| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 241 | 328 |

INSTALL SPEED LIMIT 35 ONTO HWY LT STD AT STATION 94+ PER FC #9-85

INSTALL NORTH M3-1

83 M1-6 (83)

INSTALL REDUCE SPEED 35 WITH POST AT STATION 98± FC #9-85

INSTALL U TURN AHEAD R16-6

INSTALL U TURN OK R16-7

INSTALL R3-4

TRUE NORTH Scale: 1"=50'

4" White Guide Line (Tape)

4" Yellow Guide Line (Tape)

4" White Guide Line (Tape)

12" Stop Line (Tape)

Pavement Arrow (Tape)

4" White Edge Stripe (Paint)

KAMEHAMEHA HIGHWAY

NORTHBOUND

SOUTHBOUND

Match to Exist. Markings

Match to Exist. Markings

95

180

4" White Guide Line (Tape)

MATCH LINE STA. 105+00 KAM HWY. (See this sheet)

REMOVE EXISTING 35 MPH SPEED LIMIT SIGN AND REPLACE WITH 45 MPH SIGN FC #9-85

INSTALL SPEED LIMIT ~~45~~ 35

R2-1(35) ON LT. STD.

KOOLAU VIEW DR.

KAHIKO ST.

4" Yellow Edge Stripe (Paint) w/Type H Markers @40'o.c.

4" White Edge Stripe (Paint)

INSTALL W3-1a-A

12" Stop Line (Tape)

Paint Tape

Type D Markers 4 Type J Markers

SERVICE ROAD

4" White Edge Stripe (Paint)

Transverse Right Shoulder Marking (Temporary Tape)

MATCH LINE STA. 105+00 KAM HWY. (See this sheet)

INSTALL JCT IM2-1

INTERSTATE H-3 IM-1(2)

INSTALL STOP R1-1

KAHIKO ST.

Match to Exist. Markings

Double 4" Yellow Stripe (Tape) w/Type D Markers @20' o.c.

4" Yellow Edge Stripe (Paint) w/Type H Markers @ 40' O.C.

INSTALL RM-2

MATCH LINE (See sht. 2T for continuation)

8" White Stripe (Tape) w/Type C Markers @ 20'o.c.

4" Yellow Edge Stripe (Paint) w/Type H Markers @40'o.c.

4" White Edge Stripe (Paint)

12" White Diagonal Stripes (Tape). See Channelizing Island Detail.

INSTALL EAST Kaneohe MCAS NEXT LEFT D-1

NOTE: Provide Sign Frame & Luminaires for future Sign Panel (11'-0" wide x 9'-6" high). See Lighting & Bridge plans for details.

INSTALL DO NOT ENTER R5-1A ON LT. STD

INSTALL W4-1(R)

INSTALL DO NOT ENTER R5-1A

INSTALL RM-1

INSTALL DO NOT ENTER R5-1-A

INSTALL WRONG WAY R5-9 On Light Standard

INSTALL ON STRUCTURE EAST Kaneohe MCAS E-1

INSTALL UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 H P, PEDESTRIANS KEEP OUT FREEWAY R16-5

RAMP "D"

RAMP "F"

Pav't. Arrows (Tape)

INSTALL STOP R1-1-A

INSTALL ONE WAY R6-1(L)

Temp Tape Paint

12" Stop Line (Tape)

Transverse Right Shoulder Marking (Temporary Tape)

MATCH LINE STA. 1+50 (See sht. 3T for continuation)

4" Yellow Edge Stripe (Paint)

H-3

Pav't. Arrows (Tape)

4" White Edge Stripe (Paint)

RAMP "A"

Temporary Tape

See "Note" above

4" Yellow Guide Lines (Tape)

R=85'-1"

NORTHBOUND

SOUTHBOUND

MATCH LINE STA. 118+00 (See sht. 2T for continuation)

KAMEHAMEHA HIGHWAY

Tape Paint

4 Type J Markers

Type D Marker

SERVICE ROAD

RAMP "C"

4" Yellow Stripe (Tape)

Type H Marker

INSTALL EAST IM3-2-A

INTERSTATE H-3 IM-1(2)

IMG-3

Transverse Right Shoulder Marking (Temporary Tape)

4" White Edge Stripe (Paint)

Double 4" Yellow Stripe (Tape) w/Type D Markers @ 20'o.c.

MATCH LINE STA. 9+55 "SERVICE RD." (See sht. 3T for continuation)

INSTALL NO TURNS R3-3

INSTALL SPEED LIMIT ~~45~~ 35 R2-1(35)

4" White Guide Lines (Tape)

INSTALL EAST IM3-2-A

INTERSTATE H-3 IM-1(2)

IM5-1(L)

BR #1

BR #2

H-3

12" Stop Line (Tape)

8" White Stripe (Tape) w/Type C Markers @ 20'o.c.

RAMP "B"

RAMP "A"

4" Yellow Edge Stripe (Paint) w/Type H Markers @ 40'o.c.

INSTALL R3-4

INSTALL NO TURNS R3-3

4" White Edge Stripe (Paint)

INSTALL SPEED LIMIT 45

REMOVE 35 MPH SIGN AND INSTALL 45 MPH SIGN ON EXISTING POST AT STATION 116± PER FC #9-85

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

# TRAFFIC SIGNS AND PAVEMENT MARKINGS

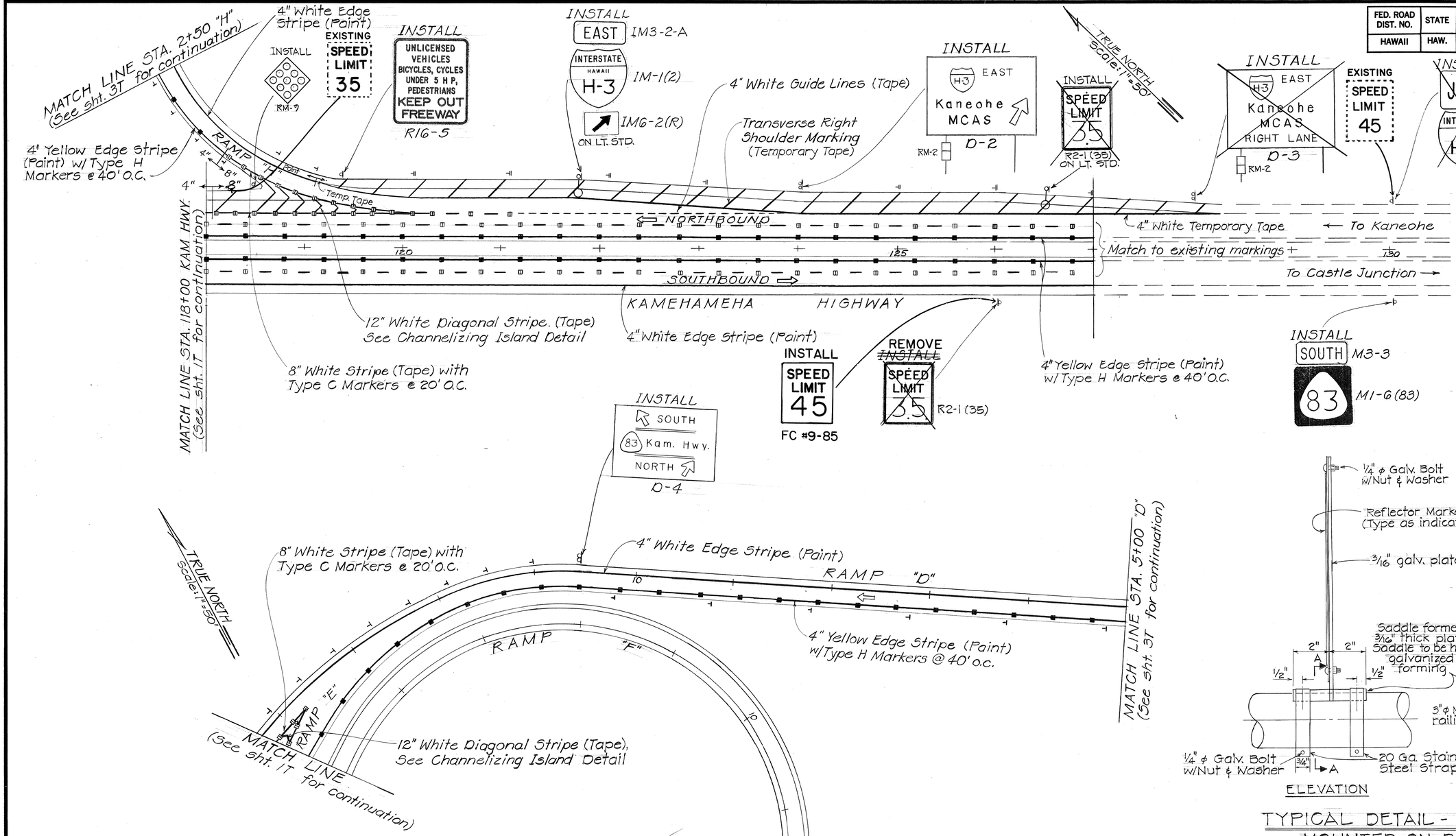
HALEKOU INTERCHANGE
F.A.I. PROJ. I-H3-1(24):11

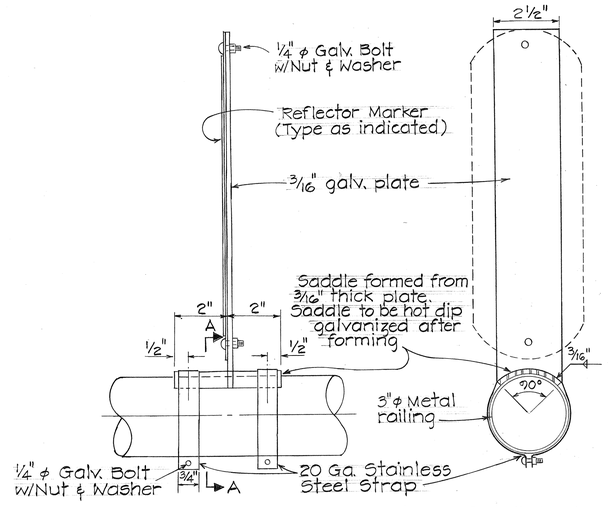
SCALE: 1" = 50' DATE: SEPT. 1982

SHEET No. 1T OF 28 SHEETS

2-2-00

| 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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

# TRAFFIC SIGNS AND PAVEMENT MARKINGS

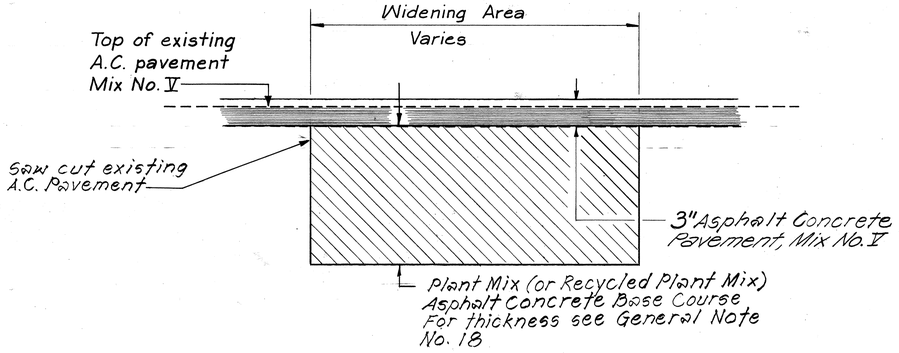
HALEKOU INTERCHANGE
F.A.I. PROJ. I-H3-1(24):11

SCALE: As Noted DATE: SEPT. 1982

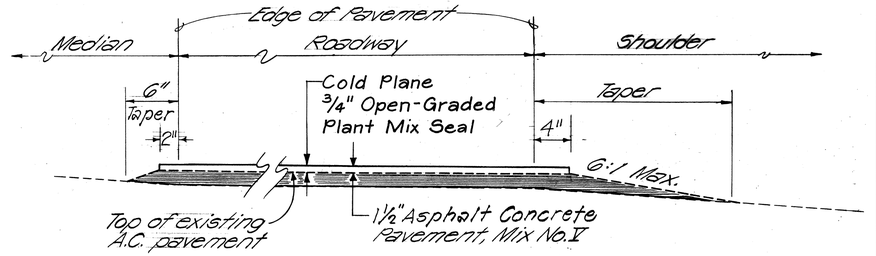
SHEET No. 2T OF 28 SHEETS

242

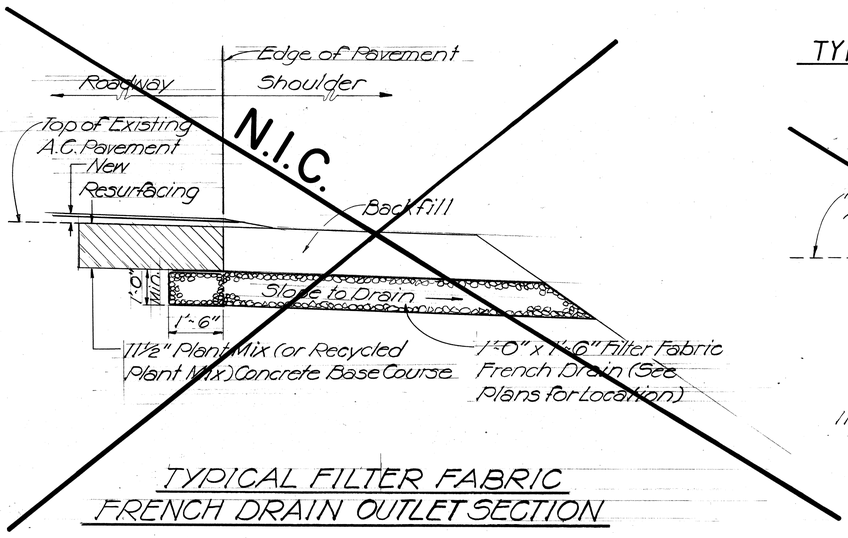
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-IR-H3-1(24):11 | 1989 | C.0.242 S-1 | 328 |



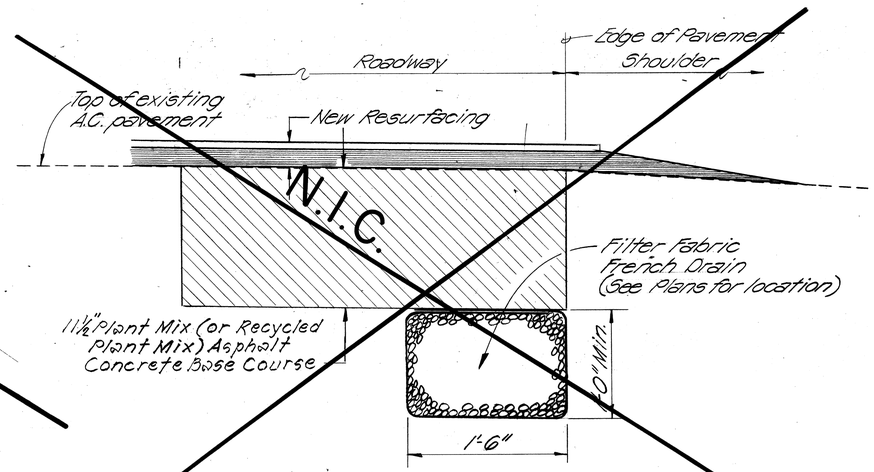

TYPICAL WIDENING AREA



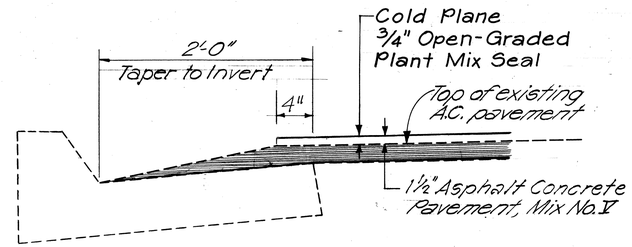

TYPICAL ROADWAY SECTION



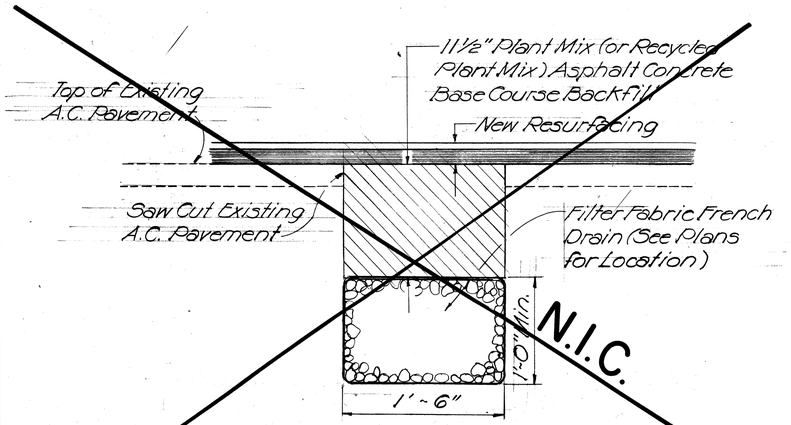

TYPICAL FILTER FABRIC
FRENCH DRAIN OUTLET SECTION



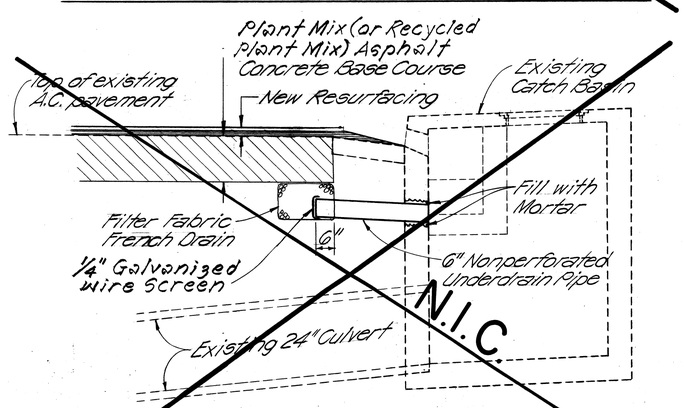

TYPICAL FILTER FABRIC FRENCH DRAIN
SECTION UNDER RECONSTRUCTION AREA



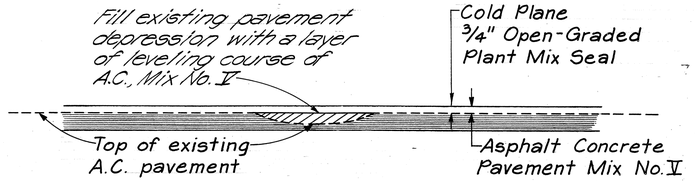

CURB AND GUTTER SECTION




TYPICAL FILTER FABRIC
FRENCH DRAIN SECTION




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




TYPICAL LEVELING COURSE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# TYPICAL SECTIONS

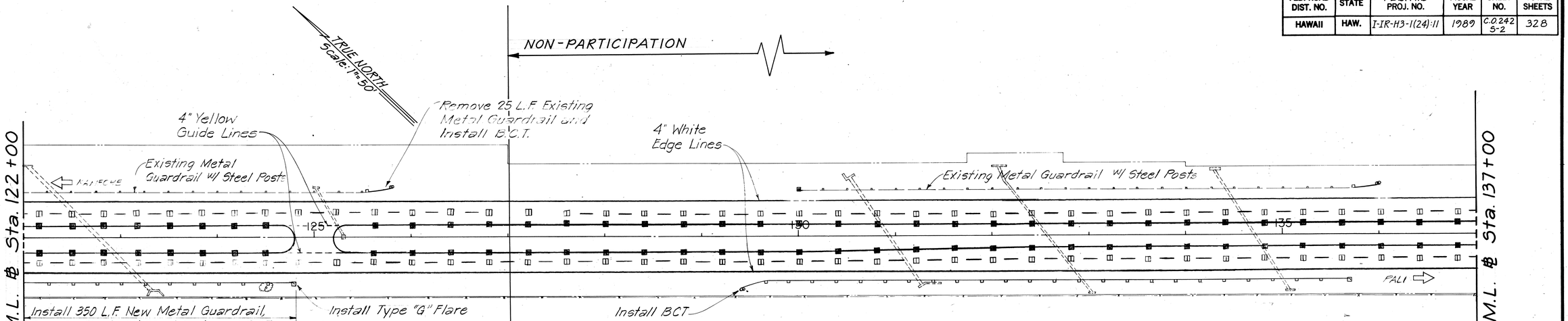
KAMEHAMEHA HIGHWAY RESURFACING
Sta. 127+00 to Pali Highway
F.A.I. Proj. No. I-IR-H3-1(24):11
Not to Scale

SHEET No. 1 OF 1 SHEETS

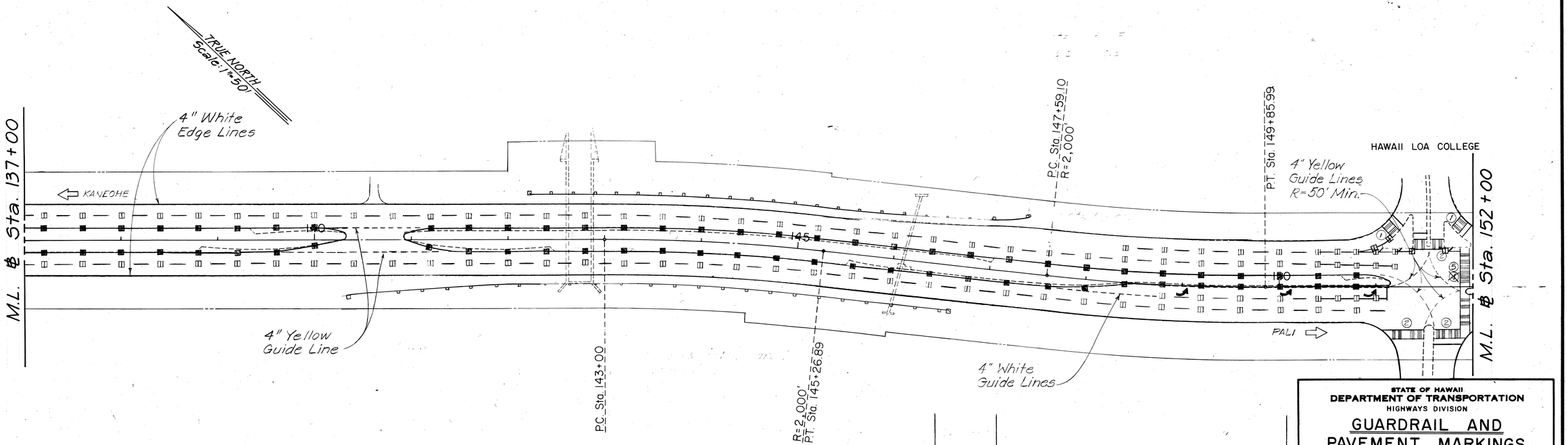
C.0.242S-1

6206-2122

| 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.O.242 S-2 | 328 |




Remove Existing Pavement Markers, Cold Plane 3/4" Open Graded Mix Resurface with 1½ Inches of Asphalt Concrete Mix II, Reinstall Pavement Markers and Striping as shown.




| 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'

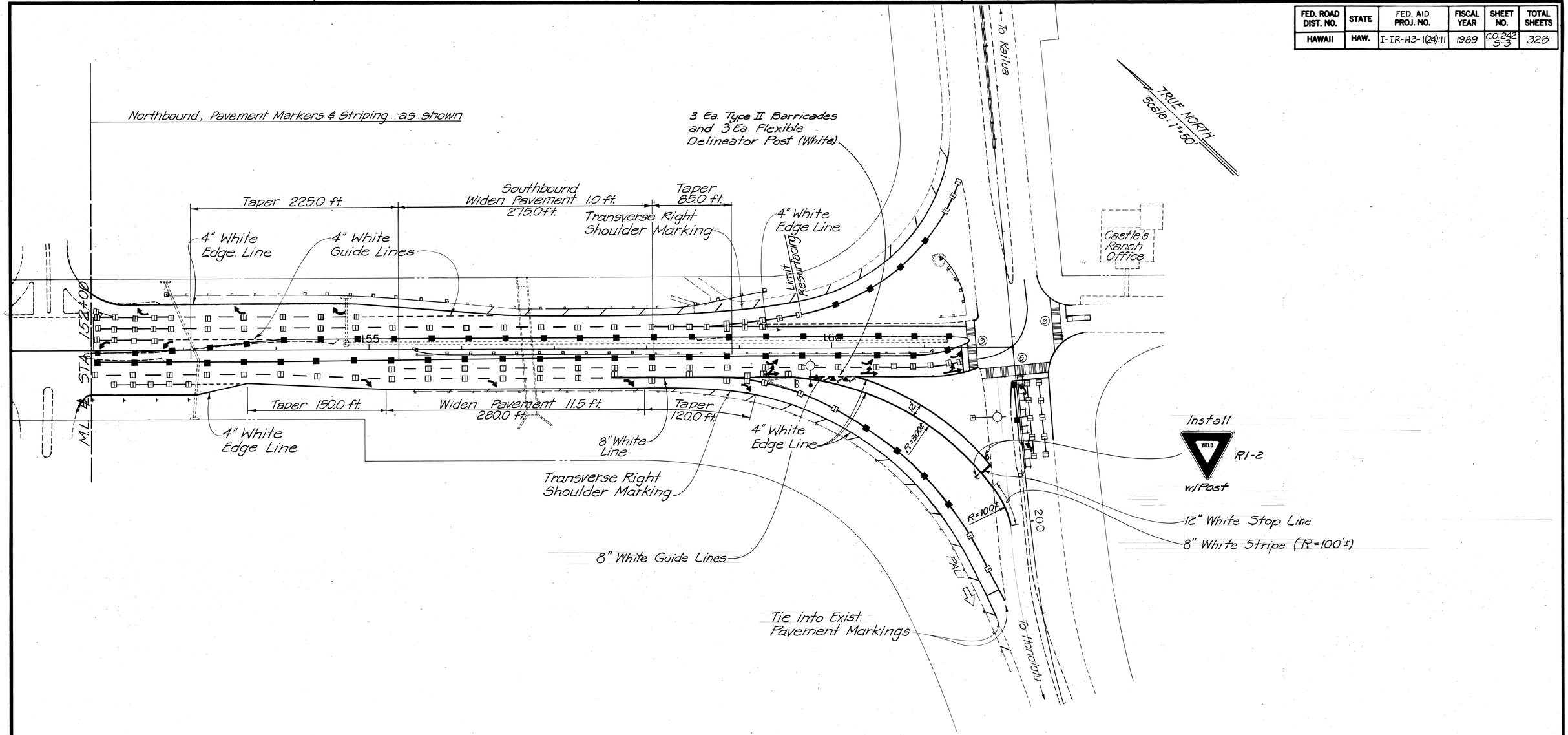
SHEET No. OF SHEETS

C.O.242S-2

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

D-2-5

| 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 S-3 | 328 |




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

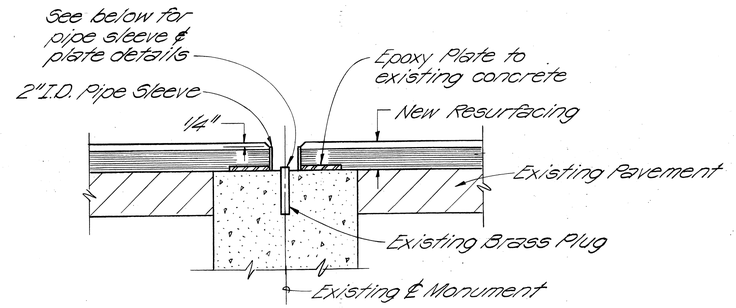
F.A.I.P. No. I-IR-H3-1(24):11

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.0242 S-4 | 328 |




SECTION THRU MONUMENT

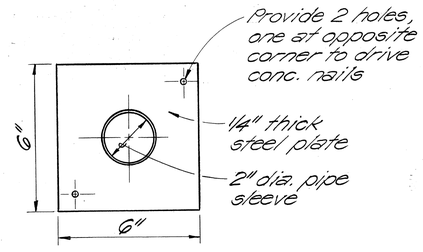



PLATE PLAN

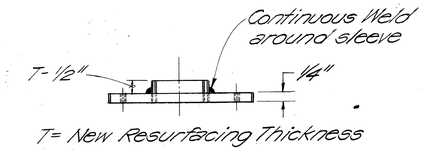
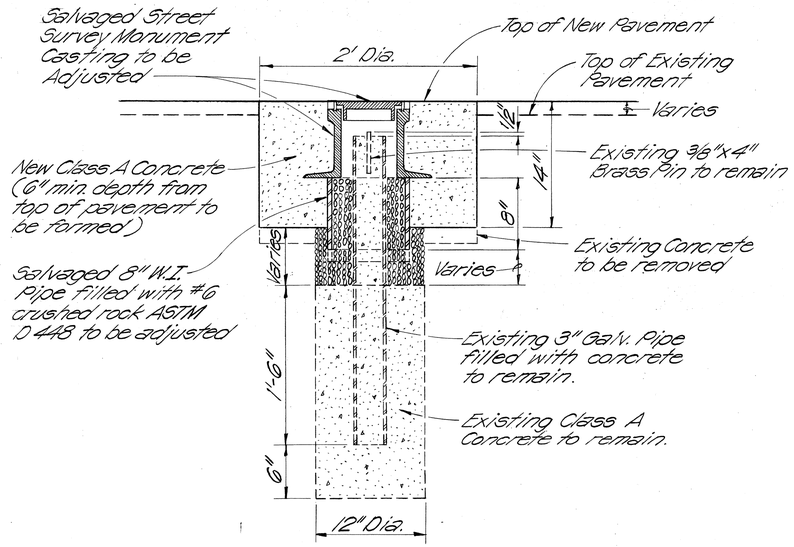



PLATE ELEVATION

## 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 1/2"=1'-0"

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

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

C.0.242 S-4

6206.2/22

| 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'

12" Stop Line (Tape)

INSTALL STOP R1-1

SERVICE ROAD

RAMP "C"

MATCH LINE STA. 9+55 "SERVICE RD." (See Sht. 1T for cont.)

RM-1 Mounted on Bridge Rail. For Details, See Sht. No. 2T

⇐ WESTBOUND

INTERSTATE ROUTE H-3

EASTBOUND ⇒

MATCH LINE STA. 504+00 (See Sht. 4T for continuation)

RAMP "A"

Double 4" Yellow Stripe (Tape) with Type D Markers @ 20'o.c.

4" White Edge Stripe (Painted)

6' CHAIN LINK FENCE
W1-6 48" x 24"
10' GATE
ROAD CLOSED
RM9
RM9
R11-2 48" x 30" (STATE FURNISHED)

SECTION A-A Not to Scale
FC #1-86

MATCH LINE STA. 22+50 (See Below)

SERVICE ROAD

4" White Edge Stripe (Painted)

Double 4" Yellow Stripe (Tape) w/Type D Markers @ 20'o.c.

Chain Link Fence and Gate

INSTALL STOP R1-1 ON LT. STD.

INSTALL W1-6 48" x 24"

INSTALL NO OUTLET W14-2

KIONAOLE ROAD

12" Stop Line (Tape)

Guard Rail with Rub Rail

MATCH LINE STA. 22+50 (See Above)

MATCH LINE STA. 5+00 "D" (See Sht. 2T for continuation)

4" White Edge Stripe (Paint)

INSTALL RAMP 25 M.P.H. W13-3 (25) ON LT. STD.

4" Yellow Edge Stripe (Painted) w/Type H Markers @ 40'o.c.

Paint

Temporary Tape

RAMP "D"

4" White Edge Stripe (Temporary Tape)

4" Yellow Edge Stripe (Temp. Tape) w/Type H Markers @ 40'o.c.

TRUE NORTH
Scale: 1"=50'

⇐ WESTBOUND

INTERSTATE ROUTE H-3

EASTBOUND ⇒

RAMP "G"

8" White Stripe (Tape) w/Type C Markers @ 20'o.c.

4" Yellow Edge Stripe (Paint) w/Type H Markers @ 40' o.c.

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

4" Yellow Edge Stripe (Paint) w/Type H Markers @ 40'o.c.

4" White Edge Stripe (Paint)

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

4" Yellow Edge Stripe (Paint) w/Type H Markers @ 40'o.c.

4" White Edge Stripe (Paint)

MATCH LINE STA. 1+50 "G" (See Sht. 1T for continuation)

RAMP "H"

8" White Edge Stripe (Tape) w/Type C Markers @ 20'O.C

INSTALL YIELD R1-2-A ON LT STD.

MATCH LINE STA. 2+50 "H" (See Sht. 2T for continuation)

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

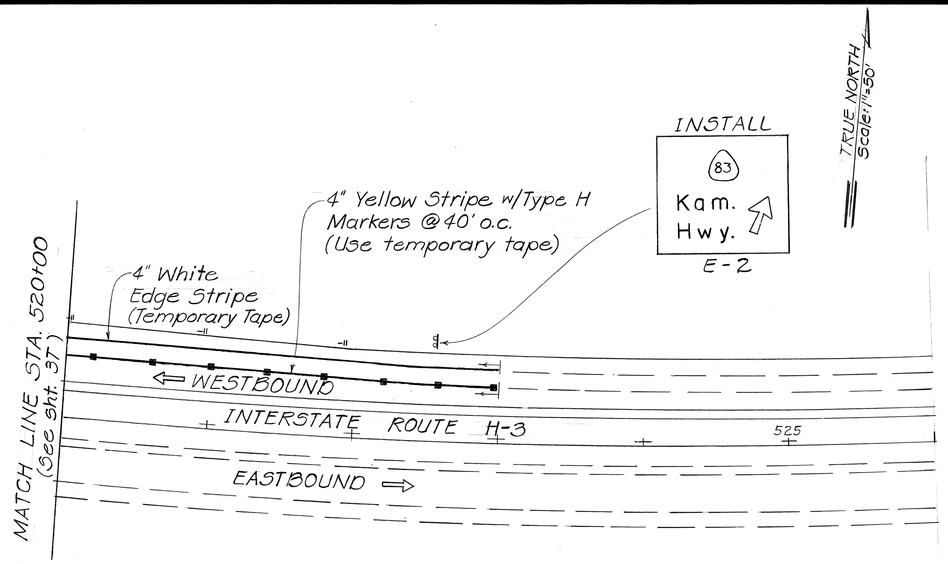
# TRAFFIC SIGNS AND PAVEMENT MARKINGS

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

SCALE: 1" = 50' DATE: SEPT. 1982

SHEET No. 3T 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 |




## SIGNING & PAVEMENT MARKING NOTES

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

## PAVEMENT MARKING SUMMARY

| 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 |

## 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)

## TRAFFIC SIGN SUMMARY

| TYPE | DESCRIPTION | QUANTITY W/POST(S) | QUANTITY W/O POST | QUANTITY 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 | |
| R1G-5 | KEEP OUT FREEWAY | 2 | | |
| R1G-6 | U TURN AHEAD | 1 | | |
| R1G-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 | |
| IM6-2(R) | ↗ | | 1 | |
| IM6-3 | ↑ | | 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 | | |
| | | | | |

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

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

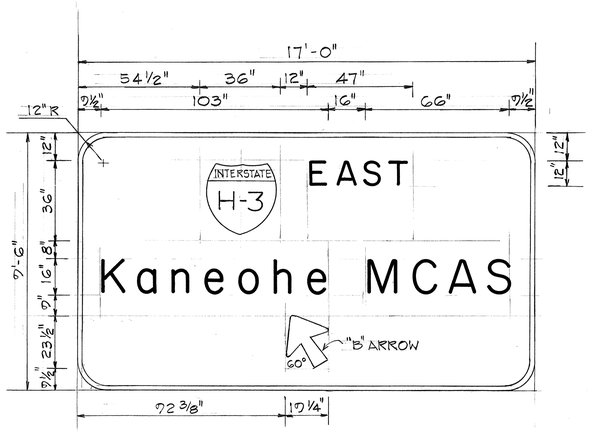
SCALE: 1"= 50' DATE: SEPT. 1982

SHEET No. 47 OF 28 SHEETS

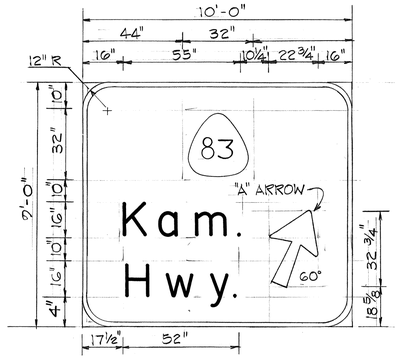
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | NOTE BOOK | No.

244R

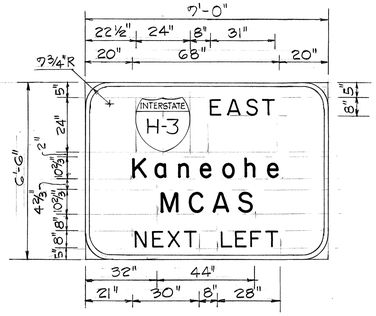
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 245 | 328 |




SIGN E-1



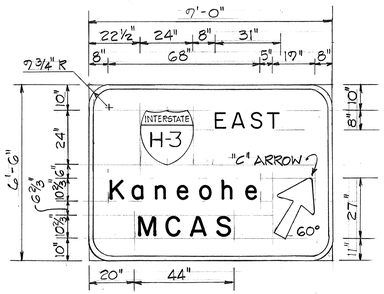

SIGN E-2



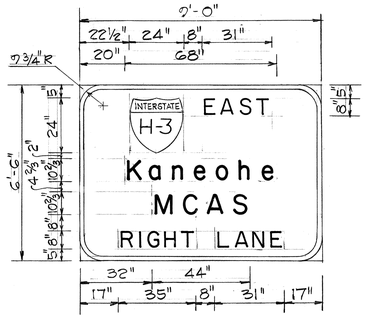

SIGN D-1

## PANEL LAYOUT NOTES

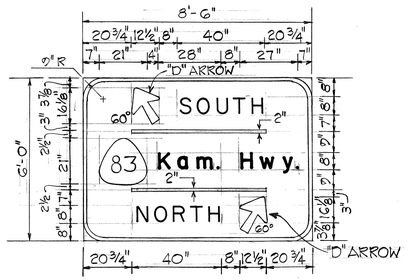
1. SIGNS SHALL CONFORM TO THE LATEST EDITIONS AND AMENDMENTS OF THE FOLLOWING FHWA PUBLICATIONS:
   a) "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD).
   b) "STANDARD HIGHWAY SIGNS".
   c) "STANDARD ALPHABETS FOR HIGHWAY SIGNS".
2. USE SERIES "E" (M) LETTERS UNLESS OTHERWISE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




SIGN D-2




SIGN D-3



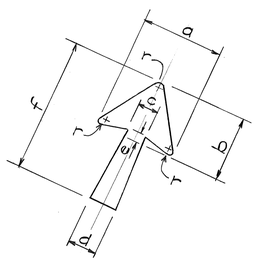

SIGN D-4

## 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 | 20 1/4 | 3/4 |
| D | 14 1/4 | 9 13/16 | 3 3/8 | 4 1/2 | 1 5/16 | 17 1/4 | 3/4 |

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

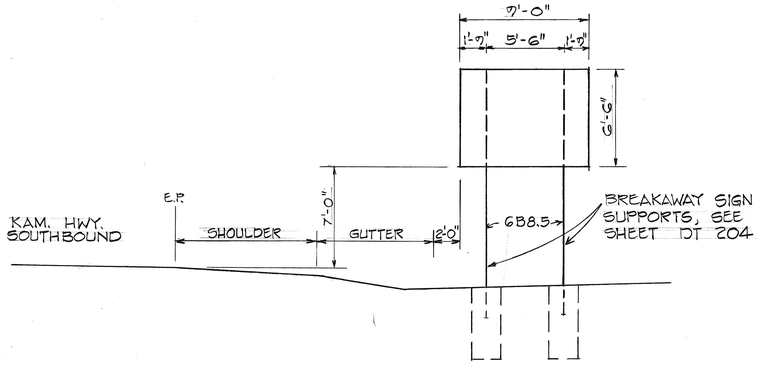
PANEL LAYOUT

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

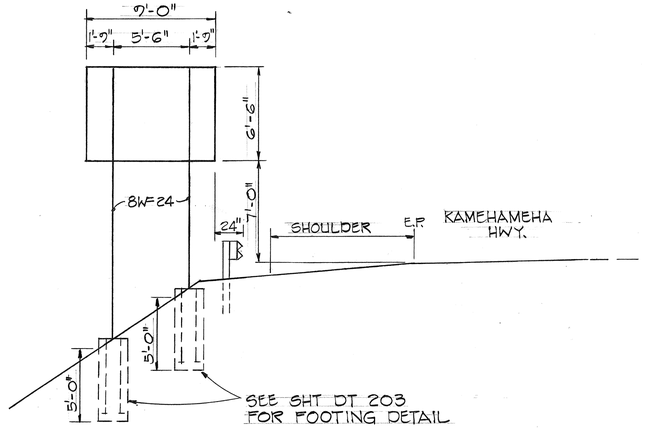
SCALE: 3/8" = 1'-0" DATE: SEPT. 1982

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 |



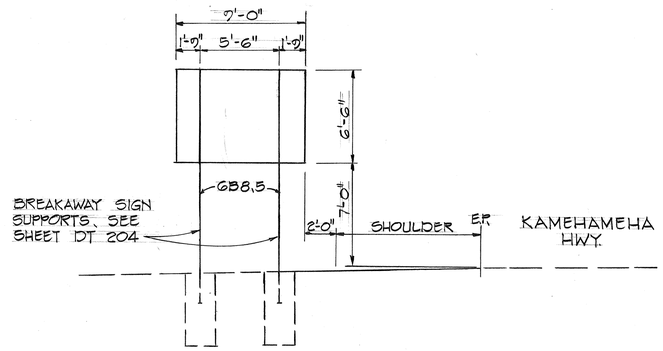

SIGN D-1
℄ STA. 103+00 RT
KAMEHAMEHA HWY SB



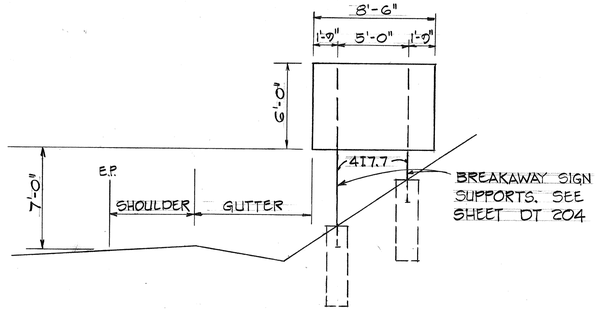

SIGN D-2
℄ STA. 124+00 LT.
KAMEHAMEHA HWY N.B.

## FRAME LAYOUT NOTES

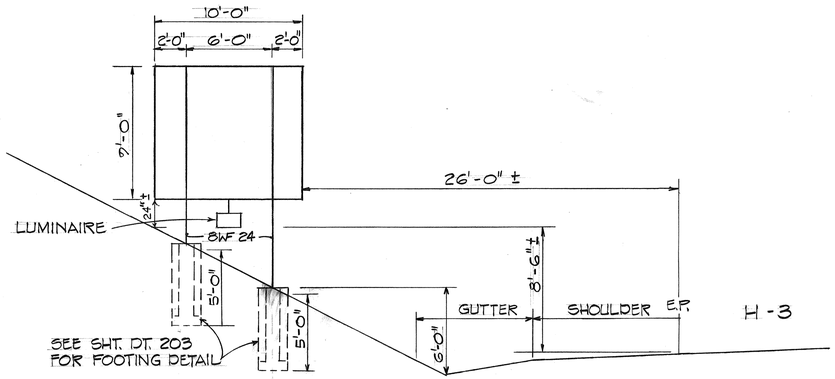
1. THE FINAL LOCATIONS OF SIGN FRAMES AND PANELS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE BRIDGE PLAN FOR SIGN E-1 FRAME LAYOUT.
3. THE AMOUNT AND CENTER-TO-CENTER SPACING OF SIGN LUMINAIRES SHALL BE IN ACCORDANCE WITH THE LUMINAIRE MANUFACTURER'S INSTRUCTIONS. MAXIMUM CENTER-TO-CENTER 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-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 | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | " |
| NOTE BOOK | TRACED BY | " |
| No. | DESIGNED BY | " |
| | QUANTITIES BY | " |
| | CHECKED BY | " |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

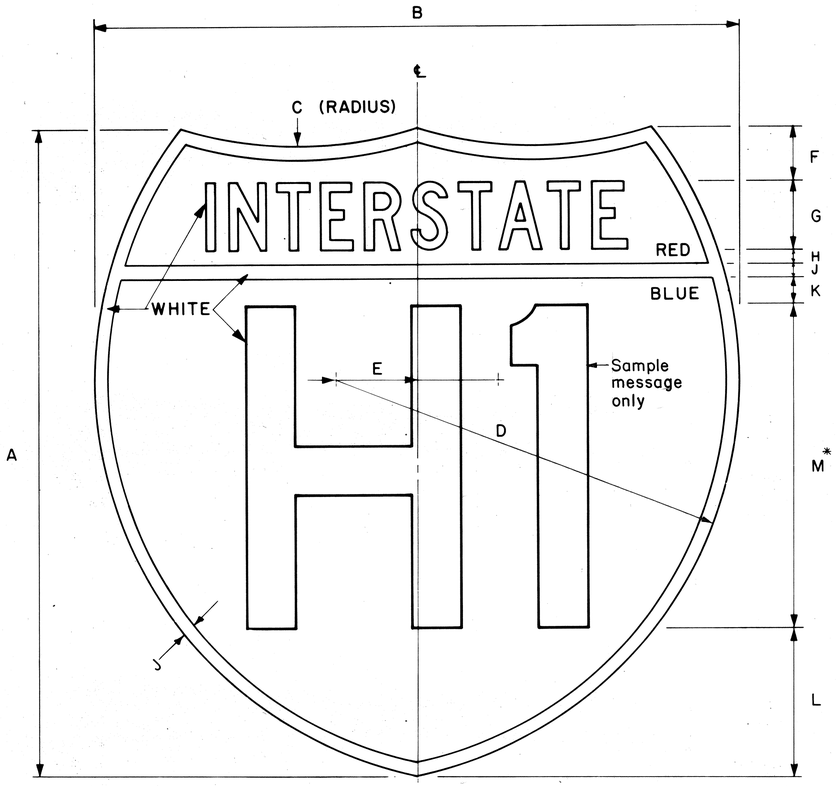
# FRAME LAYOUT

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

SCALE: 1"=5' DATE: SEPT. 1982

SHEET No. 67 OF 28 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 247 | 328 |

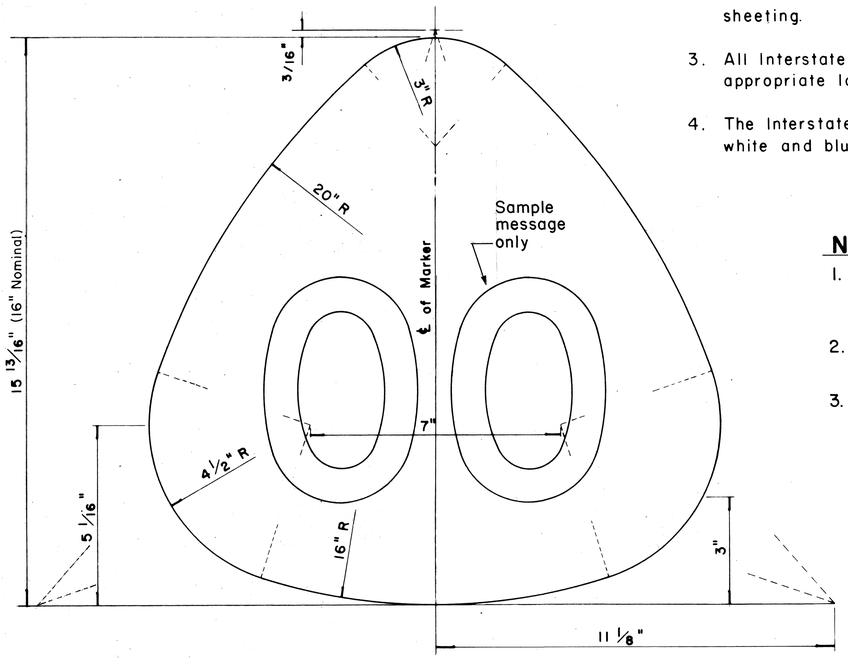



## INTERSTATE ROUTE MARKER IM-1( )

Scale: 3/8" = 1"

| 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 1/2C | 1/2 | 1/2 | 1 | 5 1/2 | 12D |
| 2 | 36 | 36 | 22 1/2 | 22 1/2 | 4 1/2 | 3 | 3 3/4C | 3/4 | 3/4 | 1 1/2 | 8 1/4 | 18D |
| 3 | 48 | 48 | 30 | 30 | 6 | 4 | 5C | 1 | 1 | 2 | 11 | 24D |

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




## STATE ROUTE MARKER FOR GUIDE SIGNS

Scale: Half Size

| MARKER SIZE | MULTIPLY DIMENSIONS BY | NUMERAL SIZE |
|---|---|---|
| | | 2 Digit - Series D<br>3 Digit - Series C |
| 21" | 1.3 | 8" |
| 32" | 2.0 | 12" |
| 42" | 2.63 | 16" |

## NOTE: INTERSTATE ROUTE MARKER

1. Interstate route marker details shall conform to the latest FHWA publications:
   a. "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
   b. "Standard Alphabets for Highway Signs," and as amended.
   c. "Standard Highway Signs," and as amended.
2. All Interstate route markers shall be reflectorized with reflective sheeting.
3. All Interstate route markers shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.
4. 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

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

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

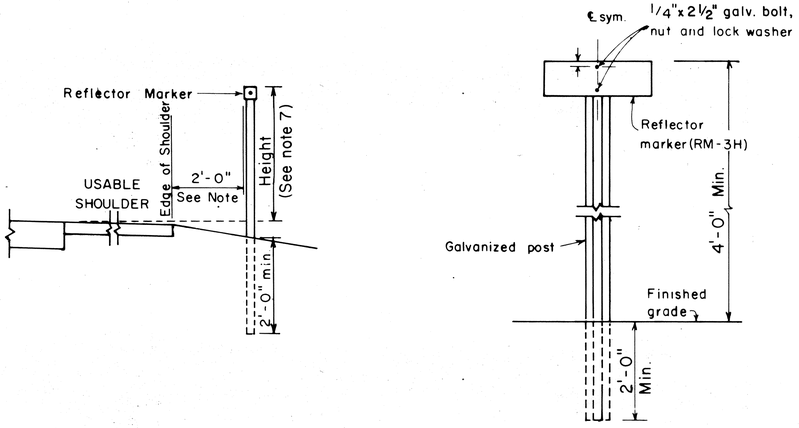
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# TYPICAL DETAILS
# INTERSTATE ROUTE MARKER AND STATE ROUTE MARKER FOR GUIDE SIGNS

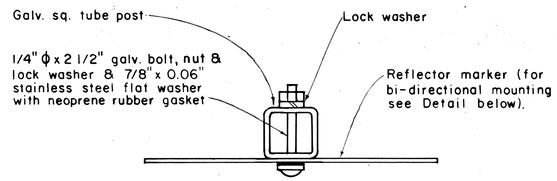
Scale: As shown

SHEET No. 71 OF 28 SHEETS

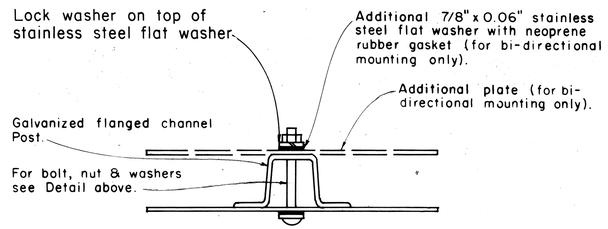
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)111 | 1983 | 248 | 328 |




REFLECTOR MARKER MOUNTING DETAIL




GALVANIZED SQUARE TUBE POST

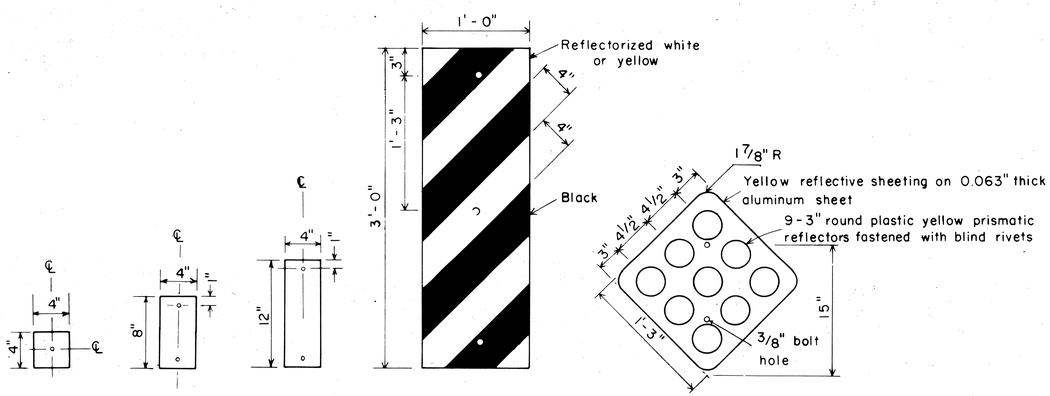



GALVANIZED FLANGED CHANNEL POST

# TYPICAL MOUNTING DETAILS

## GENERAL NOTES:

1. Clearance markers (RM-3, RM-4) shall be installed with the inner edge of the marker in 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.




**RM-1** (WHITE, YELLOW, OR RED)
**RM-2** (WHITE, YELLOW, OR RED)
**RM-3** (YELLOW)
**RM-4(R)**
**RM-9**

REFLECTOR MARKERS

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

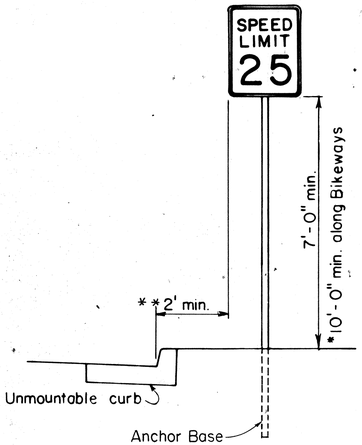
TYPICAL DETAILS

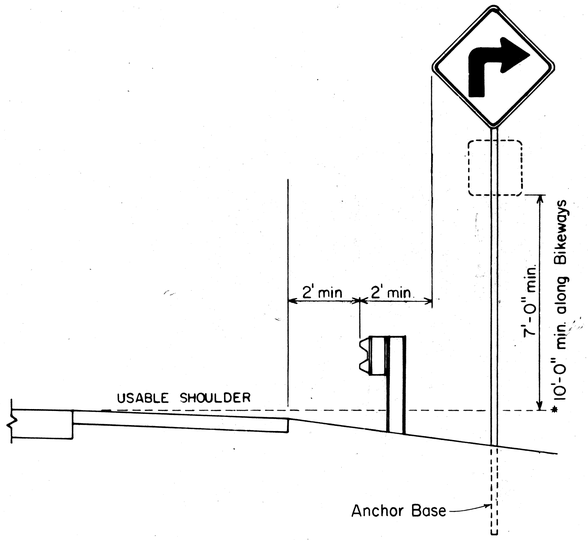
MISCELLANEOUS REFLECTOR MARKERS

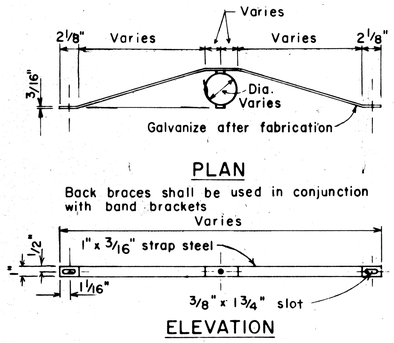
Not to scale

SHEET No. 8T OF 28 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 249 | 328 |




## BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION

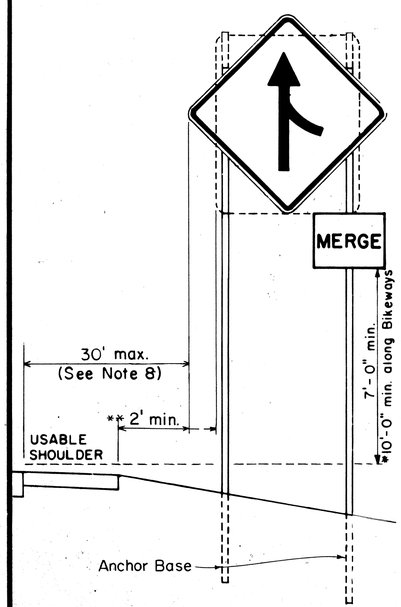
## GENERAL NOTES

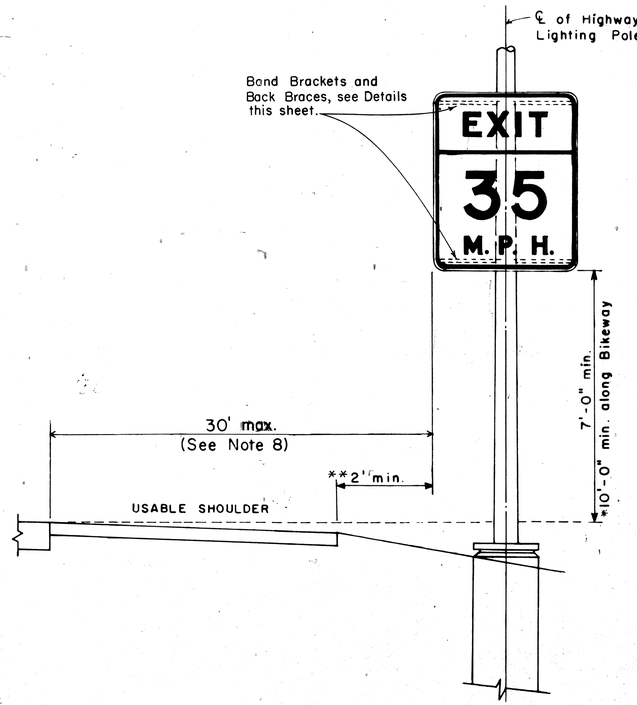
1. Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
2. Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts except as noted below.
3. 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:
   a. 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.
   b. Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band brackets and back braces.
4. All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
5. Sign posts shall extend 3½" above each sign, where required, for attachment of City and County street name signs.
6. (R) or (L) indicates right or left and shall be shown on the plans.

* 7. See plans for special details of signs along bikeways.

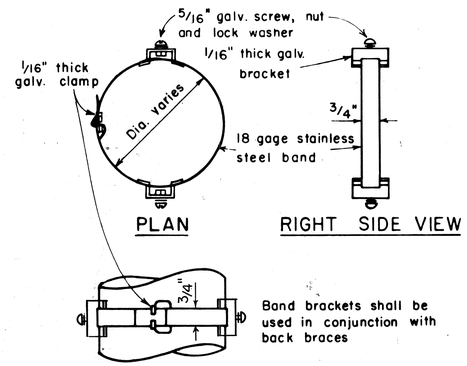
** 8. The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.

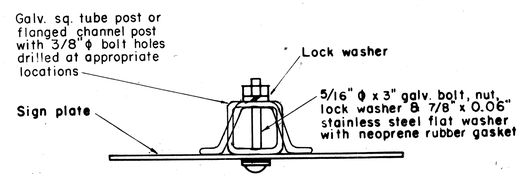
9. Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
10. Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.




## HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION




## GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST

## TYPICAL MOUNTING DETAILS

NOT TO SCALE

| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Supercedes Sht. DT-100 approved 12/30/69 | H.T. | 11/15/77 |
| 2 | Revised depth of signpost | H.T. | 5/8/79 |
| 3 | Added Notes No. 8 & No. 9 | H.T. | 5/18/79 |
| 4 | Revised Gen. Note #4 & Mounting Details | H.T. | 4/23/80 |
| 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:
Eiichi Tanaka — TRAFFIC ENGINEER — 11/10/77 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

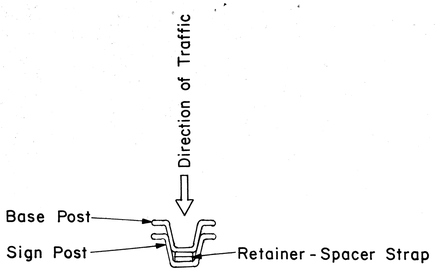
# STANDARD DETAILS
## MISCELLANEOUS SIGN DETAILS

Not to scale — June, 1977

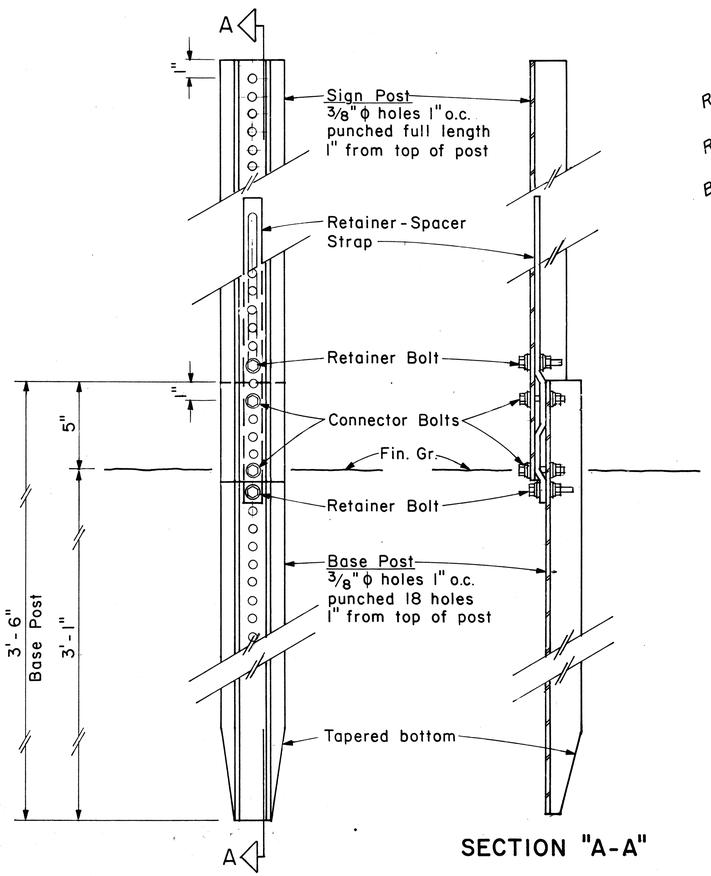
SHEET NO. 27 OF 28 SHEETS DT 100

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | 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 | 250 | 328 |




TOP VIEW

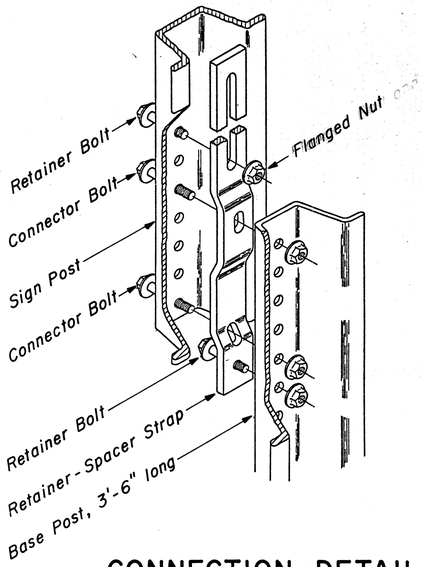



BACK VIEW

SECTION "A-A"

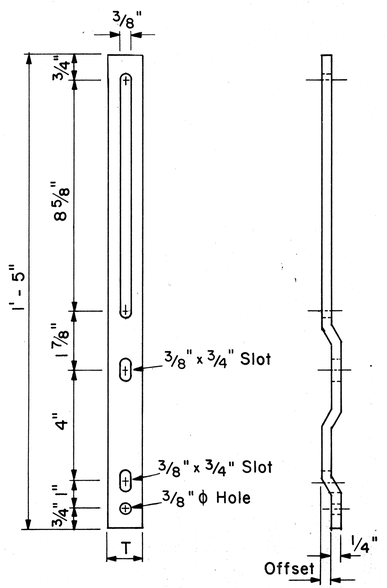
## ANCHOR BASE DETAIL

Scale: 3" = 1'-0"




## CONNECTION DETAIL

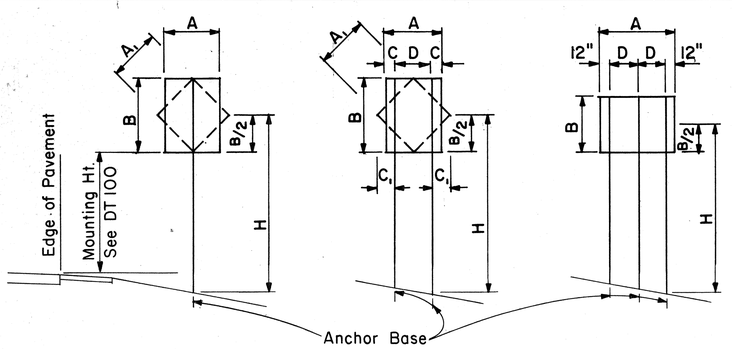
Not to Scale




## 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" |




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

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

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

## WINDLOAD CHARTS

| A or A1 | C | C1 |
|---|---|---|
| 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

1. 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"
2. Retainer - Spacer Strap shall be AISI 1020 steel and galvanized in accordance with ASTM A 123.
3. 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.
4. All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
5. For additional details see sht. DT 100.
6. Basic formulas for use with the windload charts:
   Factor = A x B x H
   Therefore, if sign area (A x B) is known,
   $\text{Maximum H} = \frac{\text{Factor}}{\text{sign area (A x B)}}$
   and if H is known,
   $\text{Maximum sign area (A x B)} = \frac{\text{Factor}}{\text{H}}$

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 9/21/82 DATE

APPROVED:

Herbert Kafoshi — ASSISTANT CHIEF, ENGINEERING — 9/22/82 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

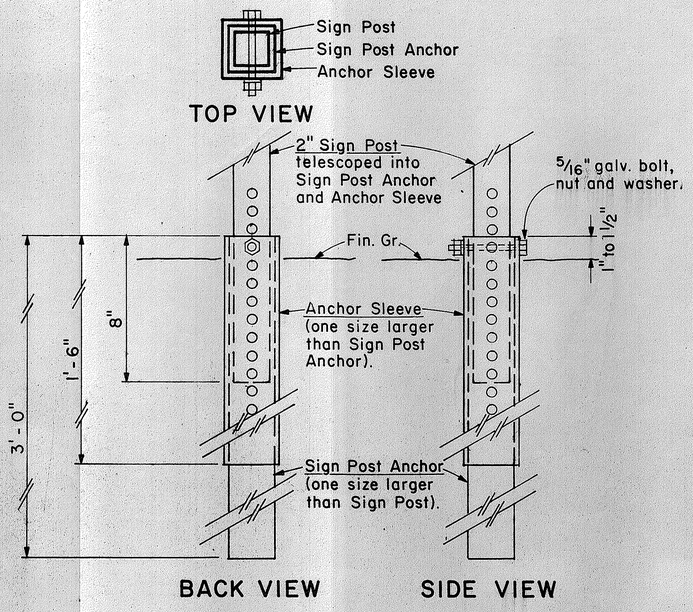
GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING

Scale: As Shown Date: Sept. 1982

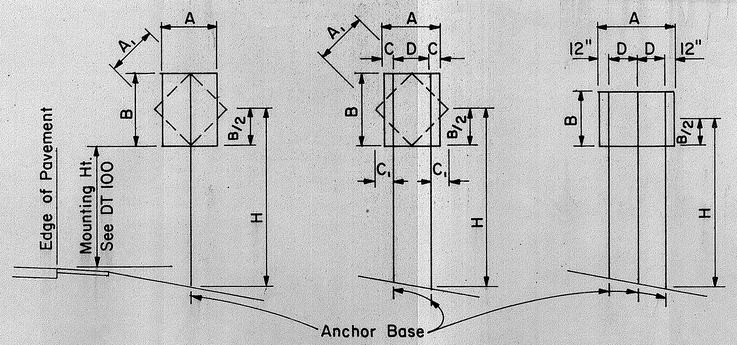
SHEET No. 10T OF 28 SHEETS DT 100A

| ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE |
|---|---|---|---|---|---|---|---|
| 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 | 251 | 328 |




## 2" SIGN POST INSTALLATION




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

| A or A1 | C | C1 |
|---|---|---|
| 36" | 6" | - |
| 48" | 9" | 19" |
| 60" | 12" | 24" |

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

## TYPICAL INSTALLATION

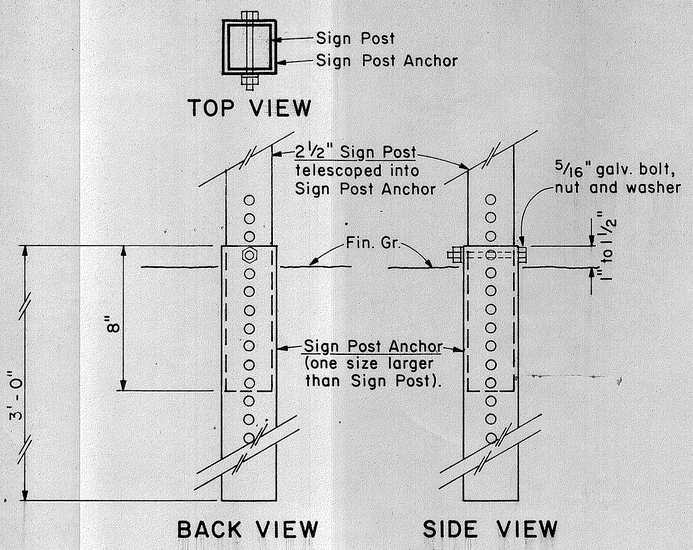
Not to Scale

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

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

| SQUARE TUBE: 3 - POST INSTALLATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
| | | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2" | 183 | 26.0 | 22.8 | 20.3 | 18.2 | 16.6 | 15.2 | |
| 2 1/2" | 318 | 45.4 | 39.5 | 35.2 | 31.5 | 28.8 | 26.5 | |
| 2 1/2", 10 ga. | 388 | 55.0 | 48.5 | 43.0 | 38.5 | 35.0 | 32.0 | |

## WINDLOAD CHARTS




## 2 1/2" SIGN POST INSTALLATION

## ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

## GENERAL NOTES

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

APPROVAL RECOMMENDED:

Eiichi Tanaka — 9/21/82
TRAFFIC ENGINEER — DATE

APPROVED:

Herbert Takeishi — 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. 111 OF 28 SHEETS DT100B

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

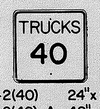
251

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1973 | 252 | 328 |

R1-1 30"x30"
R1-1-A 36"x36"

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

R2-1(50) 24"x30"
R2-1(50)-A 48"x60"



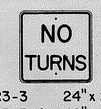
R2-2(40) 24"x24"
R2-2(40)-A 48"x48"

R2-4a(50/40) 24"x48"
R2-4a(50/40)-A 48"x96"

R2-5b(30) 24"x30"
R2-5b(30)-A 48"x60"

R3-1 24"x24"
24"x18"
R3-1-A 48"x48"
48"x36"

R3-2 24"x24"
24"x18"
R3-2-A 48"x48"
48"x36"



R3-3 24"x24"
R3-3-A 48"x48"

R3-4 24"x24"
24"x18"
R3-4-A 48"x48"
48"x36"

R3-5(L) 30"x36"
R3-5(L)-A 48"x60"

R3-6(L) 30"x36"
R3-6(L)-A 48"x60"

R3-7(R) 30"x30"
R3-7(R)-A 48"x48"

R3-8(L) 30"x30"
R3-8(L)-A 36"x36"
R3-8(L)-B 48"x48"

R3-9 24"x30"

R4-1 24"x30"

R4-2 24"x30"

R4-3 24"x30"
R4-3-A 48"x60"

R4-5 24"x30"

R4-6(500) 24"x30"

R4-7 24"x30"
24"x18"

R4-8 24"x30"
24"x18"

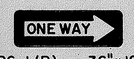
R5-1 30"x30"
R5-1-A 48"x48"

R5-2 24"x24"
24"x18"

R5-4 24"x30"

R5-6 24"x24"
24"x18"

R5-9 36"x24"



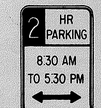
R6-1(R) 36"x12"

R6-2(R) 18"x24"

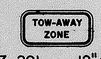
R7-1 12"x18"
R7-1-A 24"x30"

R7-4 12"x18"
R7-4-A 24"x30"

R7-107(R) 12"x18"



R7-108 12"x18"



R7-201 12"x6"
R7-201-A 24"x12"

R8-1 24"x30"

R8-2 24"x30"



R8-3 24"x30"



R8-4 30"x24"
R8-4-A 48"x36"



R8-5 24"x30"



R8-6 24"x30"



R8-7 30"x24"
R8 7-A 48"x36"



R9-1 18"x24"



R9-2 12"x18"



R9-3 12"x18"



R9-4 18"x24"



R10-1 12"x18"



R10-2 12"x18"



R10-3 9"x12"

R10-4 9"x12"

R10-5 24"x30"

R10-6 24"x36"

R10-7 24"x30"

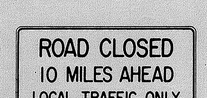
R10-8 24"x30"

R10-9 24"x30"

R10-10 24"x30"

R11-1 24"x30"

R11-2 48"x30"



R11-3(10) 60"x30"

R11-4 60"x30"

R12-1(10) 24"x30"

## GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in ( ) indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. All signs shall be erected without educational plaques unless called for in the plans.

APPROVAL RECOMMENDED:
Eiichi Tanaka — TRAFFIC ENGINEER — 3/17/72 DATE

APPROVED:
Hubert Zakian — ASSISTANT CHIEF, ENGINEERING — 3-20-72 DATE

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

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

K&E IMPERIAL LA 3207

252

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII * | HAW. | F-H3-1(24)11 | 1983 | 253 | 328 |

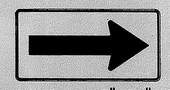
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"

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

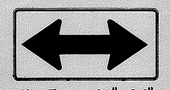
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"

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"

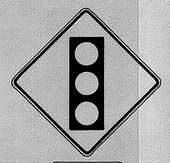
W2-3(R) 30"x30"
W2-3(R)-A 48"x48"

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

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

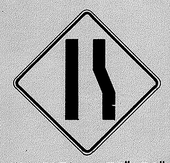
W3-1 30"x30"
W3-1-A 36"x36"

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




W3-3 36"x36"
24"x18"

W4-1(R) 30"x30"
24"x18"
W4-1(R)-A 48"x48"
24"x18"



W4-2(R) 36"x36"
W4-2(R)-A 48"x48"

W5-1 36"x36"

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

W5-3 36"x36"

W6-1 36"x36"
24"x18"

W6-2 36"x36"
24"x18"

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

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

W7-2 24"x18"

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

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

W8-3 30"x30"
W8-3-A 36"x36"

W8-4 30"x30"
W8-4-A 36"x36"

W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"

W9-1(R) 30"x30"
W9-1(R)-A 36"x36"
W9-1(R)-B 48"x48"

W9-2(L) 36"x36"
W9-2(L)-A 48"x48"

W10-1 36" Diameter

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

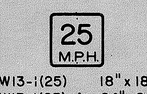
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"

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

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

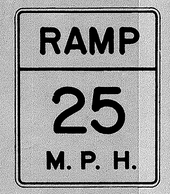
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"

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




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

W13-2(25) 48"x60"




W13-3(25) 48"x60"

W14-1 30"x30"

W14-3 36"x48"x48"

## GENERAL NOTES

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

NOTE

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

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

APPROVED:
Walter Takeshita 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. 13T OF 28 SHEETS DT 102

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

K&E IMPERIAL LA 3207

253

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 254 | 328 |

ALL WAY
R1-4 18"x6"

REDUCED SPEED 35 AHEAD
R2-5d(35) 24"x30"
R2-5d(35)-A 48"x60"

SPEED LIMIT ENFORCED BY VASCAR } 4" Series D / 4" Series C / 3" Series D / 5" Series C
R2-10 24"x30"

CENTER LANE ONLY
R3-9b 24"x36"

BUS STOP
R7-107(R) 12"x24"

RESERVED PARKING
R7-8 12"x18"
R7-8-A 24"x30"

ANY TIME – 4" Series C – 1½"
R8-3a 24"x24" / 24"x18"
R8-3a-A 48"x48"

NO PED XING
R9-3a 18"x18" / 18"x12"
R9-3a-A 24"x24" / 24"x18"

USE CROSSWALK
R9-3b(R) 18"x12"

USE CROSSWALK
R9-3b(L) 18"x12"

NO TURN ON RED
R10-11a 24"x30"

TURN RIGHT ANY TIME WITH CAUTION – 4" Series C
R16-1 24"x30"

NO LEFT TURN ON RED – 4" Series D / 3" Series D / 2" Series D / 3" Series D
R16-3 18"x24"

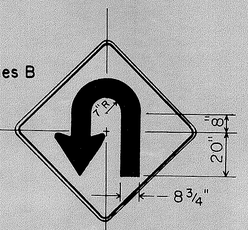
NO RIGHT TURN ON RED
R16-4 18"x24"

UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 H P, PEDESTRIANS KEEP OUT FREEWAY } 3" Series C / 4" Series E
R16-5 36"x42"

U TURN AHEAD } 8" Series F / 5" Series D
R16-6 24"x30"

U TURN OK } 8" Series F / 5" Series D
R16-7 24"x30"

MOTOR-DRIVEN CYCLES PROHIBITED – 4" Series B
R5-8 30"x24"



W17-1(L) 60"x60"

STOP AHEAD
W3-1a 36"x36" / 24"x18"
W3-1a-A 48"x48" / 24"x18"

YIELD AHEAD
W3-2a 36"x36" / 24"x18"
W3-2a-A 48"x48" / 24"x18"

STOP AHEAD WHEN FLASHING – 6" Series C
W3-4 48"x48"

TRUCK CROSSING
W8-6 30"x30"
W8-6-A 36"x36"

THRU TRAFFIC MERGE LEFT – 6" Series E
W9-3(L) 48"x48"

EQUESTRIAN XING
W11-7 36"x36" / 24"x18"
W11-7-A 48"x48" / 24"x18"

FIRE STATION
W11-8 36"x36" / 24"x18"
W11-8-A 48"x48" / 24"x18"

W11-9 36"x36"
W11-9-A 48"x48"

LIMITED SIGHT DISTANCE
W14-4 36"x36"
W14-4-A 48"x48"

DELAYED GREEN – 4" Series C – ADVANCE GREEN
W15-1 24"x24"
W15-2 24"x24"

END FREEWAY ½ MI – 8" Series E
CW16-1(½) 60"x60"

RIGHT LANE EXIT ONLY – 8" Series E
W18-1 48"x60"

SI-1 36"x36"

S2-1 36"x36"

SCHOOL BUS STOP AHEAD
S3-1 30"x30"

8:00 AM TO 3:30 PM
S4-1 24"x10"

WHEN CHILDREN ARE PRESENT
S4-2 24"x10"

SCHOOL
S4-3 24"x8"

WHEN FLASHING
S4-4 24"x10"

SIDEWALK CLOSED – 7" Series D
CW23-4 48"x48"

USE SIDEWALK – 4" Series C
R18-1 24"x18"

General Notes

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

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

APPROVED:
Herbert Z. Takeiahi
ASSISTANT CHIEF, ENGINEERING — 5/3/78 DATE

| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Supersedes Sht. DT 103 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. 14T OF 28 SHEETS DT 103

254

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

254

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 255 | 328 |

CW20-1a 48"x48"

CW20-2d 48"x48"

CW20-3b 48"x48"

CW20-4d 48"x48"

CW20-5d(L) 48"x48"

CW20-7c 48"x48"

CW21-1 30"x30"

CW21-2 30"x30"

CW21-3 36"x36"

CW21-4 36"x36"

CW21-5 30"x30"

CW21-6 30"x30"

CW22-1b 48"x48"

CW22-2 42"x36"

CW22-3 42"x36"

CG20-1(5) 60"x36"

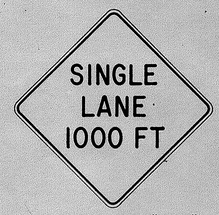
CG20-2 60"x24"

CM4-9(R) 30"x24"

CM4-10(R) 48"x18"

CG20-4 36"x18"

CW23-1 36"x36"



CW23-2b 48"x48"

CW23-3(R) 48"x48"

## GENERAL NOTES

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

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

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

| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Supersedes Sht. DT 104 Approved 12-30-69 | H.T. | 3/23/72 |
| 2 | Revised General Note 1 | H.T. | 10/10/74 |
| 3 | Revised General Note 2 | MF | 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

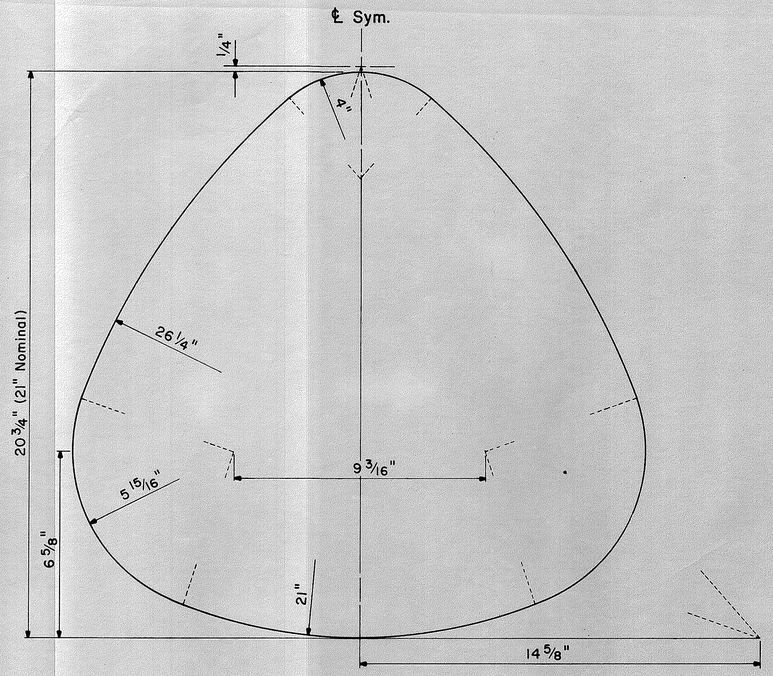
SHEET No. 15T OF 28 SHEETS DT 104

255

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

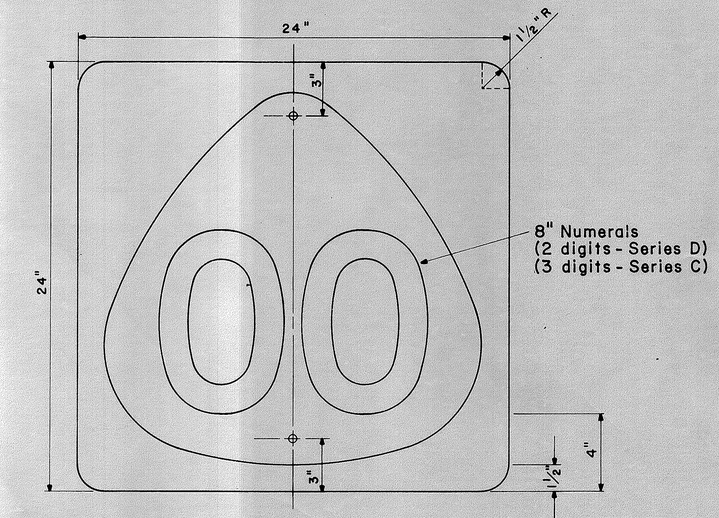
K&E IMPERIAL LA 3207

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)111 | 1983 | 256 | 328 |




## STATE ROUTE MARKER DETAIL

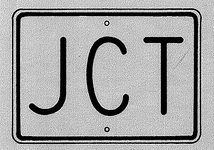
Not to Scale



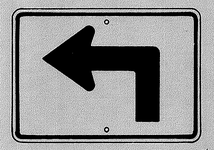

## STATE ROUTE MARKER

M1-6 (00) 24"x 24"

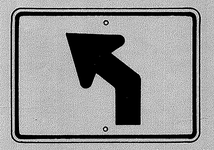
Scale: 1/4" = 1"



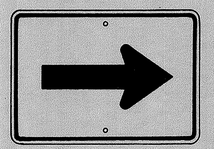

M2-1 21"x 15"



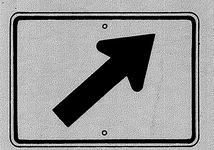
M5-1(L) 21"x 15"



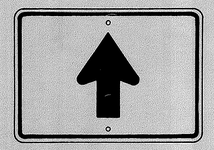
M5-2(L) 21"x 15"



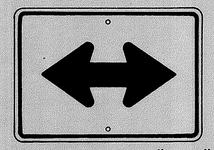
M6-1 21"x 15"



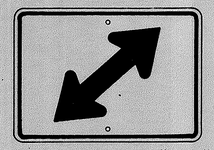
M6-2(R) 21"x 15"



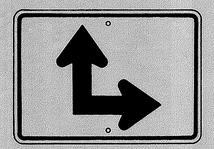
M6-3 21"x 15"



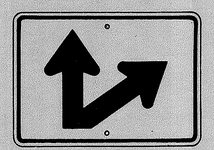
M6-4 21"x 15"



M6-5(R) 21"x 15"



M6-6(R) 21"x 15"



M6-7(R) 21"x 15"

## AUXILIARY MARKERS

Not to Scale

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

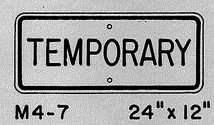
M4-1 24"x 12"

M4-2 24"x 12"

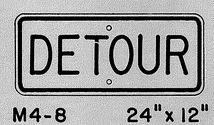
M4-3 24"x 12"

M4-5 24"x 12"

M4-6 24"x 12"




M4-7 24"x 12"




M4-8 24"x 12"

## GENERAL NOTES

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

APPROVAL RECOMMENDED:

Eiichi Tanaka — 6/6/72
TRAFFIC ENGINEER — DATE

APPROVED:

Richard E. Wakida — 6-1-72
ASSISTANT CHIEF, ENGINEERING — DATE

| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Supersedes Sht. DT 105 Approved 12-30-69 | H.T. | 6/7/72 |
| 2 | Revised General Note 1 | H.T. | 10/16/74 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown

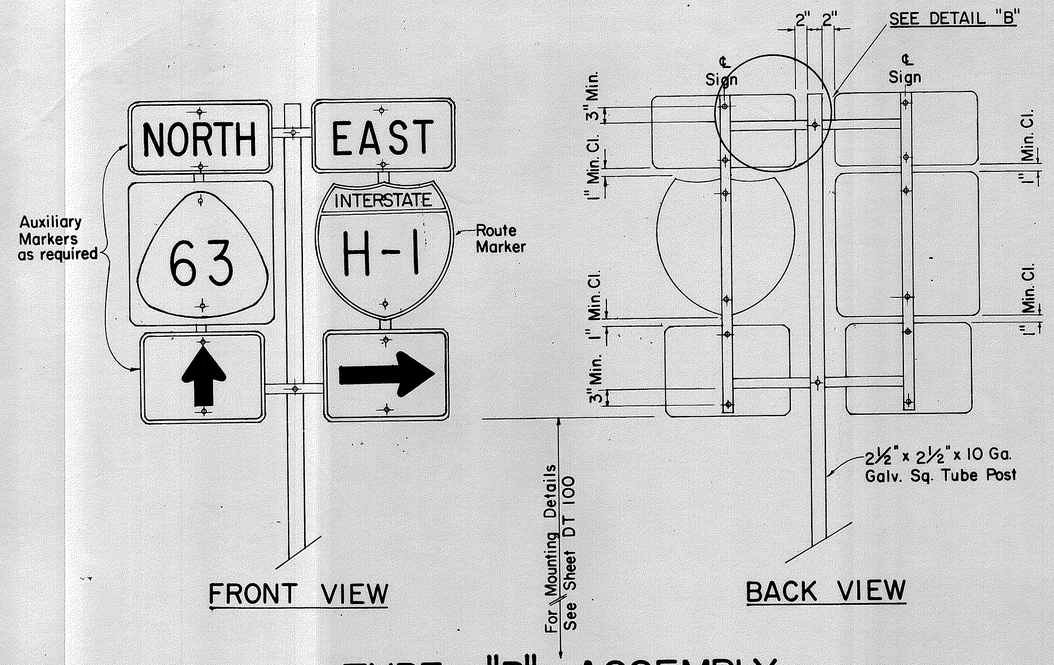
SHEET Nº 16T OF 28 SHEETS DT 105

256

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

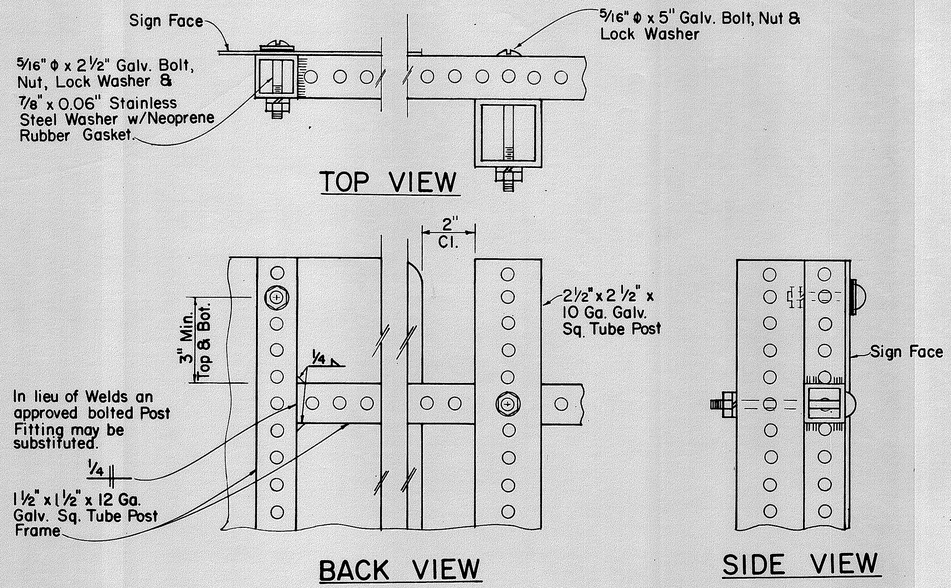
LIETZ 1103 ARKWRIGHT TRACING CLOTH 10-60 200P

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 257 | 328 |



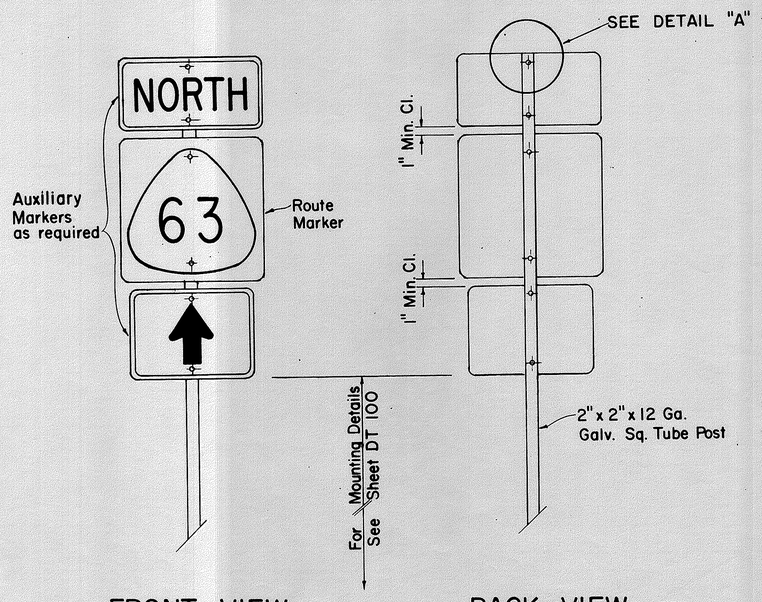

# TYPE "B" ASSEMBLY

SCALE: 1"= 1'-0"



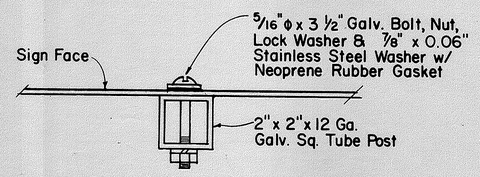

# DETAIL "B"

SCALE: ~~3/8~~"=1"




# TYPE "A" ASSEMBLY

SCALE: 1"= 1'-0"




TOP VIEW

# DETAIL "A"

SCALE: 3/8" = 1"

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 7/31/80 DATE

APPROVED:

Herbert Zakahi — ASSISTANT CHIEF, ENGINEERING — 7/31/80 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# STANDARD DETAILS ROUTE MARKER ASSEMBLIES

SCALE: AS SHOWN

SHEET No. 17T OF 28 SHEETS DT 107

257

ORIGINAL PLAN

NOTE BOOK No.

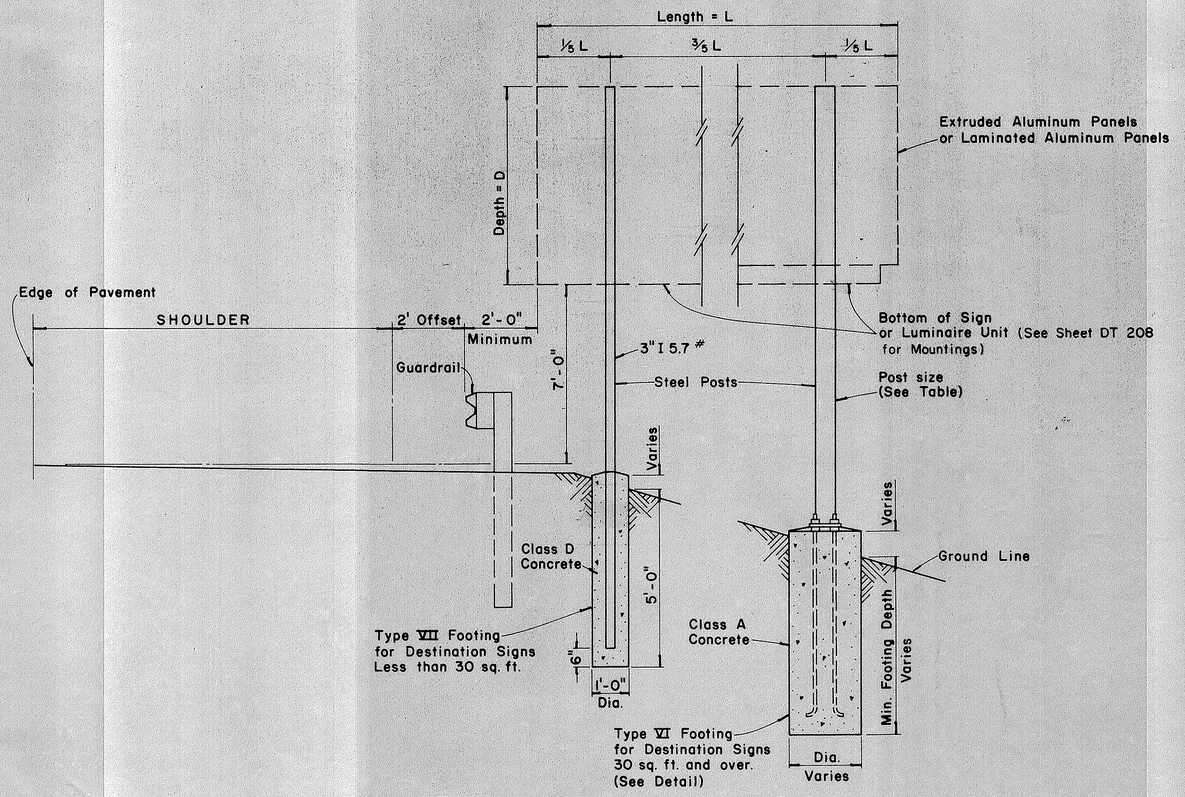
SURVEY PLOTTED BY: DATE
DRAWN BY: " "
TRACED BY: " "
DESIGNED BY: " "
QUANTITIES BY:
CHECKED BY:

* For moment calculations only. Post shall be from top of foundation to top of sign.

** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

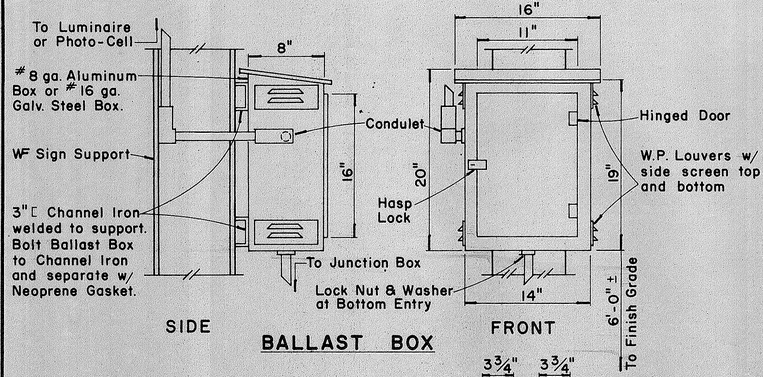
## DATA TABLE FOR TYPE VI FOOTING

| POST SIZE | MAXIMUM SIGN AREA | POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN * | DIMENSIONS H | J | K | M | N | O | P | S | T | U | V | W | ANCHOR BOLT DIA. | MINIMUM FOOTING DEPTH CUT | FILL** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 J 10 | 50 sq. ft. | 14' | 14" | 5" | 24" | 17¼" | 1⅝" | 6" | 1¼" | 9" | 6" | 10" | 2" | 1" | 1⅛"ø | 4½' | 4½' |
| 8 WF 24 | 90 sq. ft. | 21' | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 5' |
| 8 WF 35 | 190 sq. ft. | 15' | 16½" | 6¾" | 30" | 20" | 1¾" | 6" | 1⅜" | 11¾" | 6½" | 10" | 1¾" | 1" | 1¼"ø | 6' | 7' |
| 10 WF 45 | 190 sq. ft. | 25' | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 10 WF 45 | 200 sq. ft. | 25' | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 12 WF 50 | 230 sq. ft. | 25' | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 7' | ↓ |
| 12 WF 50 | 250 sq. ft. | 23' | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

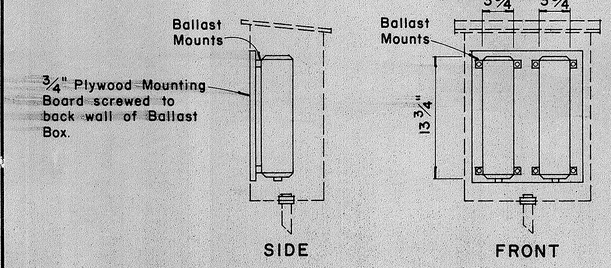



## TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale



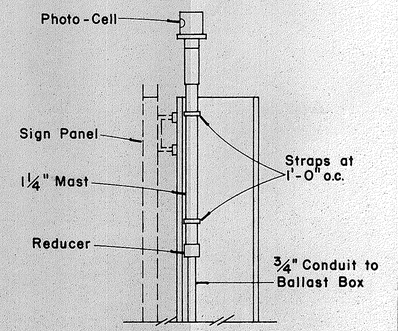

## BALLAST BOX




## BALLASTS

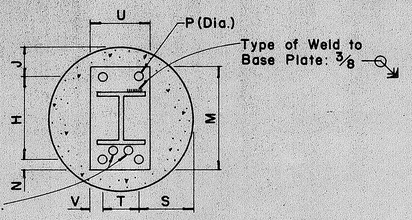
## WEATHERPROOF BALLAST BOX

Scale: 1½" = 1'-0"



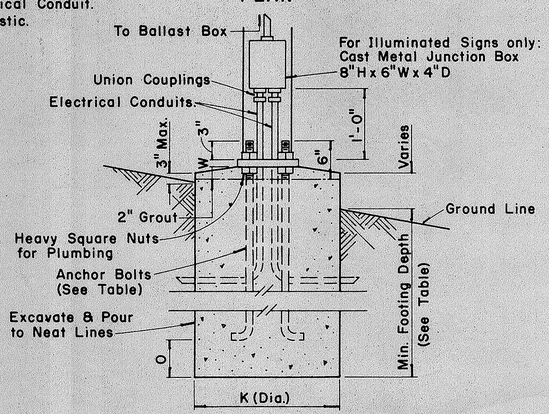

## PHOTO-CELL DETAIL

Scale: 1½" = 1'-0"




For Illuminated Signs only: Openings for Electrical Conduits. Dia. shall be ¼" larger than O.D. of Electrical Conduit. Seal with Mastic.

PLAN




ELEVATION

## TYPE VI FOOTING

Scale: 1" = 1'-0"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)III | 1983 | 258 | 328 |

APPROVAL RECOMMENDED:

Eiichi Tanaka — 12/29/69
TRAFFIC ENGINEER — DATE

APPROVED:

[signature] — 12-30-69
ASSISTANT CHIEF, ENGINEERING — DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS

Scale: As Shown

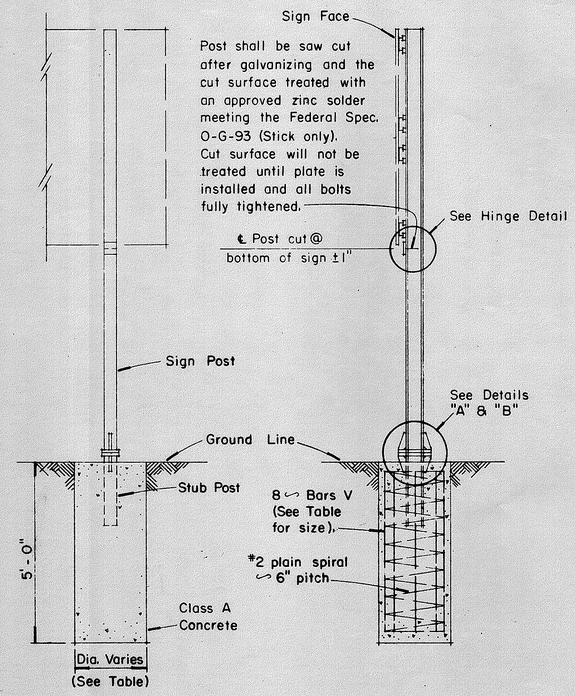
SHEET No. 18T OF 28 SHEETS DT 203

258

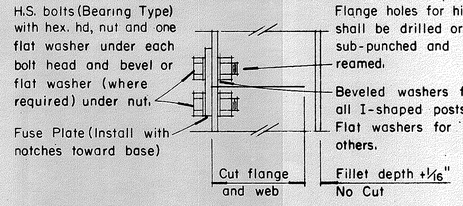
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

PRINTED ON NO. 1000H CLEARPRINT

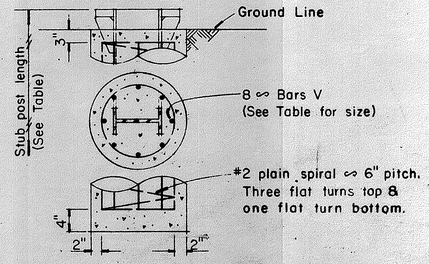
| | BASE CONNECTION DATA TABLE | | | | | | | | | | FUSE PLATE DATA TABLE | | | | | | | | | | FOUNDATION DATA | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Post Size | Bolt Size & Torque | A | B | C | D | E | t1 | t2 | W | R | F | G | H | J | K | L | N | d1 | t3 | Bolt Dia. | Wt. of each Fuse ℄ | Stub Length | Stub Projection | Footing Diameter | Bars V Size |
| 6 B 8.5 | 5/8"ø x 2 3/4" Torque = 450"# | 5" | 2" | 1 1/4" | 2 3/4" | 1 1/8" | 3/4" | 1/2" | 1/4" | 11/32" | 3 3/8" | 2" | 1 1/8" | 4" | 2 1/4" | 7/8" | 1/2" | 9/16" | 1/4" | 1/2"ø | 1.09# | 2'-0" | 3" | 2'-0" | #5 |
| 6 B 12 | | | | | | | | | | | 3 3/4" | 2" | 1 1/8" | 4" | 2 1/4" | 7/8" | 5/8" | 11/16" | 3/8" | 5/8"ø | 1.60# | 2'-0" | 3" | 2'-0" | #5 |
| 6 B 15.5 | | | | | | | | | | | 4 1/2" | 2 1/2" | 1 1/4" | 6" | 3 1/2" | 1 1/4" | 3/4" | 13/16" | 1/2" | 3/4"ø | 3.75# | 2'-6" | 3" | 2'-0" | #6 |
| 8 WF 17 | | | | | | | | | | | 4 1/2" | 2 1/2" | 1 1/4" | 5 1/4" | 2 3/4" | 1 1/4" | 3/4" | 13/16" | 1/2" | 3/4"ø | 3.27# | 2'-6" | 3" | 2'-0" | #7 |
| 8 WF 20 | 3/4"ø x 3 1/2" Torque = 750"# | 6" | 2 1/4" | 1 3/8" | 3 1/2" | 1 1/4" | 1" | 3/4" | 5/16" | 13/32" | 4 7/8" | 2 1/2" | 1 1/2" | 5 1/4" | 2 3/4" | 1 1/4" | 7/8" | 15/16" | 9/16" | 7/8"ø | 3.93# | 3'-0" | 2 1/2" | 2'-0" | #8 |
| 10 WF 21 | | | | | | | | | | | 5 3/8" | 3" | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 15/16" | 9/16" | 7/8"ø | 4.75# | 3'-0" | 2 1/2" | 2'-0" | #9 |
| 10 WF 25 | | | | | | | | | | | 5 3/8" | 3" | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 15/16" | 9/16" | 7/8"ø | 4.79# | 3'-0" | 2 1/2" | 2'-0" | #10 |
| 12 WF 27 | | | | | | | | | | | 5 3/8" | 3" | 1 1/2" | 6 1/2" | 3 1/2" | 1 1/2" | 7/8" | 15/16" | 9/16" | 7/8"ø | 5.42# | 3'-0" | 2 1/2" | 2'-0" | #11 |
| 3 I 5.7 | 1/2"ø x 2 1/2" Torque = 200"# | SEE DETAIL "A" | | | | | | | | | 3 1/8" | 1 1/2" | 1 1/8" | 2 5/8" | 1 1/2" | 9/16" | 1/2" | 9/16" | 1/4" | 1/2"ø | 0.64# | 1'-6" | 3 1/2" | 1'-6" | #5 |
| 4 I 7.7 | | | | | | | | | | | 3 1/8" | 1 1/2" | 1 1/8" | 2 5/8" | 1 1/2" | 9/16" | 1/2" | 9/16" | 1/4" | 1/2"ø | 0.64# | 1'-6" | 3 1/2" | 1'-6" | #5 |



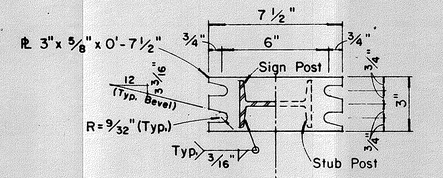

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24) II | 1983 | 259 | 328 |




HINGE DETAIL

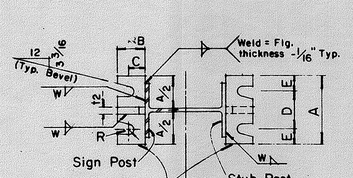



FOUNDATION DETAIL

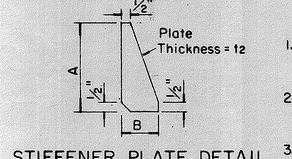



SECTION "A-A" SECTION "B-B"

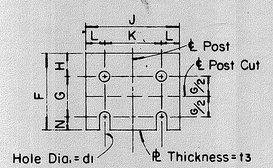
NOTE:
Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.



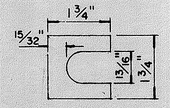

SECTION "C-C" SECTION "D-D"




STIFFENER PLATE DETAIL




FUSE PLATE DETAIL




SHIM DETAIL

Furnish 2-0.012" ± thick and 2-0.032" ± thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to A.S.T.M.-B36.

## GENERAL NOTES

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

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

9. Supplemental Sign shall not be installed below the Breakaway Hinges.

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

APPROVED:
ASSISTANT CHIEF, ENGINEERING — 12-30-69 DATE

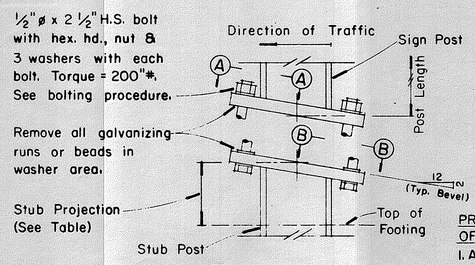
| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Added General Note No. 9 | H.T. | 6/3/80 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

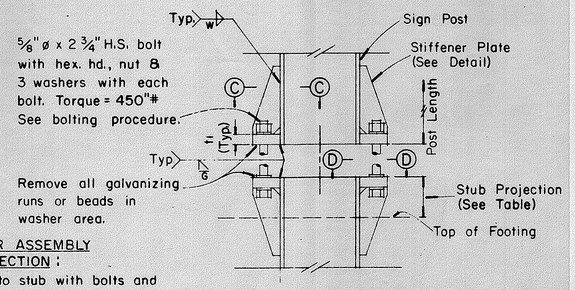
# STANDARD DETAILS
# BREAK-AWAY SIGN SUPPORTS FOR GROUND MOUNTED GUIDE SIGNS

Not to Scale

SHEET No. 19T OF 28 SHEETS DT204




DETAIL "A"
SIGN POST & STUB POST
(For 4I7.7 and 3I5.7 Shapes)




DETAIL "B"
SIGN POST & STUB POST
(For WF and B Shapes)

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

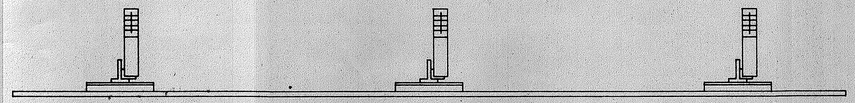
1. Assemble post to stub with bolts and with one flat washer on each bolt between plates.
2. Shim as required to plumb post.
3. Tighten all bolts the max. possible with 12" to 15" wrench to bed washers & shims and to clean bolt threads then loosen each bolt in turn & retighten bolts in systematic order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

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

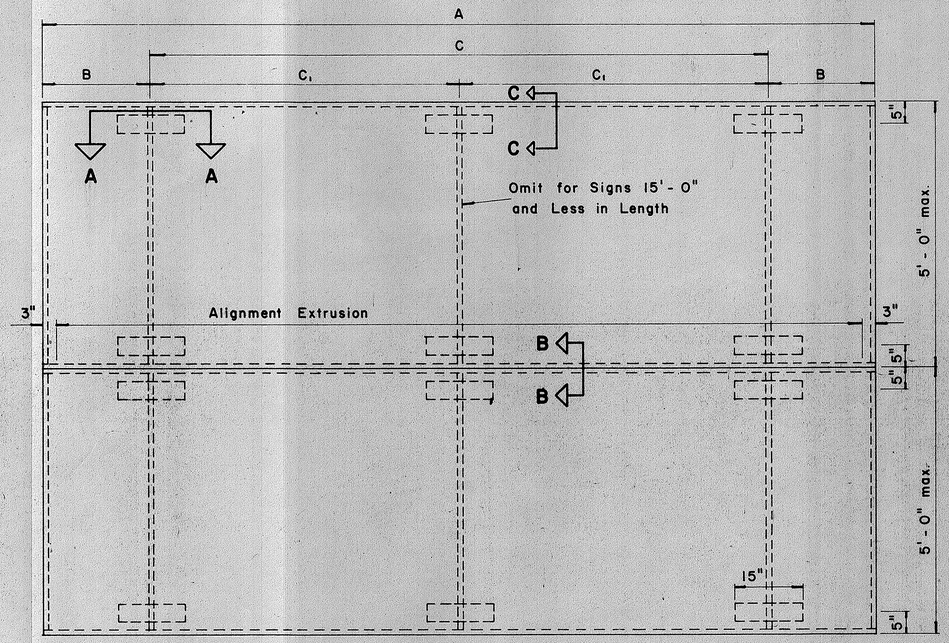
PRINTED ON NO. 1000H CLEARPRINT

259

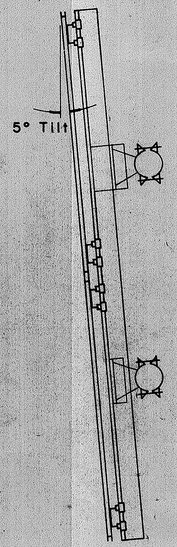
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 260 | 328 |



TOP VIEW



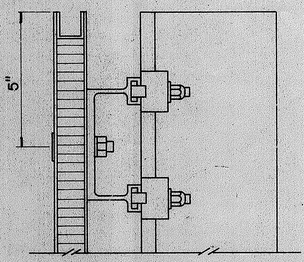

ELEVATION




SIDE VIEW

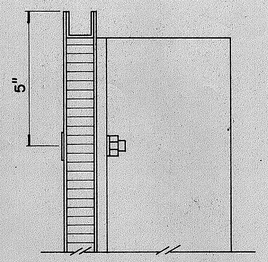
## TYPICAL SIGN ASSEMBLY

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



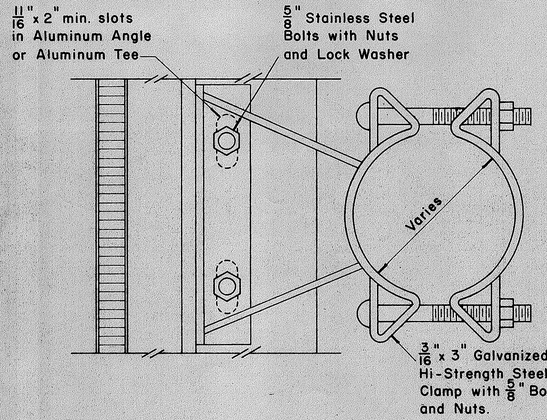

## SECTION "C-C"

Scale: 3/8" = 1"




## SECTION "C-C" (Alternate)

Scale: 3/8" = 1"




## SIGN BRACKET ASSEMBLY

Scale: 3/8" = 1"

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

(OVERHEAD SIGNS)

## SUPPORT SPACING TABLE

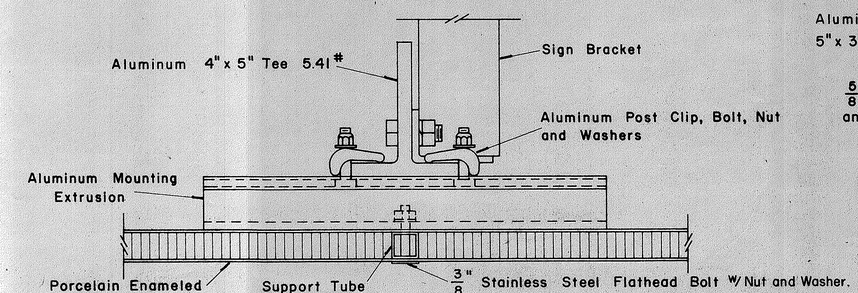
| PANEL THICK. | LENGTH OF SIGN A | NO. OF SUPPORTS | OVERHANG B | SUPPORT SPACING C or C1 |
|---|---|---|---|---|
| 1" | 6'-0" | 2 | 12" | 48" |
| 1" | 6-6" | 2 | 15" | 48" |
| 1" | 7'-0" | 2 | 15" | 54" |
| 1" | 7'-6" | 2 | 18" | 54" |
| 1" | 8'-0" | 2 | 18" | 60" |
| 1" | 8'-6" | 2 | 20" | 62" |
| 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:

Eiichi Tanaka — TRAFFIC ENGINEER — 12/23/69 DATE

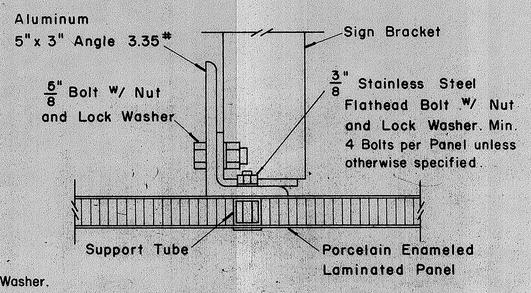
APPROVED:

ASSISTANT CHIEF, ENGINEERING — 12-30-69 DATE



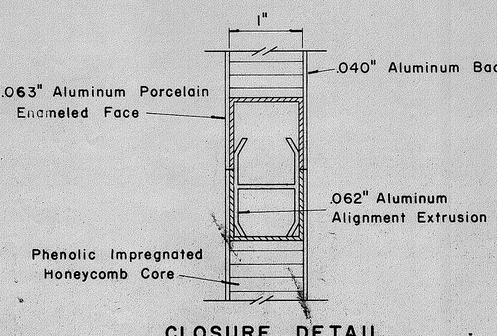

## SECTION "A-A"

Scale: 3/8" = 1"




## SECTION "A-A" (Alternate)

Scale: 3/8" = 1"




CLOSURE DETAIL

## SECTION "B-B"

FULL SCALE

| 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

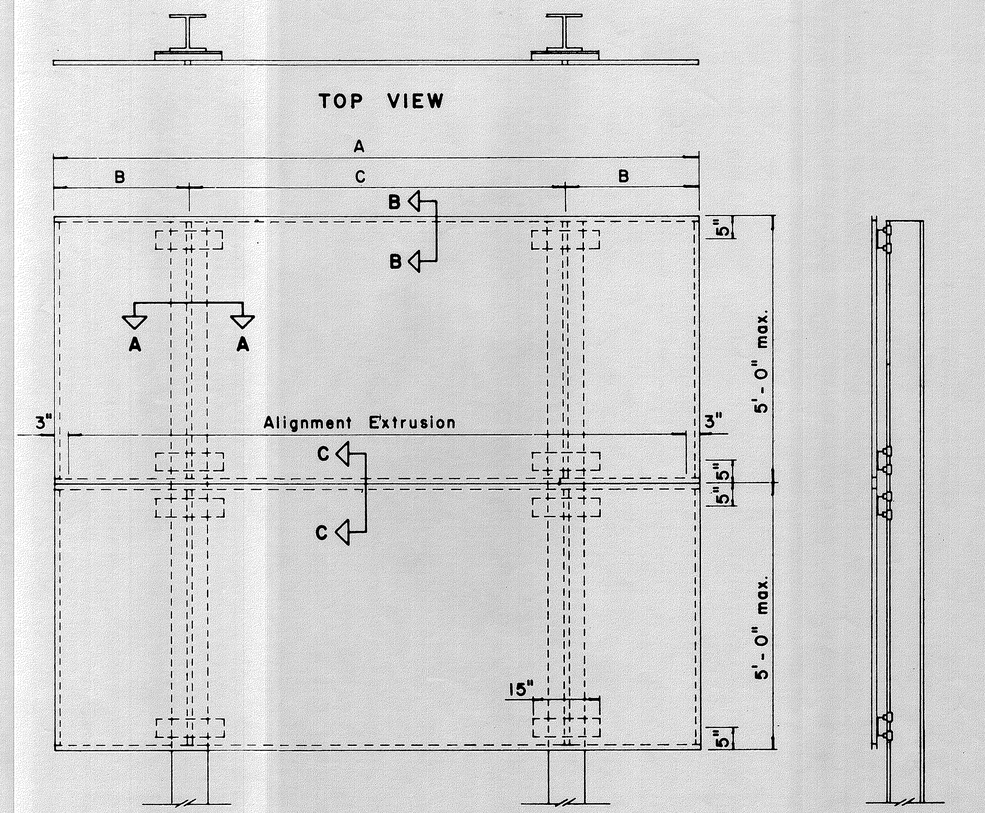
SHEET No. 20T OF 28 SHEETS DT 205

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

PRINTED ON NO. 1000H CLEARPRINT

260

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | F-H3-1(24)11 | 1983 | 261 | 328 |

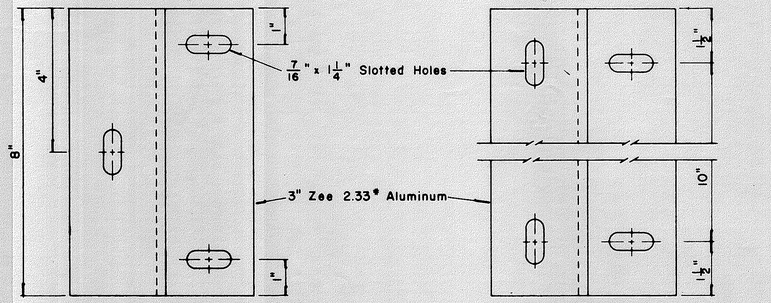



ELEVATION

SIDE VIEW

## TYPICAL SIGN ASSEMBLY

Scale: $\frac{3}{4}$" = 1' - 0"

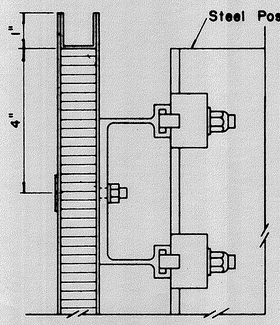



END MOUNTING

INTERMEDIATE MOUNTING

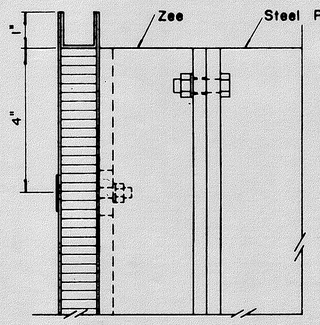
## ZEE MOUNTING DETAILS

Scale: $\frac{1}{2}$" = 1"




## SECTION "B - B"

Scale: $\frac{1}{2}$" = 1"



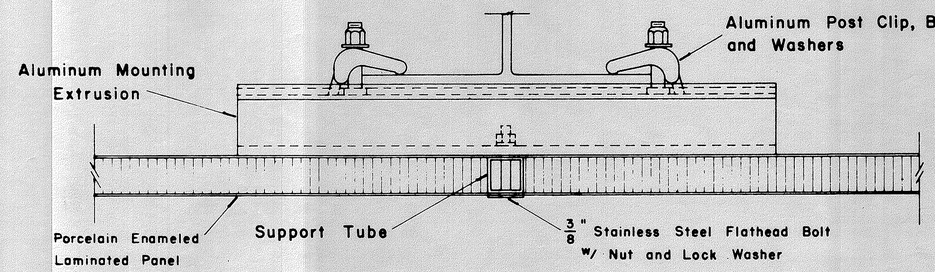

## SECTION "B - B" (Alternate)

Scale: $\frac{1}{2}$" = 1"

(GROUND MOUNTED SIGNS)

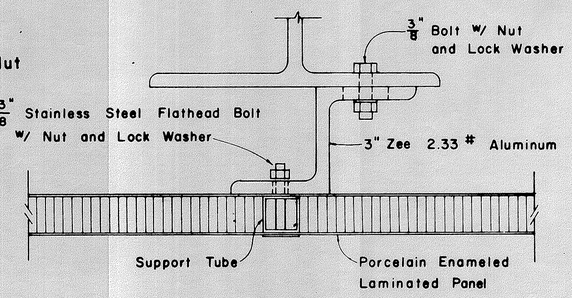
## SUPPORT SPACING TABLE

| PANEL THICK. | LENGTH OF SIGN A | NO. OF SUPPORTS | OVERHANG B | SUPPORT SPACING 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" |



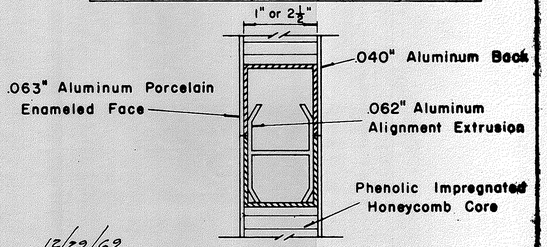

## SECTION "A - A"

Scale: $\frac{1}{2}$" = 1"




## SECTION "A - A" (Alternate)

Scale: $\frac{1}{2}$" = 1"




## CLOSURE DETAIL SECTION "C - C"

FULL SCALE

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 12/29/69 DATE

APPROVED:

[signature] — ASSISTANT CHIEF, ENGINEERING — 12-30-69 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

# STANDARD DETAILS
## LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)

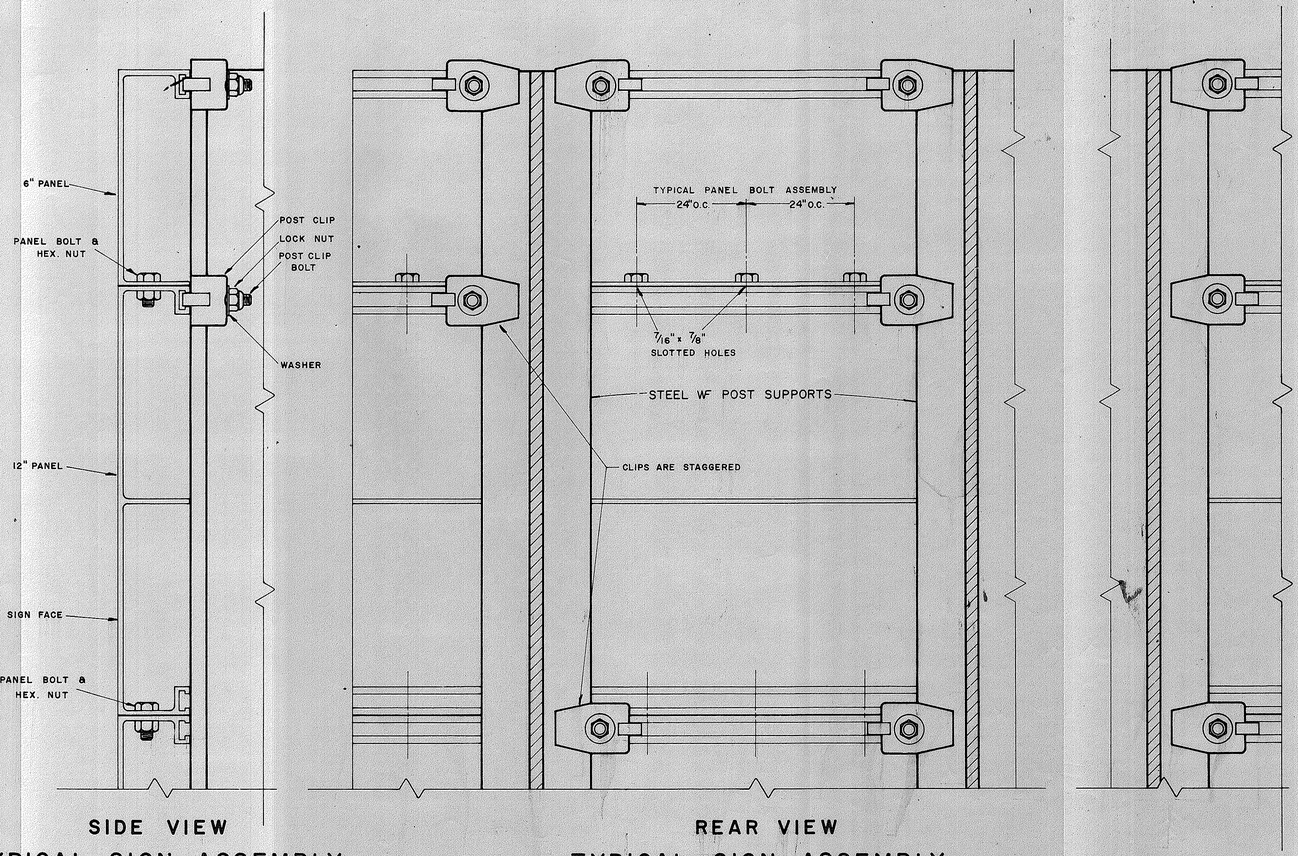
Scale: As Shown

SHEET No. 21T OF 28 SHEETS DT 206

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

261

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 262 | 328 |

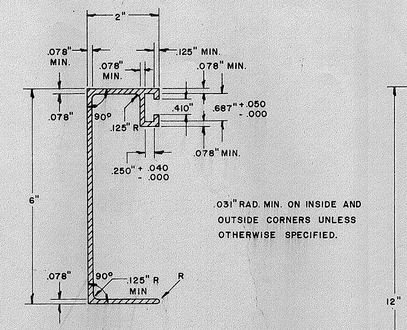



SIDE VIEW

## TYPICAL SIGN ASSEMBLY

REAR VIEW

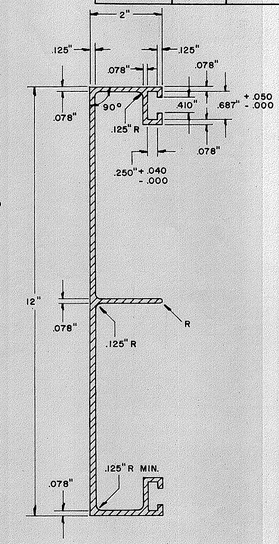
## TYPICAL SIGN ASSEMBLY




.031" RAD. MIN. ON INSIDE AND OUTSIDE CORNERS UNLESS OTHERWISE SPECIFIED.

## 6" SIGN PANEL

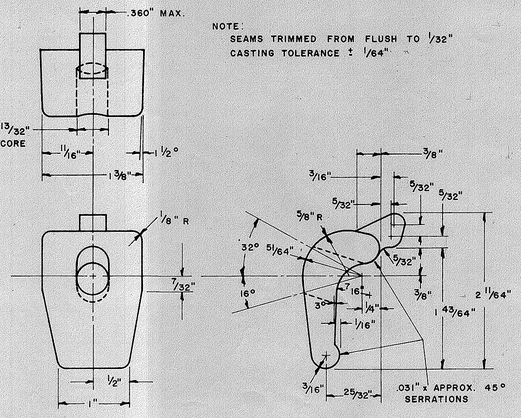
WT./ LINEAL FT. - 1.103 LBS. MIN.
ALLOY - 6061 - F(1)
MOMENT OF INERTIA - 0.487 MIN
MINIMUM SECTION MODULUS 0.341




## 12" SIGN PANEL

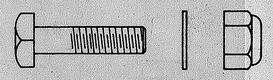
WT./ LINEAL FT. - 2.690 LBS. MIN.
ALLOY - 6061 - F(1)
MOMENT OF INERTIA 0.936 MIN.
MINIMUM SECTION MODULUS 0.605

## SOLID EXTRUDED SIGN PANEL DETAILS



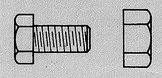

## POST CLIP DETAIL

ALLOY 356 - T6



## POST CLIP BOLT ASSEMBLY

3/8" - 16 x 1 3/4" LONG SQ. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 LOCK NUT - ALLOY 2017 - T4
25/32" ID x 3/4" OD x .09" WASHER - ALLOY ALCLAD 2024 - T4



## PANEL BOLT ASSEMBLY

3/8" - 16 x 3/4" LONG HEX. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 HEX. NUT - ALLOY 6061 - T6
FLAT WASHER - ALLOY ALCLAD 2024 - T4

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

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 12/29/82 DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING — 12-30-82 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:

SHEET No. 227 OF 28 SHEETS DT 207

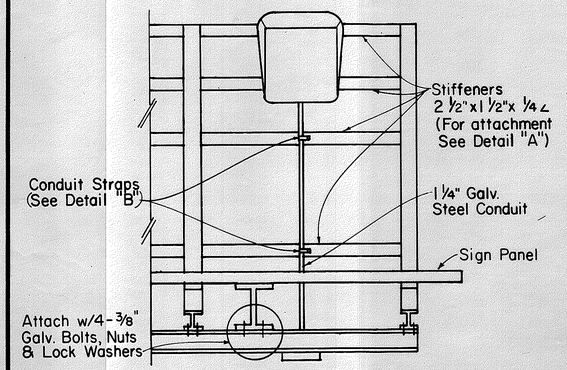
262

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

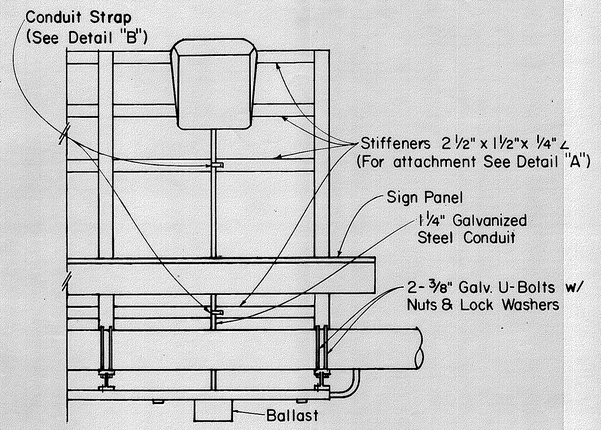
PRINTED ON DIEPO 1000H CLEARPRINT

262

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 263 | 328 |

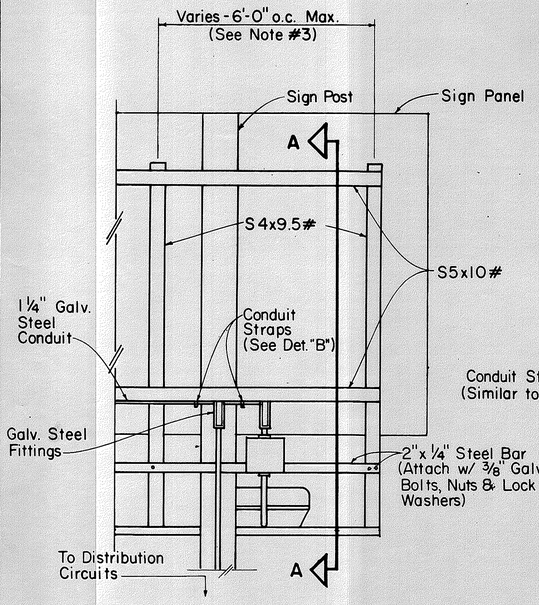



GROUND MOUNTED

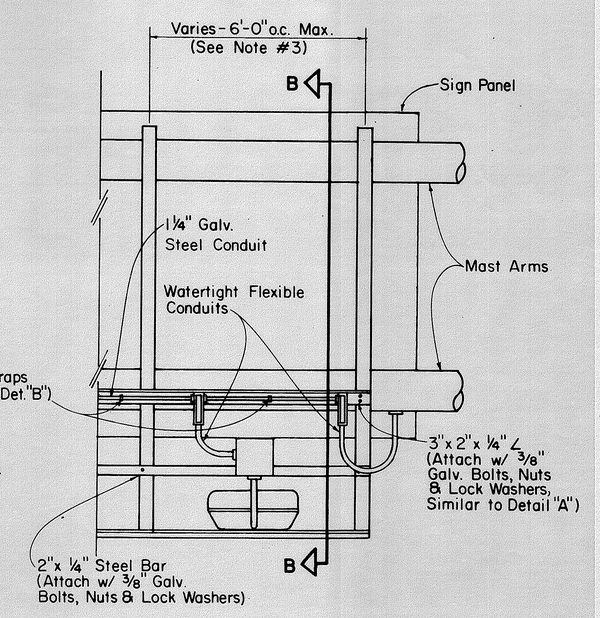



OVERHEAD MOUNTED

## TOP VIEW




GROUND MOUNTED

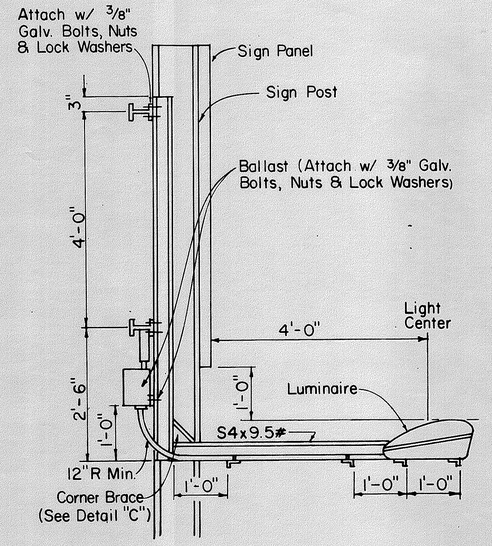



OVERHEAD MOUNTED

## REAR VIEW

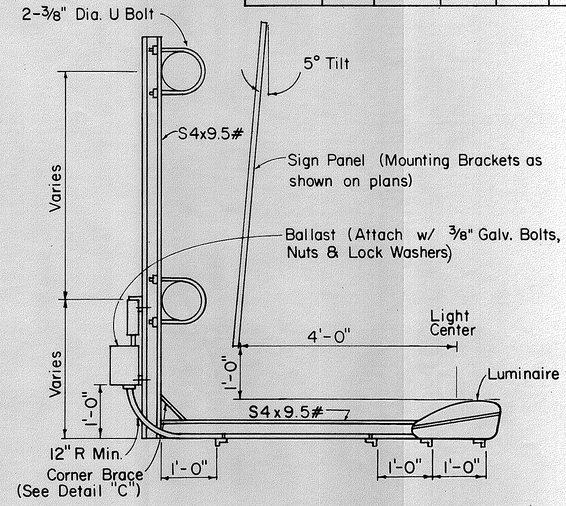
# LUMINAIRE MOUNTING

Not to Scale



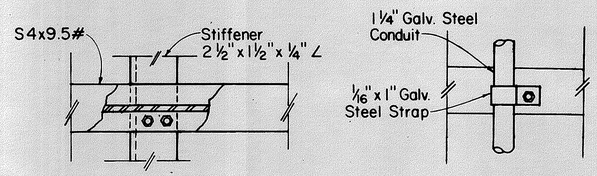

## SECTION A-A

Scale: ¾"=1'-0"



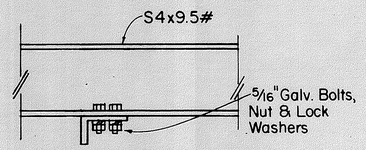

## SECTION B-B

Scale: ¾"=1'-0"




## TOP VIEW

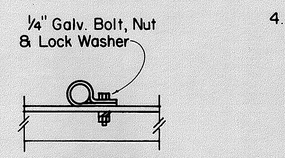
## TOP VIEW




## SIDE VIEW

## DETAIL "A"

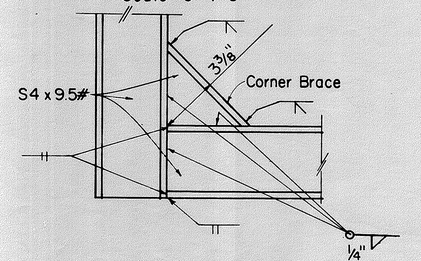
Scale: 3"=1'-0"




## SIDE VIEW

## DETAIL "B"

Scale: 3"=1'-0"




## DETAIL "C"

Scale: 3"=1'-0"

GENERAL NOTES:

1. 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.
2. Luminaire Mounting shall be adjusted as recommended by the manufacturer to provide optimum sign illumination.
3. 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.
4. 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:

Eiichi Tanaka — 5/19/81
TRAFFIC ENGINEER — DATE

APPROVED:

Herbert Sakiyama — 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

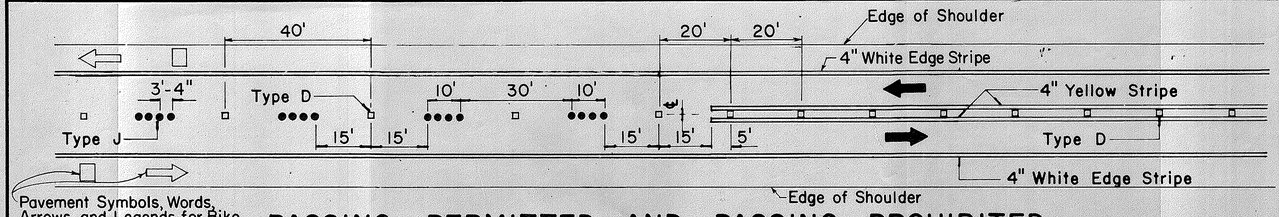
SHEET No. 23T OF 28 SHEETS DT 208

263

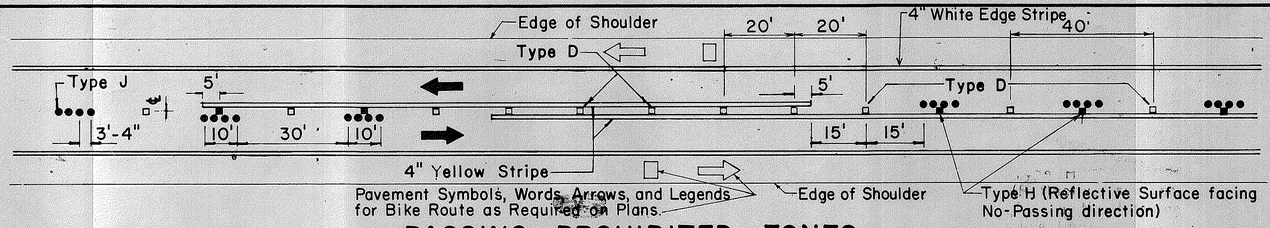
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| NOTE BOOK | TRACED BY | |
| | DESIGNED BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24):11 | 1983 | 264 | 328 |

## TWO - LANE

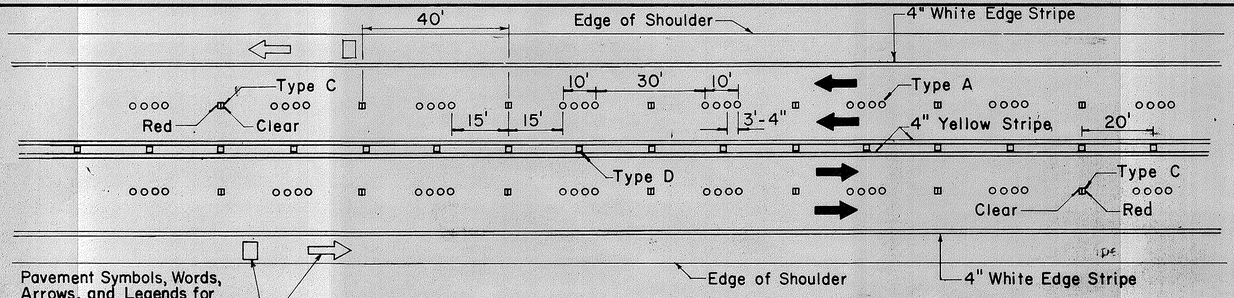



PASSING PERMITTED AND PASSING PROHIBITED

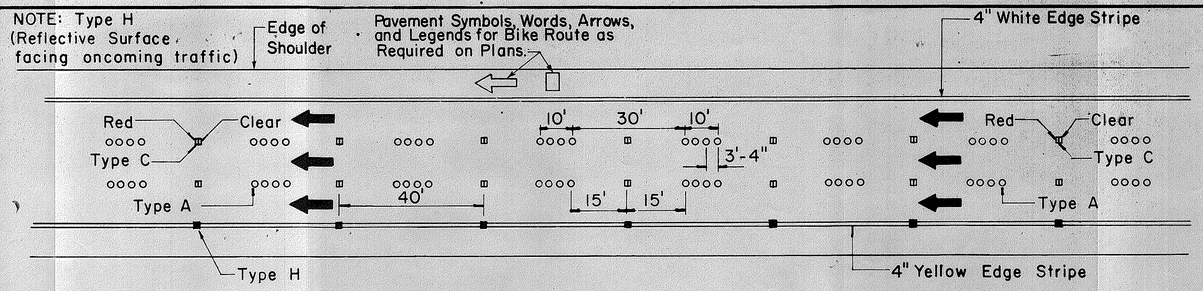



PASSING PROHIBITED ZONES

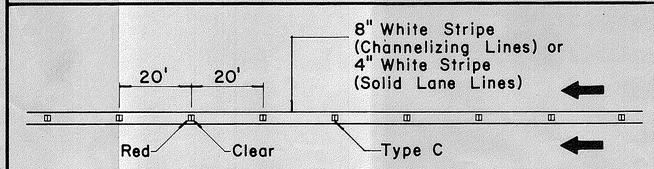
## MULTI - LANE



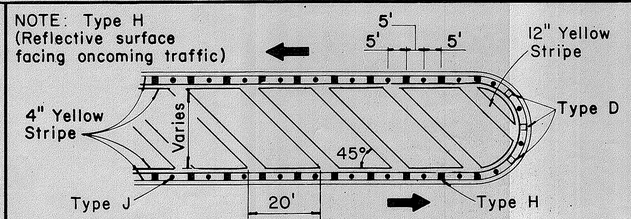

## DIVIDED HIGHWAY AND FREEWAY



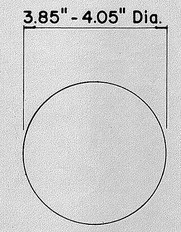

## MISCELLANEOUS




CHANNELIZING LINES OR SOLID LANE LINES

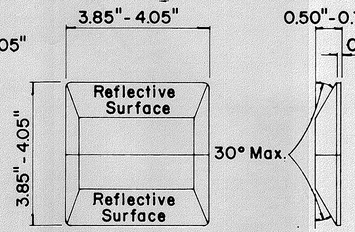



MEDIAN NOSE DELINEATION

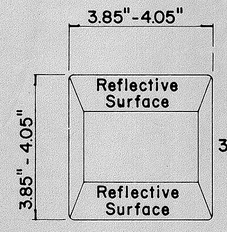



TYPE A
NON - REFLECTIVE WHITE MARKER

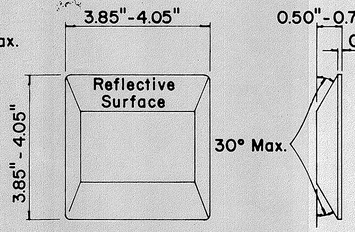
TYPE J
NON - REFLECTIVE YELLOW MARKER




TYPE C
RED - CLEAR REFLECTIVE MARKER




TYPE D
TWO - WAY YELLOW REFLECTIVE MARKER




TYPE H
ONE - WAY YELLOW REFLECTIVE MARKER

## GENERAL NOTES

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

## LEGEND

- ○ Type A
- ▥ Type C
- □ Type D
- ■ Type H
- ● Type J

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 7/21/78 DATE

APPROVED:

Herbert T. Takeishi — ASSISTANT CHIEF, ENGINEERING — 1/24/78 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# STANDARD DETAILS
# RAISED PAVEMENT MARKERS AND STRIPING

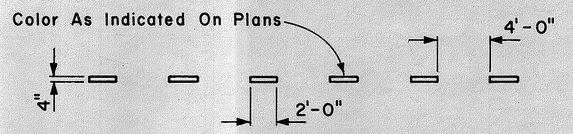
Not to Scale — July 1978

SHEET No. 247 OF 28 SHEETS DT 300

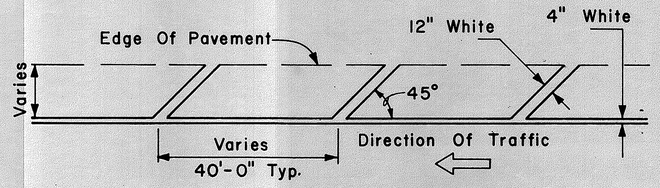
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | NOTE BOOK | No.

K+E IMPERIAL™ LA 3207

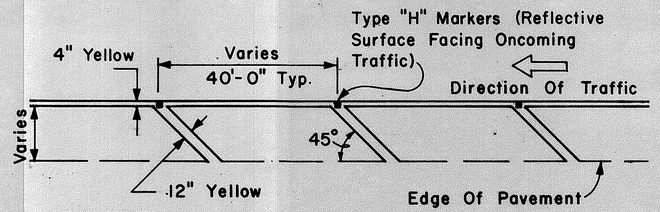
264



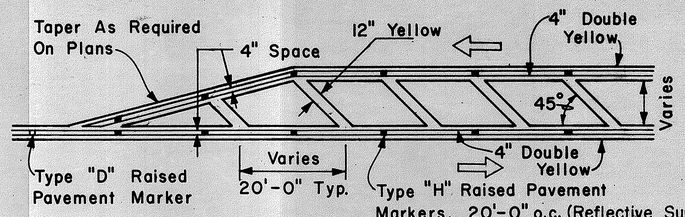

## 4" GUIDE LINE



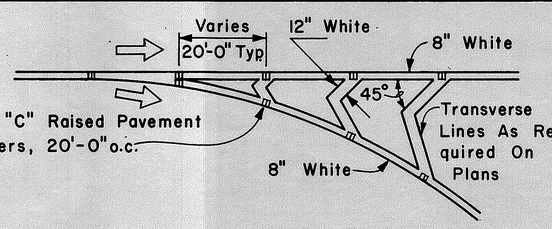

## TRANSVERSE RIGHT SHOULDER MARKING



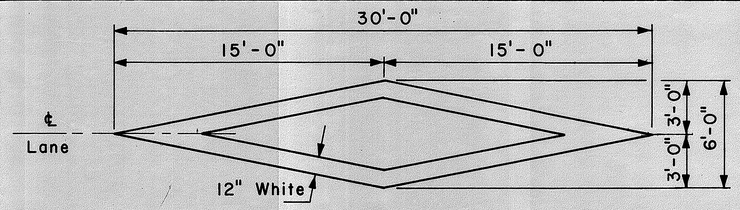

## TRANSVERSE LEFT SHOULDER MARKING



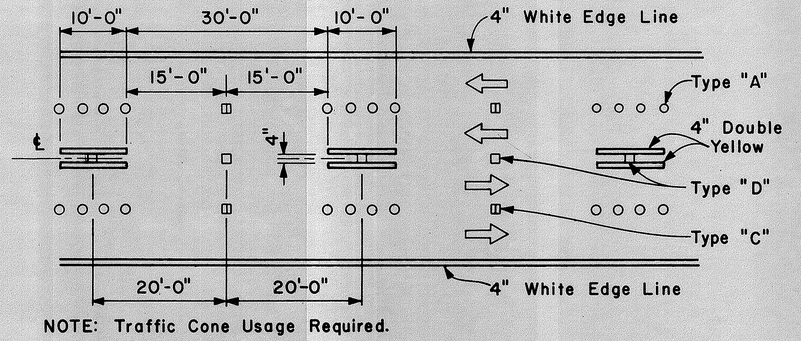

## TRANSVERSE MEDIAN MARKING




## CHANNELIZING ISLAND

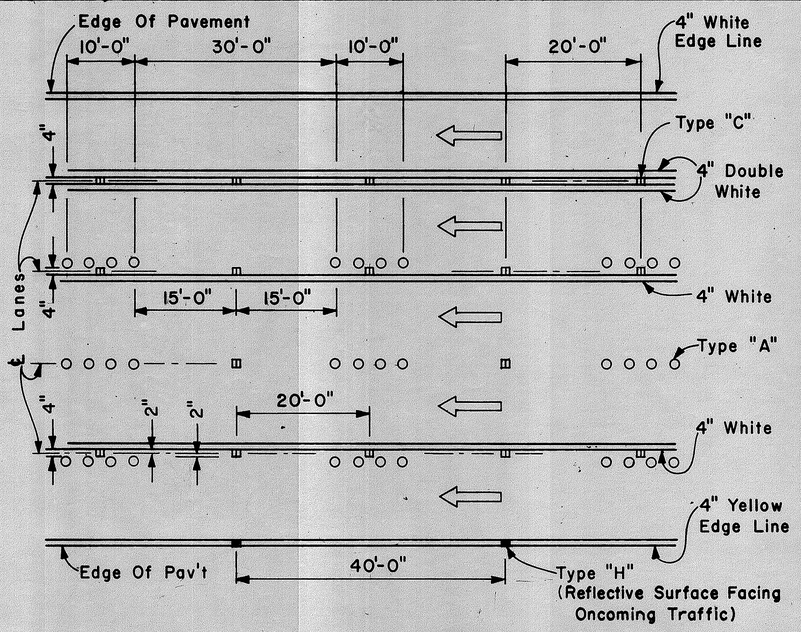



## PAVEMENT DIAMOND




NOTE: Traffic Cone Usage Required.

## MULTI-LANE REVERSIBLE LANES




## MULTI-LANE LANE CHANGE RESTRICTION ZONES

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 265 | 328 |

## GENERAL NOTES:

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

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

APPROVED:
Herbert S. Takeichi 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

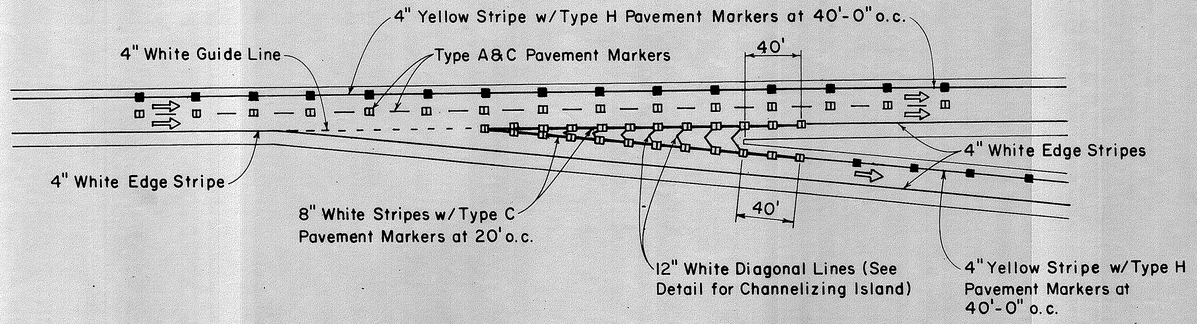
Scale: Not to Scale Date: April, 1978

SHEET No. 25T OF 28 SHEETS DT 302

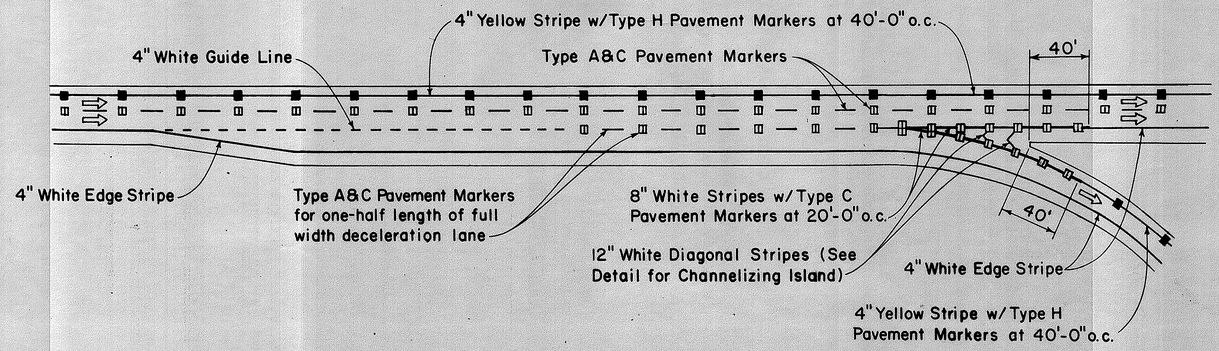
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| NOTE BOOK | DRAWN BY | |
| | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| No. | CHECKED BY | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24)11 | 1983 | 266 | 328 |

## TAPERED DECELERATION LANE

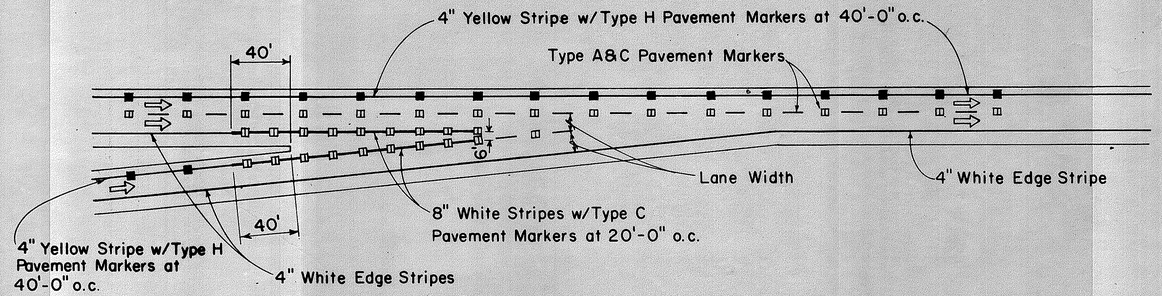



## PARALLEL DECELERATION LANE

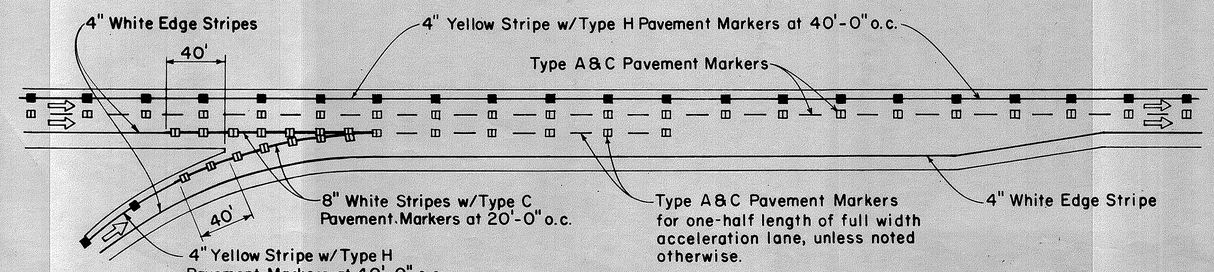



## TYPICAL ROADWAY EXIT MARKINGS

## TAPERED ACCELERATION LANE




## PARALLEL ACCELERATION LANE




## TYPICAL ROADWAY ENTRANCE MARKINGS

## 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.

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

APPROVAL RECOMMENDED:

Eiichi Tanaka — 7/21/78
TRAFFIC ENGINEER — DATE

APPROVED:

Herbert S. Takeuchi — 7/24/78
ASSISTANT CHIEF, ENGINEERING — DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

**STANDARD DETAILS**

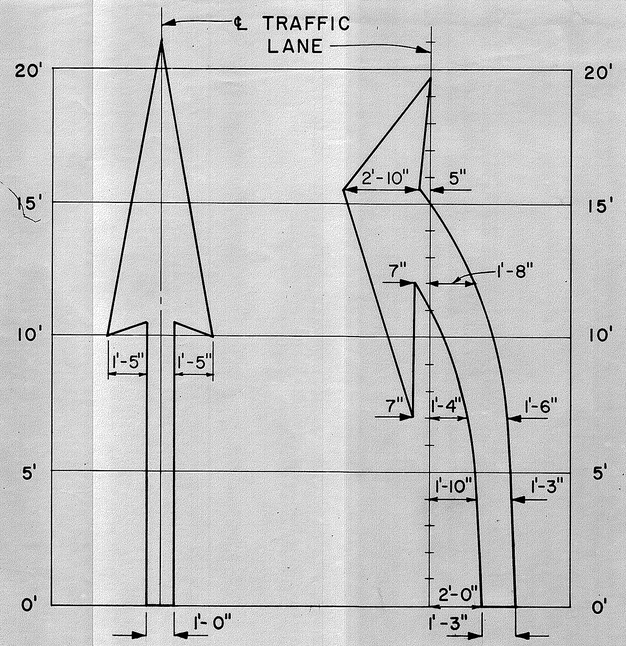
# MISCELLANEOUS PAVEMENT MARKINGS

Not to Scale — July 1978

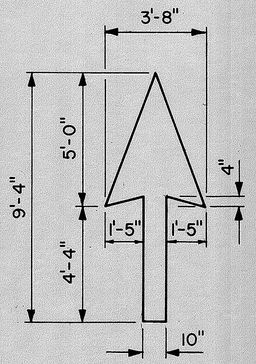
SHEET No. 266 OF 28 SHEETS DT 304

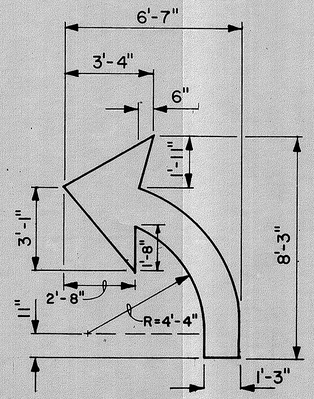
266

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | I-H3-1(24);11 | 1983 | 267 | 328 |

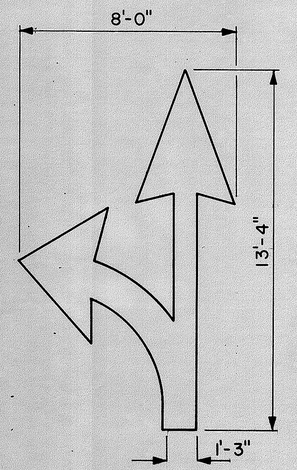



ELONGATED



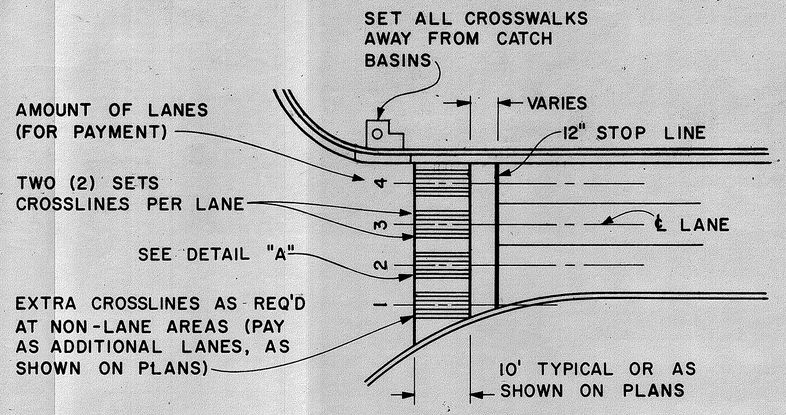




STANDARD

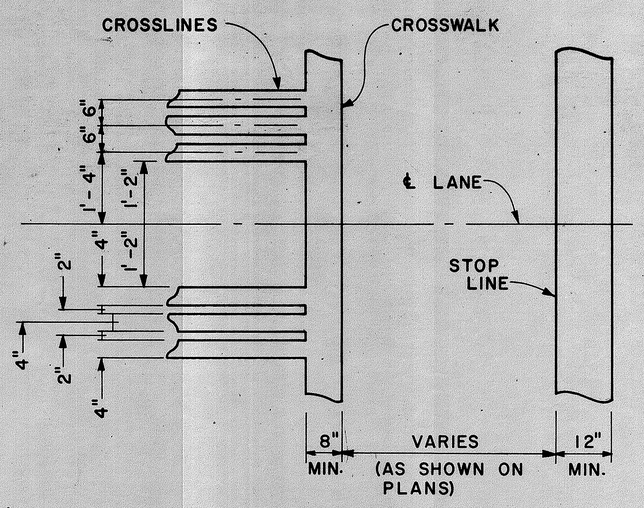



## PAVEMENT ARROWS

Scale: 3/8" = 1'




PLAN




DETAIL "A"

## CROSSWALK & STOP LINE

Scale: Not to Scale

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | No.

## GENERAL NOTES:

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

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

APPROVED:
Herbert Q. Takiishi — ASSISTANT CHIEF, ENGINEERING — 5/3/78 DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

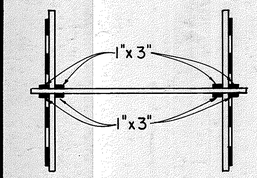
# STANDARD DETAILS

## MISCELLANEOUS PAVEMENT MARKINGS

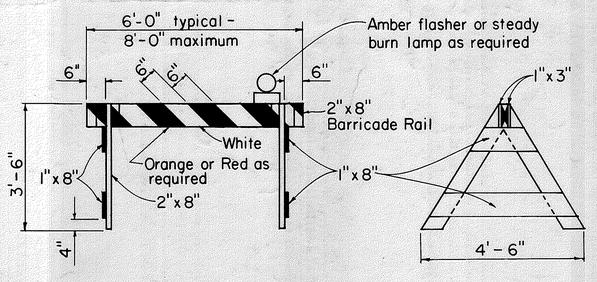
Scale: As Shown Date: March, 1978

SHEET No. 27T OF 28 SHEETS DT 306

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | F-H3-1(24)11 | 1983 | 268 | 328 |




PLAN VIEW



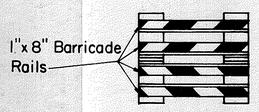

FRONT VIEW

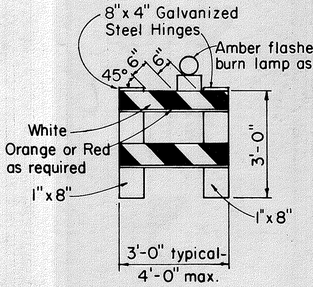



END VIEW

## TYPE I BARRICADE

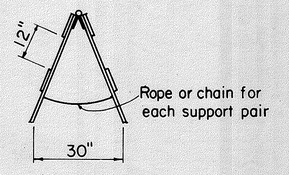
Scale: 1/2" = 1'-0"




PLAN VIEW

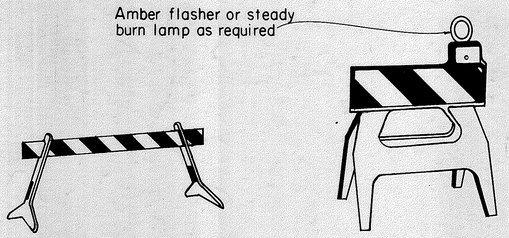
FRONT VIEW




END VIEW

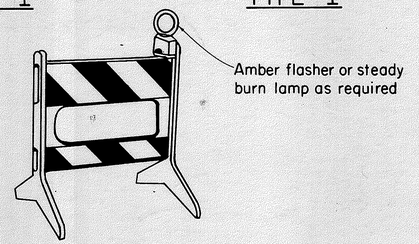
## TYPE II BARRICADE

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




TYPE I

TYPE I

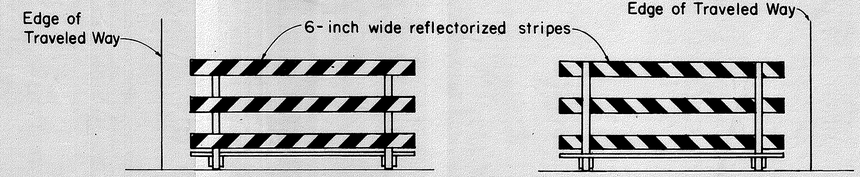



TYPE II

## PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.

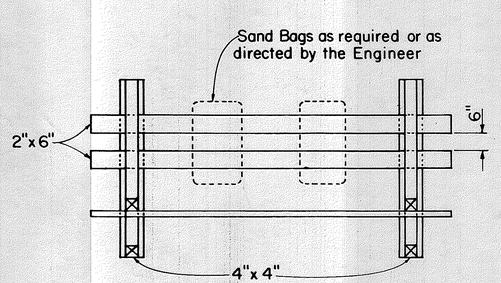



FRONT FACE

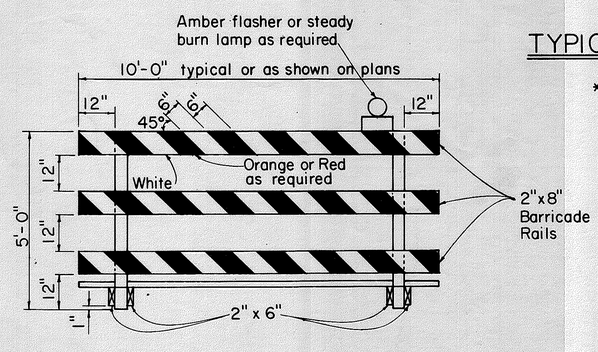
BACK FACE

## GENERAL NOTES

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




PLAN VIEW




FRONT VIEW

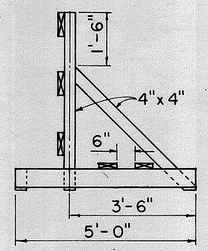
## TYPE III BARRICADE

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

## TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

** Similar for Types I & II




END VIEW

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 10/21/81 DATE

APPROVED:

Hubert S. Ishii — ASSISTANT CHIEF, ENGINEERING — 10/23/81 DATE

| NO. | REVISION | APPROVED BY | DATE |
|---|---|---|---|
| 1 | Supercedes DT 800 Approved 12/30/69 | HI. | 10/23/81 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET No. 28T OF 28 SHEETS DT 800

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

268