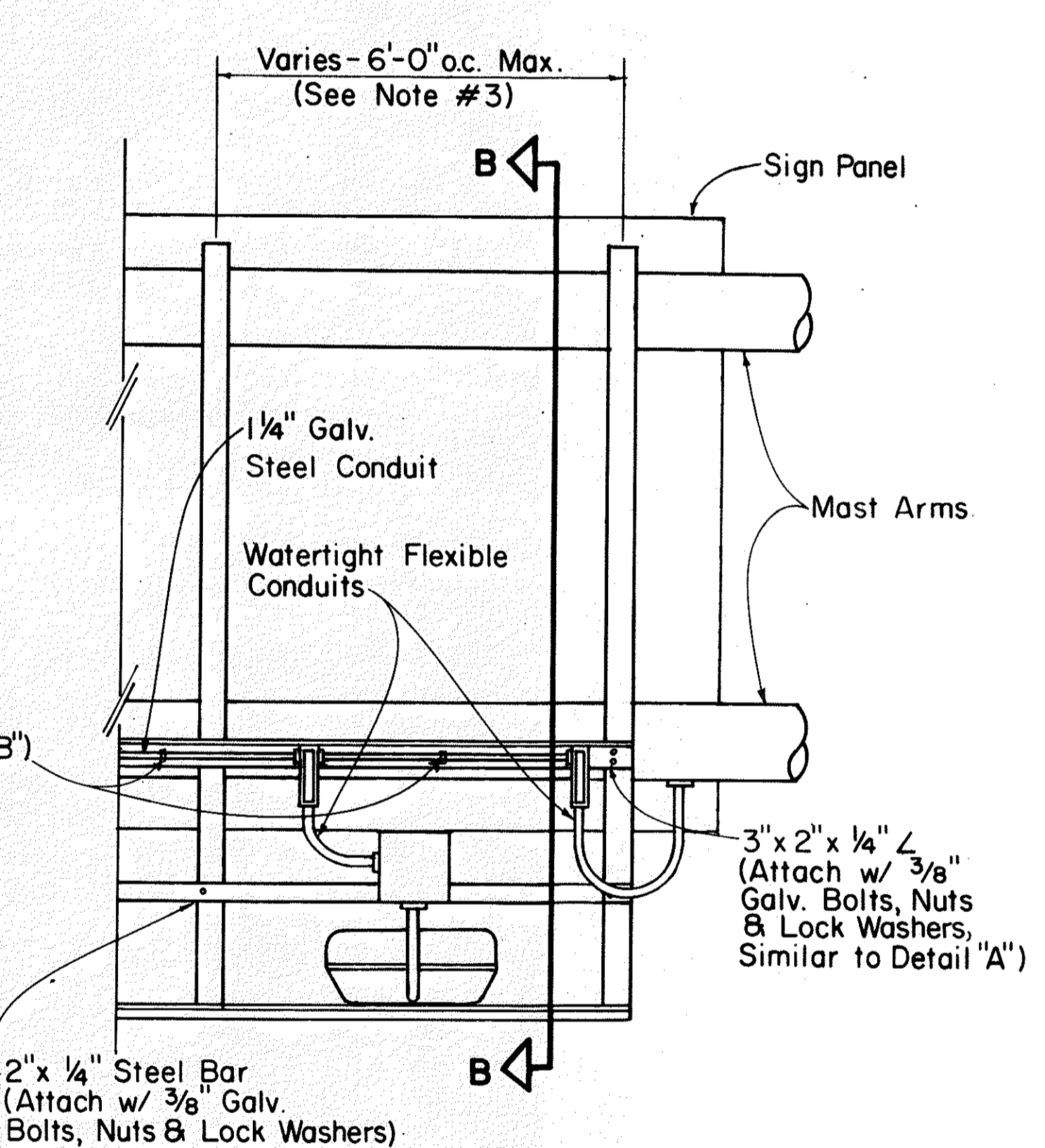
SECTION A-A
Scale: 3/4" = 1'-0"



SECTION B-B
Scale: 3/4" = 1'-0"



GROUND MOUNTED

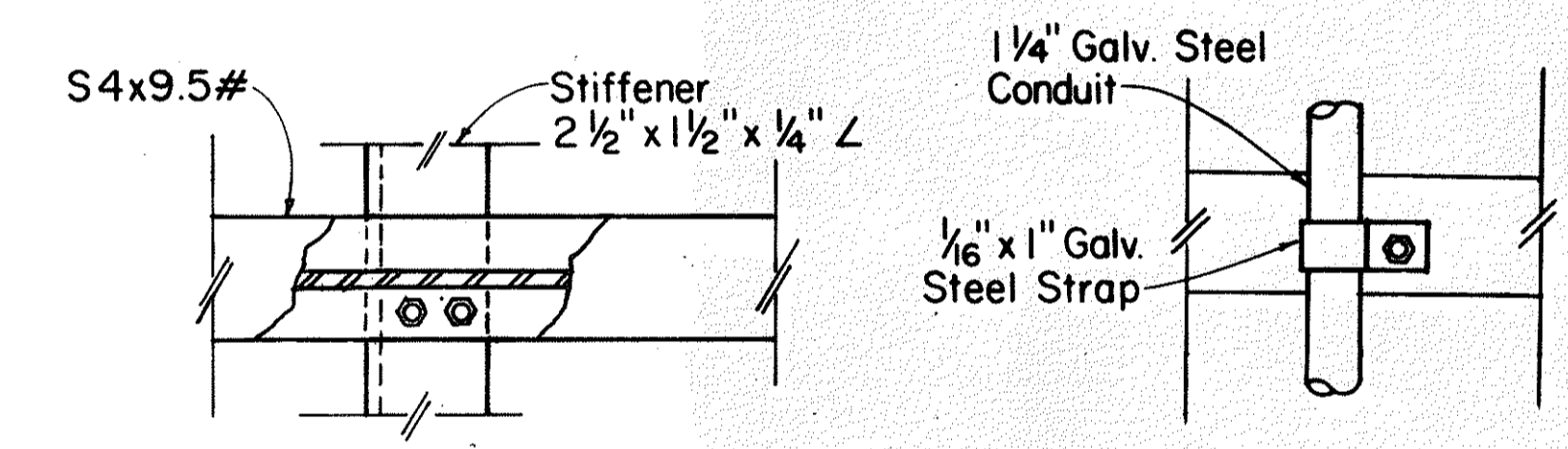


OVERHEAD MOUNTED

REAR VIEW

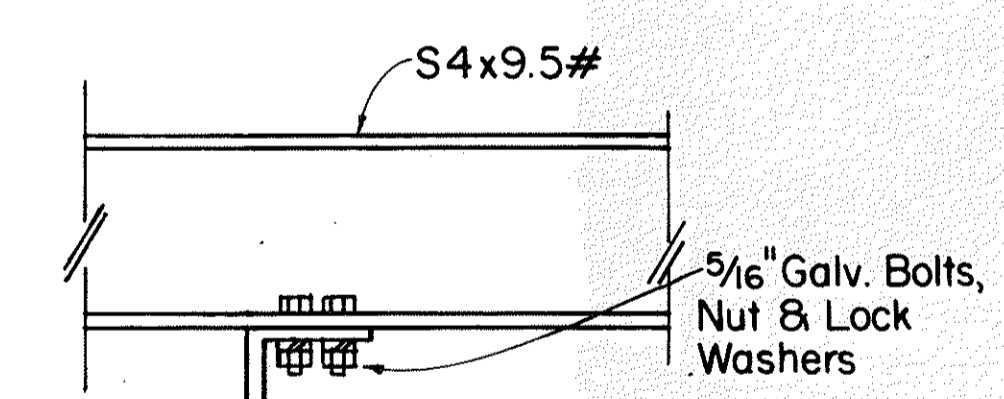
LUMINAIRE MOUNTING

Not to Scale

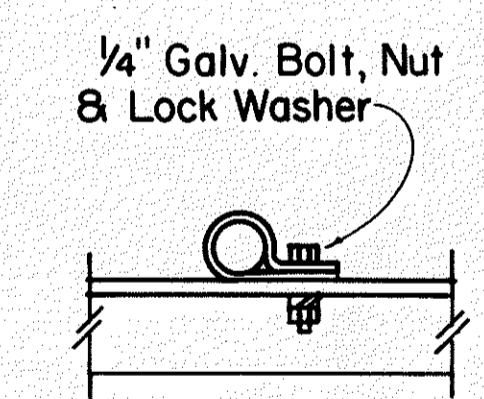


TOP VIEW

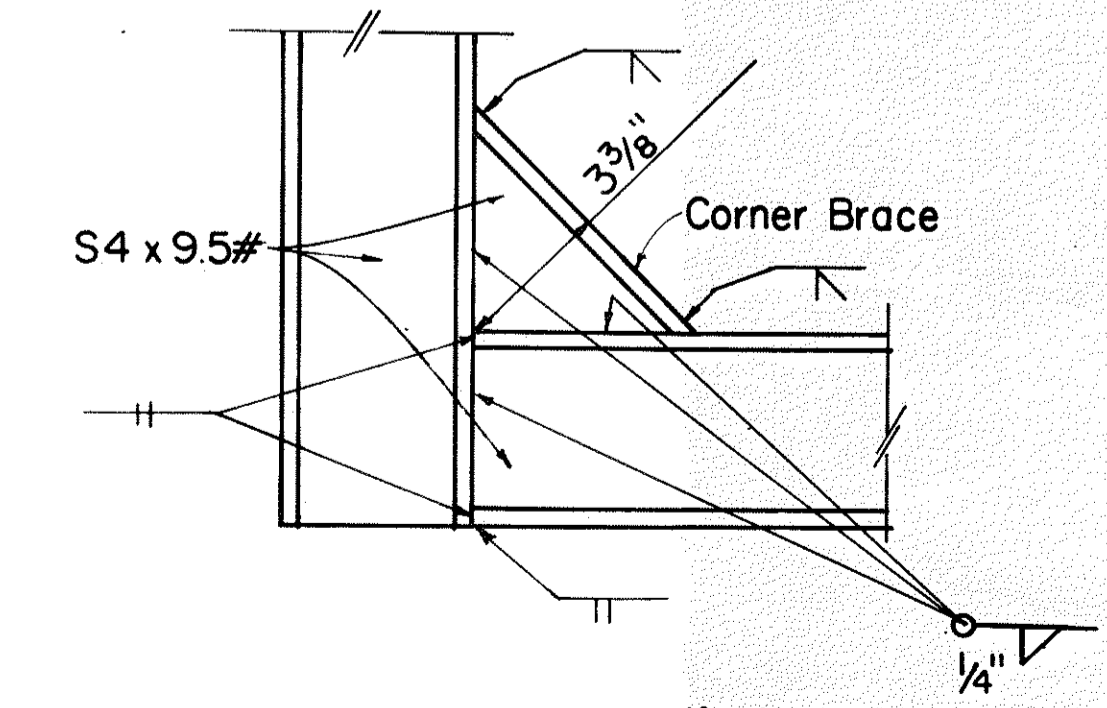
TOP VIEW



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



SIDE VIEW
DETAIL "B"
Scale: 3" = 1'-0"



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

GENERAL NOTES:

- All parts of the Luminaire Mounting shall be Hot-Dip Galv., Prime Coated with a suitable Primer and Painted with Three Coats of Dark Green Enamel.
- Luminaire Mounting shall be adjusted as recommended by the manufacturer to provide optimum sign illumination.
- The Contractor shall insure that the luminaire supports do not conflict with the sign supports (see support spacing tables on sheets DT 205 and DT 206). Final spacing shall be approved by the Engineer.
- The Contractor shall determine the amount and spacing of luminaires per sign in accordance with the luminaire manufacturer's instructions, subject to approval by the Engineer. The maximum spacing shall be 10 feet on centers and the maximum height and width illuminated by a single luminaire shall be 10 feet, respectively.

APPROVAL RECOMMENDED:
Eishi Tanaka 5/19/81
TRAFFIC ENGINEER DATE

APPROVED:
Robert Zaleski 5/20/81
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--------------------------------------|-------------|---------|
| 1 | Supersedes DT 208 Approved 12/30/69. | H.F. | 5/20/81 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

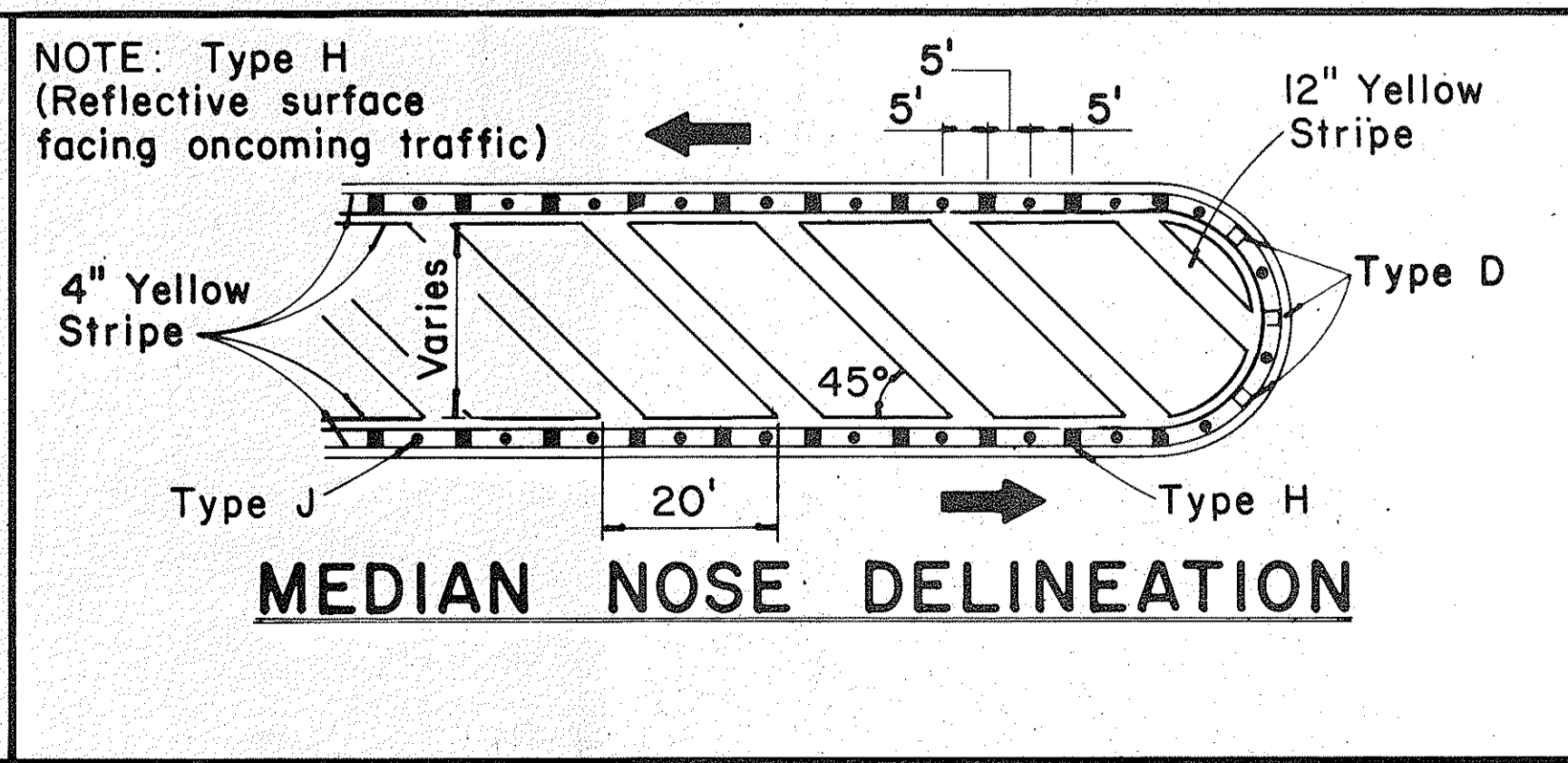
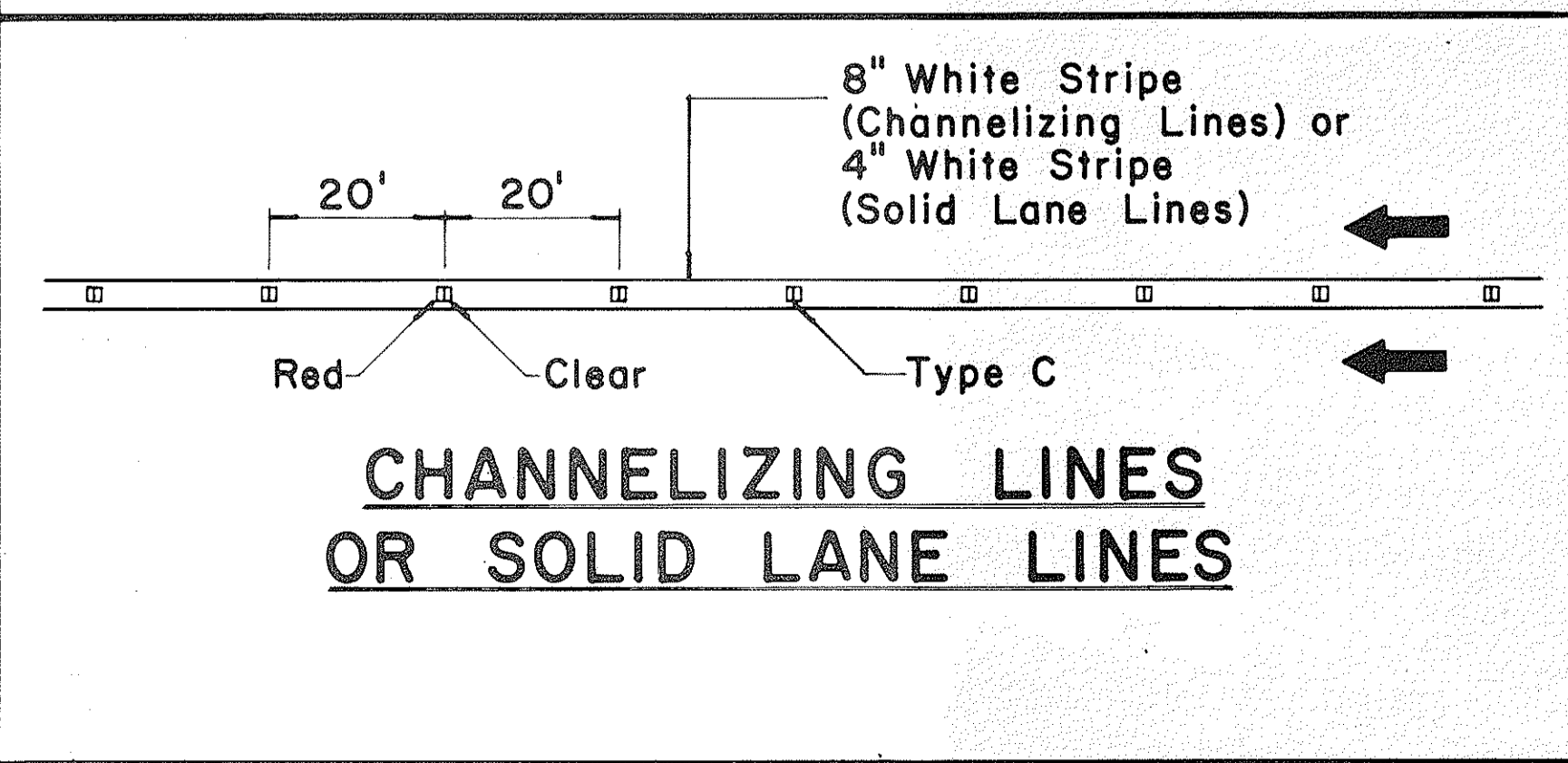
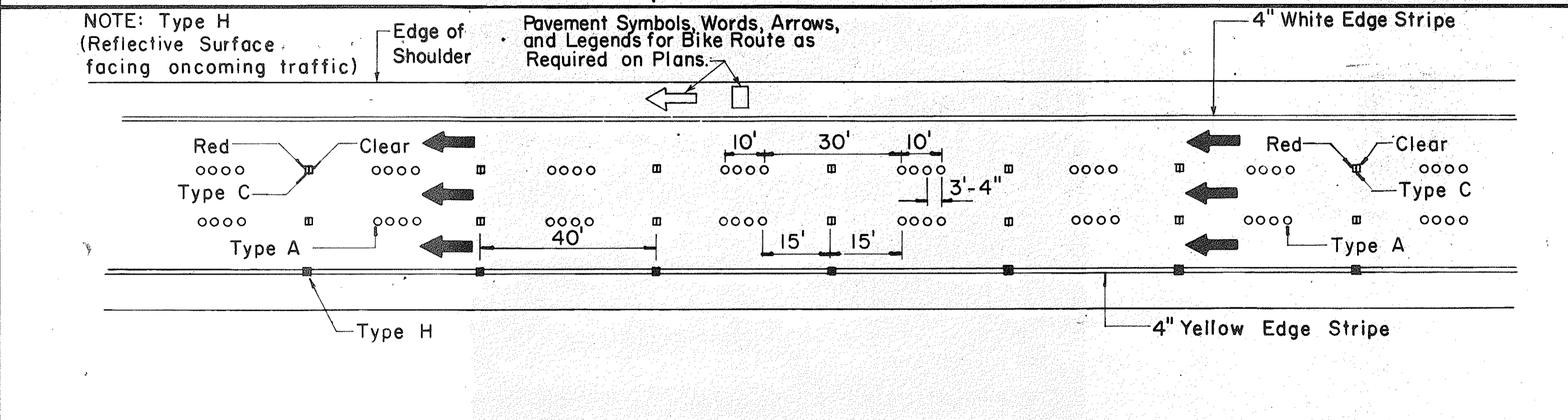
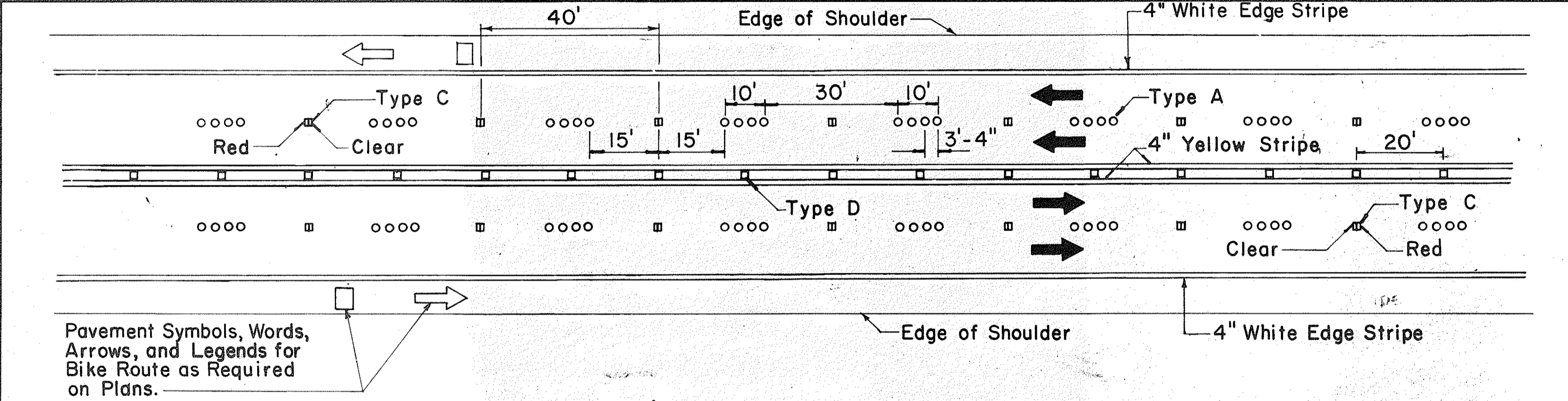
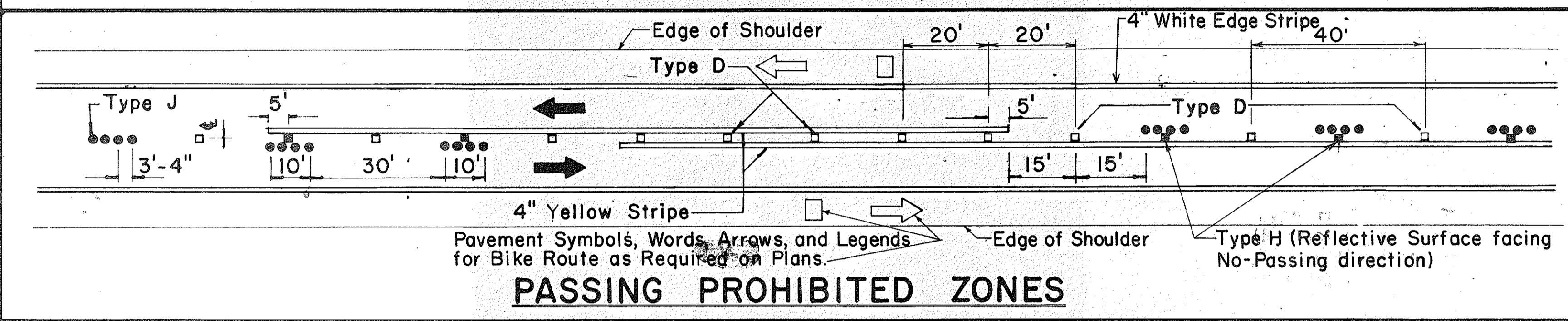
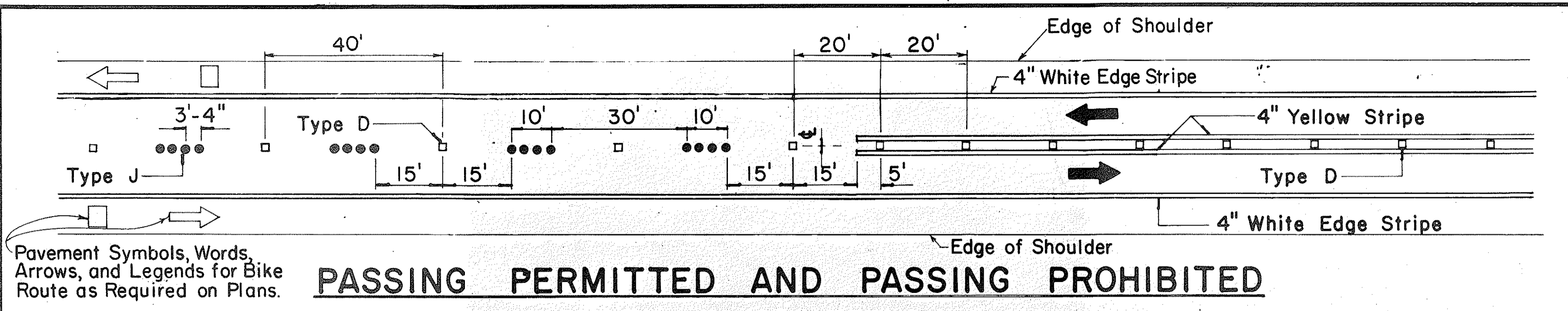
STANDARD DETAILS
GUIDE SIGNS
LUMINAIRE MOUNTINGS

Scale: As Shown

SHEET No. 231 OF 28 SHEETS DT 208

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1-13-1(24) | 1983 | 264 | 328 |

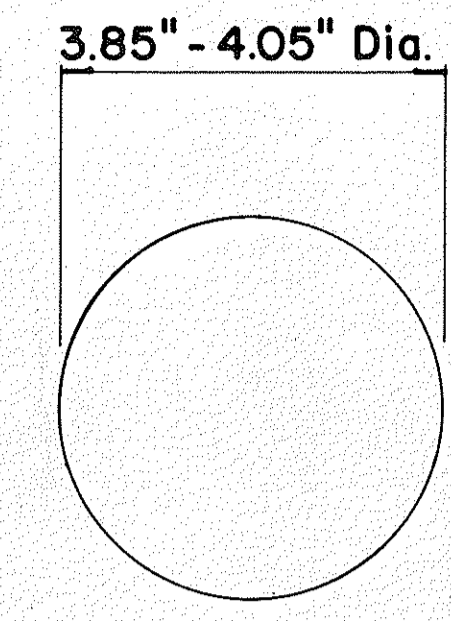


TWO - LANE

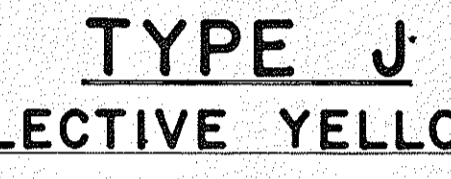
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

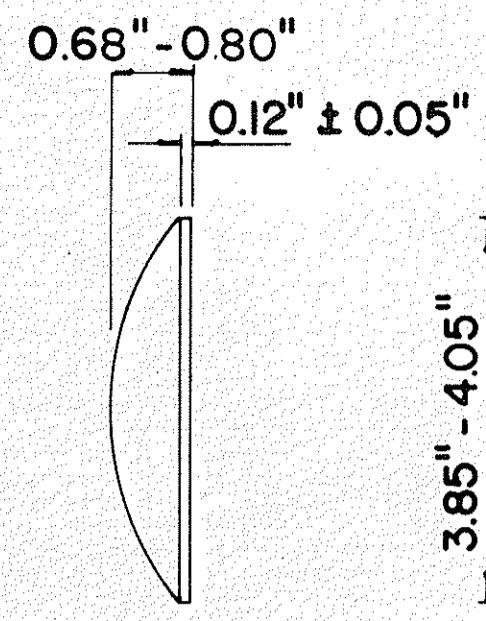
MISCELLANEOUS



TYPE A
NON-REFLECTIVE WHITE MARKER



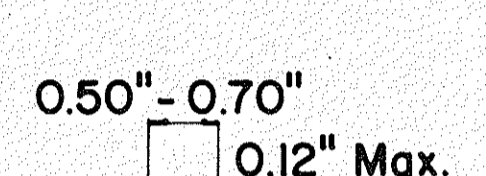
TYPE J
NON-REFLECTIVE YELLOW MARKER



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.

LEGEND

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

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

APPROVED:
Herbert J. Sakai 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

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

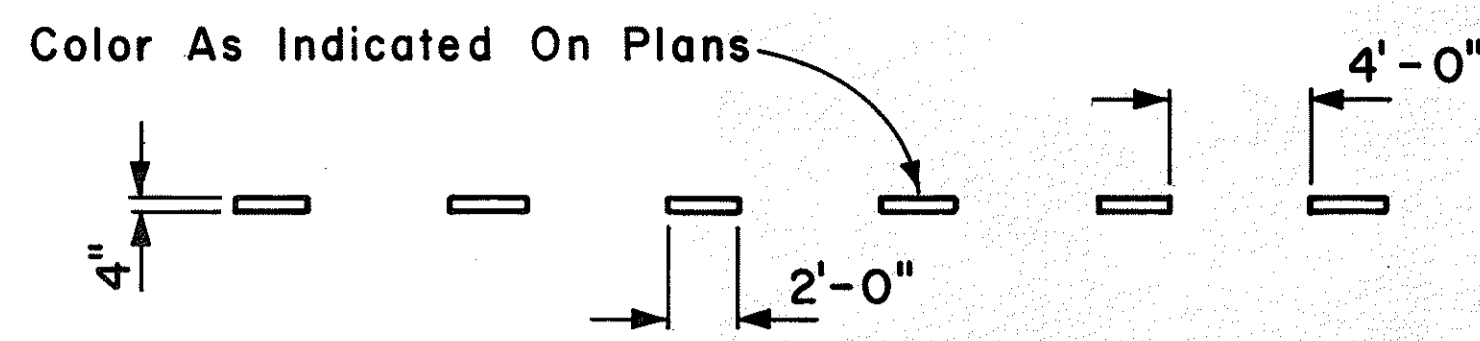
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

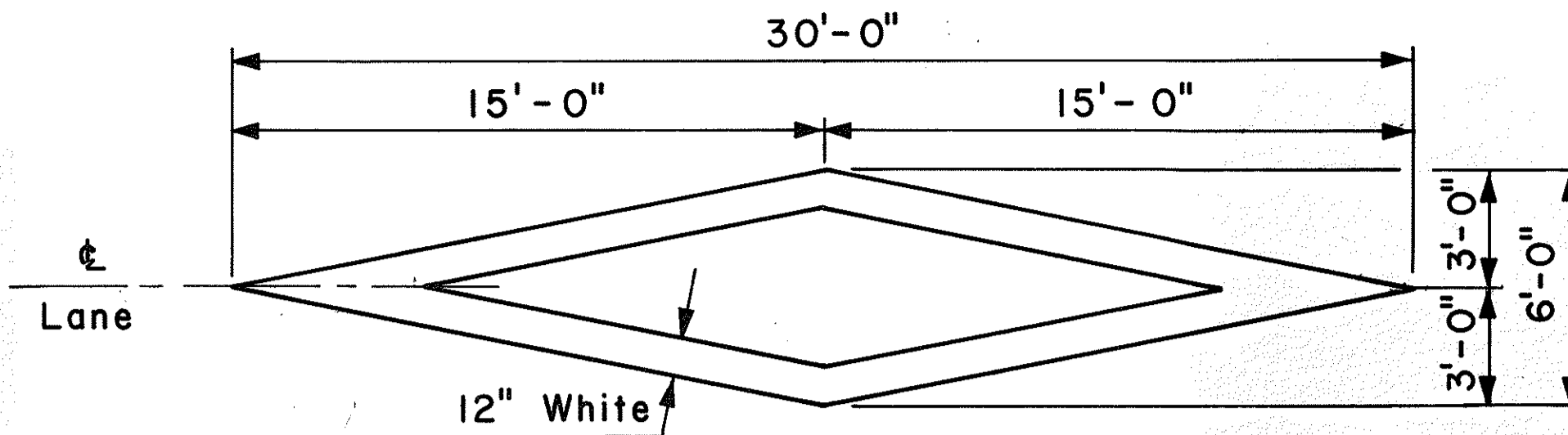
Not to Scale July 1978
SHEET No. 24T OF 28 SHEETS DT 300

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

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | 1-13-1(24) | 1983 | 265 | 328 |



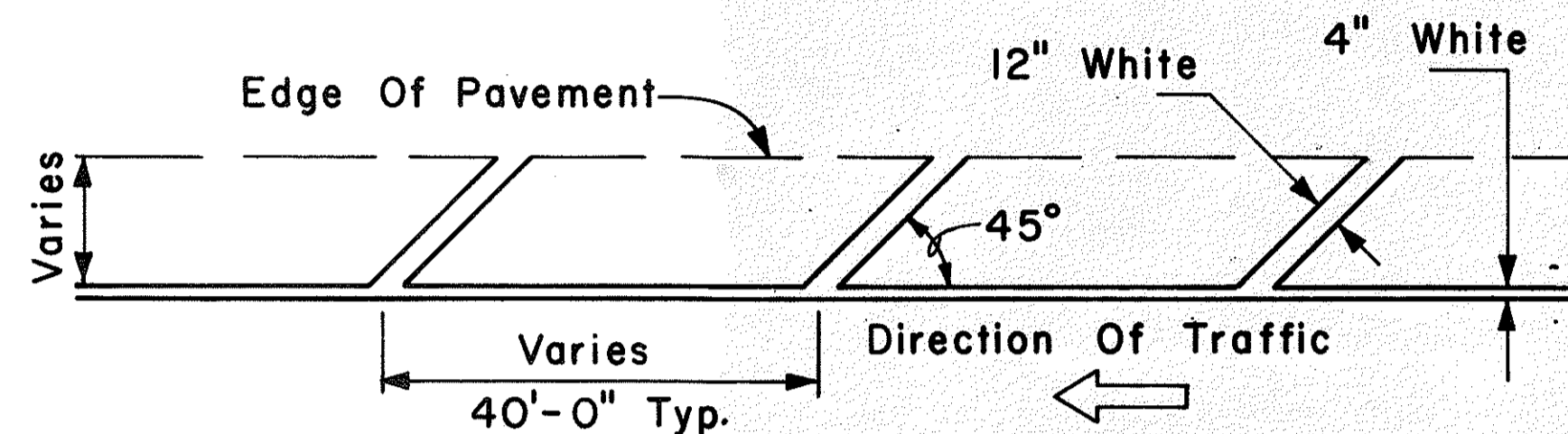
4" GUIDE LINE



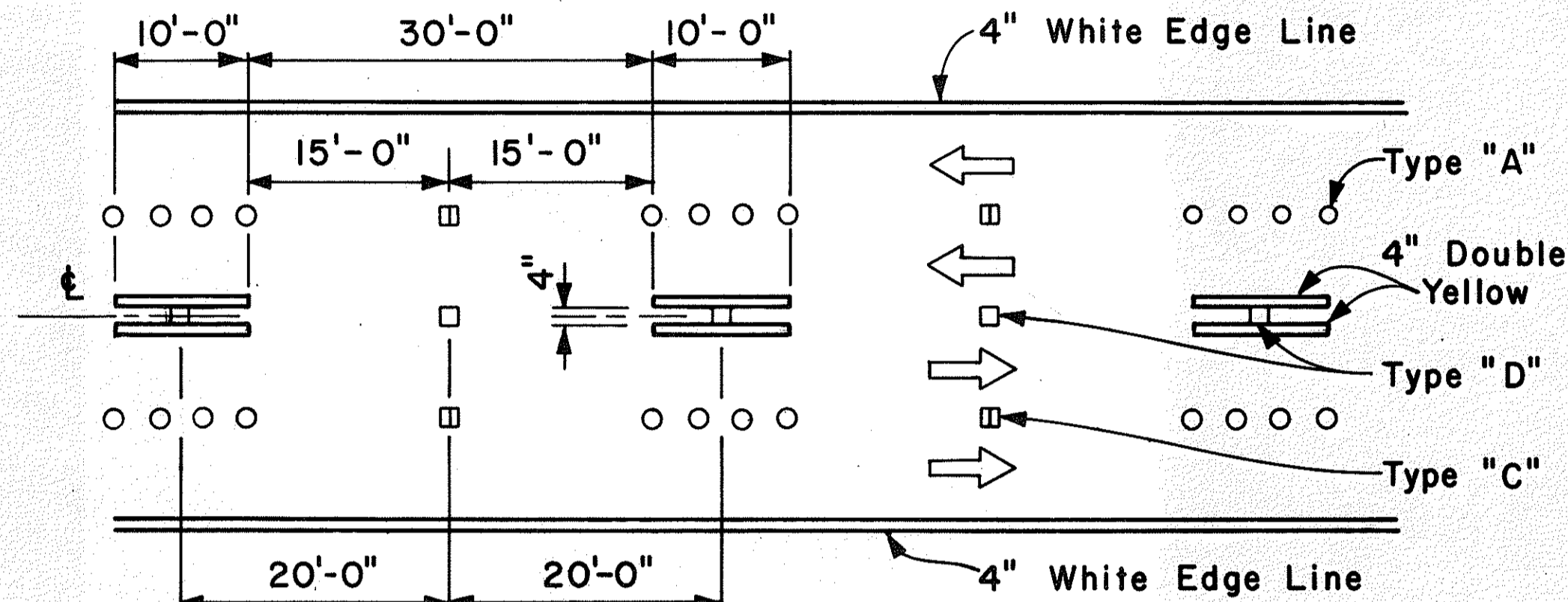
PAVEMENT DIAMOND

GENERAL NOTES:

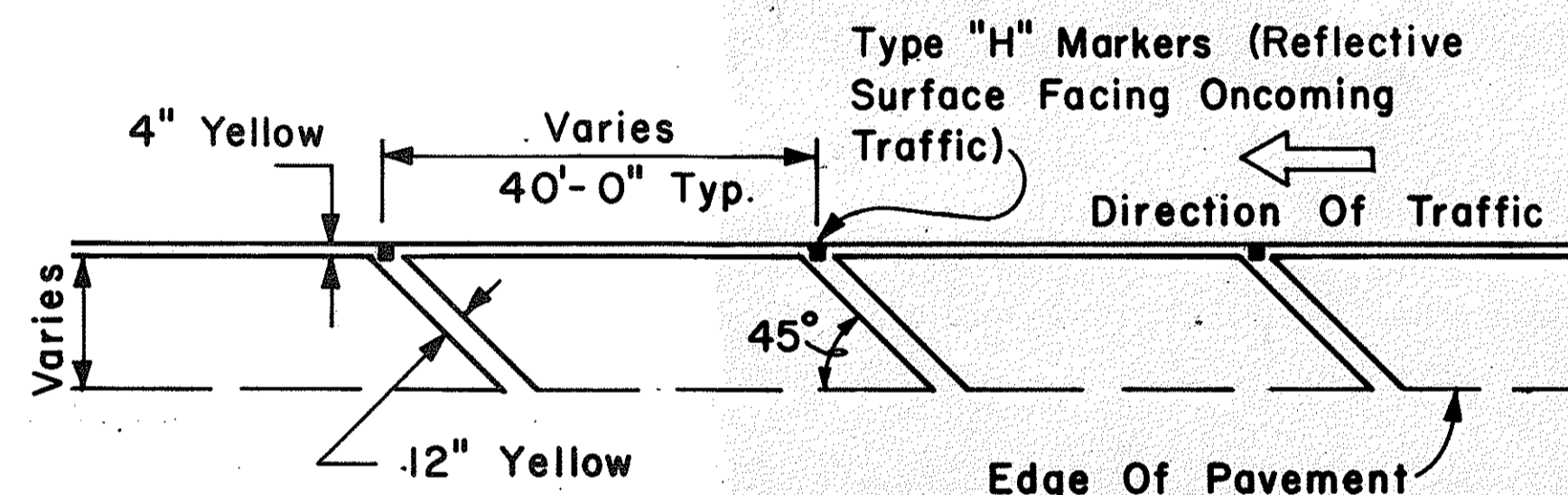
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and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



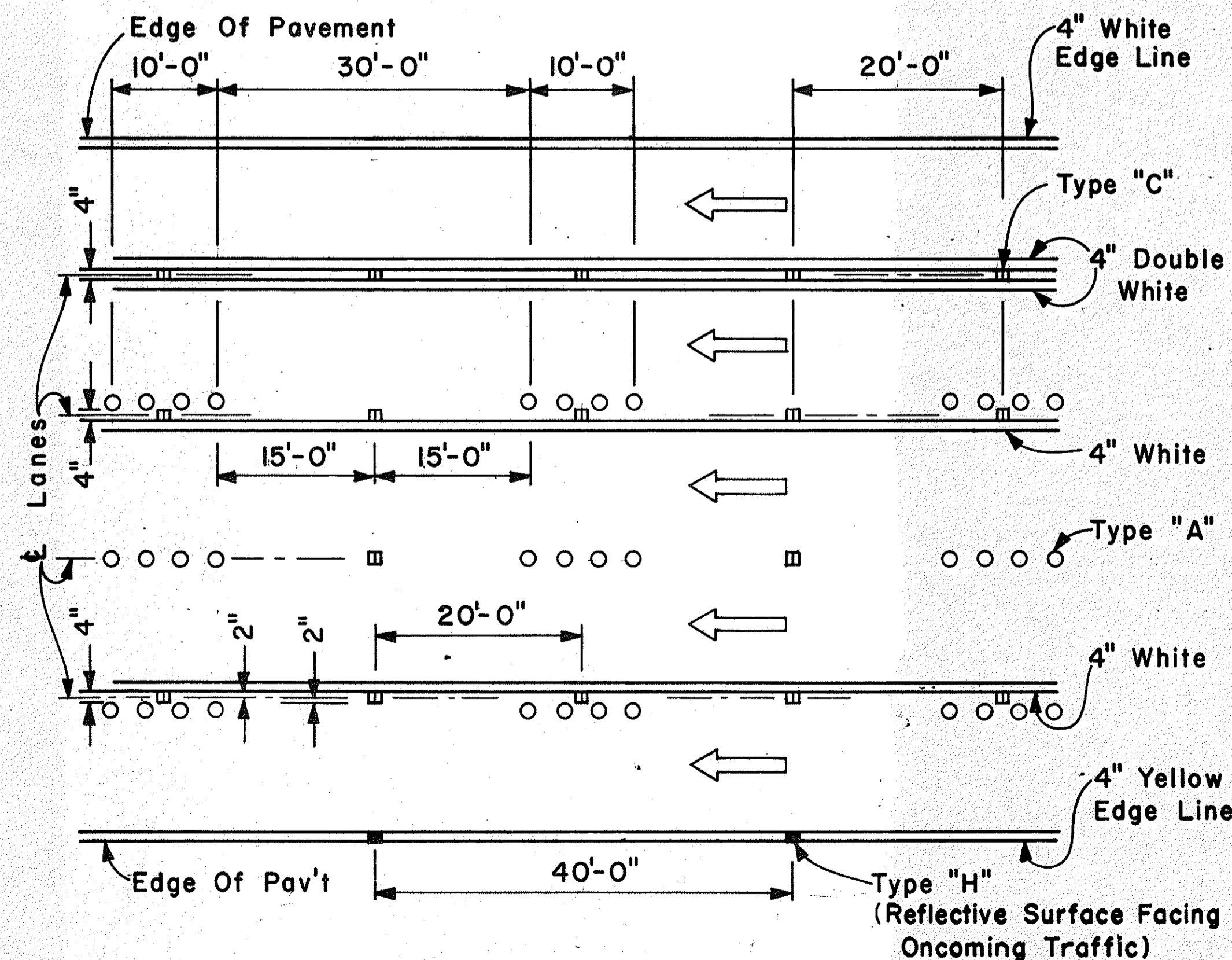
TRANSVERSE RIGHT SHOULDER MARKING



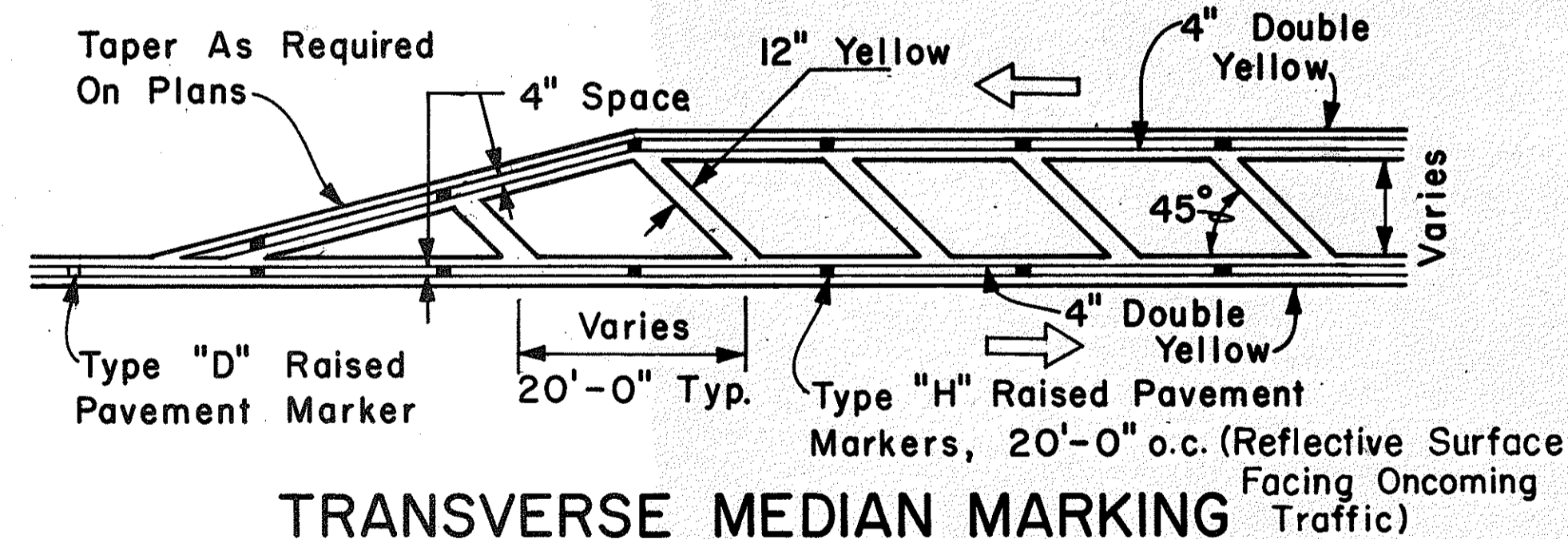
MULTI-LANE REVERSIBLE LANES



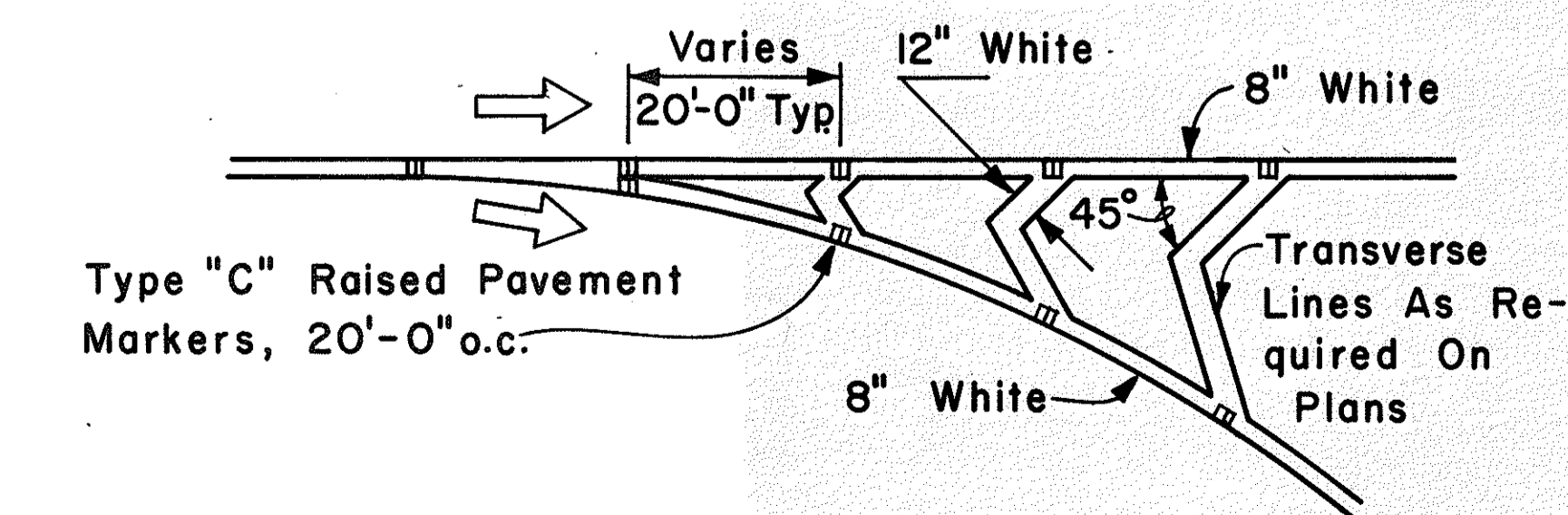
TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

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

APPROVED:
Herbert J. Zaleski 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. 25 OF 28 SHEETS DT 302

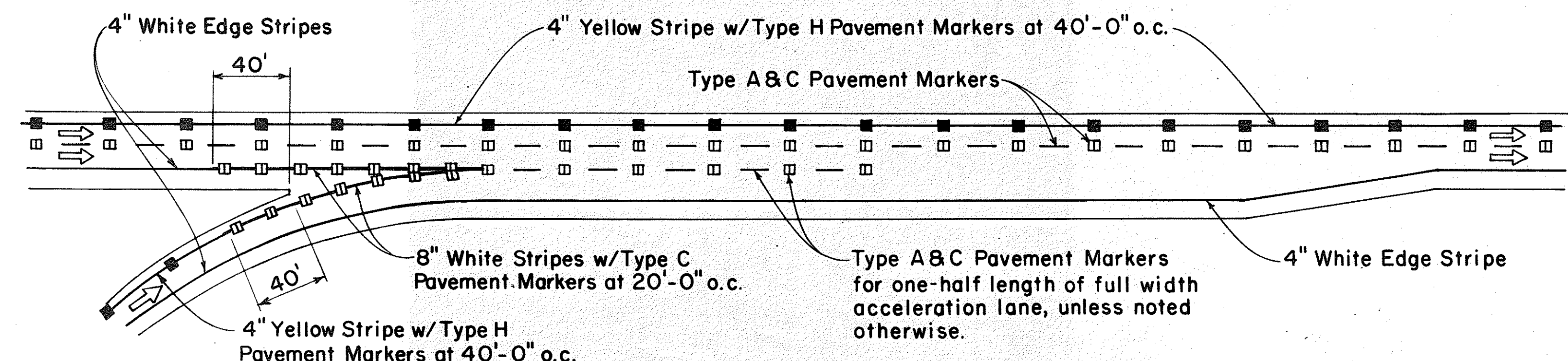
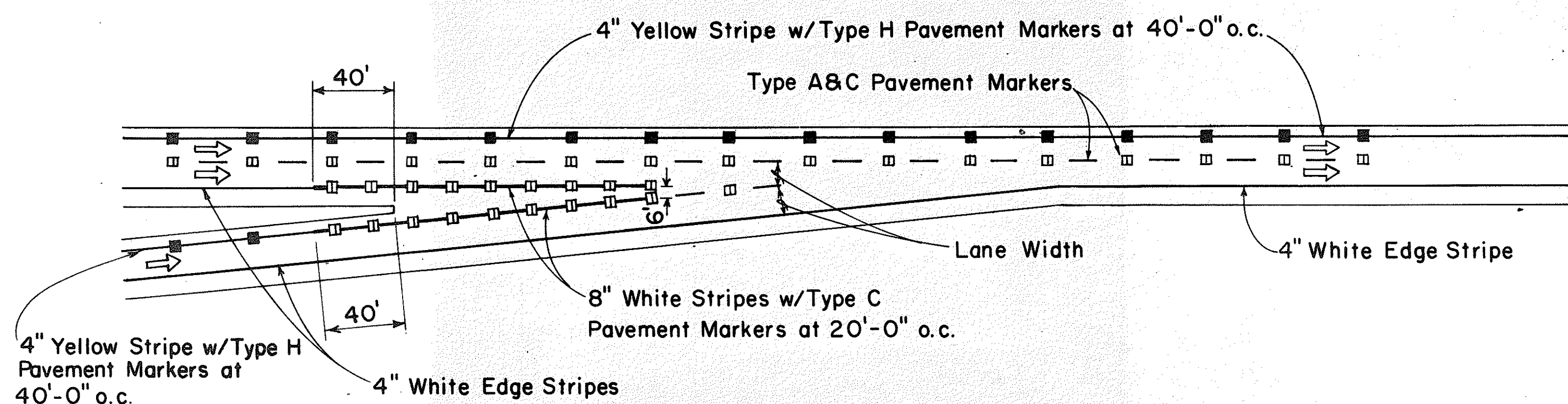
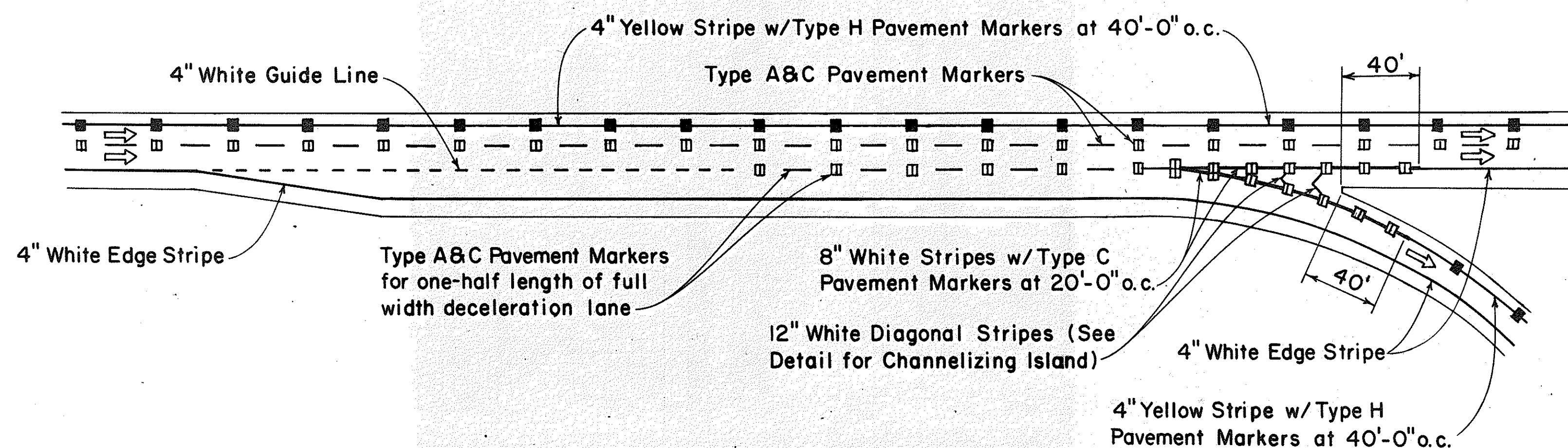
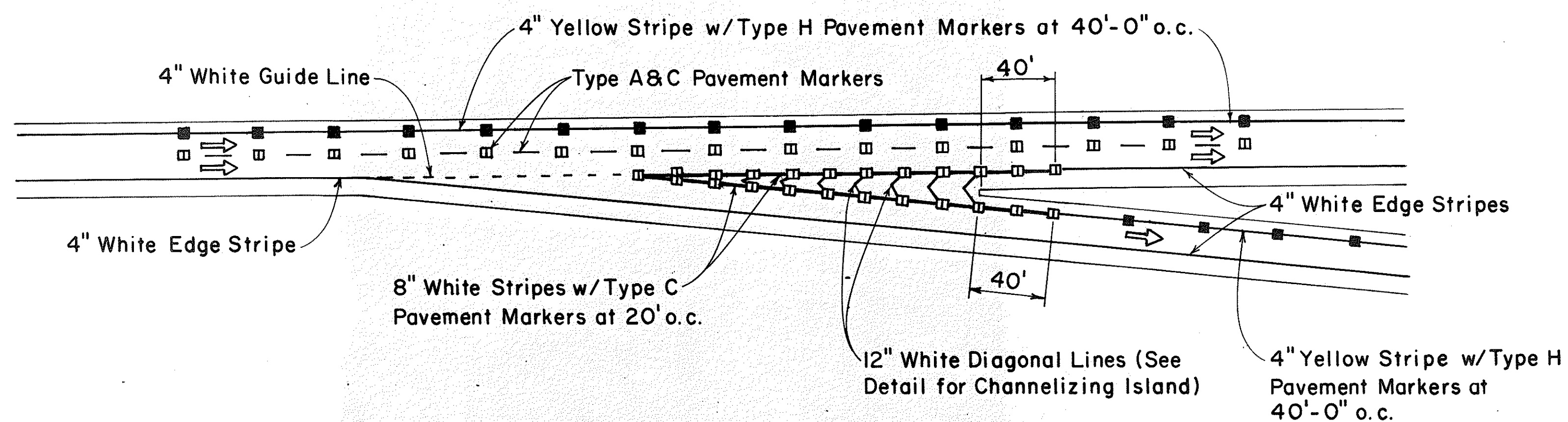
DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 43-1(24)11 | 1988 | 266 | 328 |

GENERAL NOTES:

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

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



ORIGINAL PLAN
DESIGNED BY
NOTED BY
CHECKED BY
DATE
NO.

APPROVAL RECOMMENDED:
Eishi Tanaka 1/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Zakeishi 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

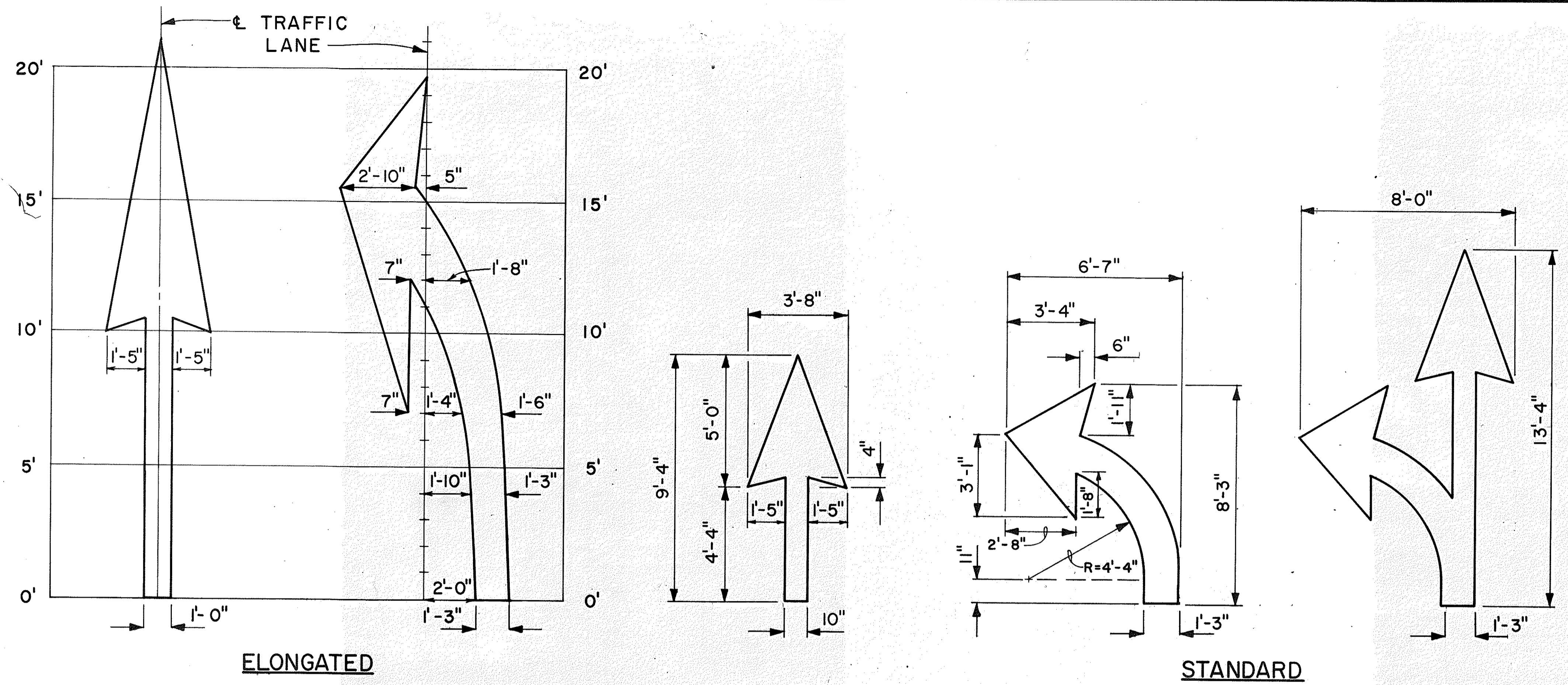
| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
| | | | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978

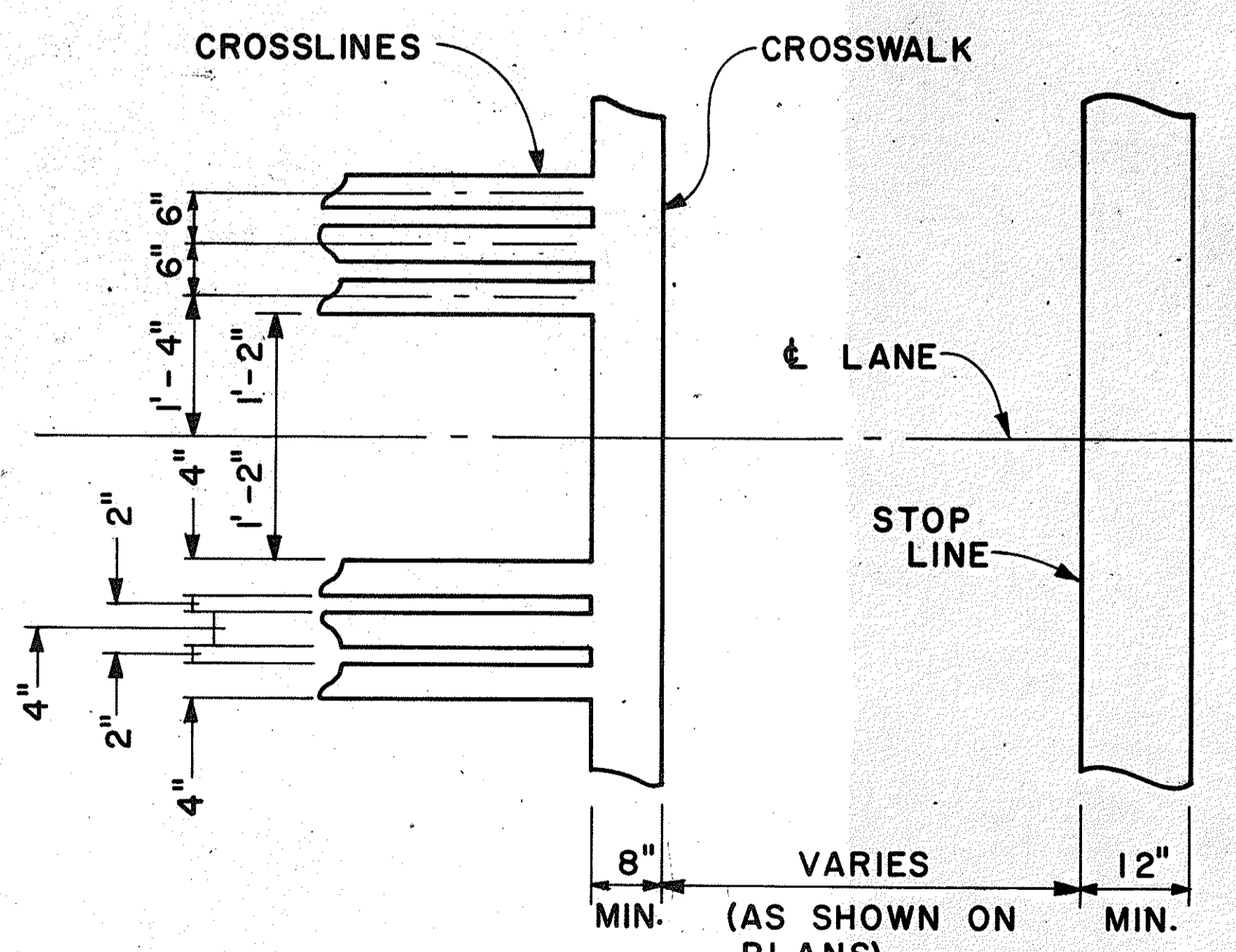
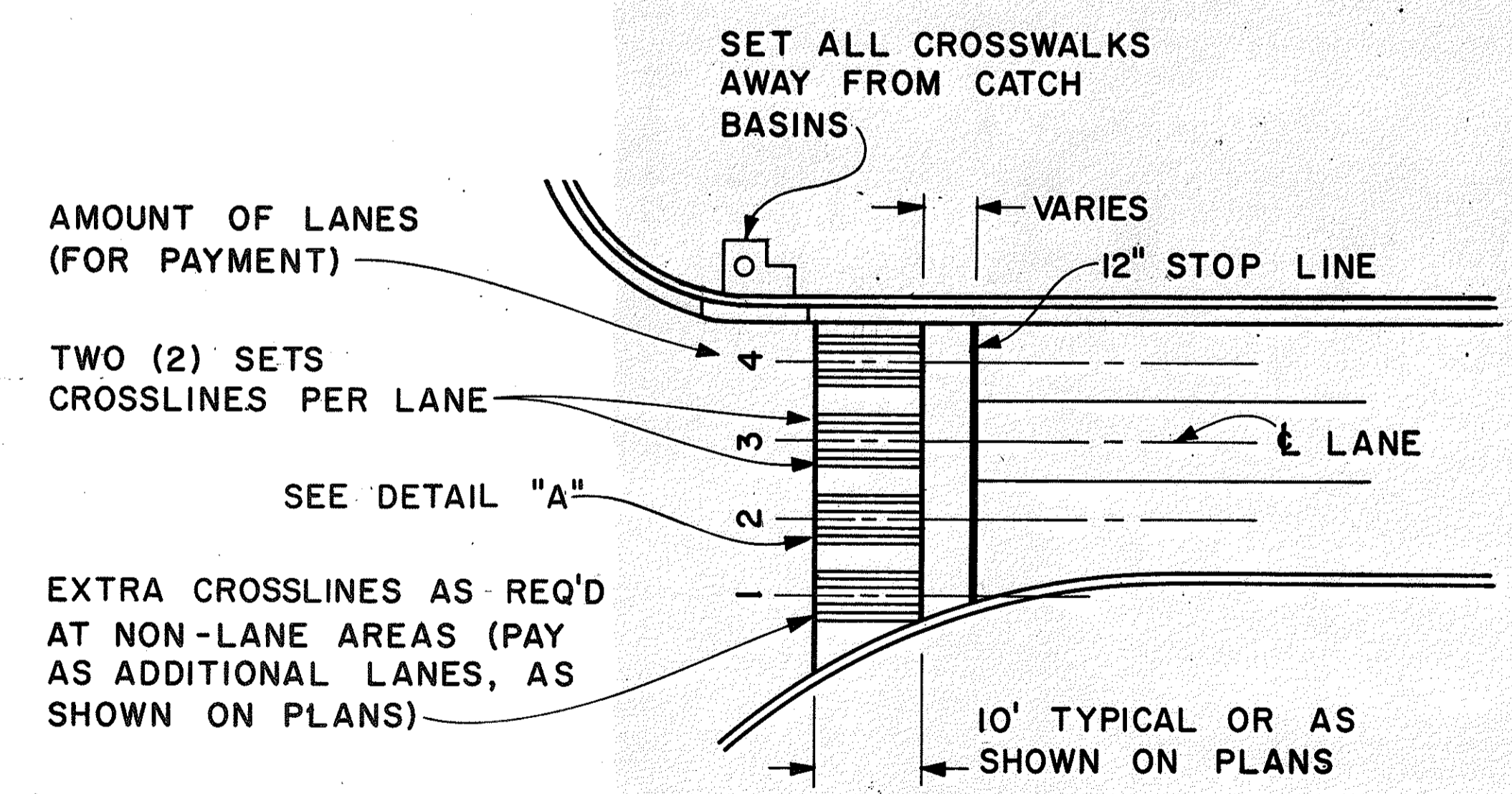
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1-43-1(24)11 | 1983 | 267 | 328 |



PAVEMENT ARROWS
Scale: 3/8" = 1'

GENERAL NOTES:

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



CROSSWALK & STOP LINE
Scale: Not to Scale

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

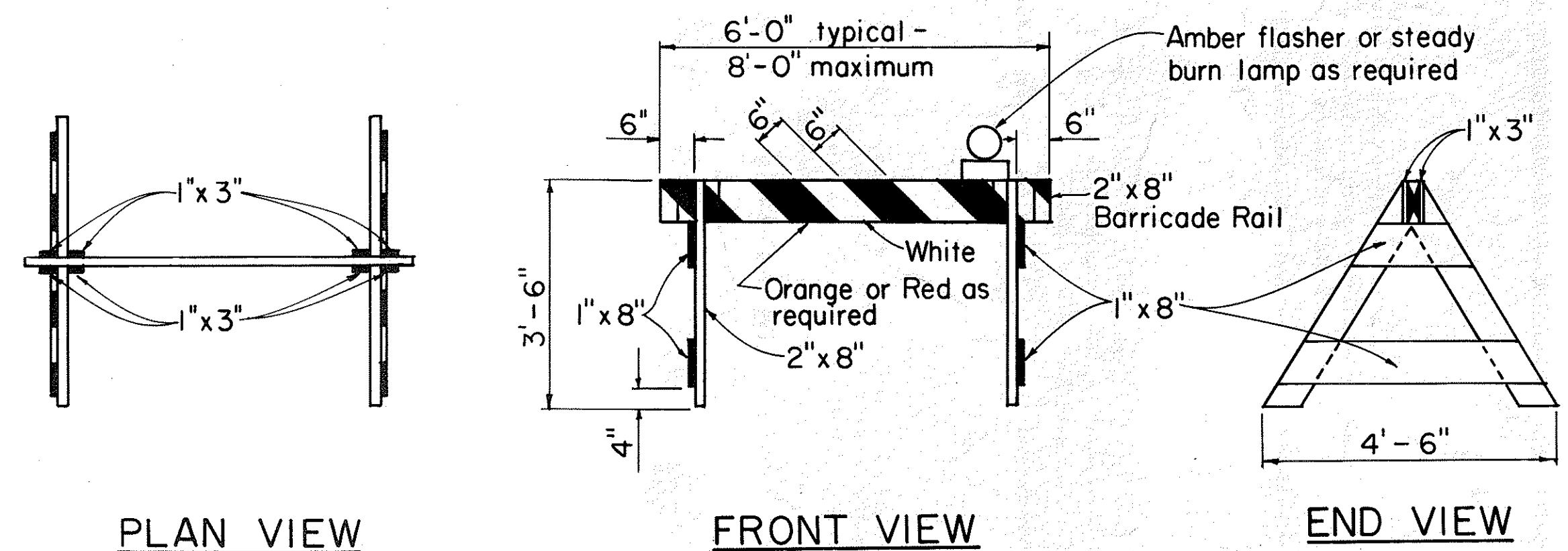
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

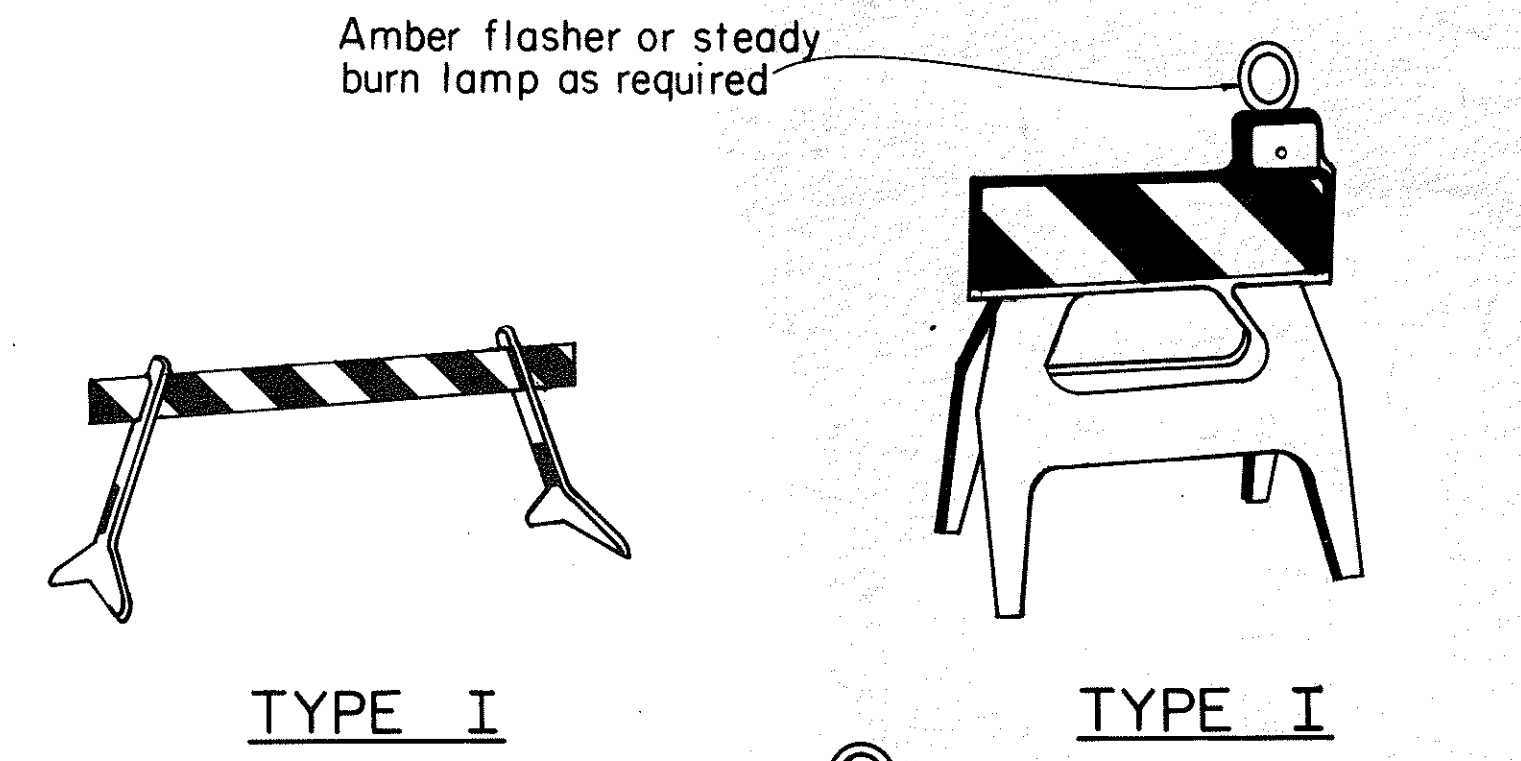
Scale: As Shown Date: March, 1978
SHEET NO. 277 OF 28 SHEETS DT 306

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

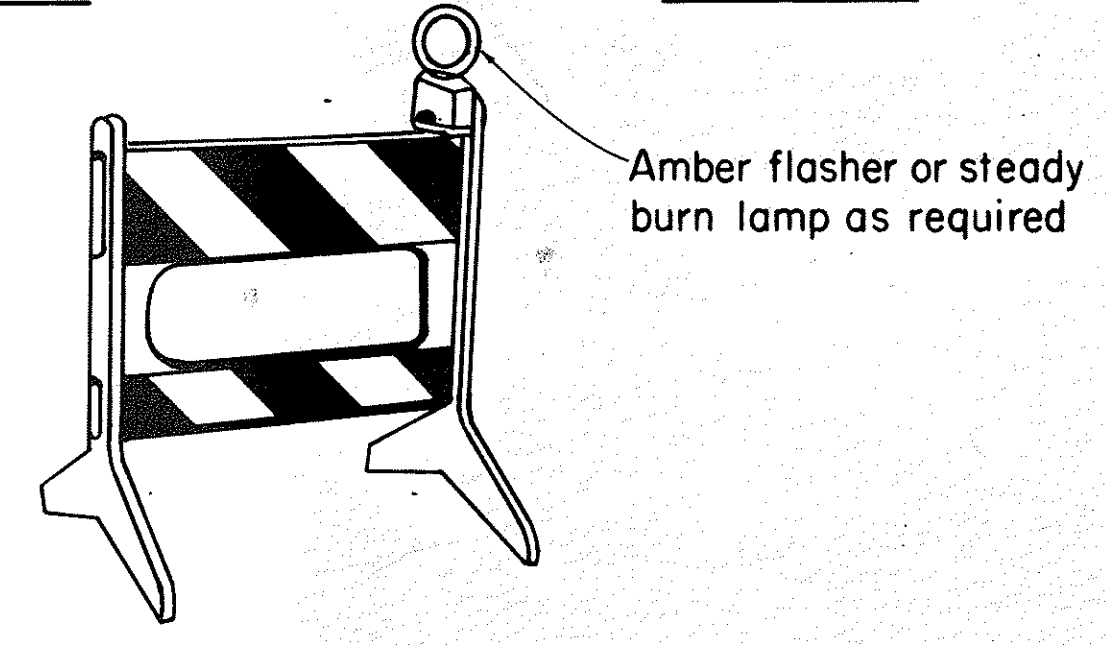
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | PH-2-1(042)11 | 1988 | 268 | 328 |



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



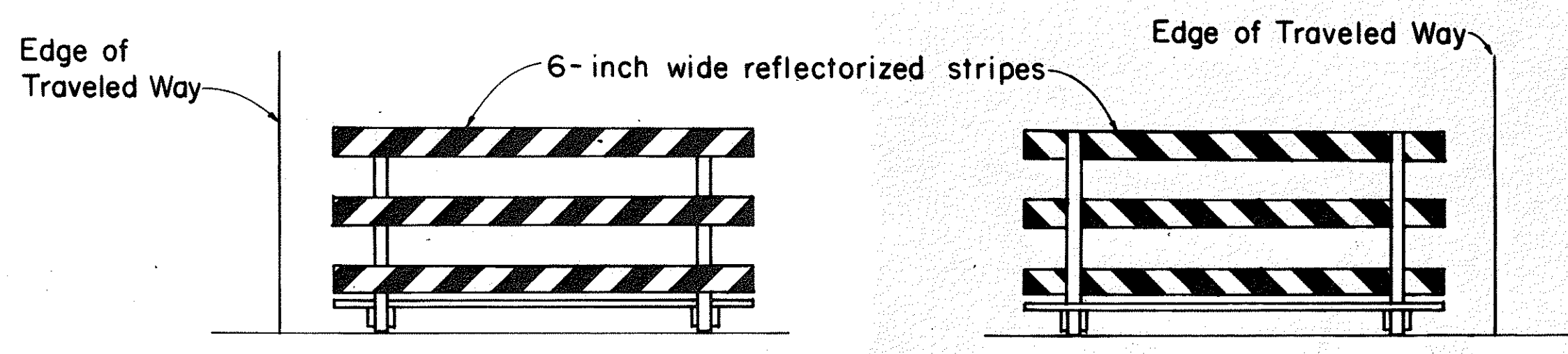
TYPE I



TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*

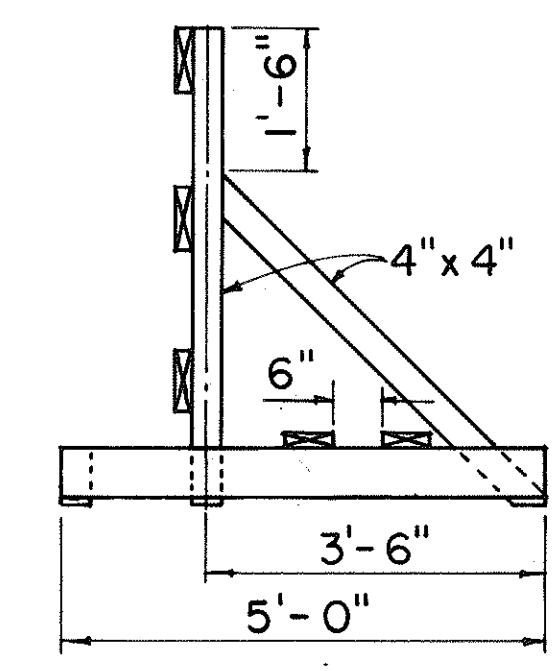
Not to Scale
* Shop Drawings must be submitted for approval.



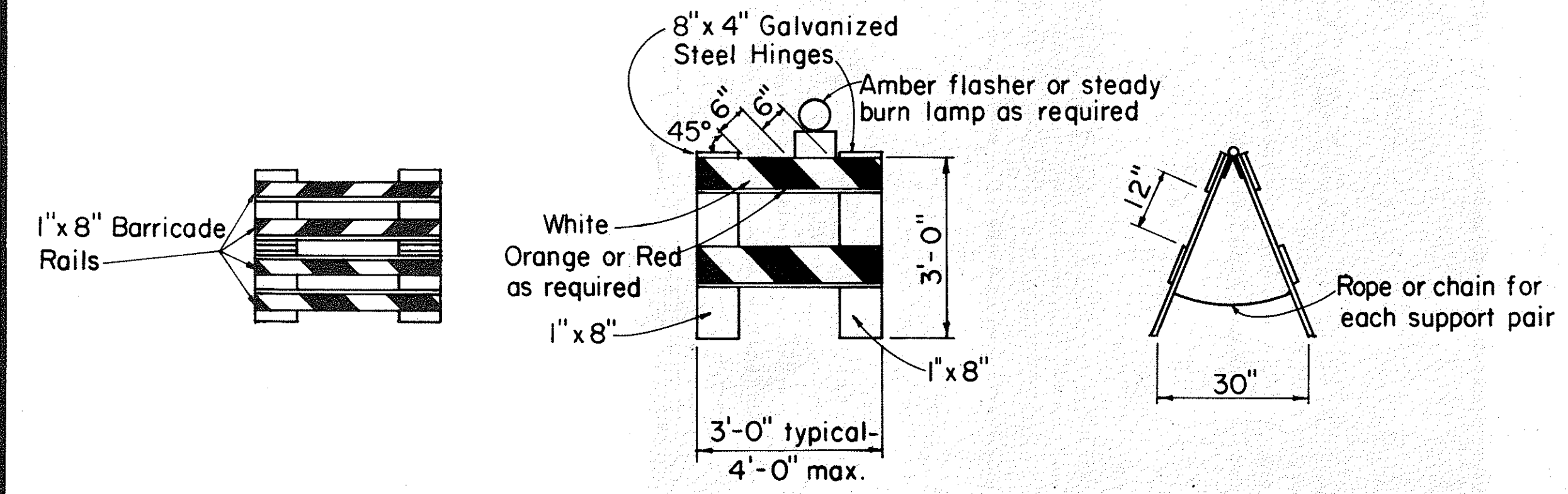
TYPICAL BARRICADE STRIPING DETAILS**
Not to Scale

TYPICAL BARRICADE STRIPING DETAILS**

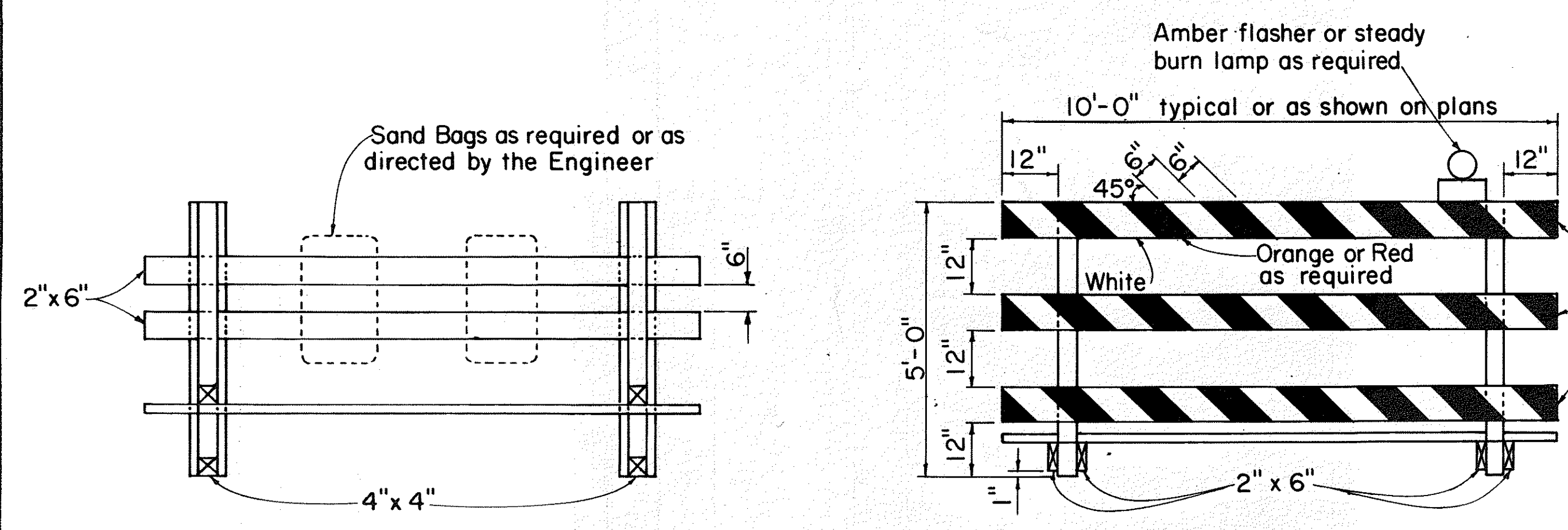
** Similar for Types I & II



END VIEW



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



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

GENERAL NOTES

- 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.
- Contractor may submit alternate barricade designs for approval.
- Sandbags or other approved weights shall not be placed on top of any striped rail.
- The Contractor is directed to Section 626.

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

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

APPROVED:
Shuhei S. Sato 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. 28 OF 28 SHEETS DT 800