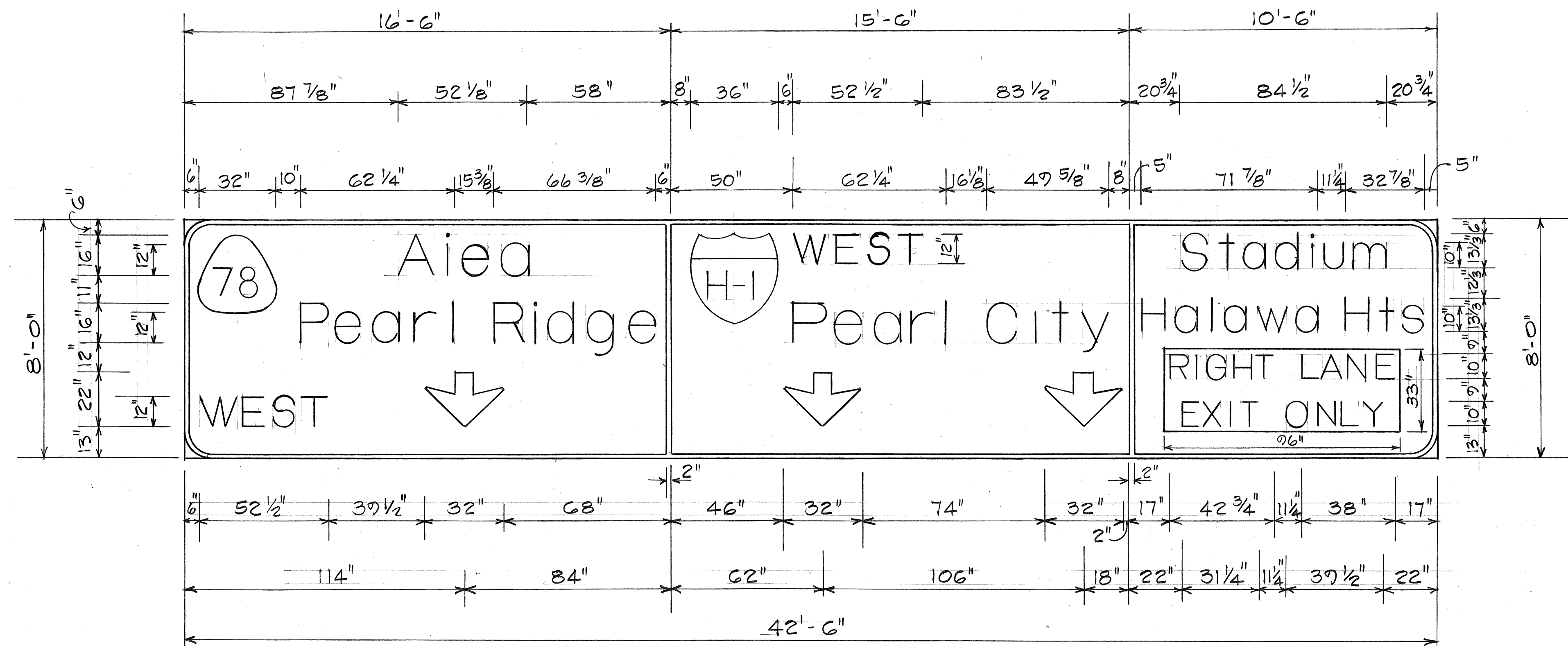


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HH5-078-1 (19)	1978	CO 137 S-1	147

NOTES FOR ALA KAPUNA OVERPASS EXPRESSWAY SIGN

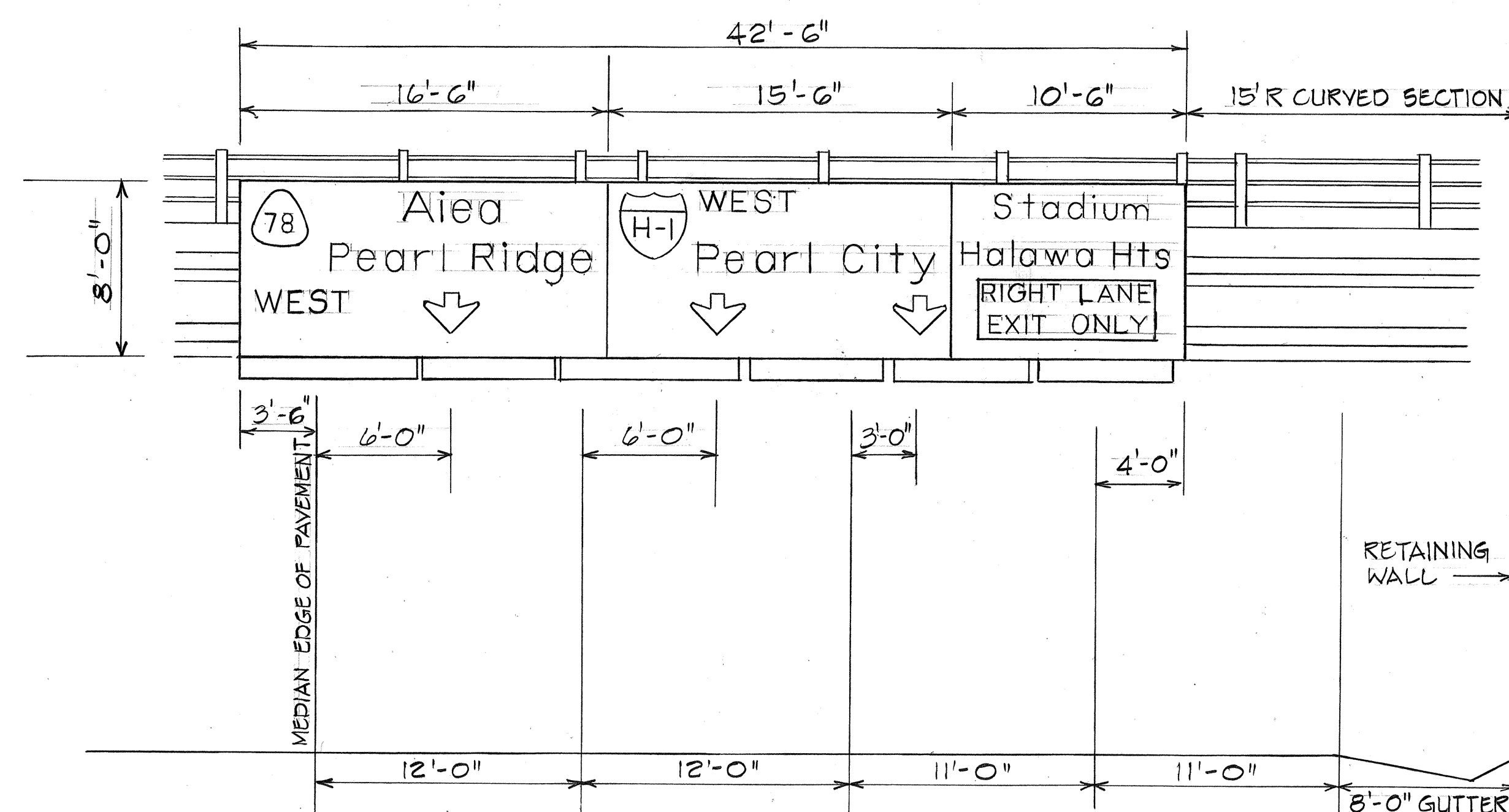
- The expressway sign shall conform to the following publications:
 - "Manual of Uniform Traffic Control Devices for Streets and Highways", by the Federal Highway Administration, 1971; unless noted otherwise.
 - "Standard Alphabets for Highway Signs", Bureau of Public Roads, 1966, Letters shall be Series "E" modified.
- Arrows, Borders and Route Markers shall conform with details shown on the plans, refer to plan sheet numbers 66, CO 137 S-1, & CO 138 S-1.
- Letters, arrows, and borders shall be of either demountable aluminum cut outs with reflective sheeting, or clear reflex reflectors fastened to the sign panel with blind rivets. No mixing of the two types will be allowed. See Special Provisions, subsection 712.20(A)(1) ReflectORIZATION, and 712.20(C)(3) Sheet Reflecting Material.
- The 33" x 96" RIGHT LANE EXIT ONLY Panel shall be a demountable aluminum cut out with black legend on a yellow reflective sheeting background.
- Construction Method:
 - The two existing expressway sign panels (22'-6" x 8'-0" and 20'-0" x 8'-0") shall be aligned and spliced together to form one continuous sign face (42'-6" x 8'-0"). Aligning and splicing shall be by methods approved by the Engineer.
 - Legends, arrows, borders, shields, and overlays shall be removed from the existing sign panels. A new green porcelain overlay panel shall be blind riveted to the existing sign panel. Green Porcelain enamel material shall conform to the requirements of Subsection 712.20(c)(2) and the overlay panel shall conform to Subsection 712.20 (B)(1) of the Standard Specifications.
 - The Contractor shall submit shop drawings for approval prior to assembling in accordance with Subsection 621.03(c) of the Standard Specifications.
 - The Lump Sum cost of the contract item "Revise Ala Kapuna Overpass Expressway Sign" shall be full compensation to do all work necessary to produce a revised expressway sign as called for on the plans.



REVISED PANEL LAYOUT ON ALA KAPUNA STREET OVERPASS

MOANALUA FREEWAY @ STA. 226+00 ± O.B. LT.

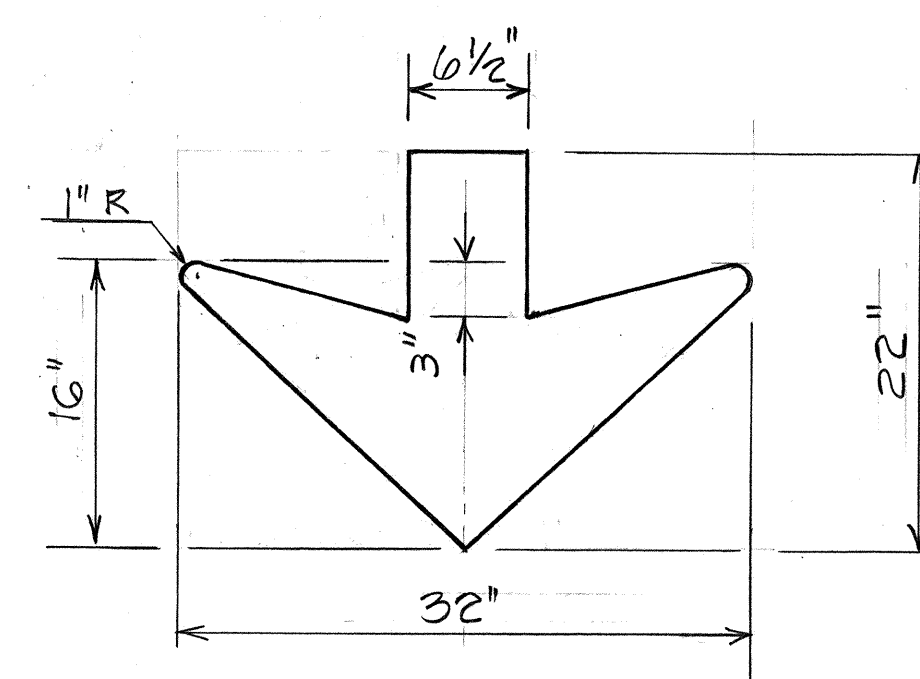
Scale: $\frac{3}{8}$ " = 1'-0"



REVISED FRAME LAYOUT ON ALA KAPUNA ST. OVERPASS

MOANALUA FREEWAY @ STA. 226+00 ± O.B. LT.

Scale: $\frac{3}{16}$ " = 1'-0"



ARROW DETAIL
FOR EXPRESSWAY SIGN

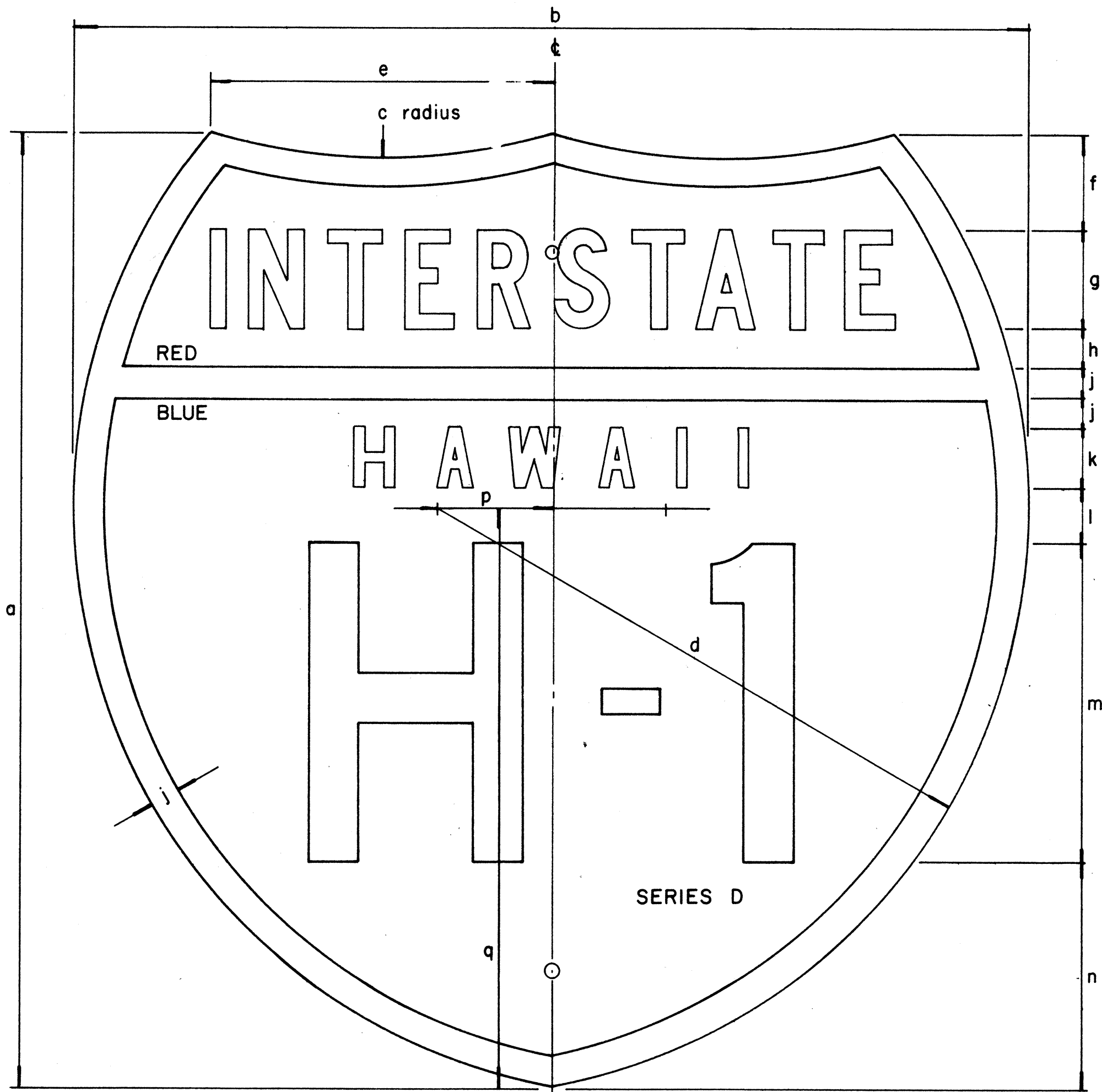
Scale: $\frac{3}{32}$ " = 1"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION LAND TRANSPORTATION FACILITIES DIVISION
FRAME & PANEL LAYOUT
MOANALUA ROAD PUULOA I.C. TO MIDDLE ST. UNIT 1A F.A.R. PROJ. NO. HH5-078-1 (19)
Scale: As Shown Date: Mar. 1978
SHEET No. 1 OF 1 SHEETS

C.O. 137 S-1

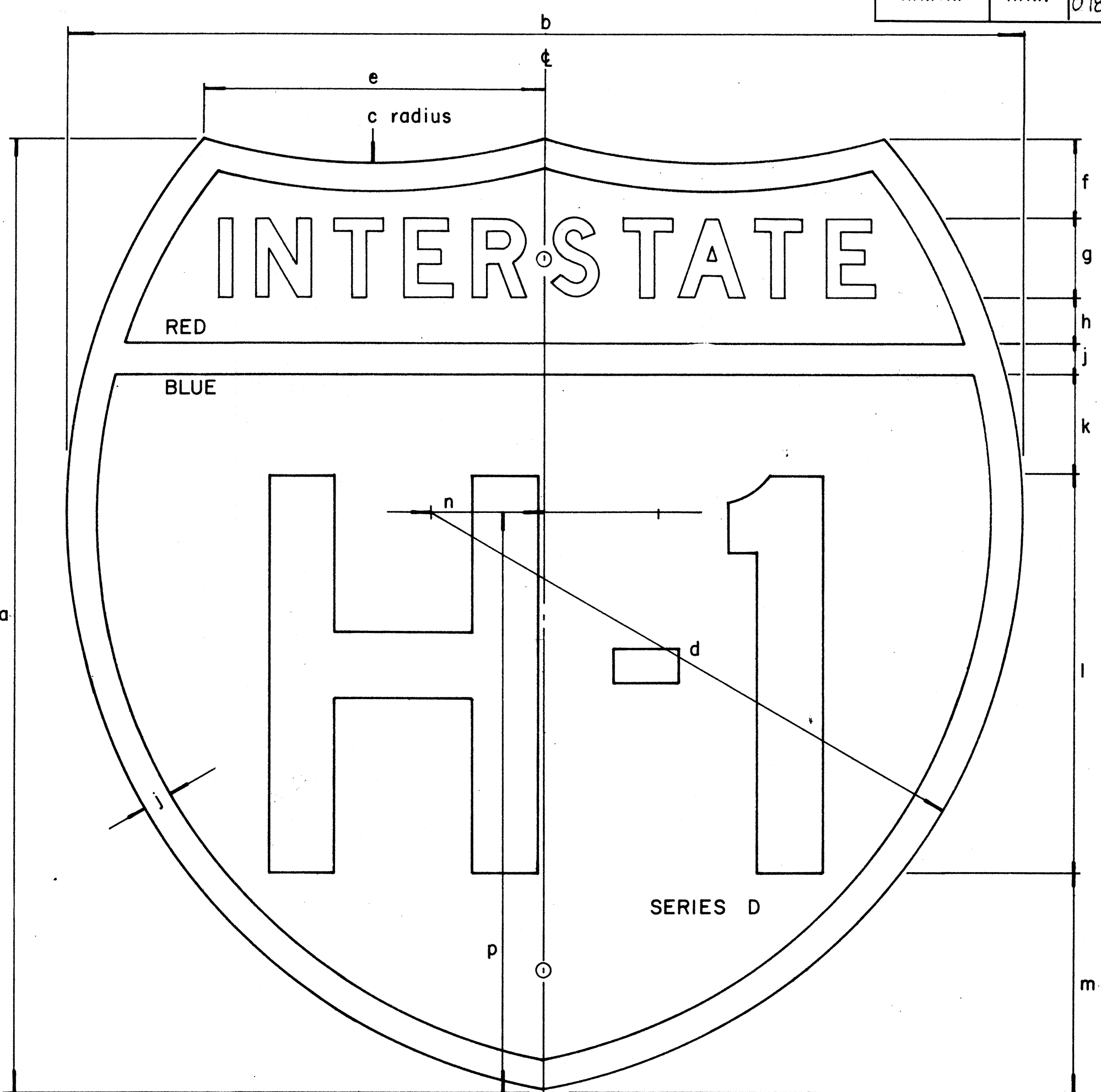
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HHS-078-1(17)	1978	CO 138 S-1	147



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	12 5/32	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

- 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.
- 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.

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

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

NO.	REVISION	APPROVED BY	DATE
1	Revised General Notes	HR	10/16/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
INTERSTATE ROUTE MARKERS
F.A.P. No. HHS-078-1(17)

SHEET No. 18 OF 1 SHEETS DT 106

C.O. 138 S-1

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HH5-078-1 (10)	1978	CO 138 5-2	147

(OVERHEAD SIGNS)
SUPPORT SPACING TABLE

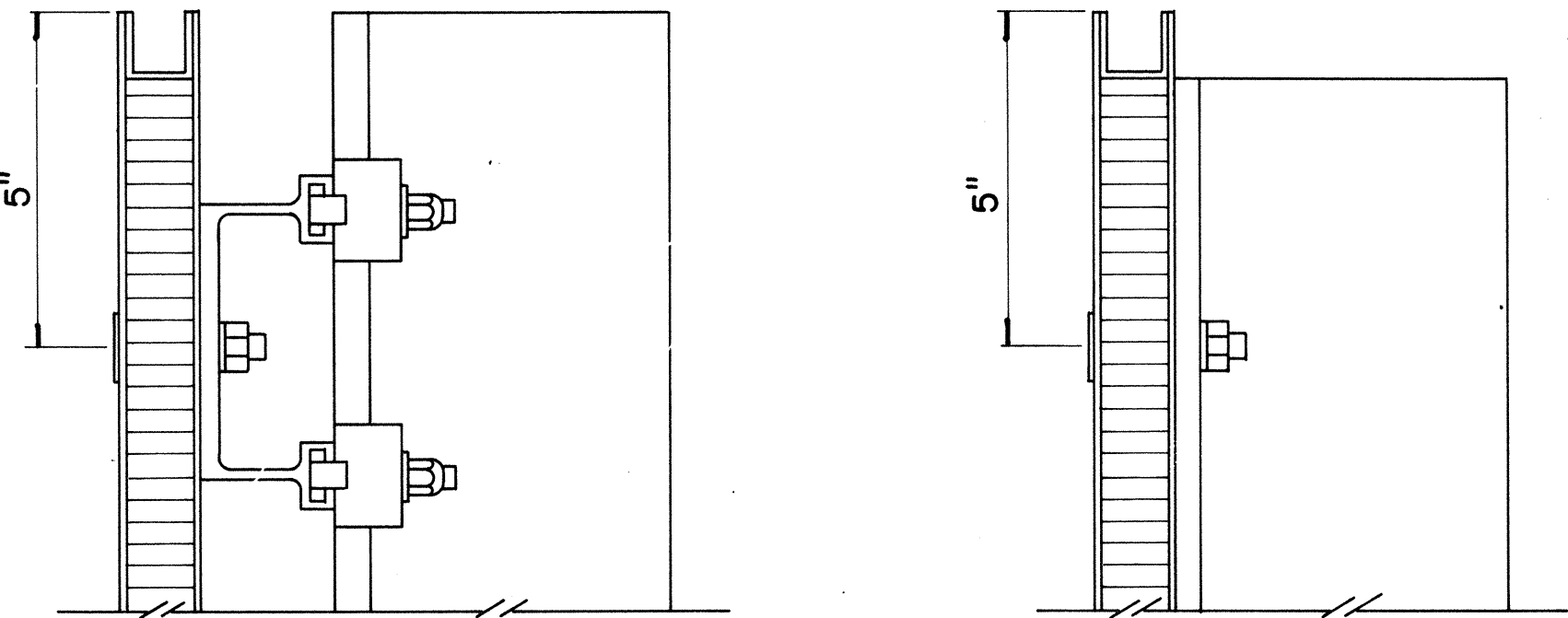
PANEL THICK.	LENGTH OF SIGN A	NO. OF SUPPORTS	OVERHANG B	SUPPORT SPACING C or C ₁
1"	6'-0"	2	12"	48"
1"	6'-6"	2	15"	48"
1"	7'-0"	2	15"	54"
1"	7'-6"	2	18"	54"
1"	8'-0"	2	18"	60"
1"	8'-6"	2	20"	62"
1"	9'-0"	2	22"	64"
1"	9'-6"	2	23"	68"
1"	10'-0"	2	24"	72"
1"	10'-6"	2	24"	78"
1"	11'-0"	2	24"	84"
1"	11'-6"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

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

APPROVED:
[Signature] 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

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



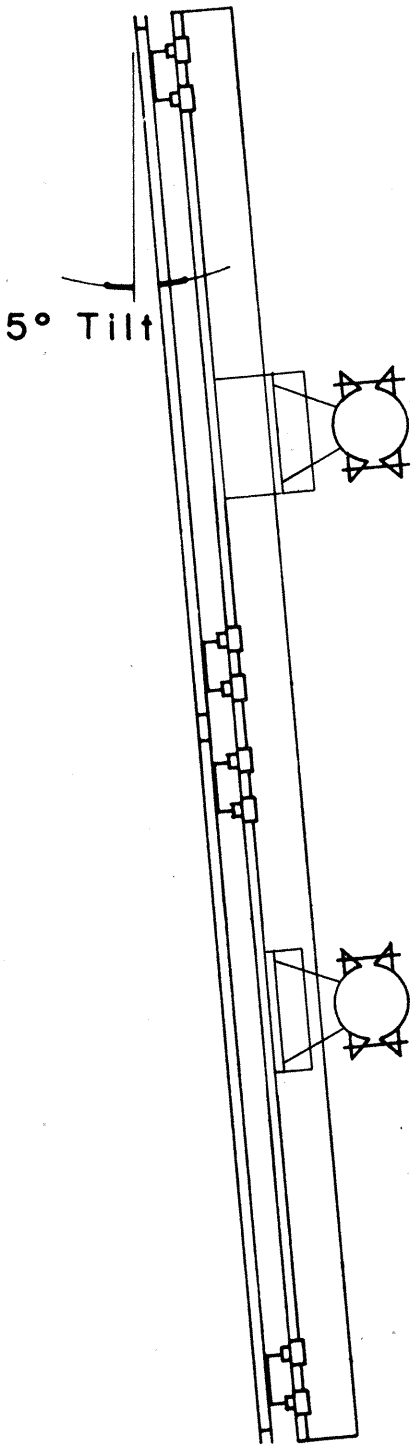
SECTION "C-C"

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

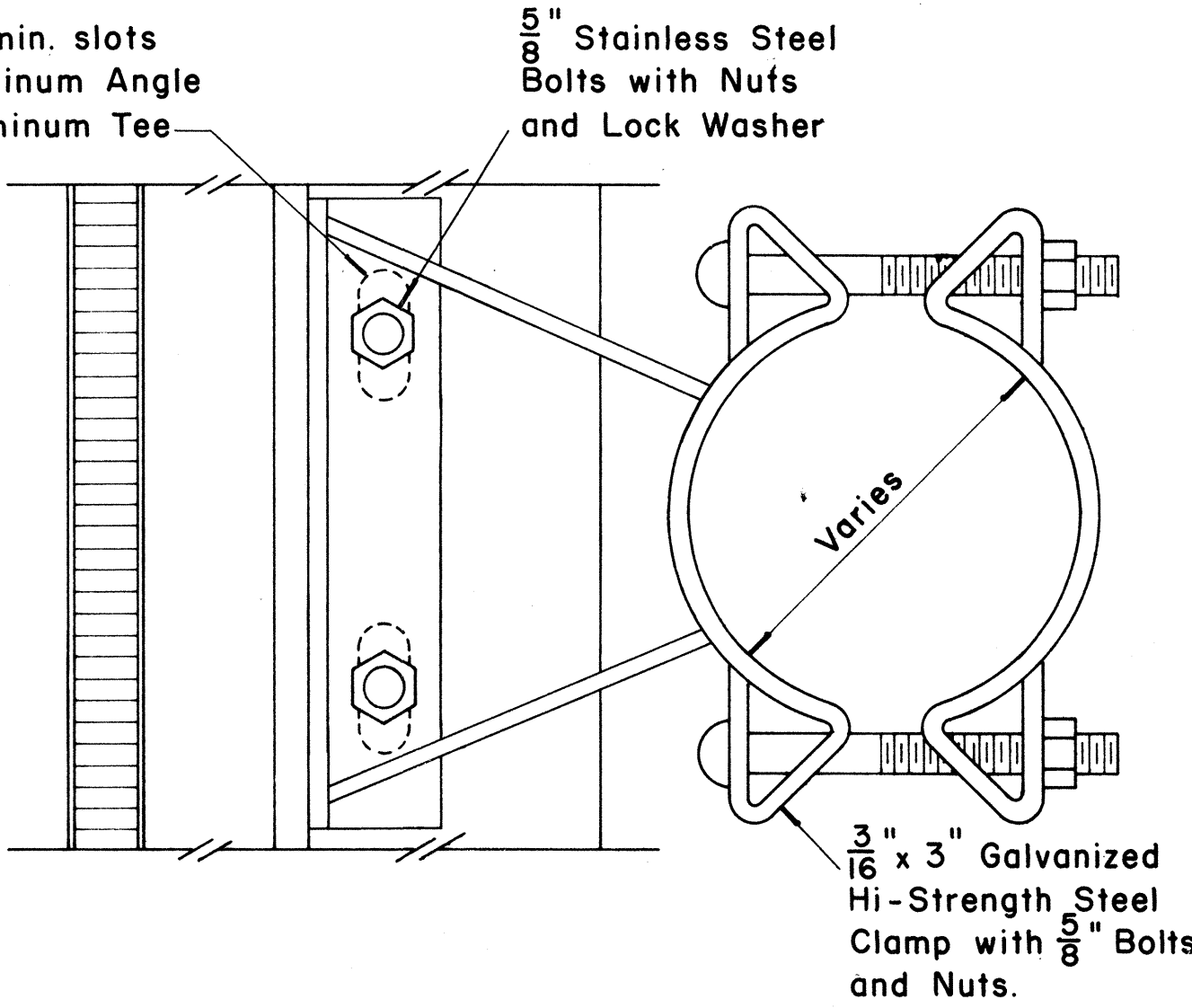
SECTION "C-C"

(Alternate)

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



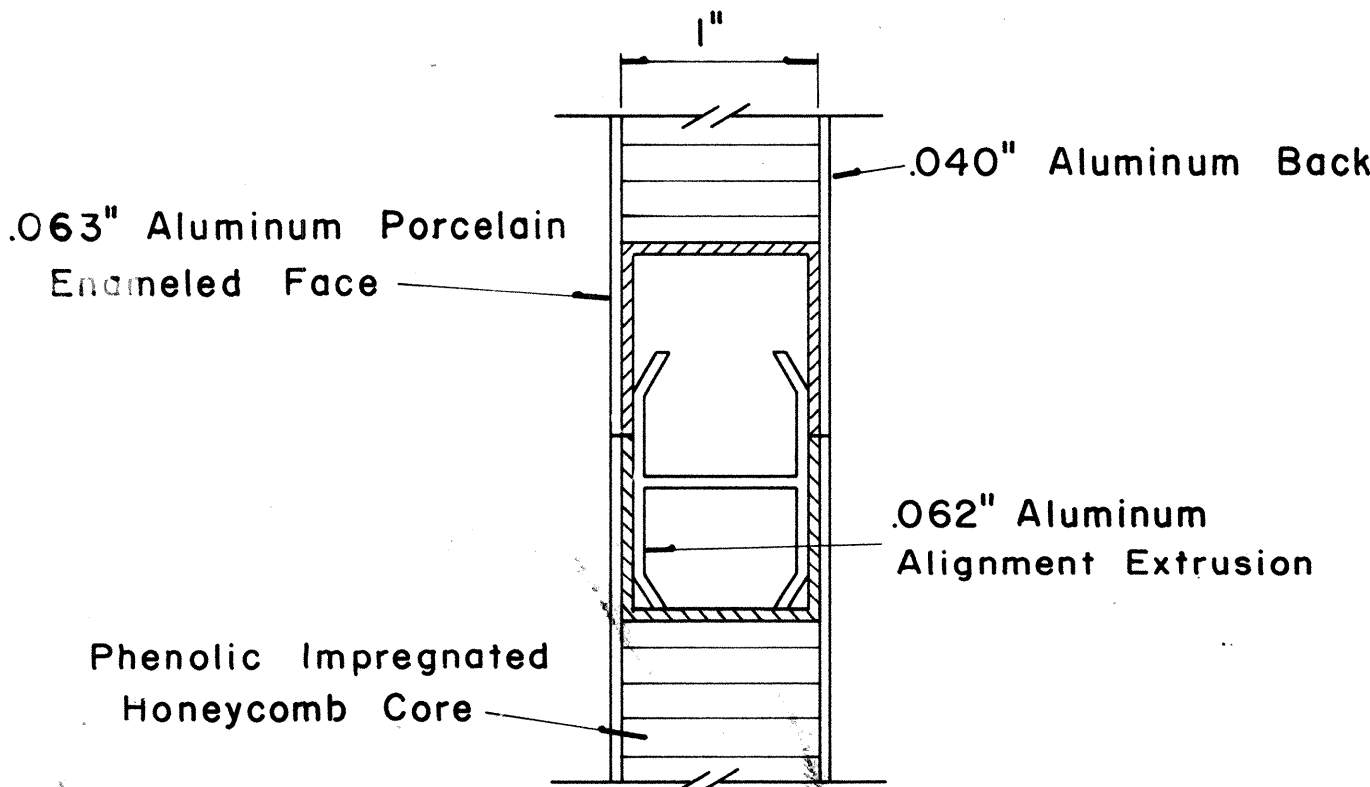
SIDE VIEW



SIGN BRACKET ASSEMBLY

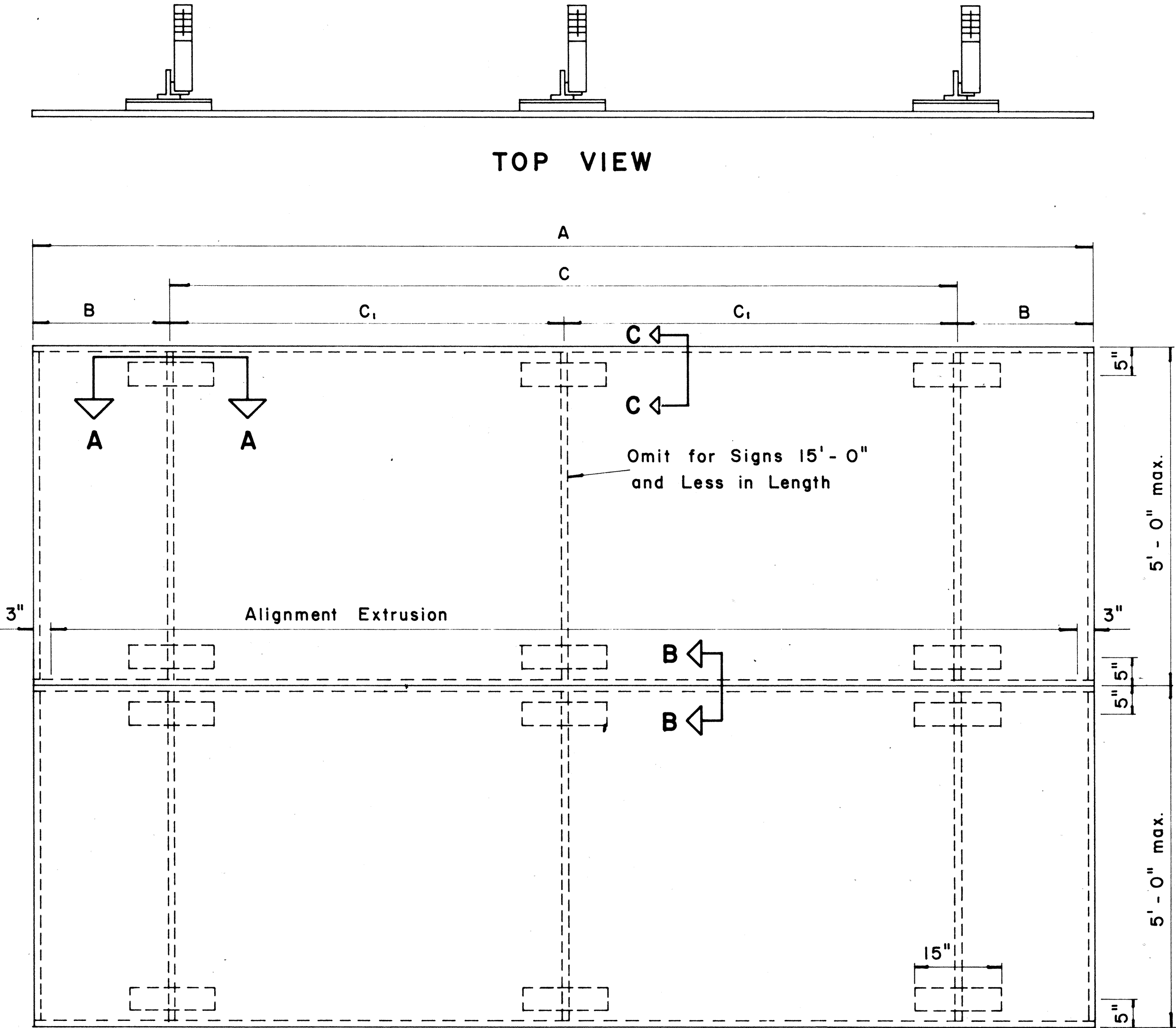
Scale: $\frac{3}{8}$ " = 1"

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



CLOSURE DETAIL
SECTION "B-B"

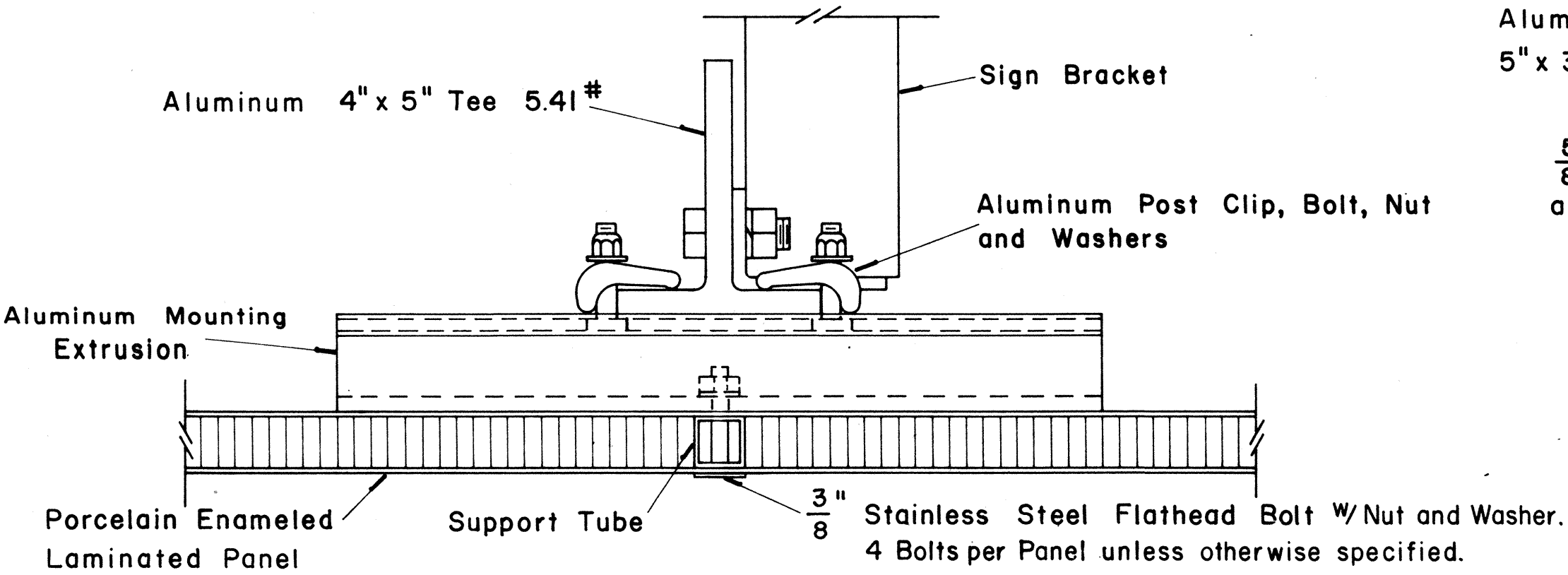
FULL SCALE



ELEVATION

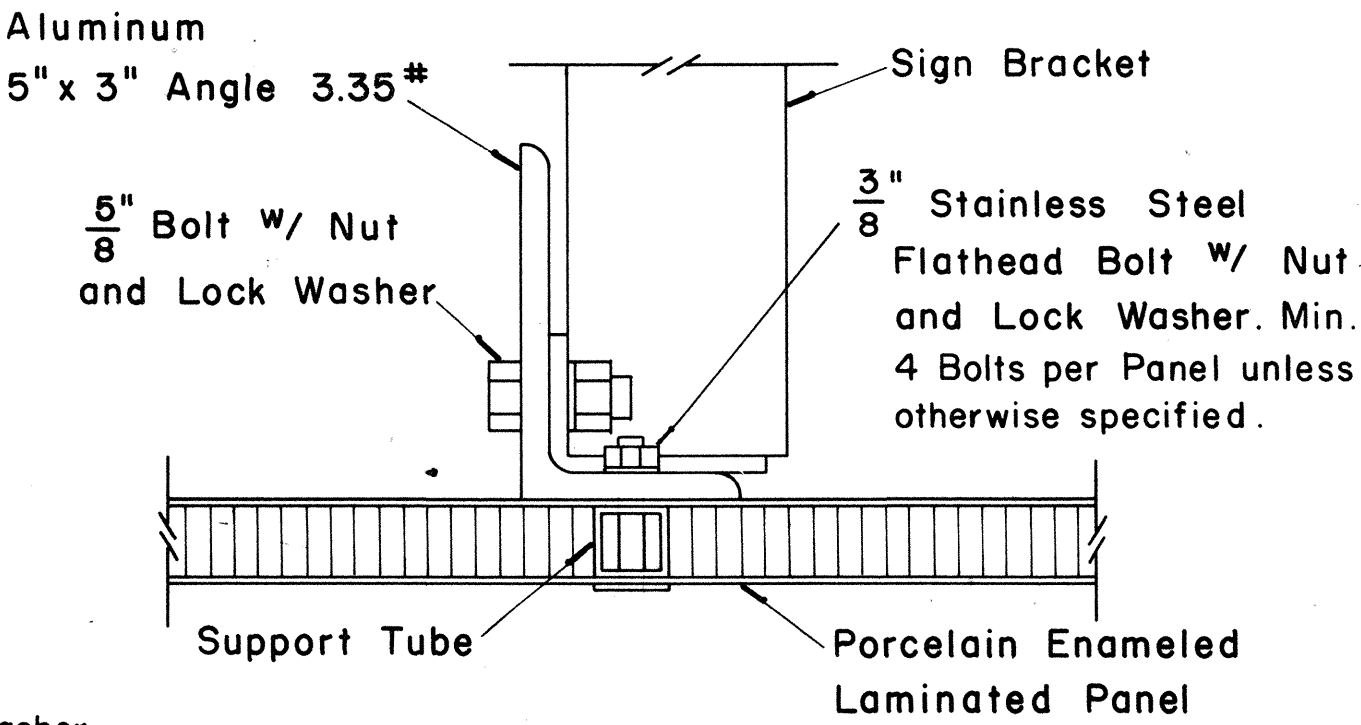
TYPICAL SIGN ASSEMBLY

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



SECTION "A-A"

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



SECTION "A-A"

(Alternate)

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

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SURVEY PLOTTED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	

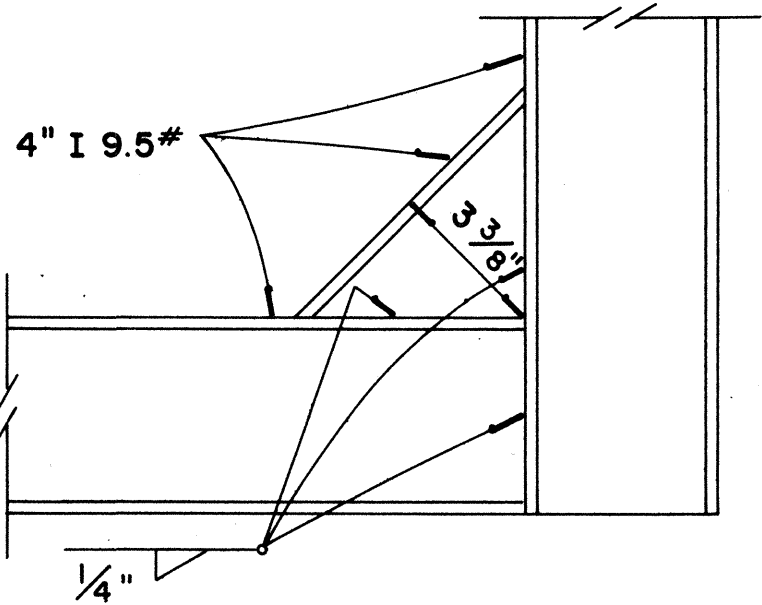
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HH5-078-1(10)	1978	CO 138 6-3	147

GENERAL NOTES

1. Conduit sizes: 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.

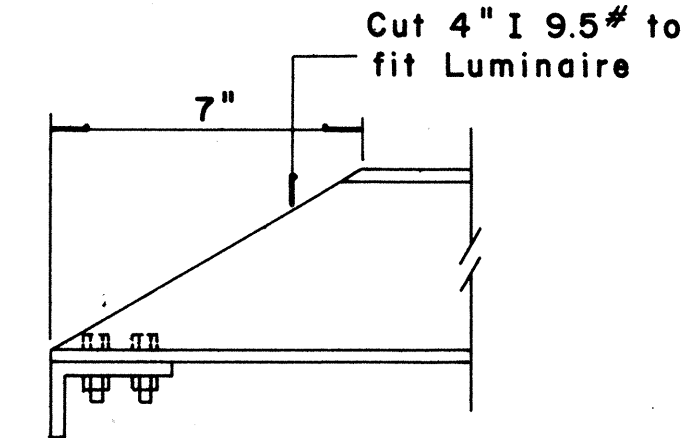
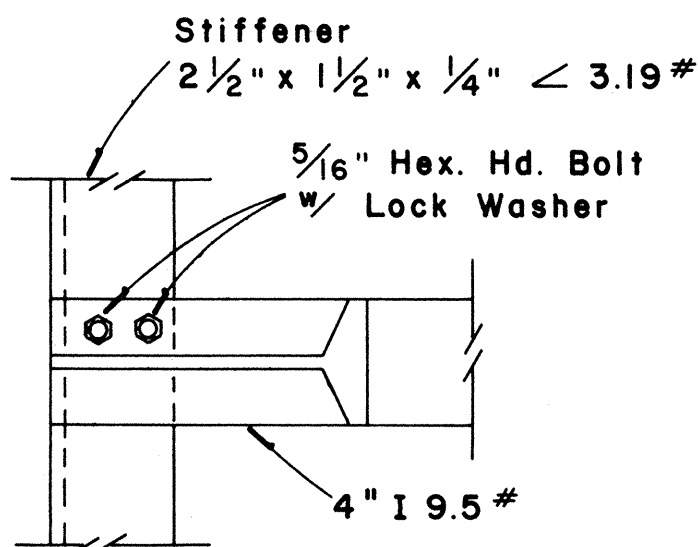
CONDUIT STRAP DETAIL

Scale: 3" = 1'-0"



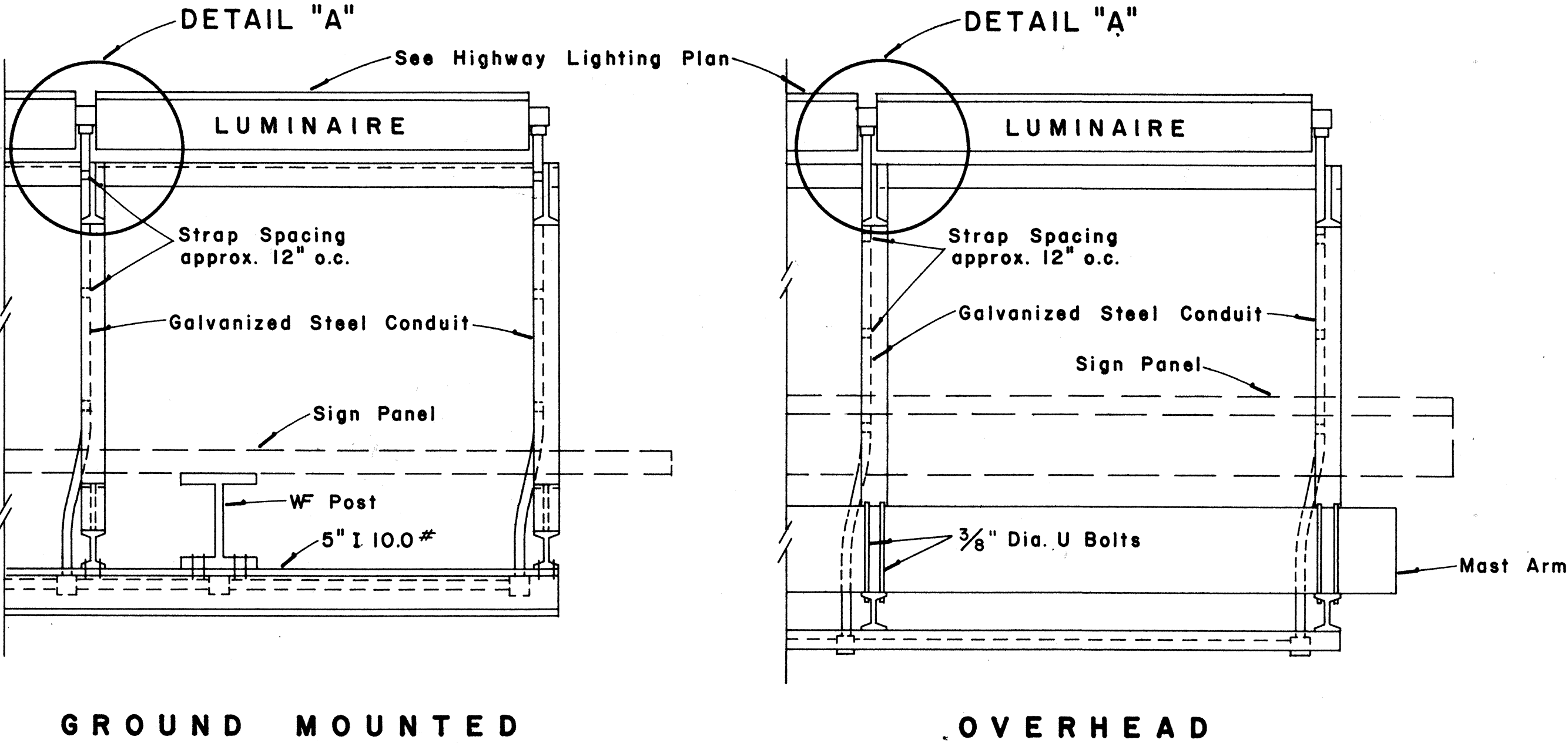
DETAIL "B"

Scale: 3" = 1'-0"



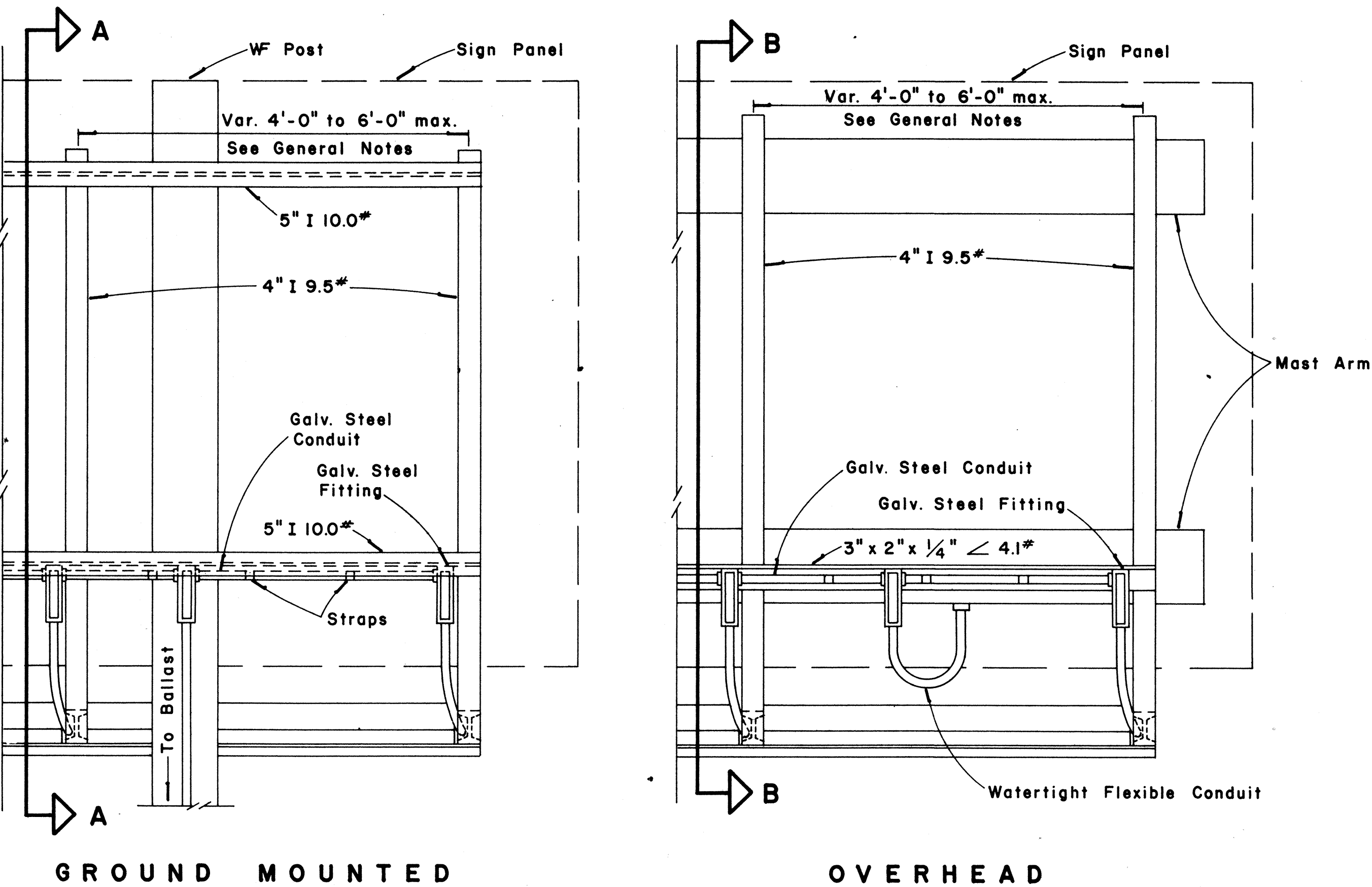
DETAIL "A"

Scale: 3" = 1'-0"



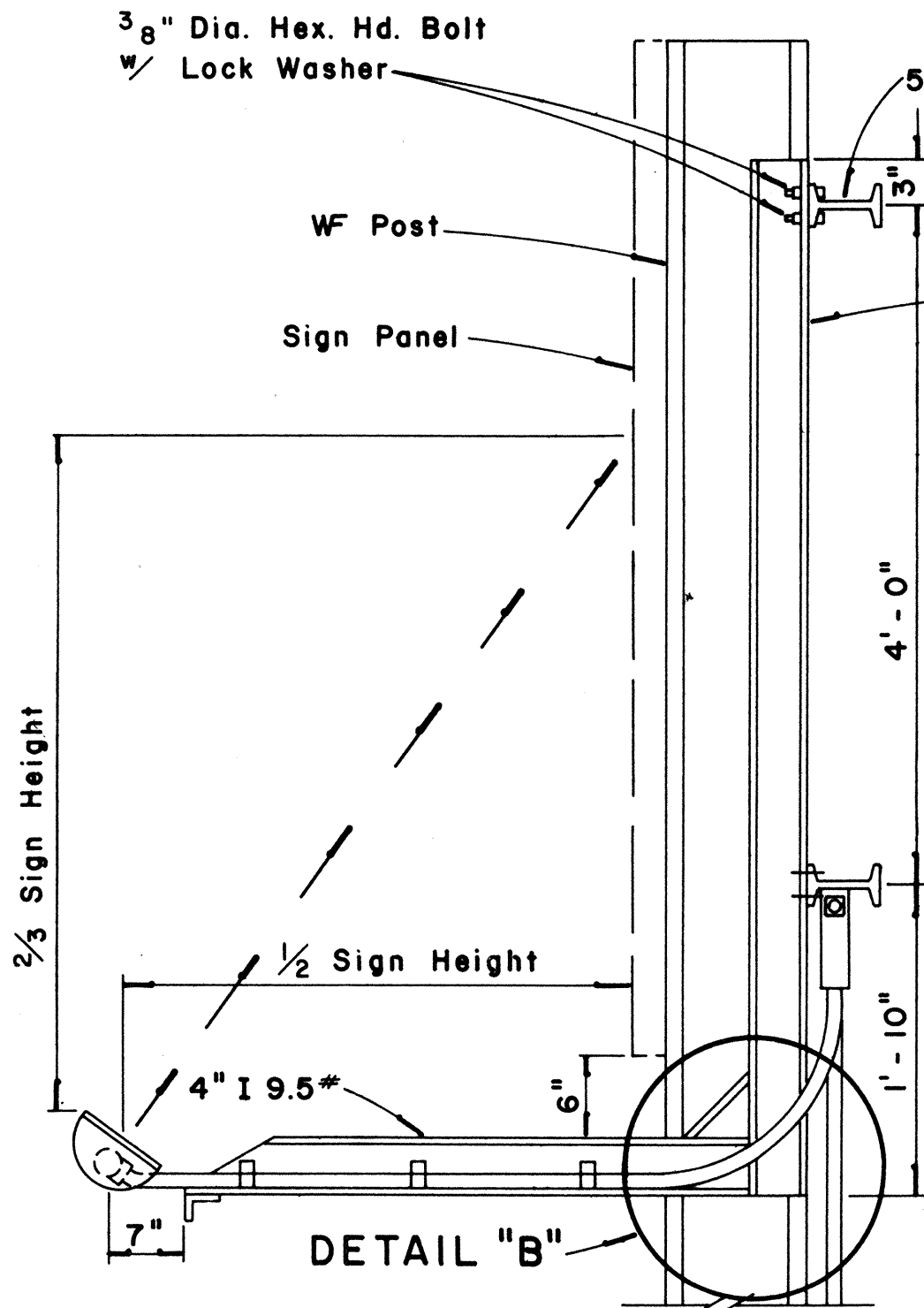
TOP VIEW
LUMINAIRE MOUNTING

Scale: 1" = 1'-0"



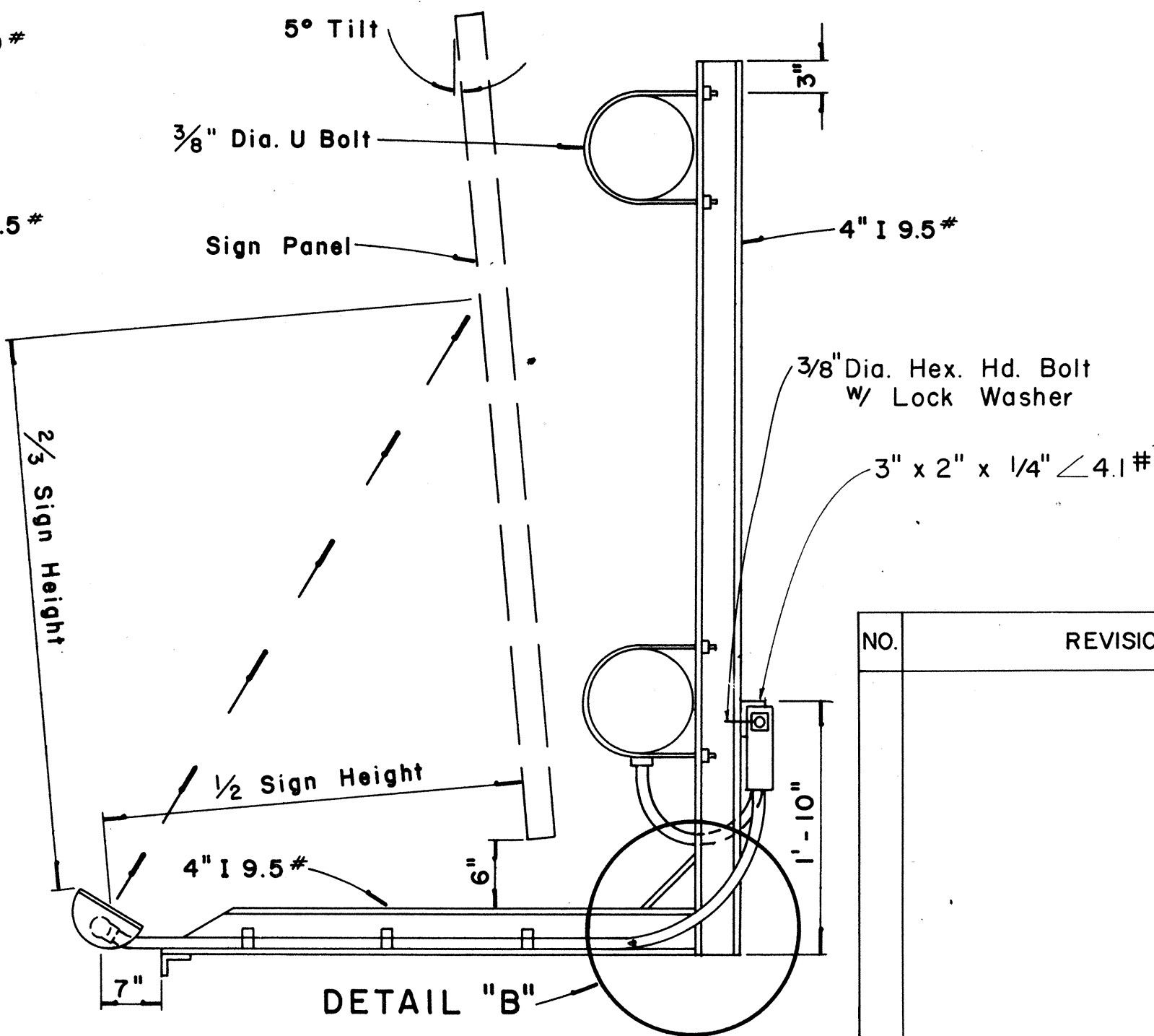
REAR VIEW
LUMINAIRE MOUNTING

Scale: 1" = 1'-0"



SECTION "A-A"

Scale: 1" = 1'-0"



SECTION "B-B"

Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:
Eugene Tanaka
TRAFFIC ENGINEER
12/29/62
DATE

APPROVED:
Wm. J. J. J.
ASSISTANT CHIEF, ENGINEERING
12/29/62
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

EXPRESSWAY SIGNS
LUMINAIRE MOUNTINGS

Scale: As Shown
SHEET No. 10 OF 1 SHEETS DT 208

C.O. 138 S-3

DATE	
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