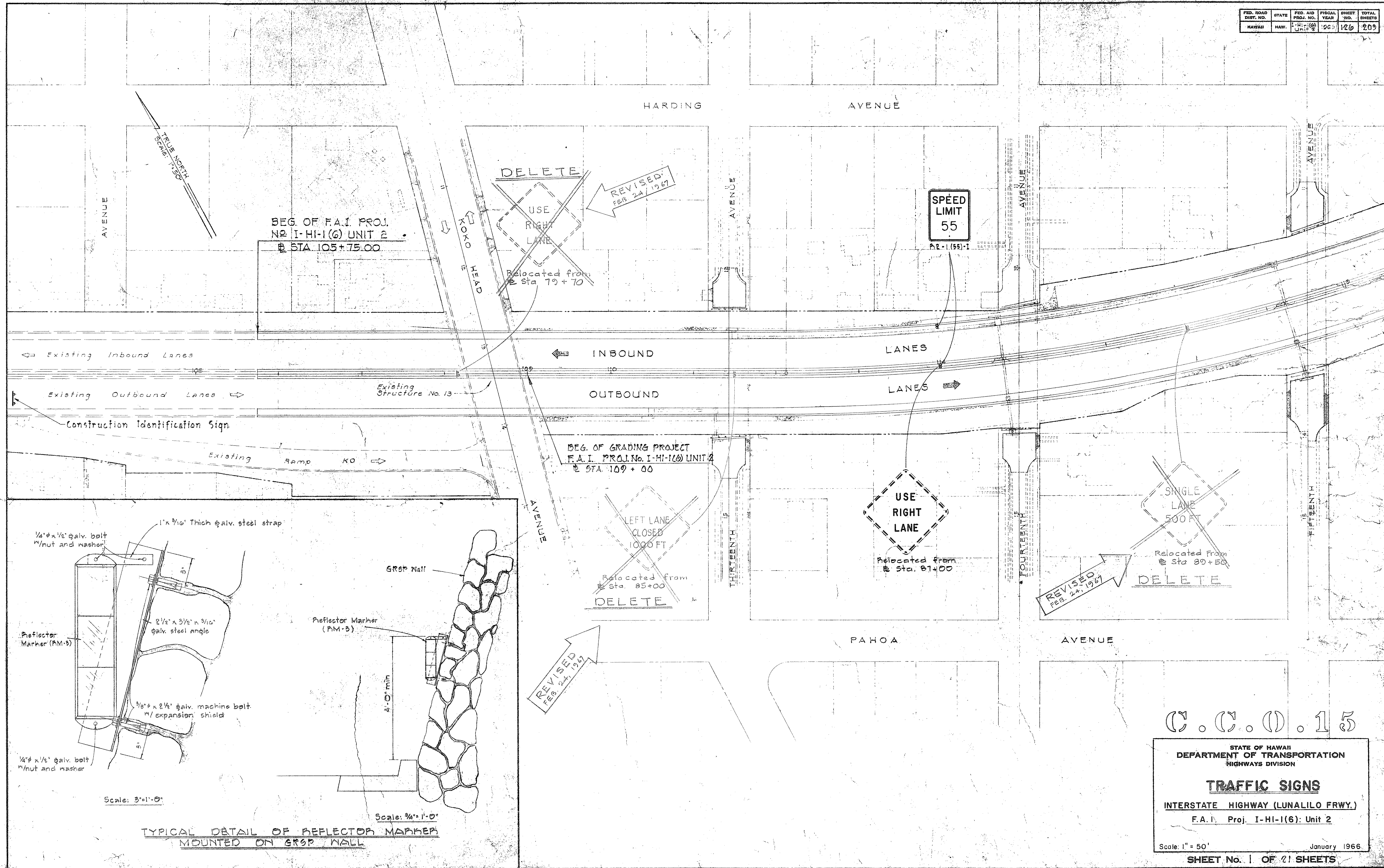
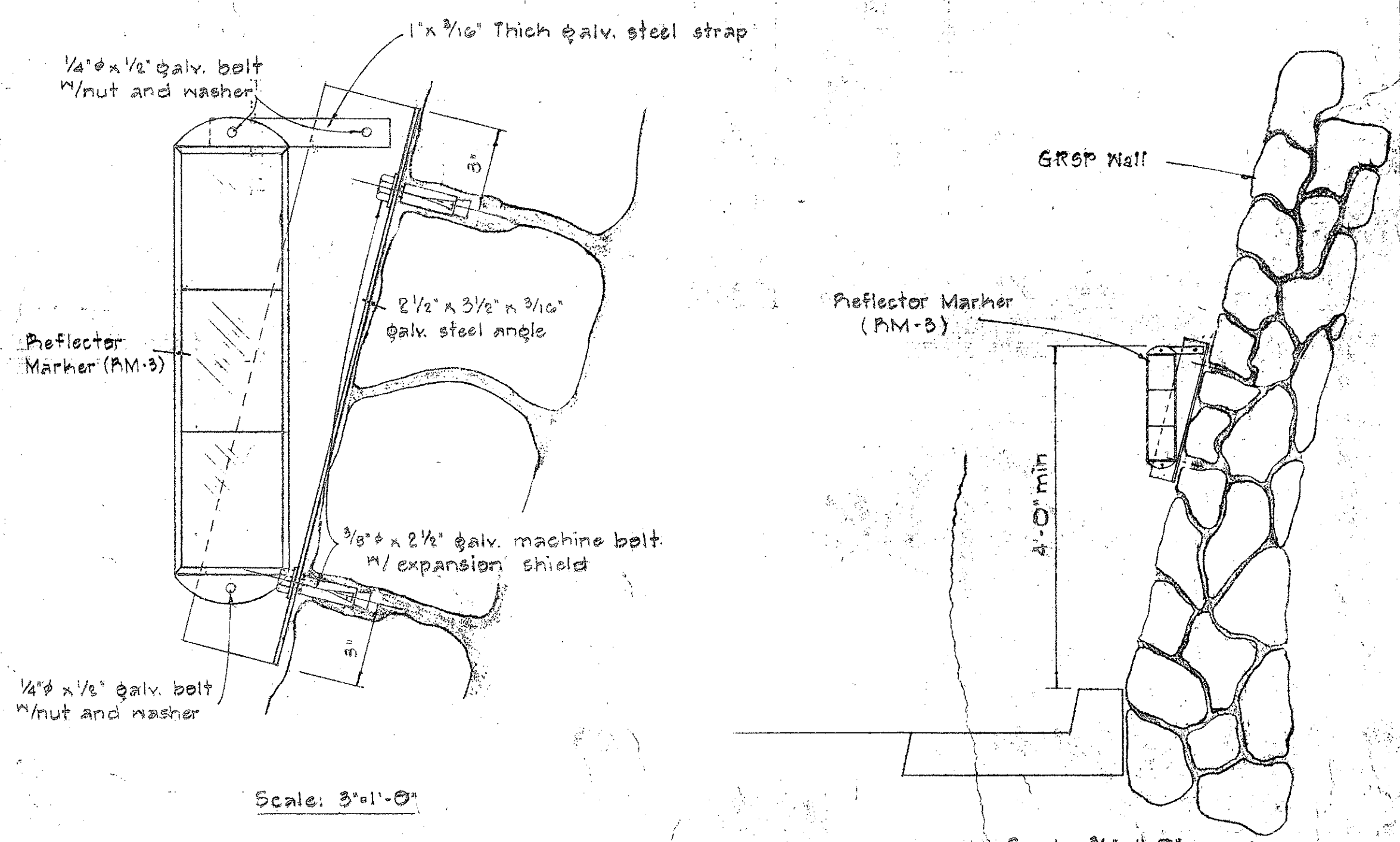


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-HI-1(6)          | 1966        | 126       | 209          |



|                   |         |
|-------------------|---------|
| DATE              | 1-24-66 |
| SURVEY PLOTTED BY | ...     |
| DRAWN BY          | ...     |
| DESIGNED BY       | ...     |
| CHECKED BY        | ...     |
| NOTE BOOK         | ...     |
| No.               | ...     |



TYPICAL DETAIL OF REFLECTOR MARKER MOUNTED ON GRS WALL

C.C.O. 15

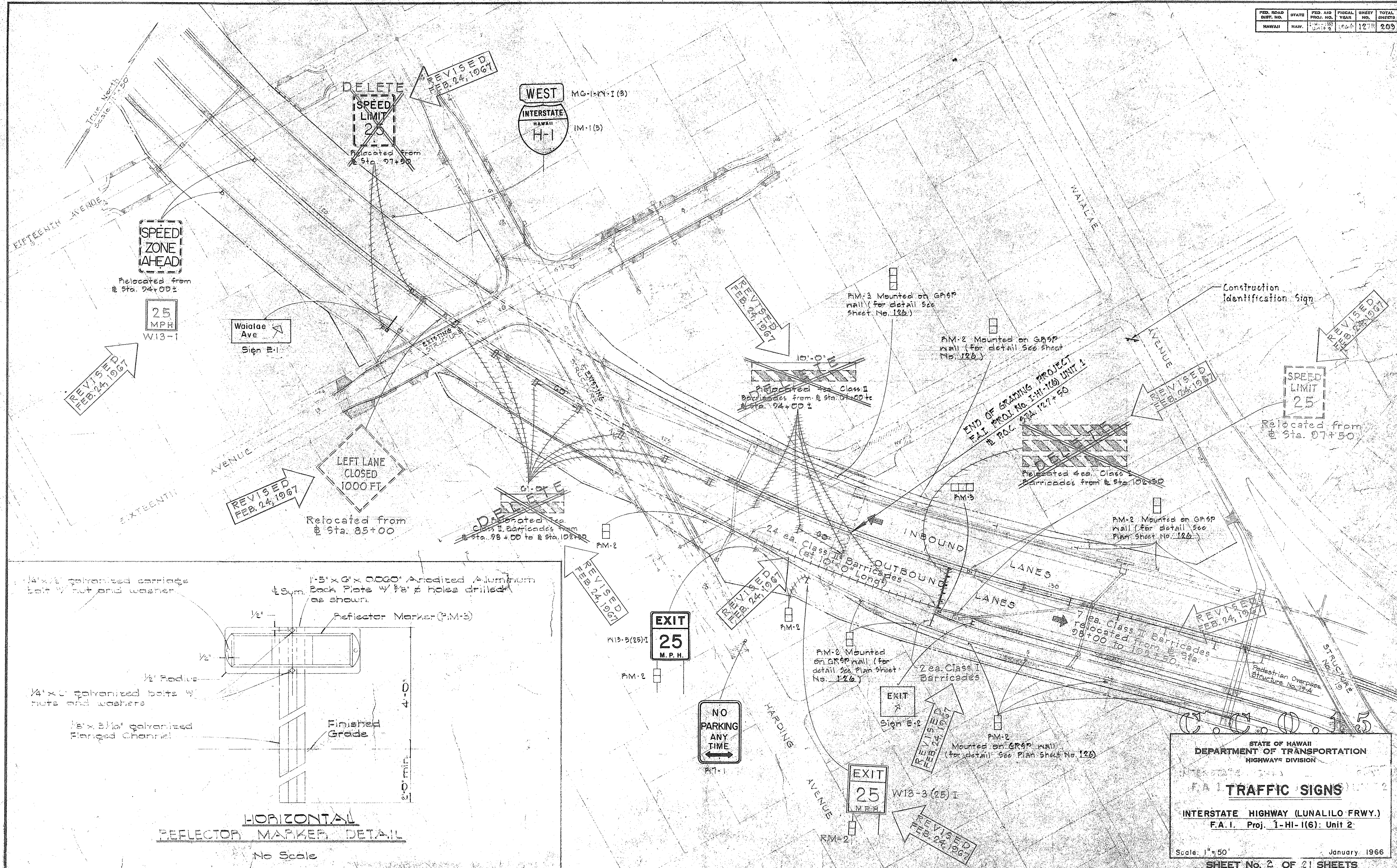
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**TRAFFIC SIGNS**  
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. 1-HI-1(6) Unit 2

Scale: 1" = 50' January 1966

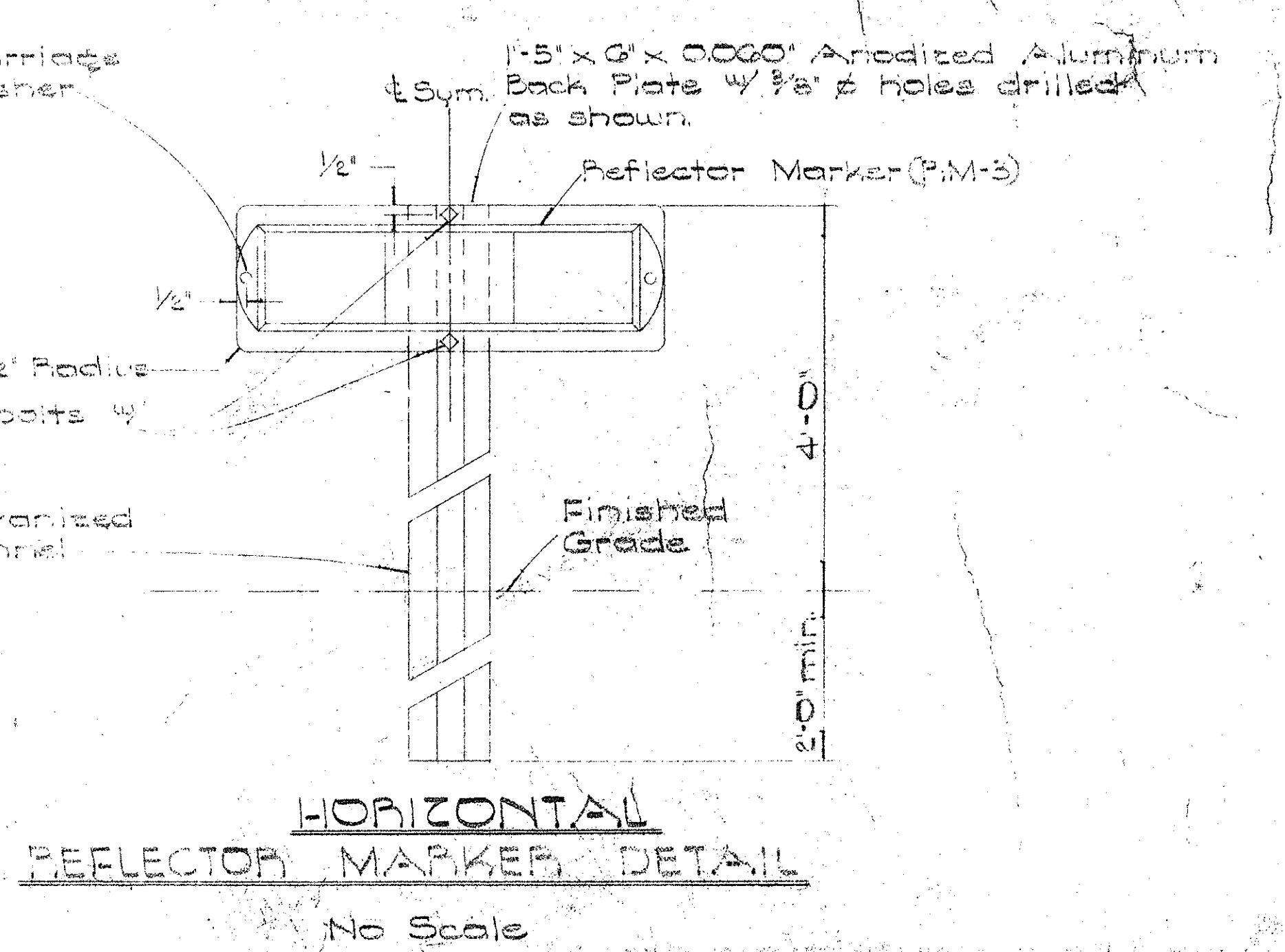
SHEET NO. 1 OF 21 SHEETS

1261R

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-11-1(6)          | 1966        | 127       | 209          |



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



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

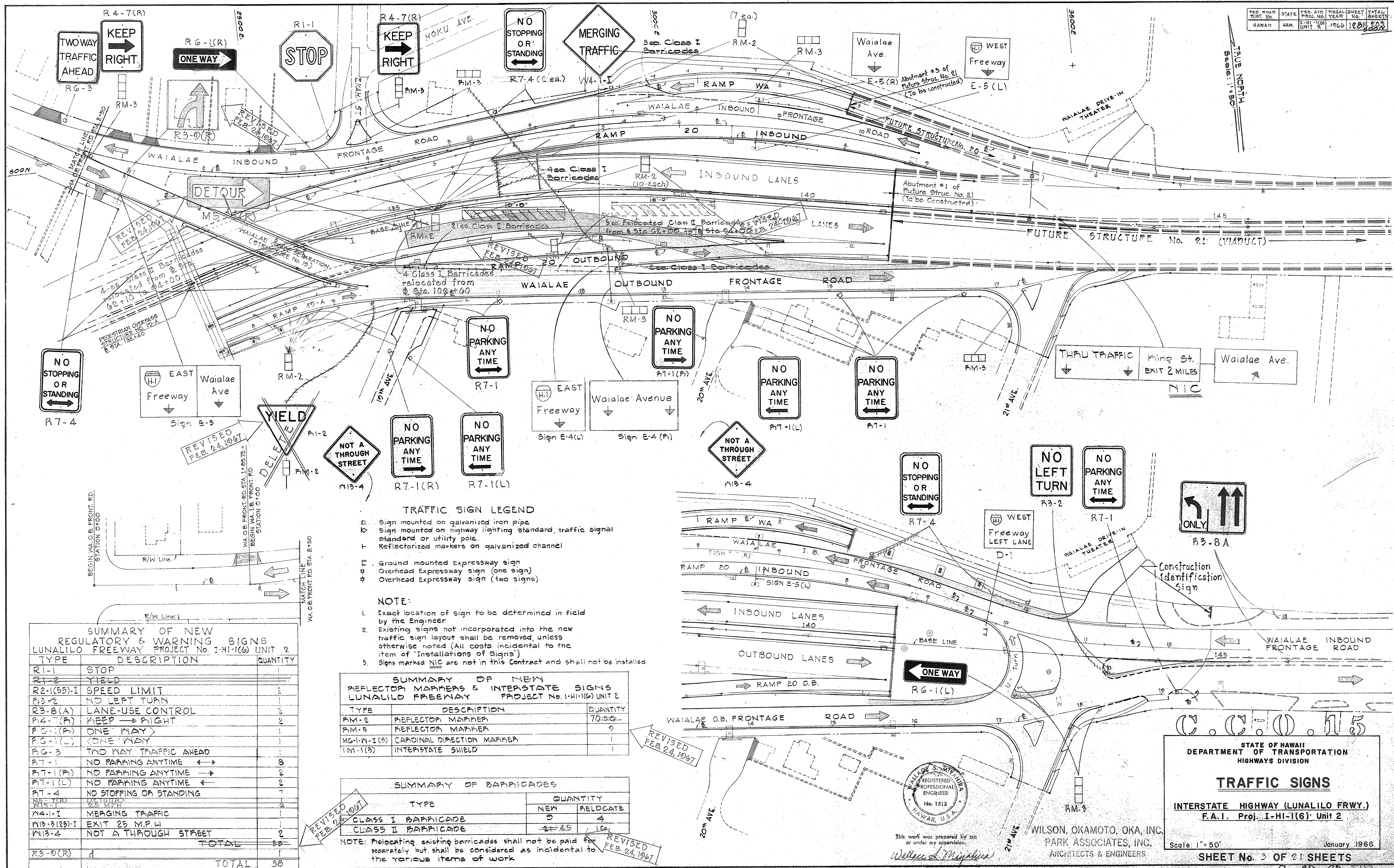
**TRAFFIC SIGNS**

INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. 1-11-1(6) Unit 2

Scale: 1"=50'

January 1966

**SHEET No. 2 OF 21 SHEETS**



PLAN  
DATE: FEB. 24, 1967  
BY: WALLACE S. MIYAHARA  
CHECKED BY: [Signature]

PROFILE  
DATE: FEB. 24, 1967  
BY: WALLACE S. MIYAHARA  
CHECKED BY: [Signature]

**SUMMARY OF NEW REGULATORY & WARNING SIGNS**  
LUALILO FREEWAY PROJECT No. 1-HI-1(6) UNIT 2

| TYPE         | DESCRIPTION             | QUANTITY  |
|--------------|-------------------------|-----------|
| R1-1         | STOP                    | 2         |
| R1-2         | YIELD                   | 2         |
| R2-1(55)-1   | SPEED LIMIT             | 2         |
| R3-2         | NO LEFT TURN            | 2         |
| R3-8(A)      | LANE-USE CONTROL        | 2         |
| R4-7(R)      | KEEP → RIGHT            | 2         |
| R5-1(R)      | ONE WAY                 | 1         |
| R6-3         | TWO WAY TRAFFIC AHEAD   | 1         |
| R7-1         | NO PARKING ANYTIME      | 3         |
| R7-1(R)      | NO PARKING ANYTIME →    | 2         |
| R7-1(L)      | NO PARKING ANYTIME ←    | 2         |
| R7-4         | NO STOPPING OR STANDING | 7         |
| W5-7(R)      | DETOUR                  | 2         |
| W13-1        | 25 MPH                  | 1         |
| W4-1-I       | MERGING TRAFFIC         | 1         |
| W13-3(25)-1  | EXIT 25 M.P.H.          | 2         |
| W13-4        | NOT A THROUGH STREET    | 2         |
| R3-0(R)      |                         | 1         |
| <b>TOTAL</b> |                         | <b>38</b> |

**TRAFFIC SIGN LEGEND**

- Sign mounted on galvanized iron pipe
- Sign mounted on highway lighting standard, traffic signal standard or utility pole
- Reflectorized markers on galvanized channel
- Ground mounted Expressway sign
- Overhead Expressway sign (one sign)
- Overhead Expressway sign (two signs)

**NOTE:**

- Exact location of sign to be determined in field by the Engineer.
- Existing signs not incorporated into the new traffic sign layout shall be removed, unless otherwise noted (All costs incidental to the item of 'Installations of Signs').
- Signs marked **NIC** are not in this Contract and shall not be installed.

**SUMMARY OF NEW REFLECTOR MARKERS & INTERSTATE SIGNS**  
LUALILO FREEWAY PROJECT No. 1-HI-1(6) UNIT 2

| TYPE        | DESCRIPTION               | QUANTITY |
|-------------|---------------------------|----------|
| RM-2        | REFLECTOR MARKER          | 70-56    |
| RM-3        | REFLECTOR MARKER          | 9        |
| MG-1-W-1(3) | CARDINAL DIRECTION MARKER | 1        |
| IM-1(3)     | INTERSTATE SHIELD         | 1        |

**SUMMARY OF BARRICADES**

| TYPE               | QUANTITY |          |
|--------------------|----------|----------|
|                    | NEW      | RELOCATE |
| CLASS I BARRICADE  | 5        | 4        |
| CLASS II BARRICADE | 21-45    | 16       |

**NOTE:** Relocating existing barricades shall not be paid for separately but shall be considered as incidental to the various items of work.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SIGNS**

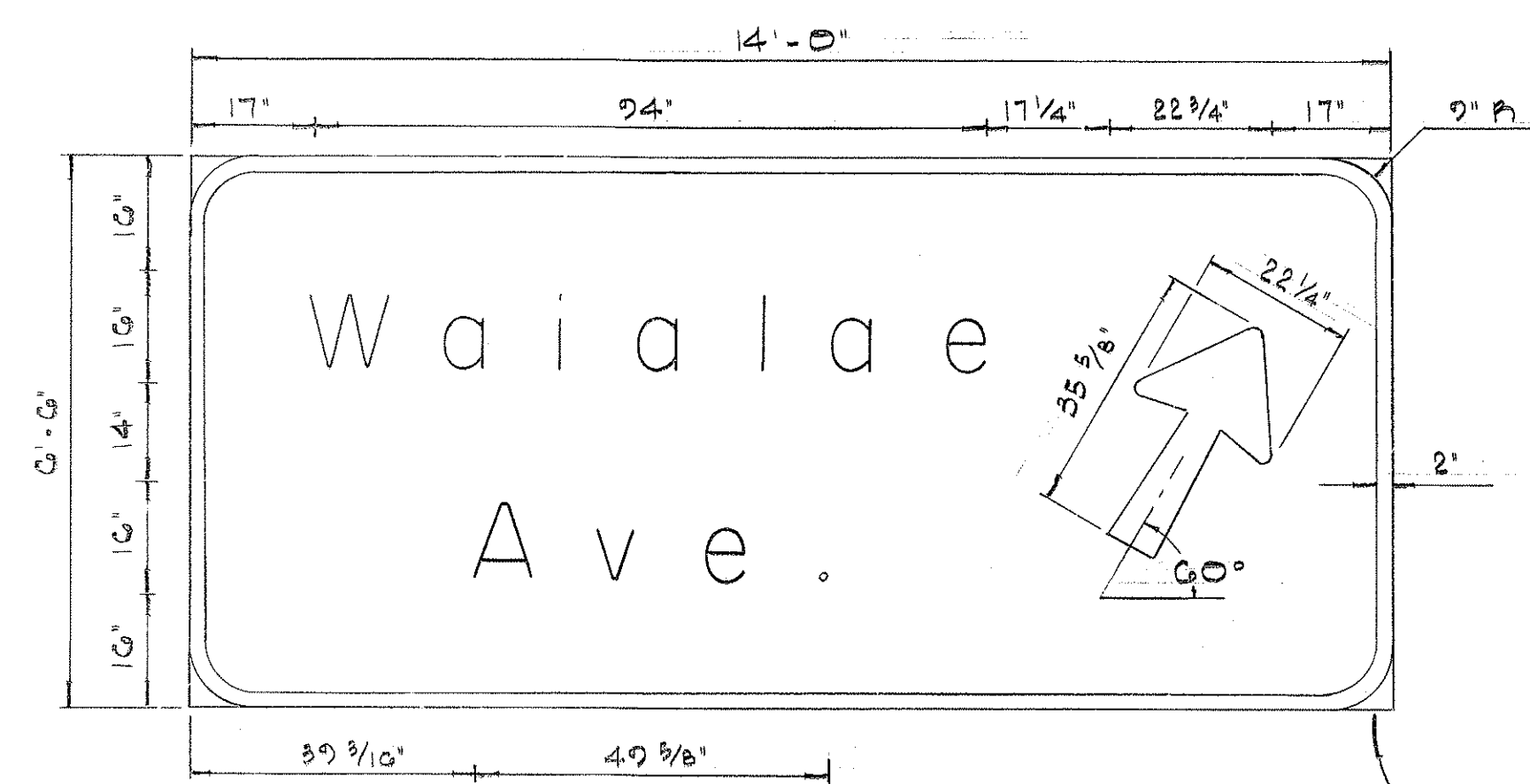
INTERSTATE HIGHWAY (LUALILO FRWY.)  
F.A.I. Proj. 1-HI-1(6) Unit 2

Scale: 1" = 50'

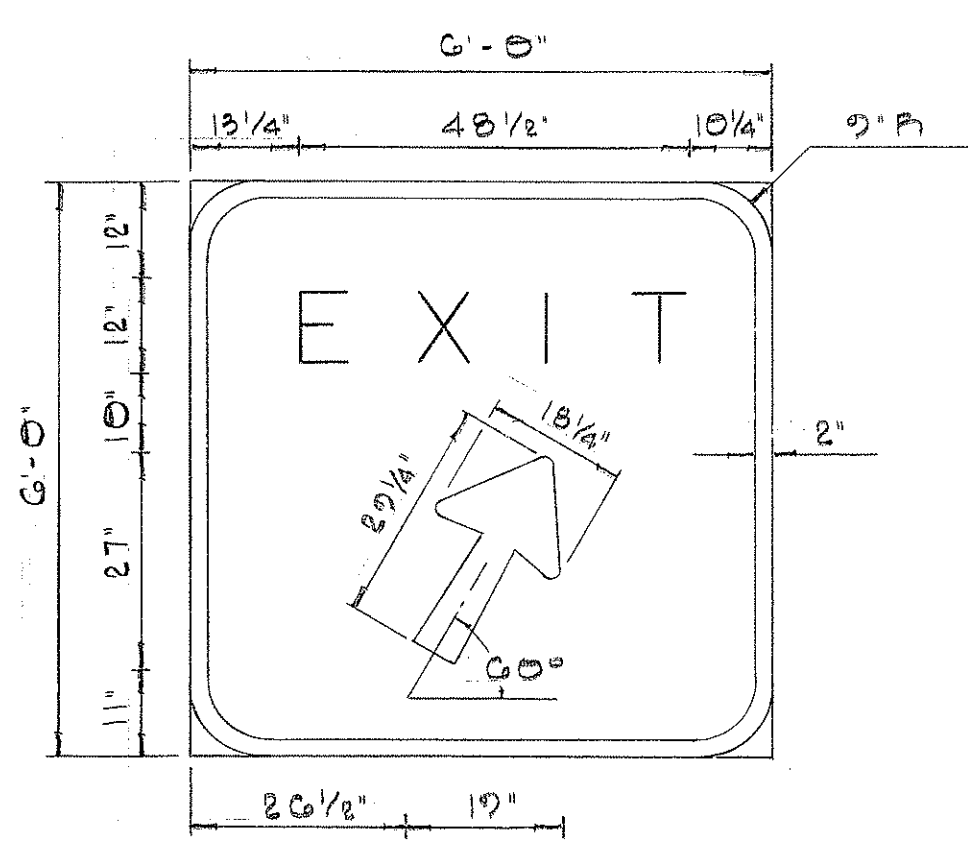
January, 1966

SHEET No. 3 OF 21 SHEETS

WILSON, OKAMOTO, OKA, INC.  
PARK ASSOCIATES, INC.  
ARCHITECTS & ENGINEERS

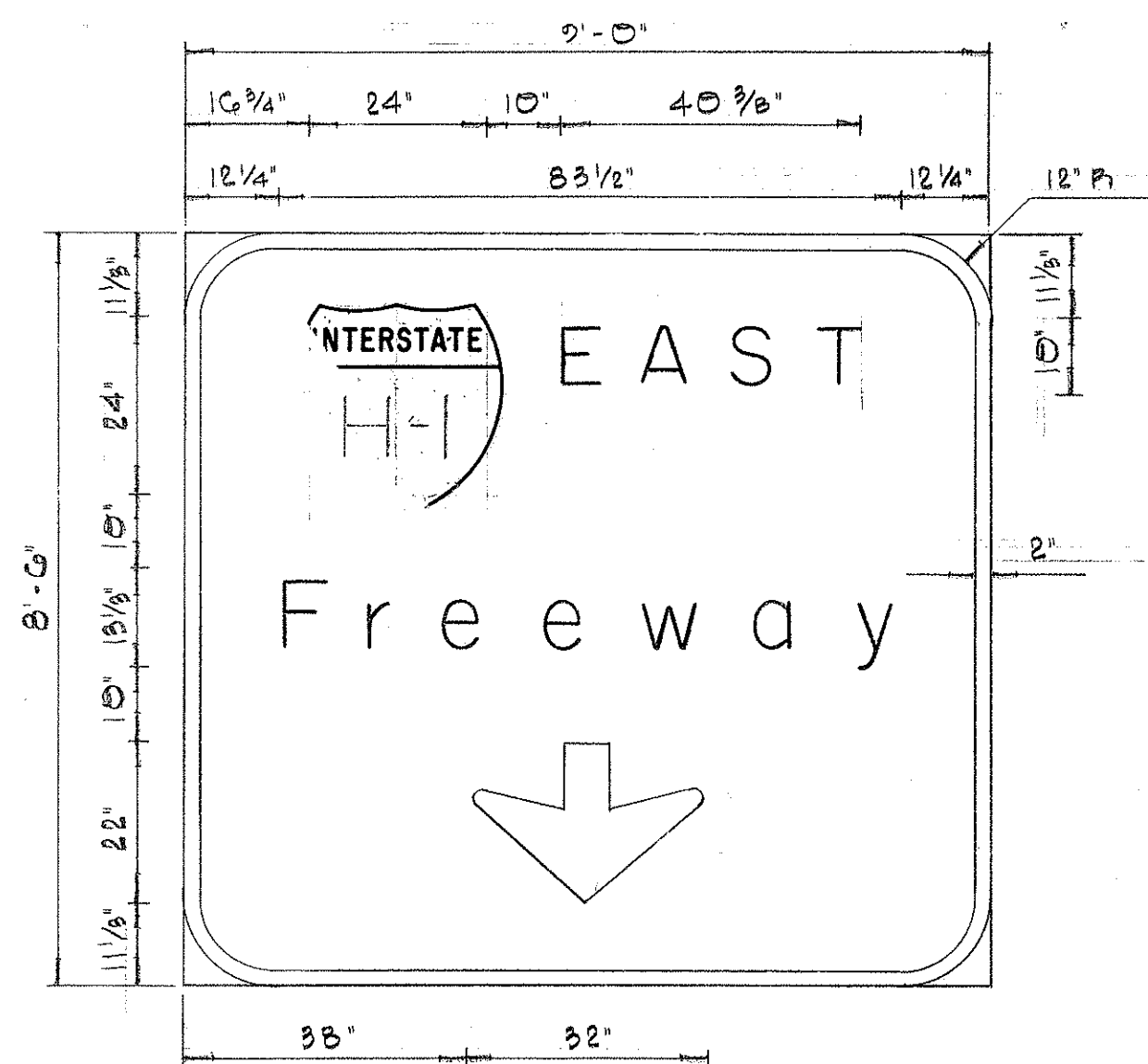


SIGN E-1

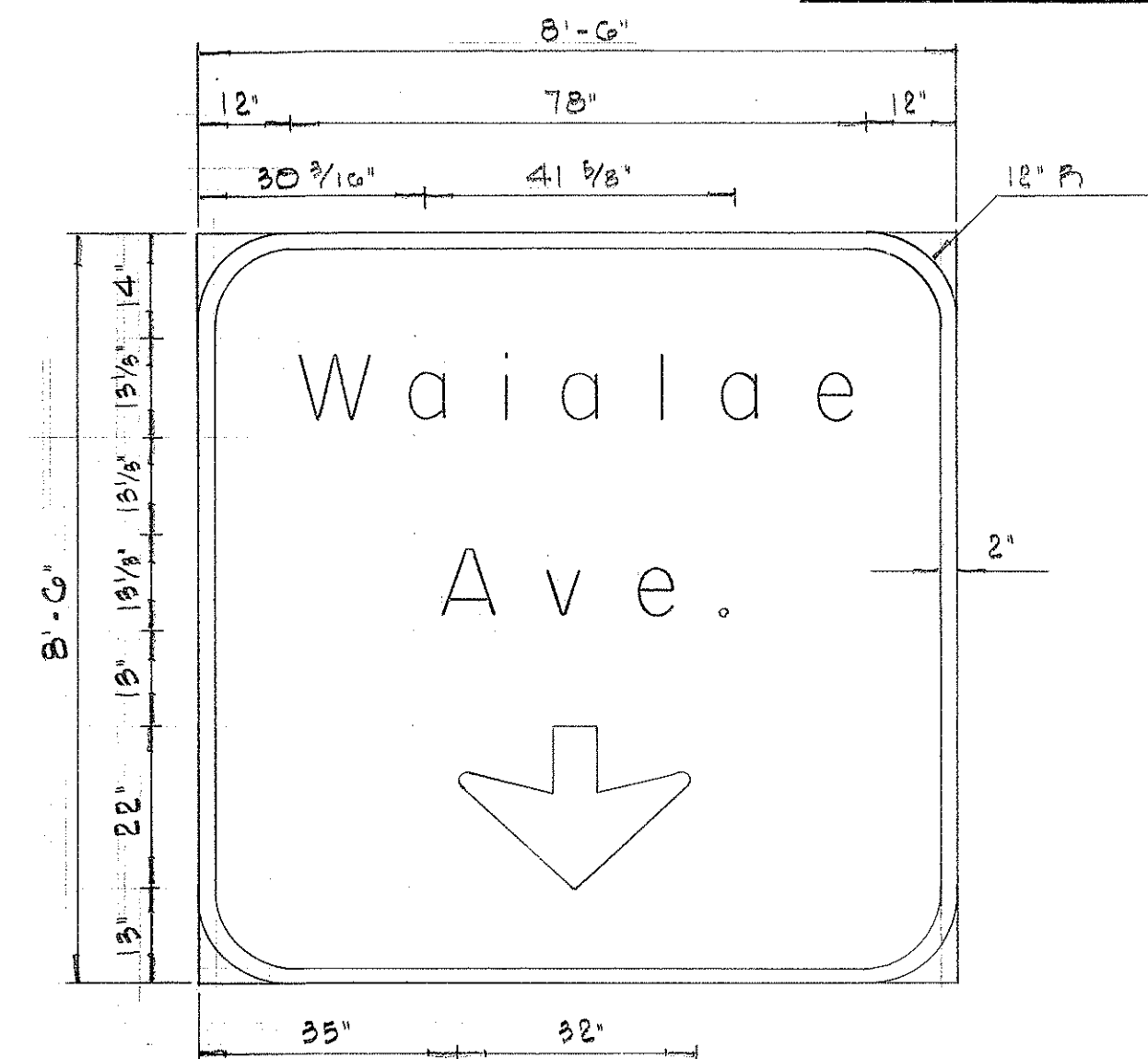


SIGN E-2

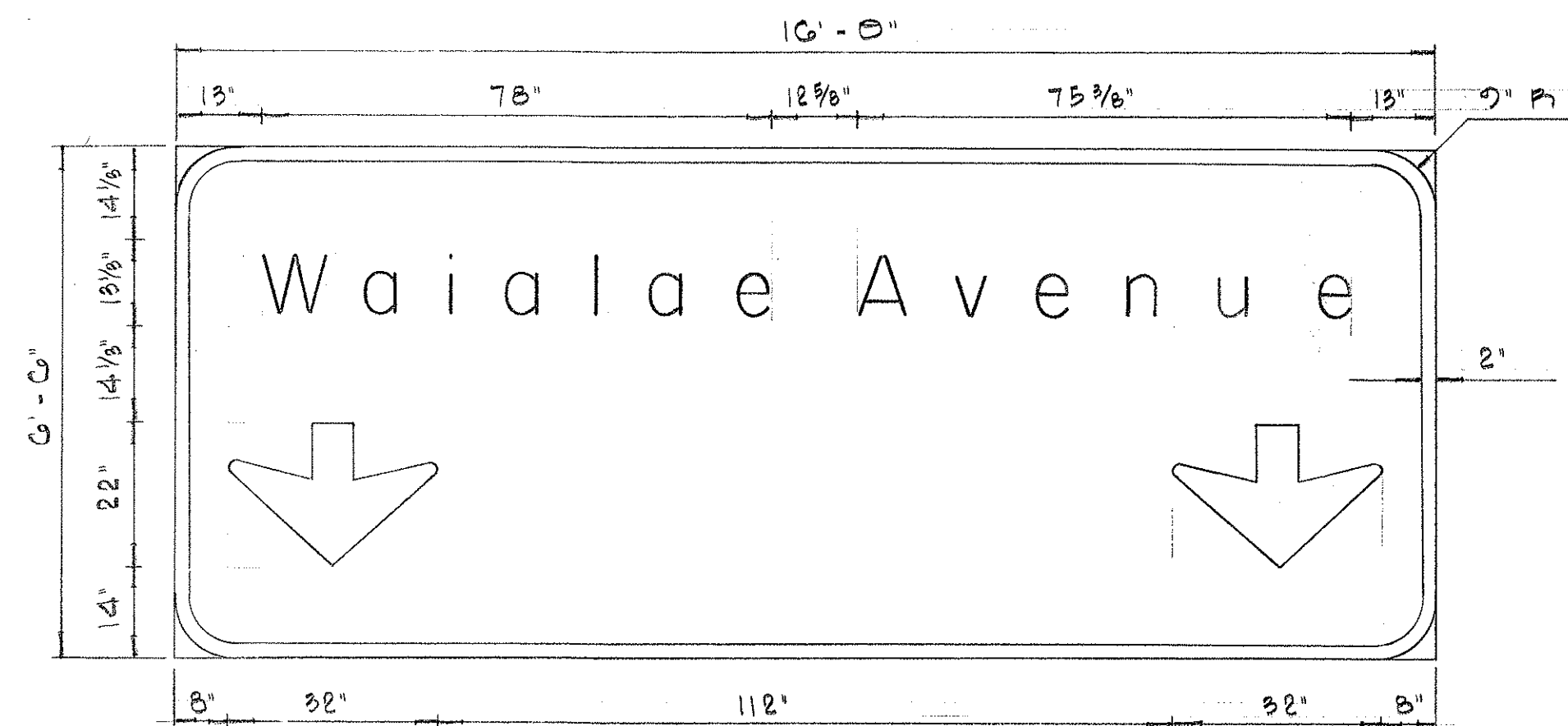
Area outside corner need not be trimmed.



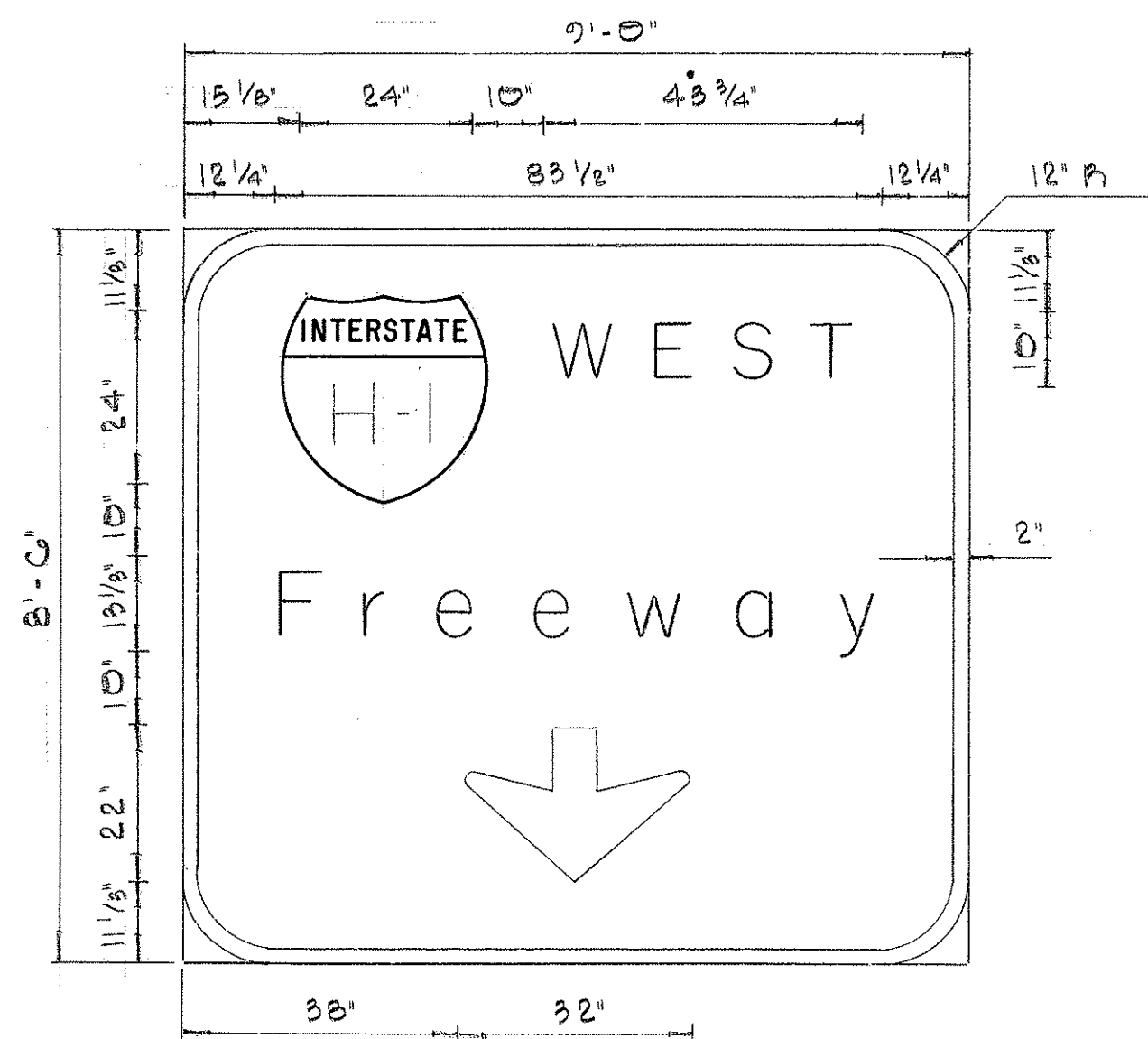
SIGN E-3(L) & E-4(L)



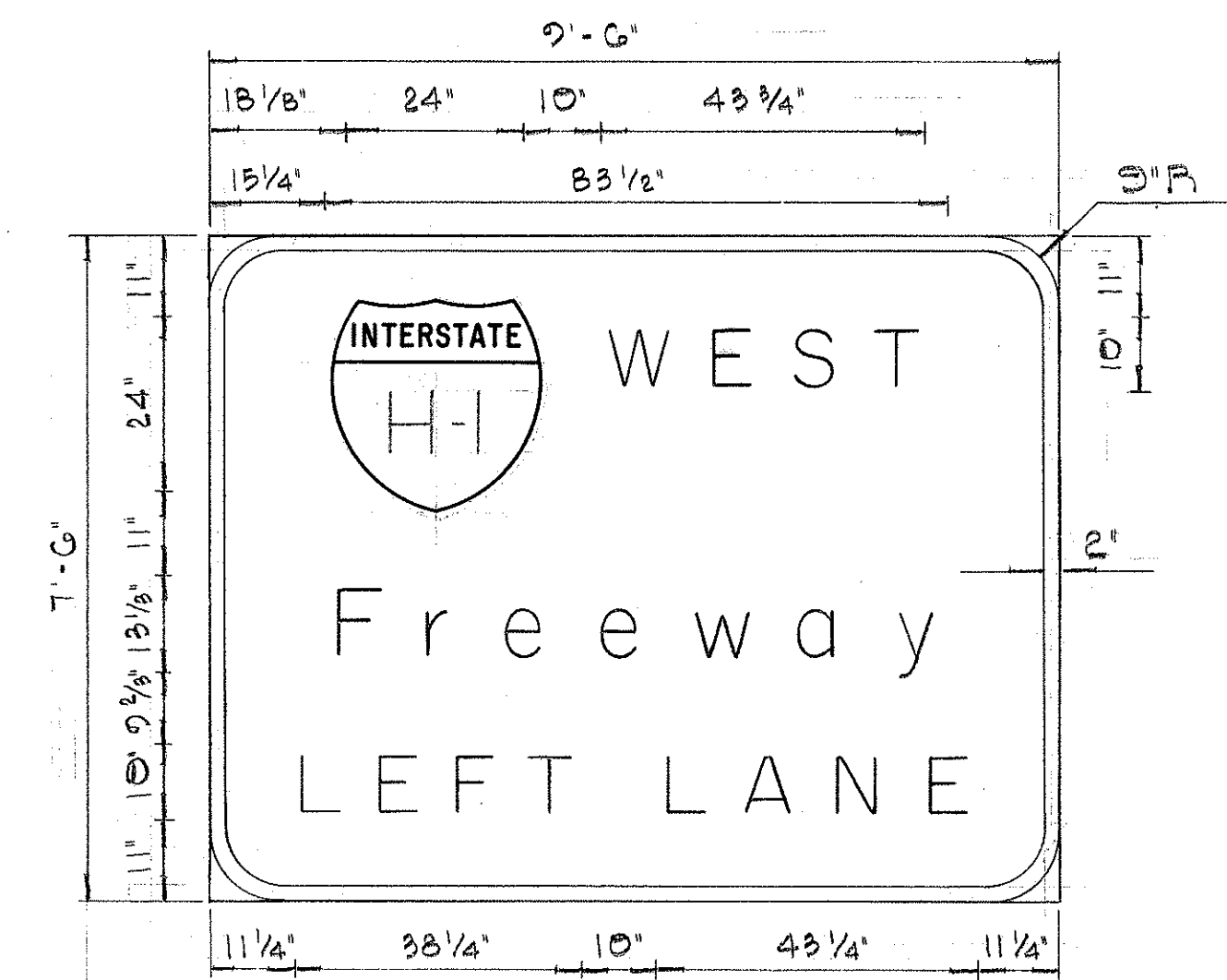
SIGN E-3(R) & E-5(R)



SIGN E-4(R)



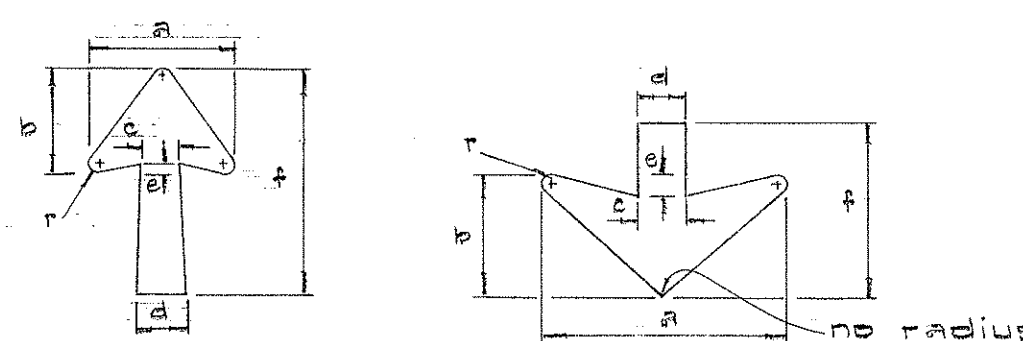
SIGN E-5(L)



SIGN D-1

### GENERAL NOTES:

- Sign message shall be lettered in upper case according to "Standard Alphabets for Highway Signs", Bureau of Public Roads, 1952, and lower case according to "Standard Lower Case Alphabets for Highway Signs", Bureau of Public Roads, 1962. Use Series "E" modified letters unless otherwise noted.
- Arrows and borders shall conform with details as shown on plans.
- Letters, numerals, symbols and borders shall be reflectorized cut-outs or demountable copies and shall be fastened on sign panel with blind rivets. See Special Provisions.
- Destination Signs will use reflectorized cut-outs.



| Arrow Size        | Dimensions in Inches |    |       |       |       |        |     |
|-------------------|----------------------|----|-------|-------|-------|--------|-----|
|                   | a                    | b  | c     | d     | e     | f      | r   |
| 18 1/4" x 27 1/4" | 18 1/4               | 14 | 4 1/2 | 6     | 1 1/2 | 27 1/4 | 3/4 |
| 22 1/4" x 35 3/8" | 22 1/4               | 17 | 5 3/8 | 7 1/8 | 1 3/4 | 35 3/8 | 1   |
| 32" x 22"         | 32                   | 16 | 6 1/2 | 6 1/2 | 3     | 22     | 1   |

TYPICAL ARROW DETAILS

| SUMMARY of<br>DESTINATION & EXPRESSWAY SIGNS |                    |                |
|----------------------------------------------|--------------------|----------------|
| Sign No.                                     | Message            | Area (Sq. Ft.) |
| E-1                                          | Waialae Ave.       | 91.00          |
| E-2                                          | EXIT               | 36.00          |
| E-3(L)                                       | Freeway            | 76.50          |
| E-3(R)                                       | Waialae Ave.       | 72.25          |
| E-4(L)                                       | Freeway            | 76.50          |
| E-4(R)                                       | Waialae Avenue     | 104.00         |
| E-5(L)                                       | Freeway            | 76.50          |
| E-5(R)                                       | Waialae Ave.       | 72.25          |
|                                              | TOTAL              | 605.00         |
| D-1                                          | Freeway, LEFT LANE | 71.25          |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DESTINATION AND EXPRESSWAY SIGNS**

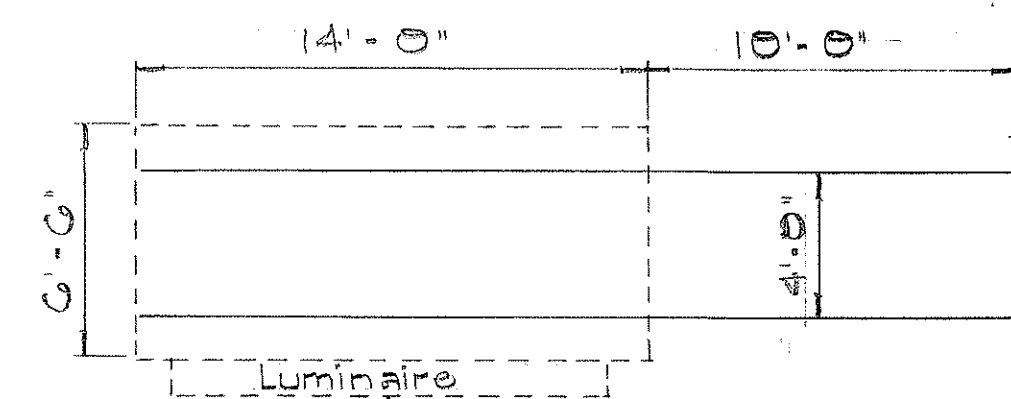
**PANEL LAYOUT**

INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6): Unit 2

Not to Scale January 1966

SHEET No. 4 OF 21 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | FH-1(6) UNIT 2     | 1966        | 130       | 209          |

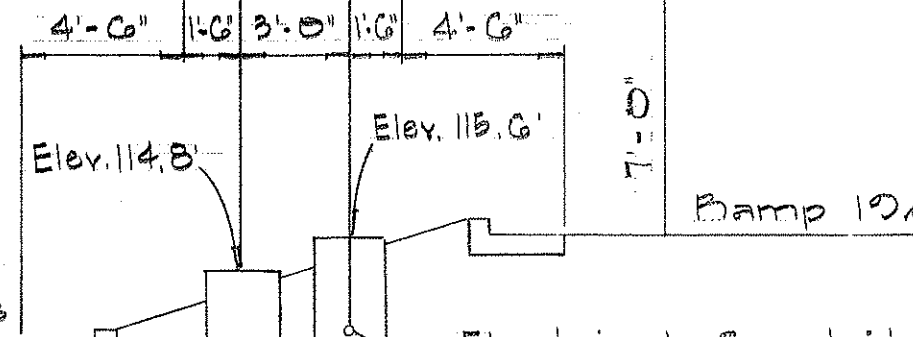
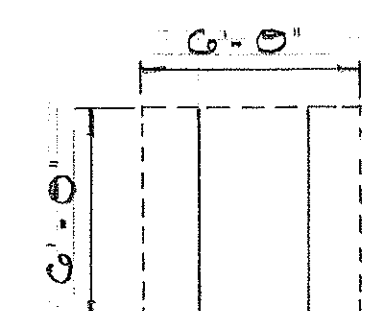


Electrical Conduit  
Type II Footing

**SIGN E-1**  
Sta. 121+50  
121+25+

C.C.O. #28  
4' Excavated and  
backfilled w/URB

Elev. 143.0'



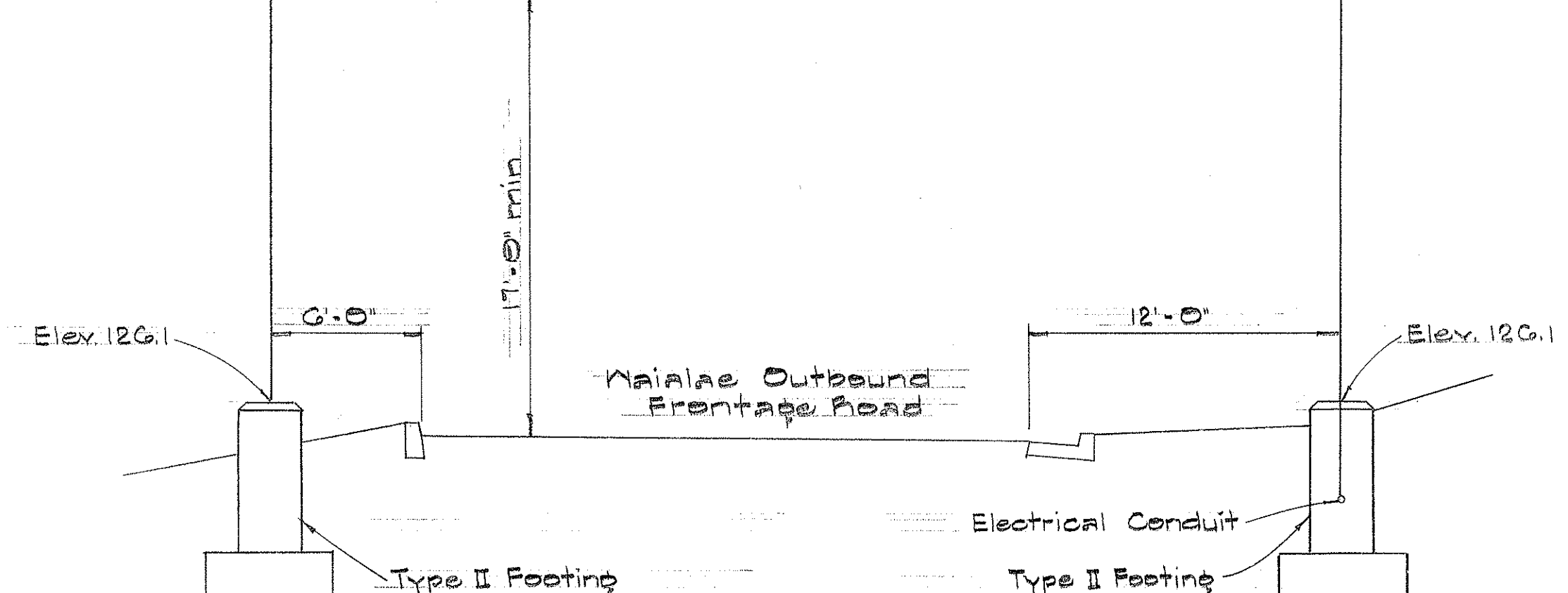
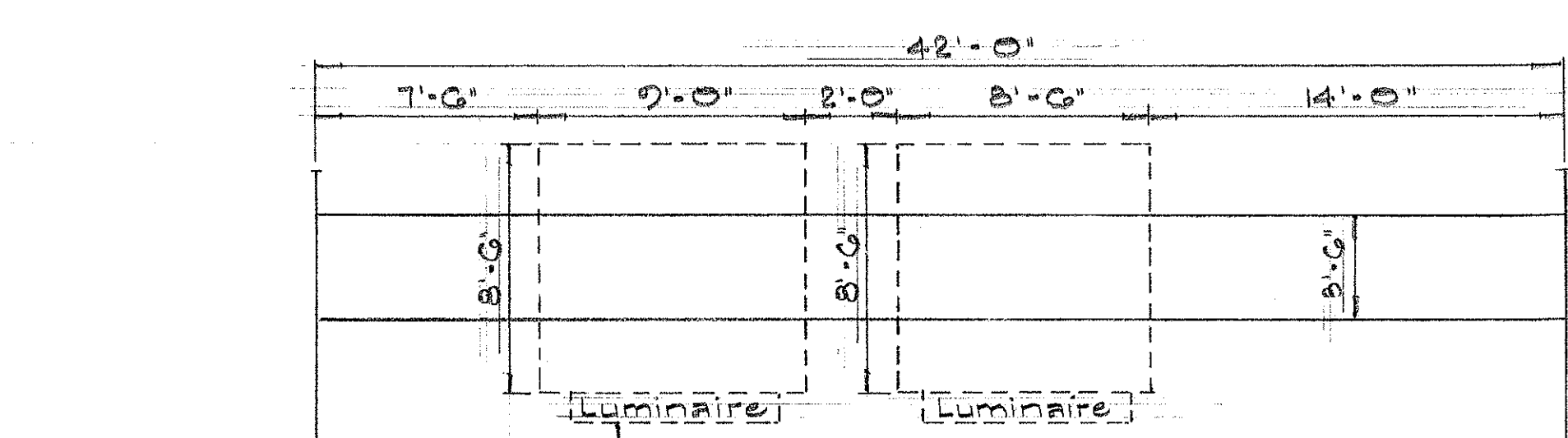
Electrical Conduit  
Type II Footing

**SIGN E-2**  
Sta. 127+15

Elev. 114.8'

Elev. 115.6'

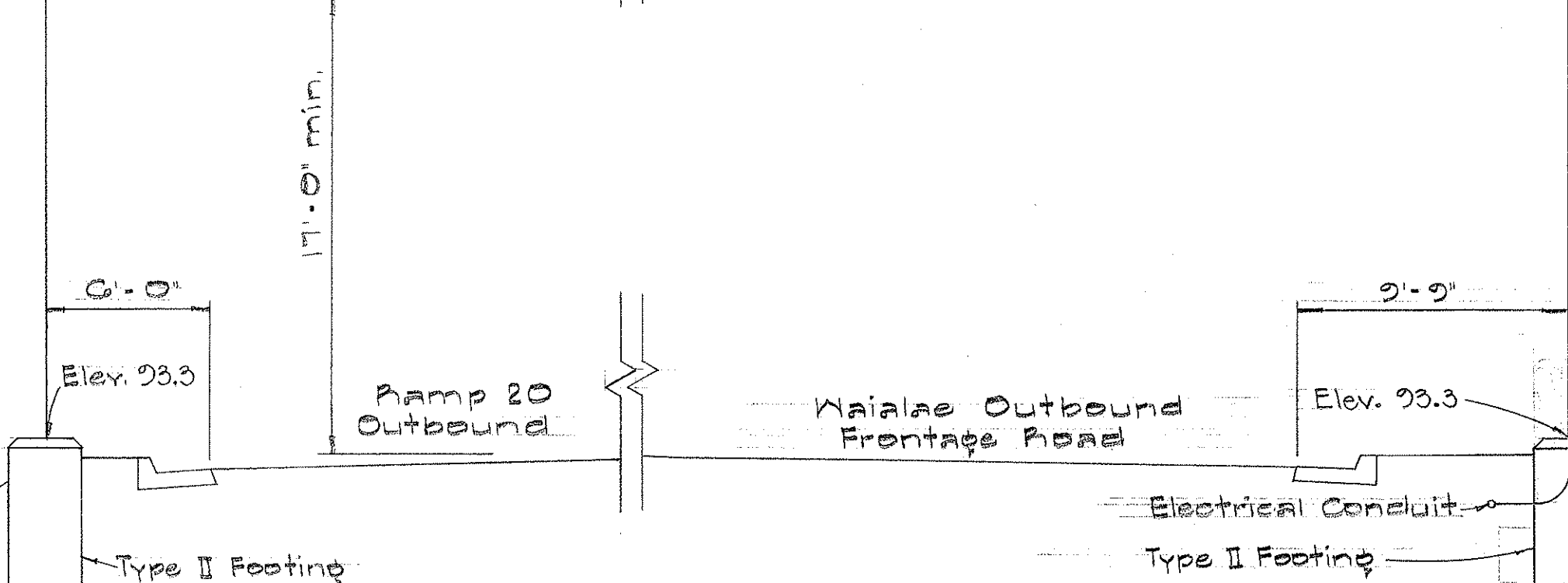
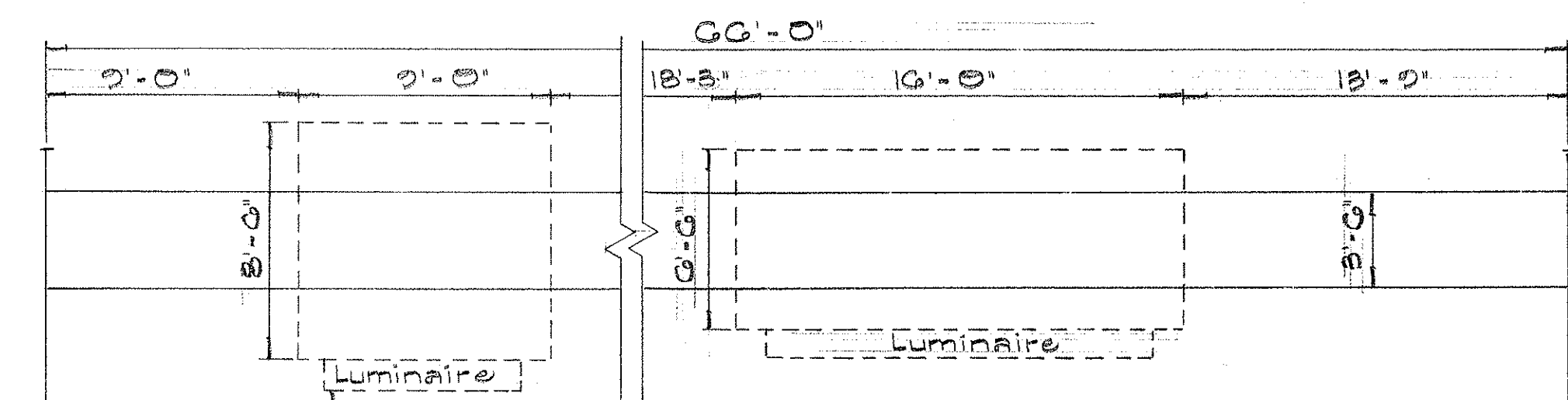
Ramp 19A



Elev. 120.1

Elev. 120.1

**SIGN E-3**  
Naialae Outbound Frontage Road Sta. 3+20  
3+05



Elev. 93.3

Ramp 20 Outbound

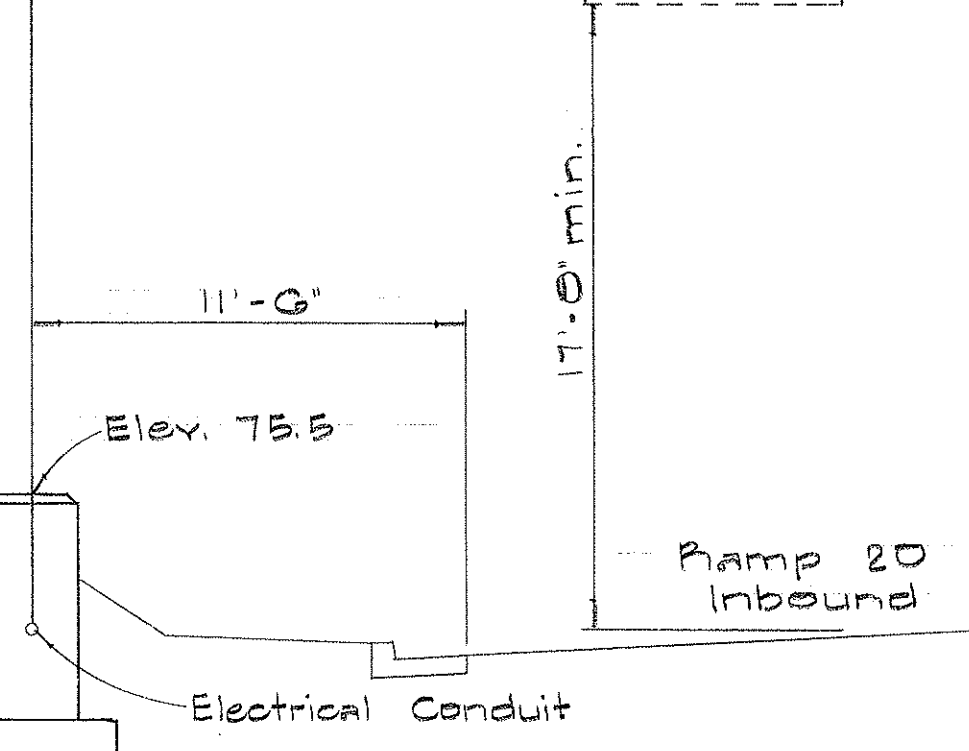
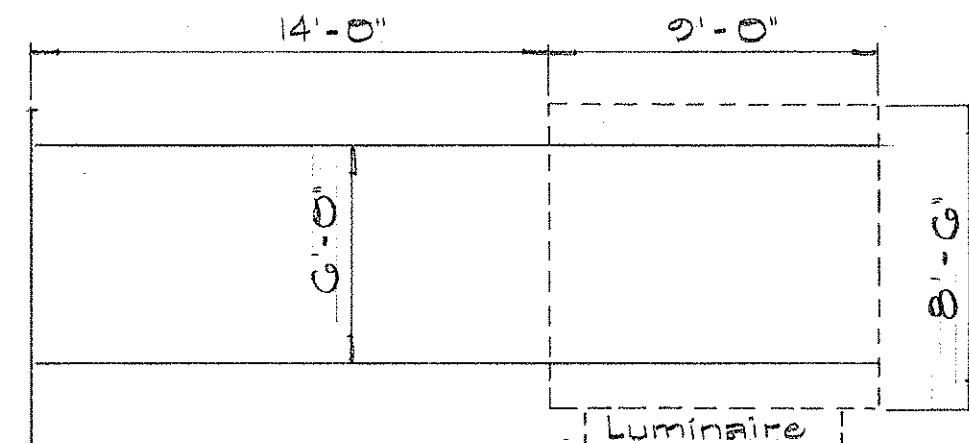
Naialae Outbound Frontage Road

Elev. 93.3

**SIGN E-4**

Waialae Outbound Frontage Road Sta. 12+36.55

C.C.O. #26  
Excavated and  
backfilled w/URB



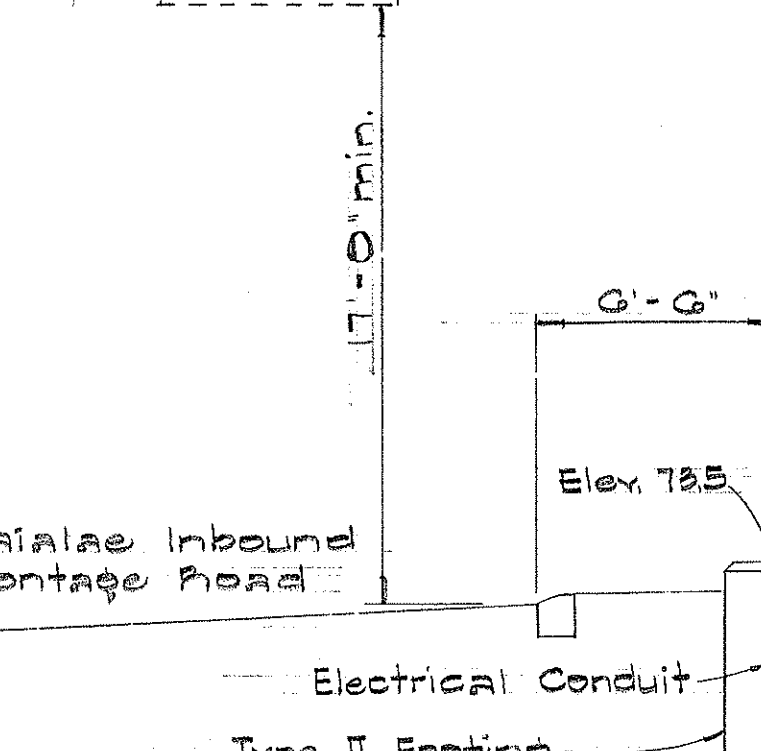
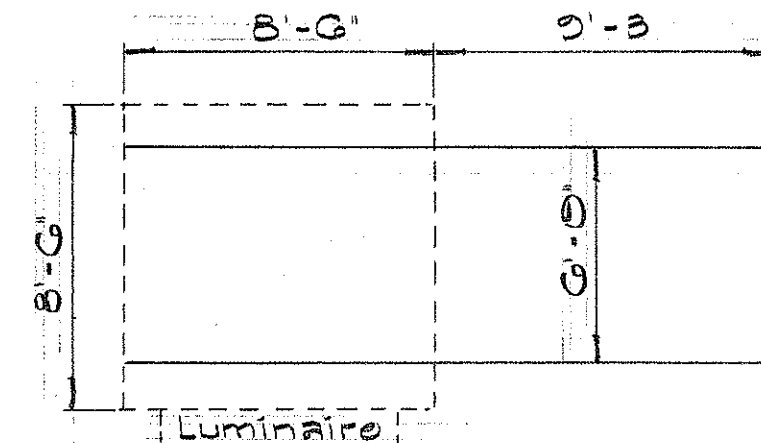
Elev. 75.5

Ramp 20 Inbound

Naialae Inbound Frontage Road

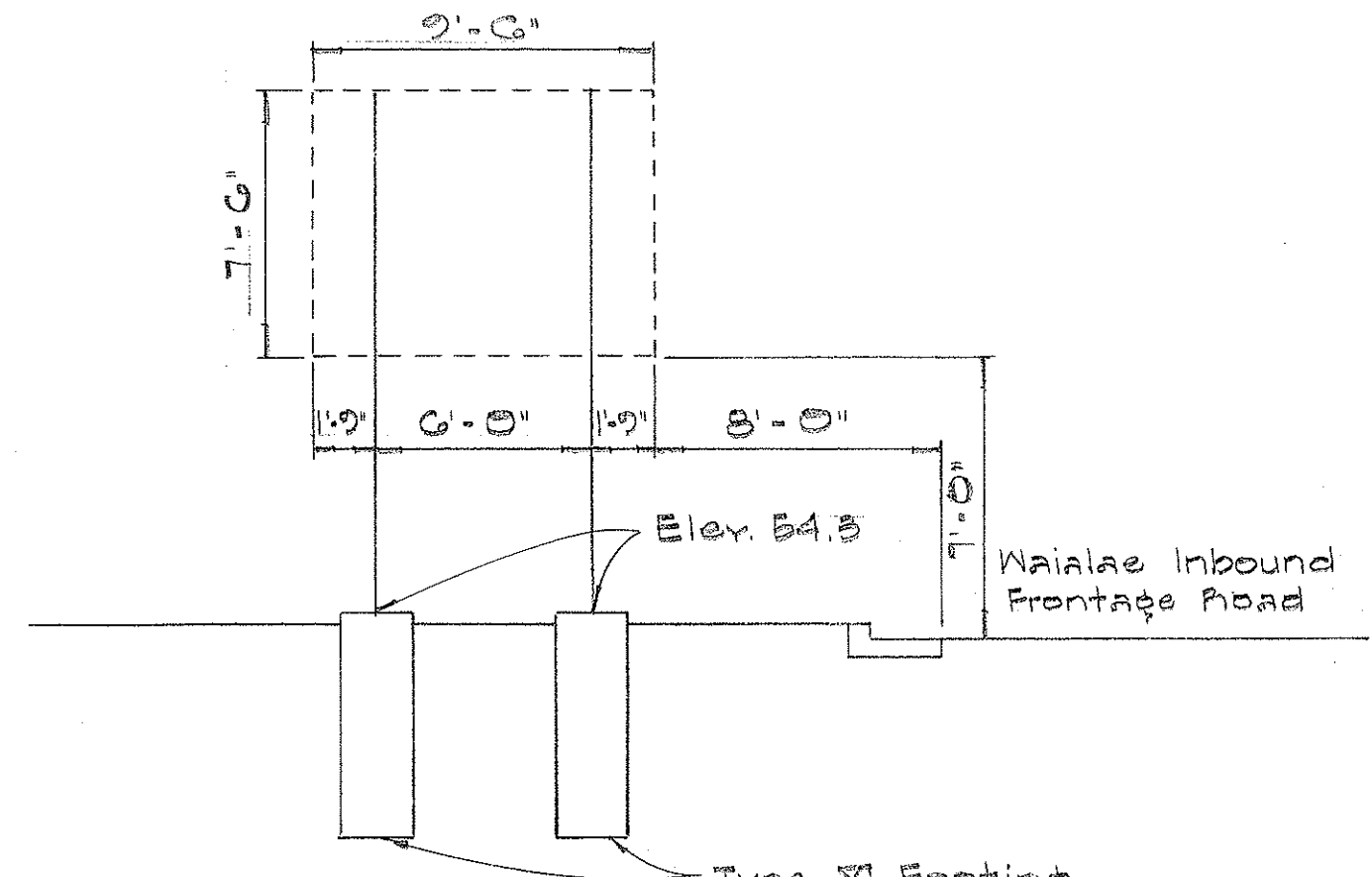
E-5(L)

**SIGN E-5**  
Naialae Inbound Frontage Road Sta. 8+75



Elev. 72.5

E-5(R)



**SIGN D-1**  
Sta. 142+18

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DESTINATION AND EXPRESSWAY SIGNS**

**FRAME LAYOUT**

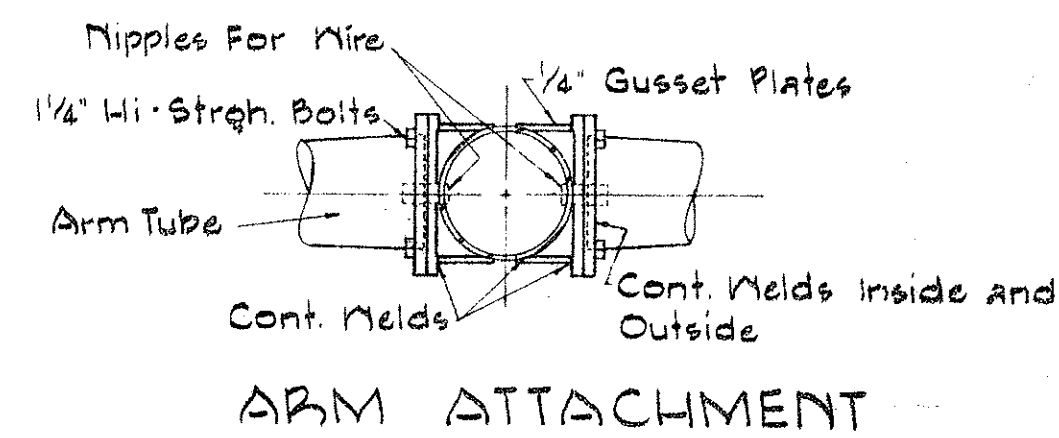
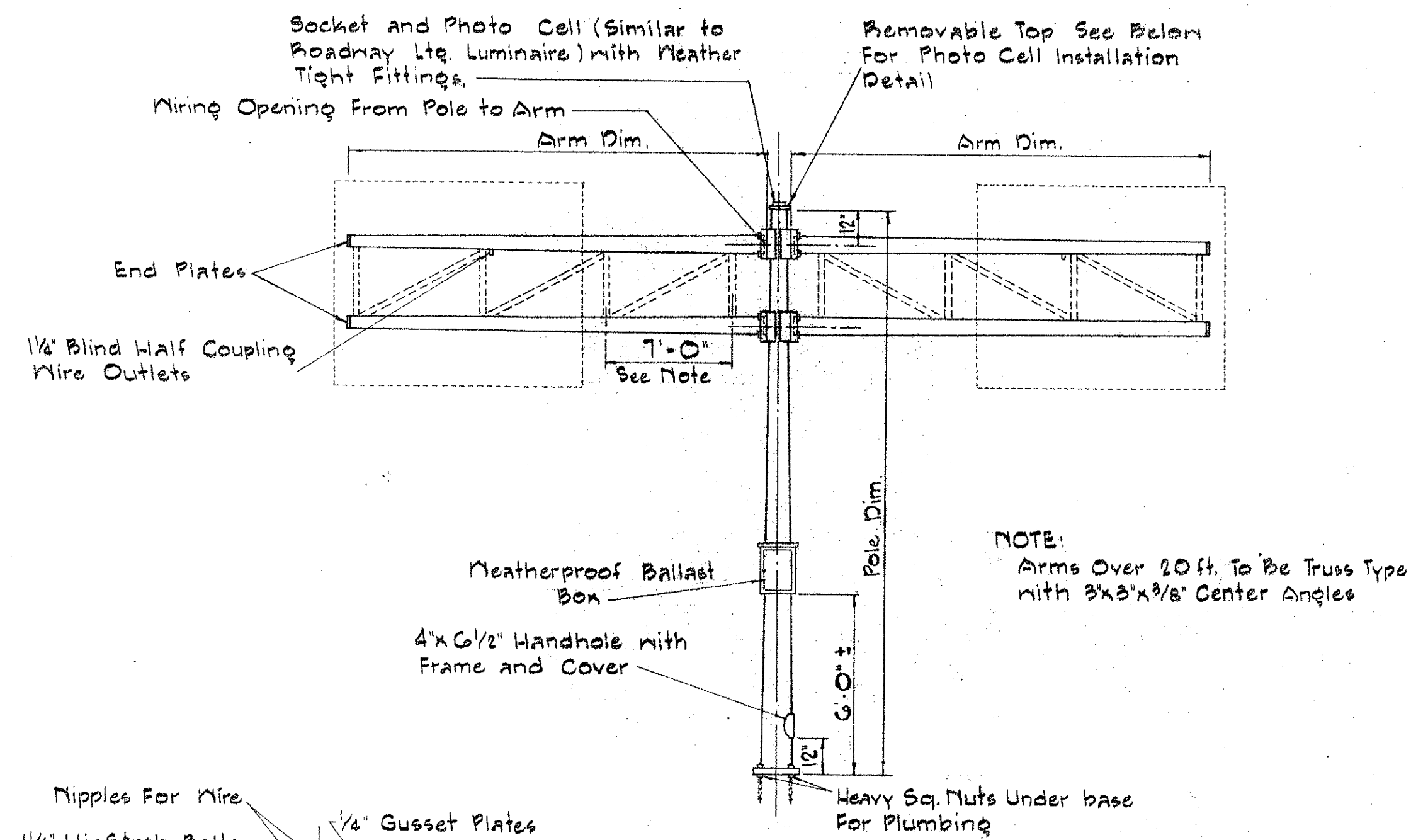
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6): Unit 2

Not to Scale January 1966

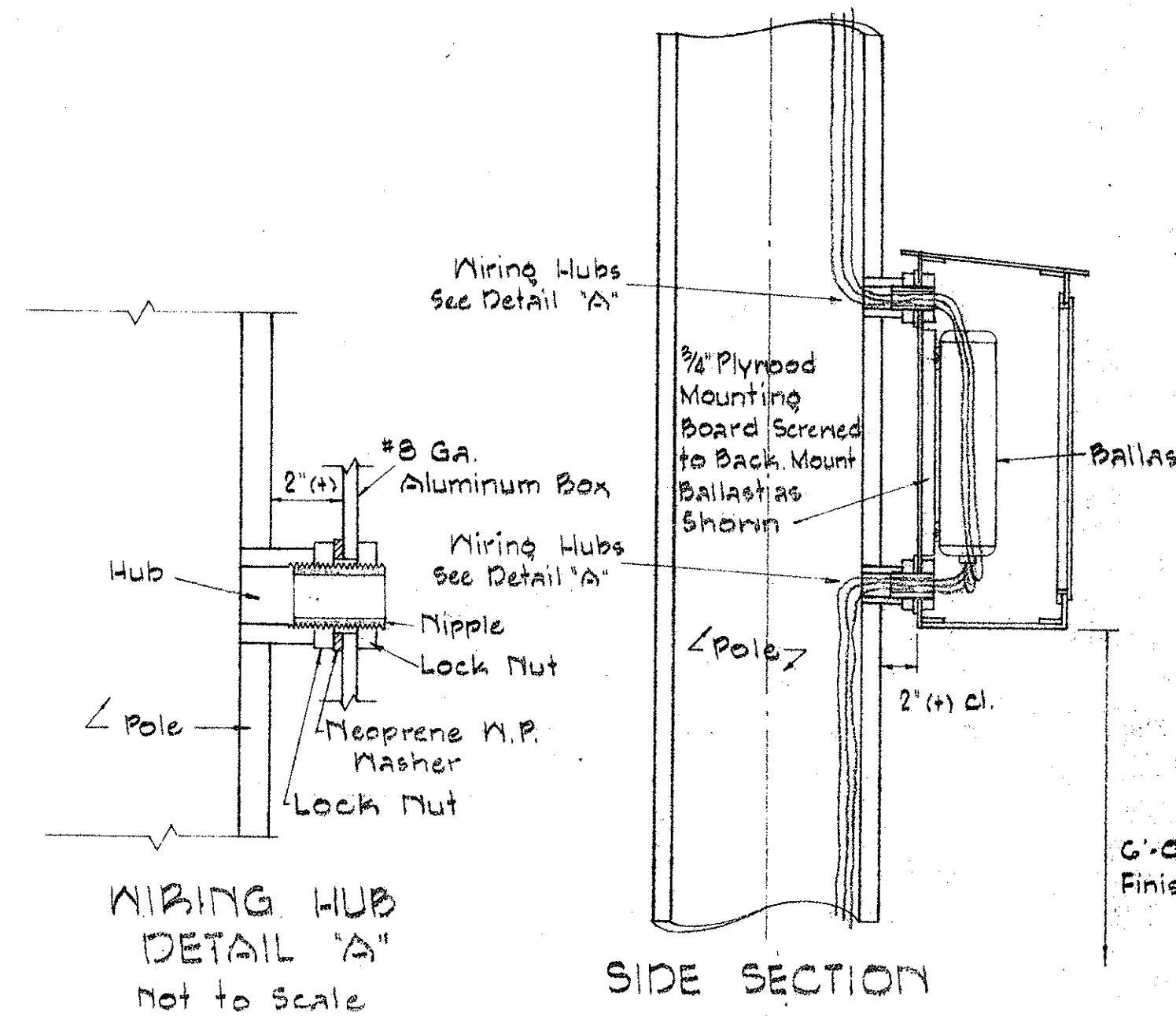
**SHEET No. 5 OF 21 SHEETS**

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(6) UN 2     | 1966        | 191       | 209          |



SINGLE SIGN POST  
CENTER MOUNTED TYPE  
DOUBLE MASTARM  
TYPE B

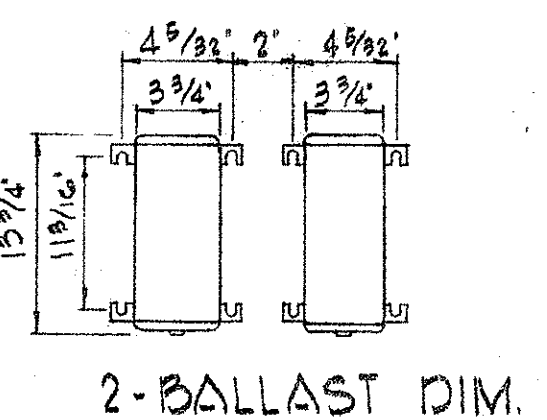


SIDE SECTION  
Scale 1 1/2" = 1'-0"

SIDE VIEW  
Scale 1 1/2" = 1'-0"

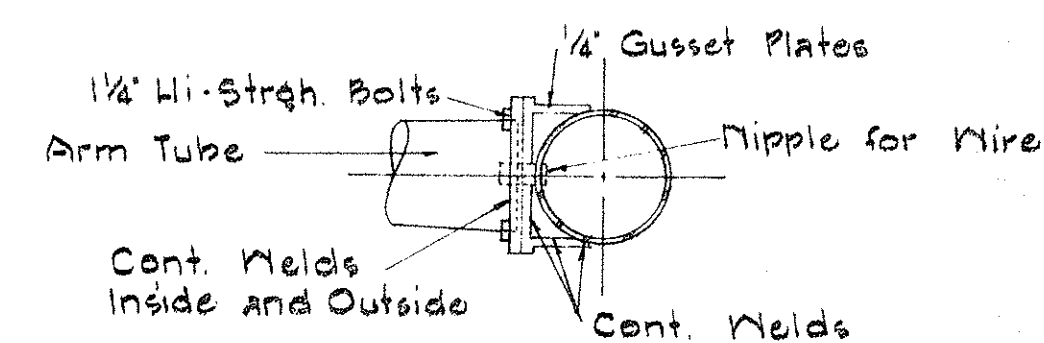
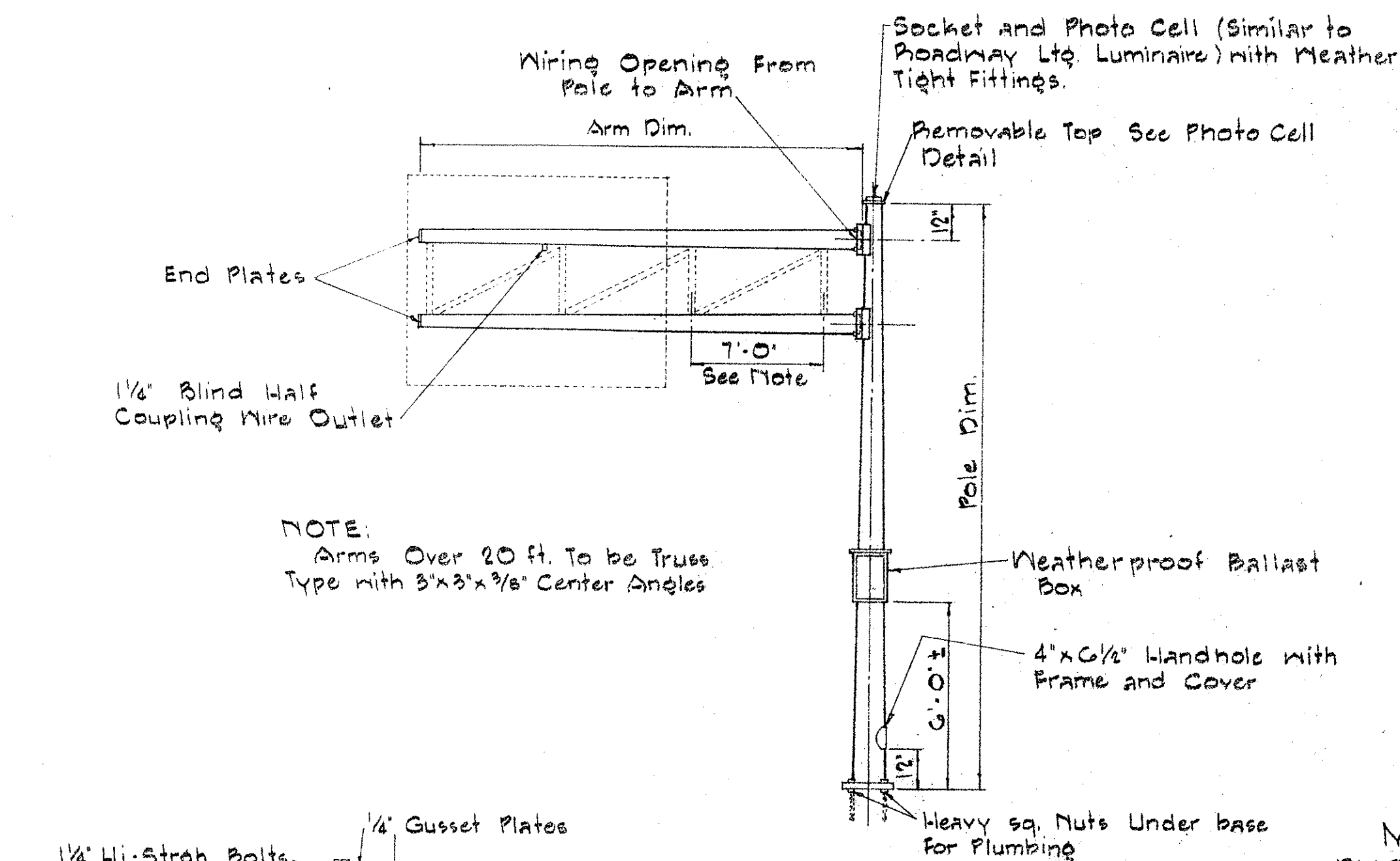
FRONT THRU VIEW  
Scale 1 1/2" = 1'-0"

FRONT VIEW  
Scale 1 1/2" = 1'-0"

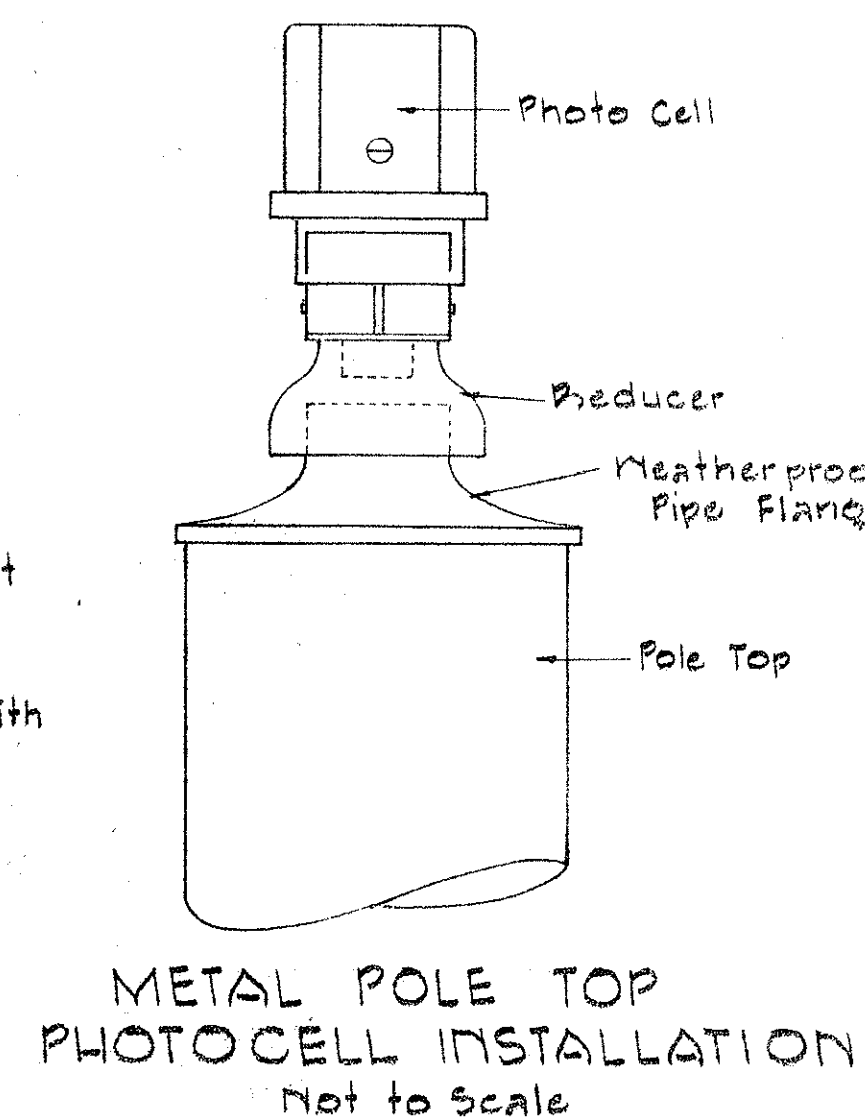


2-BALLAST DIM.

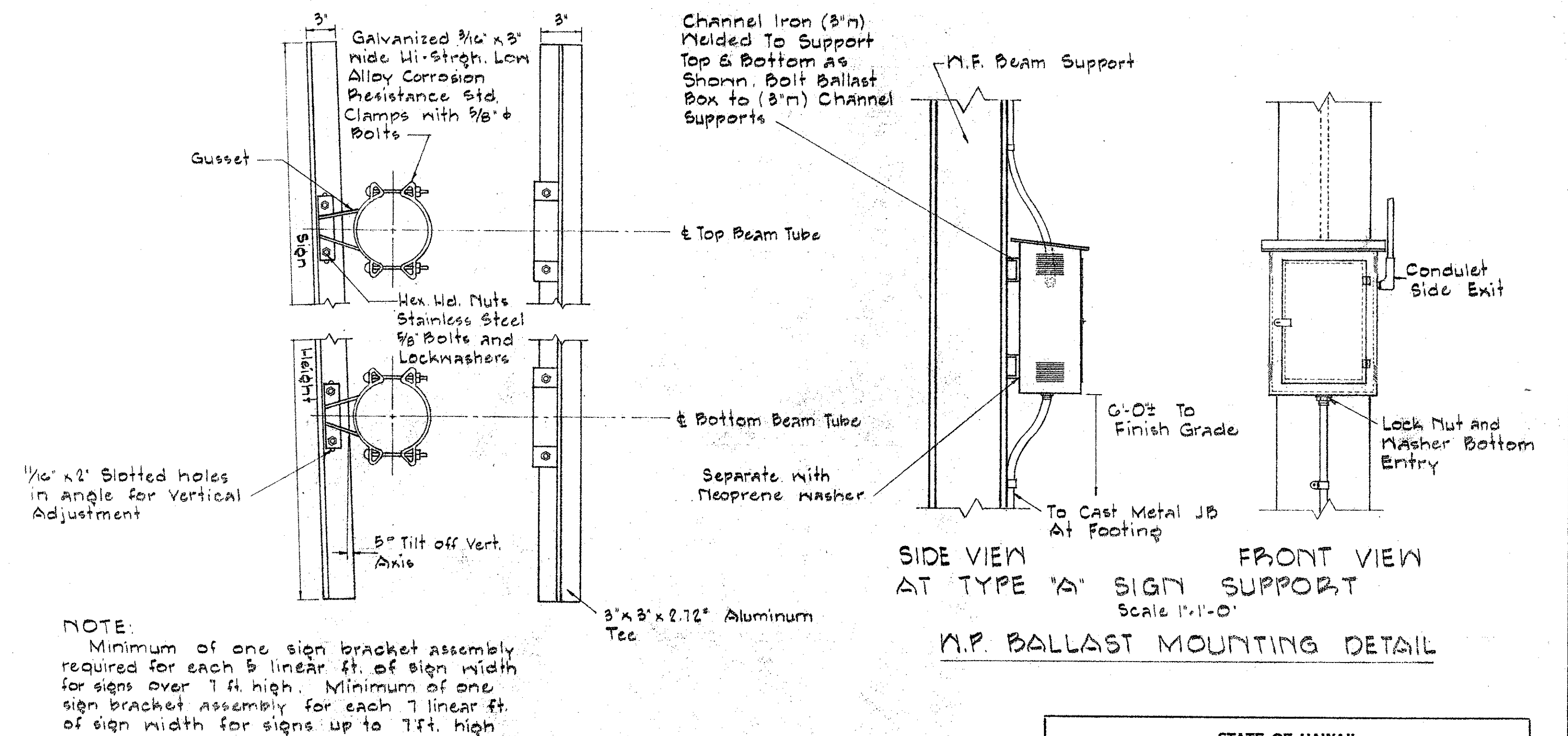
WEATHER PROOF BALLASTS MOUNTING DETAIL



SINGLE SIGN POST  
CANTILEVER TYPE  
DOUBLE MASTARM  
TYPE C



METAL POLE TOP  
PHOTOCELL INSTALLATION  
Not to Scale



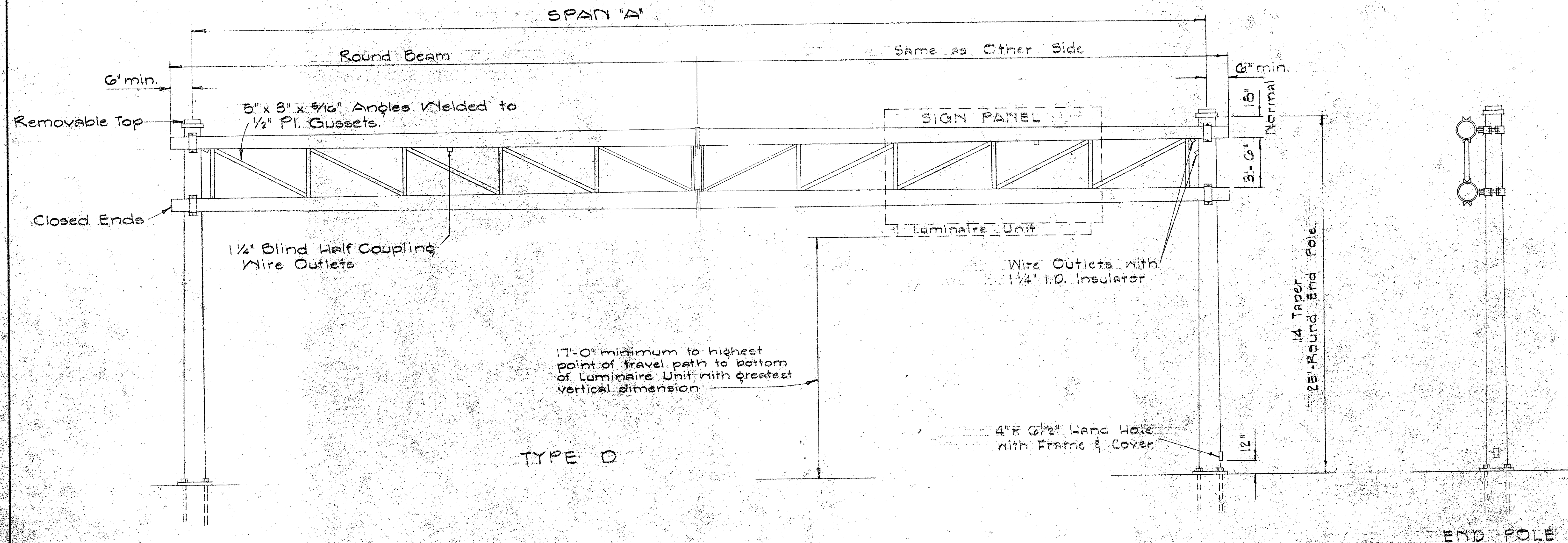
NOTE:  
Minimum of one sign bracket assembly  
required for each 5 linear ft. of sign width  
for signs over 7 ft. high. Minimum of one  
sign bracket assembly for each 7 linear ft.  
of sign width for signs up to 7 ft. high

SIGN BRACKET ASSEMBLY

SIDE VIEW  
AT TYPE 'A' SIGN SUPPORT  
Scale 1 1/2" = 1'-0"  
N.P. BALLAST MOUNTING DETAIL

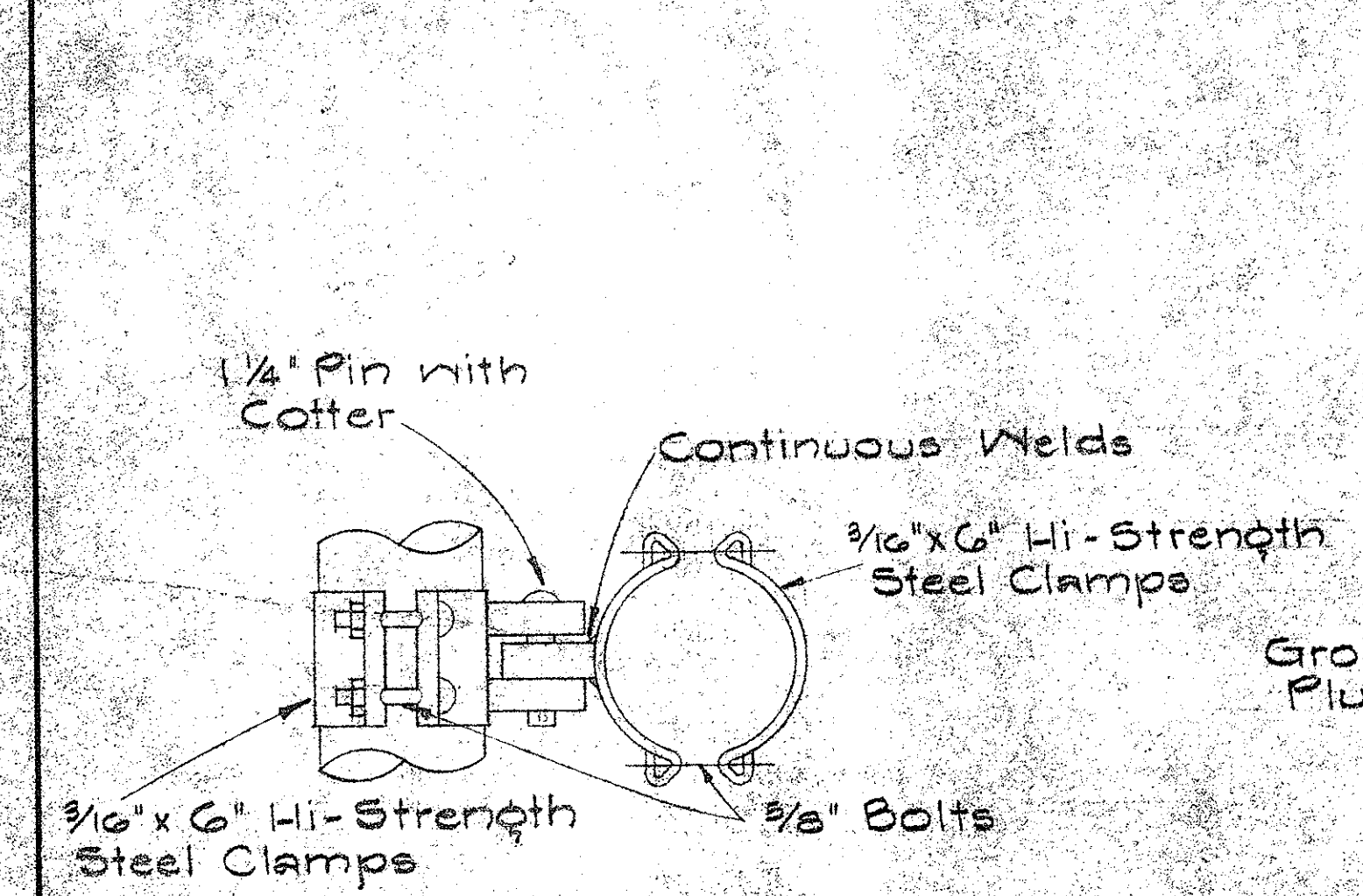
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**EXPRESSWAY SIGNS**  
TYPE B AND C  
OVERHEAD SIGN SUPPORT  
BALLAST MOUNTING DETAIL  
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6) Unit 2  
Scale as Noted January 1966  
SHEET No. 6 OF 21 SHEETS

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

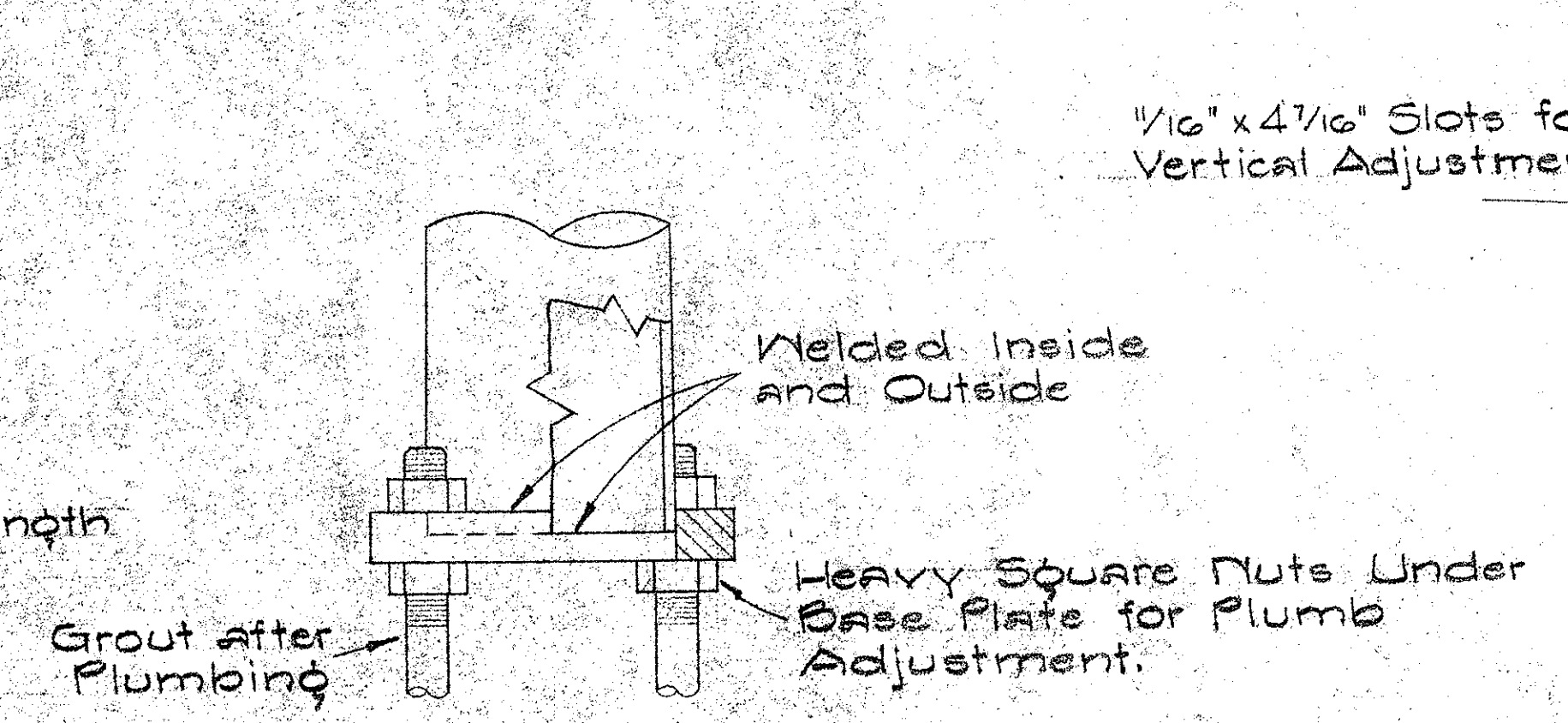


TYPE D

END POLE

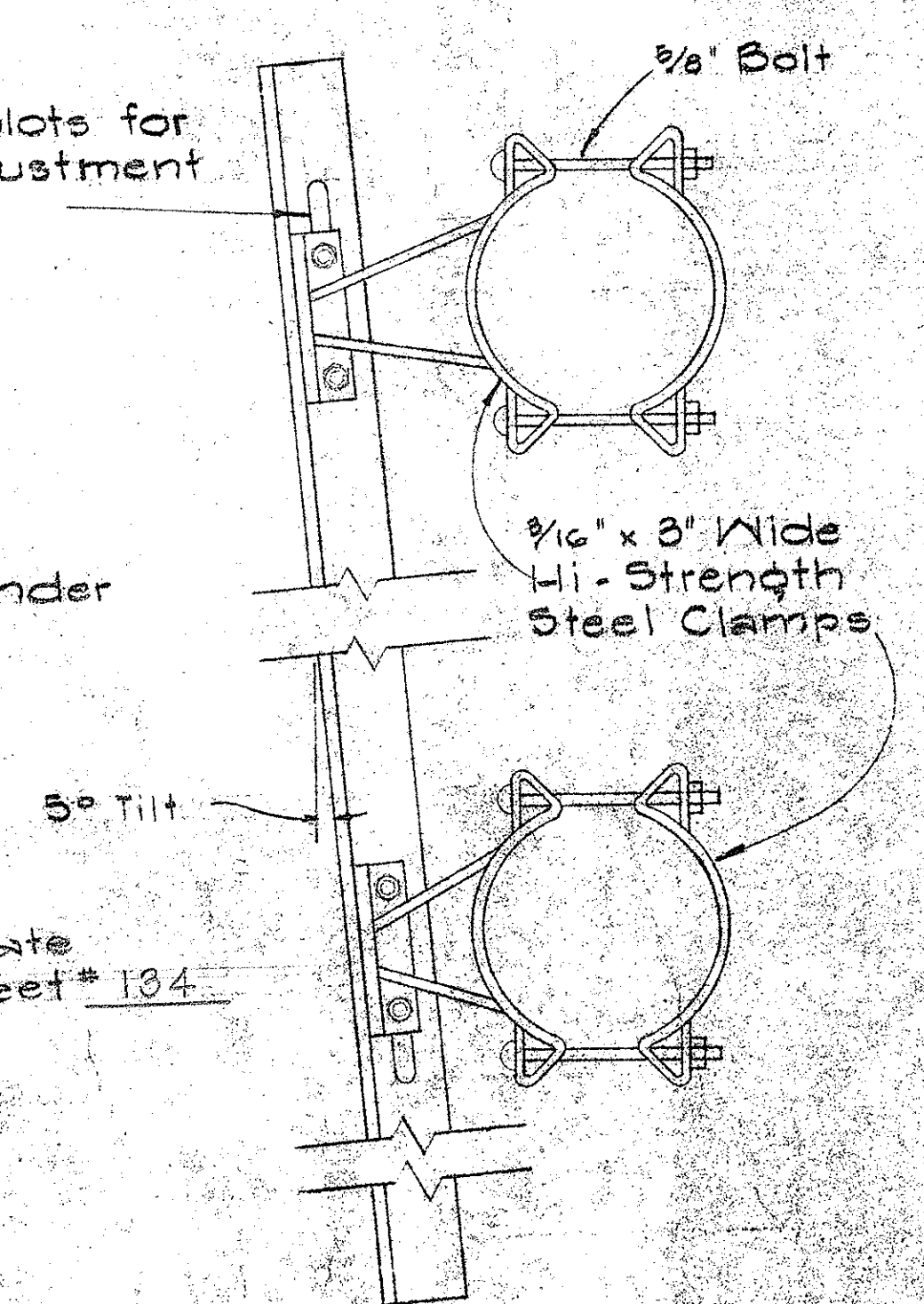


BEAM CLAMP DETAIL

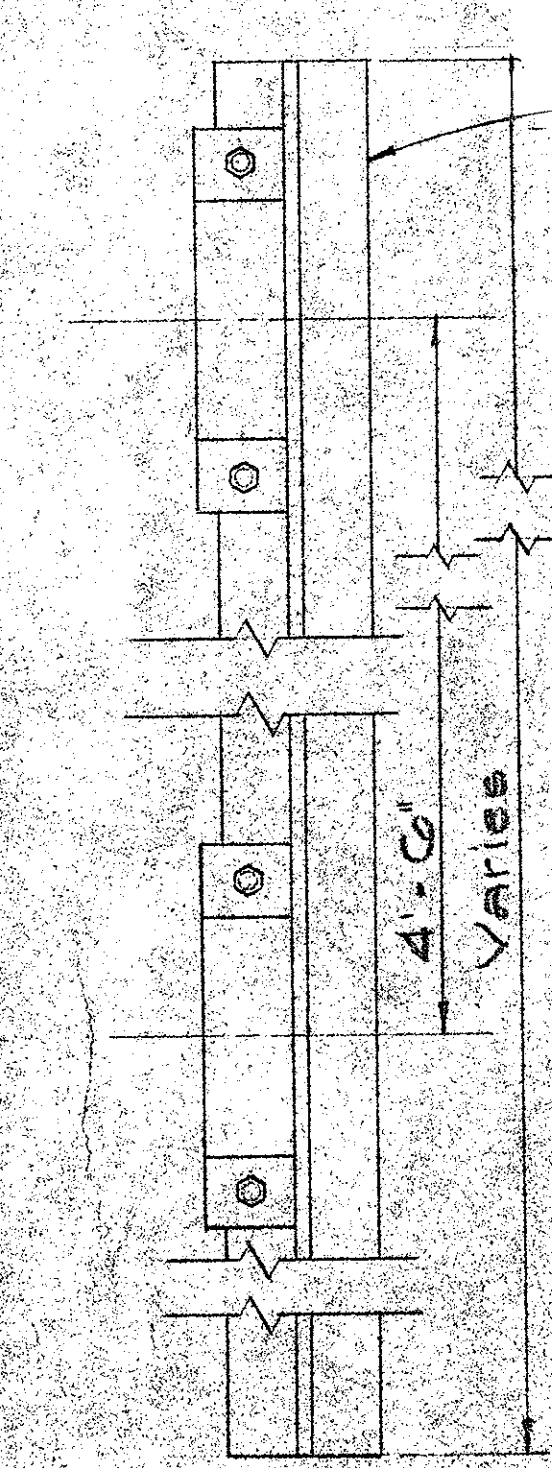


POLE BASE DETAIL

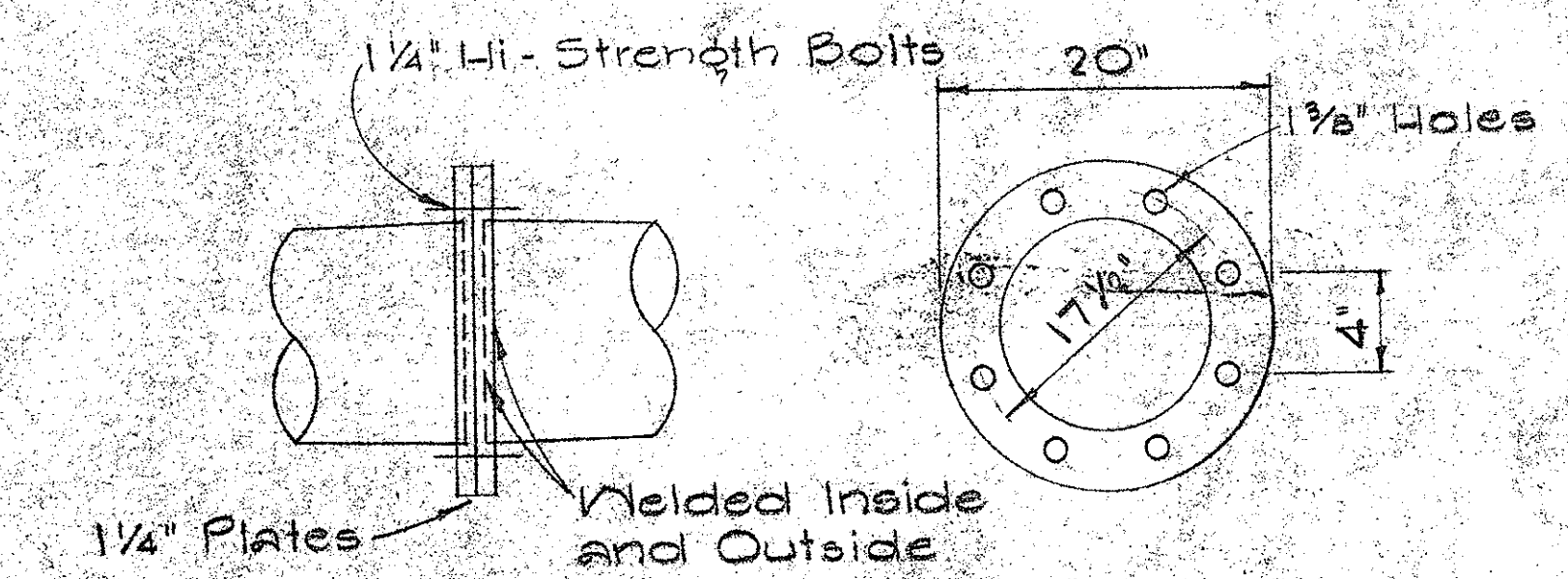
NOTE: See Base Plate Schedule sheet #134



SIGN BRACKET ASSEMBLY



Aluminum 4" x 5" Tee 5.41# or Aluminum 5" x 3" Angle 3.35#



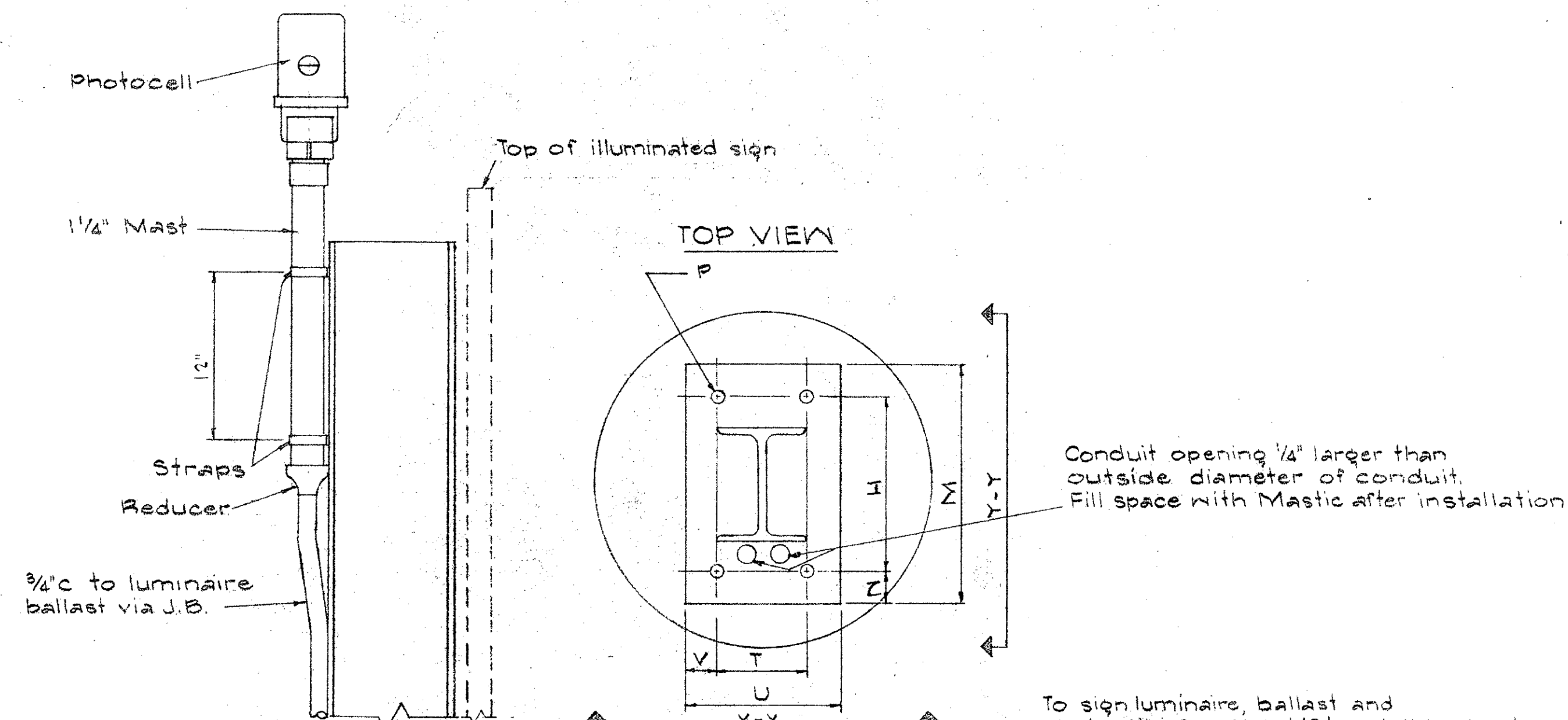
CENTER JOINT DETAIL

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

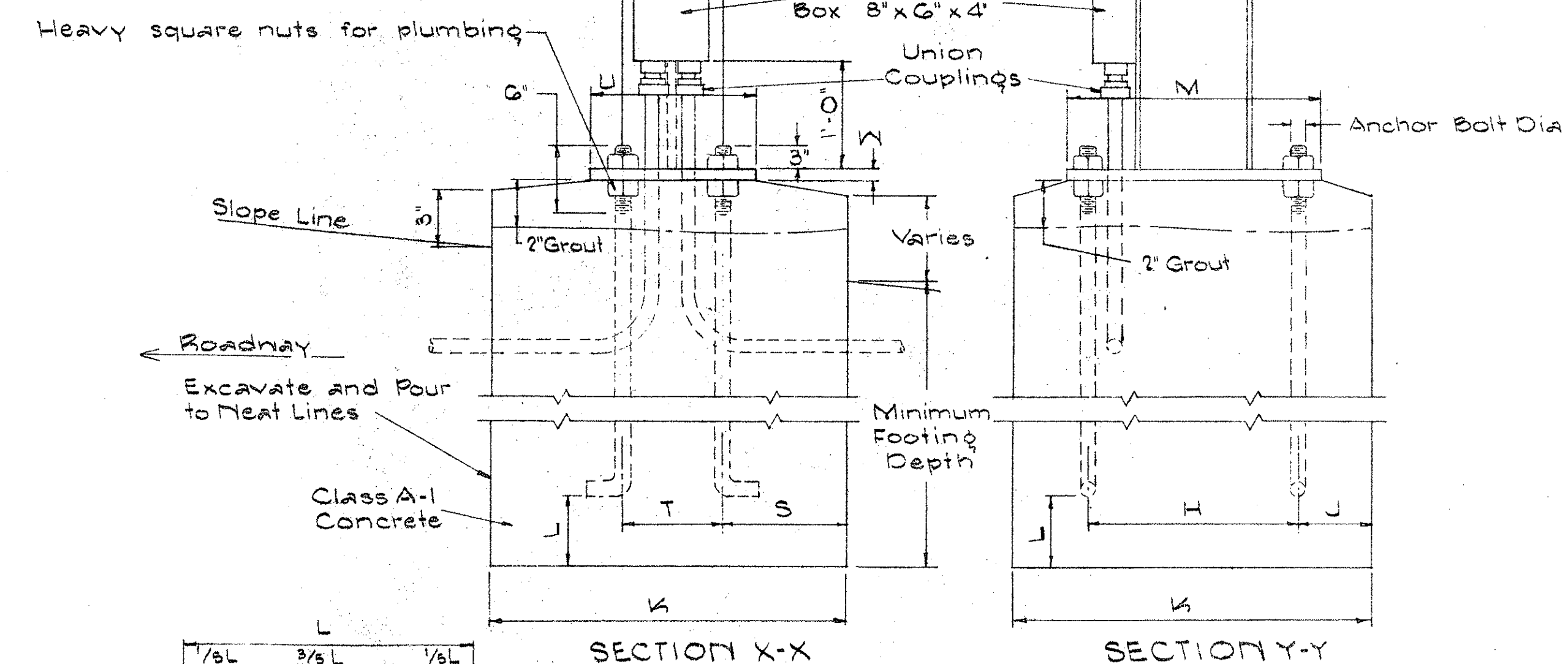
**TYPE D**  
**OVERHEAD SIGN SUPPORT**  
**TWO-TUBE TRUSS TYPE**  
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6); Unit 2

Not to Scale January 1966

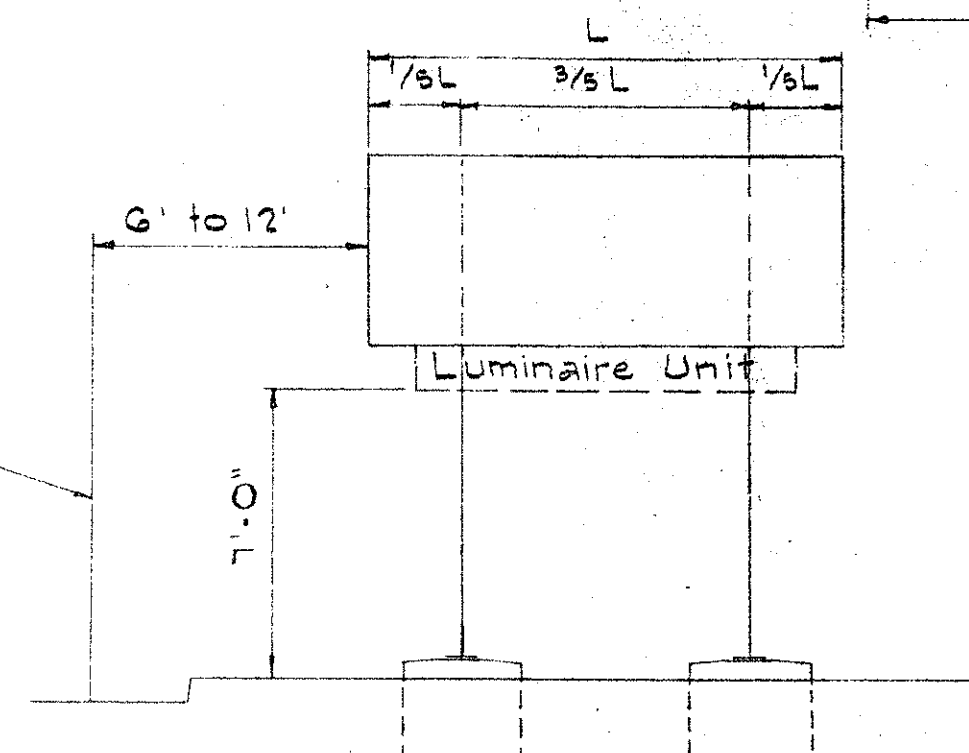
SHEET No. 7 OF 21 SHEETS



**PHOTOCELL INSTALLATION ON I-BEAM POST**



**FOUNDATION DETAILS FOR GROUND MOUNTED EXPRESSWAY SIGN EXTRUDED ALUMINUM TYPE VI FOOTING**

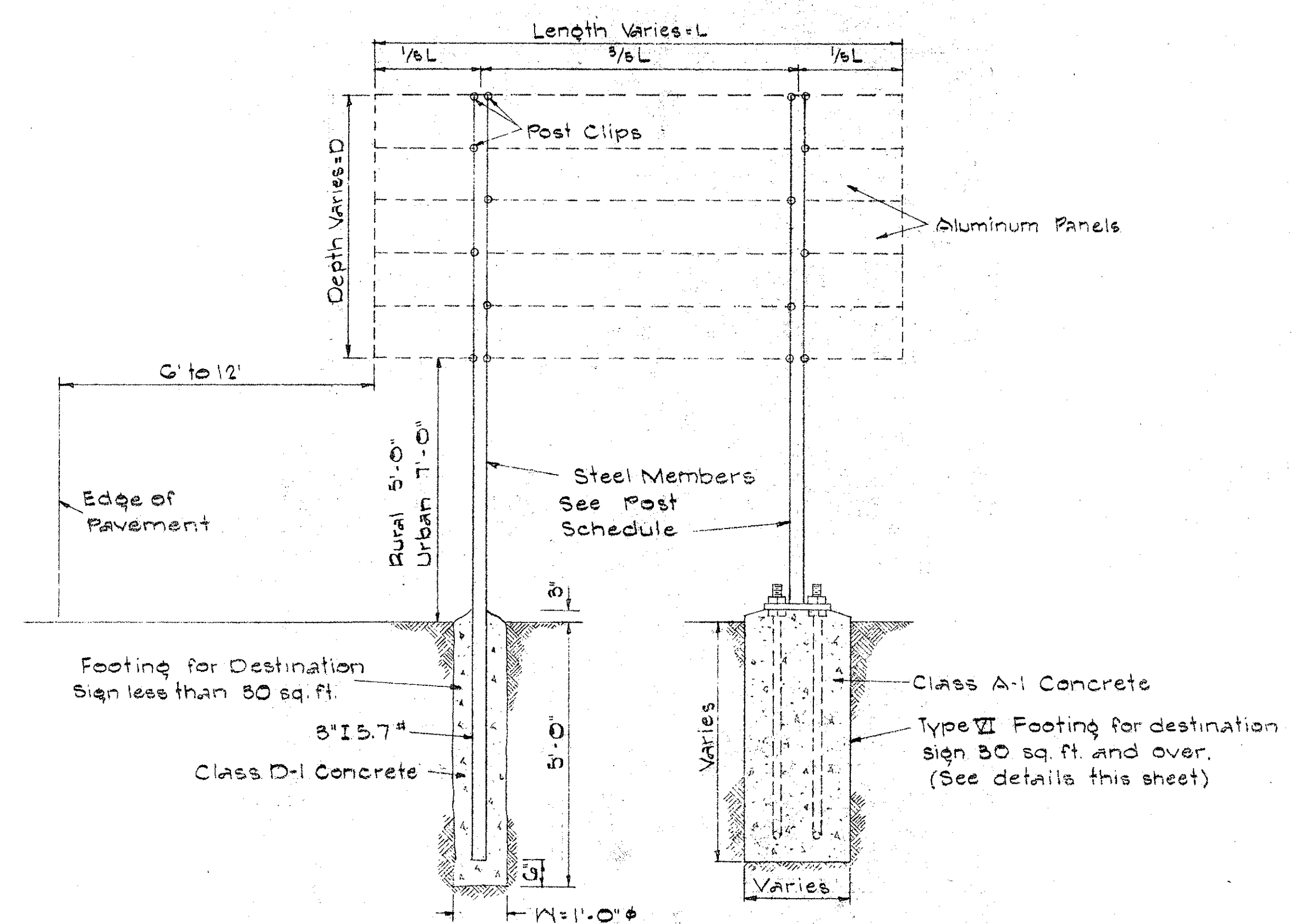


**TYPICAL GROUND MOUNTED EXPRESSWAY SIGN TYPE A**

**NOTE:**  
Conduit and ballast details are shown only for ground mounted illuminated expressway signs.

| SUPPORT STRUCTURE DATA FOR GROUND MOUNTED SIGNS |                   |                                             |                     |    |     |    |         |         |        |                     |        |    |    |     |    |    |                  |                           |     |                                                                                          |
|-------------------------------------------------|-------------------|---------------------------------------------|---------------------|----|-----|----|---------|---------|--------|---------------------|--------|----|----|-----|----|----|------------------|---------------------------|-----|------------------------------------------------------------------------------------------|
| POST SIZE                                       | MAXIMUM SIGN AREA | POST HGT. TOP OF FOUND. TO CENTER OF SIGN * | DIMENSIONS SEC. Y-Y |    |     |    |         |         |        | DIMENSIONS SEC. X-X |        |    |    |     |    |    | ANCHOR BOLT DIA. | MIN. FOOTING DEPTH (FEET) |     | TYPE OF WELD TO BASE PLATE                                                               |
|                                                 |                   |                                             | H                   | J  | K   | L  | M       | N       | O      | P                   | Q      | R  | S  | T   | U  | V  |                  | W                         | CUT |                                                                                          |
| 3" ID                                           | 50 sq. ft.        | 11'                                         | 14"                 | 5" | 24" | 6" | 17 1/2" | 18 3/4" | 1 1/2" | 24"                 | 1 1/2" | 9" | 6" | 10" | 2" | 1" | 1 1/8" d         | 0'                        | 0'  | 3/8"  |
| 8" WF 11                                        | 80 sq. ft.        | 15'                                         | ↓                   | ↓  | ↓   | ↓  | ↓       | ↓       | ↓      | ↓                   | ↓      | ↓  | ↓  | ↓   | ↓  | ↓  | ↓                | ↓                         | ↓   | ↓                                                                                        |

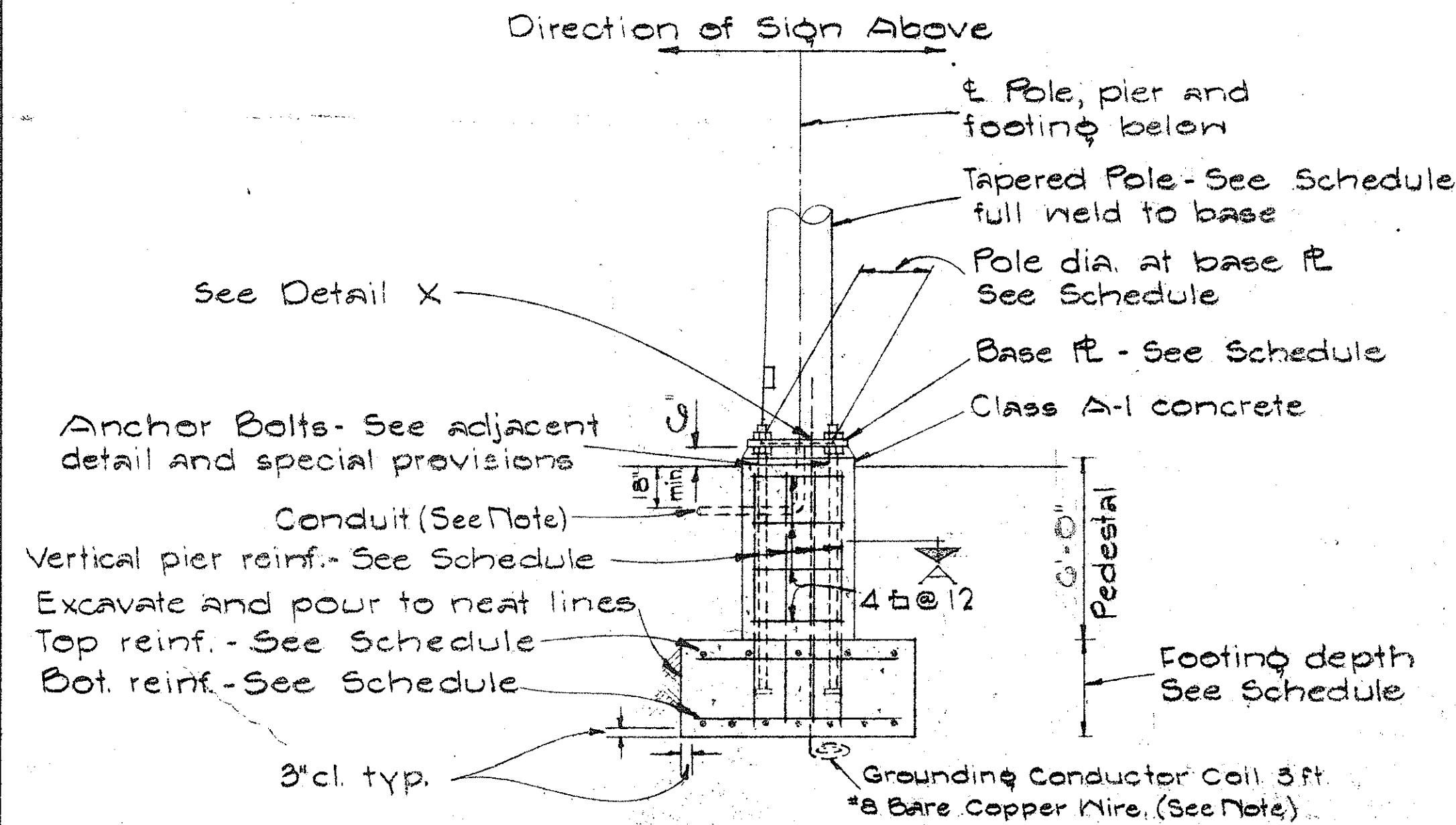
**NOTE:**  
For signs with panel areas of less than 30 sq. ft. but greater than 10 sq. ft. use 3\"/>



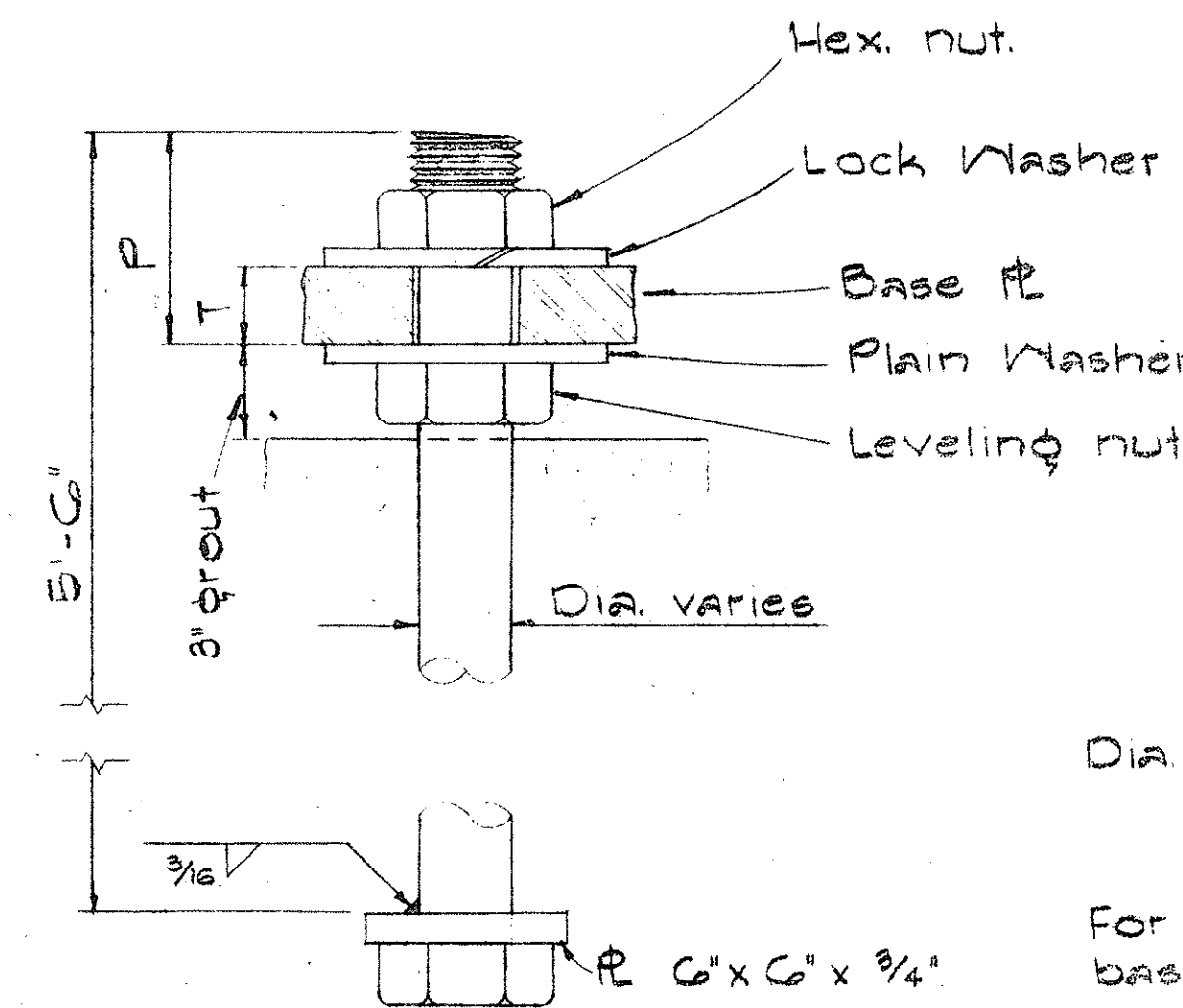
**TYPICAL DESTINATION SIGN PANEL & POST**

DATE  
DESIGNED BY  
CHECKED BY  
NO.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**DESTINATION AND EXPRESSWAY SIGNS**  
**DETAILS & SCHEDULES**  
**TYPE VI FOOTING**  
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6): Unit 2  
Not to Scale January 1966  
SHEET No. 8 OF 21 SHEETS

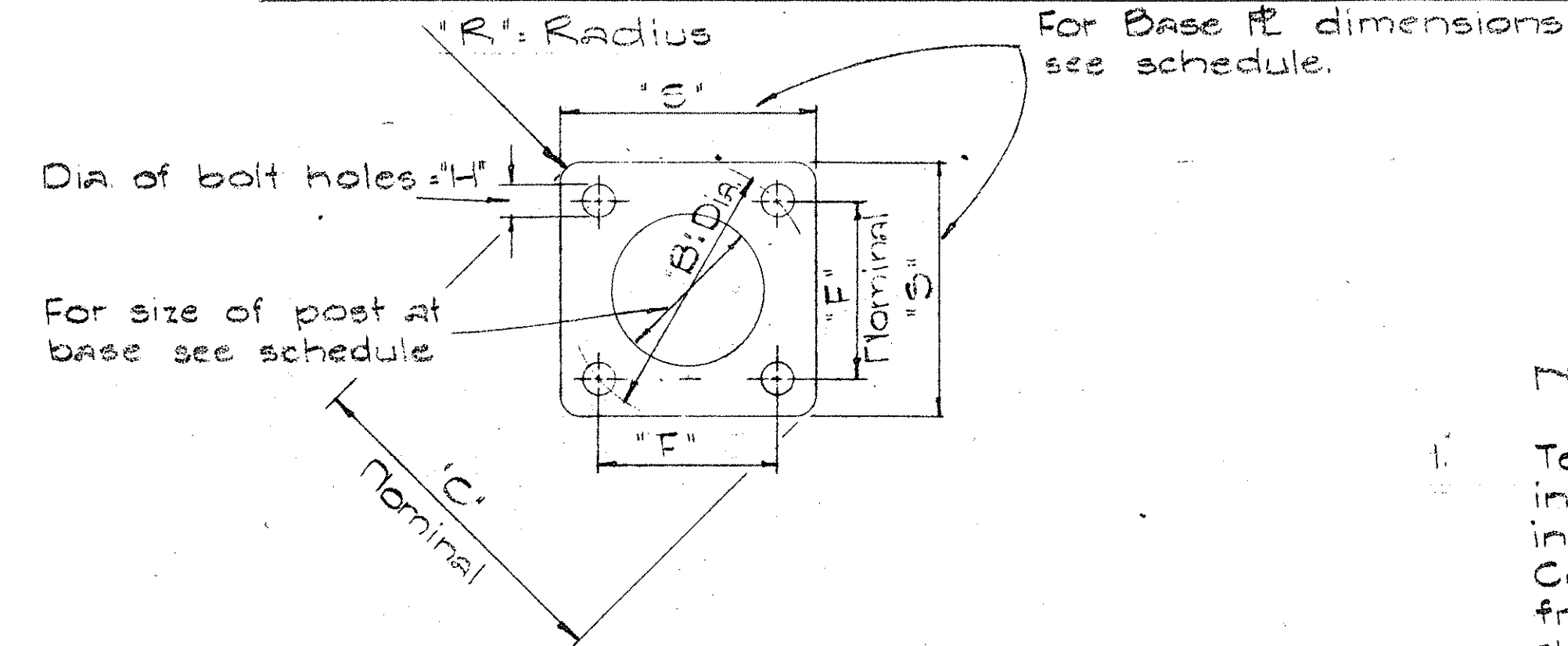


TYPICAL POLE FOUNDATION DETAIL



TYPICAL ANCHOR BOLT 4 REQ'D

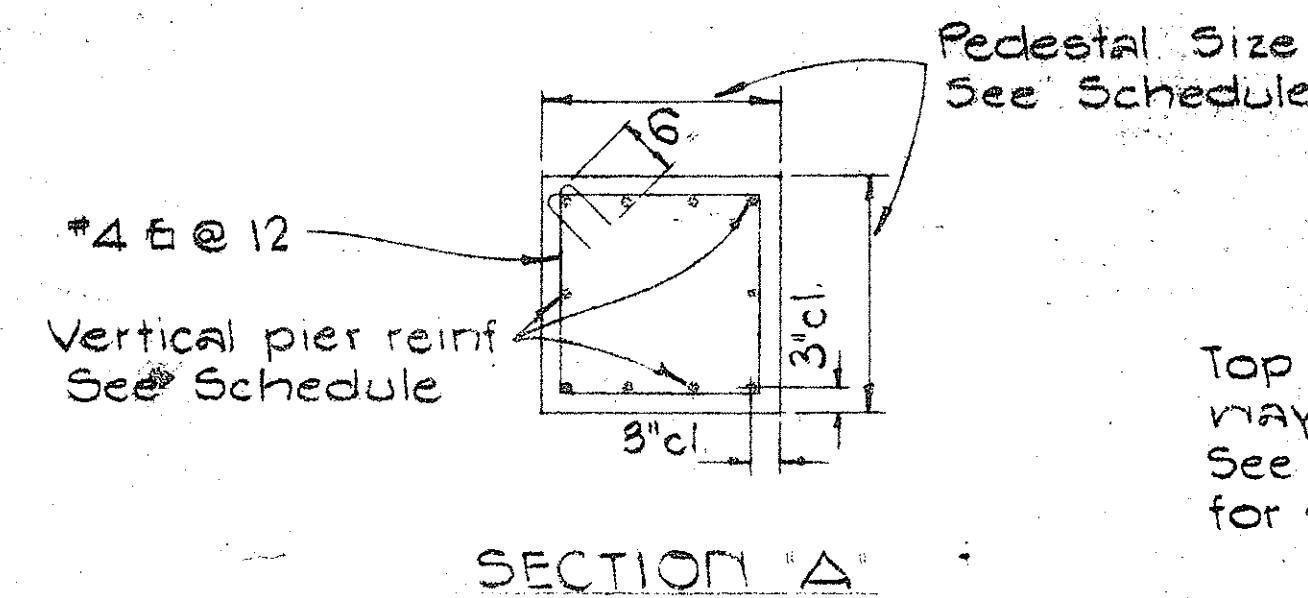
| BASE PLATE SCHEDULE |           |        |        |        |       |       |       |        |       |           |
|---------------------|-----------|--------|--------|--------|-------|-------|-------|--------|-------|-----------|
| Gage No.            | Post Dia. | B      | C      | F      | H     | P     | R     | S      | T     | Bolt Dia. |
| 0                   | 15        | 22     | 28 5/8 | 15 1/2 | 2 3/8 | 5 1/2 | 4 5/8 | 23     | 2     | 2         |
| 3                   | 15        | 22     | 28 5/8 | 15 1/2 | 2 3/8 | 5 1/2 | 4 5/8 | 23     | 2     | 2         |
| 7                   | 16        | 23 1/2 | 30 1/2 | 16 5/8 | 2 3/8 | 5 1/2 | 5     | 24 1/2 | 2     | 2         |
| 7 1/2               | 16        | 23 1/2 | 30 1/2 | 16 5/8 | 2 3/8 | 6 1/2 | 5     | 24 1/2 | 2 1/2 | 2 1/4     |



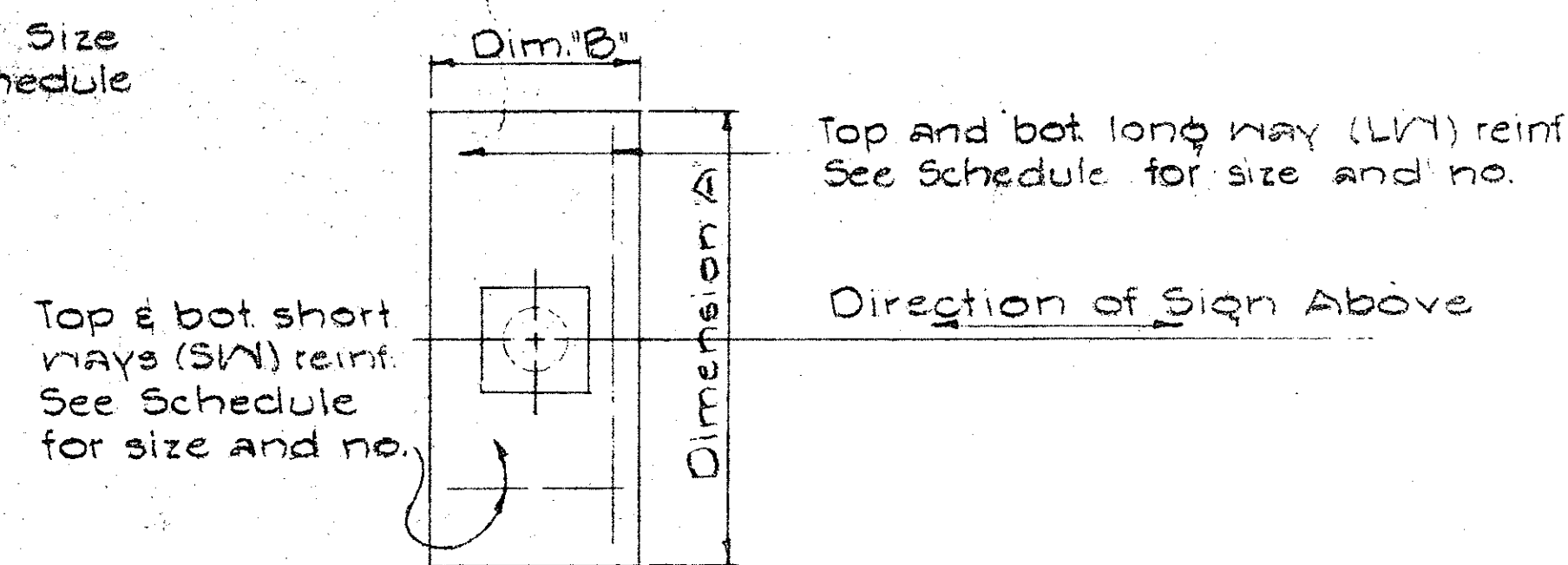
TYPICAL BASE PLATE

NOTE:

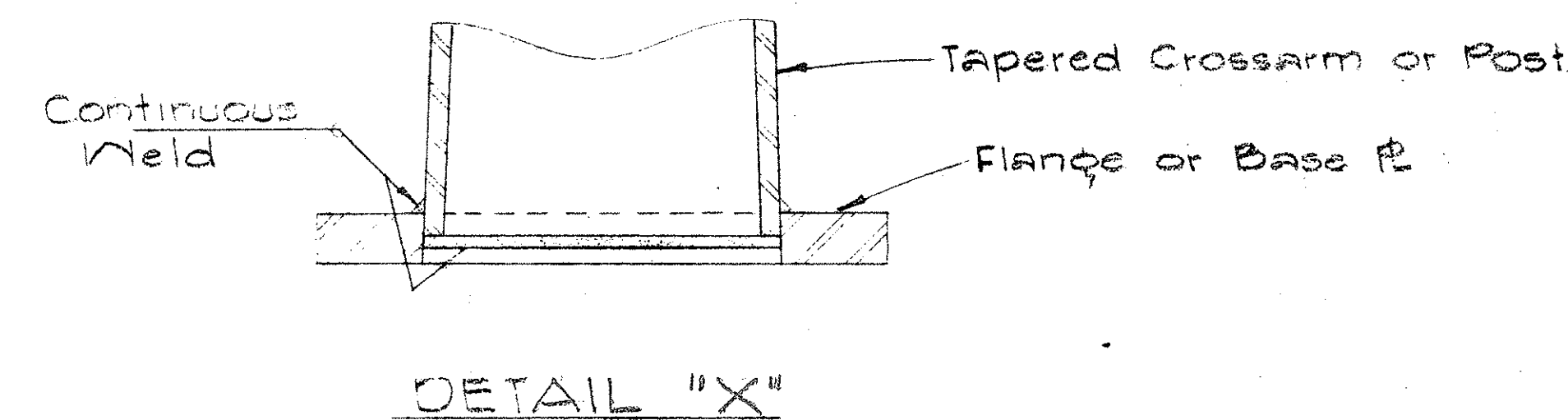
- Total number of conduits into pole foundation as indicated on lighting plans. Conduits shall slope away from pole foundation. Conduit shall stub out 3'-0" min. for direct burial entry.
- Grounding conductor shall be bonded to sign support.



SECTION 'A'



TYPICAL FOOTING PLAN



DETAIL 'X'

| FOUNDATION SCHEDULE |             |             |       |             |       |                 |      |          |              |
|---------------------|-------------|-------------|-------|-------------|-------|-----------------|------|----------|--------------|
| Type                | Dimension A | Dimension B | Depth | Bot. Reinf. |       | Top Reinf.      |      | Pedestal |              |
|                     |             |             |       | L.W.        | S.W.  | L.W.            | S.W. | Size     | Vert. Reinf. |
| I                   | 7'-0"       | 3'-0"       | 2'-0" | 3-#4        | 5-#4  | 4 @ 12 Each Way |      | 1'-11"   | 10-#8        |
| II                  | 3'-0"       | 4'-6"       | 2'-0" | 6-#6        | 10-#4 | Do.             |      | 2'-6"    | 10-#7        |
| III                 | 10'-0"      | 5'-0"       | 2'-0" | 5-#8        | 11-#4 | Do.             |      | 2'-6"    | 10-#8        |
| IV                  | 12'-0"      | 6'-0"       | 2'-0" | 7-#9        | 13-#4 | Do.             |      | 2'-9"    | 10-#10       |
| V                   | 14'-0"      | 7'-0"       | 2'-0" | 8-#11       | 15-#4 | Do.             |      | 2'-9"    | 10-#11       |

| SINGLE SIGN POST - CANTILEVER TYPE - DOUBLE MASTARM - TYPE 'C' |          |                     |                  |                |                   |
|----------------------------------------------------------------|----------|---------------------|------------------|----------------|-------------------|
| Sign No.                                                       | Station  | Arm Dimensions      | Post Dia.        | Base Plate     | Footings          |
|                                                                |          |                     |                  |                | Type Anchor Bolts |
| E-1                                                            | @ 121+50 | 3 @ 14.25' x 24'-0" | 0 @ 15" x 23'-0" | 23' x 23' x 2" | II 4-2" Dia.      |
| E-5(L)                                                         | @ 7+15   | 3 @ 14.25' x 22'-0" | 3 @ 15" x 23'-0" | 23' x 23' x 2" | II 4-2" Dia.      |
| E-5(R)                                                         | @ 7+15   | 7 @ 14.25' x 17'-3" | 3 @ 15" x 23'-0" | 23' x 23' x 2" | II 4-2" Dia.      |

| TYPE 'D' |                        | TWO TUBE TRUSS     |                      | SPAN                       |                              |
|----------|------------------------|--------------------|----------------------|----------------------------|------------------------------|
| Sign No. | Station                | Cross Beams        | Post Dimensions      | Base Plate                 | Footings                     |
|          |                        |                    | Left Right           |                            | Type Left Right Anchor Bolts |
| E-3      | WA. O.B. Sta. 3+05     | 3 @ 14.25 x 21'-0" | 7 @ 16" x 25'-0"     | 24 1/2" x 24 1/2" x 2 1/2" | II II 4-2" Dia.              |
| E-4      | WA. O.B. Sta. 12+36.55 | 3 @ 14.25 x 33'-0" | 7 1/2 @ 16" x 25'-0" | 24 1/2" x 24 1/2" x 2"     | II II 4-2 1/4" Dia.          |

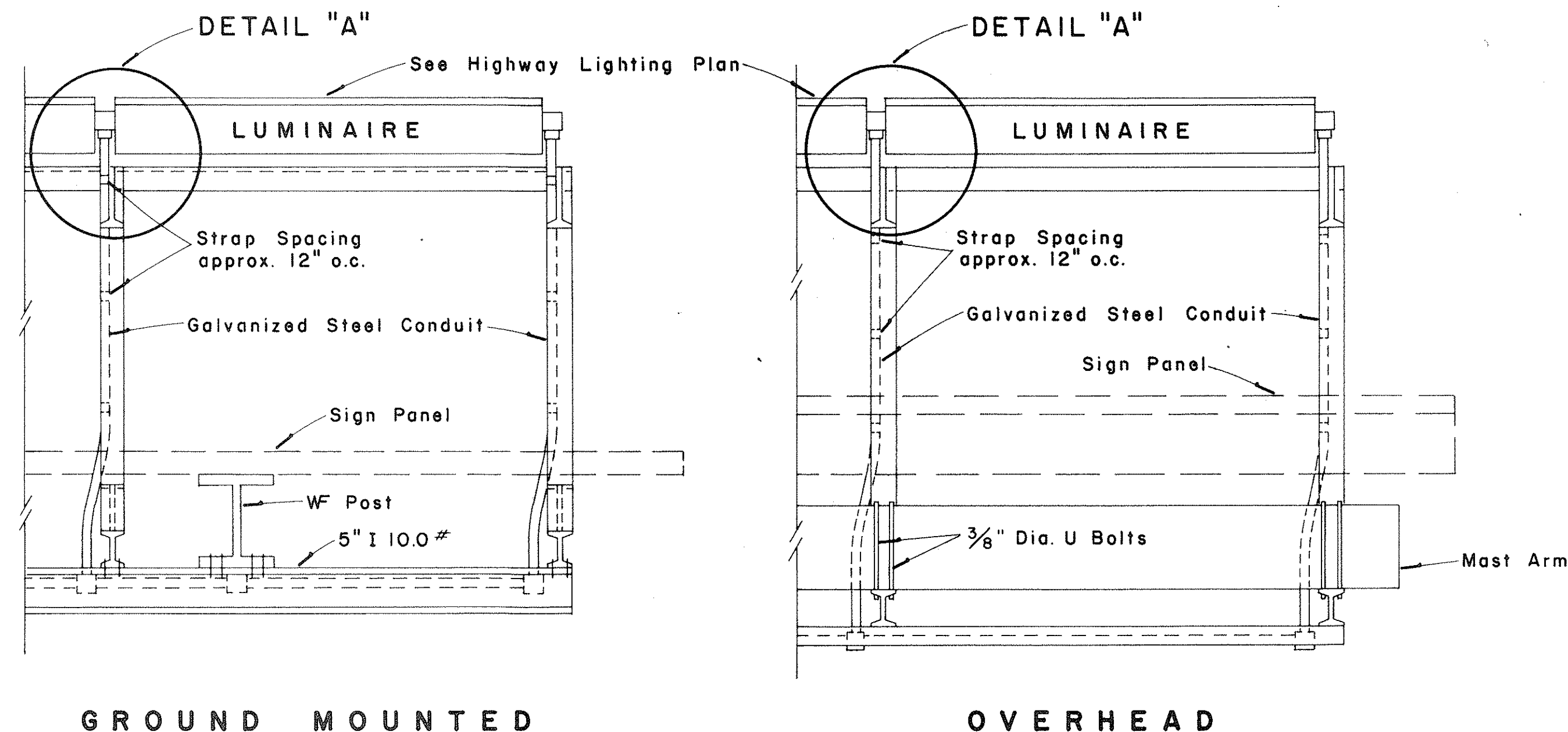
| GROUND MOUNTED - DESTINATION SIGN |          |               |       |                    |                   |
|-----------------------------------|----------|---------------|-------|--------------------|-------------------|
| Sign No.                          | Station  | Steel Members |       | Base Plate         | Footings          |
|                                   |          | Left          | Right |                    | Type Anchor Bolts |
| D-1                               | @ 142+13 | 5 x F17       |       | 10' x 17 1/4' x 1" | VI 4-1 1/8" Dia.  |

| GROUND MOUNTED - EXPRESSWAY SIGN |          |               |       |                    |                   |
|----------------------------------|----------|---------------|-------|--------------------|-------------------|
| Sign No.                         | Station  | Steel Members |       | Base Plate         | Footings          |
|                                  |          | Left          | Right |                    | Type Anchor Bolts |
| E-2                              | @ 129+15 | 8 J10         |       | 10' x 17 1/4' x 1" | VI 4-1 1/8" Dia.  |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-1-10             | 1966        | 135       | 203          |

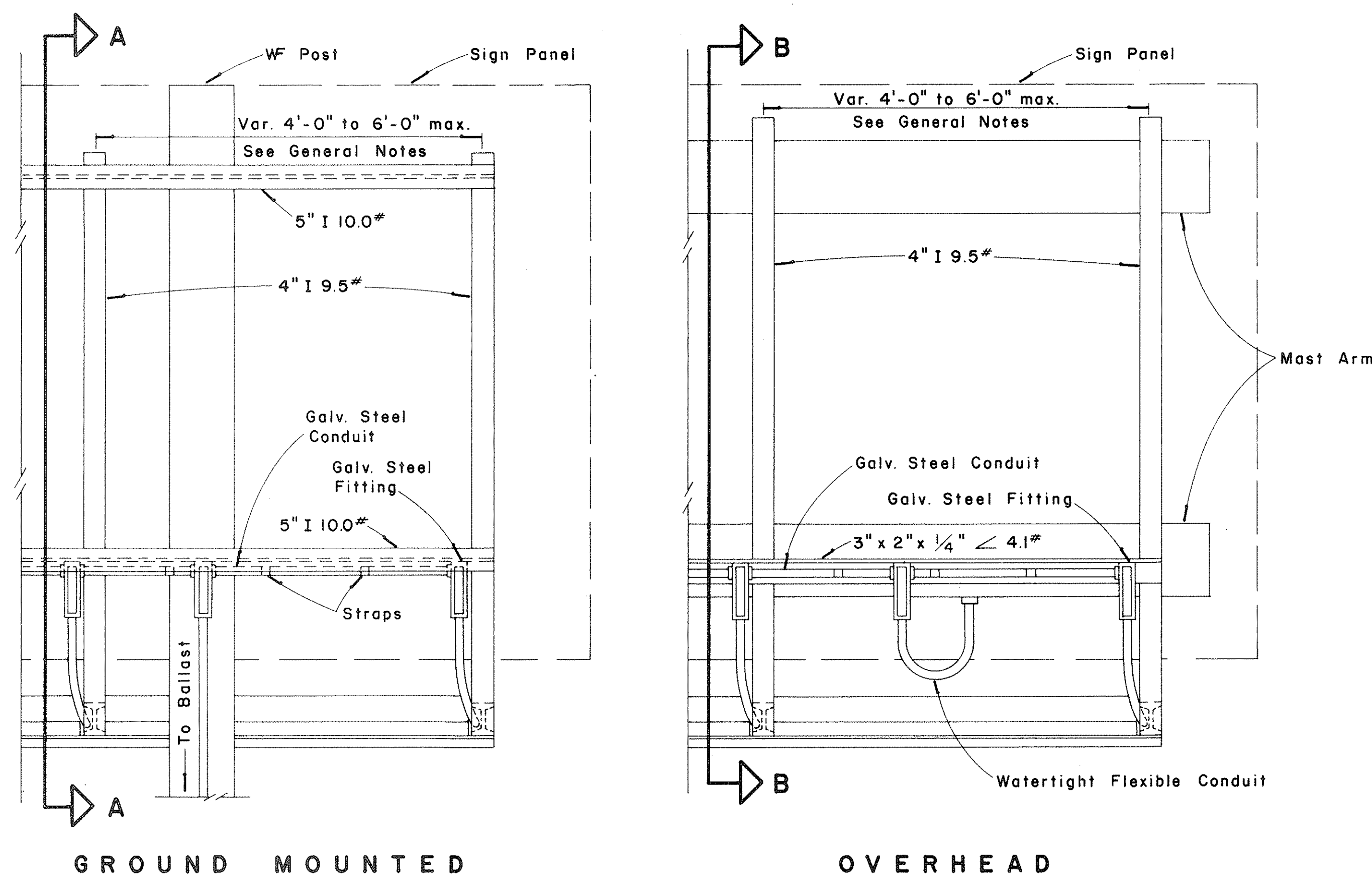
## GENERAL NOTES

1. Conduit sizes:  $\frac{3}{4}$ " diameter for one or two Luminaire Units, 1" diameter for three or more Luminaire Units.
2. Fluorescent Fixtures shall be installed as recommended by the manufacturer.
3. Luminaire brackets shall be spaced to fit 4'-0" to 6'-0" luminaires with fittings. Eight feet (8'-0") luminaires shall have an additional bracket at midpoint.
4. All parts of the bracket shall be hot-dip galvanized, prime coated with a suitable primer and painted with three coats of dark green enamel.



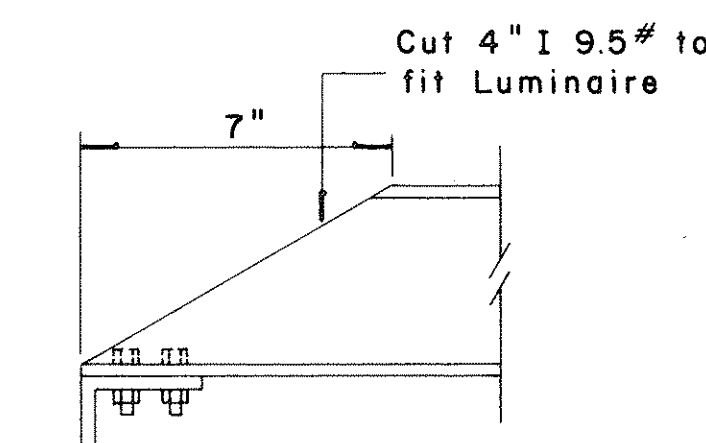
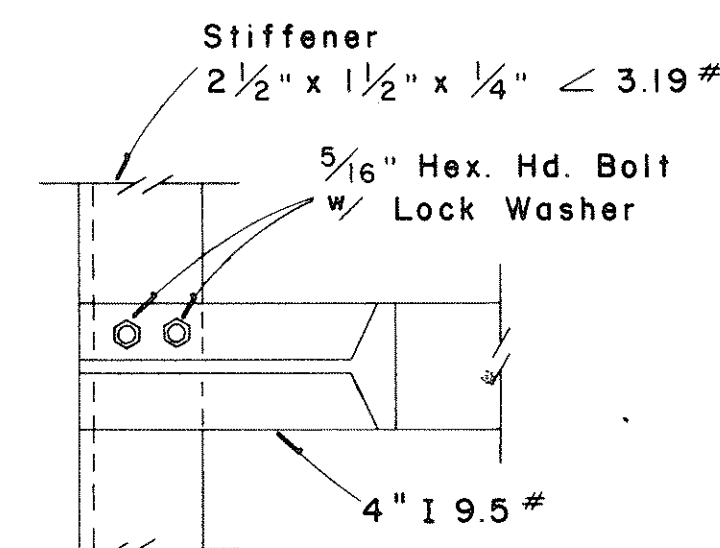
## TOP VIEW LUMINAIRE MOUNTING

Scale: 1" = 1'-0"



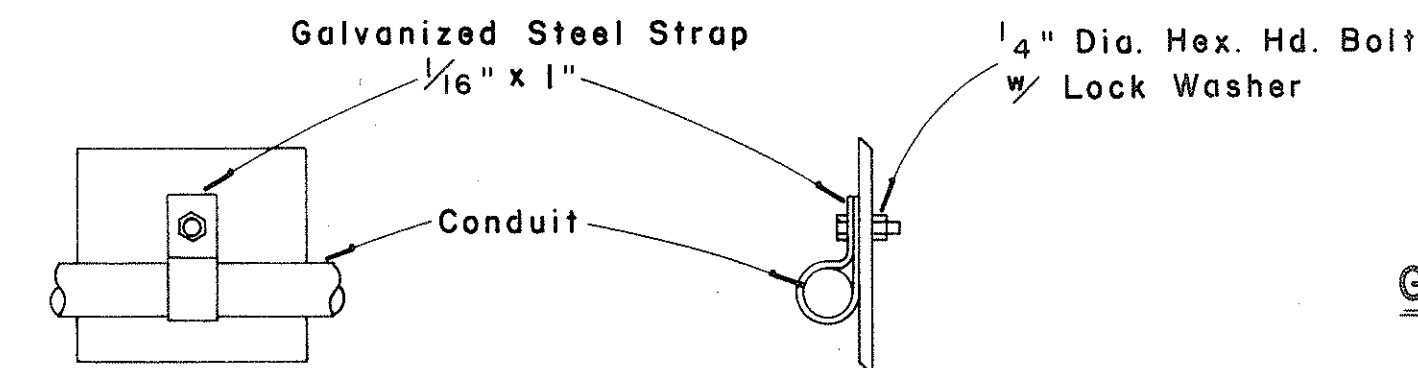
## REAR VIEW LUMINAIRE MOUNTING

Scale: 1" = 1'-0"



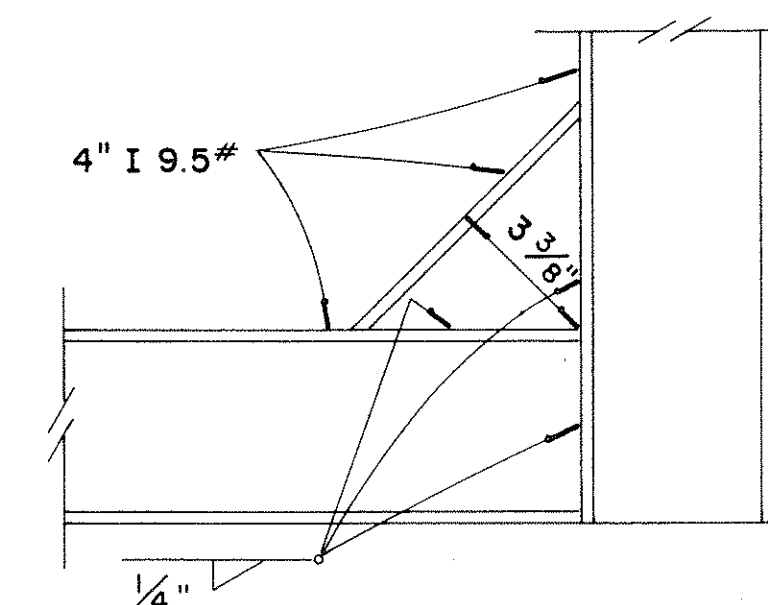
## DETAIL "A"

Scale: 3" = 1'-0"



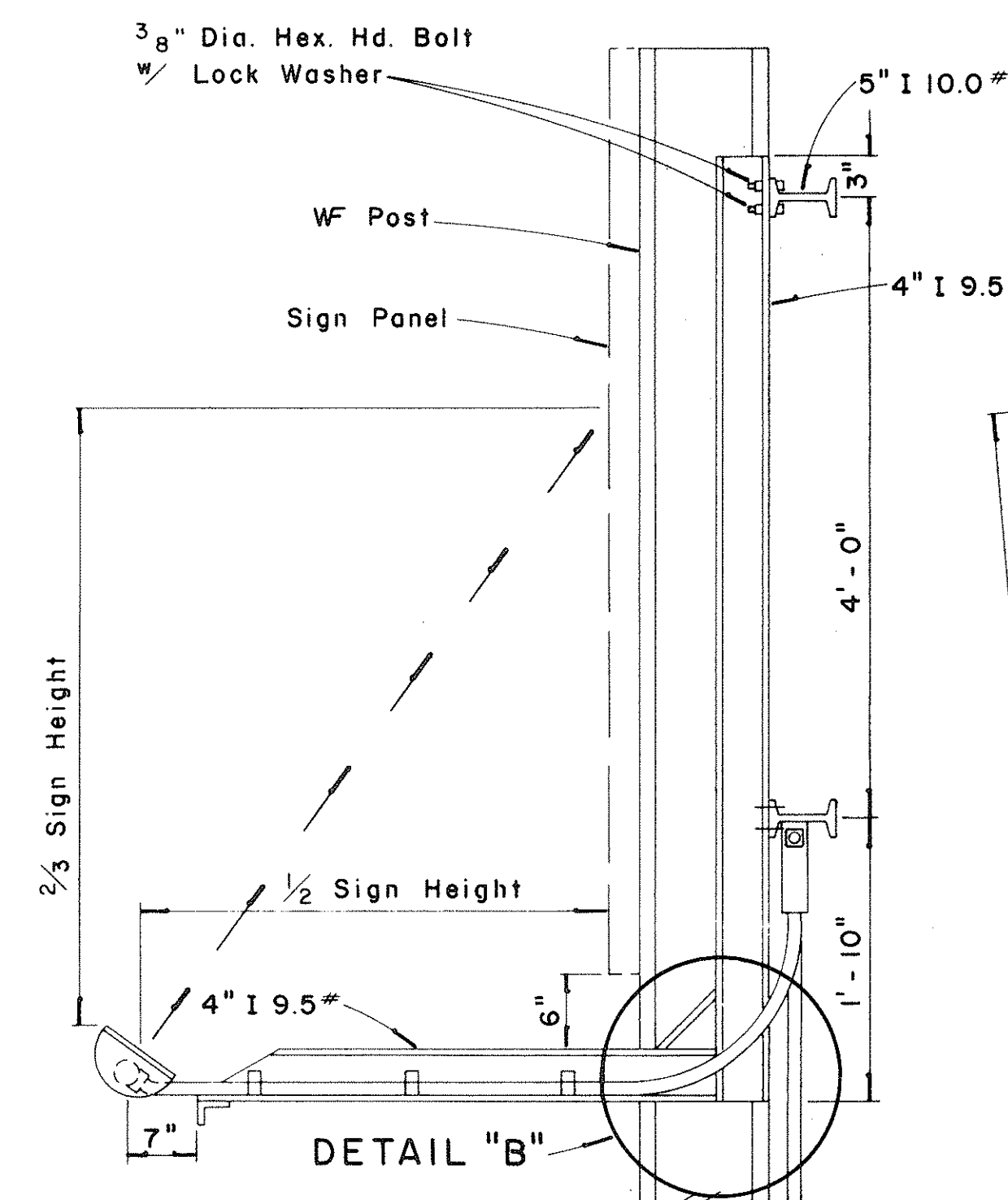
## CONDUIT STRAP DETAIL

Scale: 3" = 1'-0"



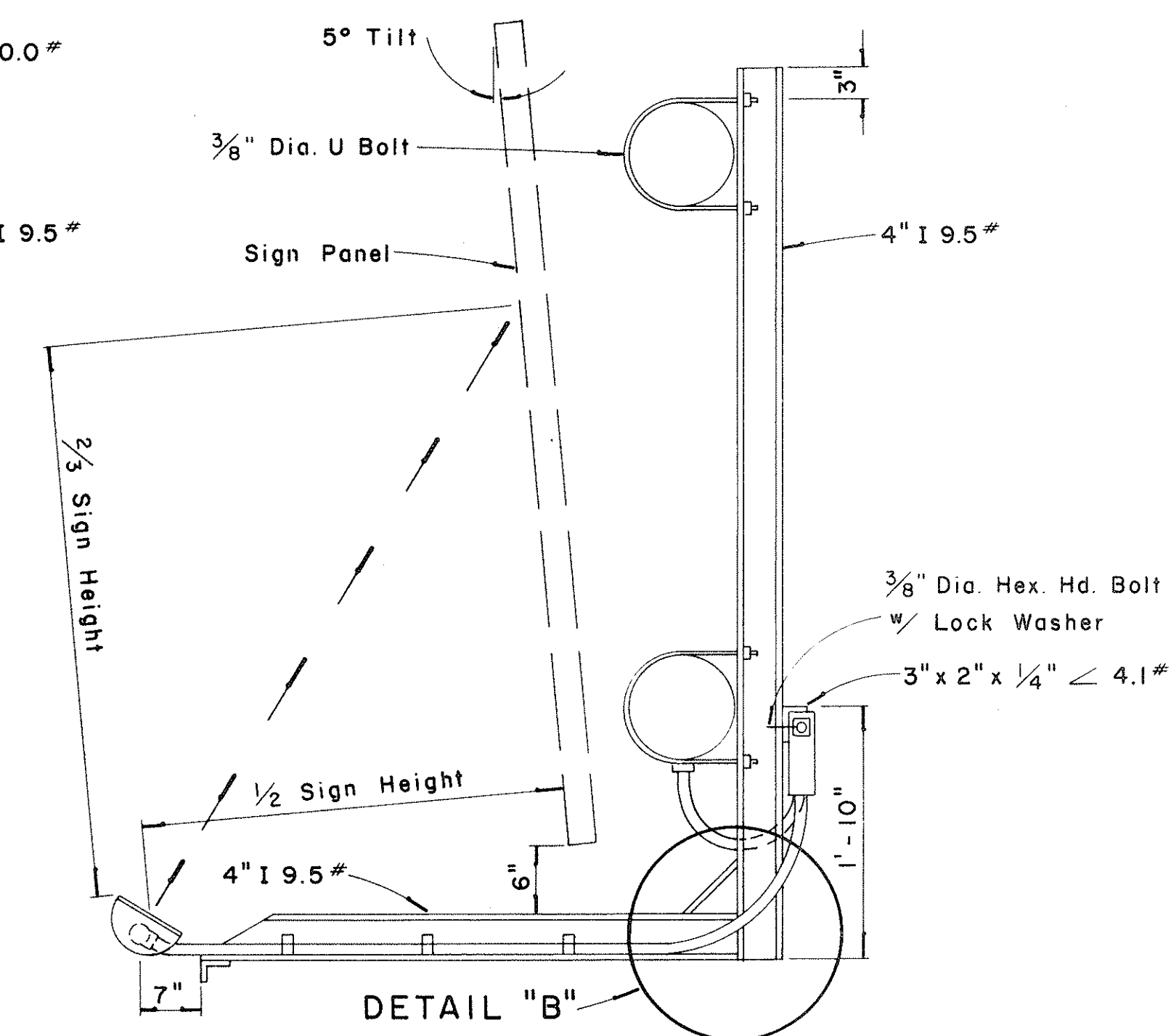
## DETAIL "B"

Scale: 3" = 1'-0"



## SECTION "A-A"

Scale: 1" = 1'-0"



## SECTION "B-B"

Scale: 1" = 1'-0"

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## EXPRESSWAY SIGNS LUMINAIRE MOUNTINGS

Scale: As Shown

SHEET No. 10 OF 21 SHEETS

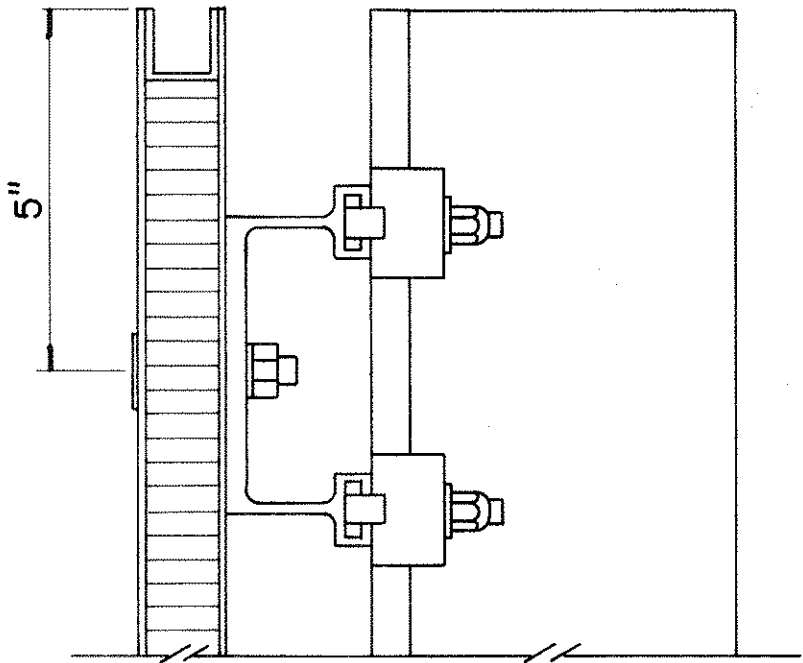
135

|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DRAWN BY      |      |
| TRACED BY     |      |
| NOTED BY      |      |
| CHECKED BY    |      |
| NO.           |      |

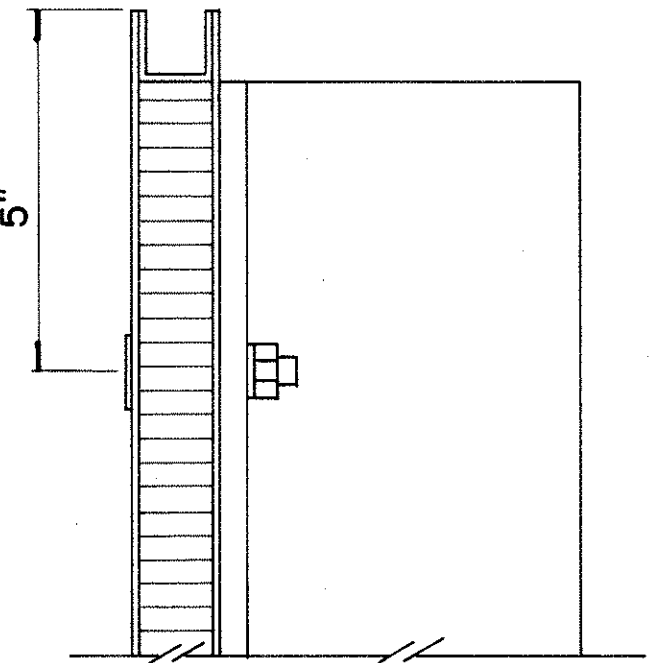
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-H-1(2) UNIT 2    | 1965        | 136       | 209          |

(OVERHEAD SIGNS)  
SUPPORT SPACING TABLE

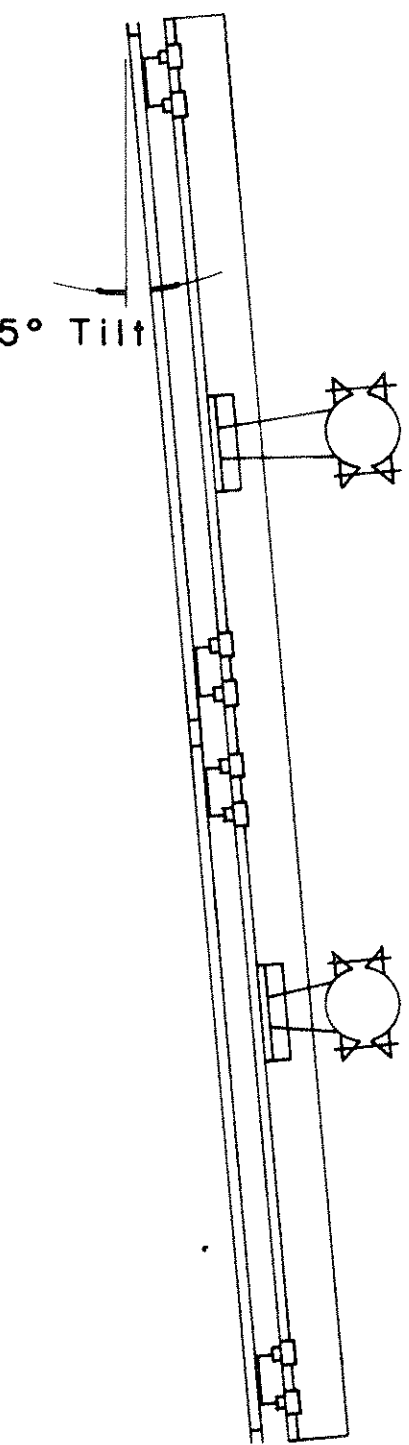
| PANEL THICK. | LENGTH OF SIGN<br>A | NO. OF SUPPORTS | OVERHANG<br>B | SUPPORT SPACING<br>C or C <sub>1</sub> |
|--------------|---------------------|-----------------|---------------|----------------------------------------|
| 1"           | 6'-0"               | 2               | 12"           | 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"                                   |



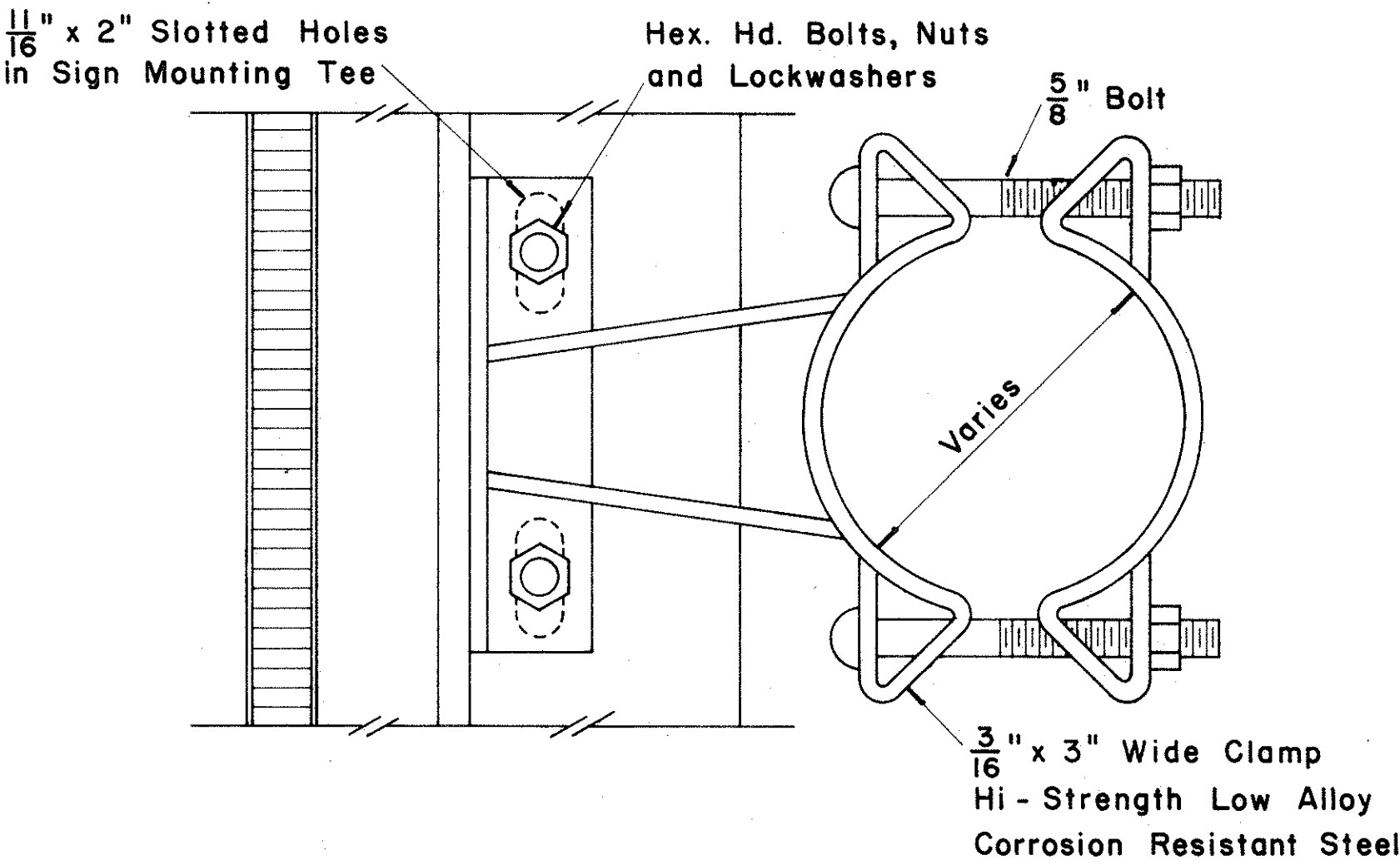
SECTION "C-C"  
Scale:  $\frac{3}{8}$ " = 1"



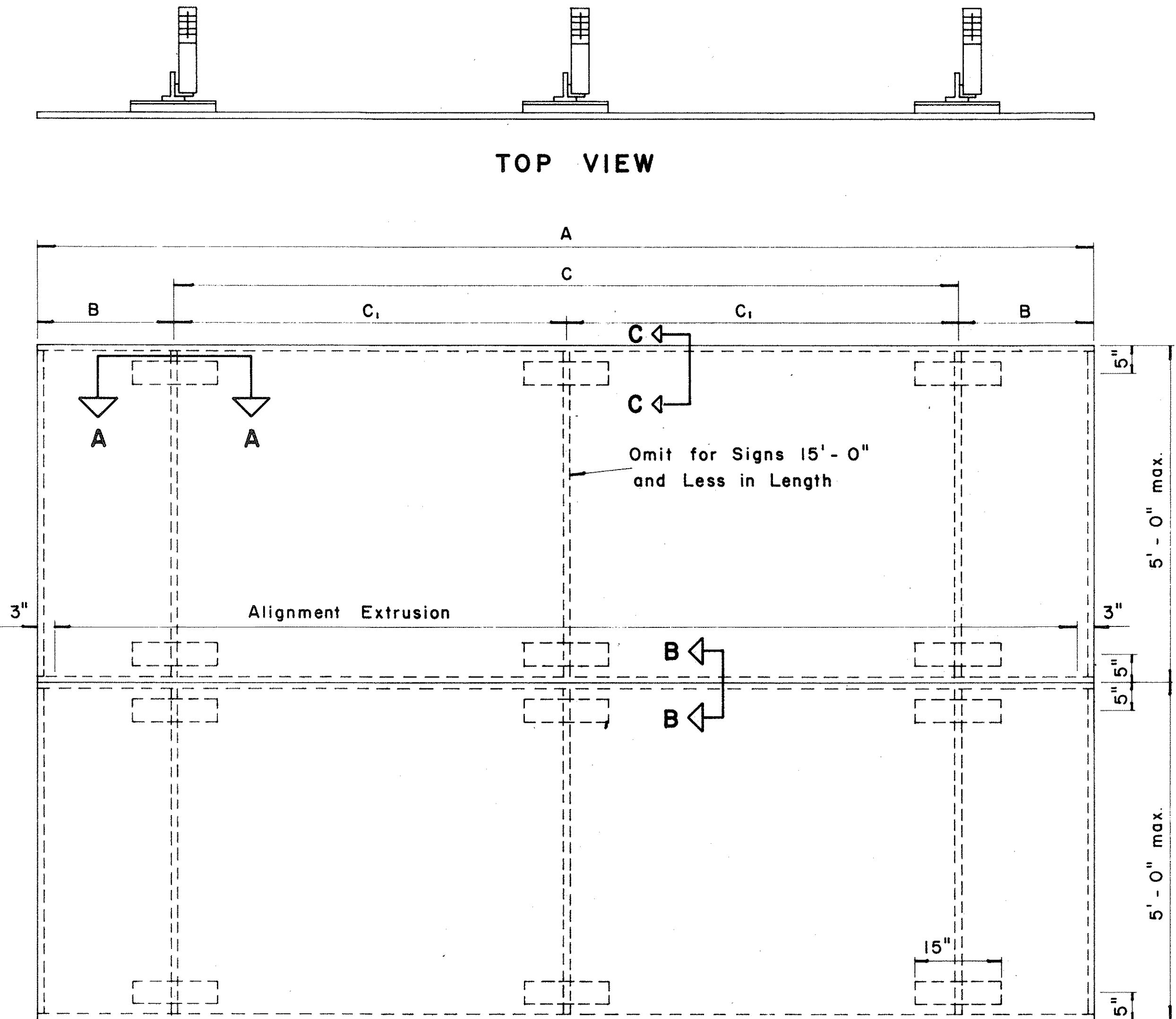
SECTION "C-C"  
(Alternate)  
Scale:  $\frac{3}{8}$ " = 1"



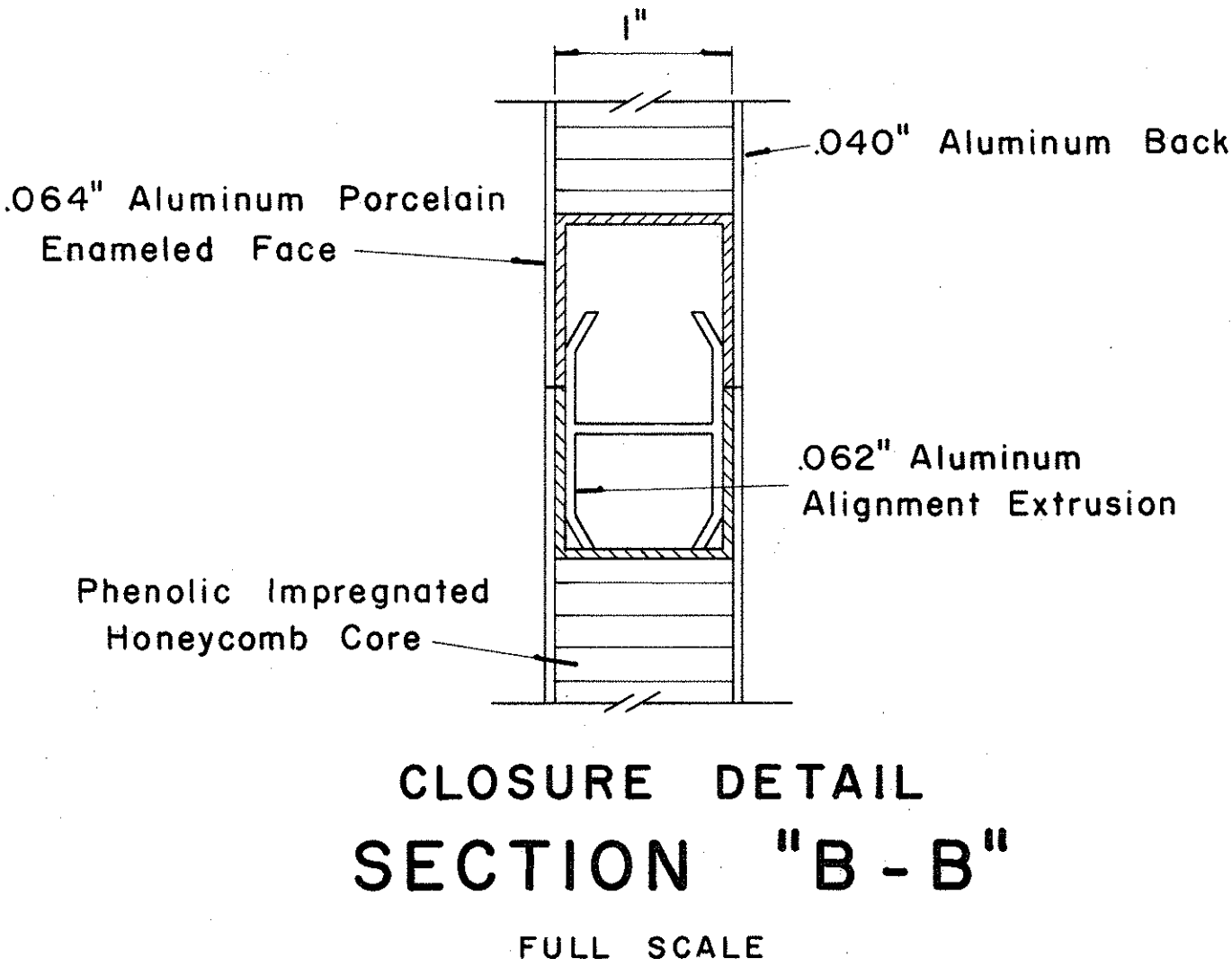
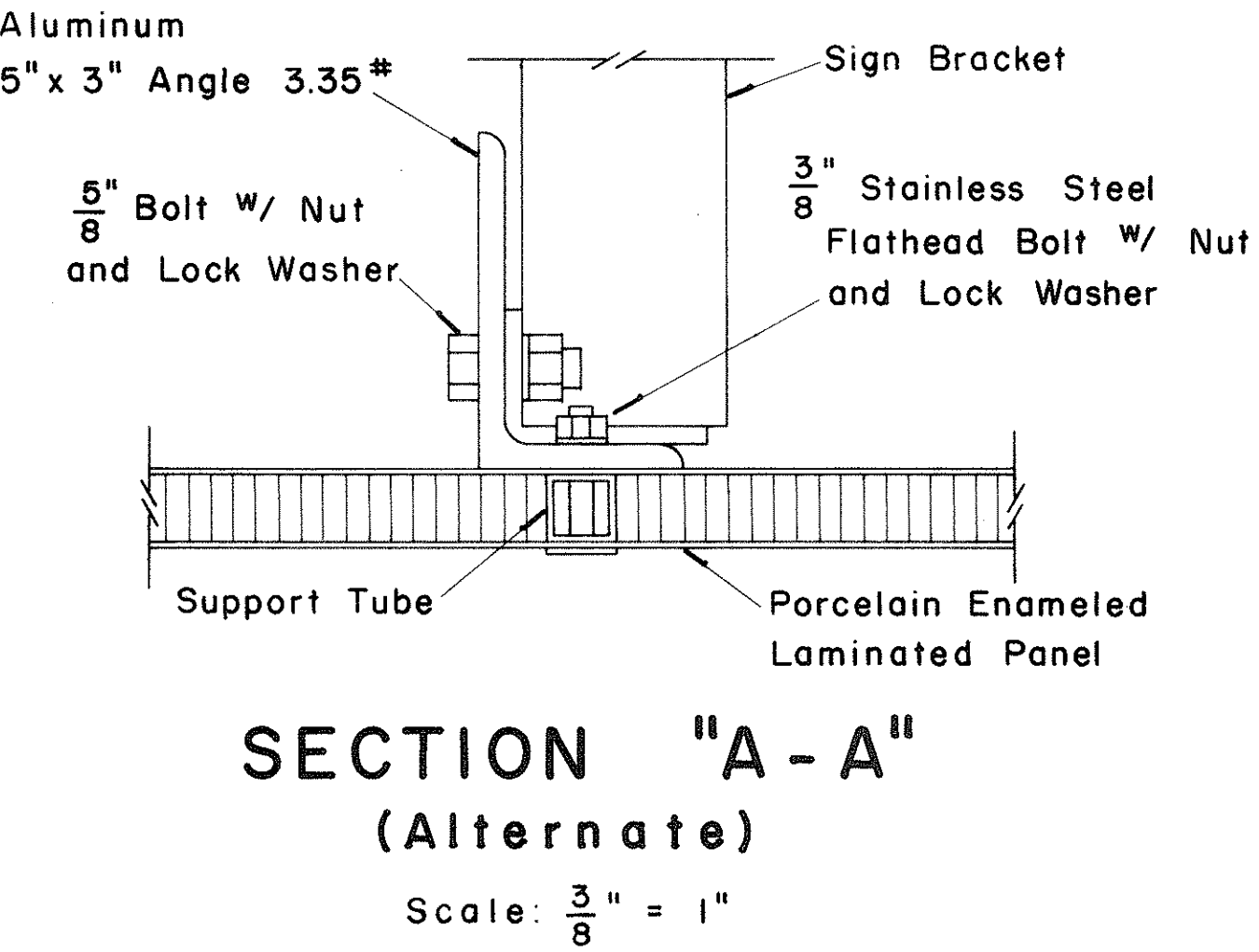
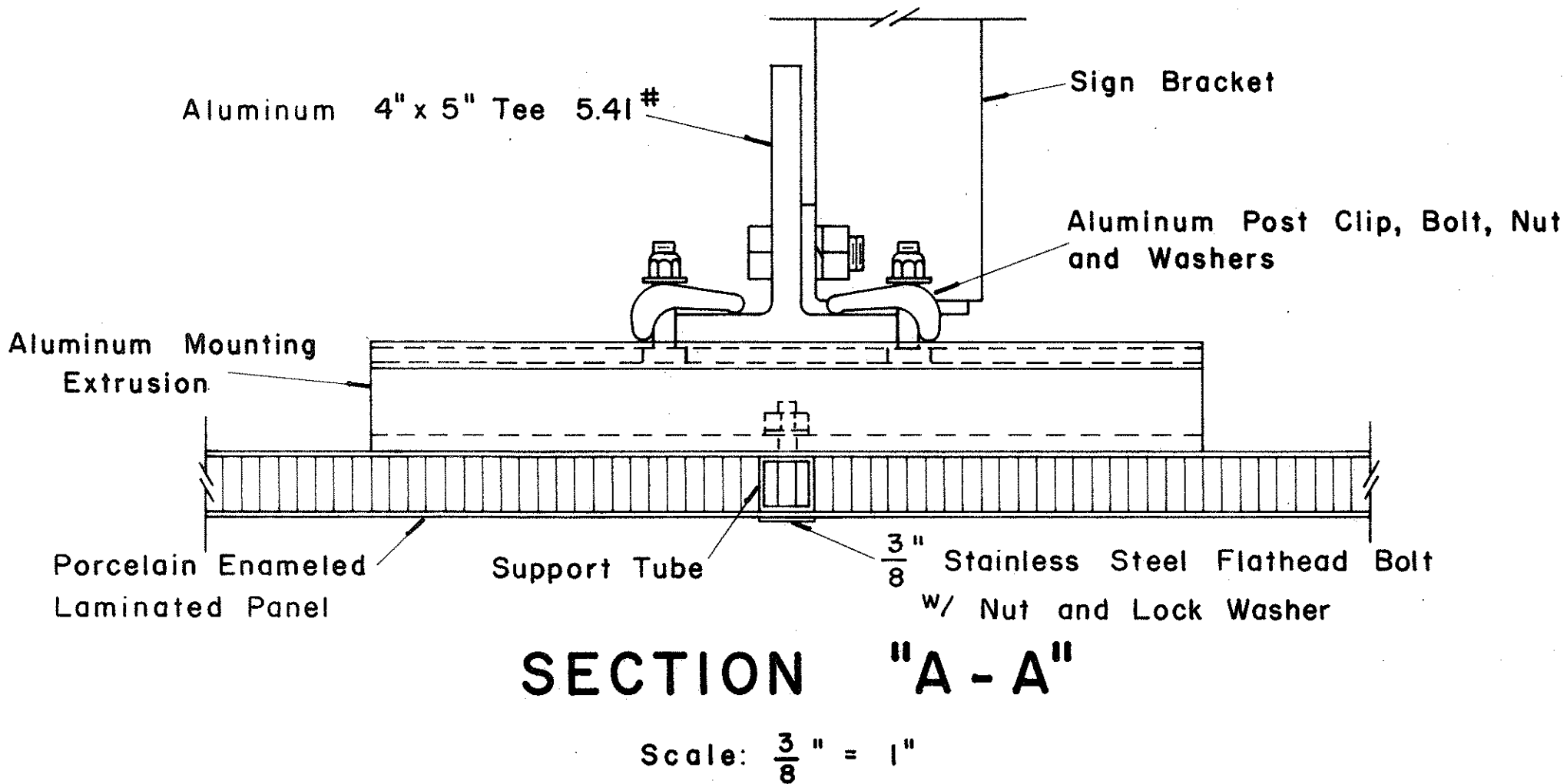
SIDE VIEW



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



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



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

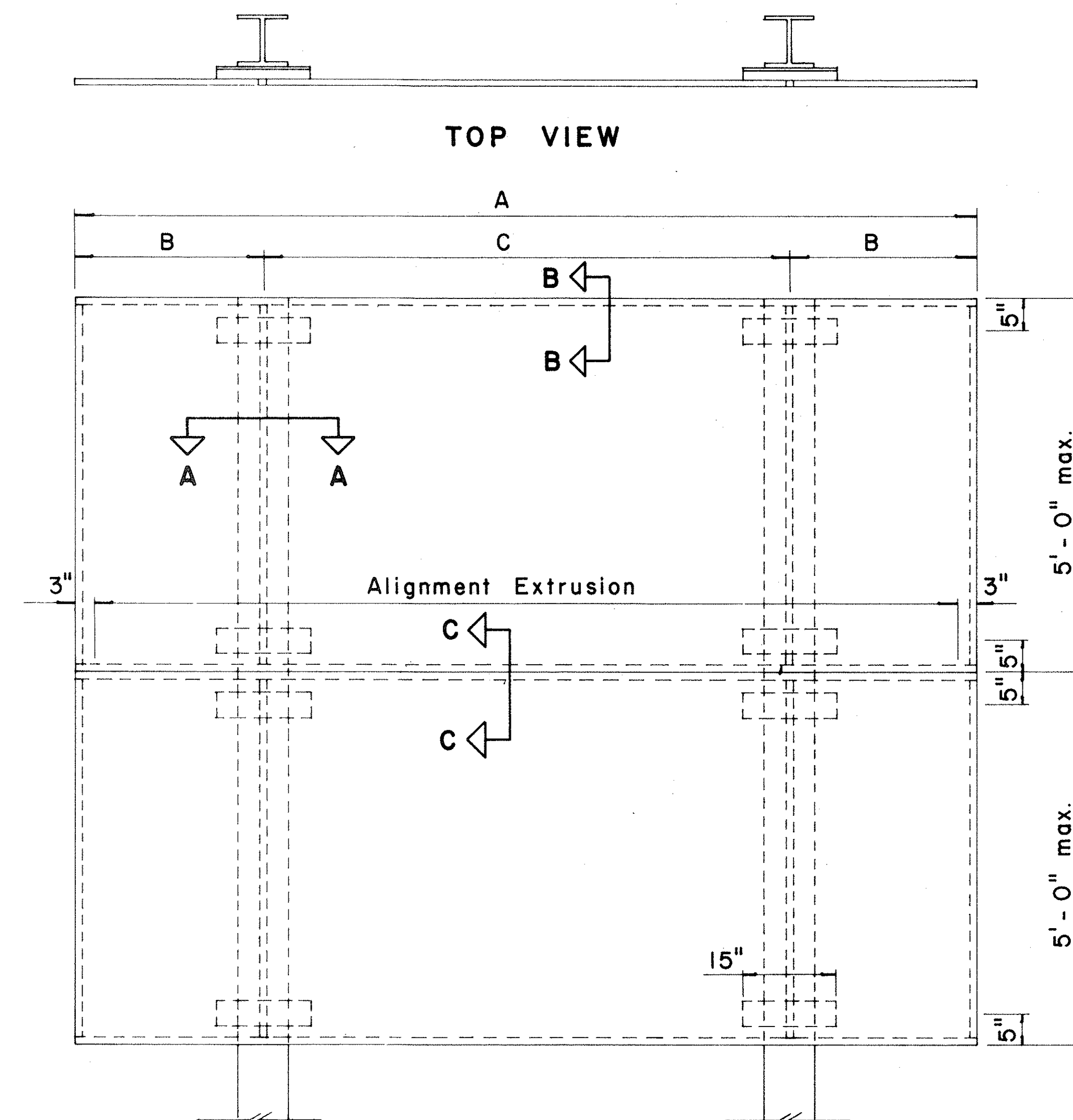
STANDARD DETAILS  
LAMINATED ALUMINUM  
SIGN PANELS  
(OVERHEAD)  
Scale: As Shown

SHEET No. 11 OF 21 SHEETS

|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| CHECKED BY        |      |
| QUANTITIES BY     |      |
| NOTED BY          |      |
| NO.               |      |

(GROUND MOUNTED SIGNS)  
SUPPORT SPACING TABLE

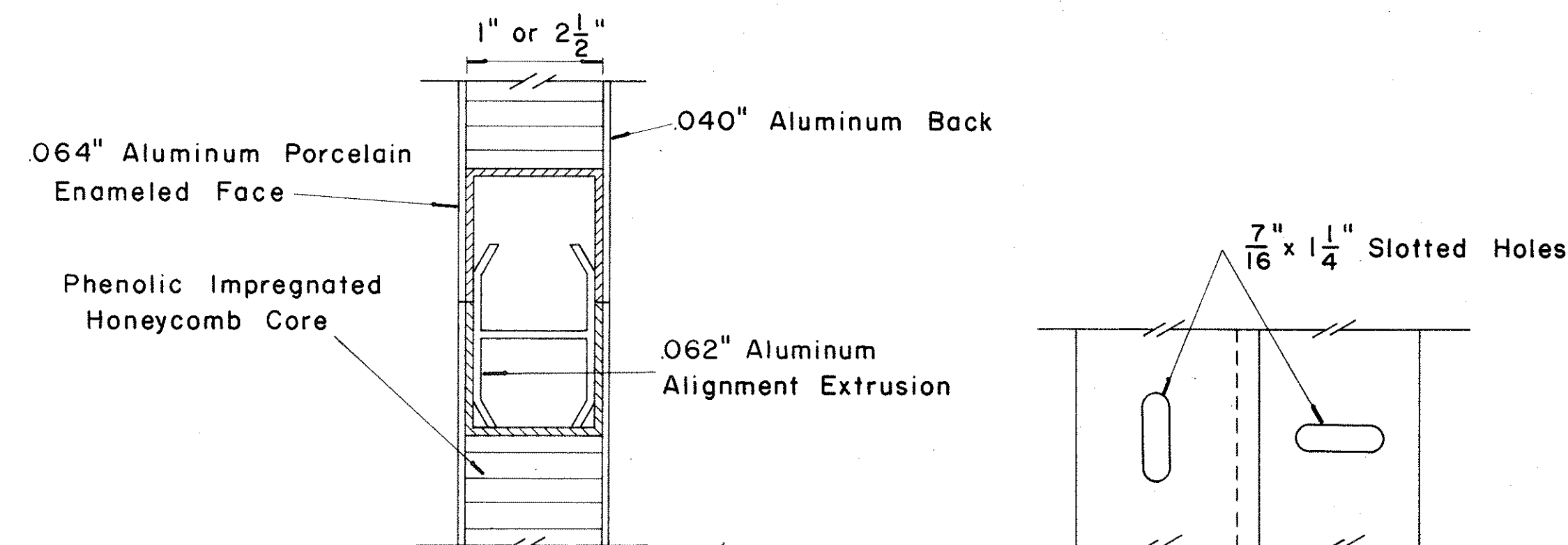
| PANEL THICK. | LENGTH OF SIGN | NO. OF SUPPORTS | OVERHANG | SUPPORT SPACING |
|--------------|----------------|-----------------|----------|-----------------|
|              | A              |                 | B        | C               |
| 1"           | 6'-0"          | 2               | 12"  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



ELEVATION

TYPICAL SIGN ASSEMBLY

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

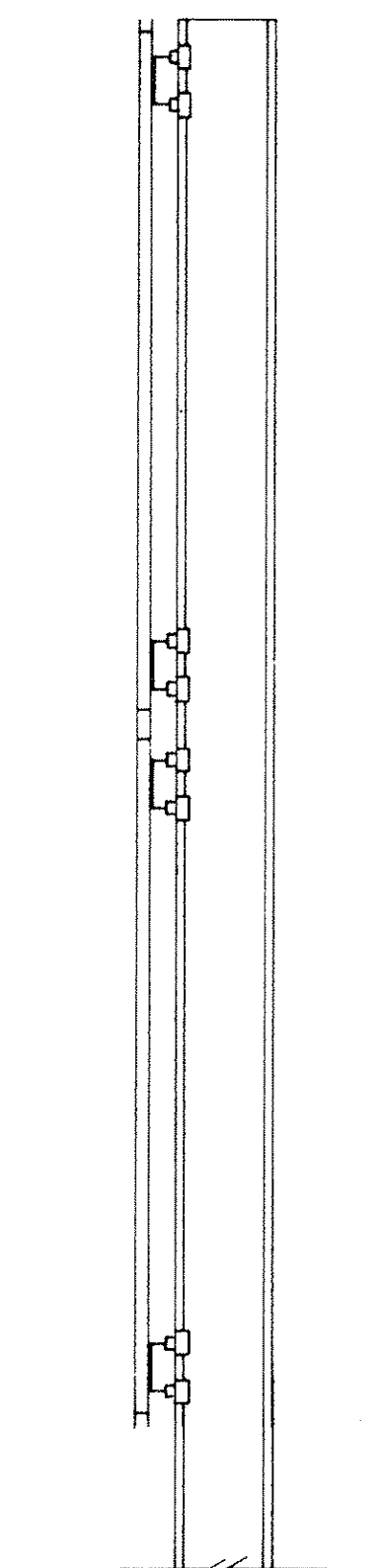


CLOSURE DETAIL  
SECTION "C - C"

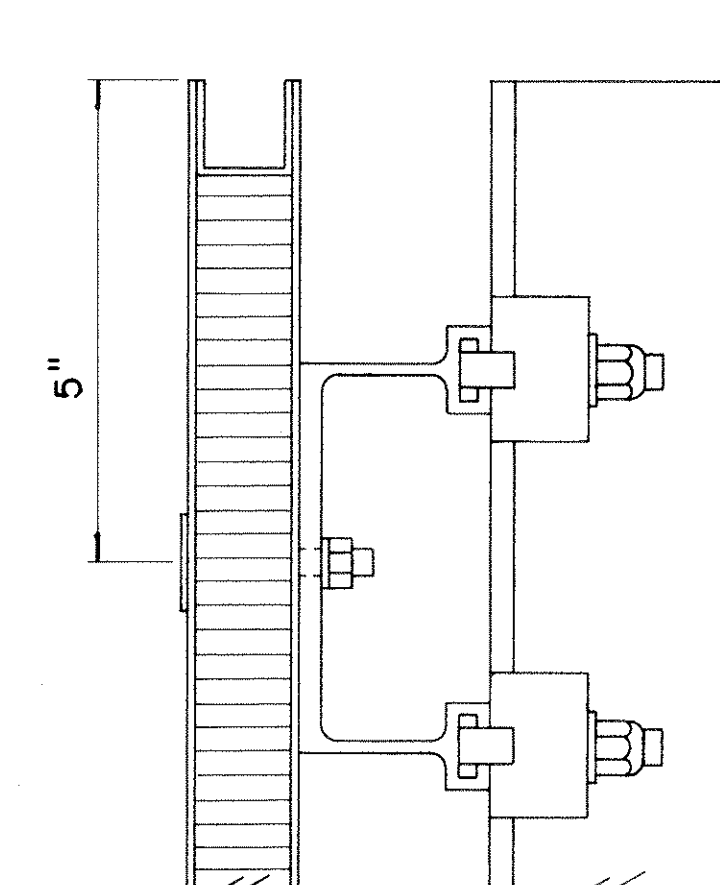
FULL SCALE

ZEE SLOT DETAIL

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

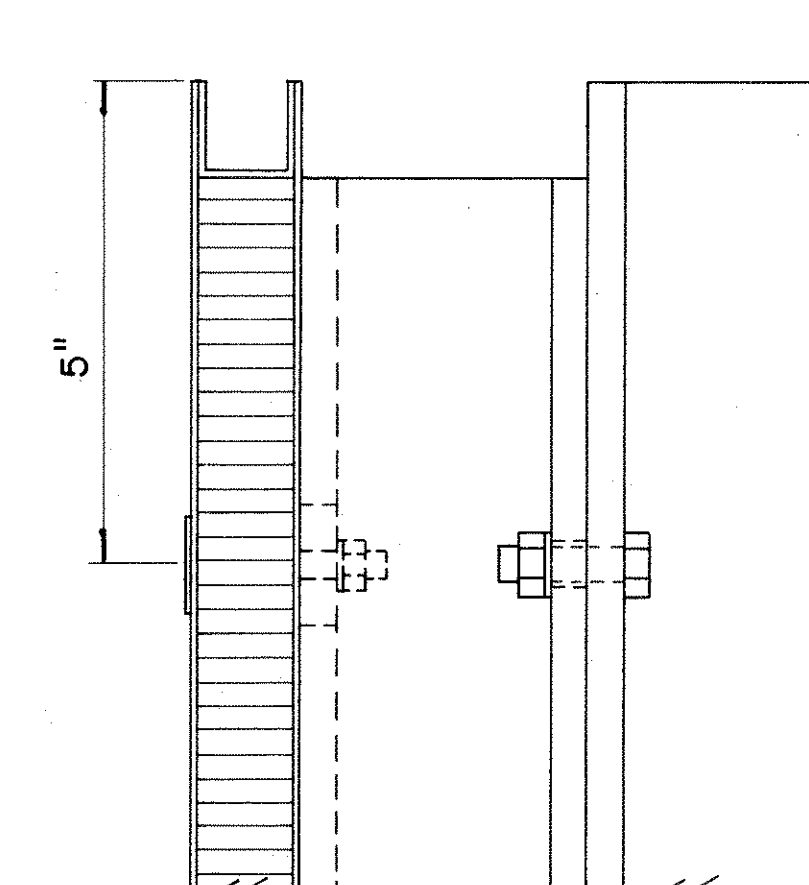


SIDE VIEW



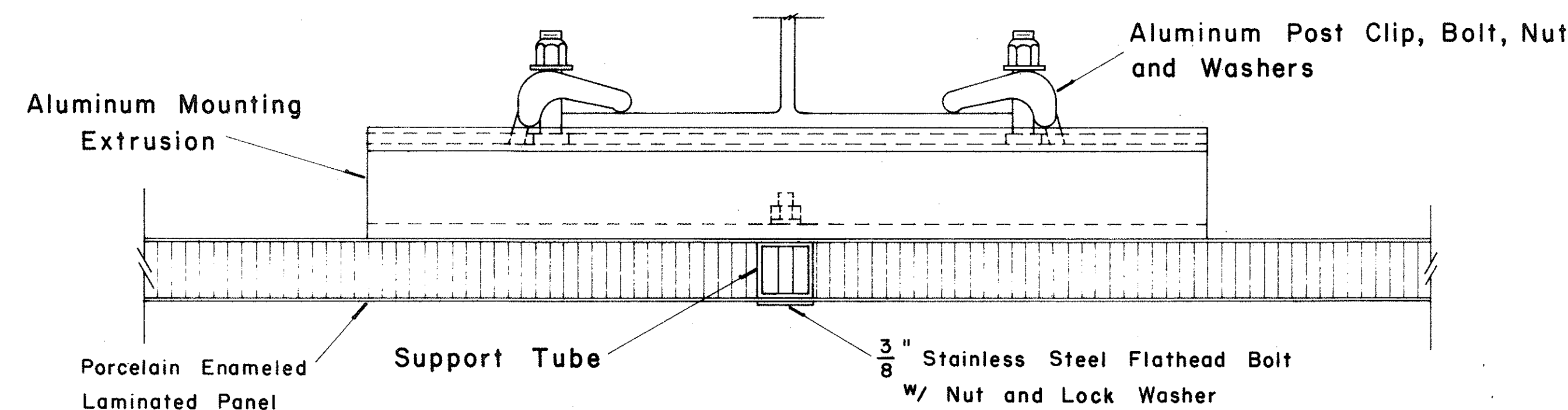
SECTION "B - B"

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



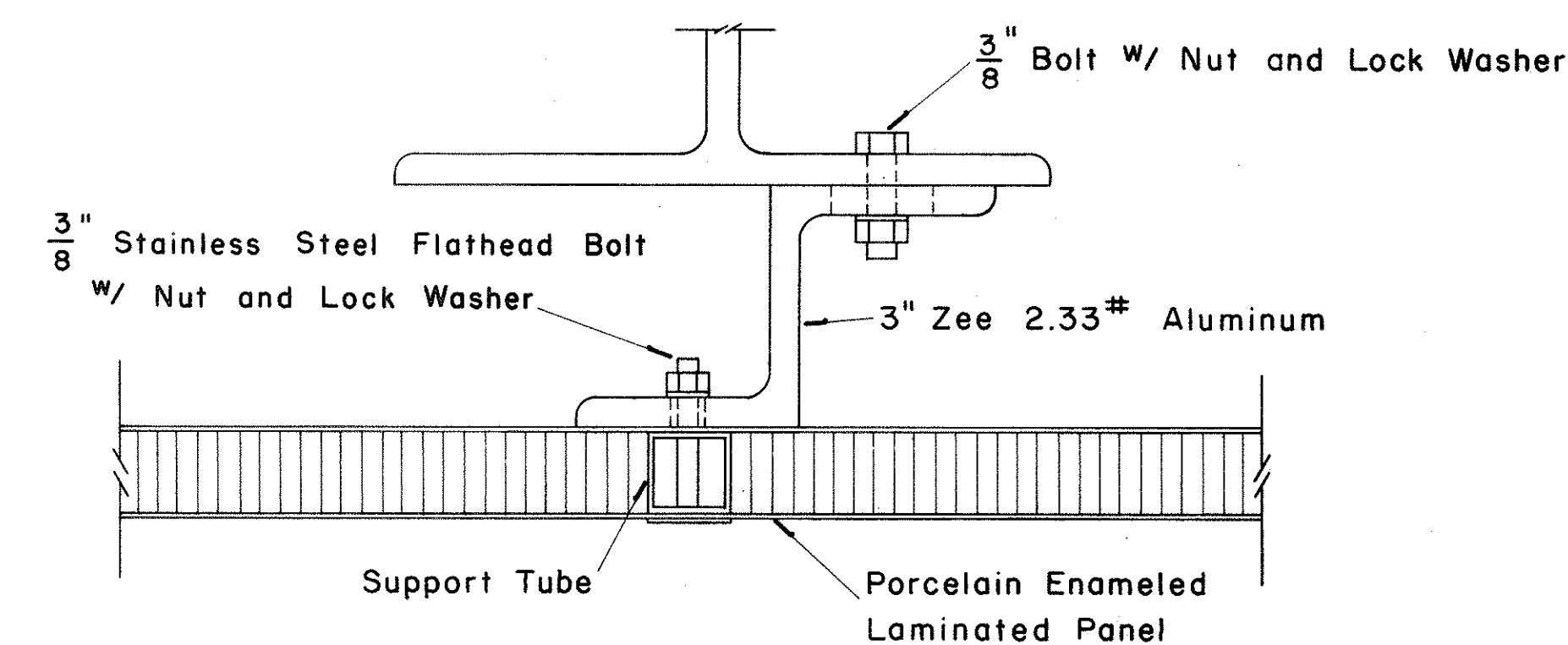
SECTION "B - B"  
(Alternate)

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



SECTION "A - A"

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



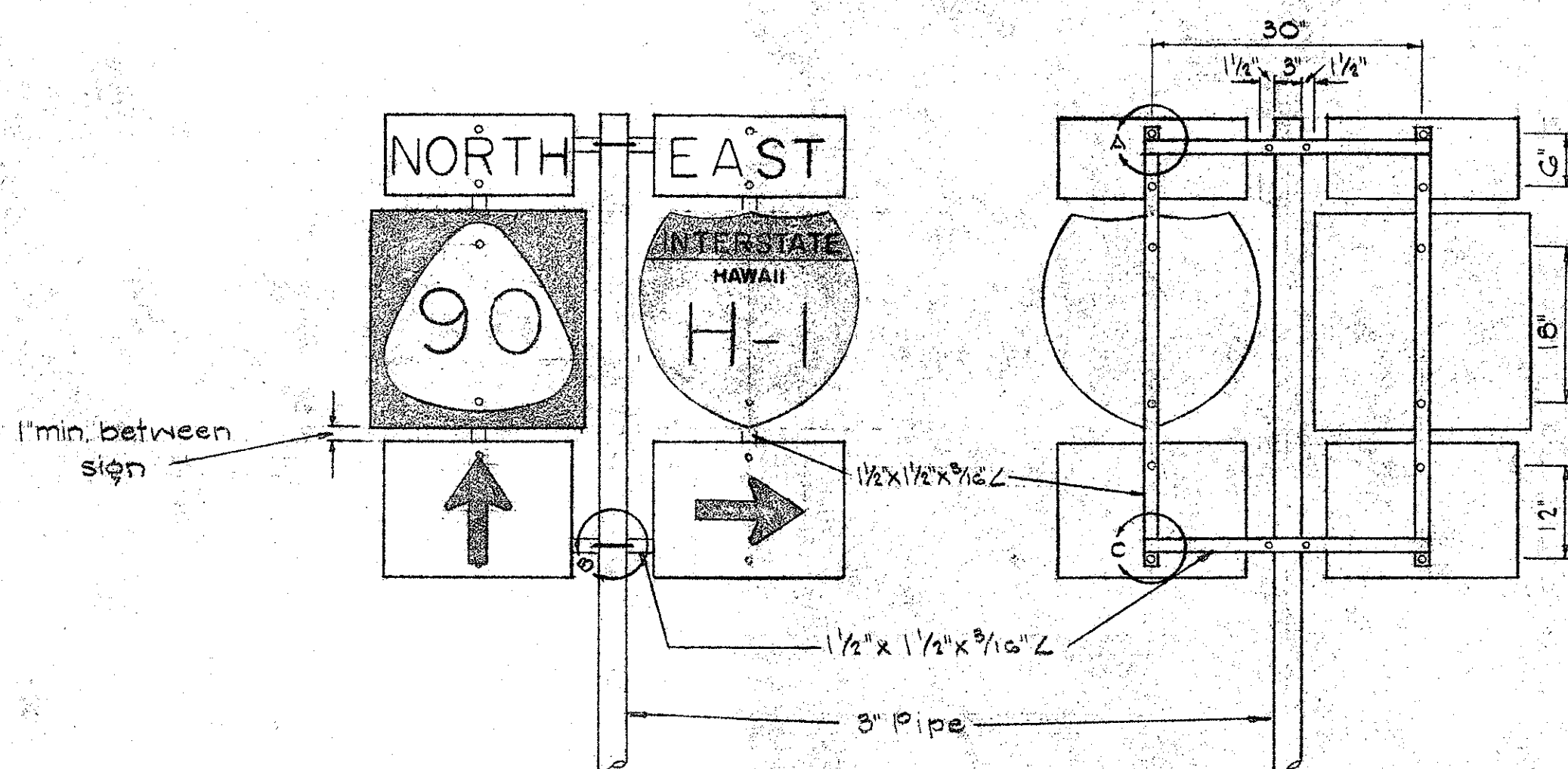
SECTION "A - A"  
(Alternate)

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
  
STANDARD DETAILS  
LAMINATED ALUMINUM  
SIGN PANELS  
(GROUND MOUNTED)  
Scale: As Shown  
SHEET No. 137 OF 209 SHEETS

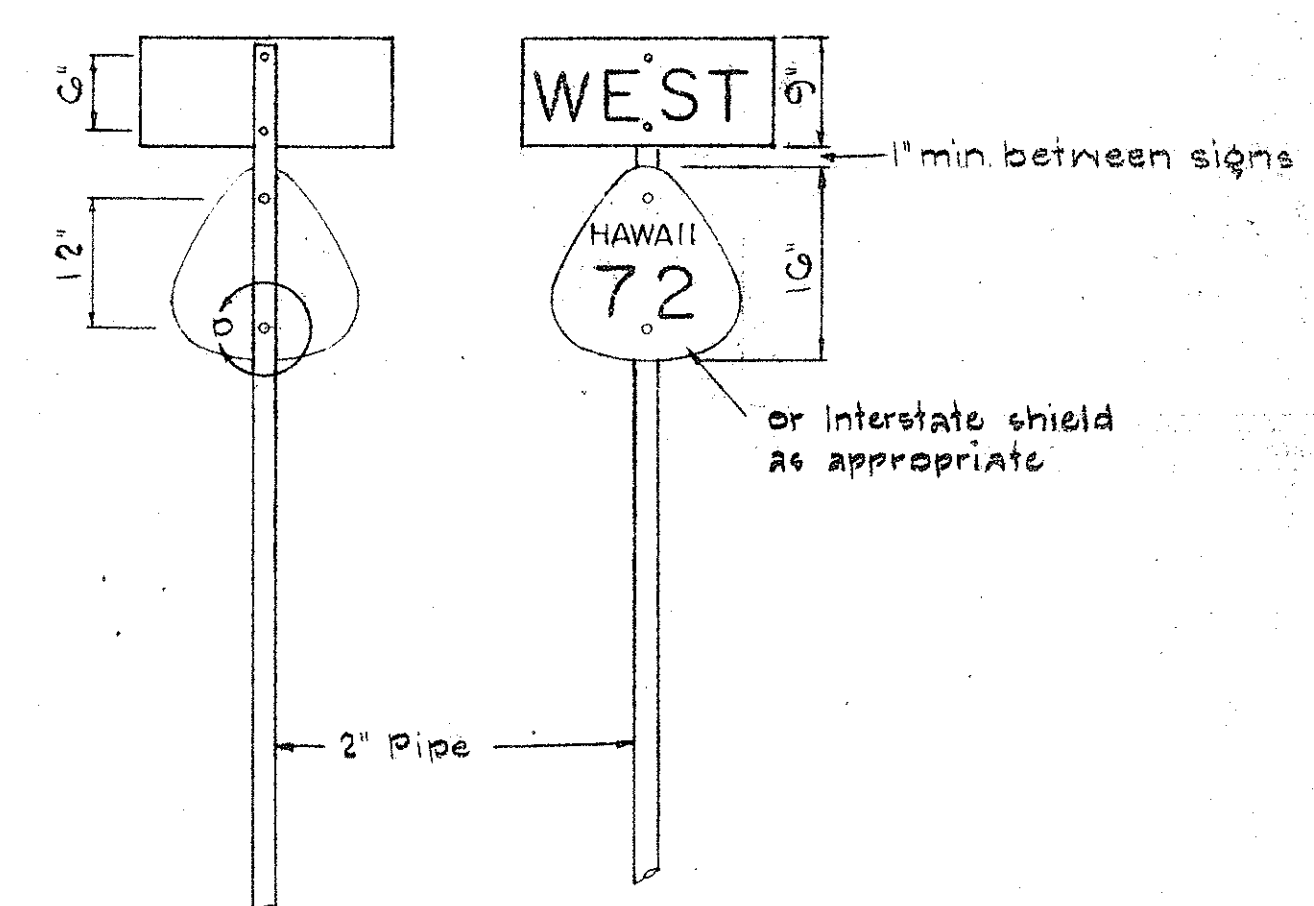
DATE  
DRAWN BY  
DESIGNED BY  
NOTE BOOK  
QUANTITIES BY  
CHECKED BY  
No.

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(6) UNIT 2   | 1966        | 138       | 209          |



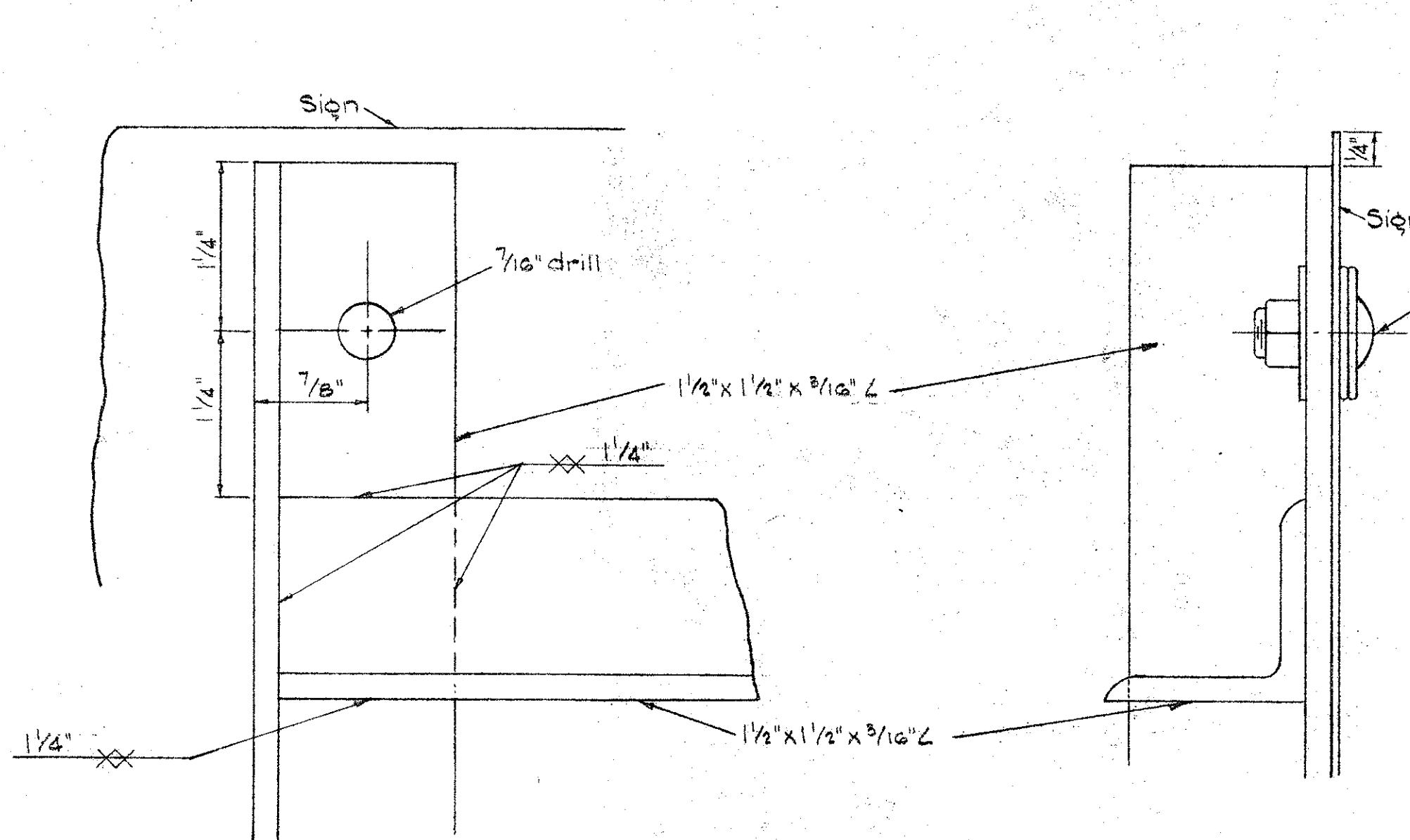
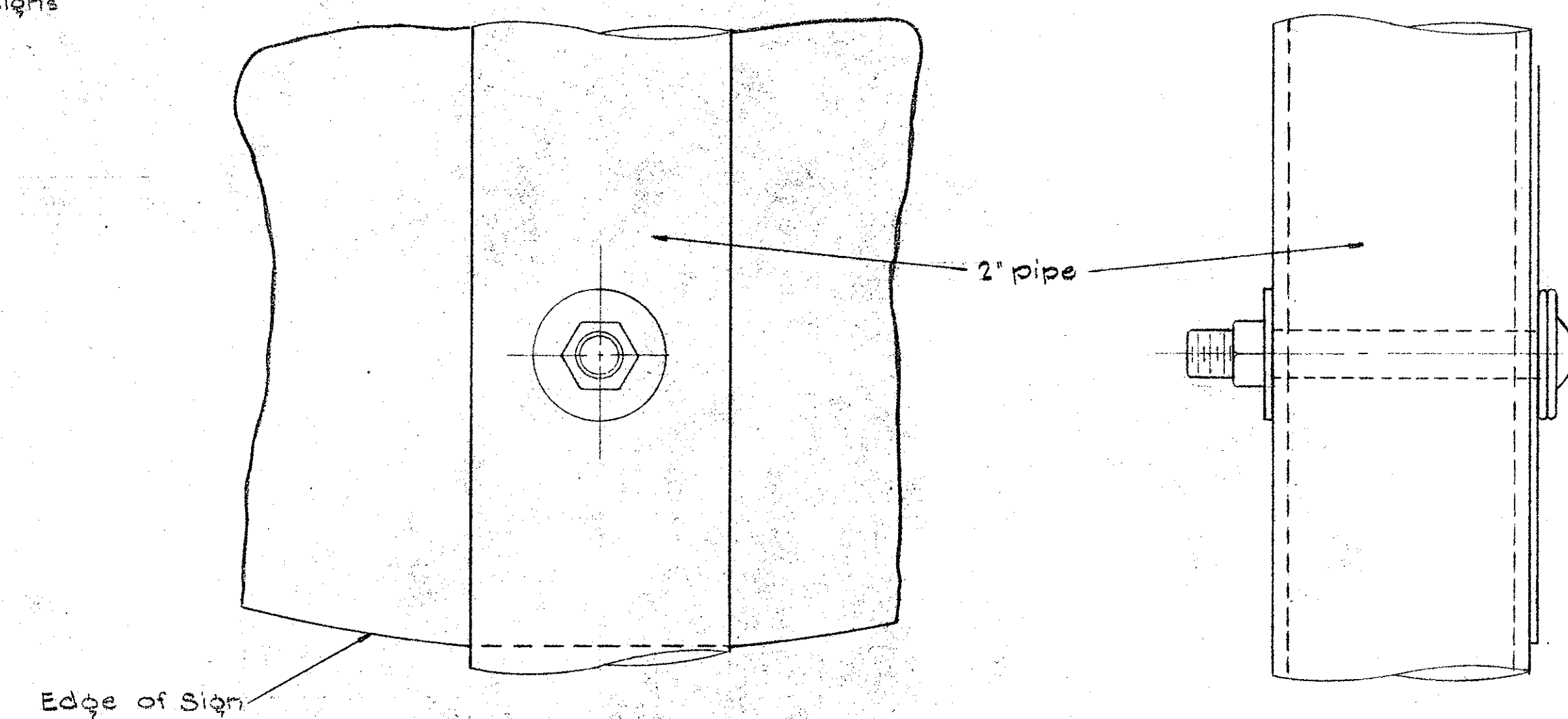
TYPE "B" ASSEMBLY  
NOT TO SCALE

NOTE:  
Minimum clearance between signs shall be 1 inch. (Larger clearances shall be in multiples of 1 inch.)



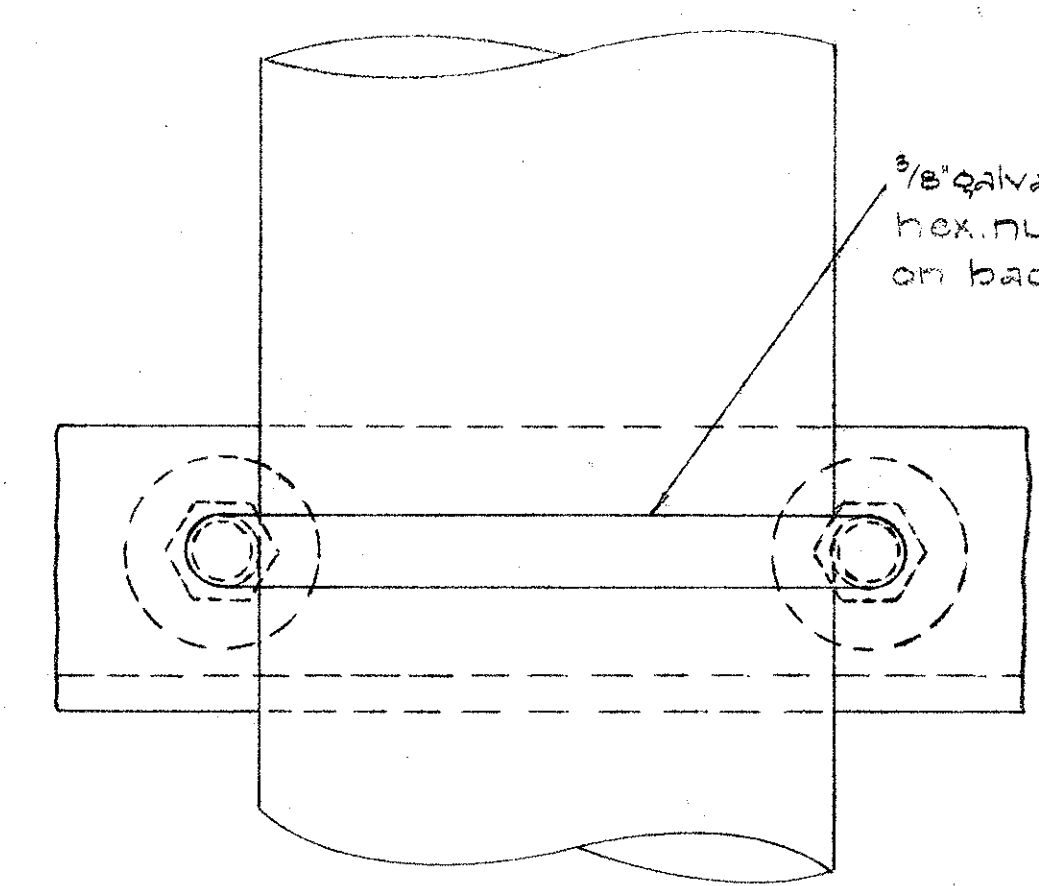
TYPE "A" ASSEMBLY  
NOT TO SCALE

NOTE:  
Use 2" pipe for Type "A" Assembly.  
Use 3" pipe for Type "B" Assembly.

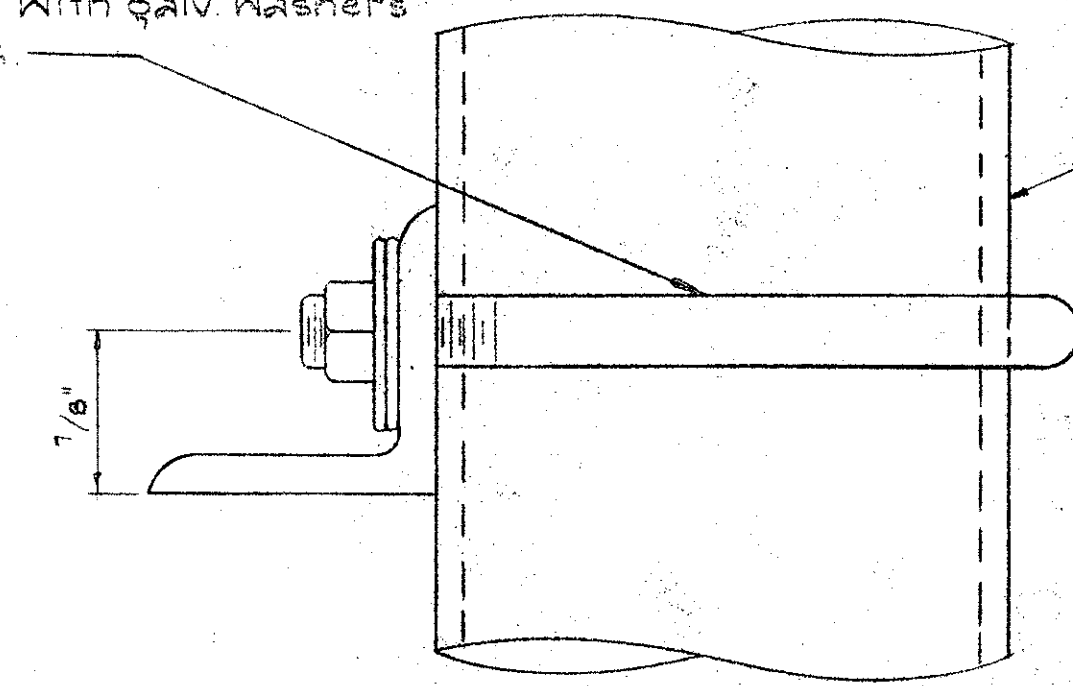


DETAIL "A"  
FULL SCALE

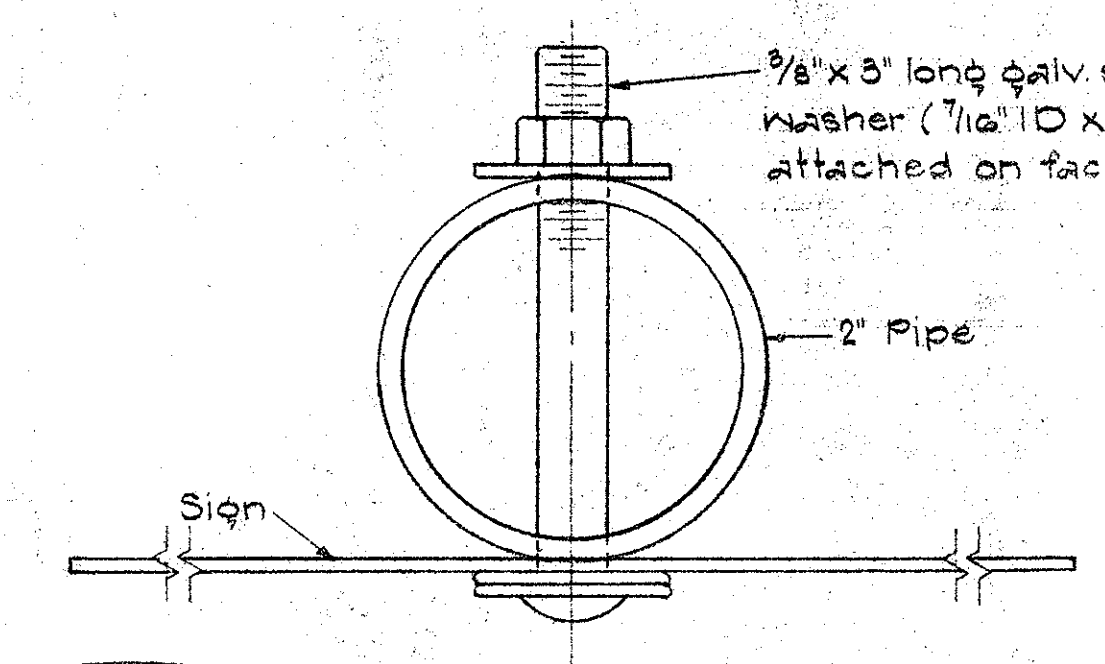
3/8" x 3/4" long rd. hd. galv. screw and hex. nut with galv. #20 gage washer with neoprene rubber gasket attached on face and galv. steel washer on back of sign.



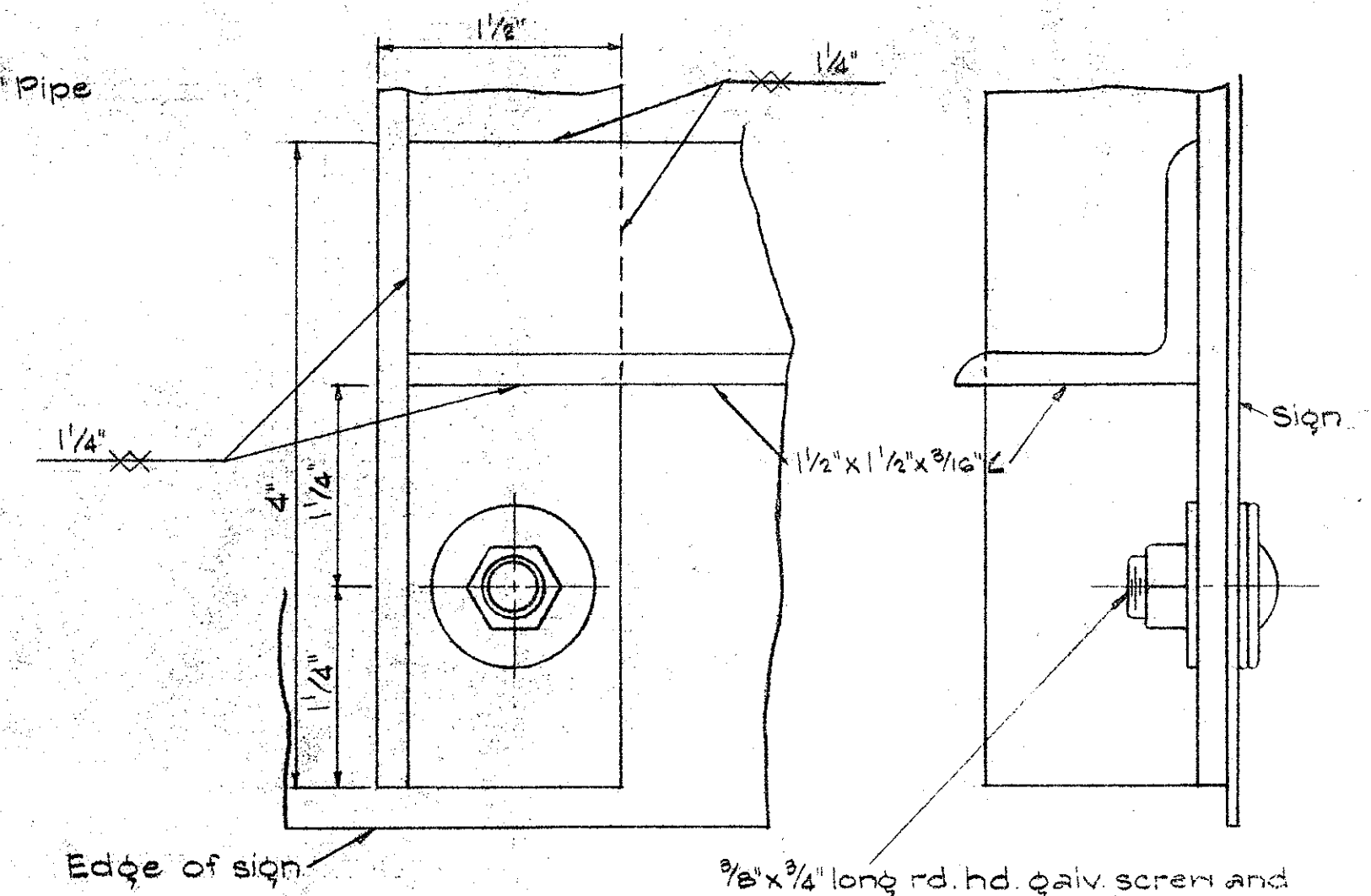
3/8" galvanized U-bolt and hex. nut with galv. washers on back.



DETAIL "B"  
FULL SCALE

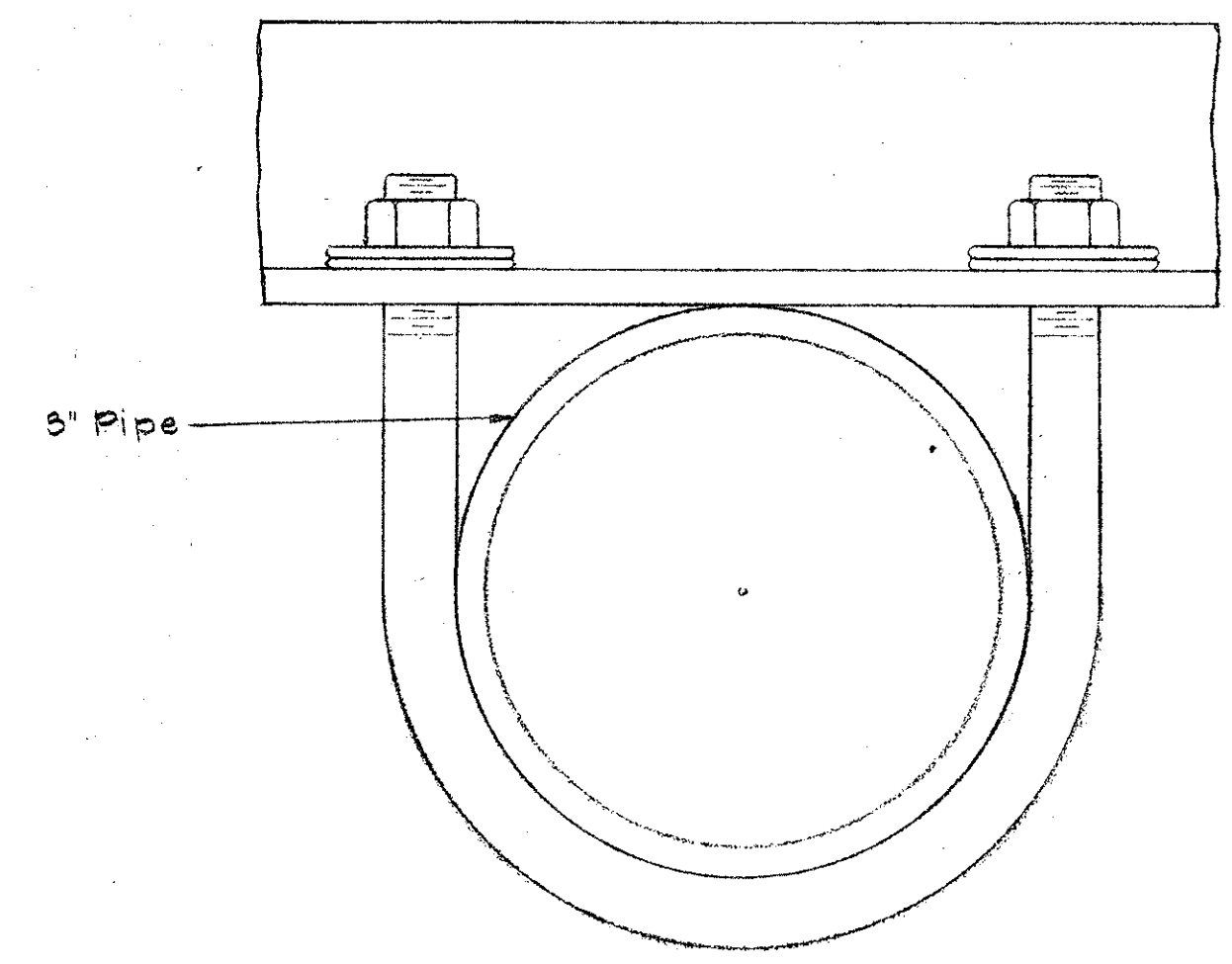


DETAIL "D"  
FULL SCALE



DETAIL "C"  
FULL SCALE

3/8" x 3/4" long rd. hd. galv. screw and hex. nut with galv. #20 gage washer with neoprene rubber gasket attached on face and galv. steel washer on back of sign.



NOTE:  
For height and lateral location of Route Marker Assembly, see Sheet No. 141.

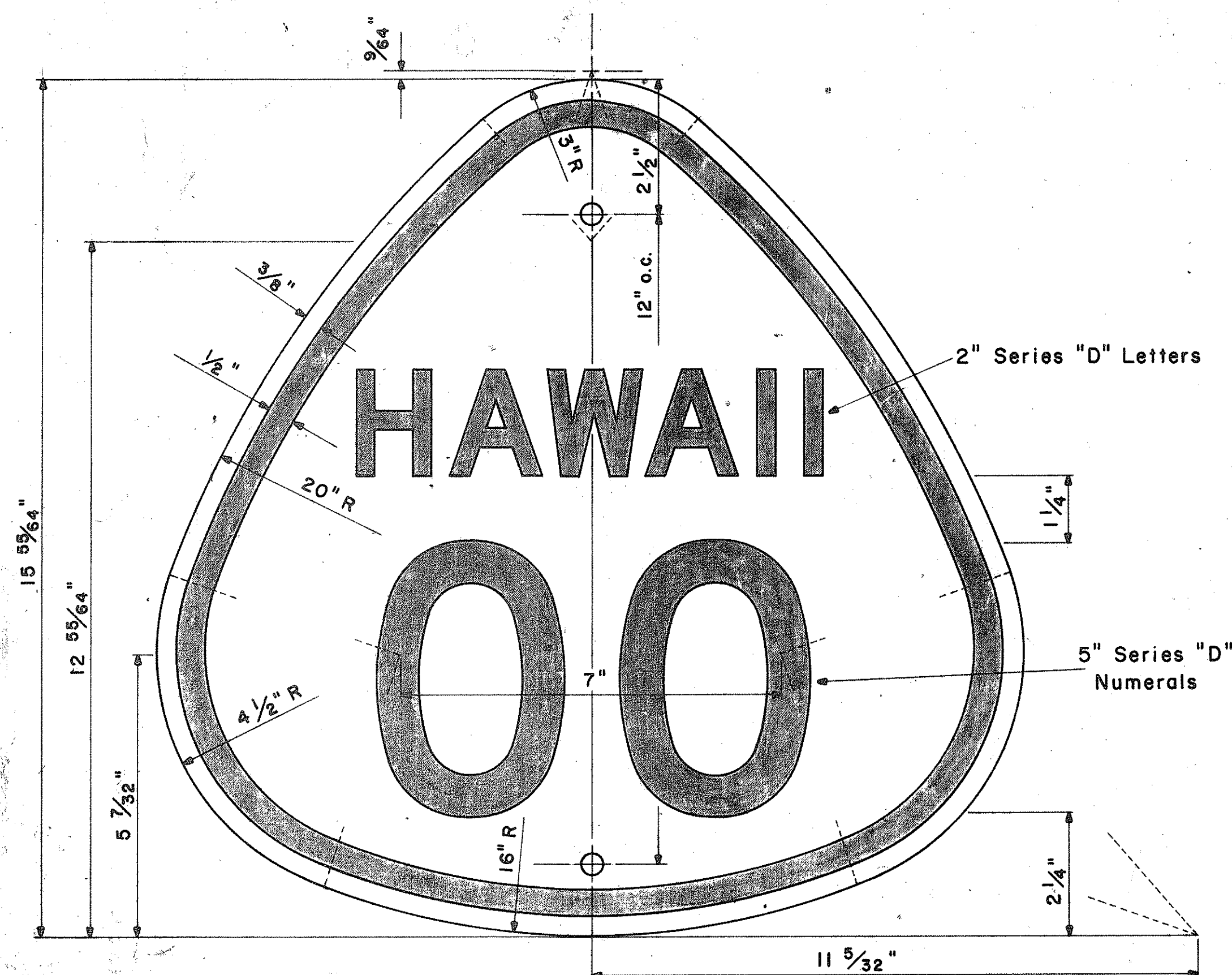
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL DETAILS  
ROUTE MARKER ASSEMBLY**

INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. I-HI-1(6) Unit 2

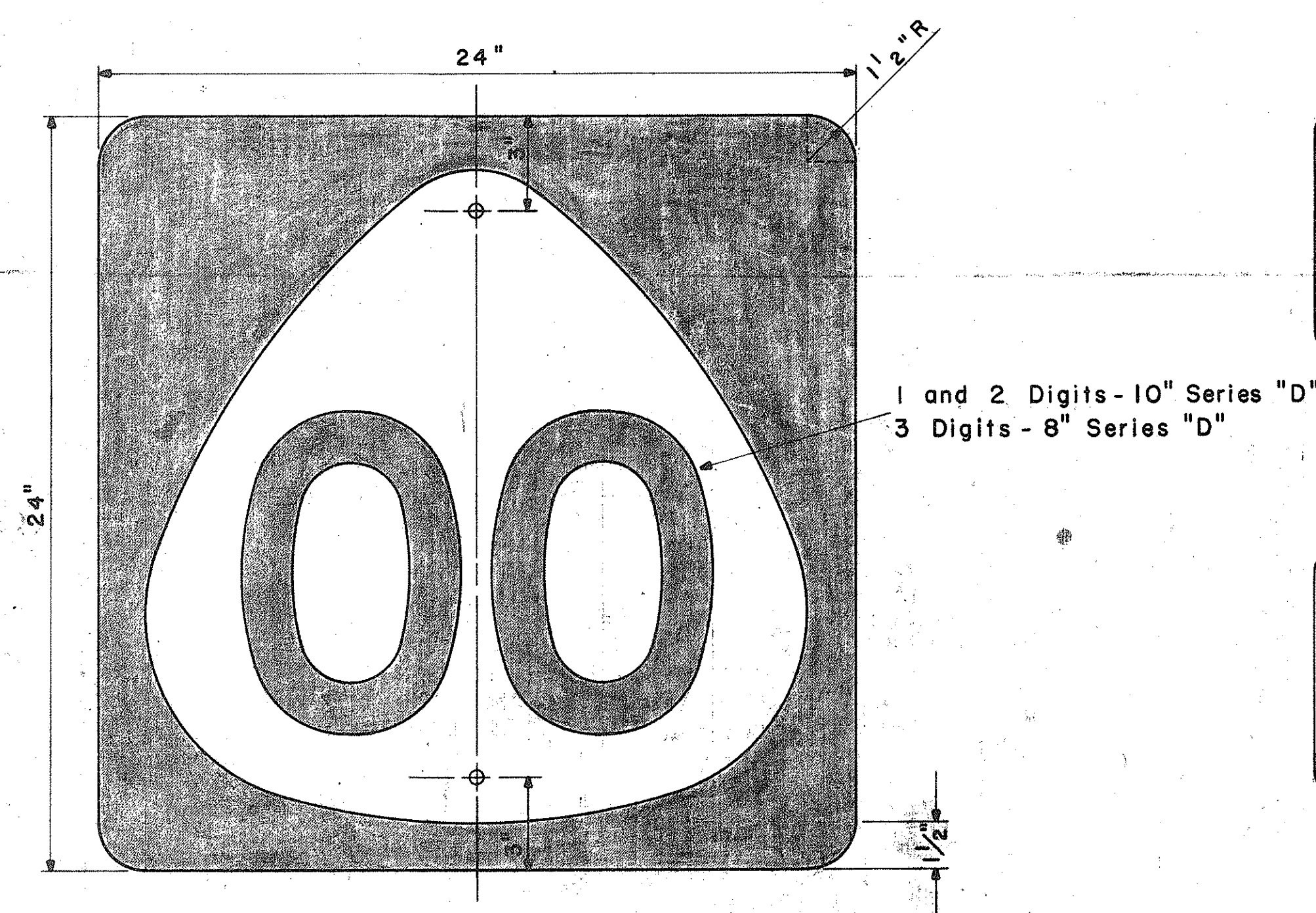
Scale as Noted January 1966

SHEET No. 13 OF 21 SHEETS



STATE ROUTE MARKER  
M1-3(OO)

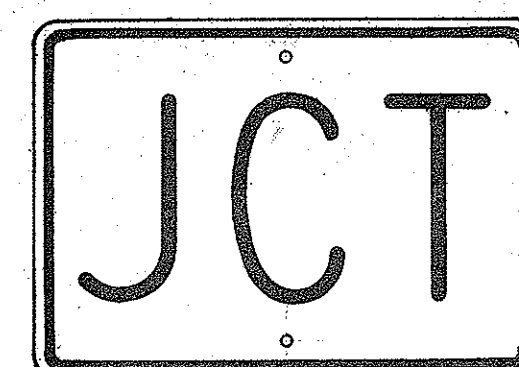
Scale:  $\frac{1}{2}$ " = 1"



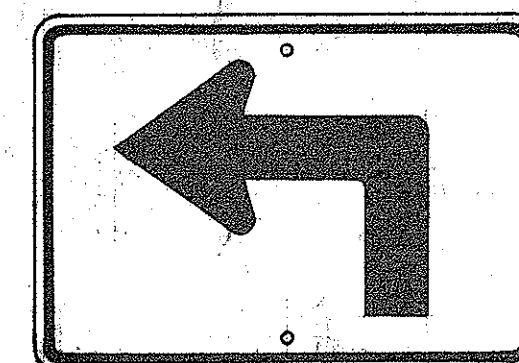
STATE ROUTE MARKER  
M1-4(OO)

Scale:  $\frac{1}{4}$ " = 1"

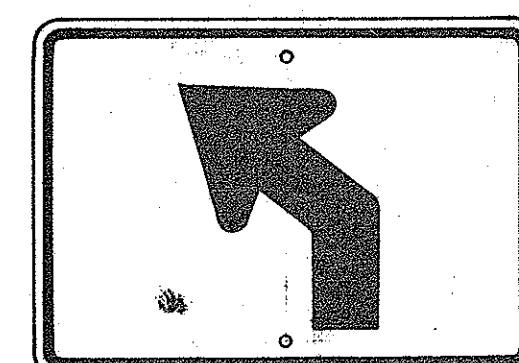
NOTE: Multiply all dimensions of State Route Marker M1-3 by 1.3 for the dimensions of the shield for M1-4.



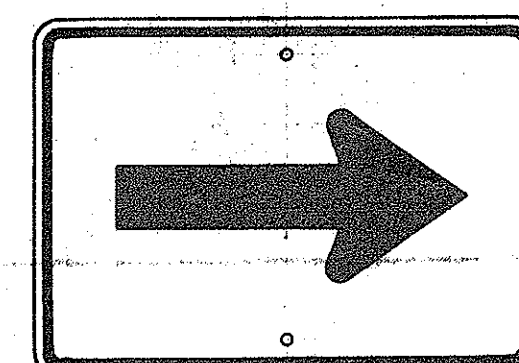
M2-1  
21" x 15"



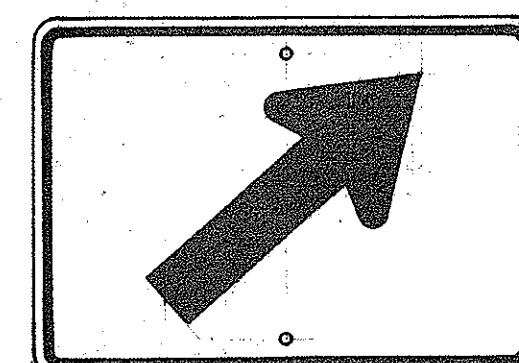
M3-1-L  
\* M3-1-R  
21" x 15"



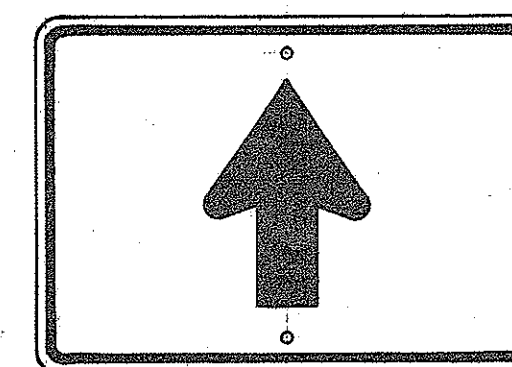
M3-2-L  
\* M3-2-R  
21" x 15"



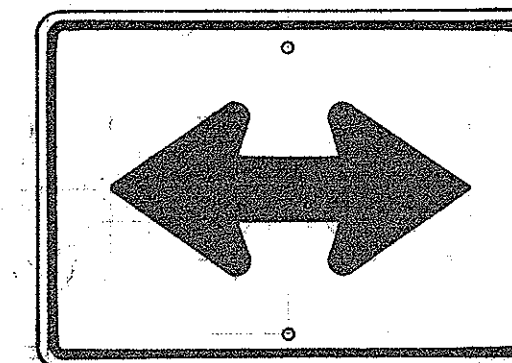
M4-1  
21" x 15"



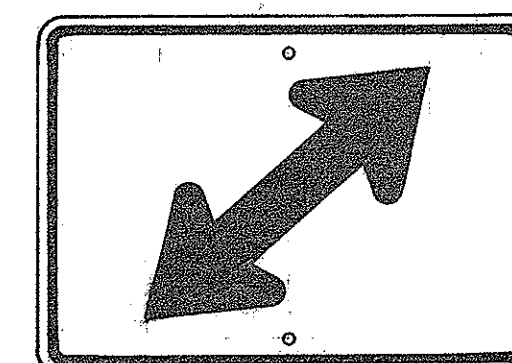
M4-2-R  
\* M4-2-L  
21" x 15"



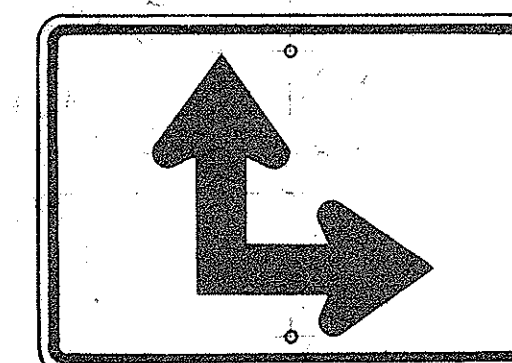
M4-3  
21" x 15"



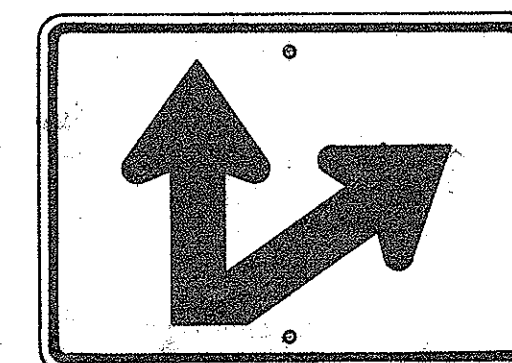
M4-4  
21" x 15"



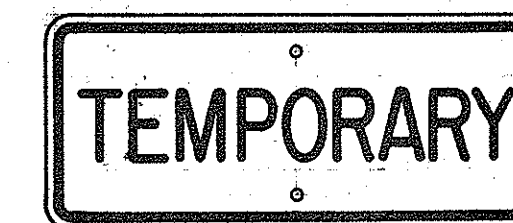
M4-5-R  
\* M4-5-L  
21" x 15"



M4-6-R  
\* M4-6-L  
21" x 15"



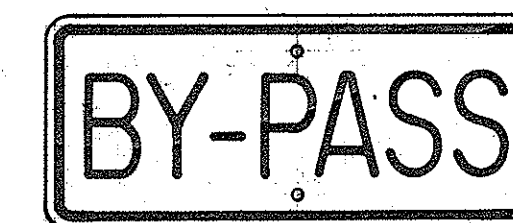
M4-7-R  
\* M4-7-L  
21" x 15"



M5-1  
21" x 9"



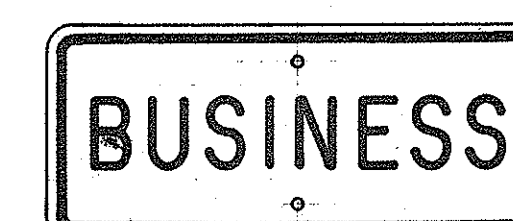
M5-2  
21" x 9"



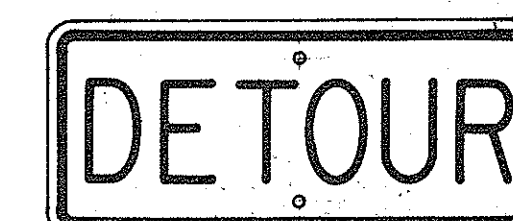
M5-3  
21" x 9"



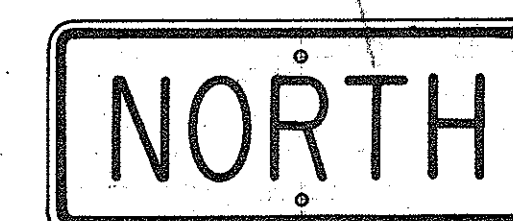
M5-4  
21" x 9"



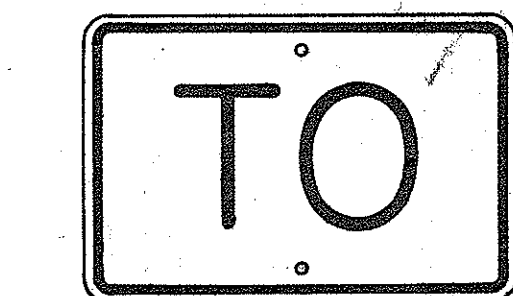
M5-5  
21" x 9"



M5-6  
21" x 9"



M6-1-N  
21" x 9"  
(See Note 6)



M7-1  
18" x 12"

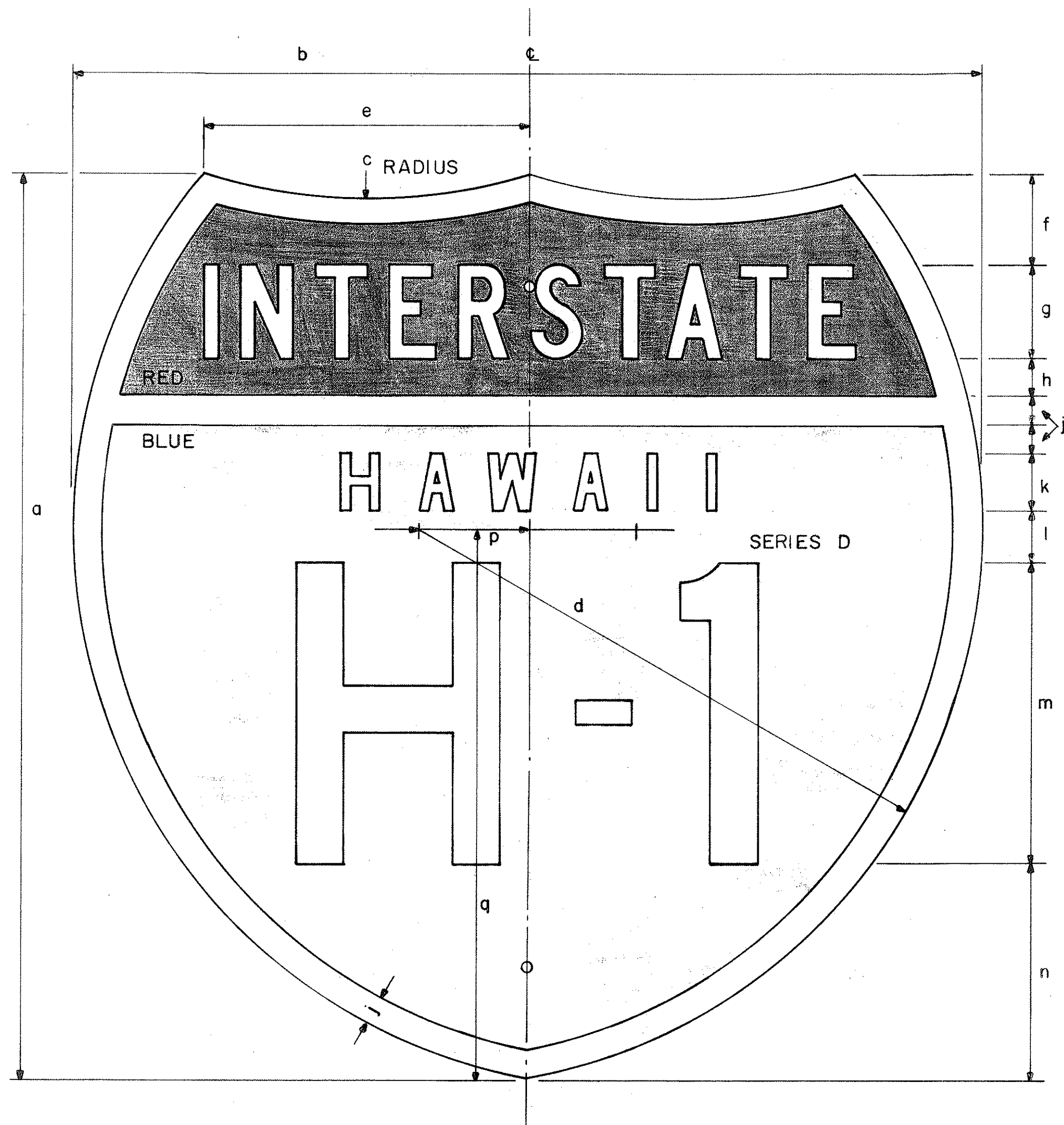
## GENERAL NOTES

- The shape, color, dimensions, symbols, wording, lettering and reflectorizing of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961, unless otherwise specified.
- All letters and figures shall conform to the manual "Standard Alphabets for Highway Signs," Dept. of Commerce, Bureau of Public Roads, 1952.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise specified.
- All markers shall have a black legend on a white background unless otherwise specified.
- Sign message of Cardinal Direction Marker (M6-1) shall be denoted by the following suffixes:  
M6-1-N : NORTH  
M6-1-E : EAST  
M6-1-S : SOUTH  
M6-1-W : WEST
- Auxiliary markers denoted with the suffix "I" (M4-1-I) shall have a white legend on a blue background.
- Cardinal Direction Marker (M6-1) with suffix I (3) shall have a white legend on a blue background and shall be 30" x 15" in size.
- For M1-3, and M1-4 signs, number in ( ) indicates route number and shall be as shown on the plan.

## AUXILIARY MARKERS

Scale:  $\frac{1}{8}$ " = 1"

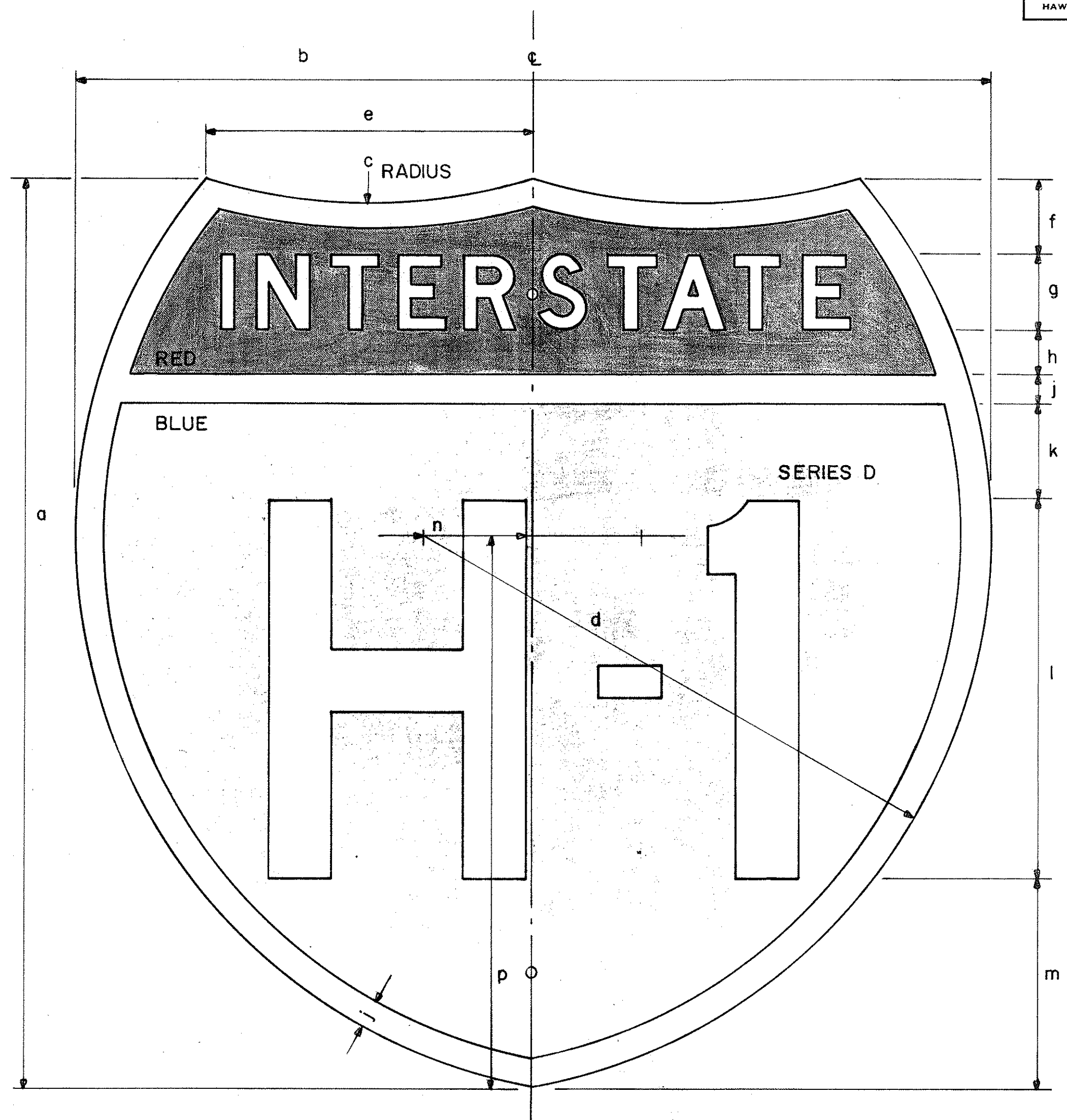
\* NOTE: Signs shall be similar but opposite in direction.



INTERSTATE ROUTE MARKER  
IM-1 ( )

INTERSTATE SHIELDS - INDEPENDENT USE

| ( ) | a  | b  | c      | d       | e        | f       | g       | h     | j     | k       | l      | m  | n      | p      | q        |
|-----|----|----|--------|---------|----------|---------|---------|-------|-------|---------|--------|----|--------|--------|----------|
| 1   | 18 | 21 | 13 1/8 | 12 9/16 | 9 3/16   | 1 25/32 | 1 7/8 C | 3/4   | 9/16  | 1 1/8 D | 1 1/32 | 6  | 4 5/16 | 2 1/16 | 12 7/16  |
| 2   | 24 | 24 | 15     | 14 7/8  | 8 5/8    | 2 3/8   | 2 1/2 C | 1     | 3/4   | 1 1/2 D | 1 3/8  | 8  | 5 3/4  | 2 7/8  | 14 5/8   |
| 3   | 36 | 36 | 22 1/2 | 22 5/16 | 12 15/16 | 3 9/16  | 3 3/4 C | 1 1/2 | 1 1/8 | 2 1/4 D | 2 1/16 | 12 | 8 5/8  | 4 5/16 | 21 15/16 |



INTERSTATE ROUTE MARKER  
IM-2 ( )

INTERSTATE SHIELDS ON GUIDE SIGNS

| ( ) | a  | b  | c      | d       | e        | f      | g   | h      | j     | k      | l  | m      | n      | p        |
|-----|----|----|--------|---------|----------|--------|-----|--------|-------|--------|----|--------|--------|----------|
| 2   | 24 | 24 | 15     | 14 7/8  | 8 5/8    | 2      | 2 D | 1 3/16 | 3/4   | 2 9/16 | 10 | 5 1/2  | 2 7/8  | 14 5/8   |
| 3   | 36 | 36 | 22 1/2 | 22 5/16 | 12 15/16 | 3 7/16 | 3 C | 1 5/16 | 1 1/8 | 3 1/8  | 15 | 9      | 4 5/16 | 21 15/16 |
| 4   | 48 | 48 | 30     | 29 3/4  | 17 1/4   | 4 3/4  | 5 C | 2      | 1 1/2 | 4      | 18 | 12 3/4 | 5 3/4  | 29 1/4   |

#### GENERAL NOTES

- The shape, color, dimensions, symbols, wording, lettering and reflectorizing of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961, unless otherwise specified.
- All letters and figures shall conform to the manual "Standard Alphabets for Highway Signs," Dept. of Commerce, Bureau of Public Roads, 1952.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.
- The Interstate Route Marker shall be a cut-out shield, in a red, white and blue design as shown on the plans.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
STANDARD DETAILS  
INTERSTATE ROUTE MARKERS

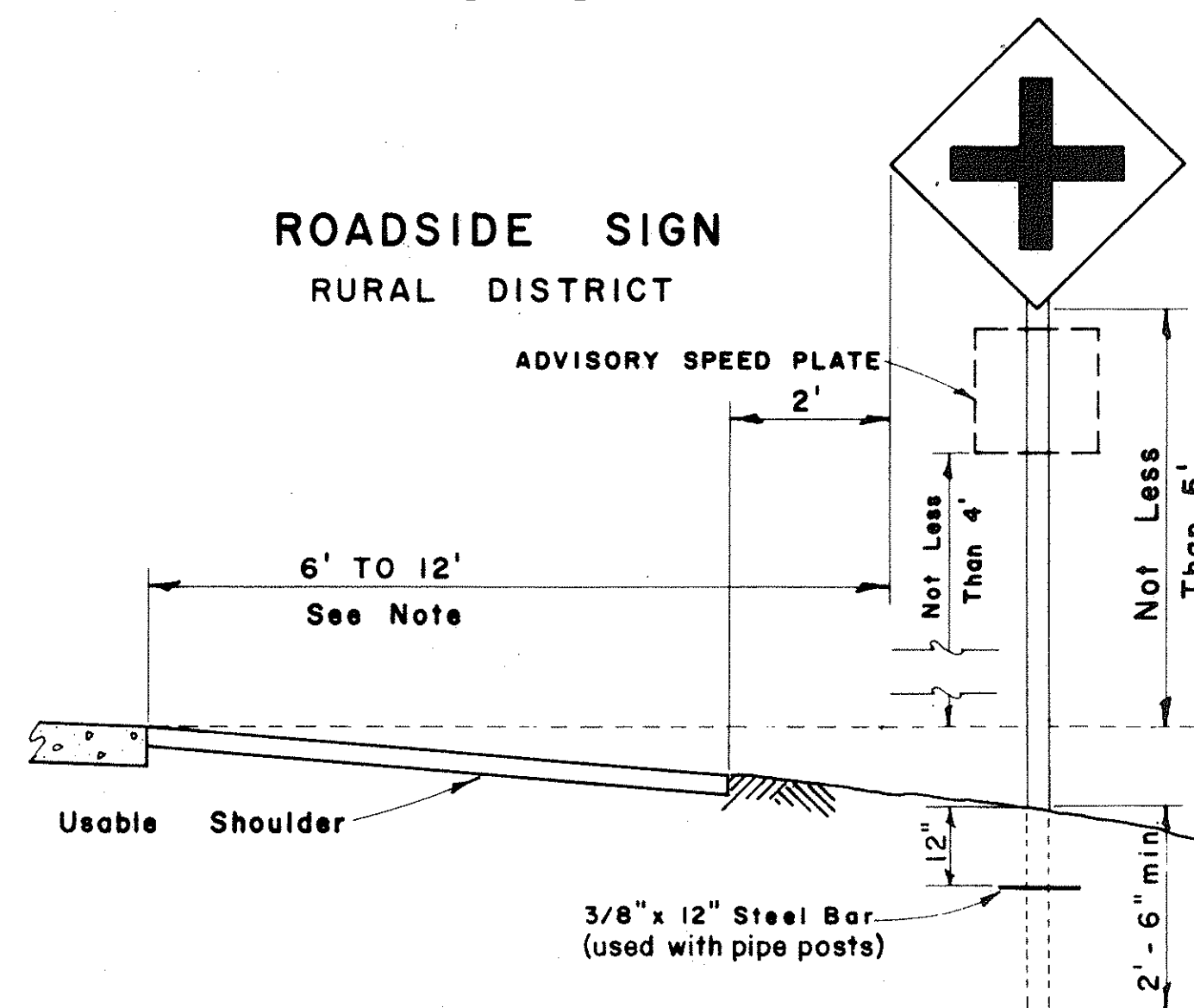
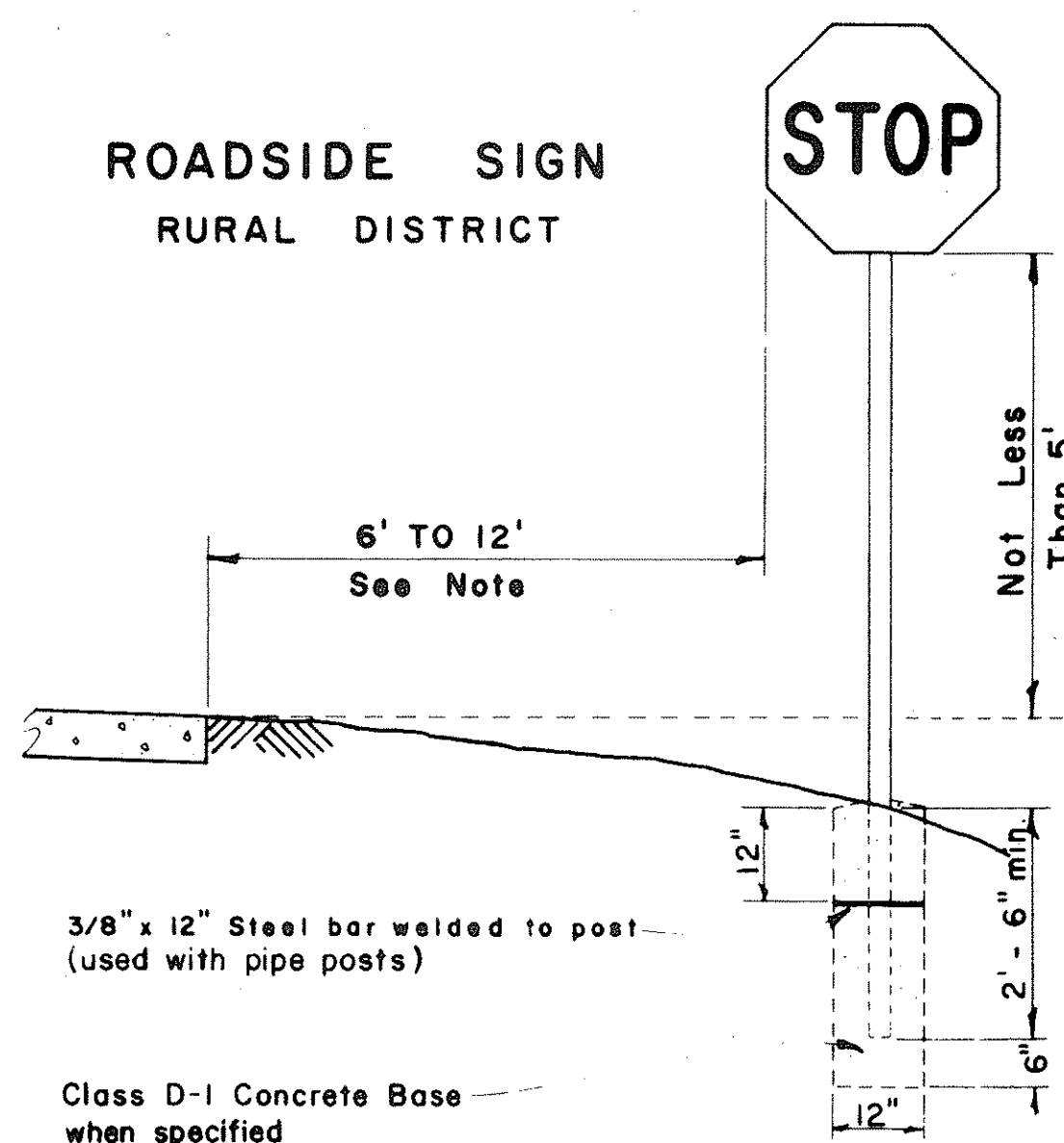
No Scale

SHEET NO 14 OF 21 SHEETS

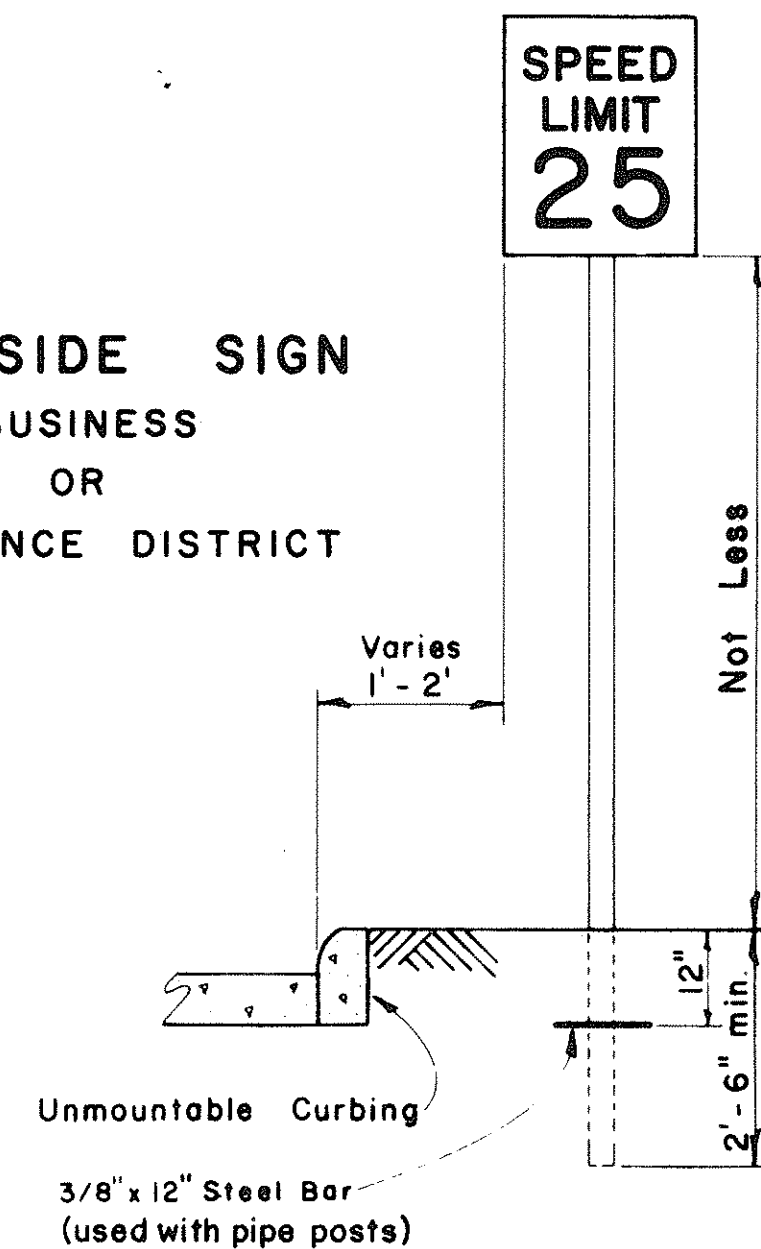
11 41 00

STUDY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
NOTE BOOK \_\_\_\_\_  
No. \_\_\_\_\_

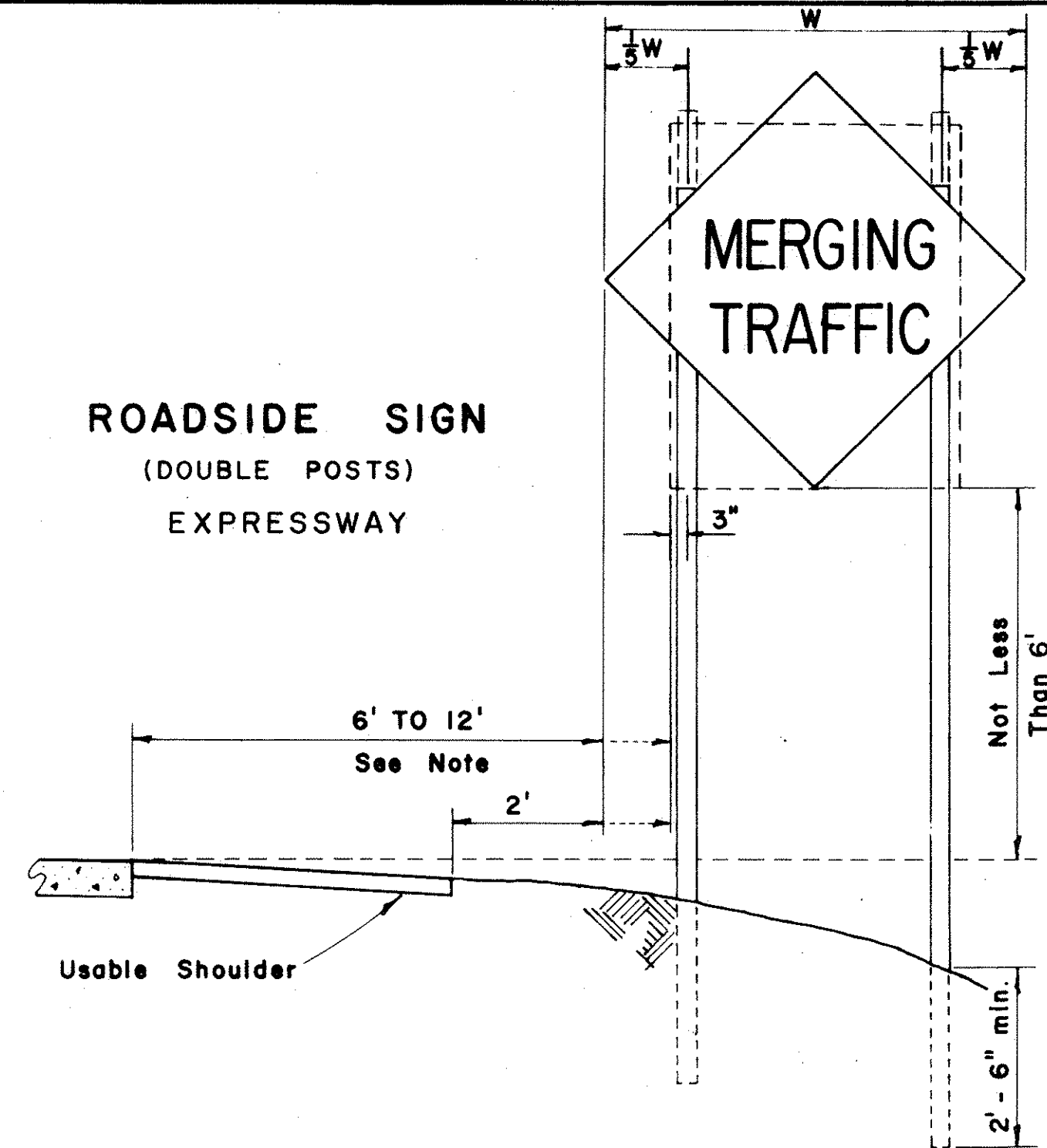
- NOTE:
- All signs and road delineators shall be placed 2' outside the usable roadway shoulder or 1' outside unmountable curbing present and within the limits shown below.
  - Except as noted below, sign posts shall be either 3" galv. std. pipe or 2 1/2" x 2 1/2" galv. square tube posts for signs larger than 24" in any dimension; 2" galv. std. pipe or 2" x 2" galv. square tube posts for signs 24" or less in any dimension.
  - Sign shall be attached to post with 5/8" galv. carriage bolts with nuts and 7/8" x 7/8" x .120" stainless-steel washers with neoprene rubber gasket.
  - Clearance Markers (RM-3, RM-4) shall be installed with the inside edge of the marker in line with the inner edge of the obstruction.
  - Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 3" galv. std. pipe or two 2 1/2" x 2 1/2" galv. square tube posts.



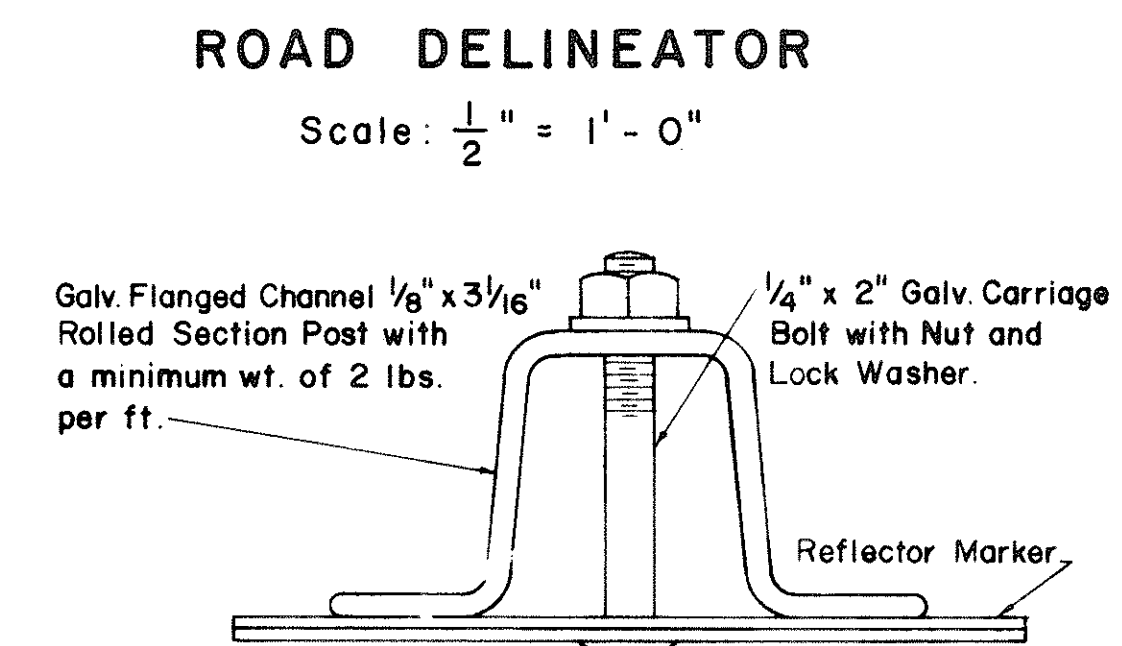
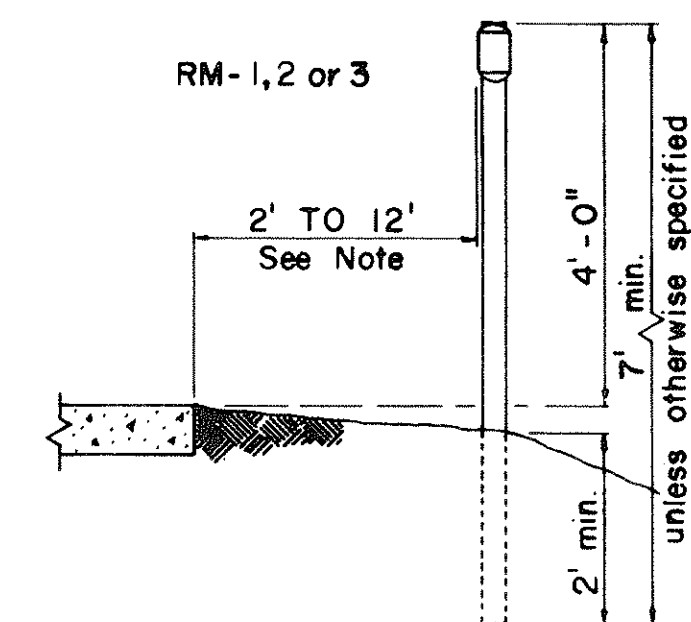
**ROADSIDE SIGN**  
BUSINESS  
OR  
RESIDENCE DISTRICT



**ROADSIDE SIGN**  
(DOUBLE POSTS)  
EXPRESSWAY

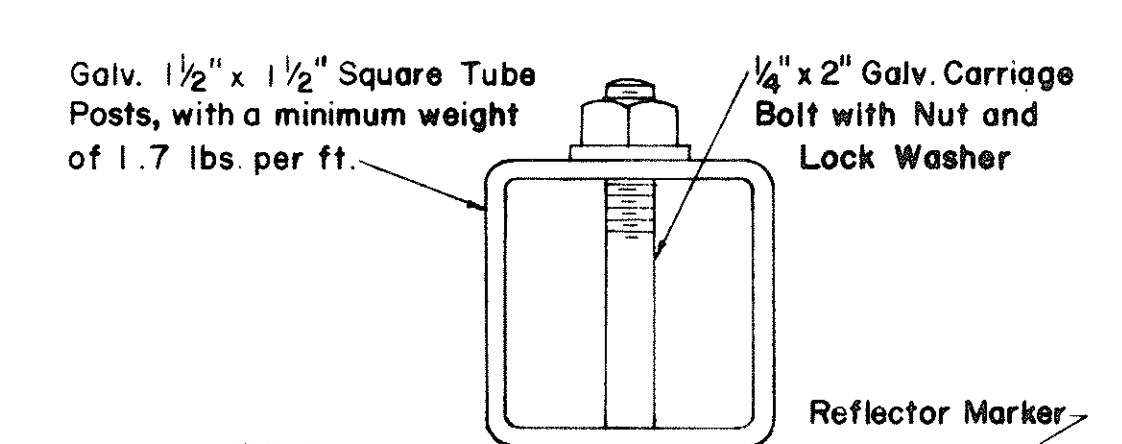
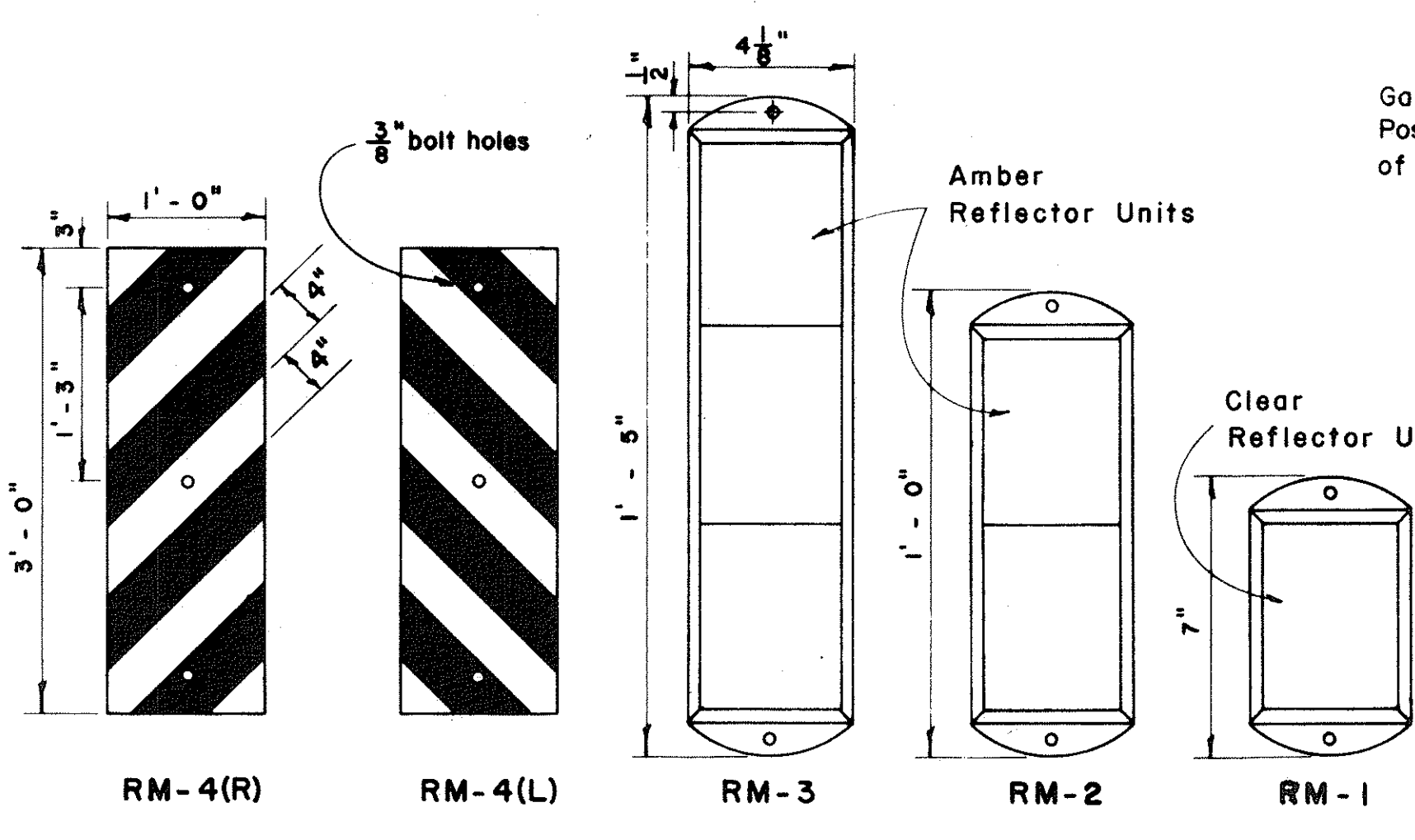
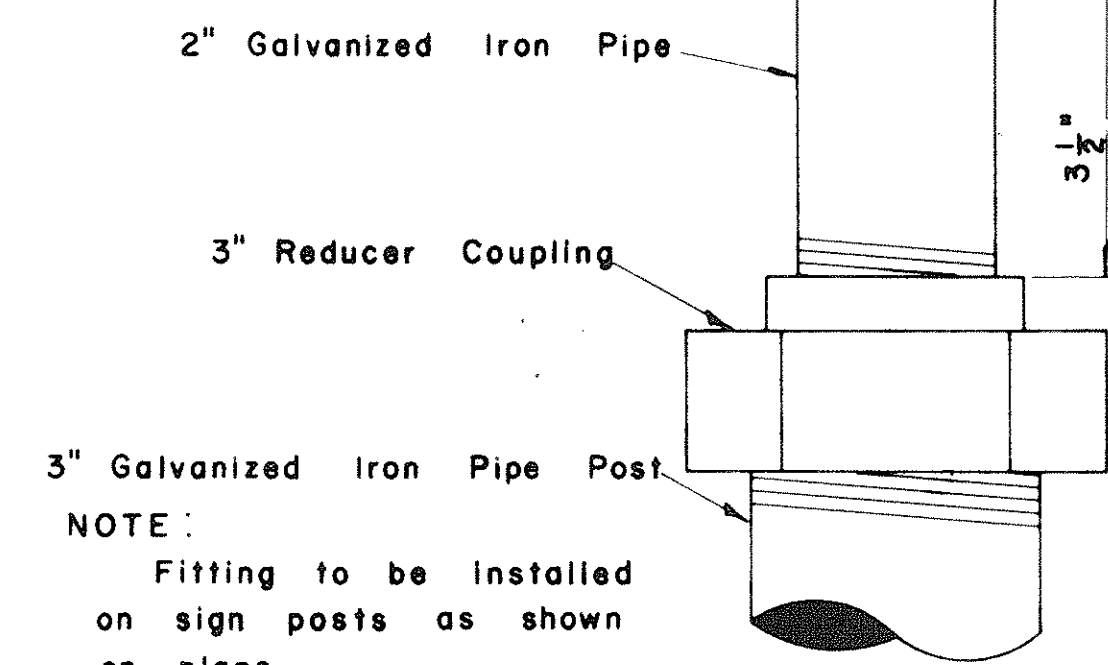
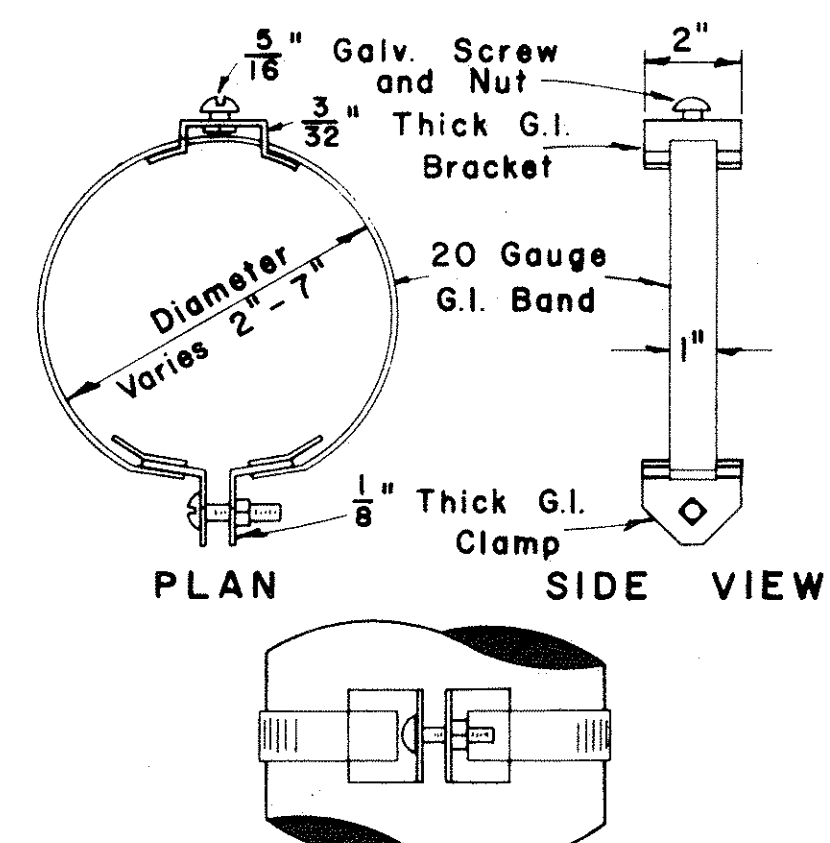
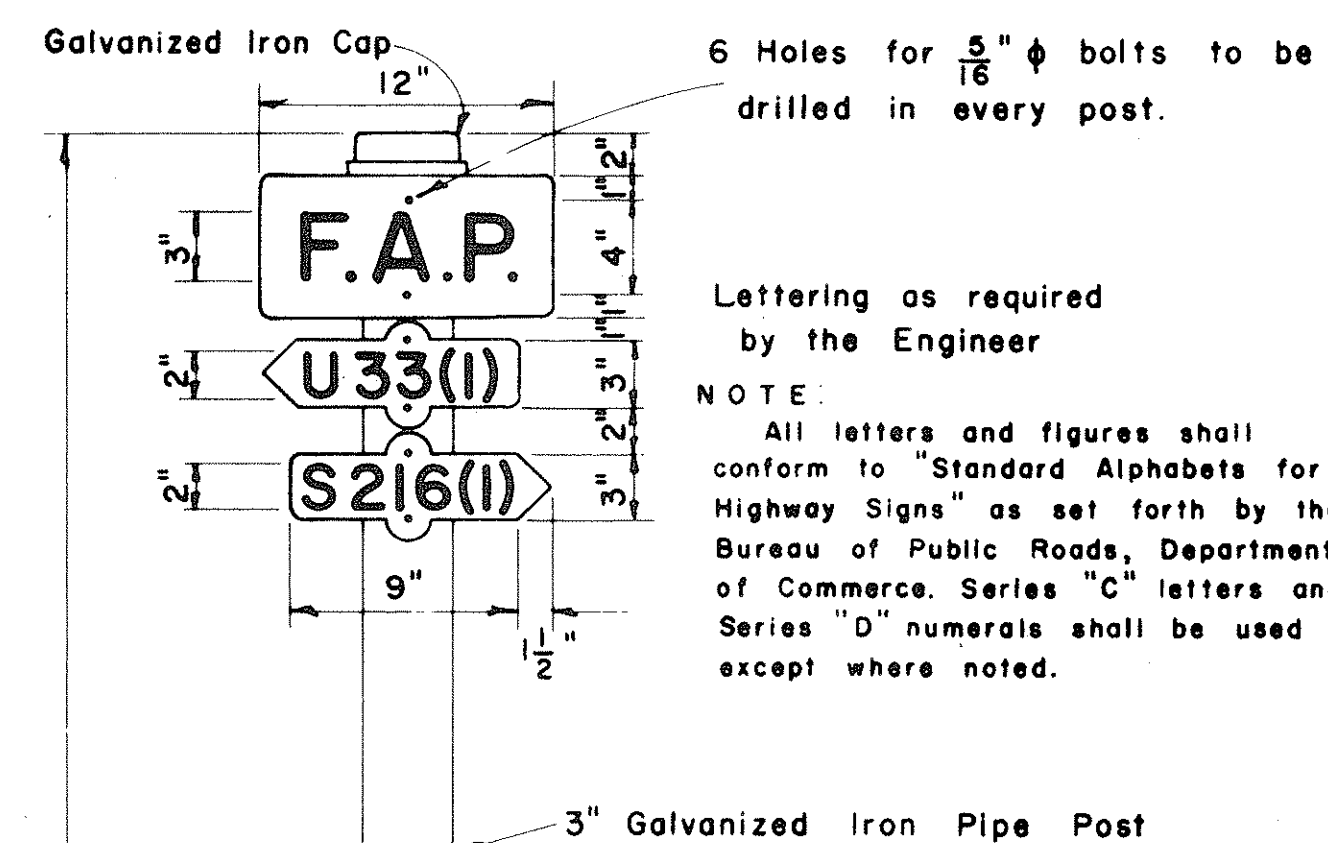


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(6) UNIT 2   | 1966        | 141       | 209          |



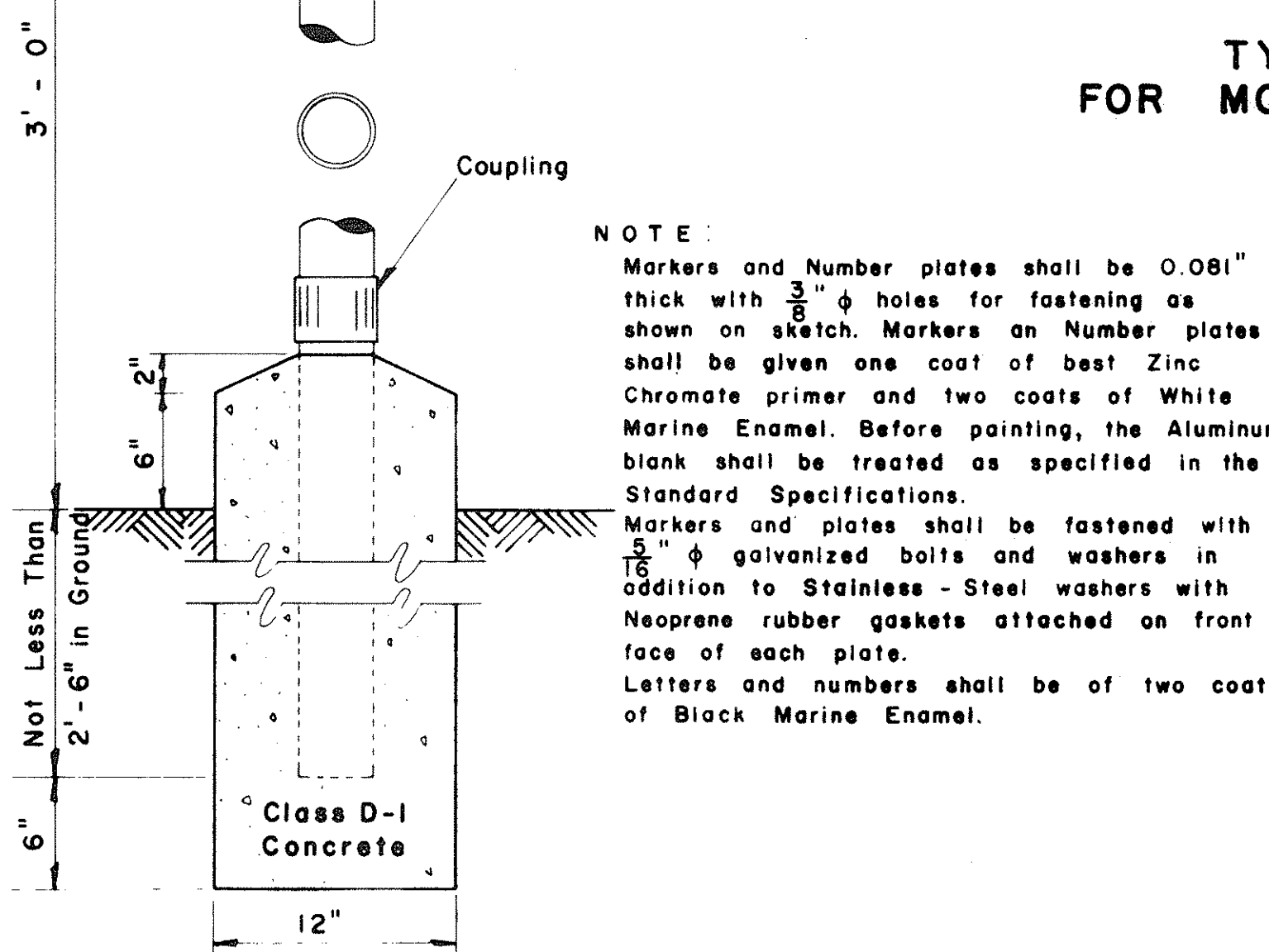
## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS

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

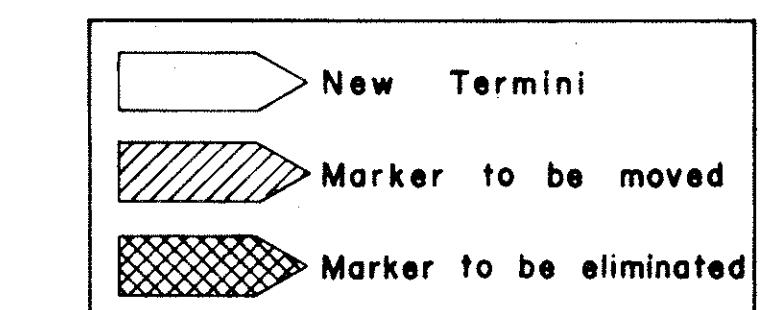
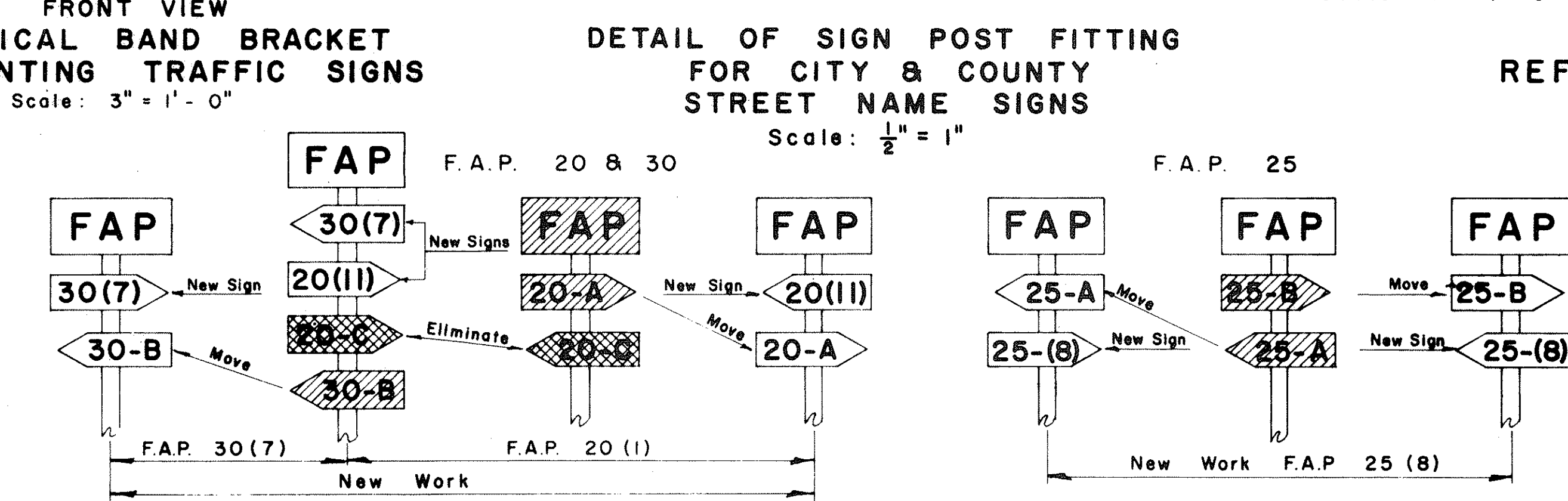


## TYPICAL SECTION OF ROAD DELINEATOR

NOTE: Reflector Markers RM-1,2,3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.



NOTE: Markers and Number plates shall be 0.081" thick with 3/8" holes for fastening as shown on sketch. Markers and Number plates shall be given one coat of best Zinc Chromate primer and two coats of White Marine Enamel. Before painting, the Aluminum blank shall be treated as specified in the Standard Specifications. Markers and plates shall be fastened with 5/16" galvanized bolts and washers in addition to Stainless-Steel washers with Neoprene rubber gaskets attached on front face of each plate. Letters and numbers shall be of two coats of Black Marine Enamel.



APPROVED: \_\_\_\_\_ DATE: 1/1/67

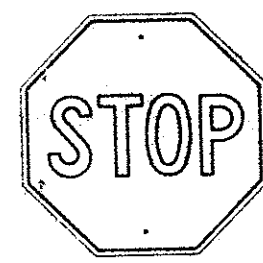
DIRECTOR OF TRANSPORTATION

DECEMBER 8, 1964  
REVISED: FEBRUARY 25, 1964

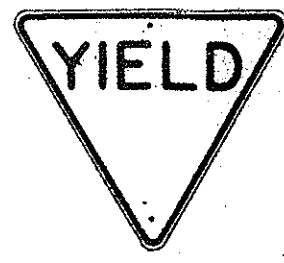
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD DETAILS**  
F.A. MARKER  
AND  
MISCELLANEOUS SIGN  
DETAILS  
Scale: As Shown

SHEET No. 16 OF 21 SHEETS

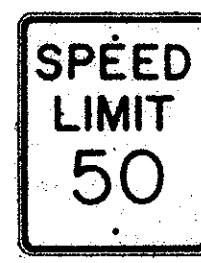
11411



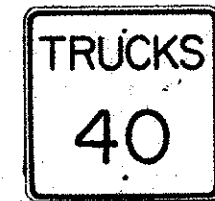
R1-1 30"x 30"



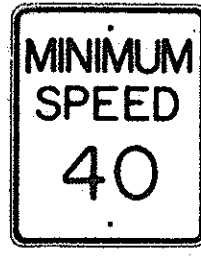
R1-2 36"x 36"x 36"  
R1-2-E 48"x 48"x 48"  
R1-2-I 60"x 60"x 60"



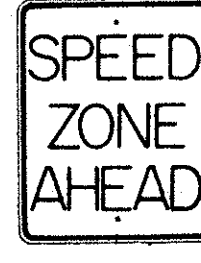
R2-1(50) 24"x 30"  
R2-1(50)-E 36"x 48"  
R2-1(50)-I 48"x 60"



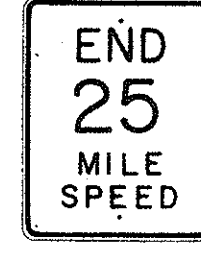
R2-2(40) 24"x 24"  
R2-2(40)-E 36"x 36"  
R2-2(40)-I 48"x 48"



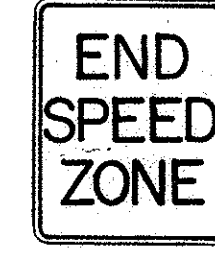
R2-4(40) 24"x 30"  
R2-4(40)-E 36"x 48"  
R2-4(40)-I 48"x 60"



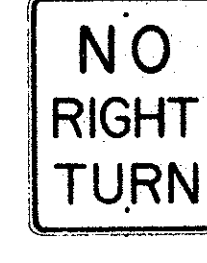
R2-5 24"x 30"  
R2-5-E 36"x 48"  
R2-5-I 48"x 60"



R2-6(25) 24"x 30"  
R2-6(25)-E 36"x 48"  
R2-6(25)-I 48"x 60"



R2-7 24"x 30"  
R2-7-E 36"x 48"  
R2-7-I 48"x 60"



R3-1 24"x 30"  
R3-1-E 36"x 48"



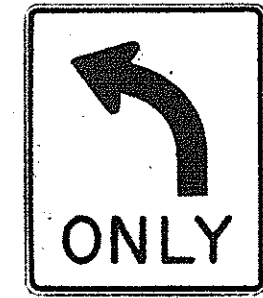
R3-2 24"x 30"  
R3-2-E 36"x 48"



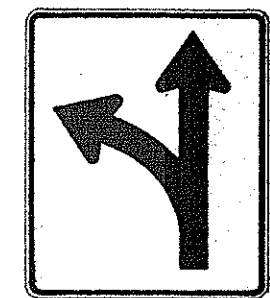
R3-3 24"x 24"



R3-4 24"x 30"  
R3-4-E 36"x 48"  
R3-4-I 48"x 60"



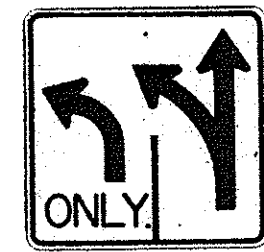
R3-5(L) 30"x 36"



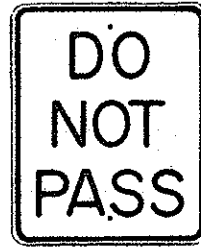
R3-6(L) 30"x 36"



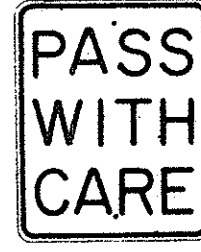
R3-7(R) 30"x 30"



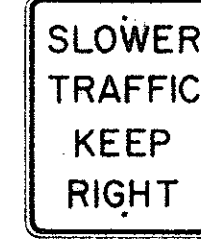
R3-8(L) 30"x 30"



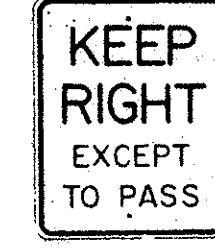
R4-1 24"x 30"



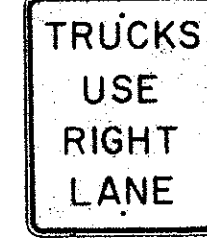
R4-2 24"x 30"



R4-3 24"x 30"  
R4-3-E 36"x 48"  
R4-3-I 48"x 60"



R4-4 24"x 30"  
R4-4-E 36"x 48"  
R4-4-I 48"x 60"



R4-5 24"x 30"  
R4-5-E 36"x 48"



R4-6 24"x 30"  
R4-6-E 36"x 48"



R4-7(R) 24"x 30"  
R4-7(R)-E 36"x 48"



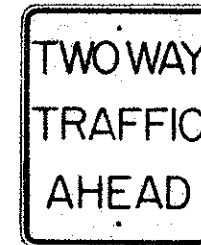
R5-1 24"x 24"



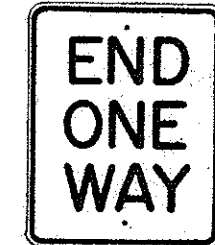
R6-1(R) 36"x 12"



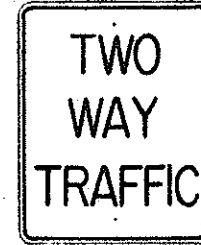
R6-2(R) 18"x 24"



R6-3 24"x 30"



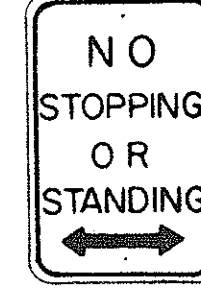
R6-4 24"x 30"



R6-5 24"x 30"



R7-1 12"x 18"



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



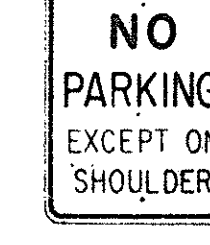
R7-107(R) 12"x 18"



R7-201 12"x 6"



R8-1 24"x 30"  
R8-1-E 36"x 48"  
R8-1-I 48"x 60"



R8-2 24"x 30"  
R8-2-E 36"x 48"



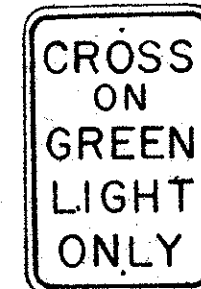
R8-3 24"x 30"  
R8-3-E 36"x 48"



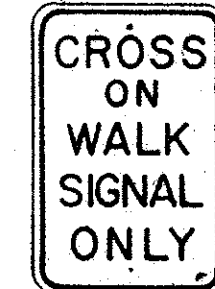
R8-4 24"x 30"  
R8-4-E 36"x 48"  
R8-4-I 48"x 36"



R9-1 18"x 24"



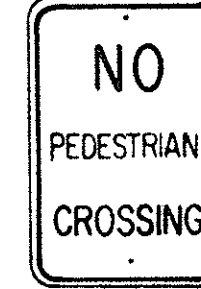
R9-2 12"x 18"



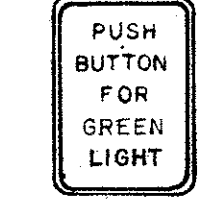
R9-3 12"x 18"



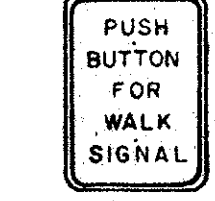
R9-4 12"x 18"



R9-5 12"x 18"



R9-6 9"x 12"



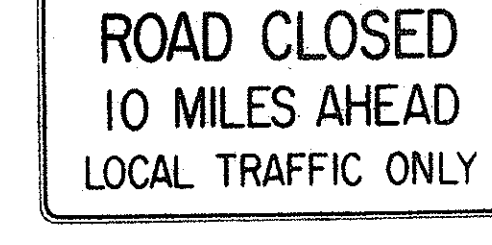
R9-7 9"x 12"



RIO-1 24"x 30"  
RIO-1-E 36"x 48"  
RIO-1-I 48"x 60"



RIO-2 48"x 30"



RIO-3(10) 60"x 30"



RIO-4(10) 18"x 24"

NOTE:

- The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
- The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
- For R2 signs, number in ( ) indicates speed and shall be as shown on the plans.
- (R) or (L) indicates right or left and shall be as shown on the plans.
- For RIO-4 sign, number in ( ) indicates weight and shall be as shown on the plan.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
REGULATORY SIGNS

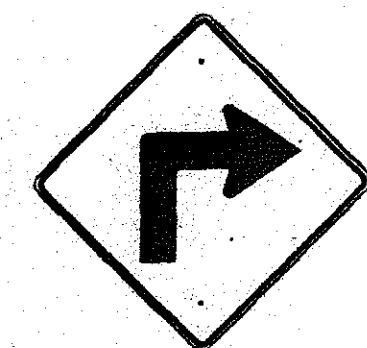
NOT TO SCALE

SHEET No. 17 OF 21 SHEETS

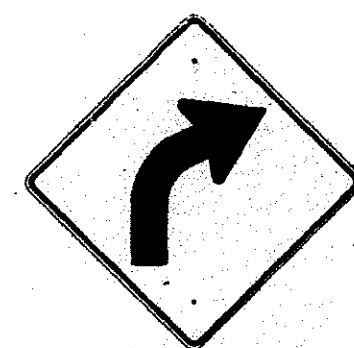
142

|             |      |
|-------------|------|
| DESIGNED BY | DATE |
| DRAWN BY    | " "  |
| TRACED BY   | " "  |
| NOTED BY    | " "  |
| CHECKED BY  | " "  |
| NO.         |      |

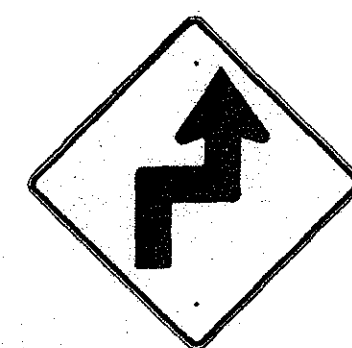
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 5-HW(6) UNIT 2     | 1960        | 143       | 203          |



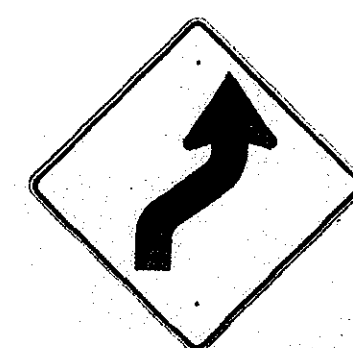
W1-1(R) 30" x 30"



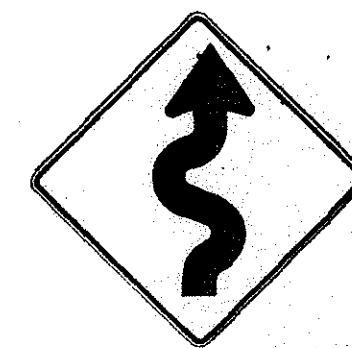
W1-2(R) 30" x 30"



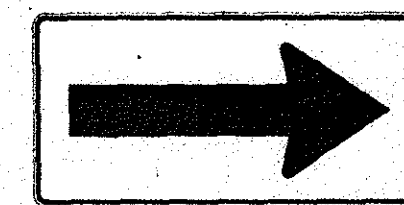
W1-3(R) 30" x 30"



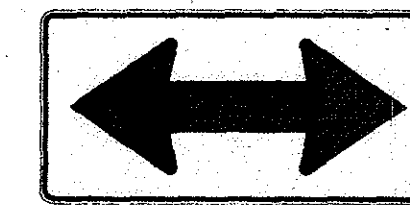
W1-4(R) 30" x 30"



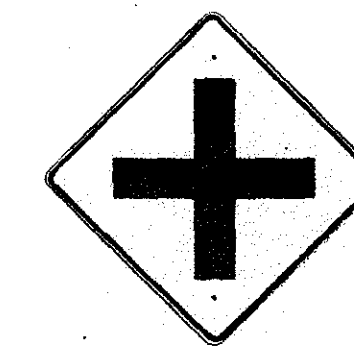
W1-5(R) 30" x 30"



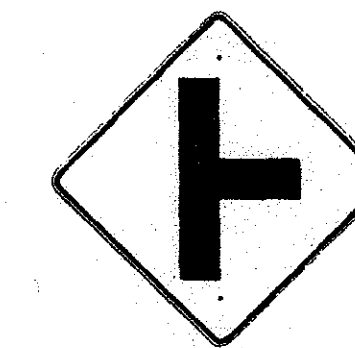
W1-6 48" x 24"



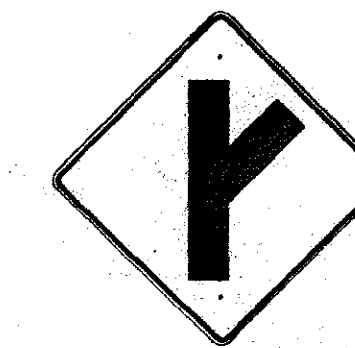
W1-7 48" x 24"



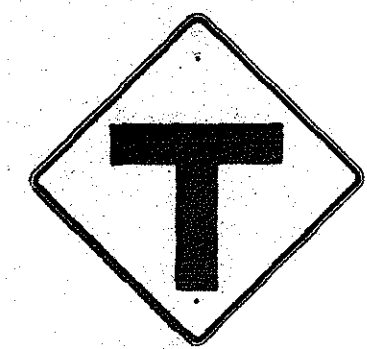
W2-1 30" x 30"



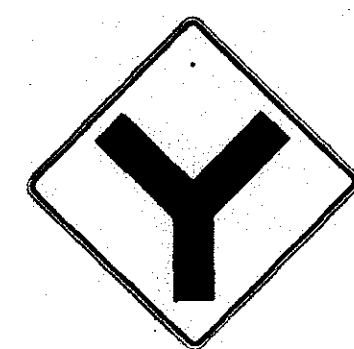
W2-2 30" x 30"



W2-3(R) 30" x 30"



W2-4 30" x 30"



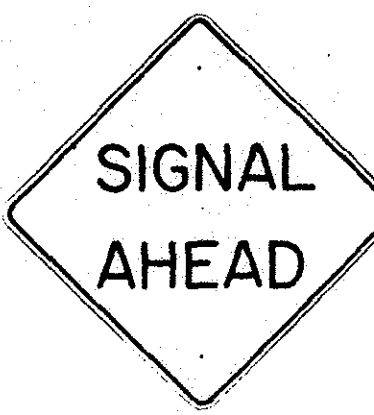
W2-5 30" x 30"



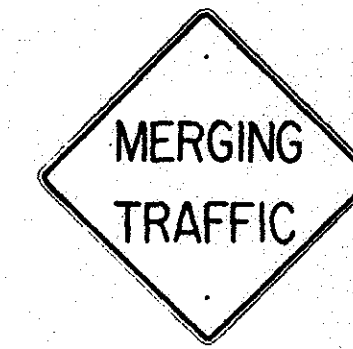
W3-1 30" x 30"



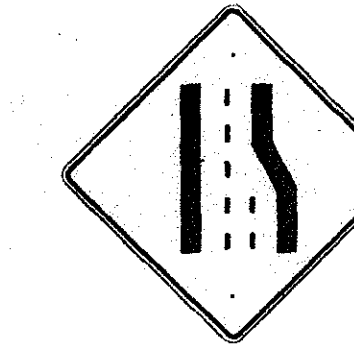
W3-2 30" x 30"



W3-3 36" x 36"



W4-1 30" x 30"  
W4-1-E 36" x 36"  
W4-1-I 48" x 48"



W4-2 30" x 30"  
W4-2-E 36" x 36"



W5-1 30" x 30"  
W5-1-E 36" x 36"



W5-2 30" x 30"



W5-3 30" x 30"



W6-1 36" x 36"



W6-2 36" x 36"



W7-1 30" x 30"



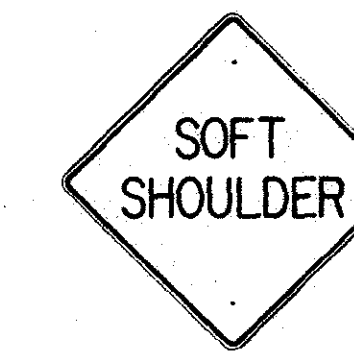
W8-1 30" x 30"



W8-2 30" x 30"



W8-3 30" x 30"



W8-4 30" x 30"



W8-5 30" x 30"



W9-1 30" x 30"



W9-2 30" x 30"



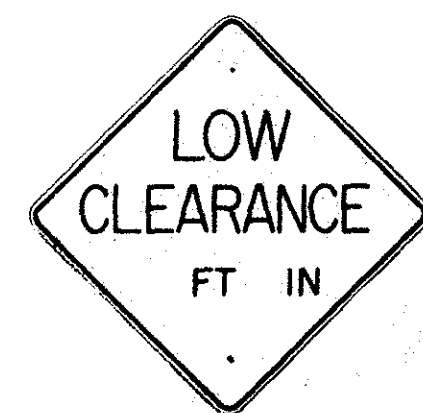
W10-1 36" DIAMETER



W11-1 30" x 30"



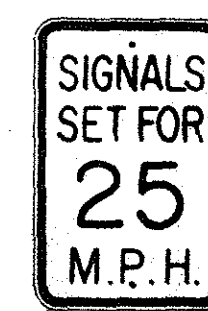
W11-5 30" x 30"



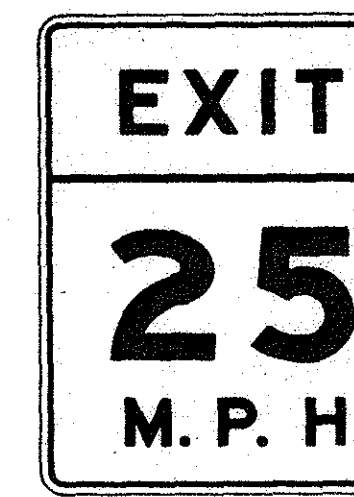
W12-2 36" x 36"



W13-1(35) 18" x 18"



W13-2(25) 12" x 18"



W13-3(25)-1 48" x 60"

NOTE:

1. The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
2. All warning signs shall be reflectorized unless otherwise specified.
3. All warning signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
4. (R) or (L) indicates right or left and shall be as shown on the plan.
5. The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
6. For W13 sign, number in ( ) indicates speed and shall be as shown on the plans.

|               |                  |      |
|---------------|------------------|------|
| ORIGINAL PLAN | SHEET PLOTTED BY | DATE |
| NOTED BY      | DRAWN BY         | " "  |
| DESIGNED BY   | CHECKED BY       | " "  |
| NO.           |                  | " "  |

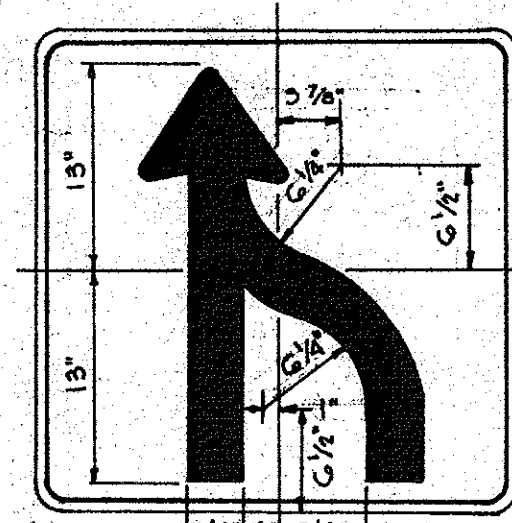
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
**WARNING SIGNS**

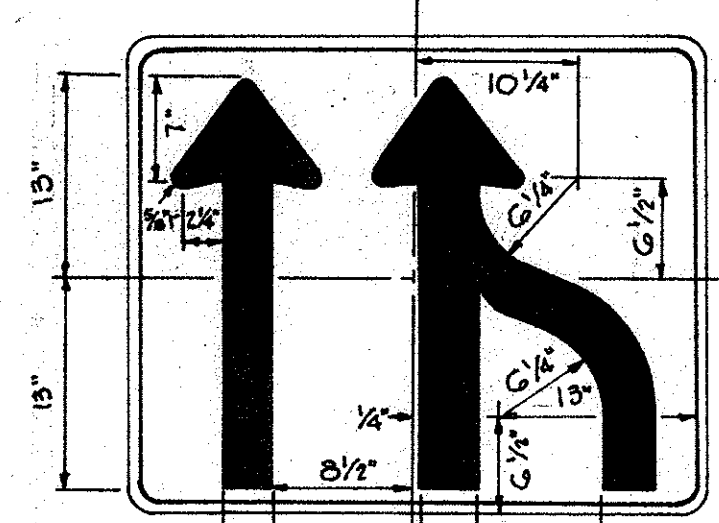
NOT TO SCALE

SHEET No. 18 OF 21 SHEETS

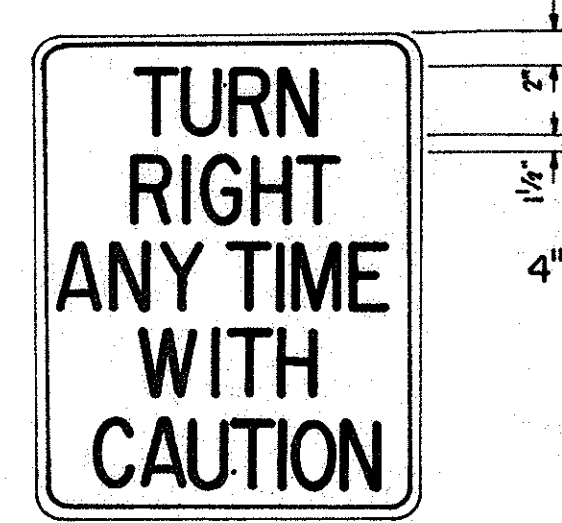
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 1-1-10             | 1966        | 144       | 203          |



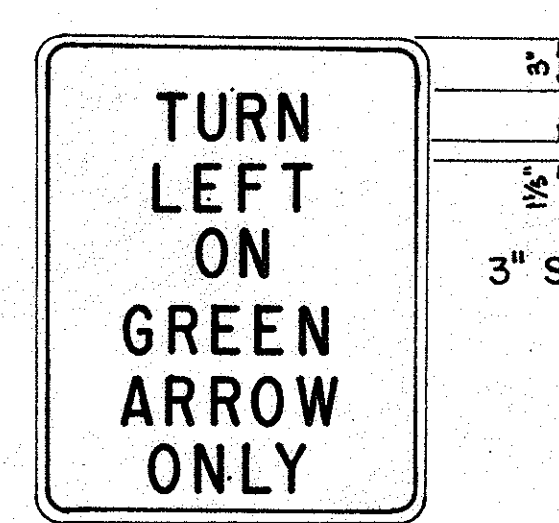
R3 - 9 30" x 30"



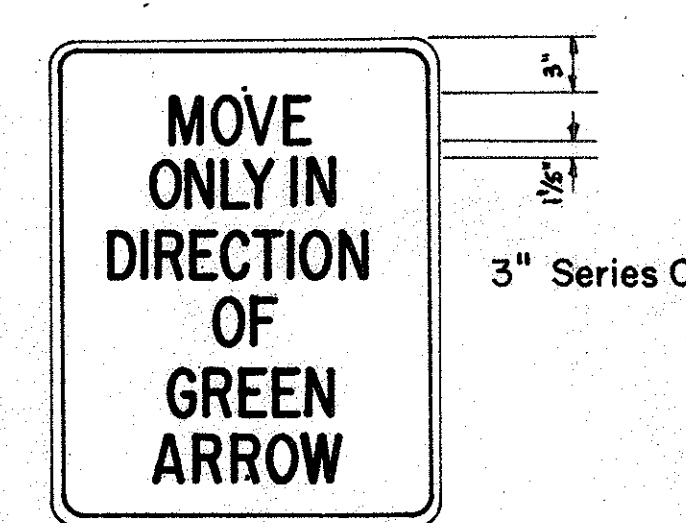
R3-10 36" x 30"



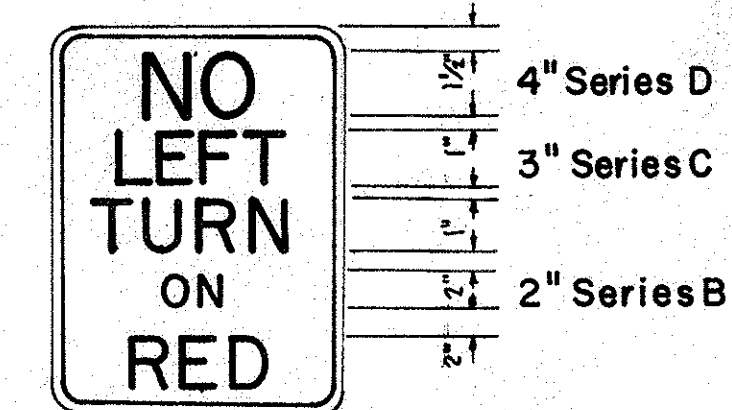
R15 - 1 24" x 30"



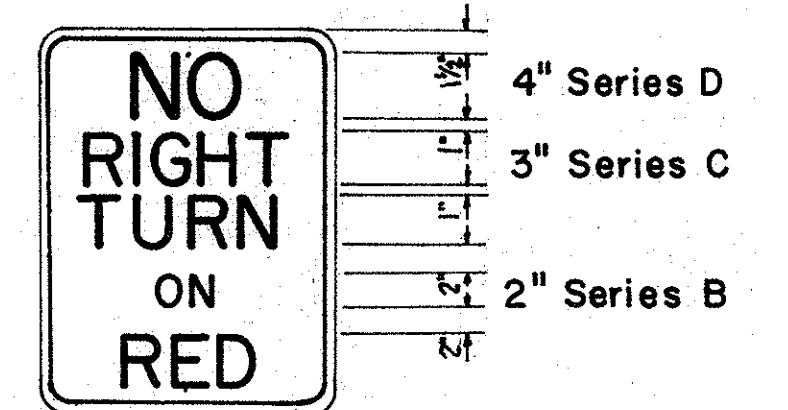
R16 - 1 24" x 30"



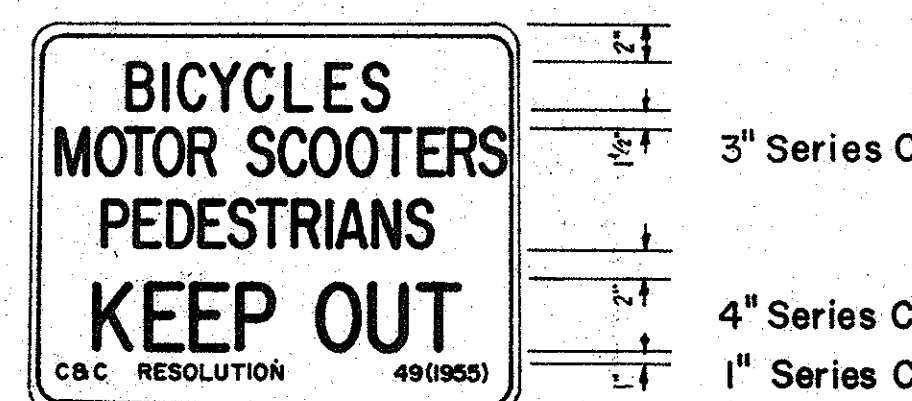
R16 - 2 24" x 30"



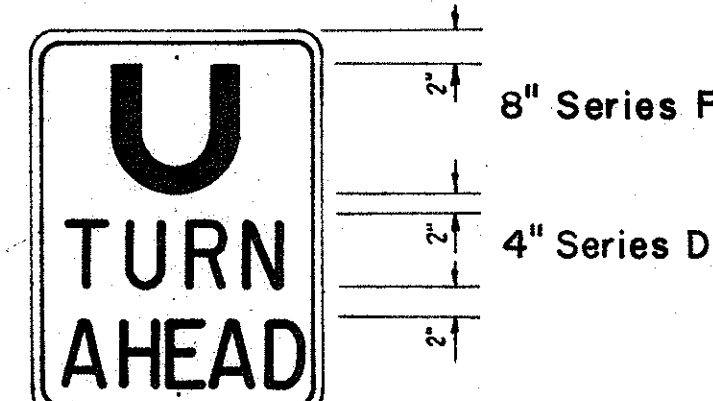
R17 - 1 18" x 24"



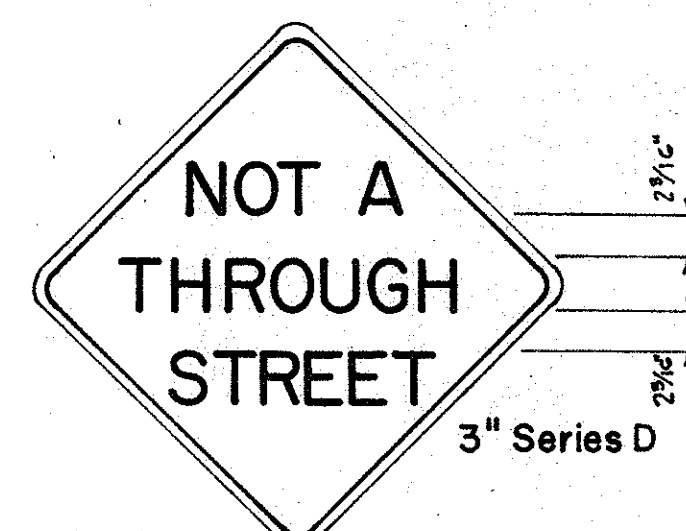
R17-2 18" x 24"



R18 - 1 30" x 24"



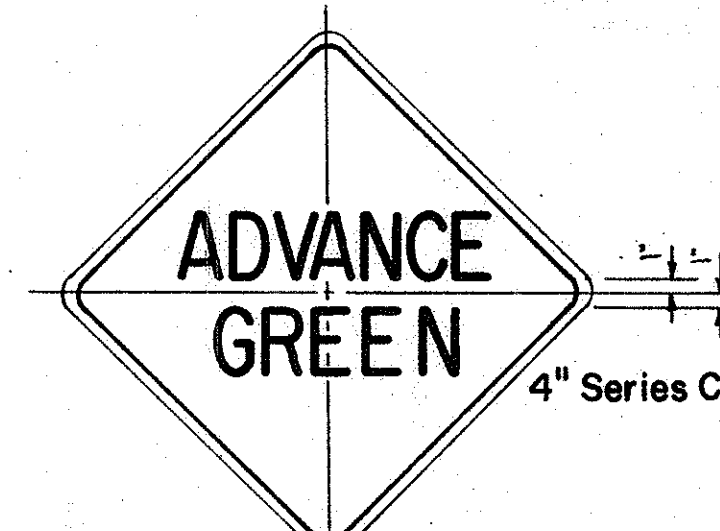
R19-1 18" x 24"



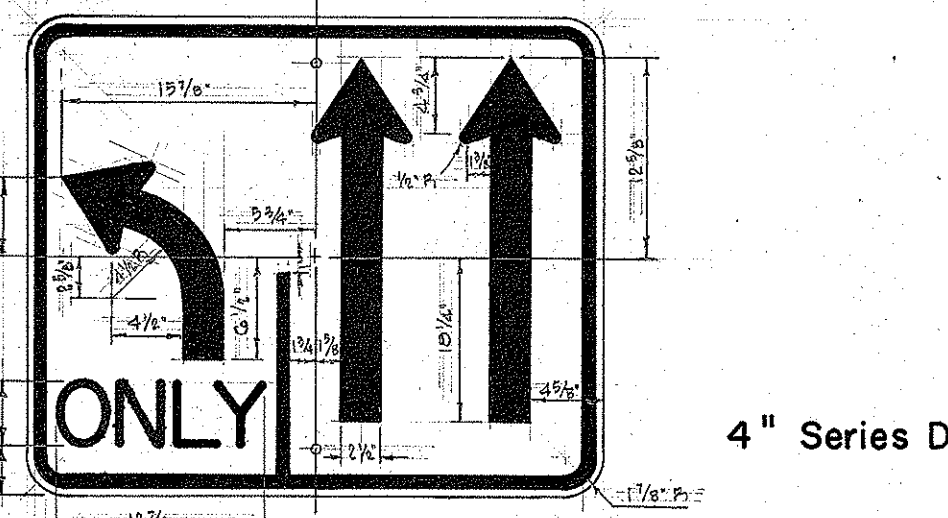
W13-4 24" x 24"



W15 - 1 24" x 24"



W15-2 24" x 24"



R3-8A 36" x 30"

NOTE:

1. The shape, color, plate details, lettering and reflectorization of Regulatory signs (Prefix R) and Warning signs (Prefix W) shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
2. All regulatory and warning signs shall be reflectorized unless otherwise specified.
3. All regulatory and warning signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
MISCELLANEOUS  
REGULATORY & WARNING SIGNS

Scale: 1" = 1'-0"

SHEET No. 144 OF 203 SHEETS

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



W7-2 48"x48"



W8-7 30"x30"



W14-1 30"x30"



W20-1a 48"x48"



W20-2d 48"x48"



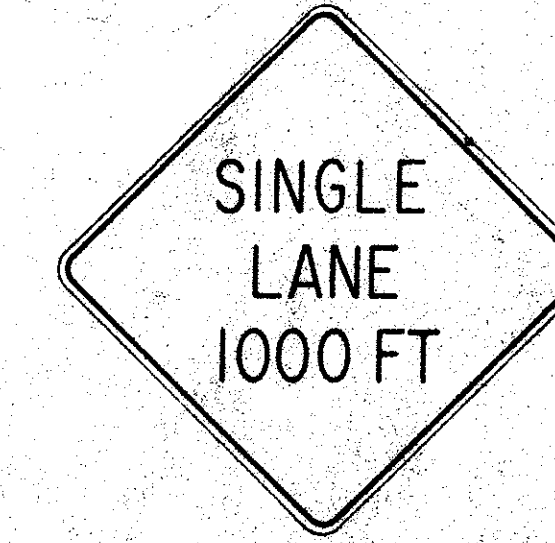
W20-3b 48"x48"



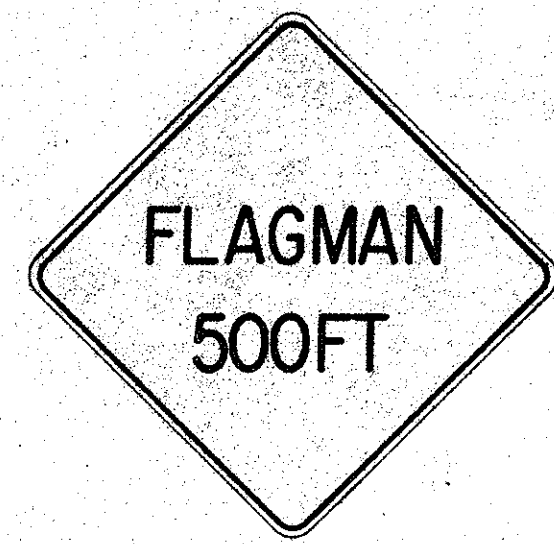
W20-4d 48"x48"



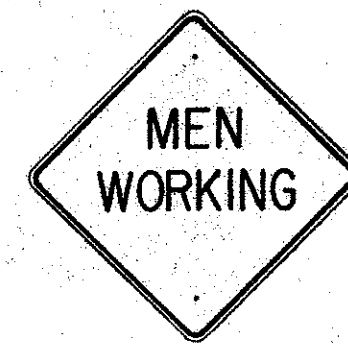
W20-5d(L) 48"x48"



W20-6b 48"x48"



W20-7c 48"x48"



W21-1 30"x30"



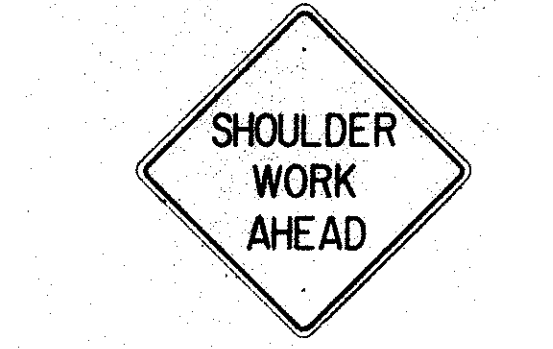
W21-2 24"x24"



W21-3 36"x36"



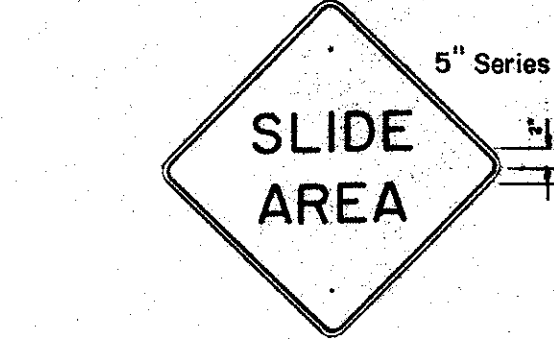
W21-4 30"x30"



W21-5 30"x30"



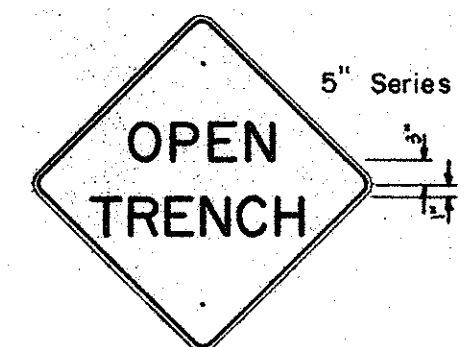
W21-6 30"x30"



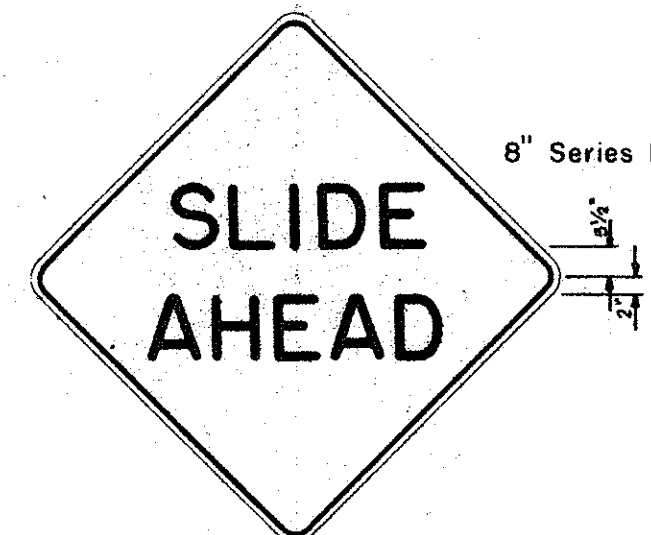
W22-1 30"x30"



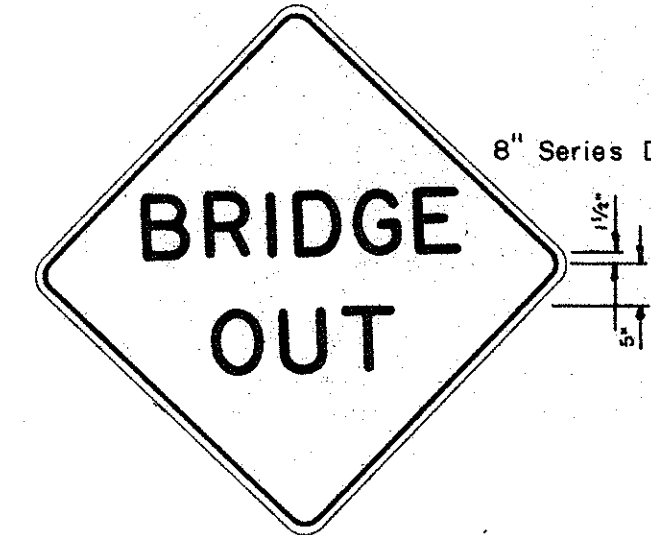
W22-2 30"x30"



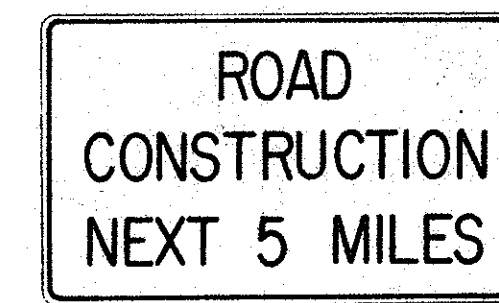
W22-3 30"x30"



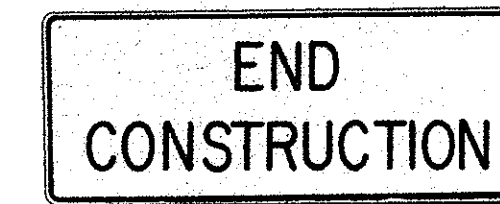
W22-4 48"x48"



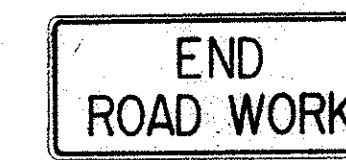
W22-5 48"x48"



G20-1(5) 60"x36"



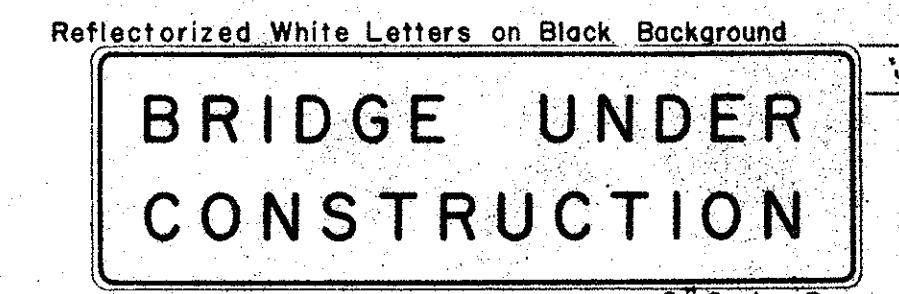
G20-2 60"x24"



G20-3 42"x18"



M5-7(L) 48"x18"



CW-1 96"x30"

NOTE:

- The shape, color, dimensions, symbols, wording, lettering and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961 unless otherwise specified.
- All signs shall be reflectorized unless otherwise specified.
- All signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
- For W20 series signs, suffixes a,b,c and d are as follows a 1500 FT, b 1000 FT, c 500 FT and d AHEAD
- (R) or (L) indicates right or left and shall be as shown on the plans.
- Number in ( ) indicates miles and shall be as shown on the plans.

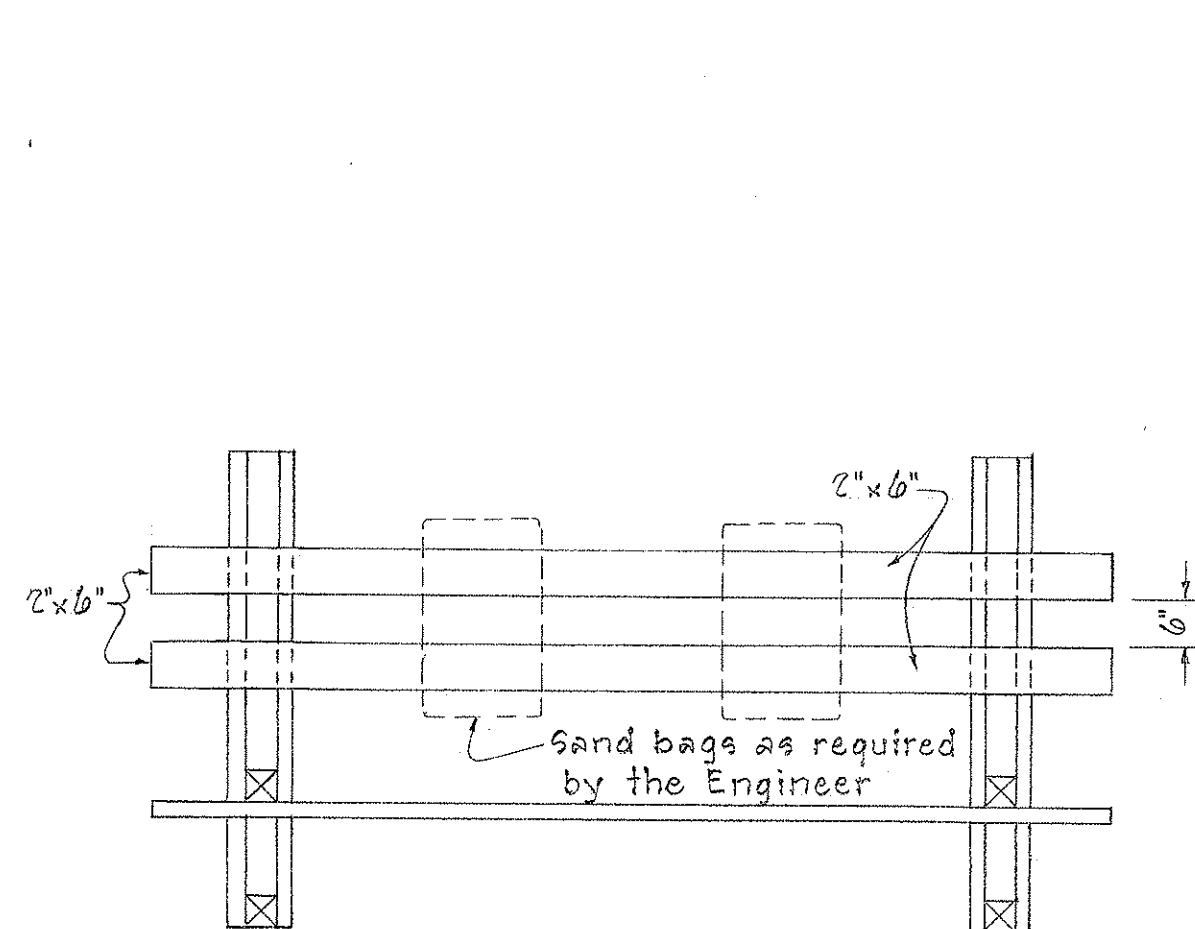
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
CONSTRUCTION SIGNS

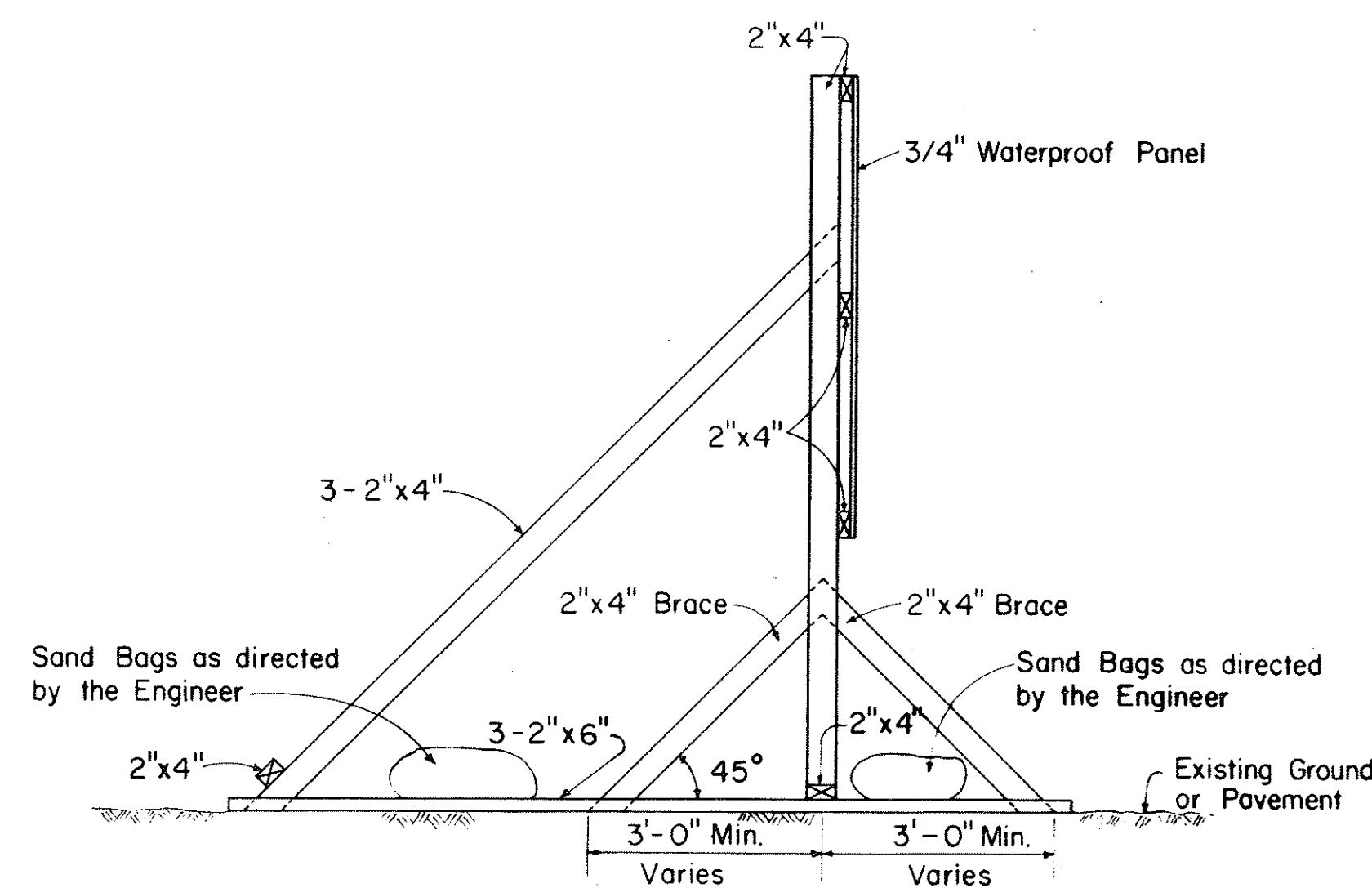
NOT TO SCALE

SHEET No. 20 OF 21 SHEETS

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

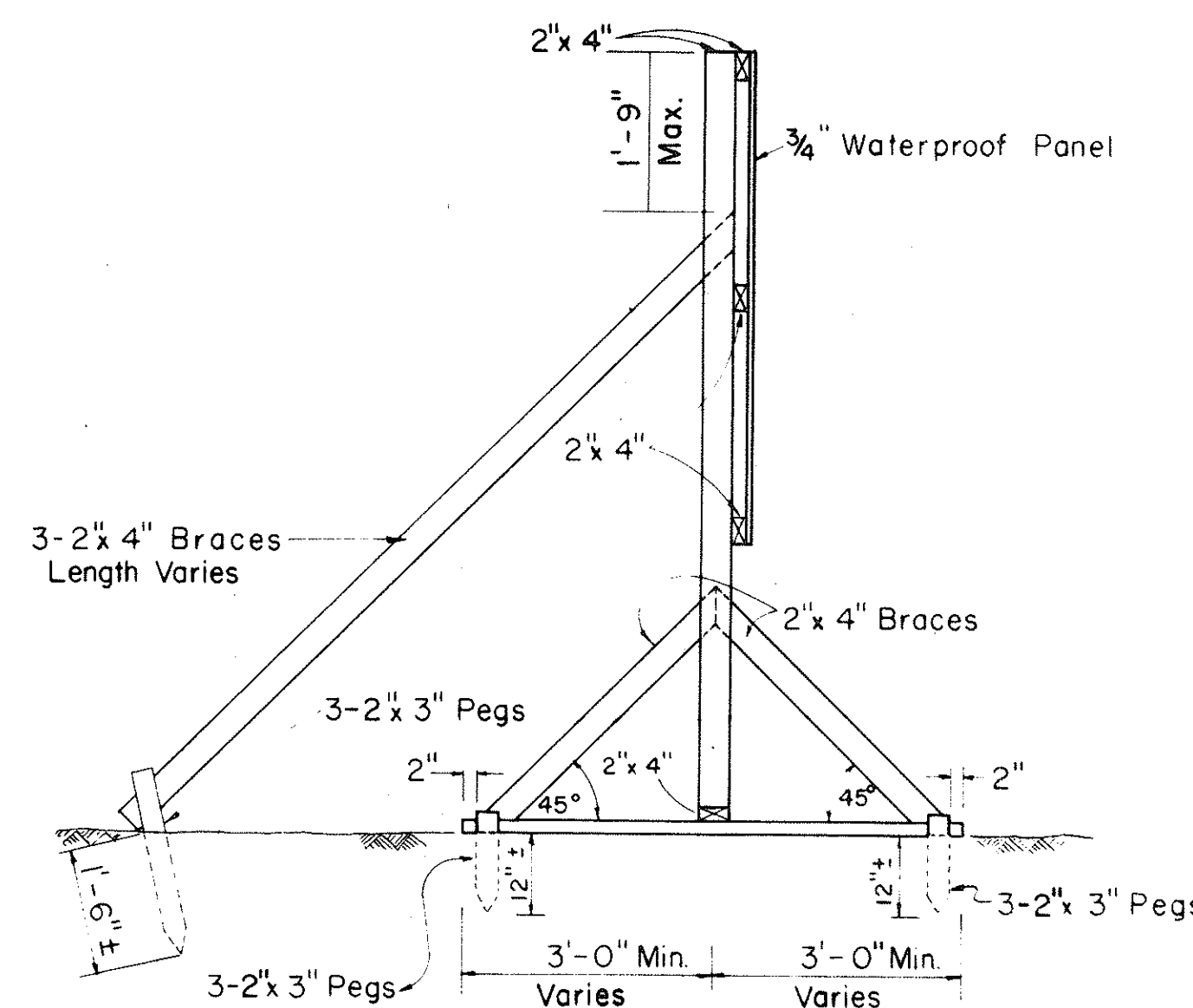


PLAN VIEW



SIDE ELEVATION  
SIGN FRAME WEIGHTED DOWN

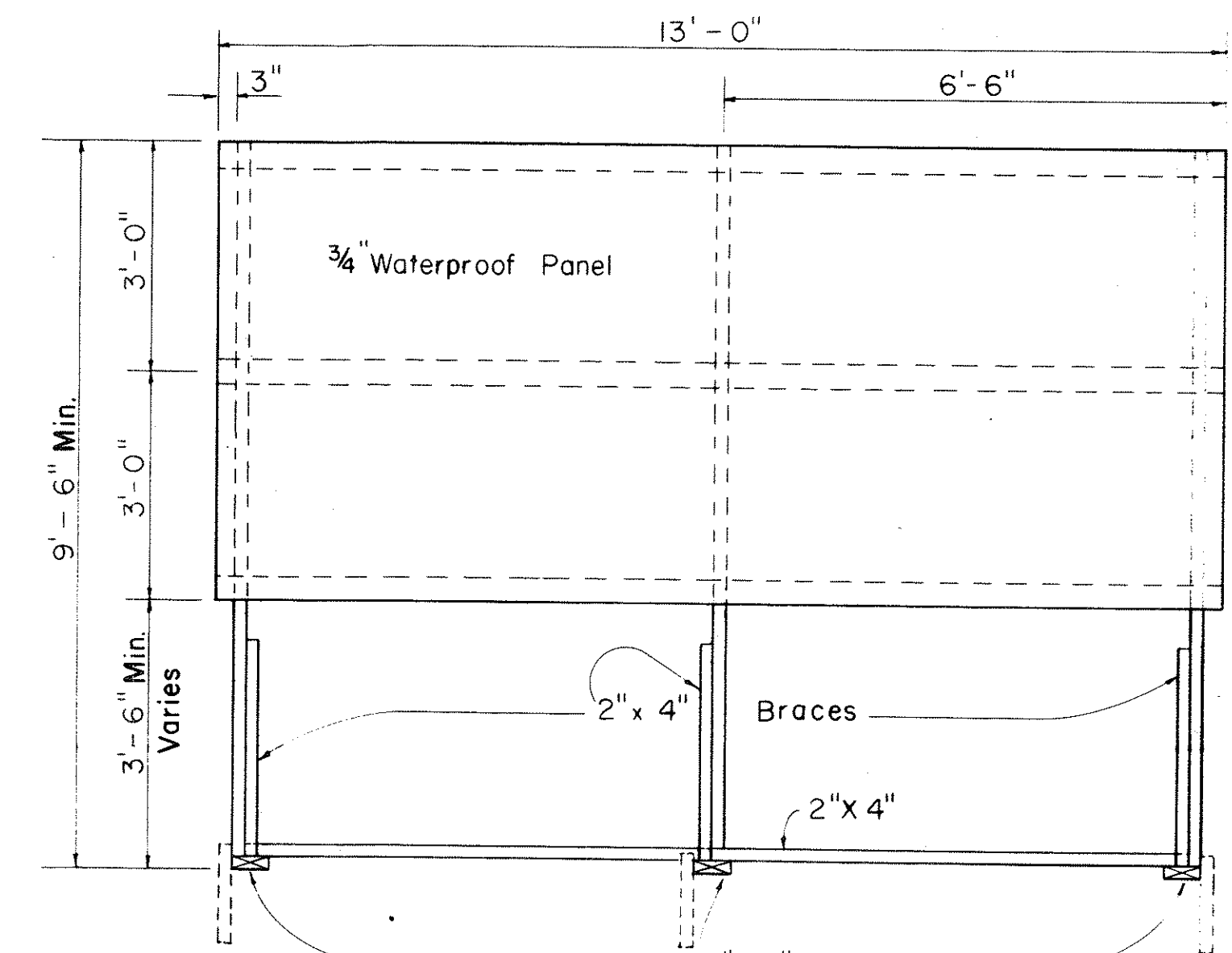
SCALE: 1/2" = 1'-0"



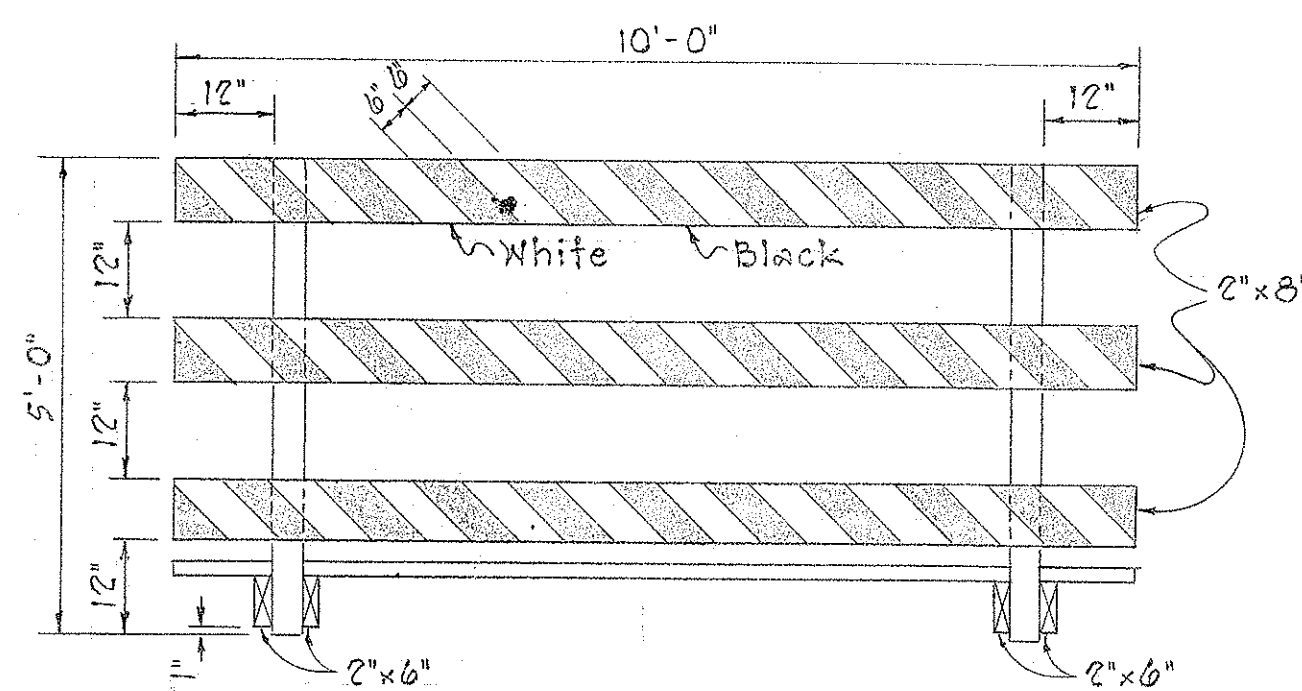
SIDE ELEVATION

SIGN FRAME ANCHORED IN GROUND

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



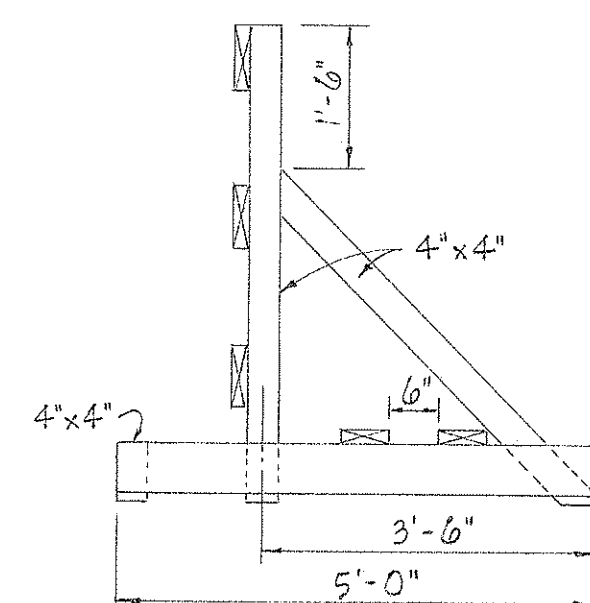
FRONT ELEVATION



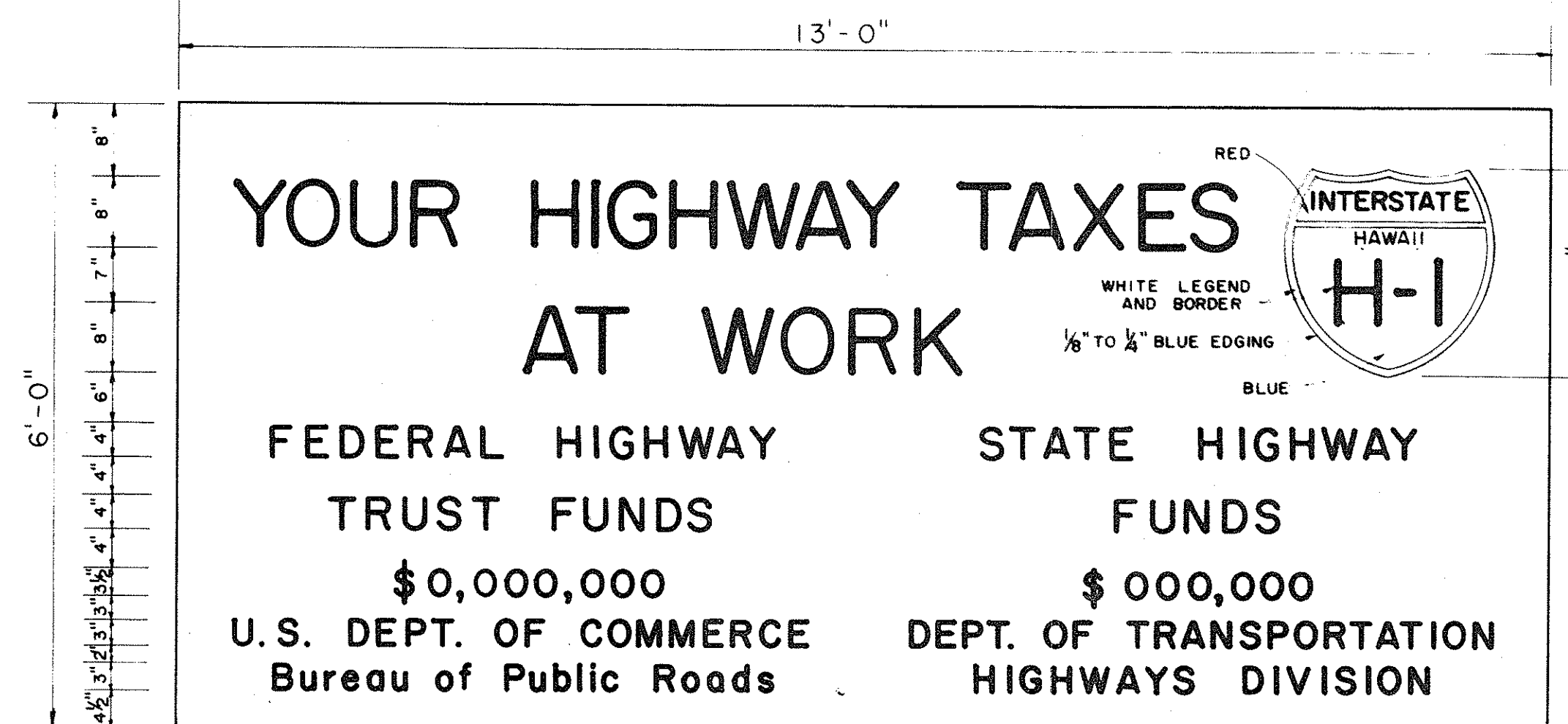
FRONT VIEW

CLASS I BARRICADE

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



END VIEW



SIGN PANEL

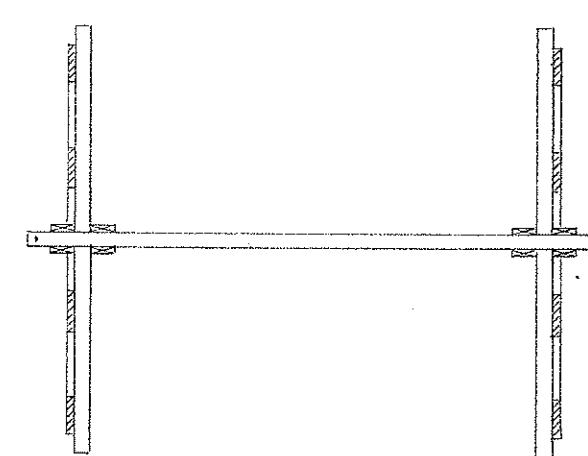
Scale: 3/4" = 1'-0"

INTERSTATE SYSTEM  
CONSTRUCTION IDENTIFICATION SIGN

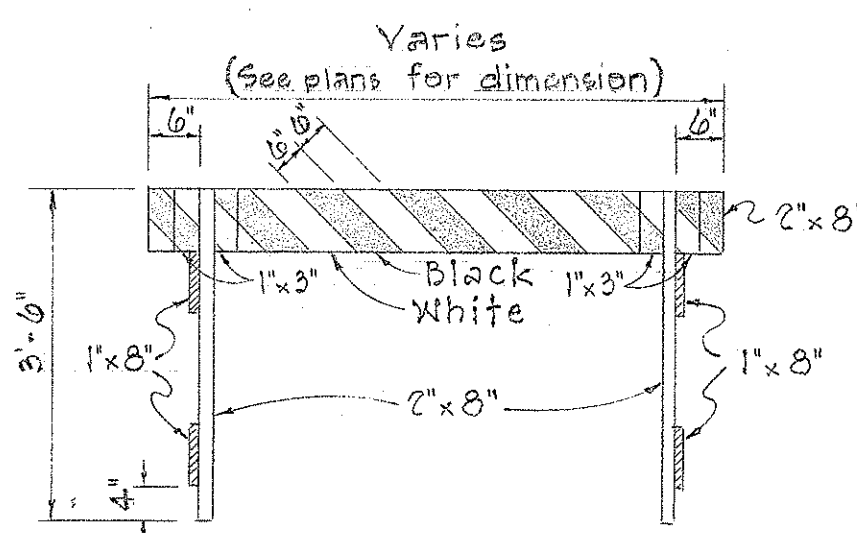
Scale: As Shown

# CONSTRUCTION IDENTIFICATION SIGN NOTES

1. The Contractor shall construct, install and maintain the Construction Identification Signs, at the locations shown on the plans and as ordered by the Engineer.
2. All costs incurred in the construction, installation and maintenance of the Construction Identification Signs, will not be paid for separately, but shall be considered as included in the unit price paid for the various items in the proposal.
3. The Construction Identification Signs shall be removed and stockpiled at the completion of the project as ordered by the Engineer and are to become State Property.
4. The exact figures for the various funds involved will be furnished to the Contractor for the incorporation in the Construction Identification Signs.
5. The legend shall be black on white background except for the interstate route marker which shall be as shown on the plan.
6. Refer to Sheet No. 140 for details on the exact shape and size of the interstate route marker to be shown on these Construction Identification Signs.
7. All letters shall be of size and design shown and shall conform with "Standard Alphabets for Highway Signs", Bureau of Public Roads, 1952. Use Series "C" letters unless otherwise noted.



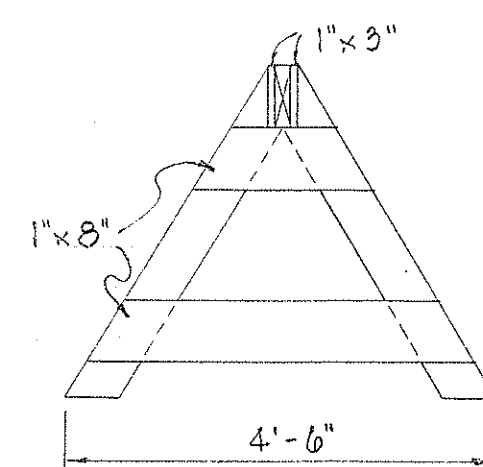
PLAN VIEW



FRONT VIEW

CLASS II BARRICADE

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



END VIEW

NOTE: Class I and Class II barricades shall be painted completely white except for the black diagonal stripes as shown.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
**CONSTRUCTION IDENTIFICATION SIGN AND BARRICADES DETAIL**  
INTERSTATE HIGHWAY (LUNALILO FRWY.)  
F.A.I. Proj. 1-HI-1(6): Unit 2  
Scale as Noted January 1966  
SHEET No. 21 OF 21 SHEETS