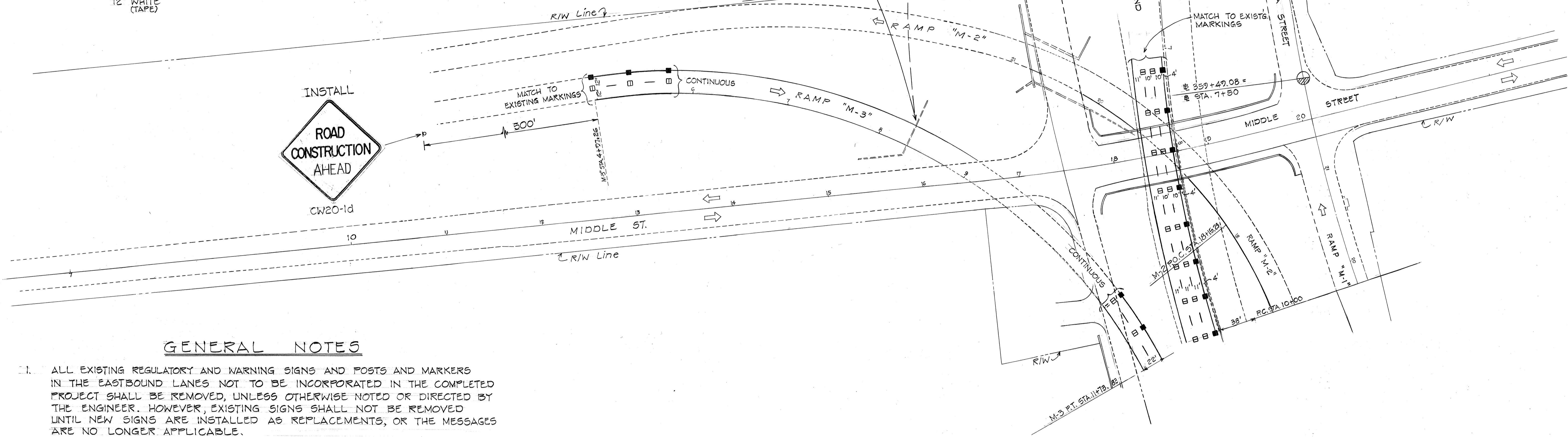
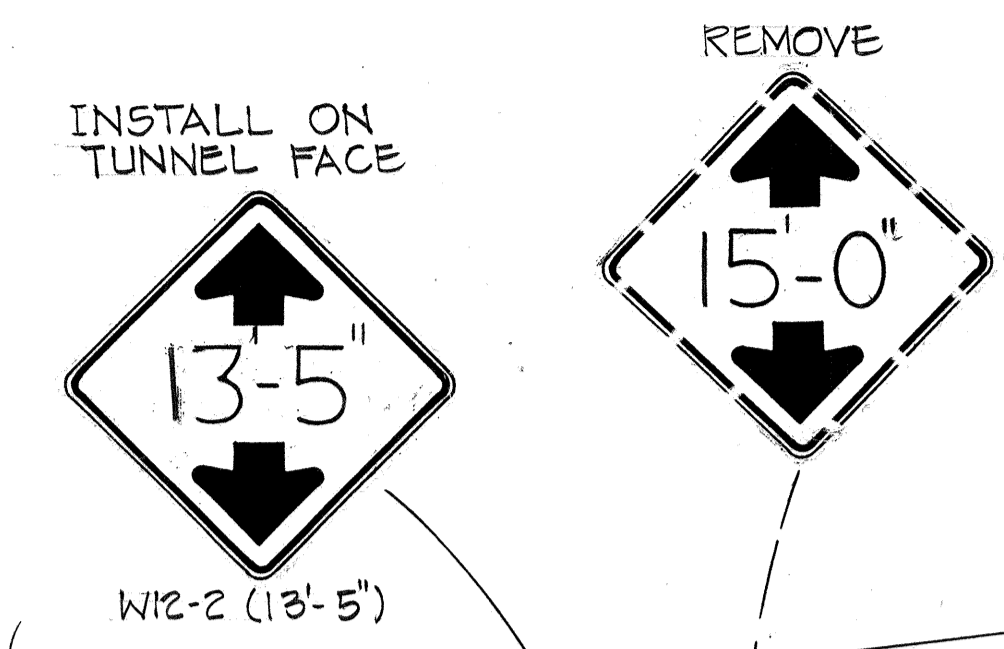
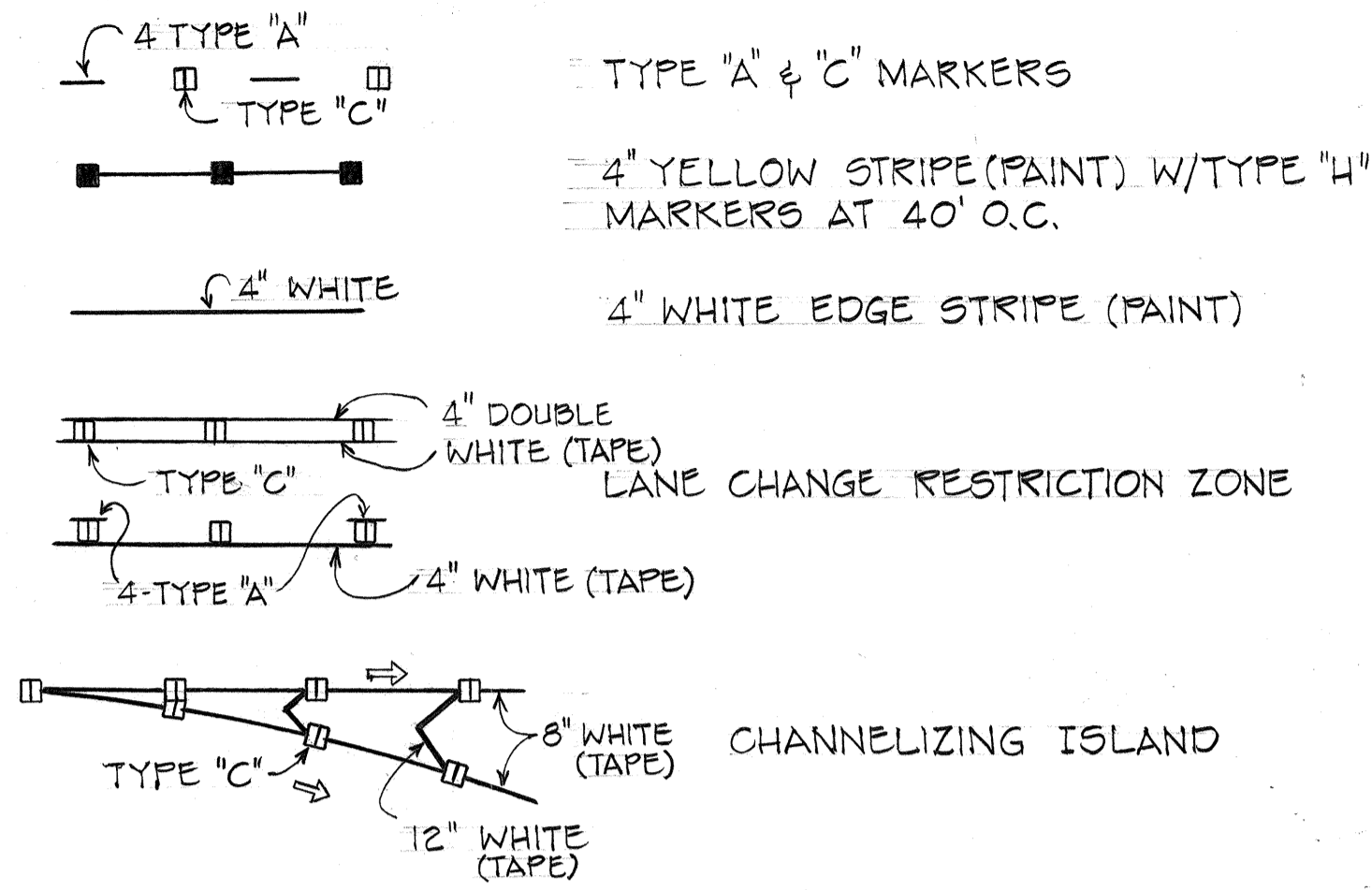


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	66	165

LEGEND



GENERAL NOTES

1. ALL EXISTING REGULATORY AND WARNING SIGNS AND POSTS AND MARKERS IN THE EASTBOUND LANES NOT TO BE INCORPORATED IN THE COMPLETED PROJECT SHALL BE REMOVED, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. HOWEVER, EXISTING SIGNS SHALL NOT BE REMOVED UNTIL NEW SIGNS ARE INSTALLED AS REPLACEMENTS, OR THE MESSAGES ARE NO LONGER APPLICABLE.
2. ALL EXISTING REGULATORY AND WARNING SIGNS ON THE WESTBOUND LANES SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
3. BACKING FOR ALL NEW REGULATORY AND WARNING SIGNS SHALL NOT BE SPLICED.
4. THE FINAL LOCATION OF ALL SIGNS SHALL BE APPROVED BY THE ENGINEER.
5. LOCATIONS OF ALL NEW PAVEMENT MARKERS, STRIPING AND MARKINGS SHALL BE STAKED OUT BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
6. EXISTING PAVEMENT MARKERS, STRIPING AND MARKINGS NOT INCORPORATED IN THE FINAL TRAFFIC PATTERN SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

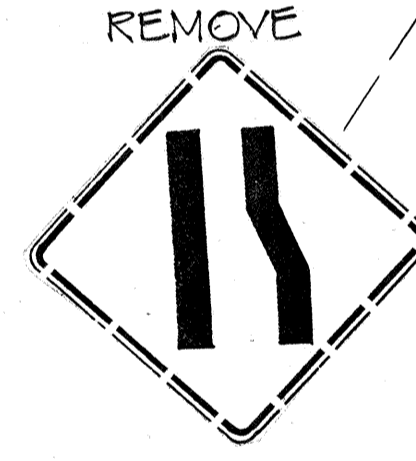
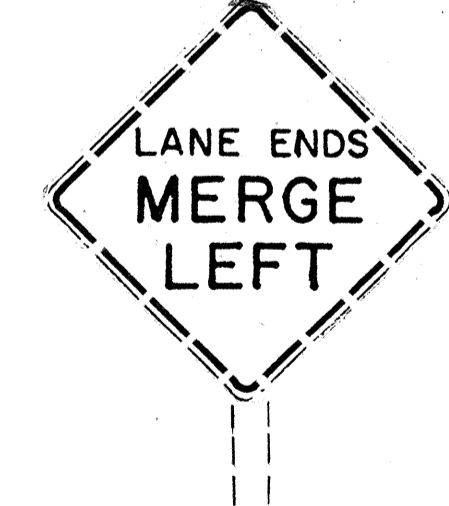
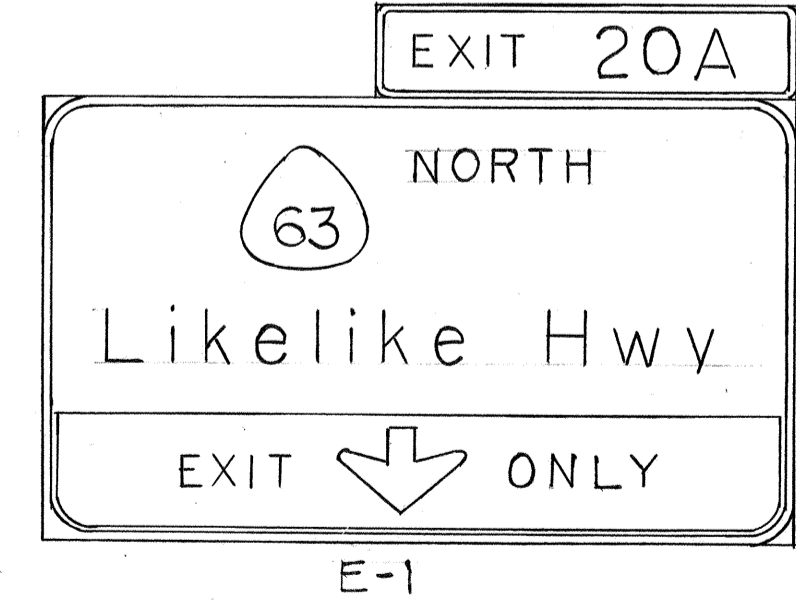
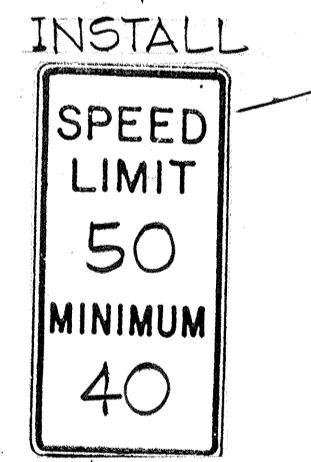
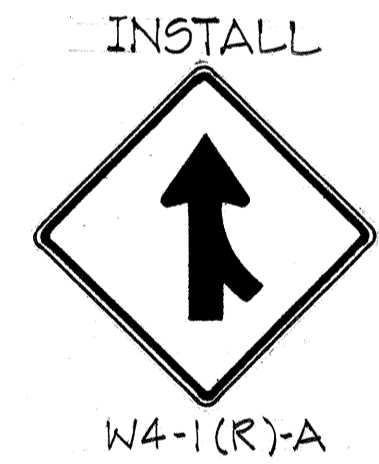
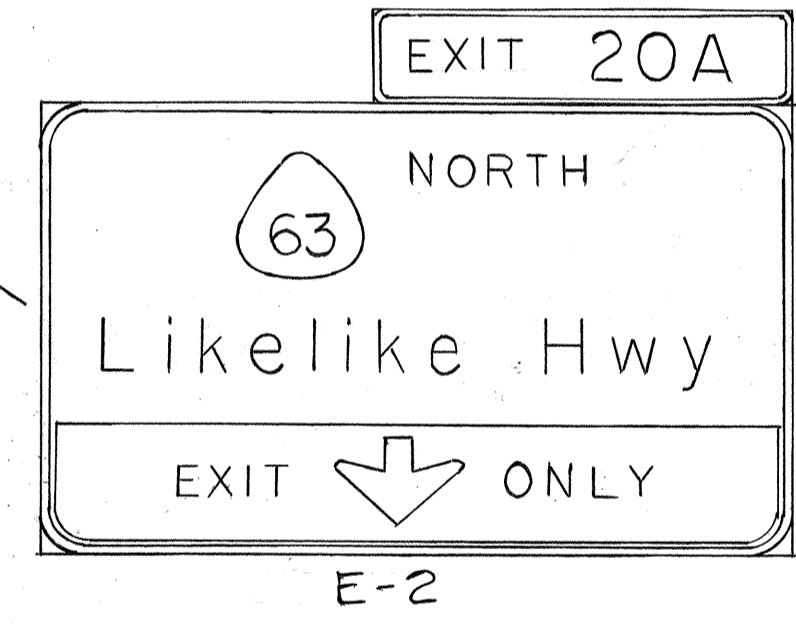
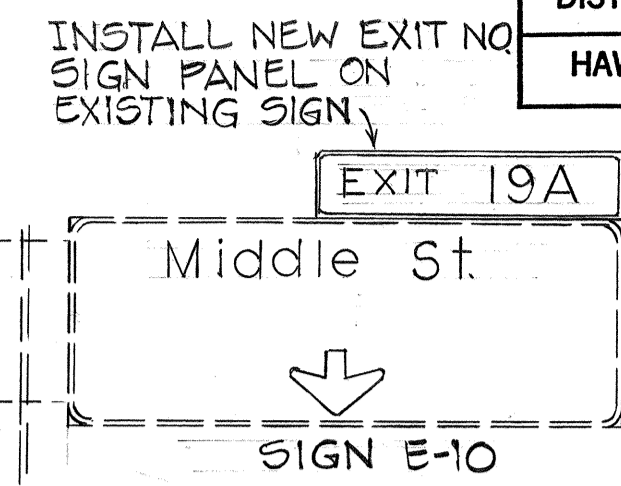
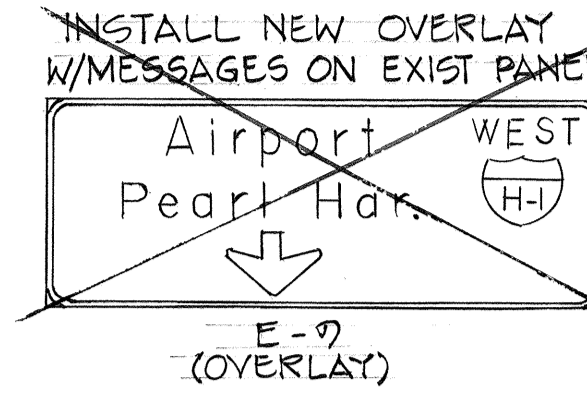
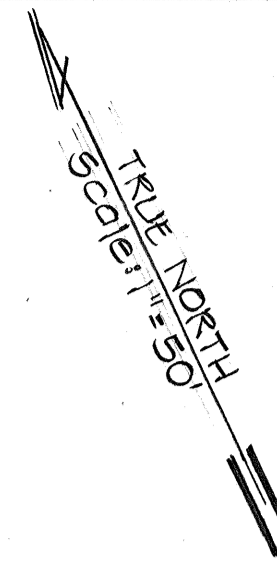
SIGNING, MARKING PLAN

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)

Scale: 1" = 50' Date: April, 1982

SHEET No. 17 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	67	165



CLOSED

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

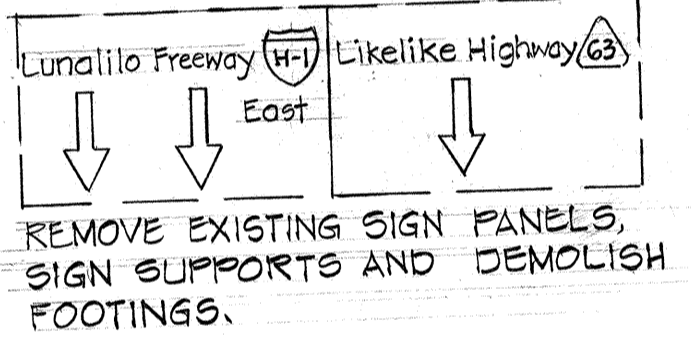
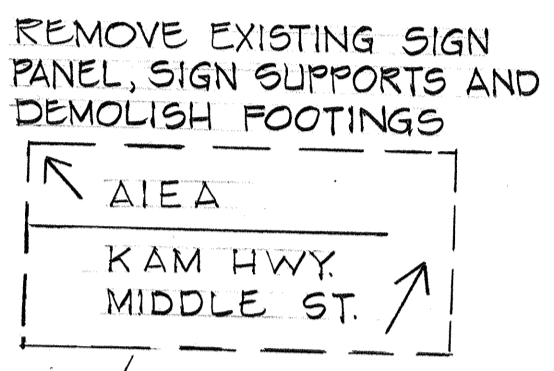
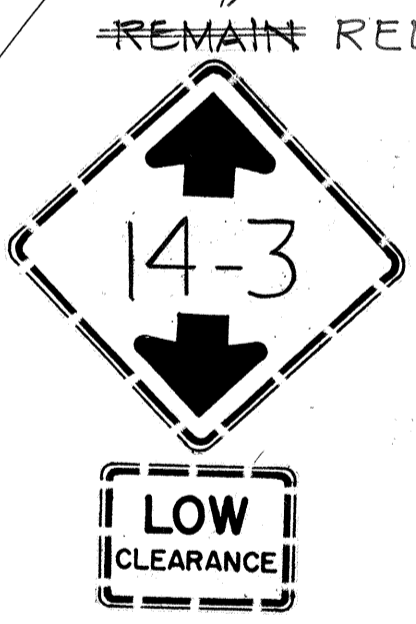
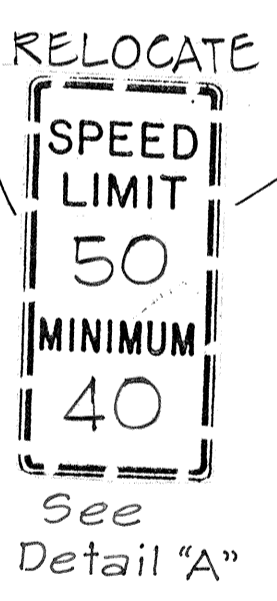
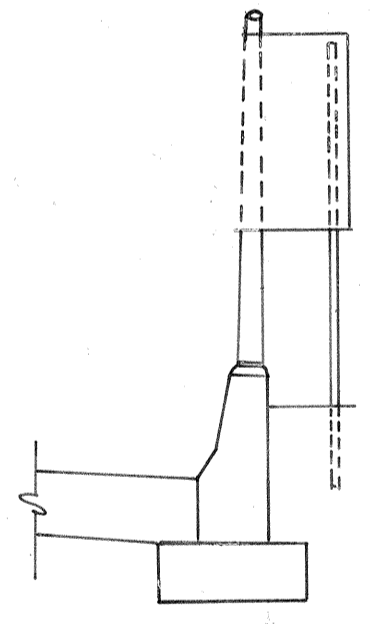
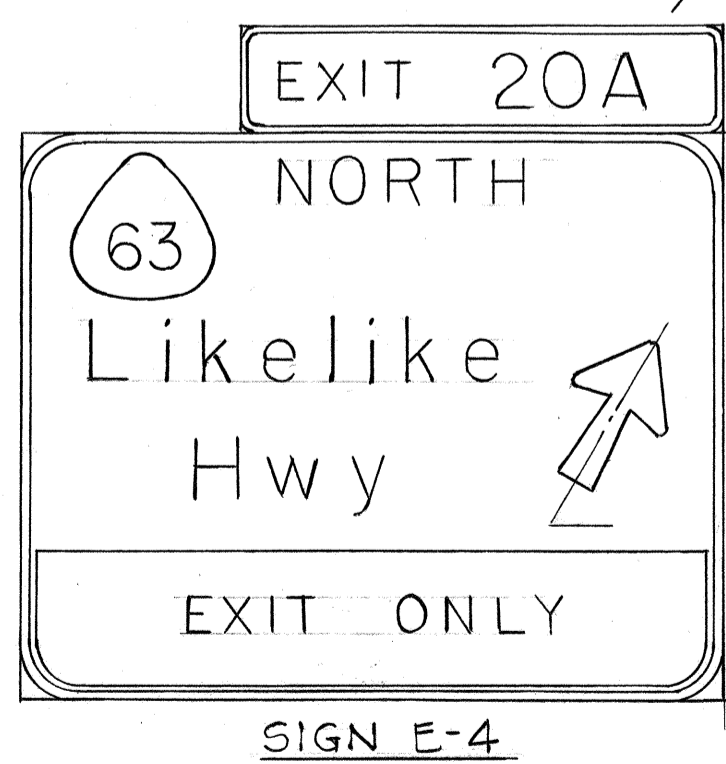
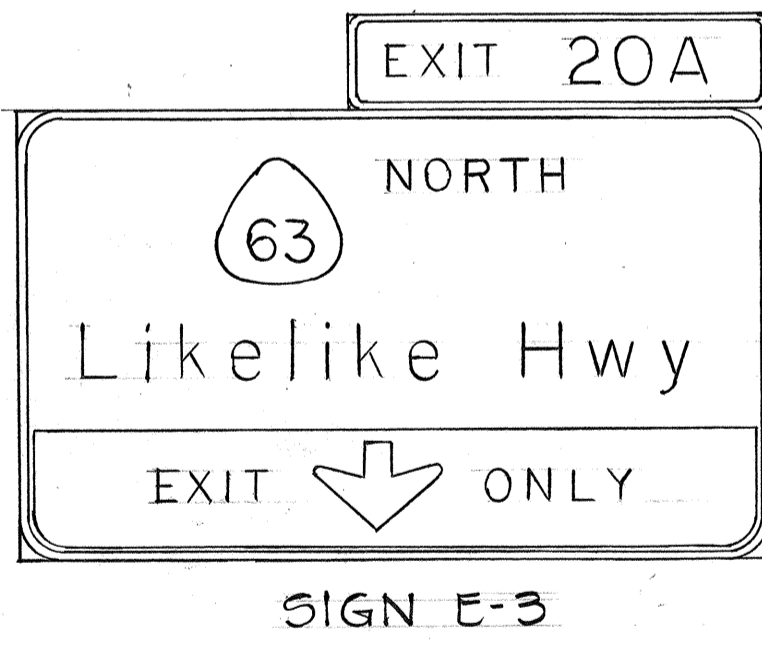
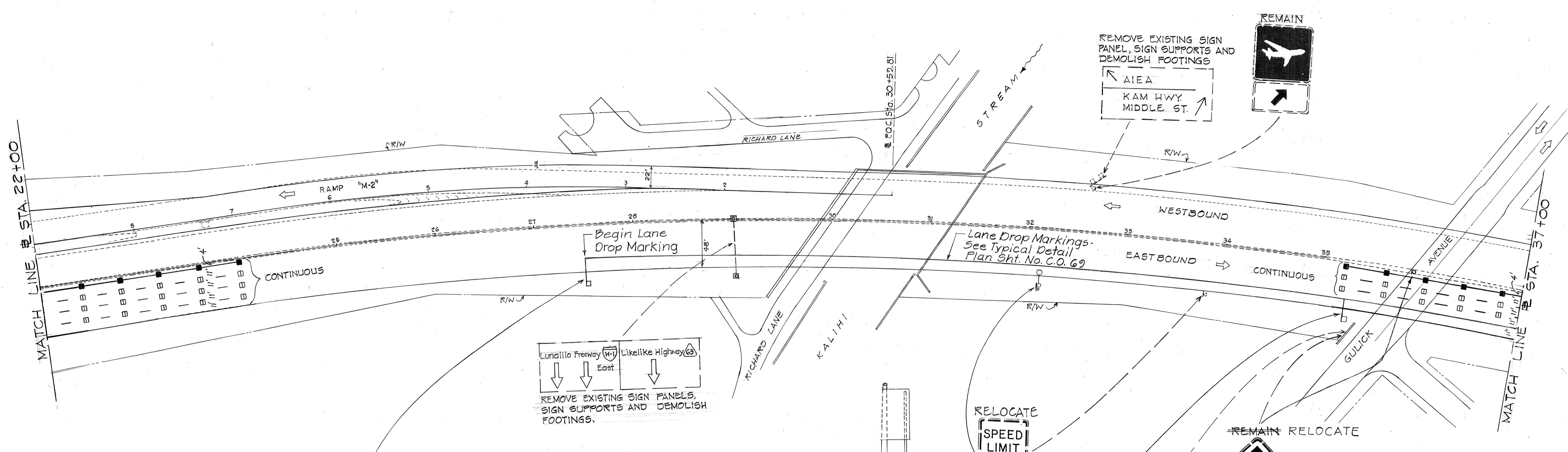
SIGNING, MARKING PLAN

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)
Scale: 1" = 50' Date: April, 1982

SHEET NO. 27 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	68	165

TRUE NORTH
SCALE: 1" = 50'



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

Date	Revision
6/6/84	Revise Pavement Markings at Lane Drop

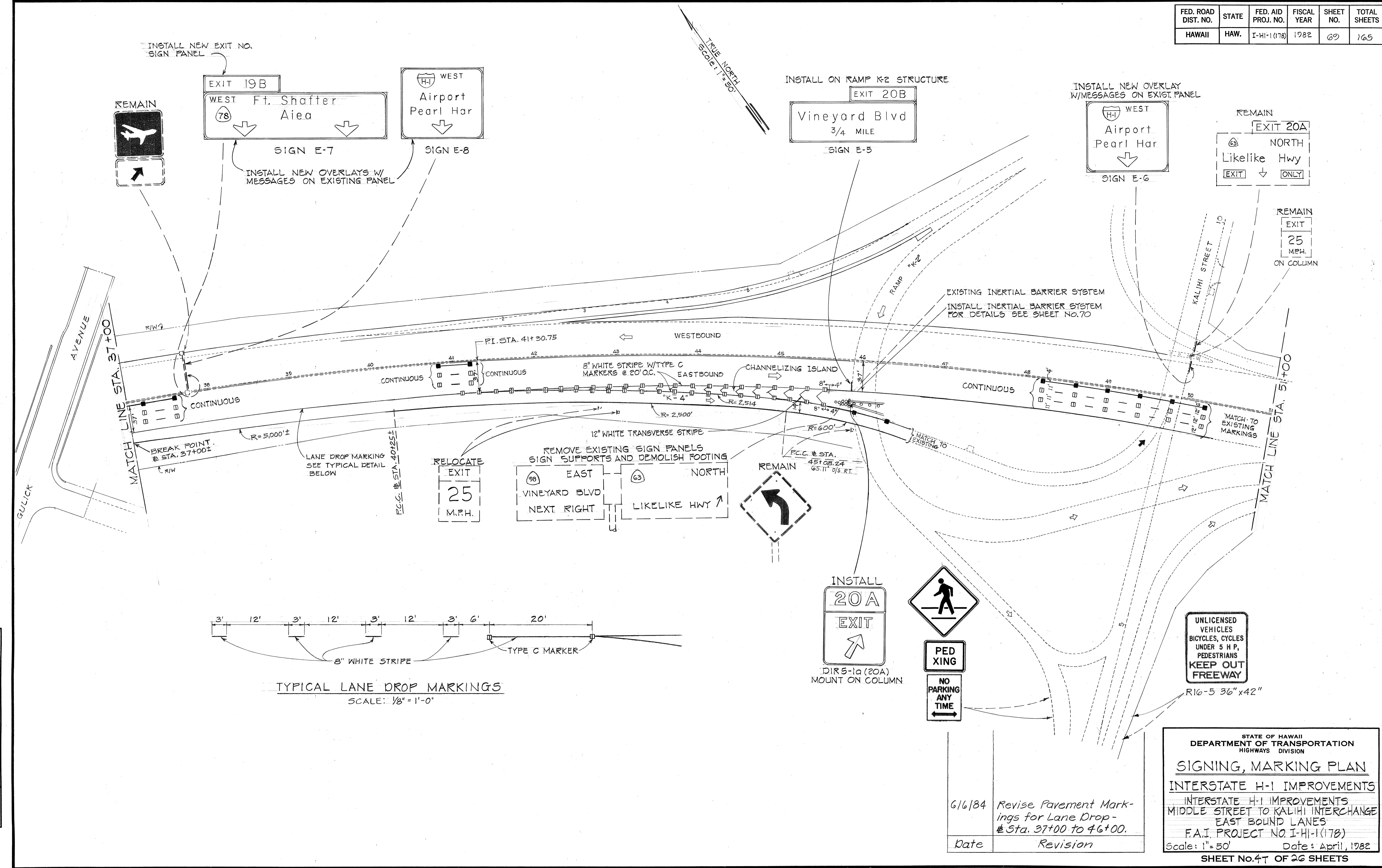
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING, MARKING PLAN

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIH'I INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)

Scale: 1" = 50' Date: April, 1982
SHEET NO. 31 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	69	165



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

6/16/84	Revise Pavement Markings for Lane Drop - Sta. 37+00 to 46+00.
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING, MARKING PLAN

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHII INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)
Scale: 1" = 50' Date: April, 1982

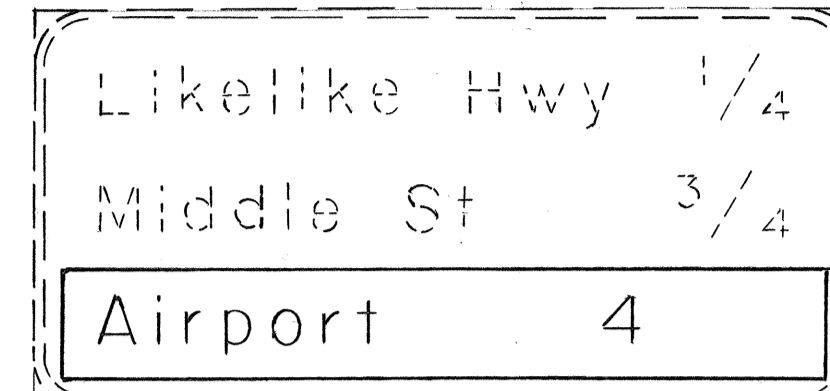
SHEET No. 47 OF 26 SHEETS

C.O. 69

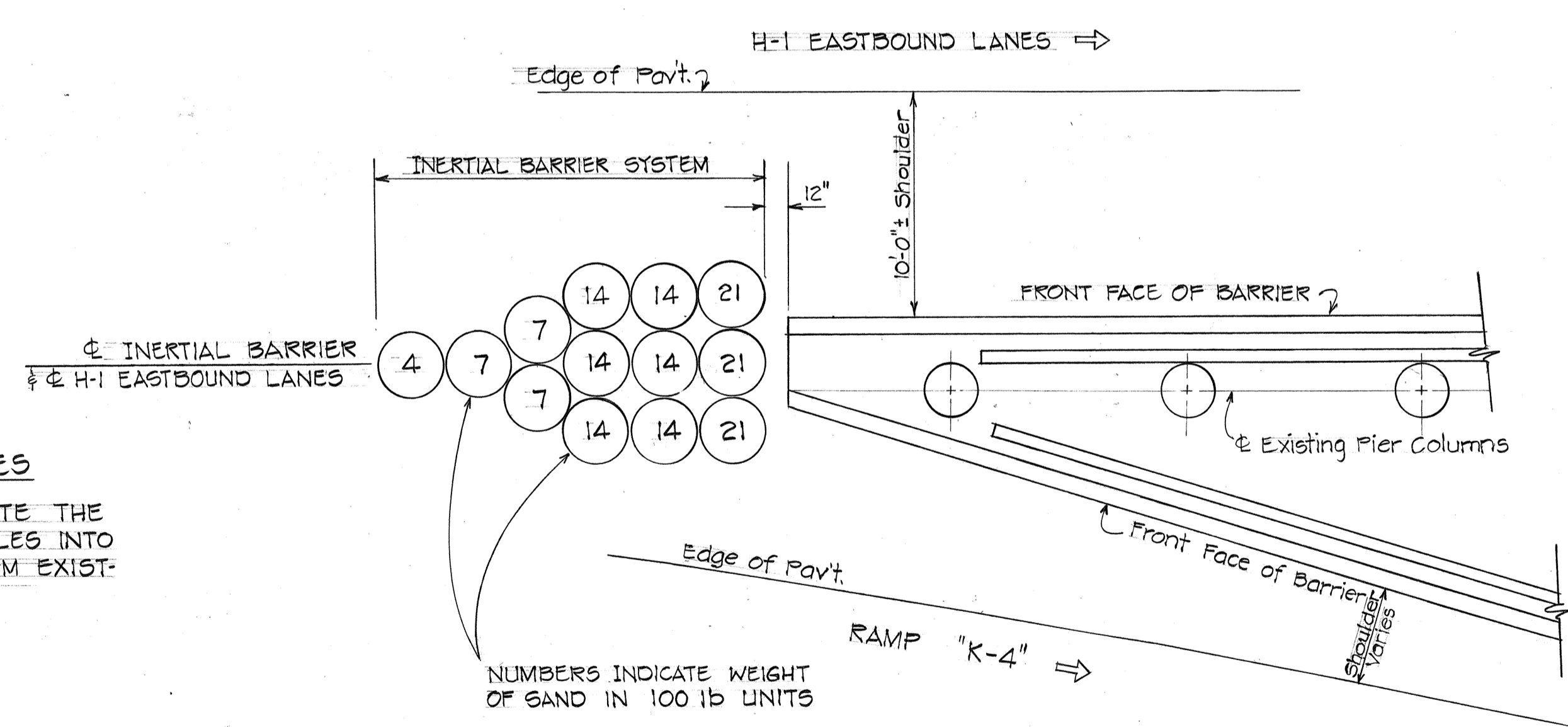
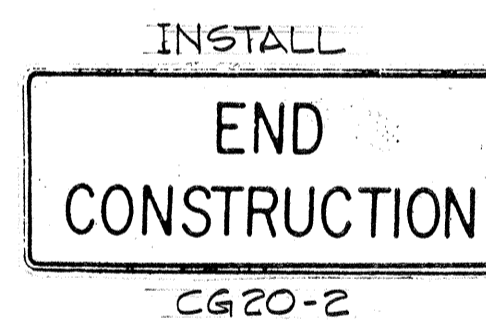
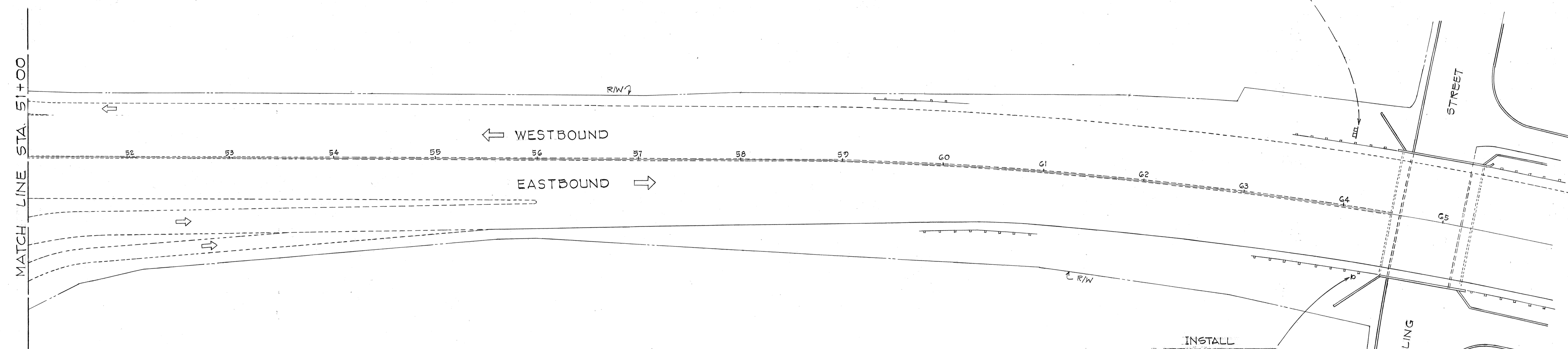
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	70	165

TRUE NORTH
Scale: 1" = 50'

REMOVE EXISTING MESSAGE "Kam Hwy 3/4"
AND INSTALL NEW OVERLAY WITH NEW MESSAGE "AIRPORT 4" ON EXISTING PANEL



SIGN E-11



INERTIAL BARRIER NOTES

- THE CONTRACTOR SHALL INCORPORATE THE EXISTING INERTIAL BARRIER MODULES INTO THE NEW INERTIAL BARRIER SYSTEM. EXISTING MODULES ARE AS FOLLOWS.
 2 - 700 LBS
 4 - 1400 LBS
 3 - 2100 LBS
- FOR ADDITIONAL REQUIREMENTS, REFER TO SECTION 693 - INERTIAL BARRIER SYSTEM OF THE SPECIAL PROVISIONS.

INERTIAL BARRIER SYSTEM
RAMP "K-4" GORE
Scale: 3/16" = 1'-0"

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING, MARKING PLAN

INTERSTATE H-1 IMPROVEMENTS
INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)

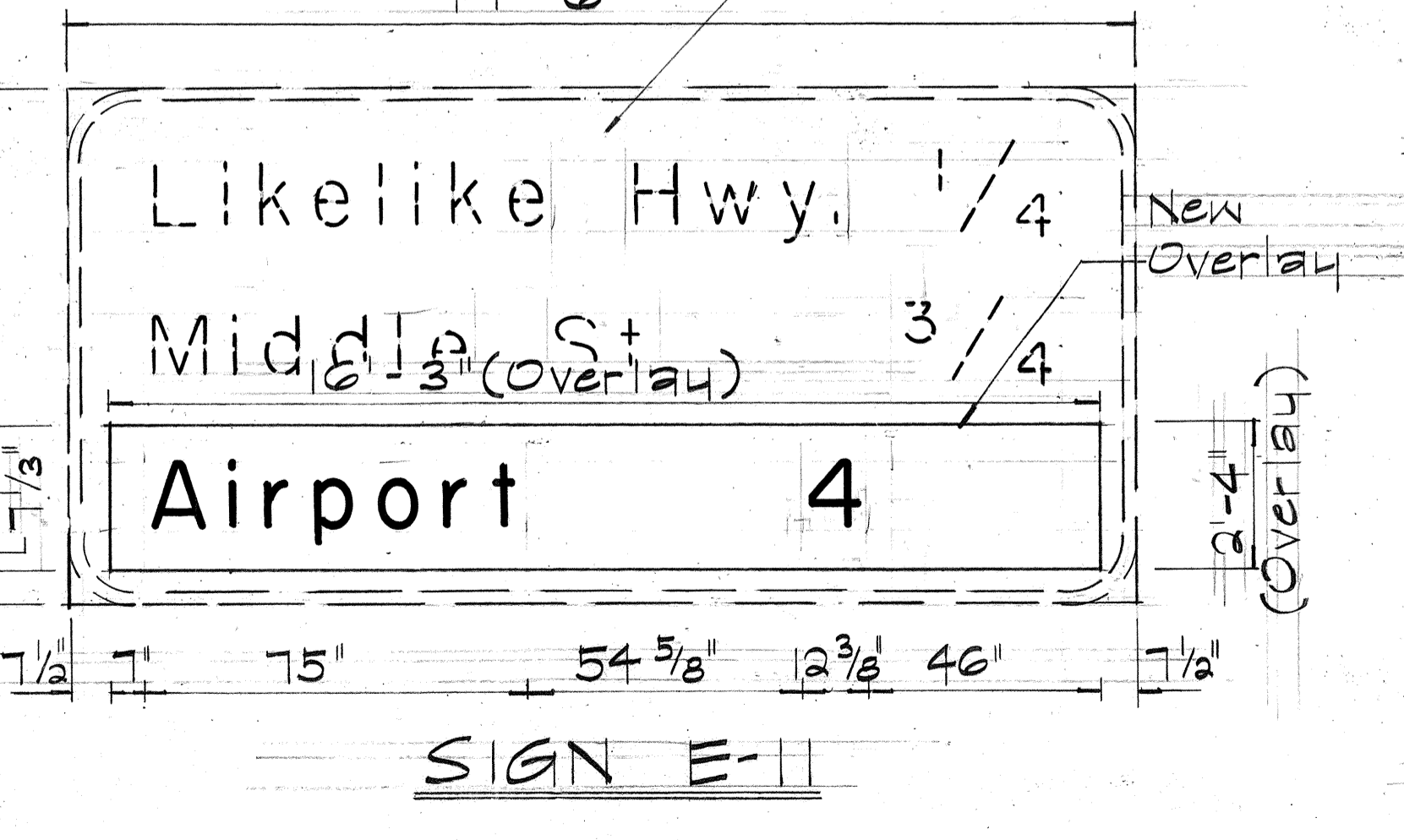
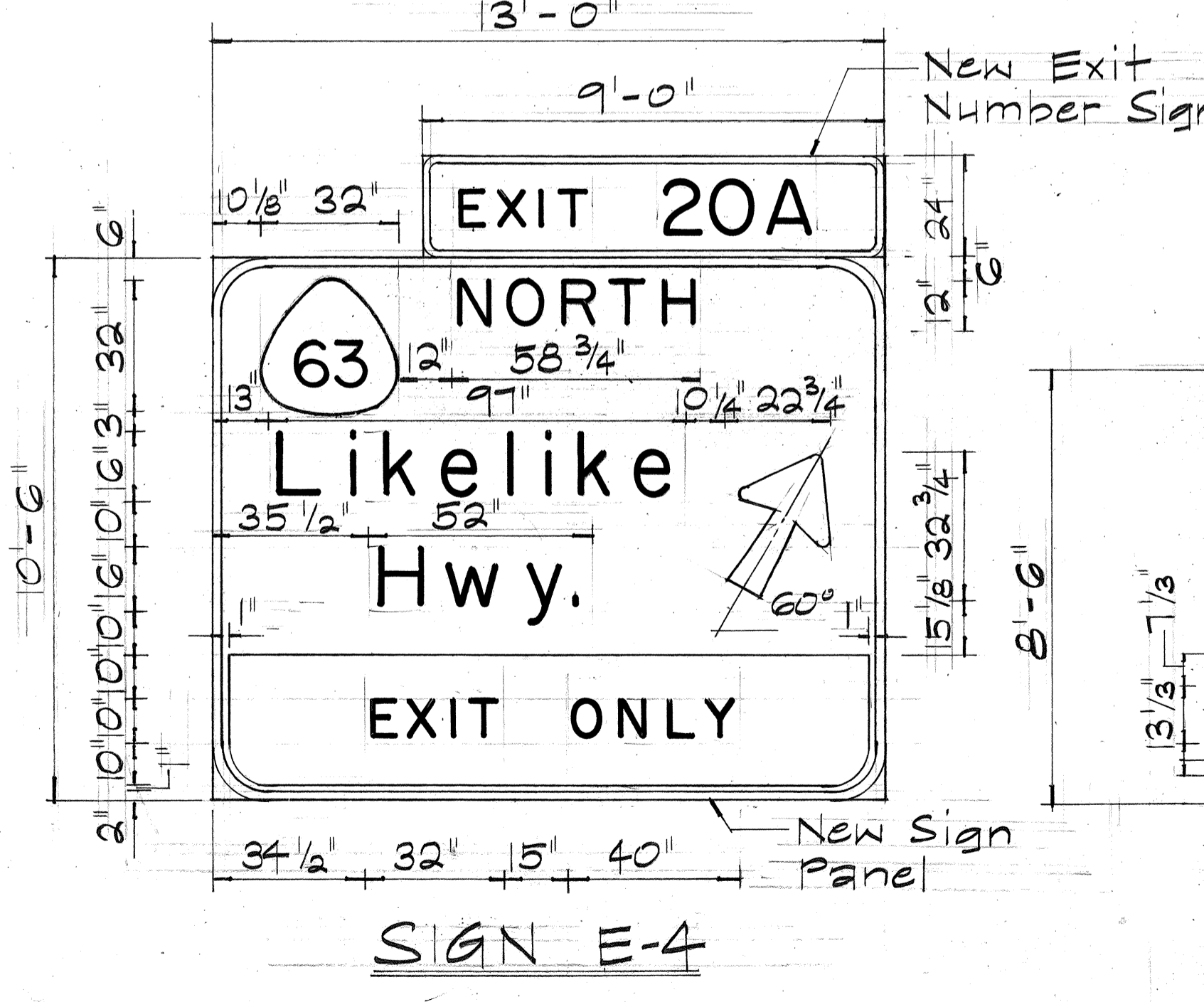
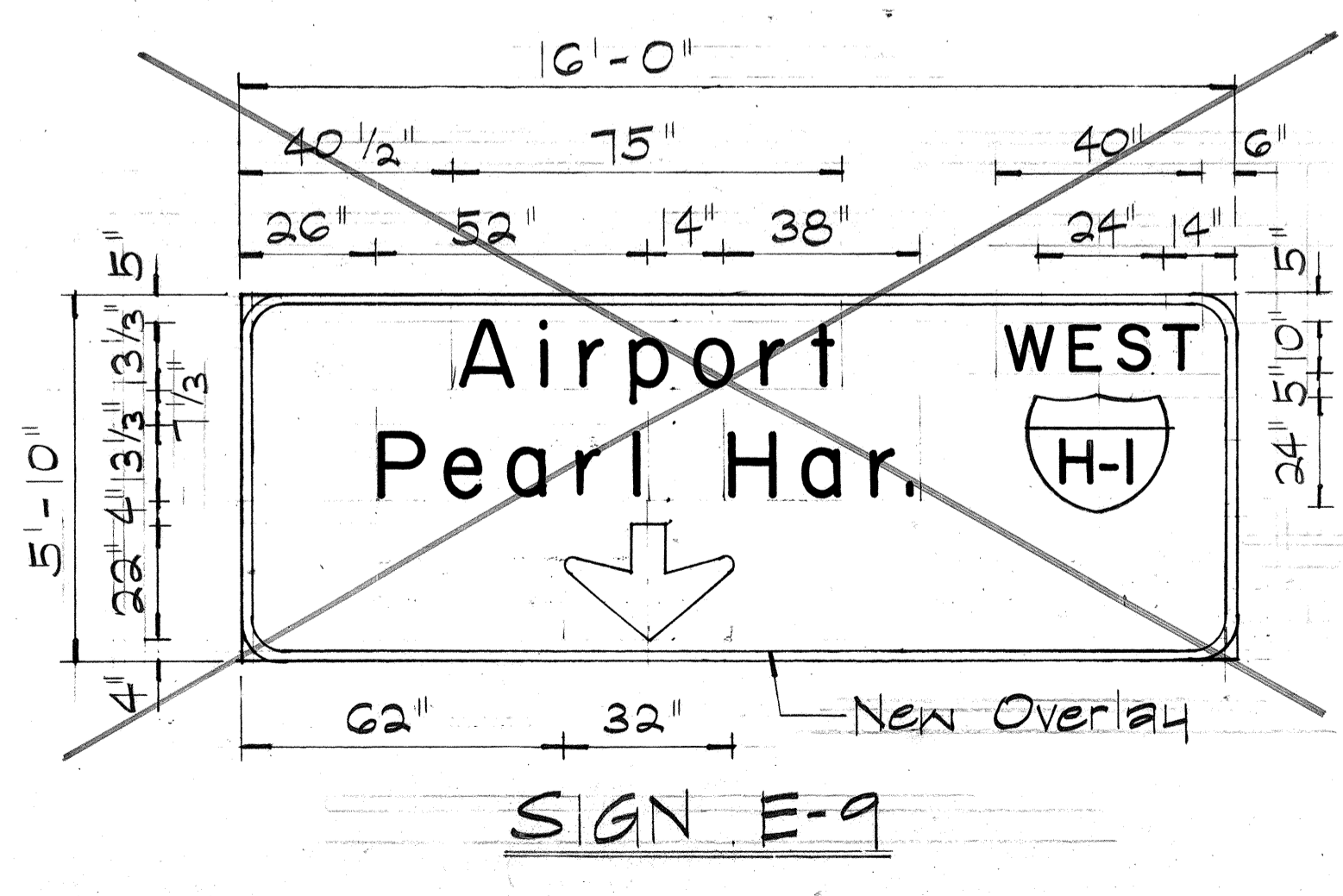
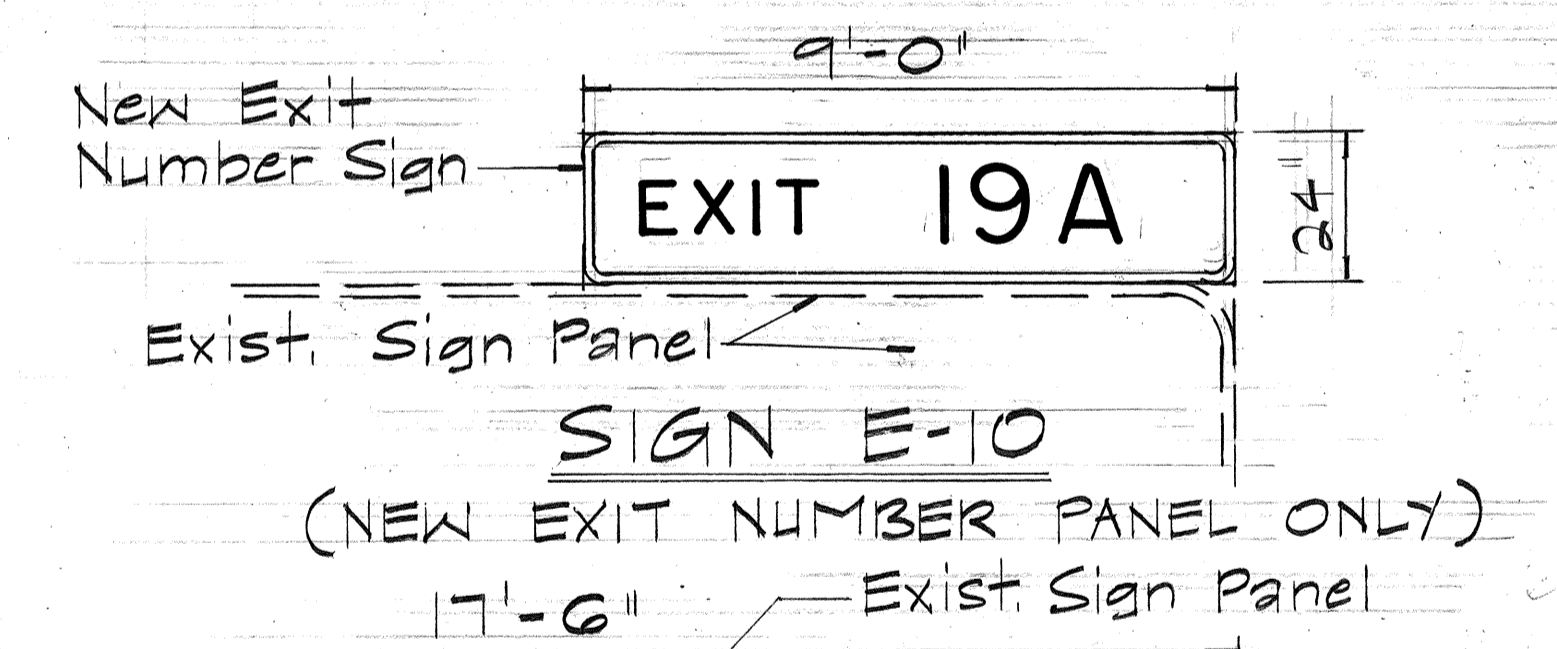
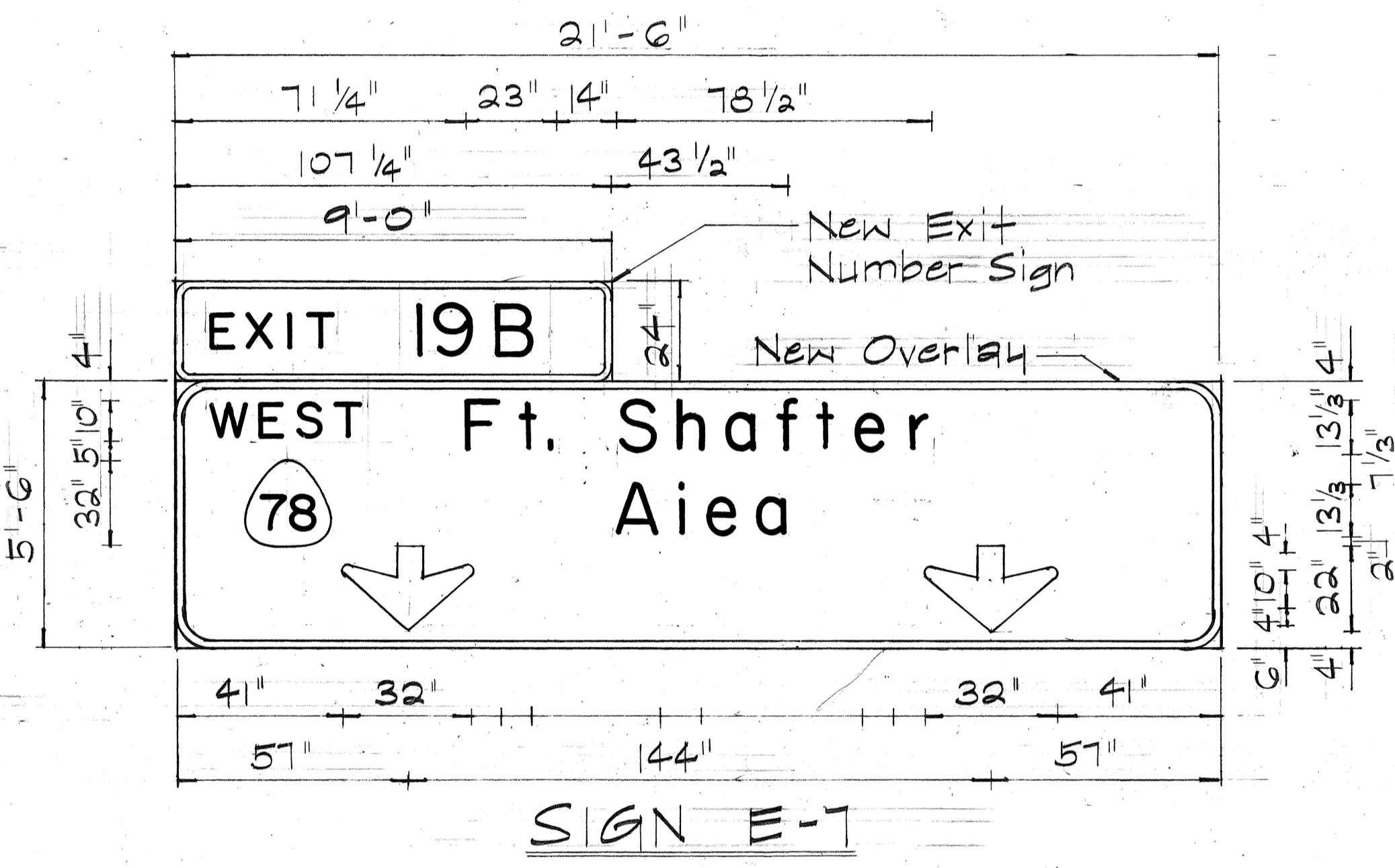
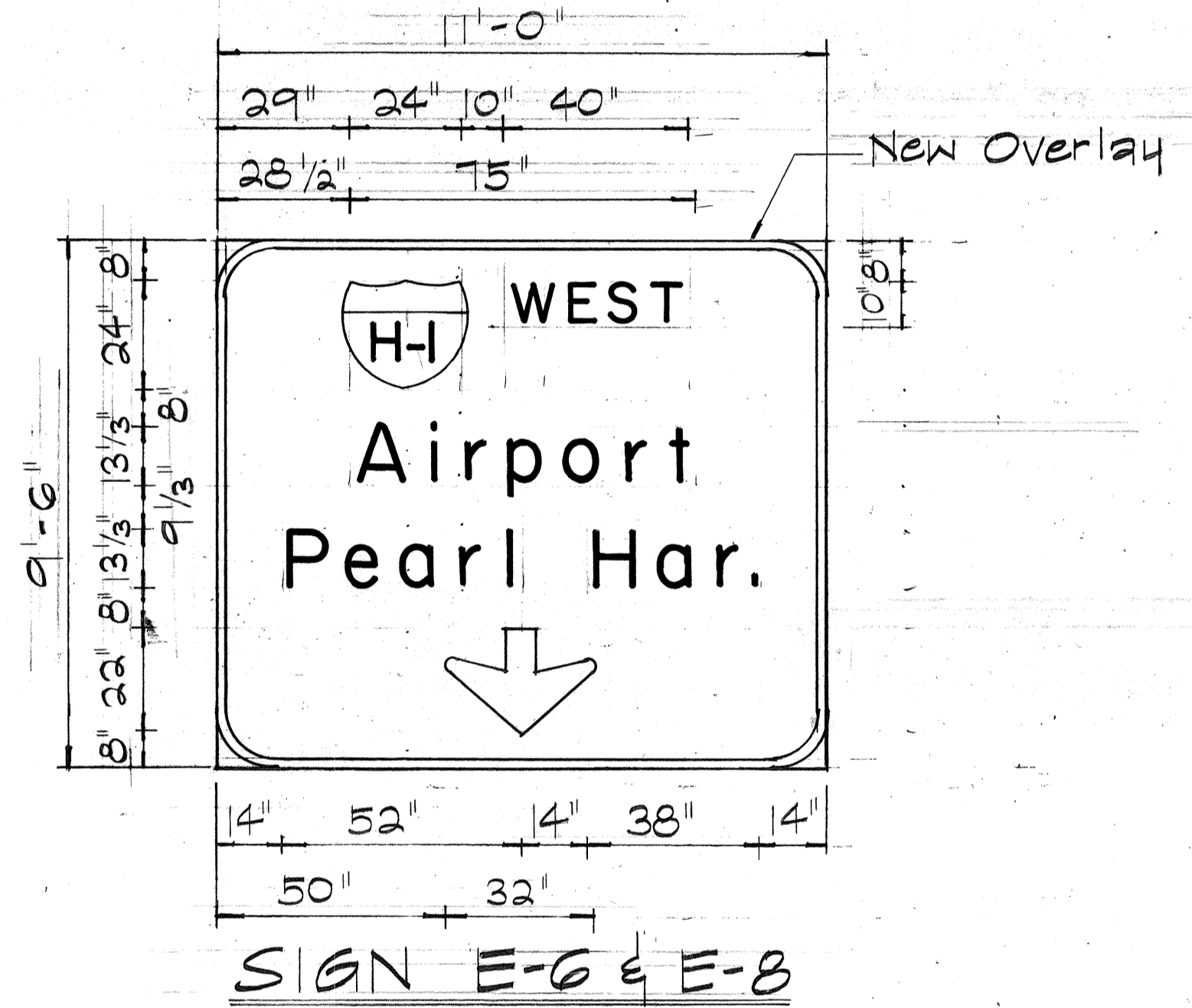
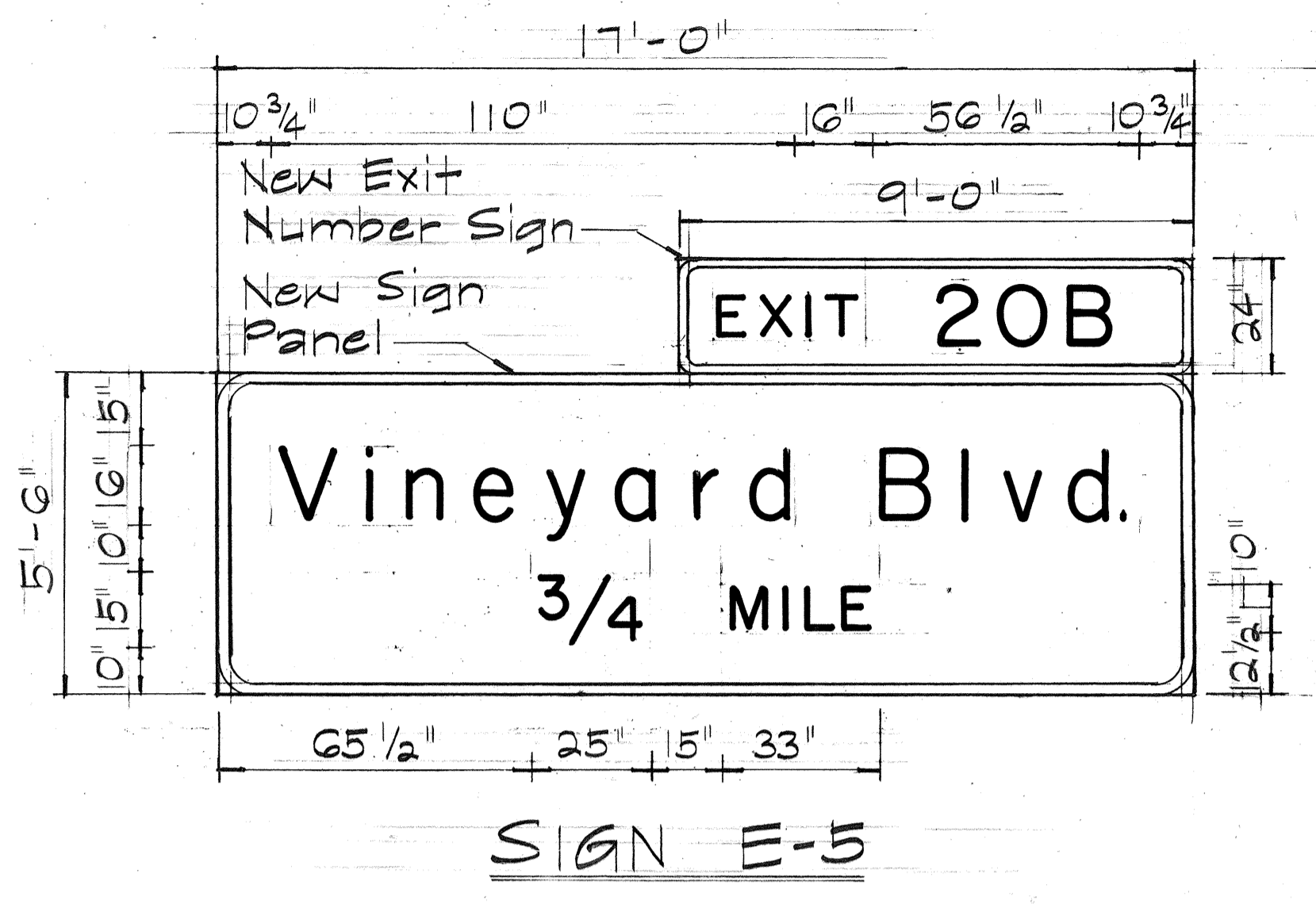
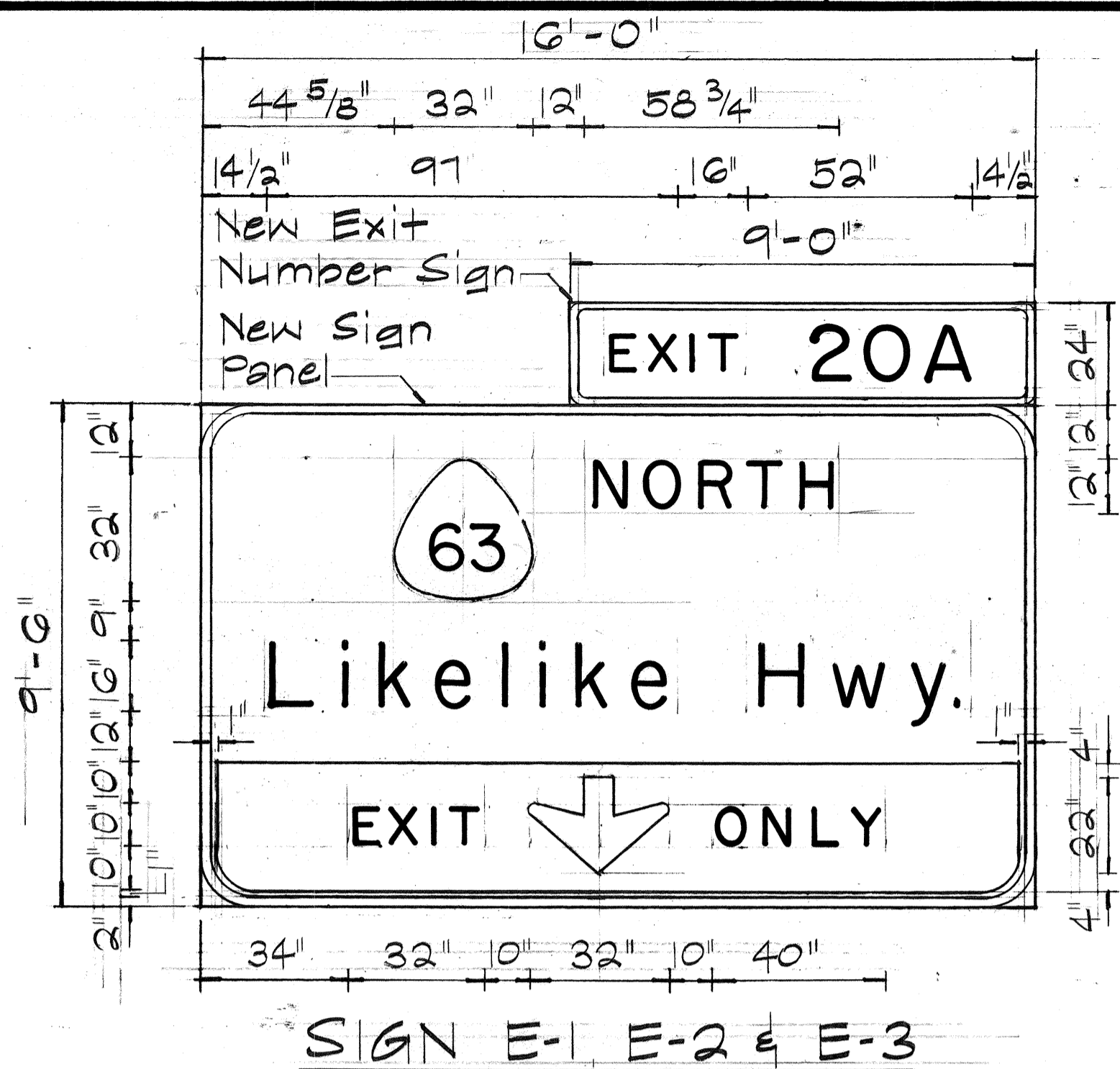
Scale: 1" = 50' Date: April, 1982

SHEET No. 57 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	71	165

GENERAL NOTES

- Signs shall conform to the latest editions and amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD).
 - "Standard Highway Signs"
 - "Standard Alphabets for Highway Signs"
- Letter size:
 - When letters are all uppercase, use Series "E".
 - When initial uppercase letter is used in conjunction with lowercase letters, use Series "E"(M) for uppercase letter.
- Borders shall be 2" wide unless otherwise noted. Corner radii shall be approximately one-eighth of the lesser side dimension of the sign. Radii shall be 3" minimum and 12" maximum.
- Interstate and State Route Marker symbols shall conform to details as shown on the plans and as specified in the MUTCD.
- New sign panels shall be laminated aluminum or extruded aluminum.
- Overlays shall be as specified in Section 621 of the Special Provisions.
- For details of Exit Number Panels see sht. #91
- "EXIT ONLY" panels shall have a black legend on a high intensity reflectorized yellow background.
- For arrow details see sht. #91



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

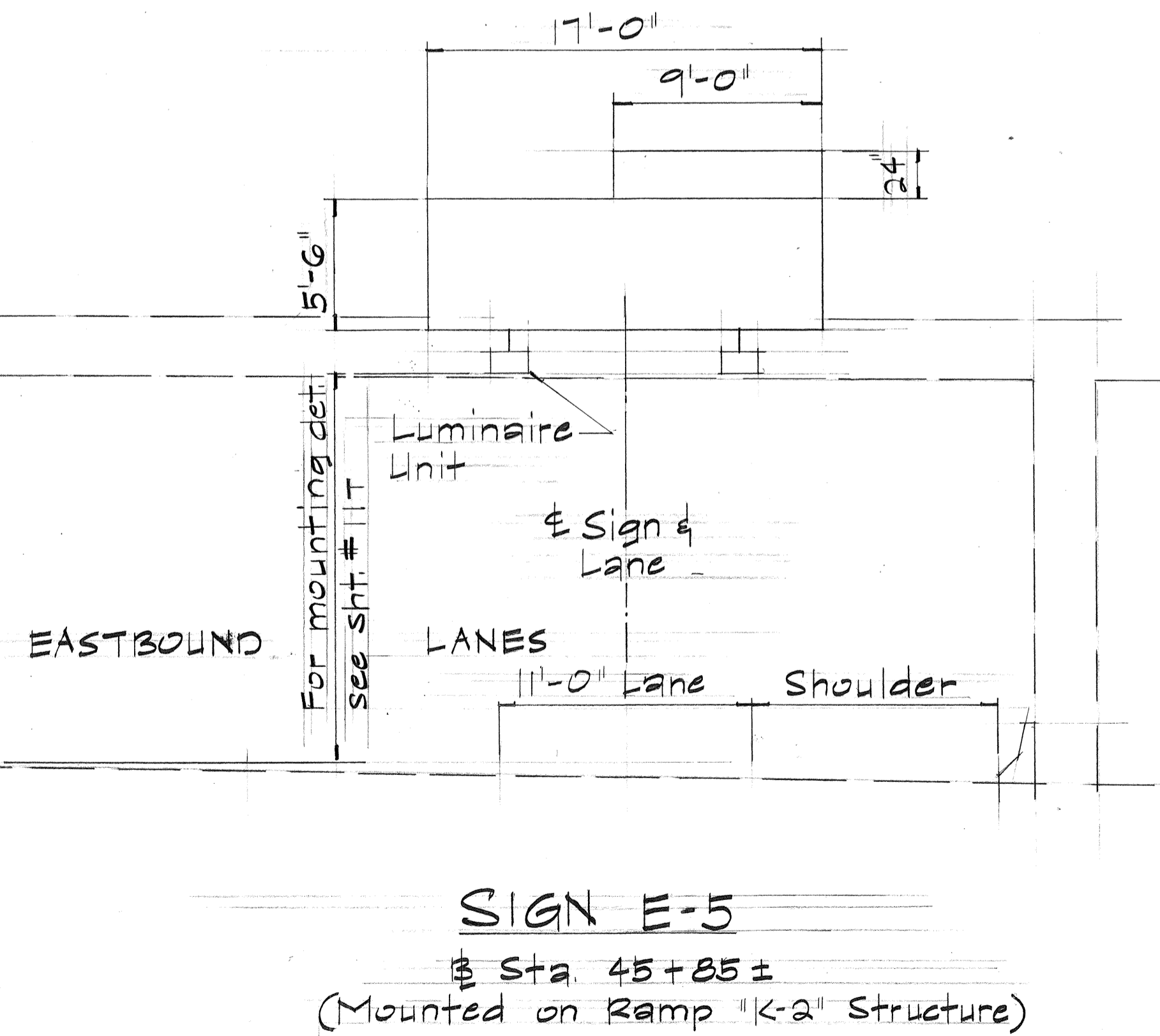
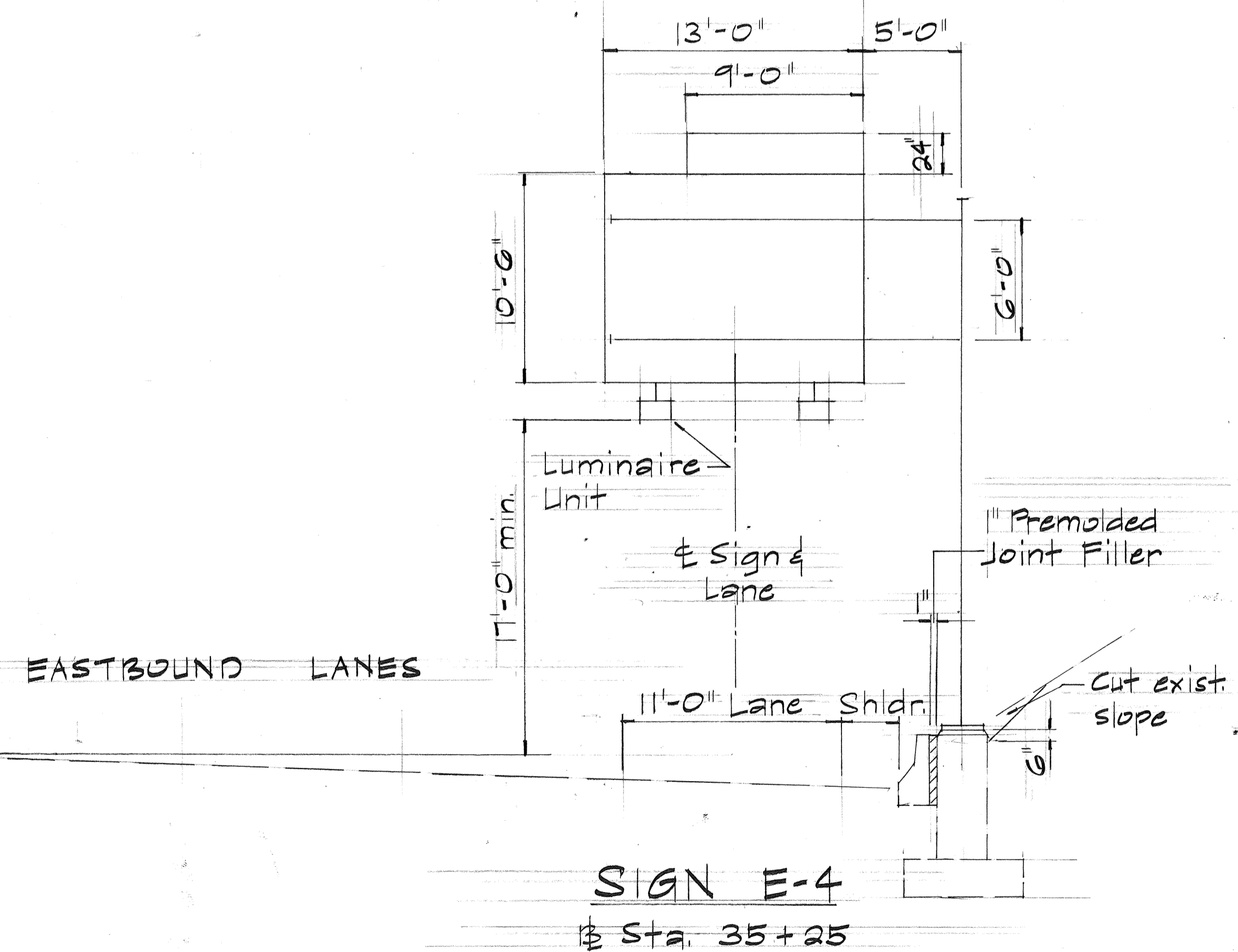
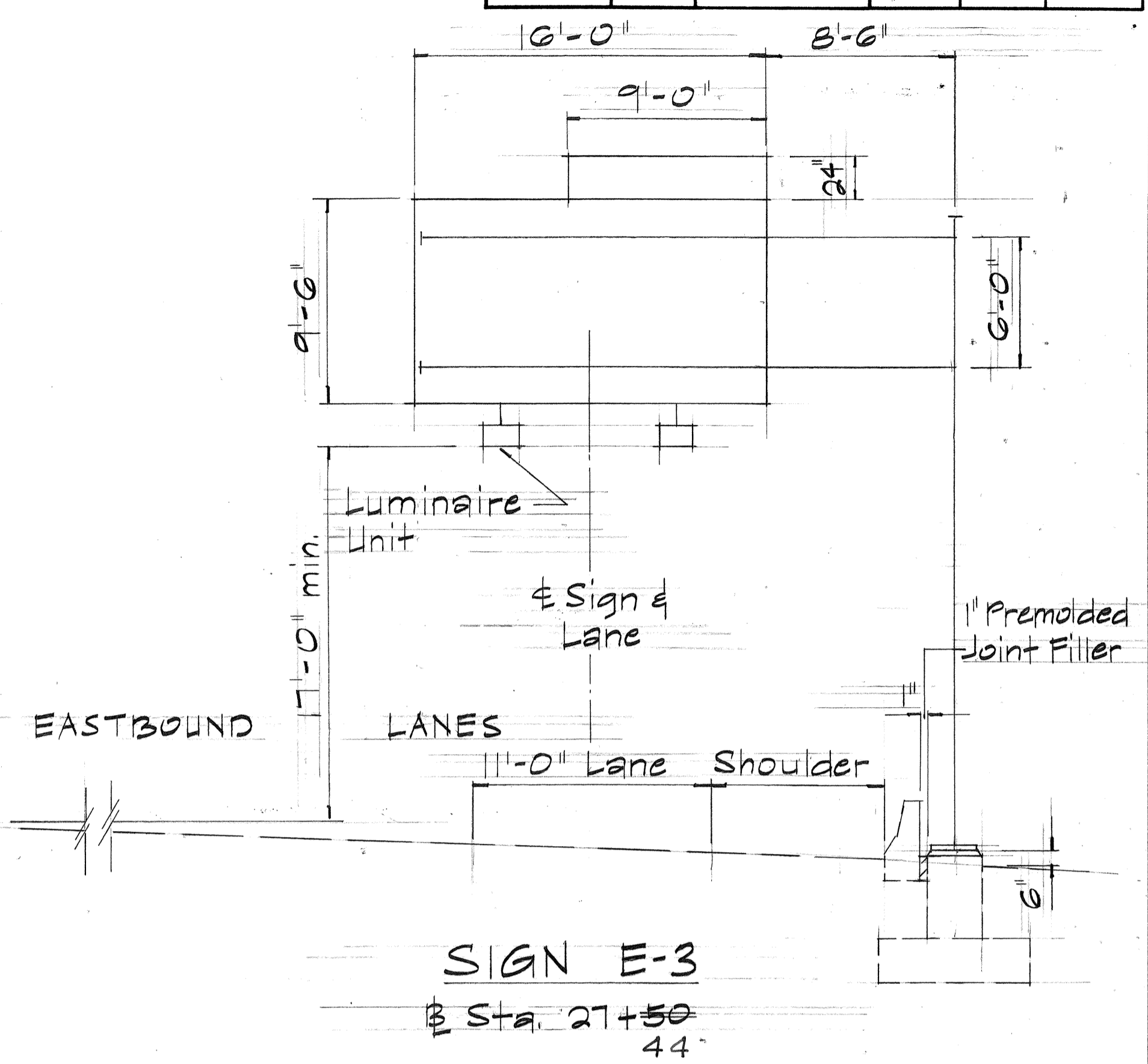
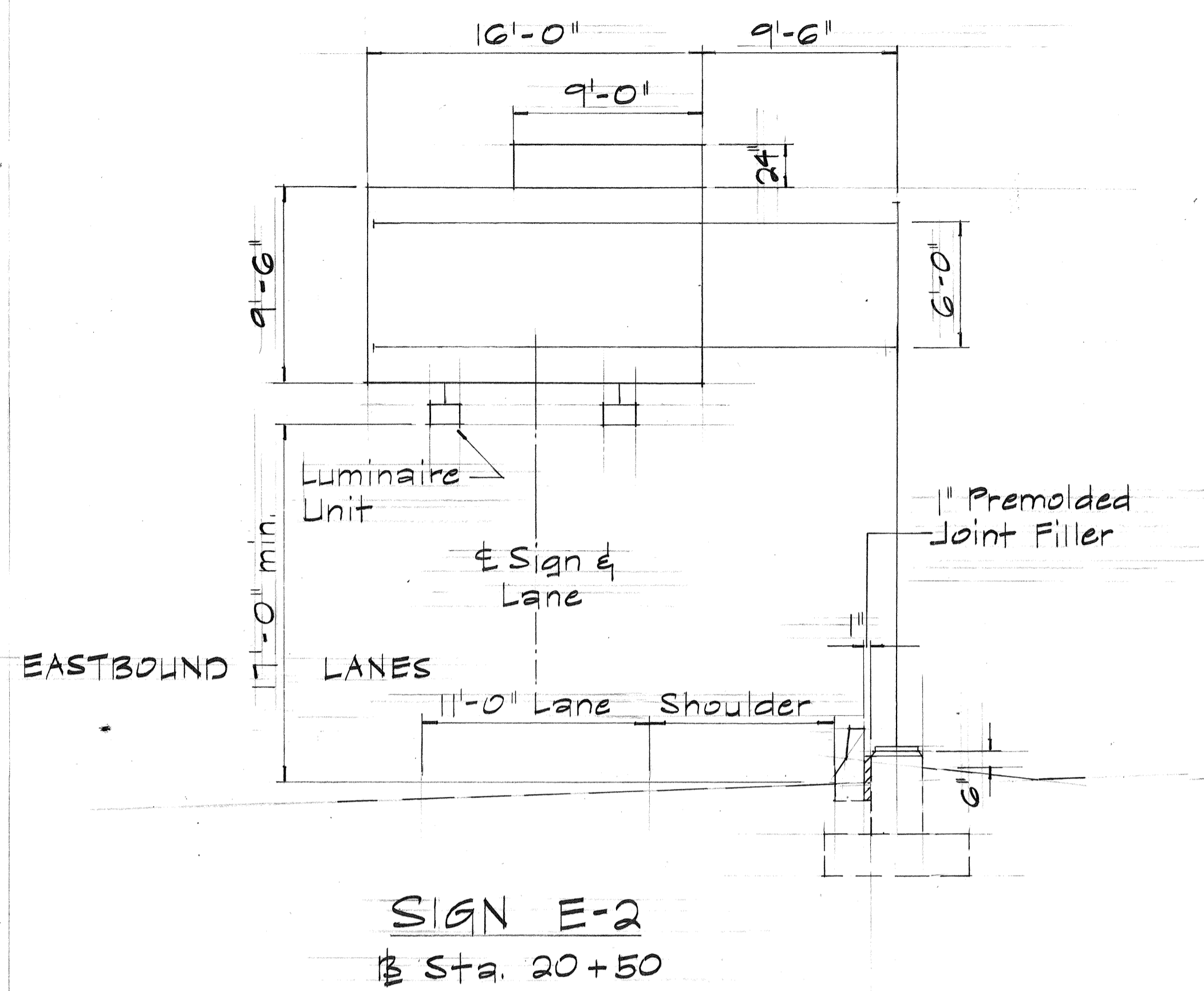
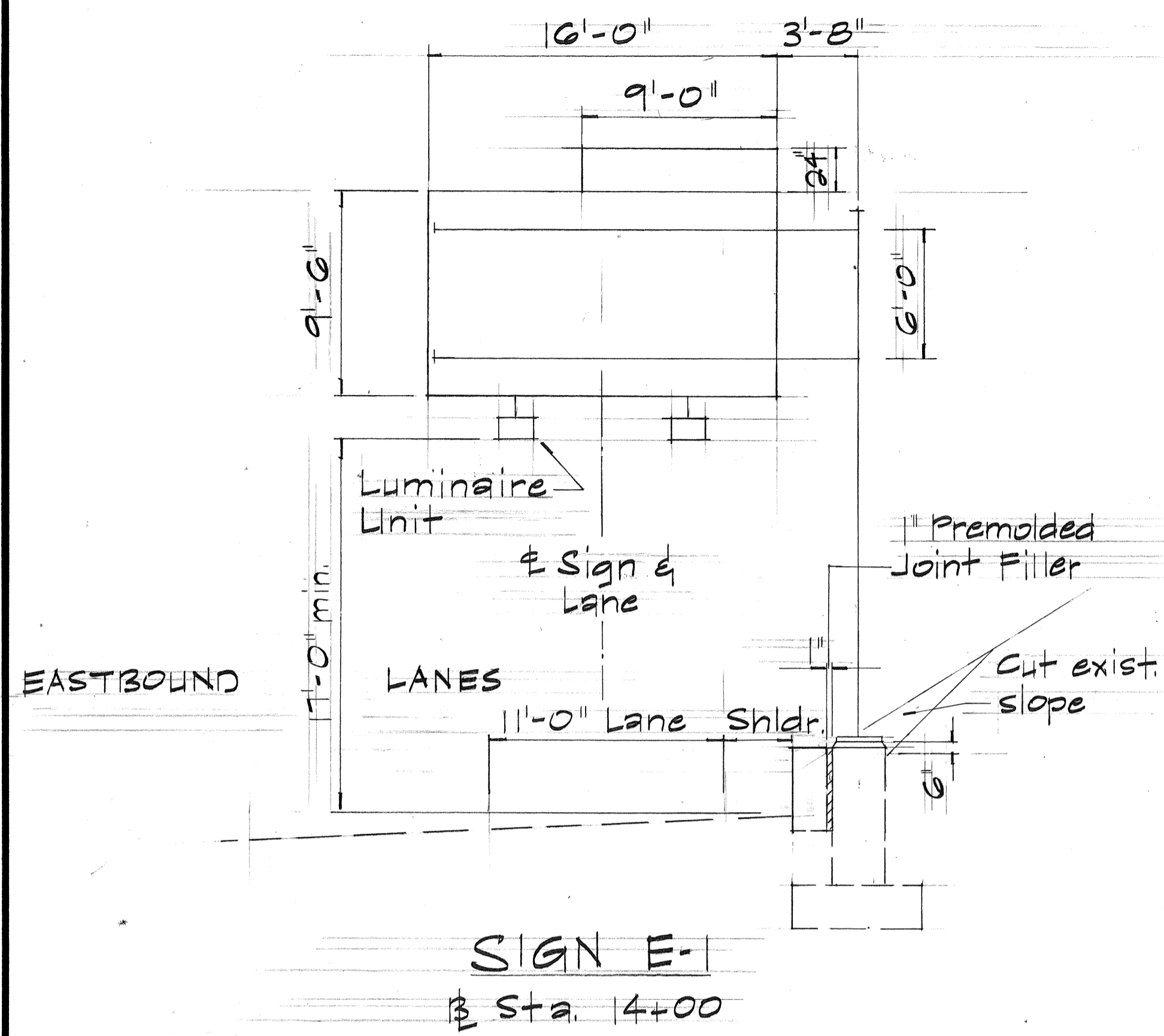
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PANEL LAYOUTS

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)
Scale: 3/8"=1'-0" April 1982

SHEET NO. 61 OF 66 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	72	165



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FRAME LAYOUTS

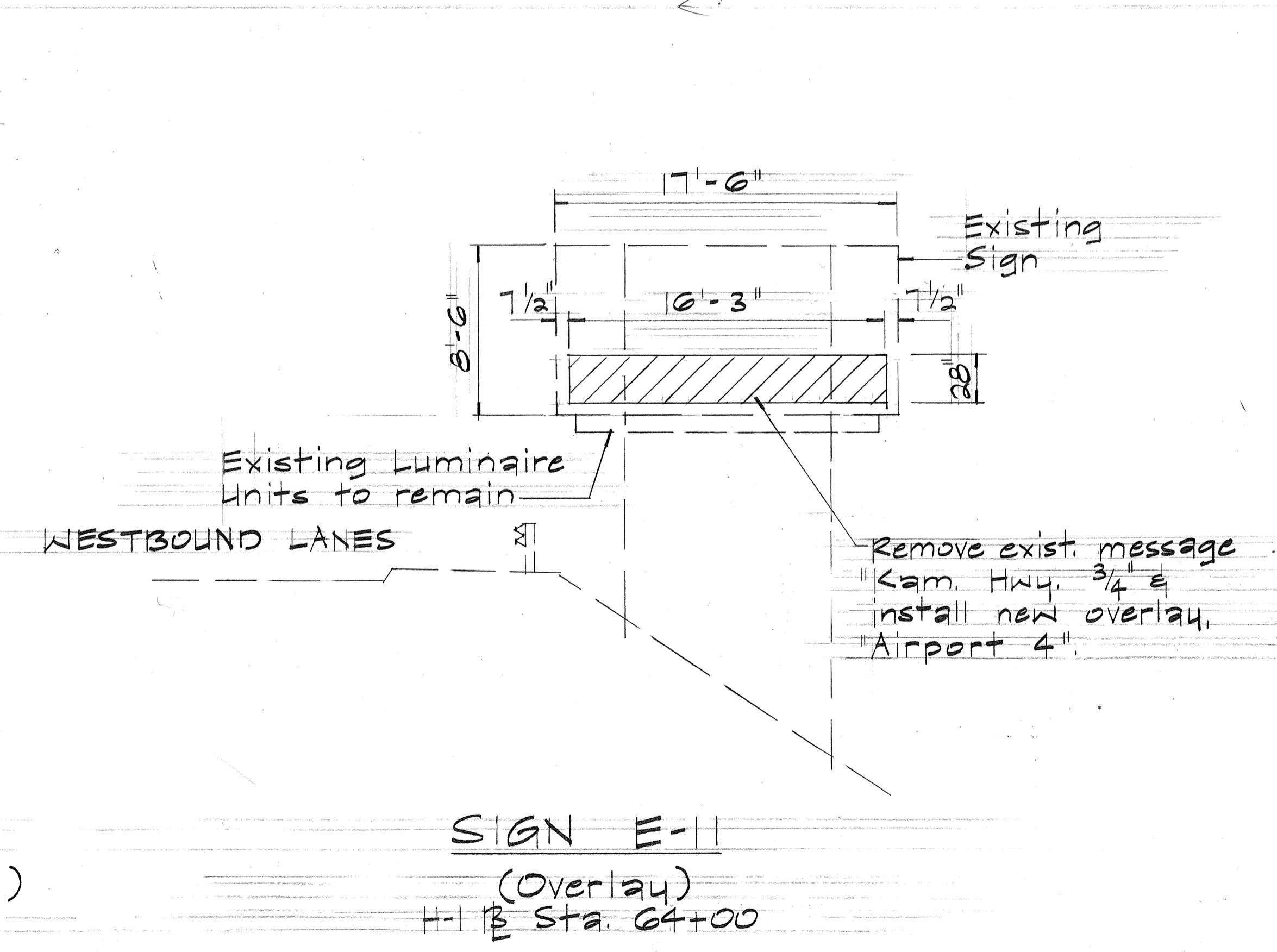
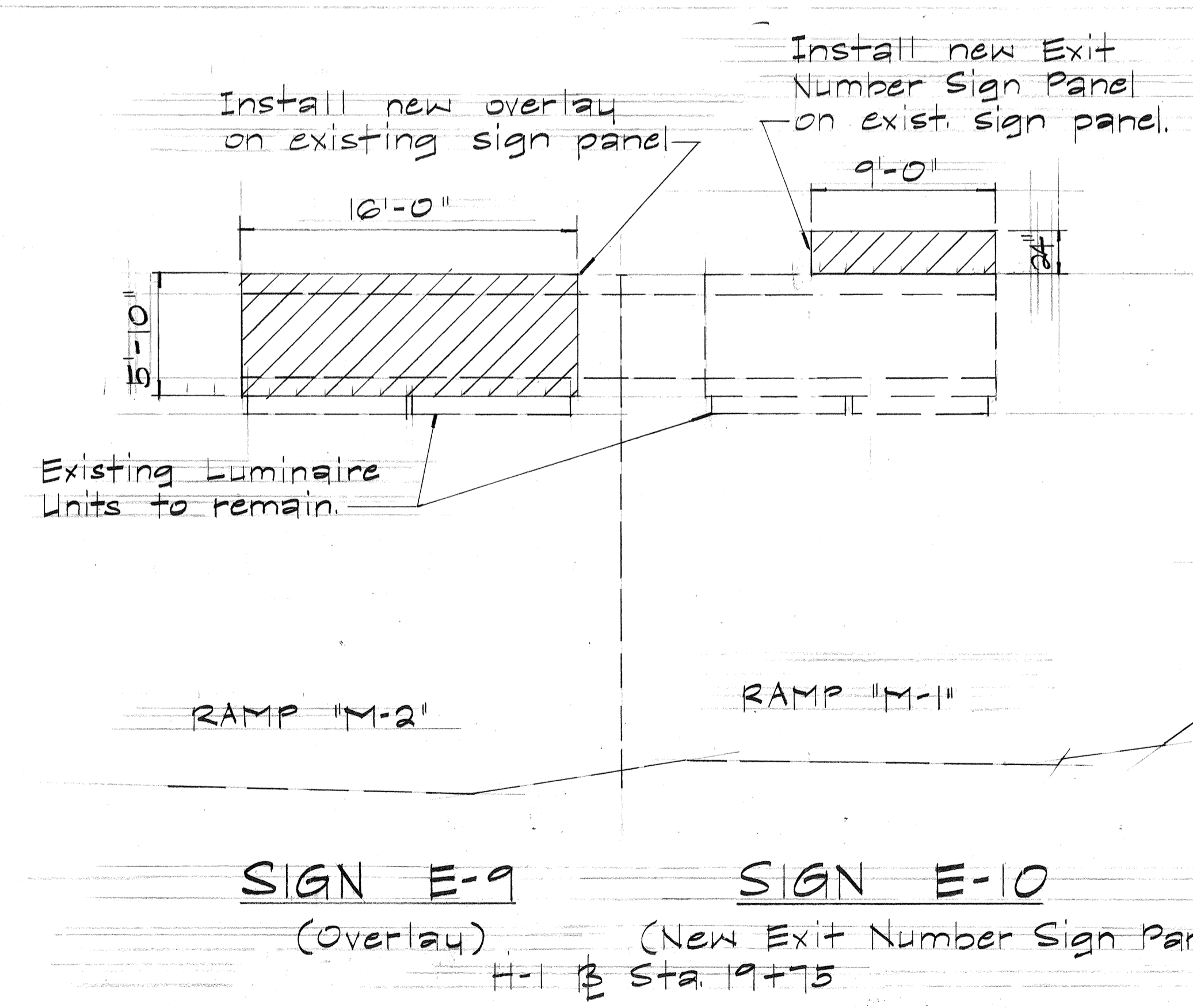
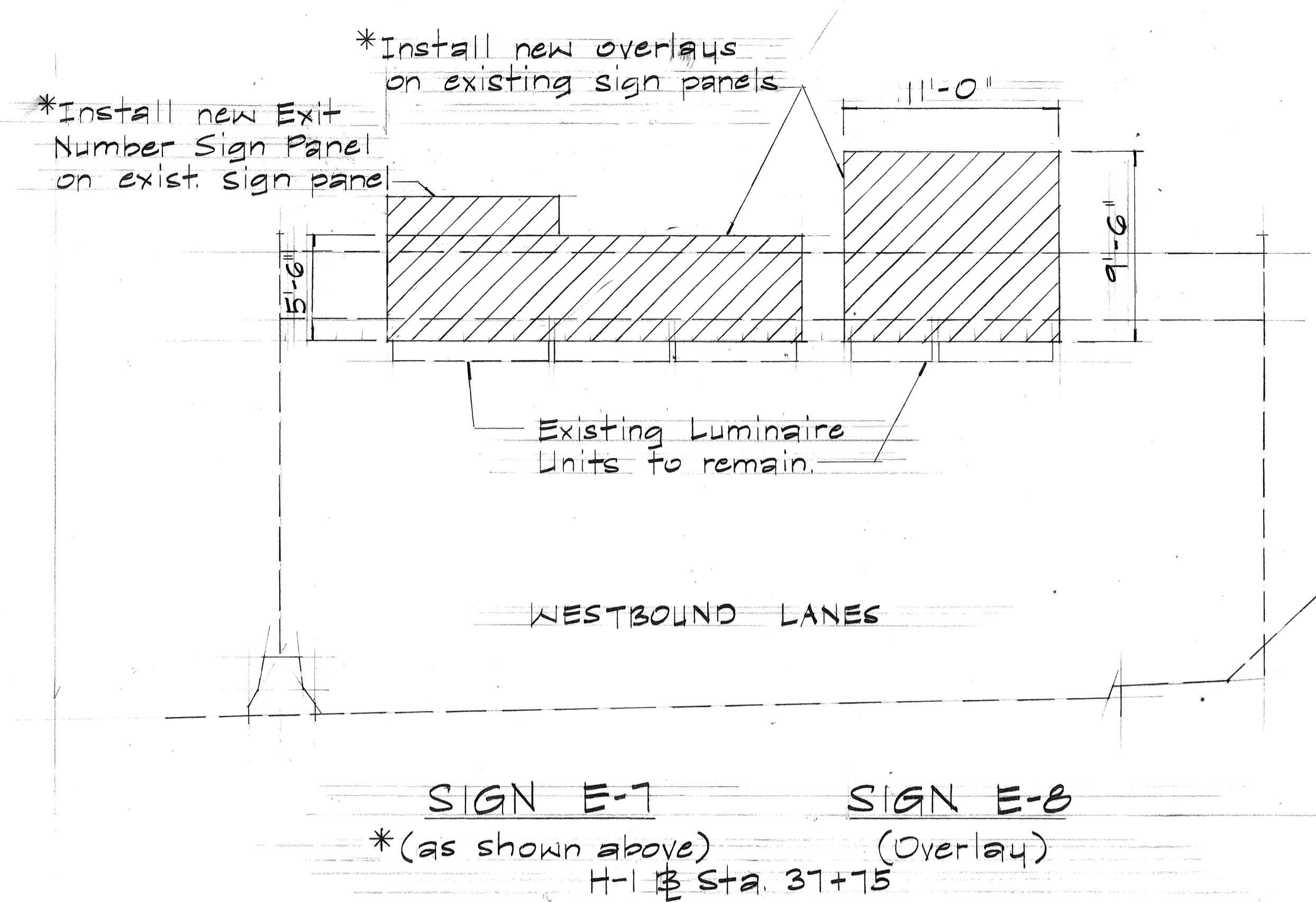
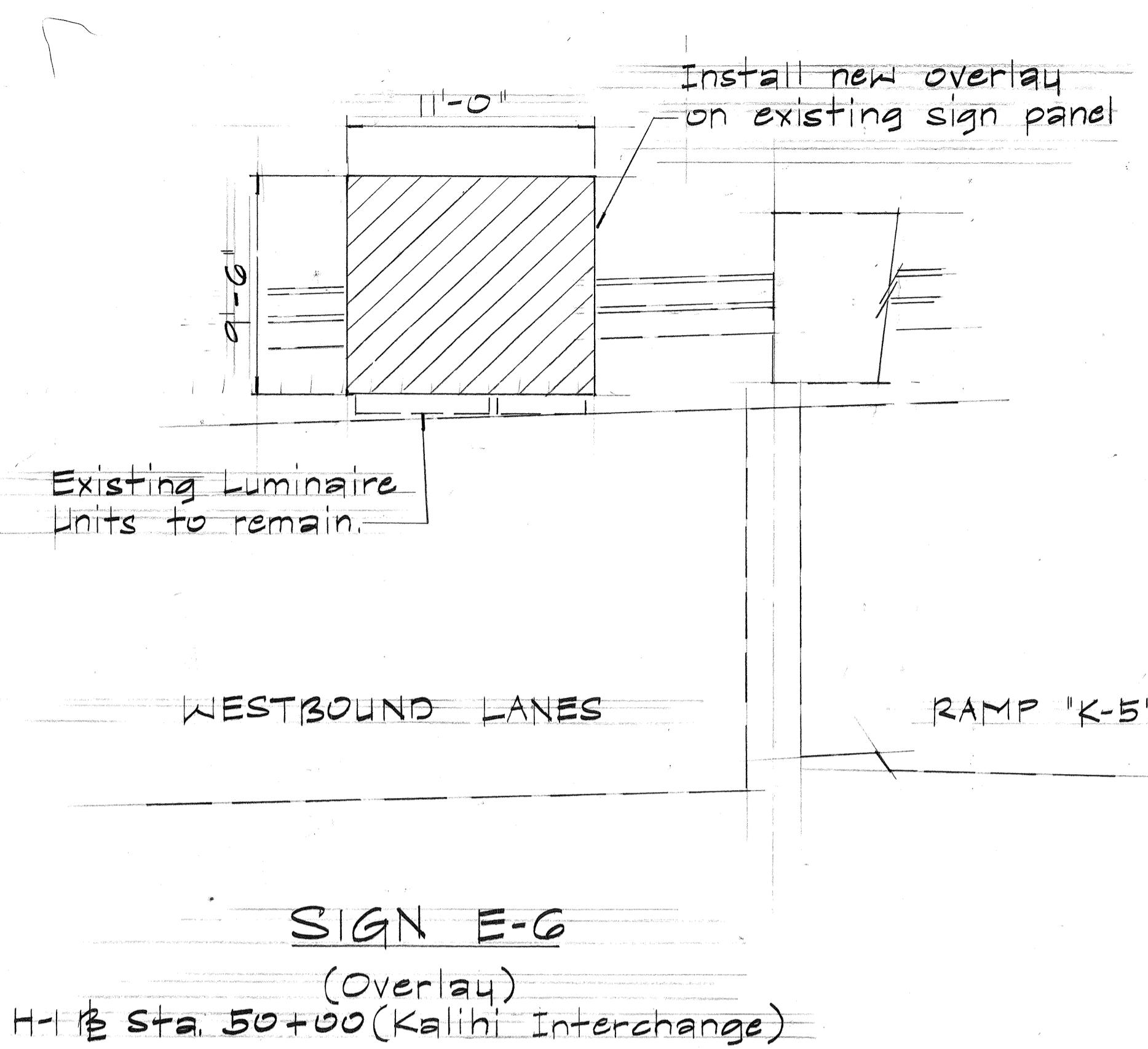
INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO. I-HI-1(178)
Scale: 3/16" = 1'-0" April 1982

SHEET NO. 72 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	73	165

GENERAL NOTES

- The final positions of sign panels above the roadway shall be approved by the Engineer.
- The clearance between the highest point on the pavement and the lowest point on the overhead sign luminaires shall be 17'-0", except where noted.
- The amount and center-to-center spacing of expressway sign luminaires shall be in accordance with the luminaire manufacturer's instructions. Maximum center-to-center spacing of luminaires shall be 10'-0".
- The Contractor shall verify the locations and dimensions of existing expressway sign panels and supports.

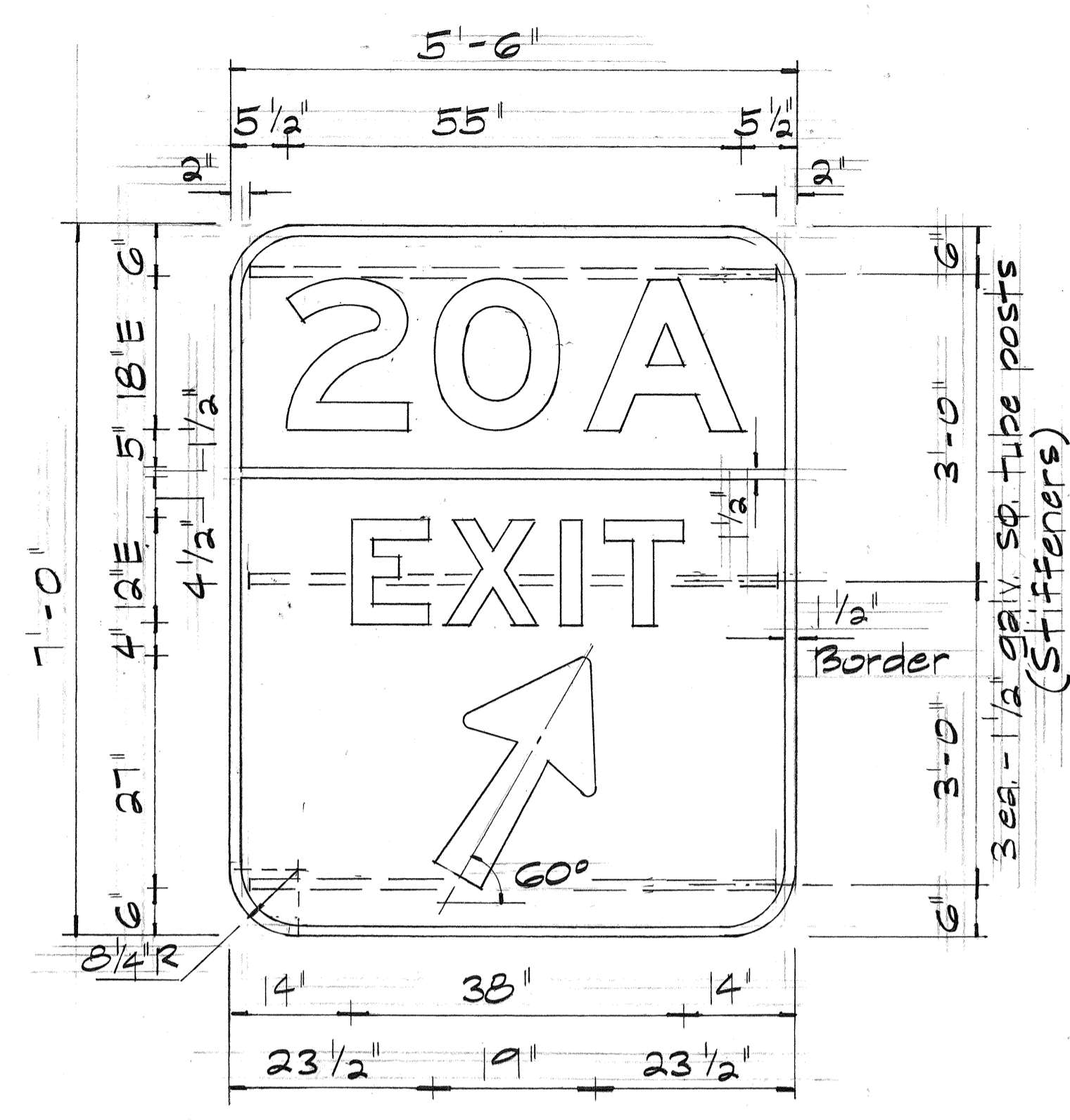


SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

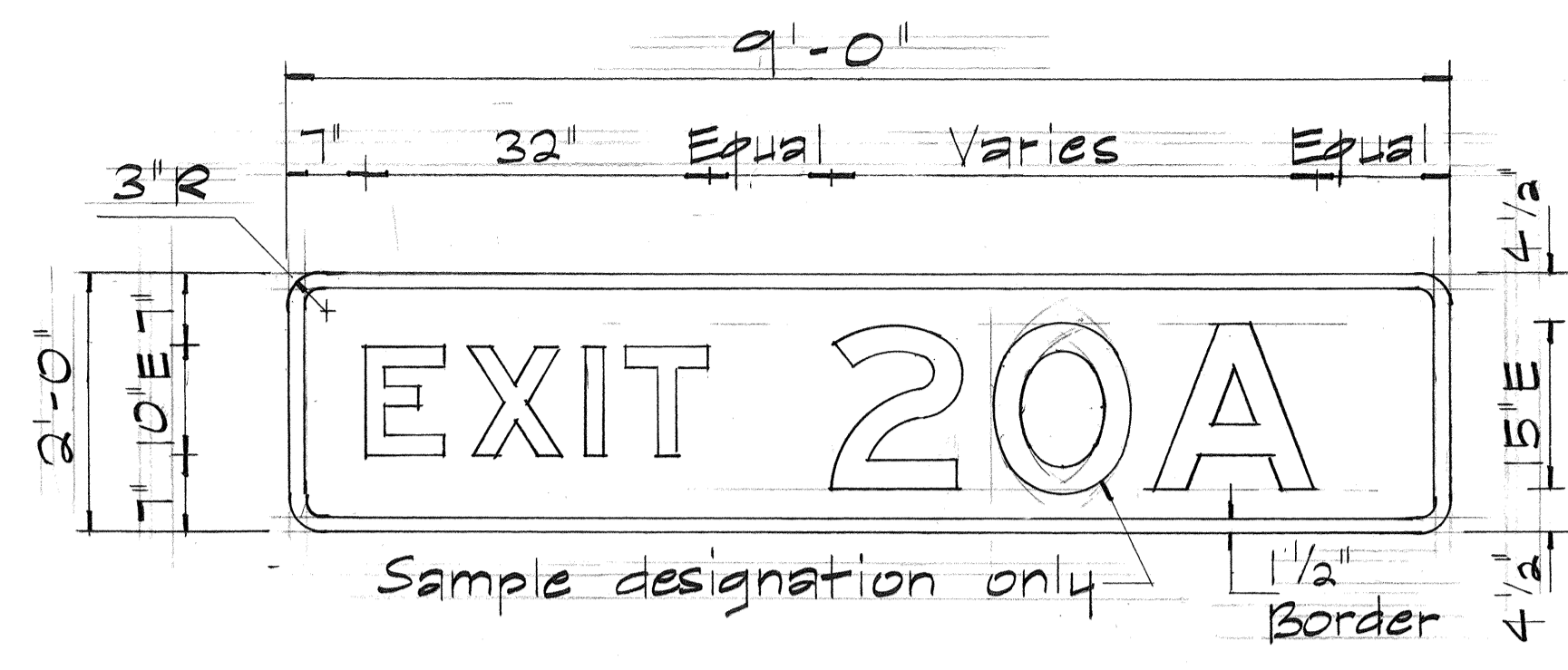
FRAME LAYOUTS

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO I-HI-1(178)
Scale: 3/16" = 1'-0" April 1982
SHEET NO. 87 OF 26 SHEETS

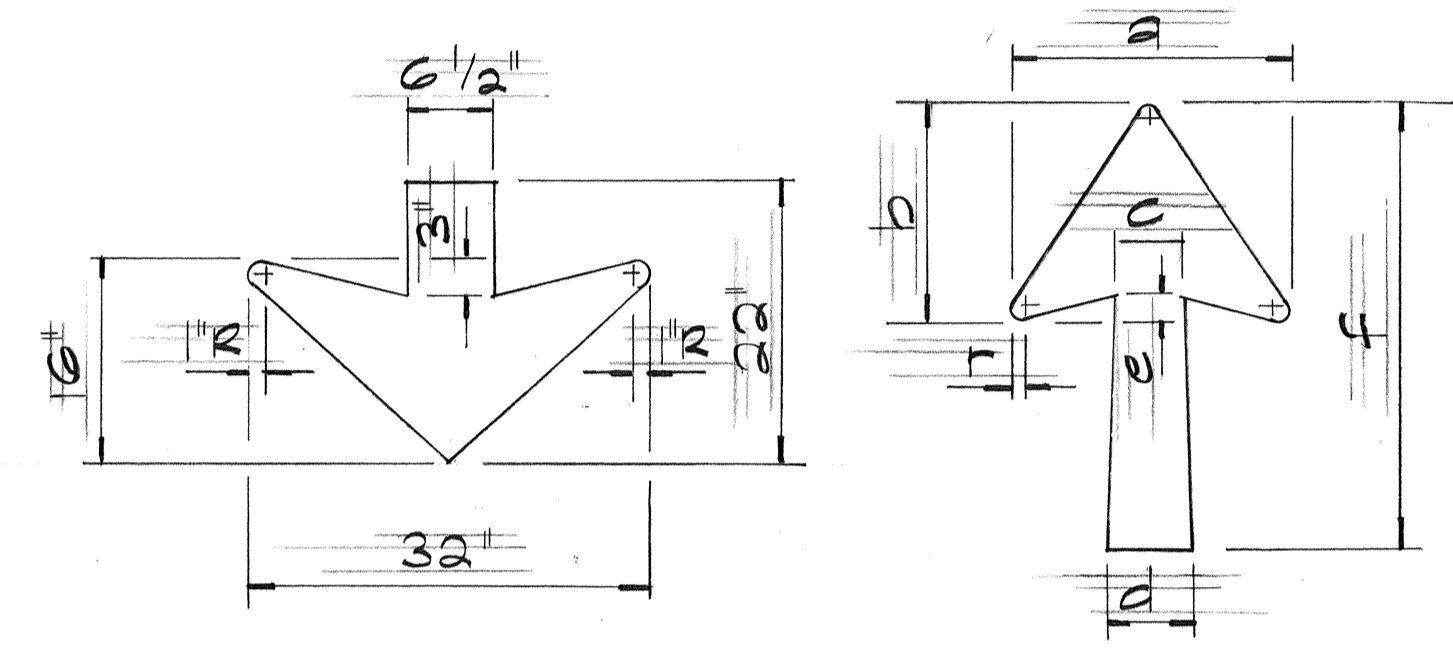


DIR. 5-1a(20A)

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

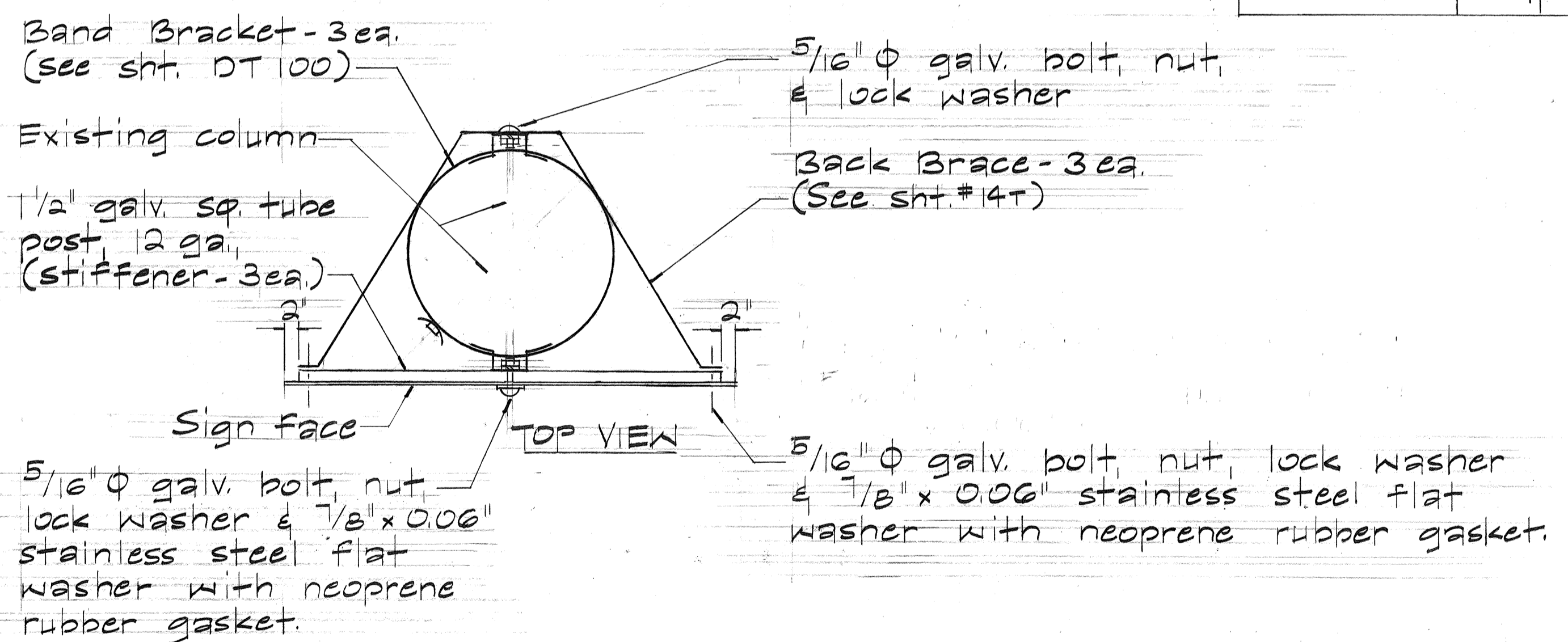


TYPICAL EXIT NUMBER SIGN
Scale: 3/4" = 1'-0"



ARROW DETAIL

Sign No.	Dimensions in Inches						
	a	b	c	d	e	f	r
E-4	18 1/4	14	4 1/2	6	1 1/2	29 1/4	3/4
DIR. 5-1a(20A)	22 1/4	17	5 3/8	7 1/8	1 3/4	35 5/8	1



GORE SIGN MOUNTING DETAIL
Not to Scale

GENERAL NOTES

- Signs shall conform to the latest editions & amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets & Highways" (MUTCD).
 - "Standard Highway Signs"
 - "Standard Alphabets for Highway Signs."

GORE SIGN

- Legend, borders & arrows shall be white reflective sheeting on a green reflective sheeting background.
- Sign backing shall be 0.100 inch sheet aluminum as specified in Subsection 712.20(B)(1).
- Corners of the sign panels shall be rounded to fit the border.
- Sign panels shall have 3/8" φ bolt holes drilled at appropriate locations.
- All backing for signs 4 feet by 8 feet or less shall be of one sheet. Larger sign panels may be spliced however, the Contractor shall submit all sign splicing details to the Engineer for approval.

EXIT NUMBER SIGN

- Exit Number Sign backing shall be of the same construction and material as the Expressway Sign to which it will be attached.
- Shop drawings for the attachment of Exit Number Signs to Expressway Signs shall be submitted by the Contractor to the Engineer for approval not later than 20 days after notice to proceed.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**EXIT NUMBER SIGN
& GORE SIGN**

INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EAST BOUND LANES
F.A.I. PROJECT NO I-HI-1(178)
Scale: As shown April 1982
SHEET NO. 97 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	75	165

TRAFFIC SIGN SUMMARY

TYPE	DESCRIPTION	QUANTITY	
		w/post(s)	w/o post
R2-4a(50/40)-A	SPEED LIMIT 50 MINIMUM 40	1	
W4-1(R)-A	↓	1	
W12-2(13-5)	↓ 13-5"		1
CW20-1d	ROAD CONSTRUCTION AHEAD	1	
CW20-2	END CONSTRUCTION	1	

EXPRESSWAY SIGN SUMMARY

TYPE	DESCRIPTION	AREA (Sq. Ft.)	
		PANEL	OVERLAY
E-1	Likelike Hwy. EXIT ONLY	152.00	
E-2	Likelike Hwy. EXIT ONLY	152.00	
E-3	Likelike Hwy. EXIT ONLY	152.00	
E-4	Likelike Hwy. EXIT ONLY	136.50	
E-5	Vineyard Blvd. 3/4 MILE	93.50	
E-6	Airport, Pearl Har.		104.50
E-7	Ft. Shafter, Aiea		118.25
E-8	Airport, Pearl Har.		104.50
E-9	Airport, Pearl Har.		93.33
E-11	Airport 4		37.91
TOTALS		686.00	458.49

PAVEMENT MARKING SUMMARY

DESCRIPTION	QUANTITY
Raised Pavement Markers:	
Type "A"	1,236 EA.
Type "C"	429 EA.
Type "H"	128 EA.
Pavement Striping (Paint)	10,240 L.F.
4" Pavement Striping (Tape)	2870 L.F.
8" Pavement Striping (Tape)	1,540 L.F.
12" Pavement Striping (Tape)	90 L.F.

EXIT NUMBER SIGN SUMMARY

Installed Above Sign No.	DESCRIPTION	AREA (Sq. Ft.)	
		PANEL	OVERLAY
E-1	EXIT 20A	18.0	
E-2	EXIT 20A	18.0	
E-3	EXIT 20A	18.0	
E-4	EXIT 20A	18.0	
E-7	EXIT 19B	18.0	
E-10	EXIT 19A	18.0	
TOTAL		108.0	

ESTIMATED QUANTITIES FOR EXPRESSWAY SIGN FOOTINGS (SIGN E-1, E-2, E-3, E-4)

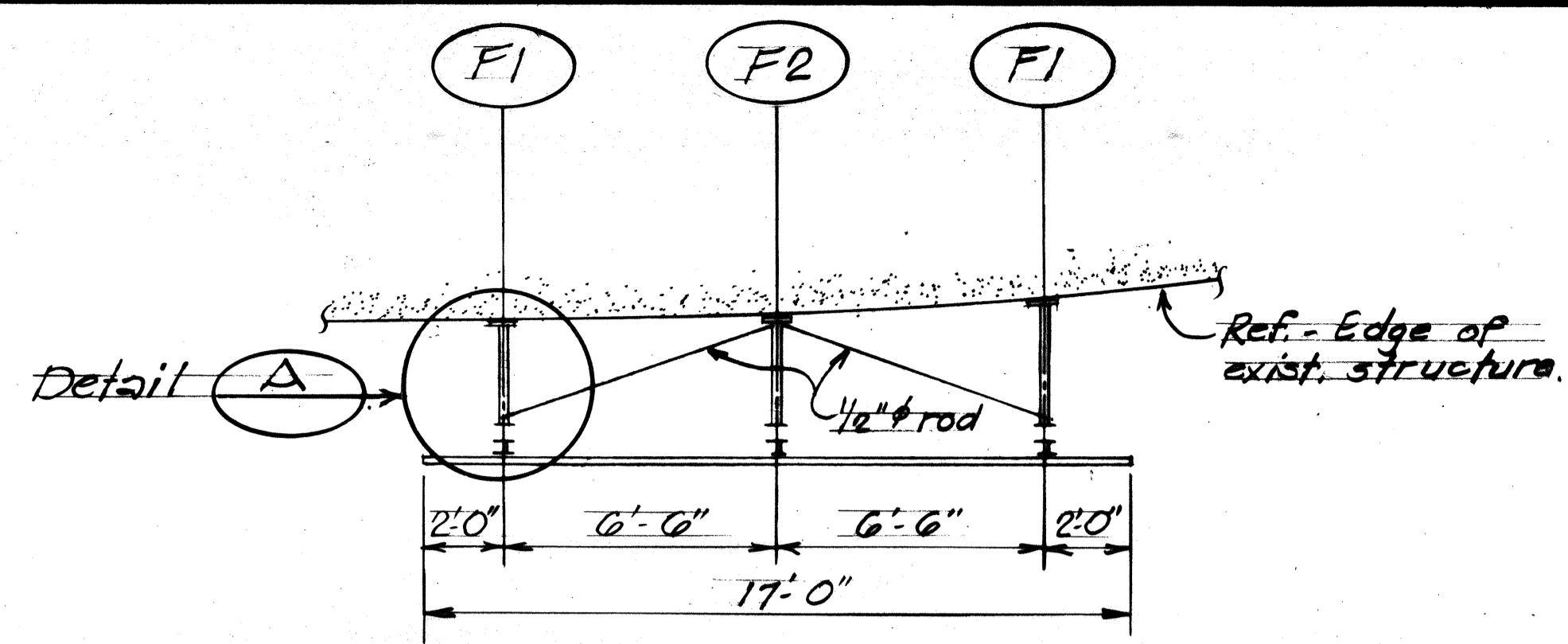
ITEM No.	DESCRIPTION	QUANTITY
206.1000	Structure excavation other than at bridges	102 cu. yd.
503.0000	Class A concrete other than in bridges.	28 cu. yd.
602.1000	Reinforcing steel other than in bridges.	4270 LB.

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

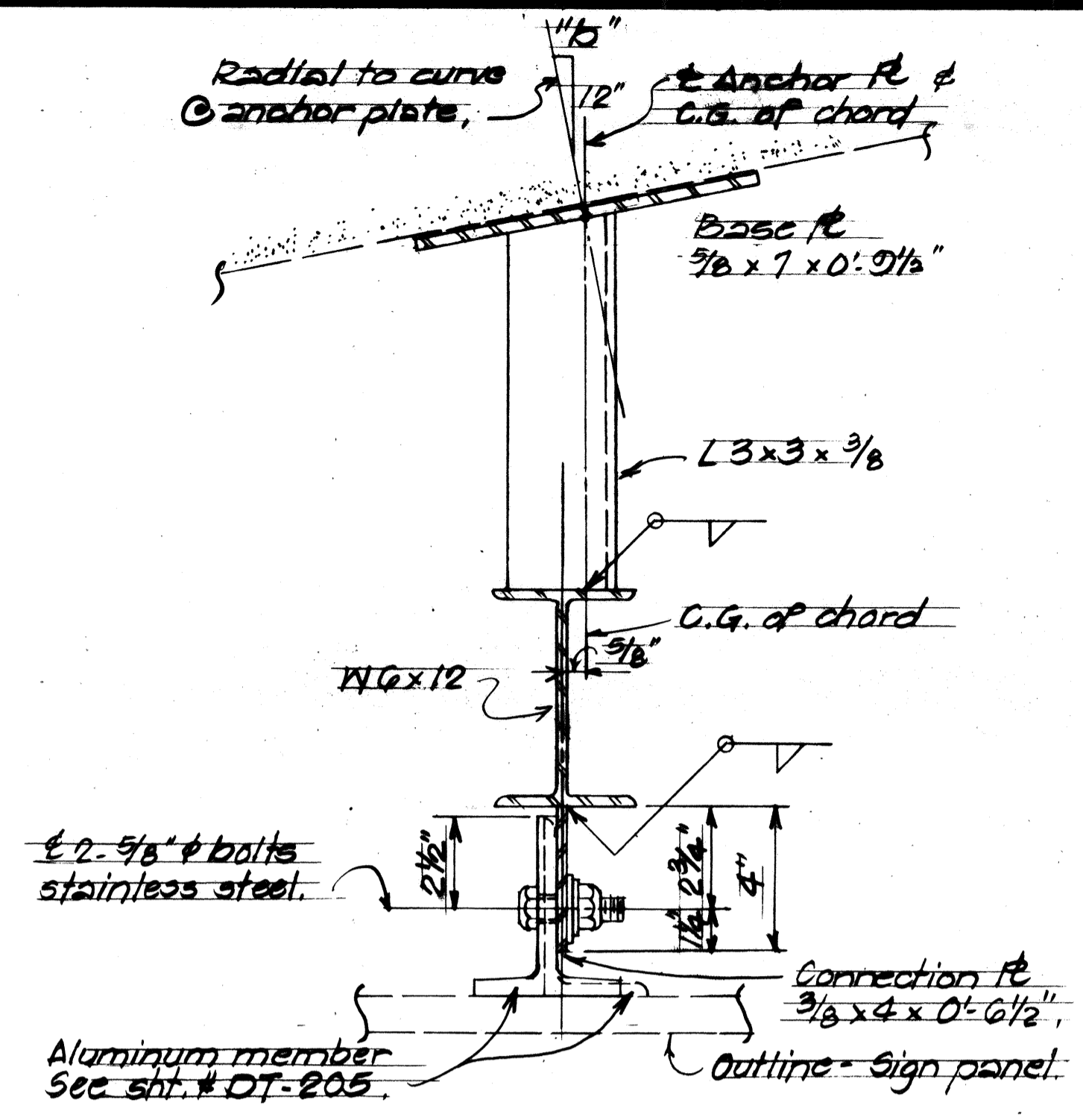
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS SUMMARIES
 INTERSTATE H-1 IMPROVEMENTS
 MIDDLE STREET TO KALIHI INTERCHANGE
 EAST BOUND LANES
 F.A.I. PROJECT NO. I-HI-1(178)
 Scale: None April 1982
 SHEET No. 07 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(178)	1982	76	165

EXPRESSWAY SIGN ~ DIMENSION SCHEDULE		SIGN SUPPORT					
LOCATION	SIGN PANEL	FRAME	"A"	"B"	"C"	"D"	"b"
		STA. 45 + 85 ±	17'-0" x 5'-6"	F-1	3"	1'-3 1/2"	10"
		F-2	3 3/4"	1'-4 3/4"	10"	2'-0"	5/16"
		F-3	4 3/8"	1'-7 1/4"	10"	2'-0"	5/8"



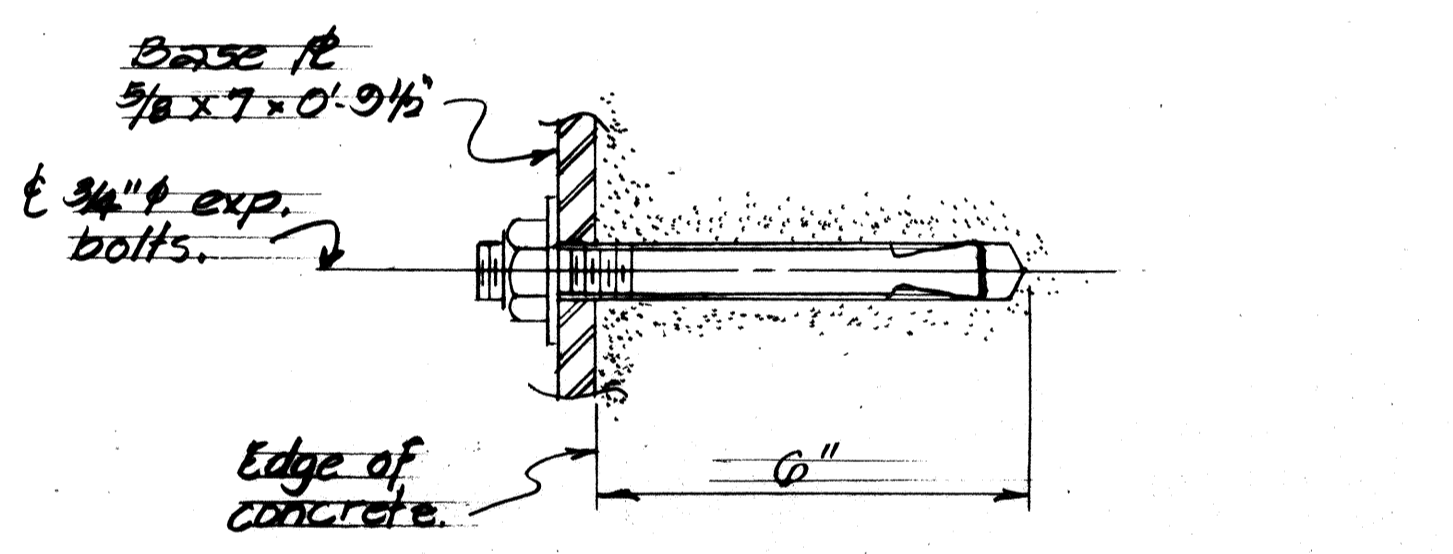
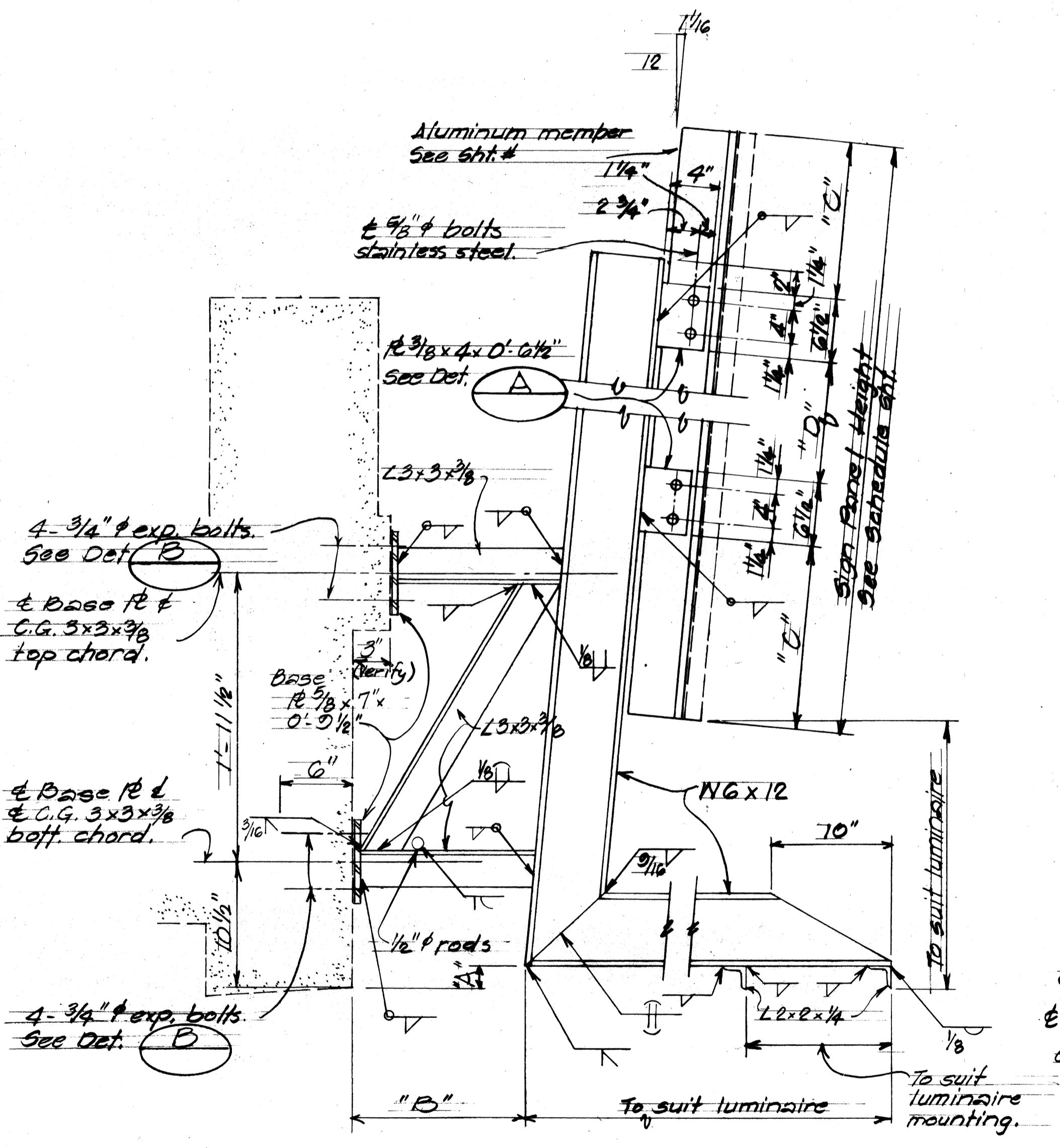
TYPICAL FRAME PLAN
Scale: 1/4" = 1'-0"



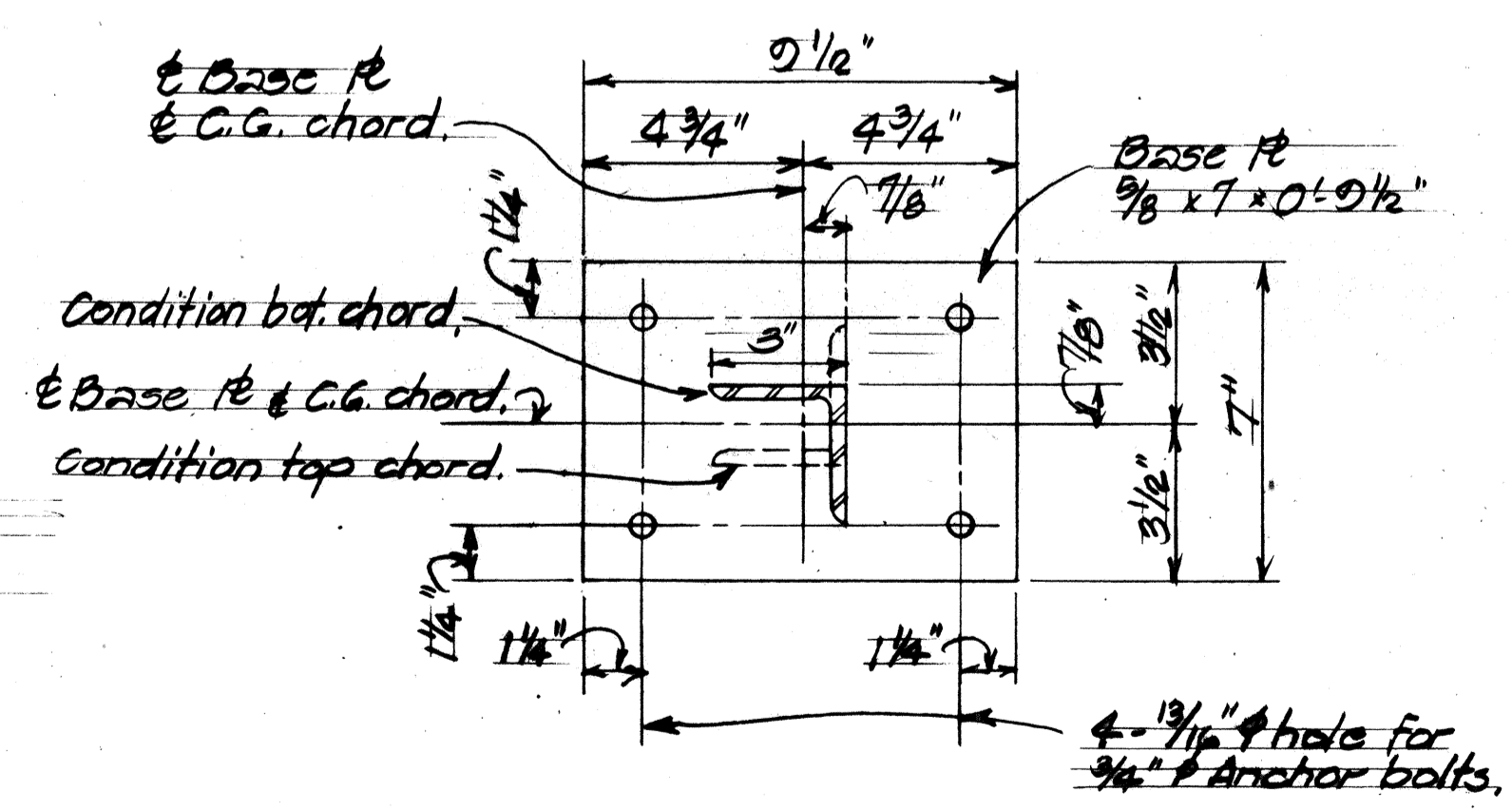
DETAIL A
Scale: 3/8" = 1'-0"

GENERAL NOTES

1. Structural steel shapes, plates & bars shall conform to ASTM A-36.
2. Electrodes shall be E60XX, and welds shall be 3/16" fillet welds unless noted otherwise.
3. All dimensions for sign bracket assemblies shall be verified by the Contractor before fabrication and any discrepancy shall be promptly reported to the Engineer.
4. All structural steel assemblies and hardware shall be hot dip galvanized after fabrication.
5. No percussion or impact drills shall be permitted in drilling holes in the existing structure.



DETAIL B
Scale: 3/8" = 1'-0"



TYPICAL BASE PLATE DETAIL
Scale: 3/8" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

EXPRESSWAY SIGN SUPPORT
KALIHU ST OVERPASS #3 RAMP K-2
INTERSTATE IH IMPROVEMENTS
MIDDLE STREET TO KALIHU INTERCHANGE
EASTBOUND LANES

F.A.I. PROJECT NO. I-HI-1(178)
Scale: As Shown Date: Apr. 1982
SHEET NO. 76 OF 26 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HH-1(178)	1982	77	165

NOTES:

DESIGN SPECIFICATIONS:

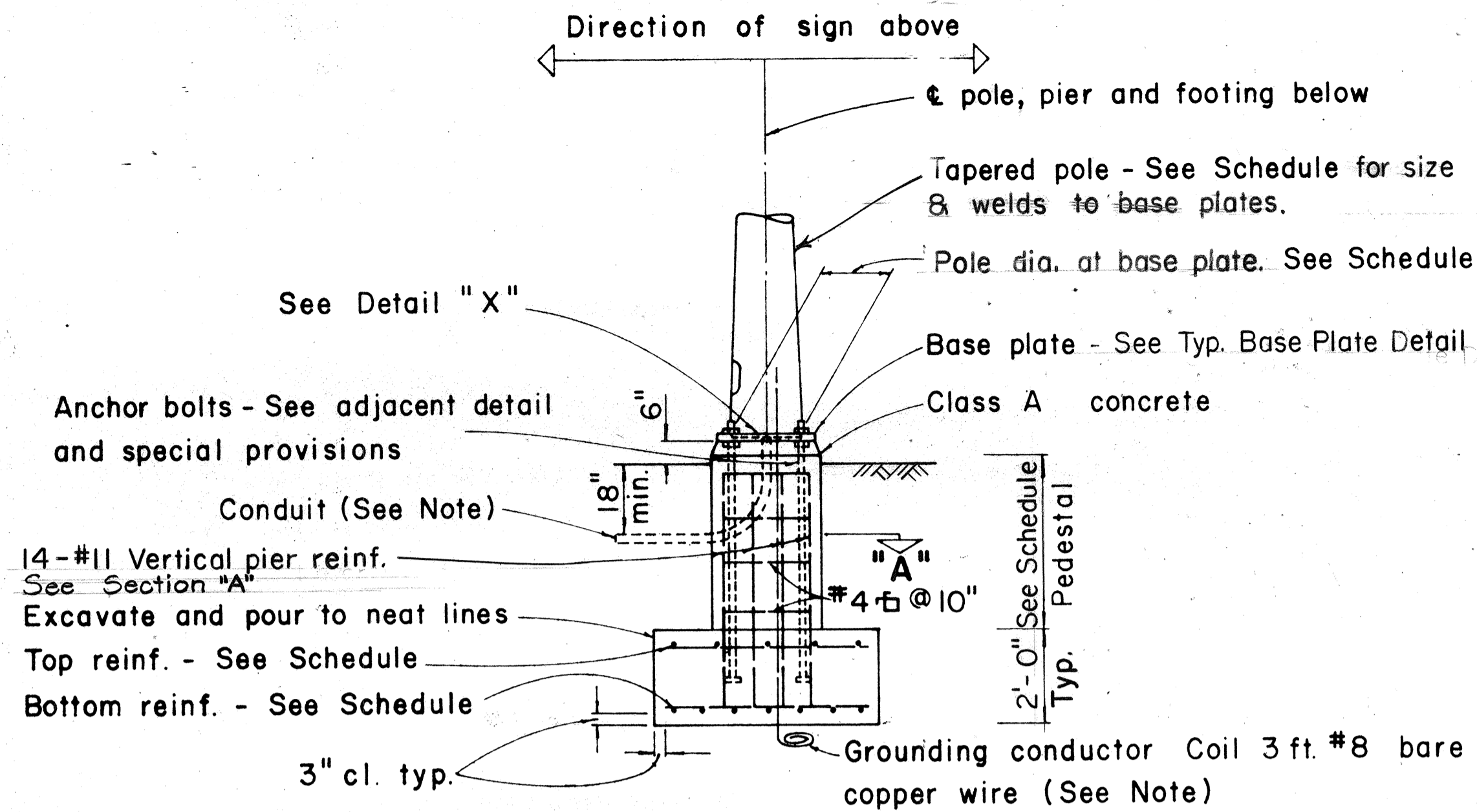
AASHTO, Standard Specifications For Structural Supports For Highway Signs, Luminaires And Traffic Signals 1975, including subsequent interim specifications.

MATERIALS:

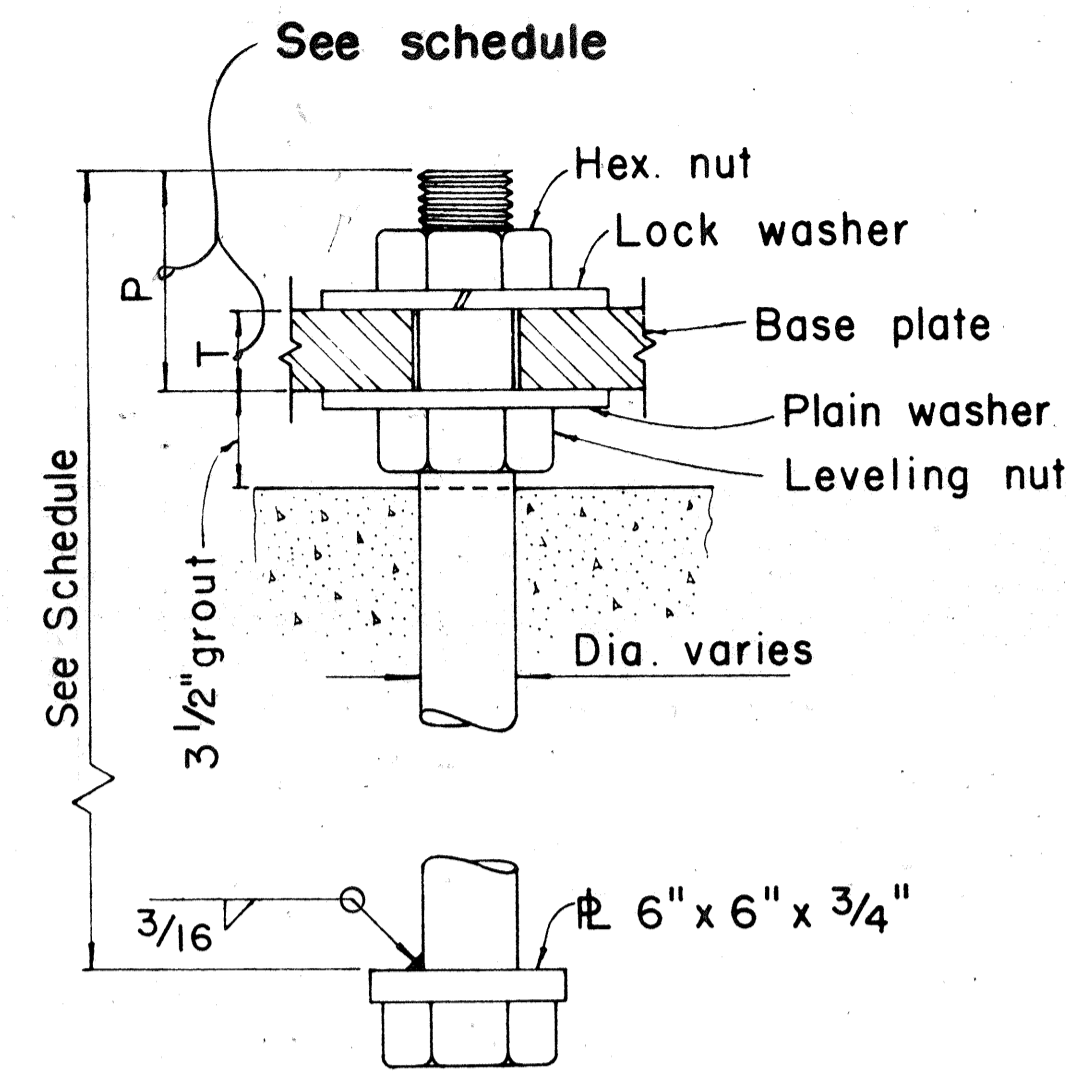
1. Reinforced Concrete - Class A
2. Reinforcing Steel - ASTM A615 Grade 40

CONSTRUCTION REQUIREMENTS:

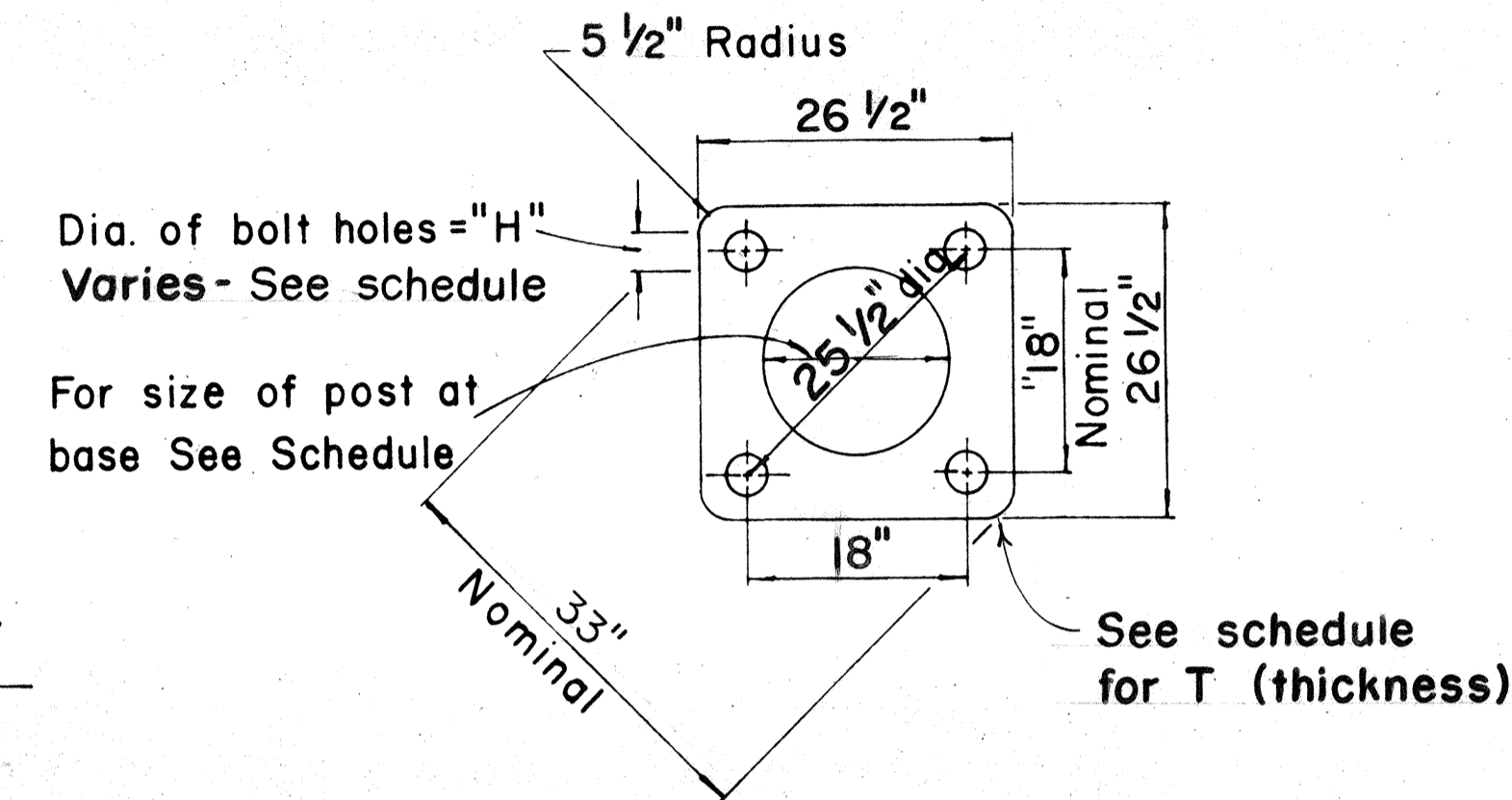
1. Refer to Standard Specifications for Road and Bridge Construction (Hawaii 1976) and Special Provisions.
2. Total number of conduits into pole foundation as indicated on Lighting plans. Conduits shall slope away from pole foundation. Conduit shall stub out 5'-0" min. for direct burial entry.
3. Grounding conductor shall be bonded to sign support.



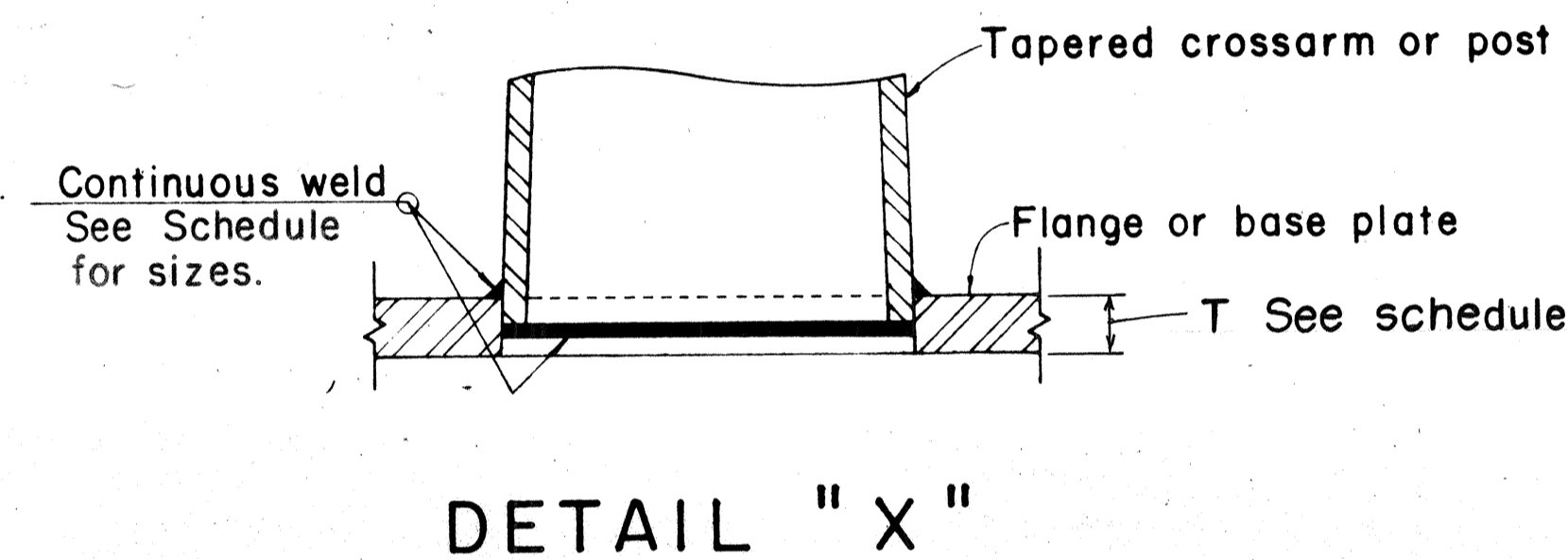
TYPICAL POLE FOUNDATION DETAIL



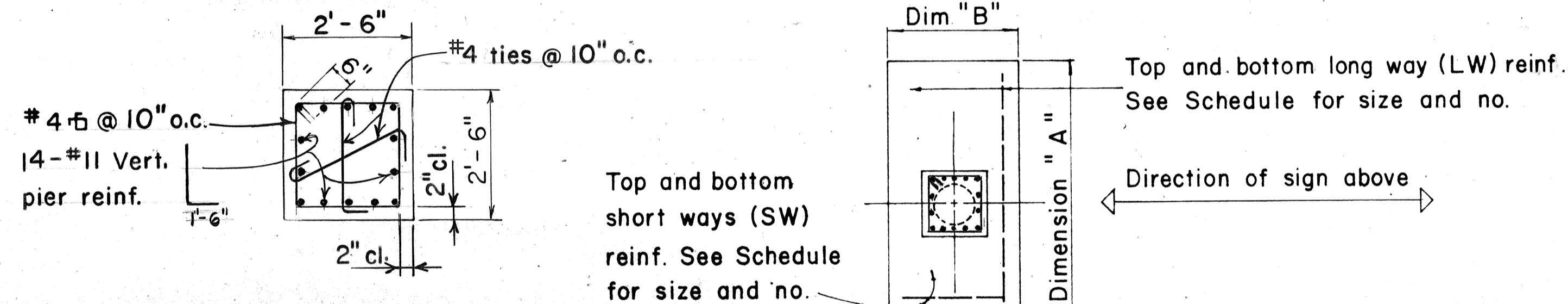
TYPICAL ANCHOR BOLT 4 REQ'D



TYPICAL BASE PLATE



DETAIL "X"



SECTION "A"
(TYPICAL FOR ALL SIGNS)

TYPICAL FOOTING DETAIL

(See Sht. C.O. 775-1 for Revised Footing Detail)

SIGN POST SCHEDULE

SIGN LOCATION	TYPE	FOOTING				PEDESTAL HEIGHT	BASE PLATE			ANCHOR BOLT DIA.	LGTH.	POST SIZE	DOUBLE CANTILEVER CROSS ARM	*FILLET WELD SIZES		
		A	B	BOT. REINF. LW	TOP REINF. SW		H	P	T							
STA. 14+00	VI-A	11'-0"	6'-0"	7-#7	12-#4	7-#5	12-#4	6'-5"	2 3/8"	4"	2"	2"	8'-2"	3 ga. 18"	7 ga. 12 1/2"	1/4"
STA 20+50	VI-C	12'-0"	7'-0"	8-#9	13-#4	8-#5	13-#4	3'-9"	3 3/8"	6"	3"	3"	5'-6"	3+3 ga. 18"	7 ga. 12 1/2"	1/2"
STA 27+50	VI-C	12'-0"	7'-0"	8-#9	13-#4	8-#5	13-#4	3'-9"	3 3/8"	6"	3"	3"	5'-6"	3+3 ga. 18"	7 ga. 12 1/2"	1/2"
STA 35+25	VI-B	12'-0"	6'-0"	7-#9	13-#4	7-#5	13-#4	6'-5"	2 5/8"	4 3/4"	2 1/4"	2 1/4"	8'-2"	0 ga. 18"	7 ga. 12 1/2"	5/16"

*Build up inside fillet welds to full throat thickness.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

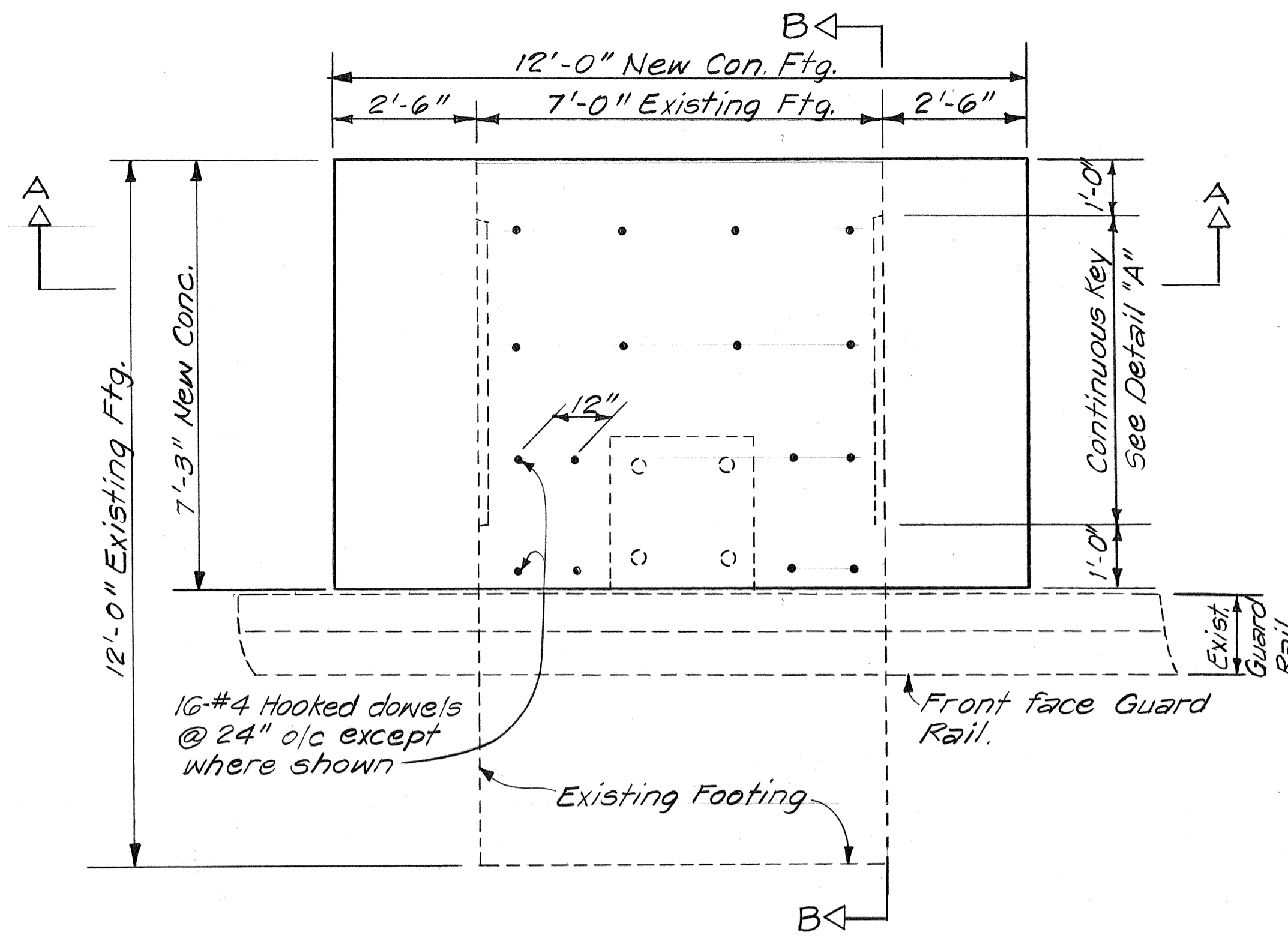
DETAILS & SCHEDULES

FAI Proj No I-HH-1(178)

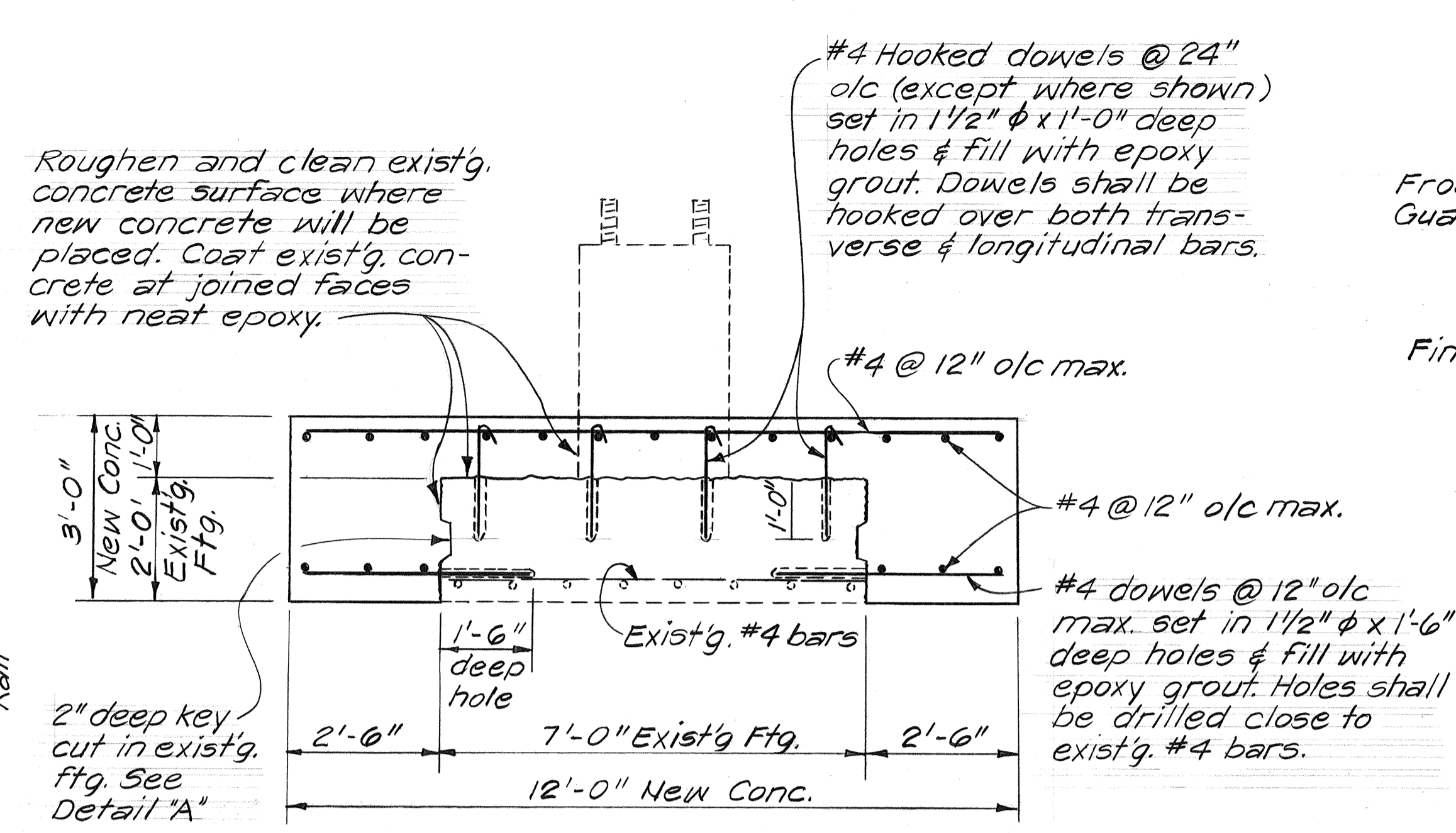
NOT TO SCALE April 1982

SHEET No. 12 OF 26 SHEETS

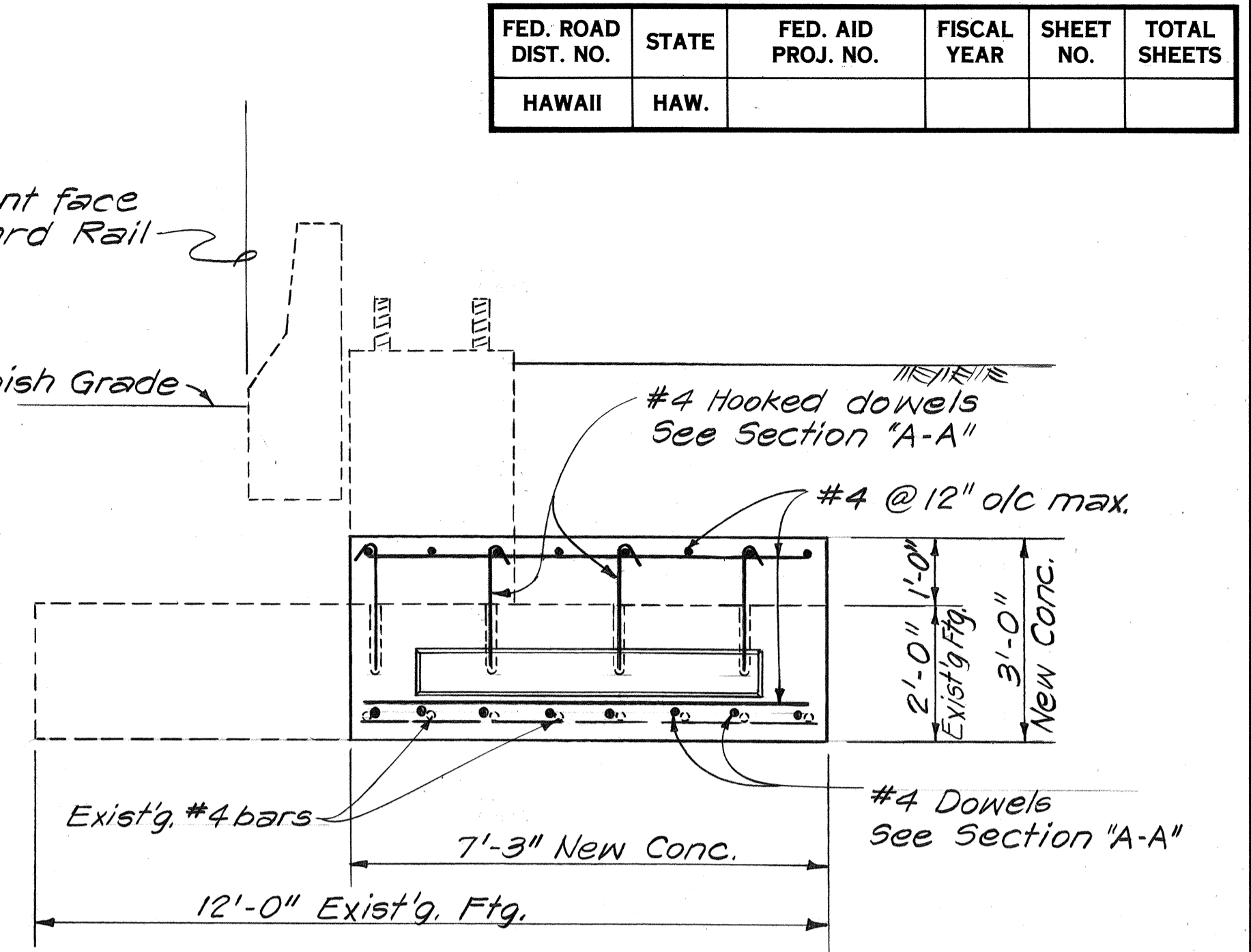
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



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

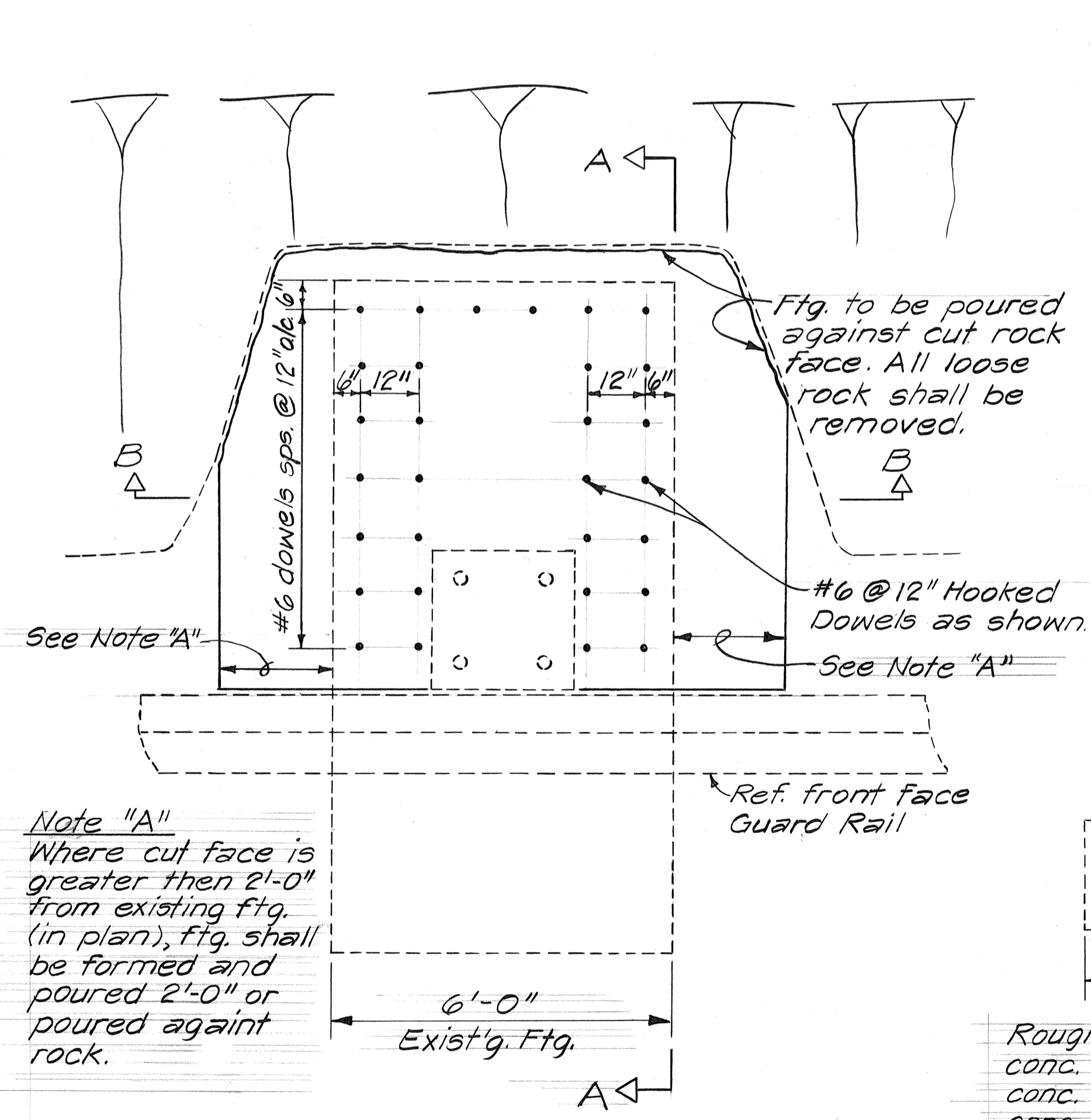


SECTION "A-A"
Scale: 1/2" = 1'-0"

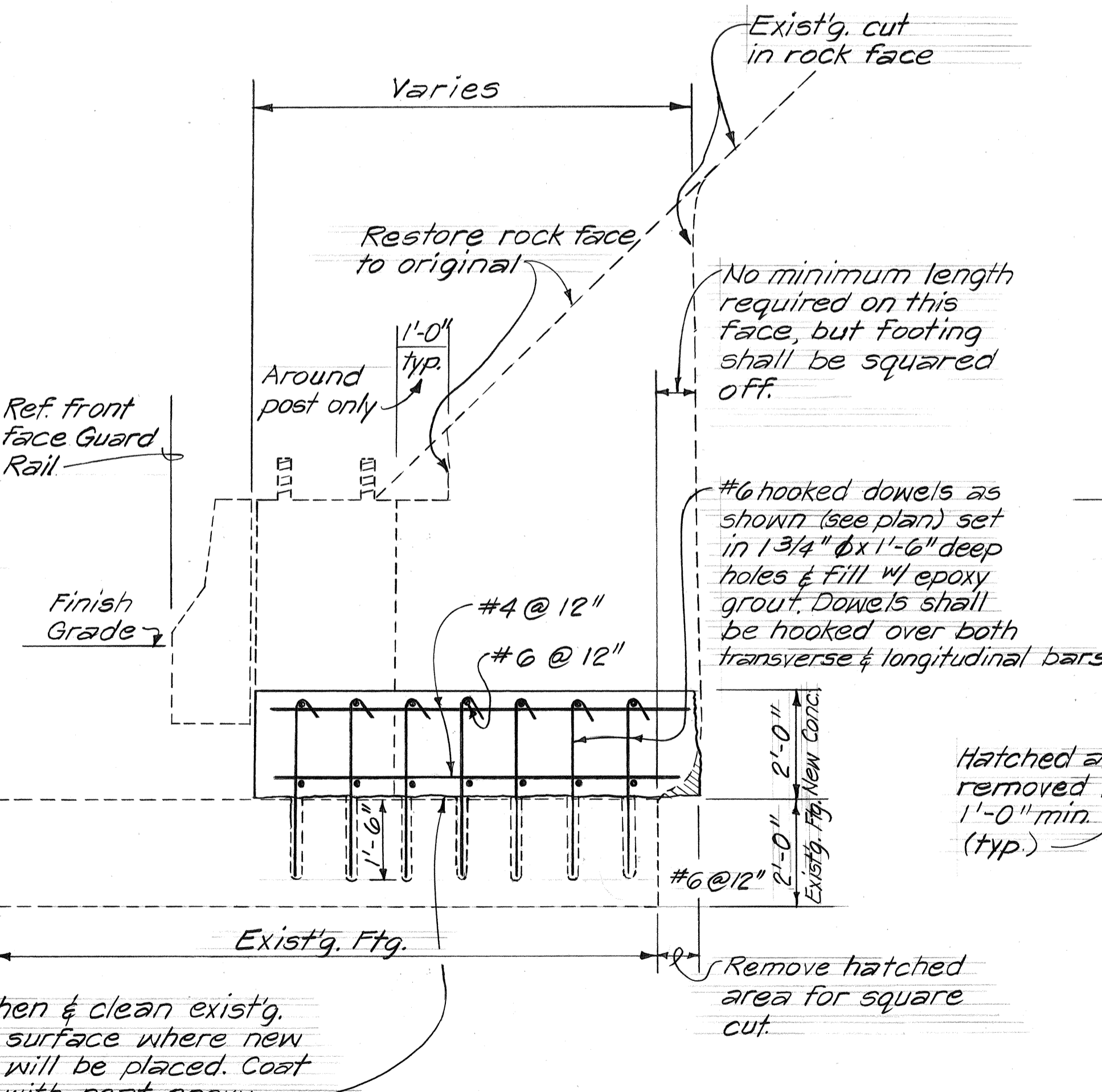


SECTION "B-B"
Scale: 1/2" = 1'-0"

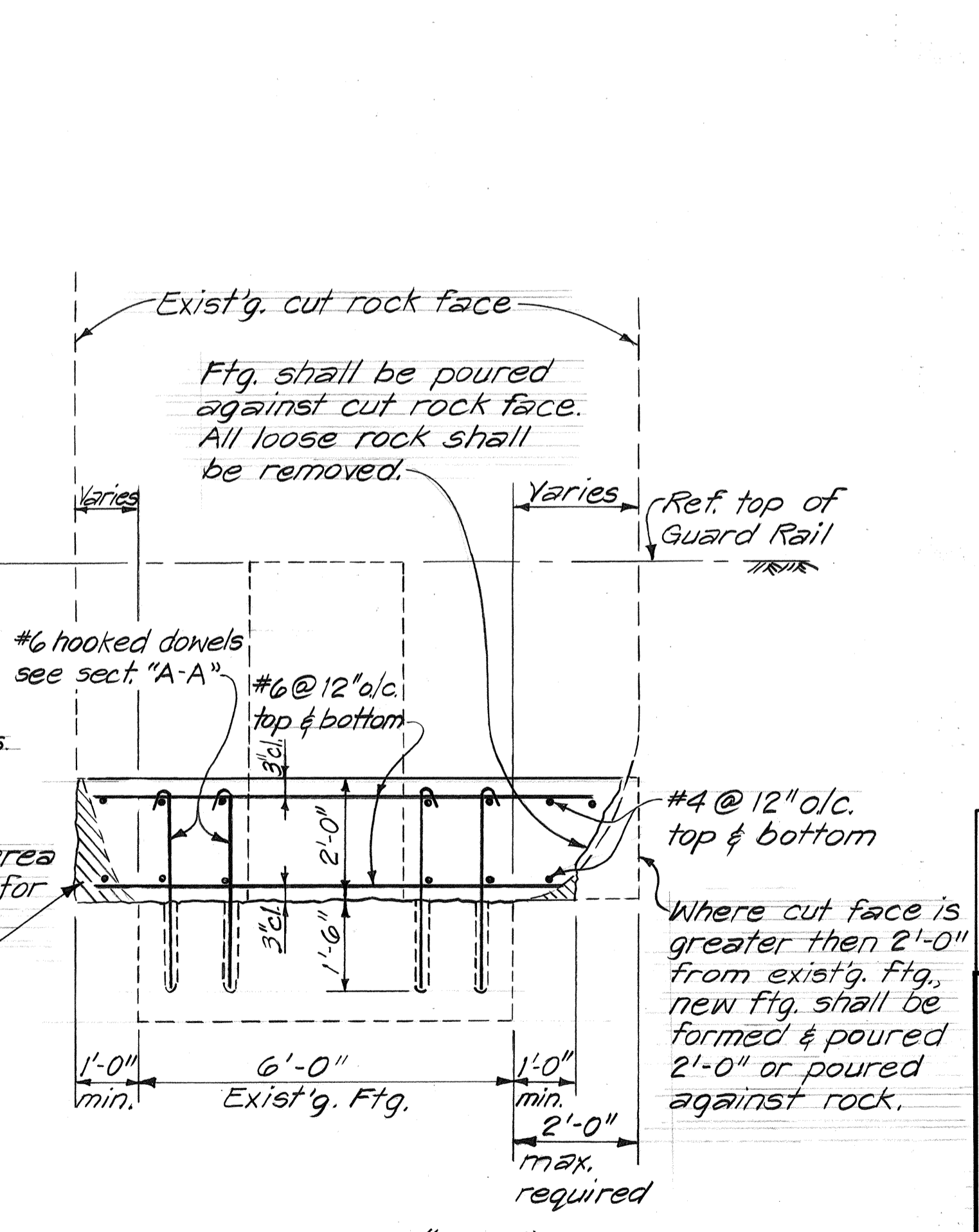
EXPRESSWAY SIGN FOOTING E-2 AND E-3



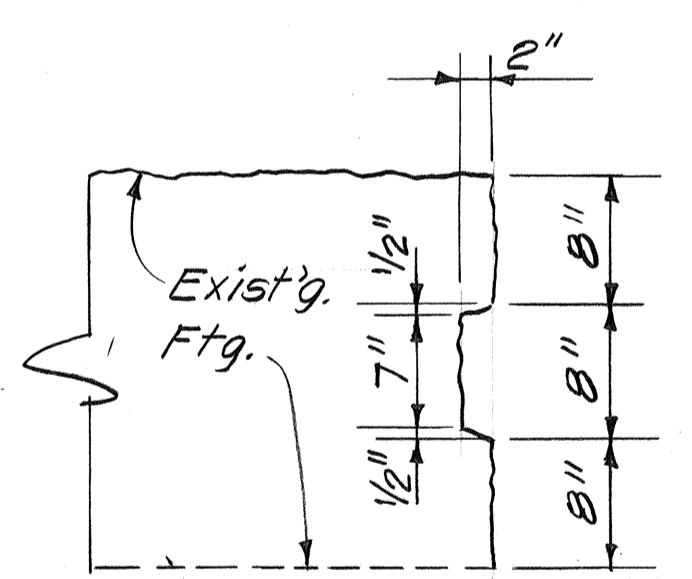
PLAN
Scale: 1/2" = 1'-0"



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



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



DETAIL "A"
Scale: 1" = 1'-0"

Note "A"
Where cut face is greater than 2'-0" from existing ftg. (in plan), ftg. shall be formed and poured 2'-0" or poured against rock.

NOTE:
This tracing prepared during "As-Built" posting.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
REVISED EXPRESSWAY SIGN FOOTING
INTERSTATE H-1 IMPROVEMENTS
MIDDLE STREET TO KALIHI INTERCHANGE
EASTBOUND LANES
F.A.I. PROJECT NO. I-HH(178)
SCALE: AS NOTED

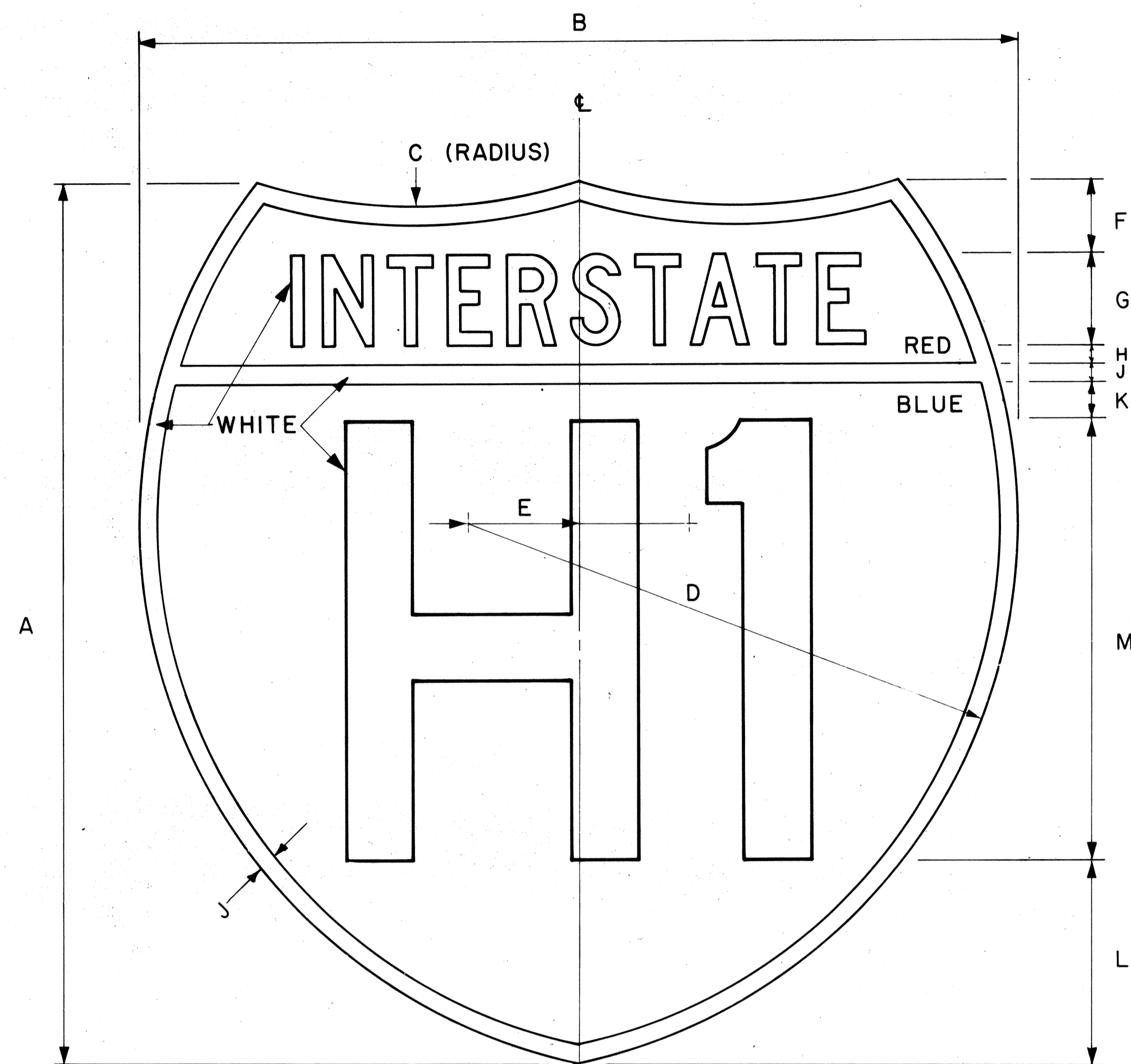
EXPRESSWAY SIGN FOOTING E-1 AND E-4

SHEET No. OF SHEETS

C.O. 77S-1

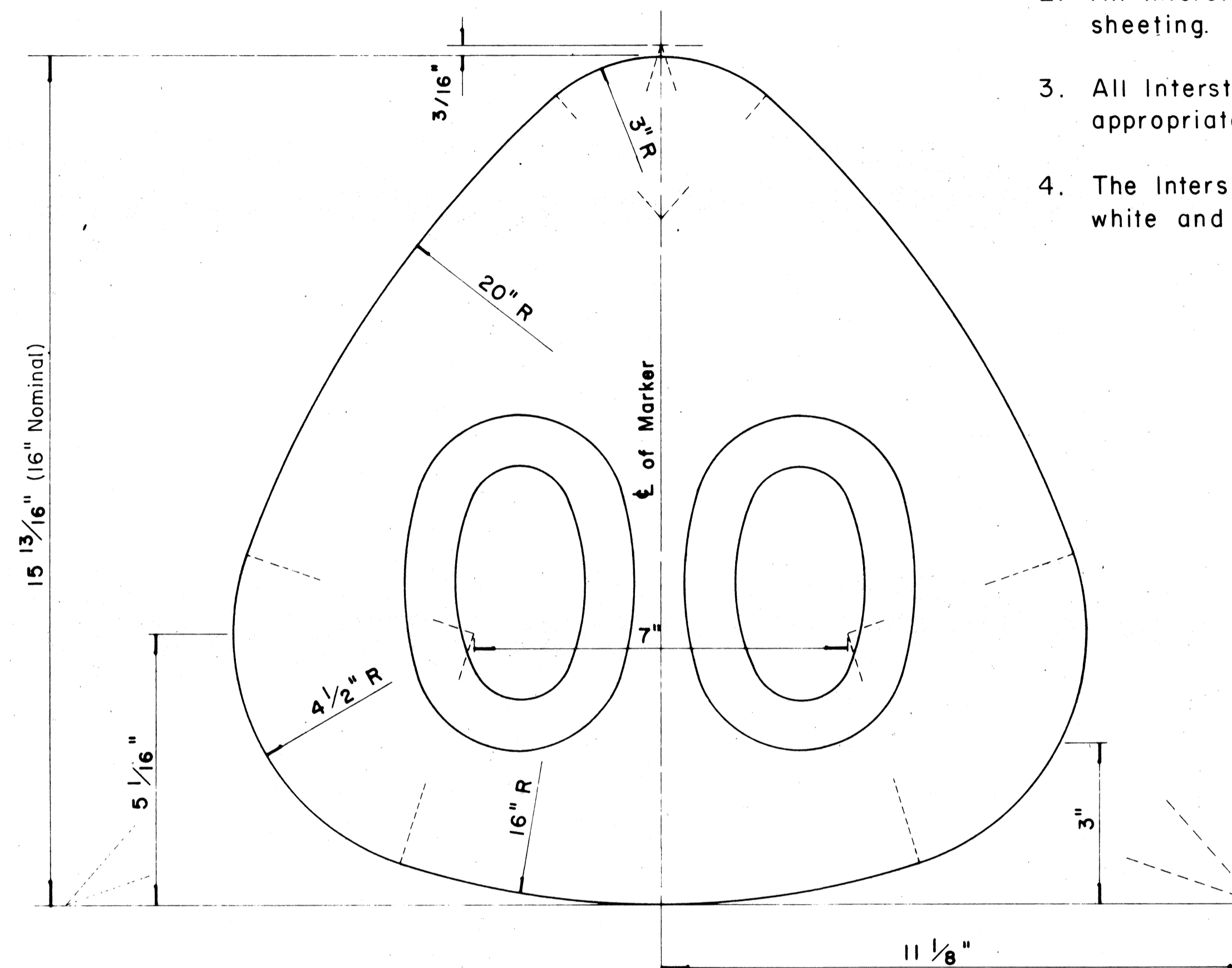
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-101(178)	1982	78	165



INTERSTATE ROUTE MARKER
IM-1()

Scale: 3/8" = 1"



STATE ROUTE MARKER
FOR GUIDE SIGNS

Scale: Half Size

NOTE: INTERSTATE ROUTE MARKER

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

NOTE: STATE ROUTE MARKER

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

INTERSTATE ROUTE MARKER SCHEDULE
(INCHES)

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

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

Scale: As shown

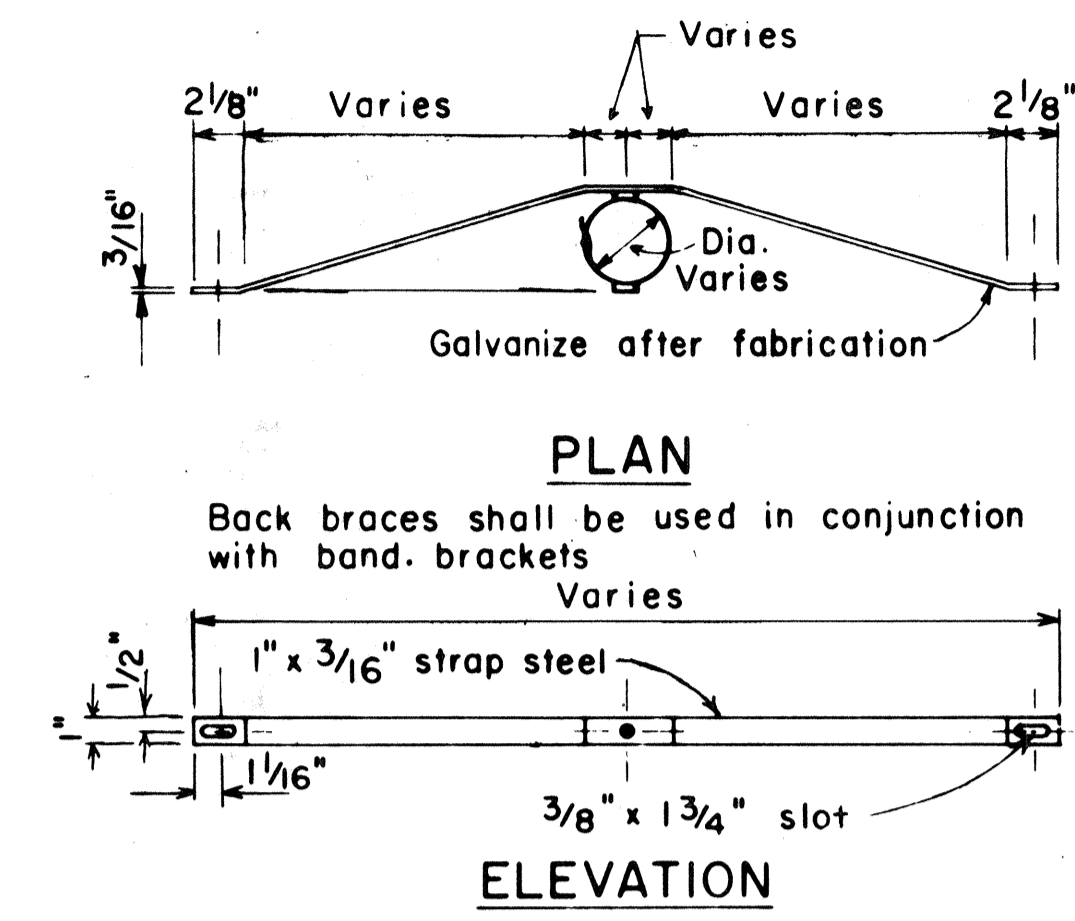
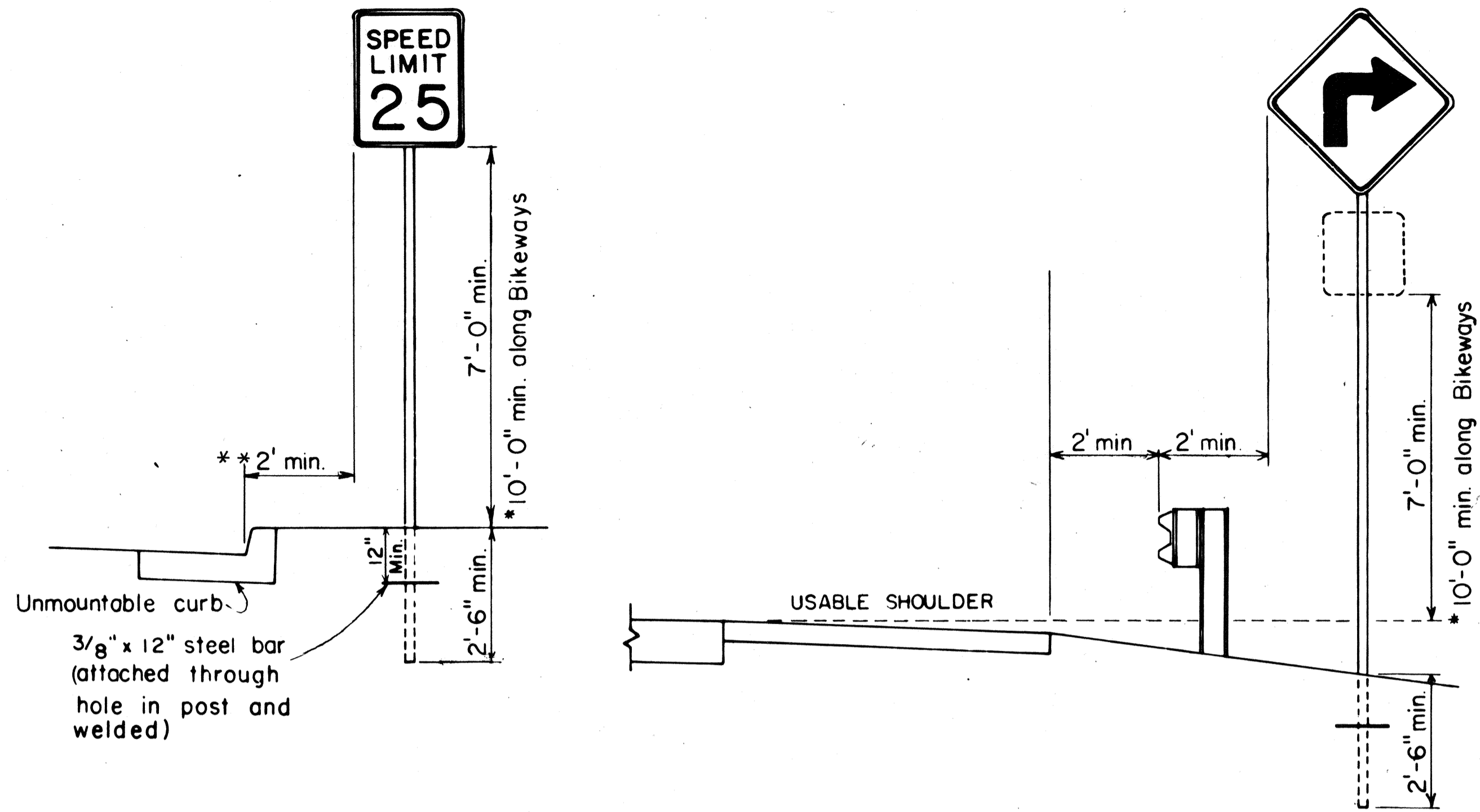
SHEET No. 137 OF 26 SHEETS

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

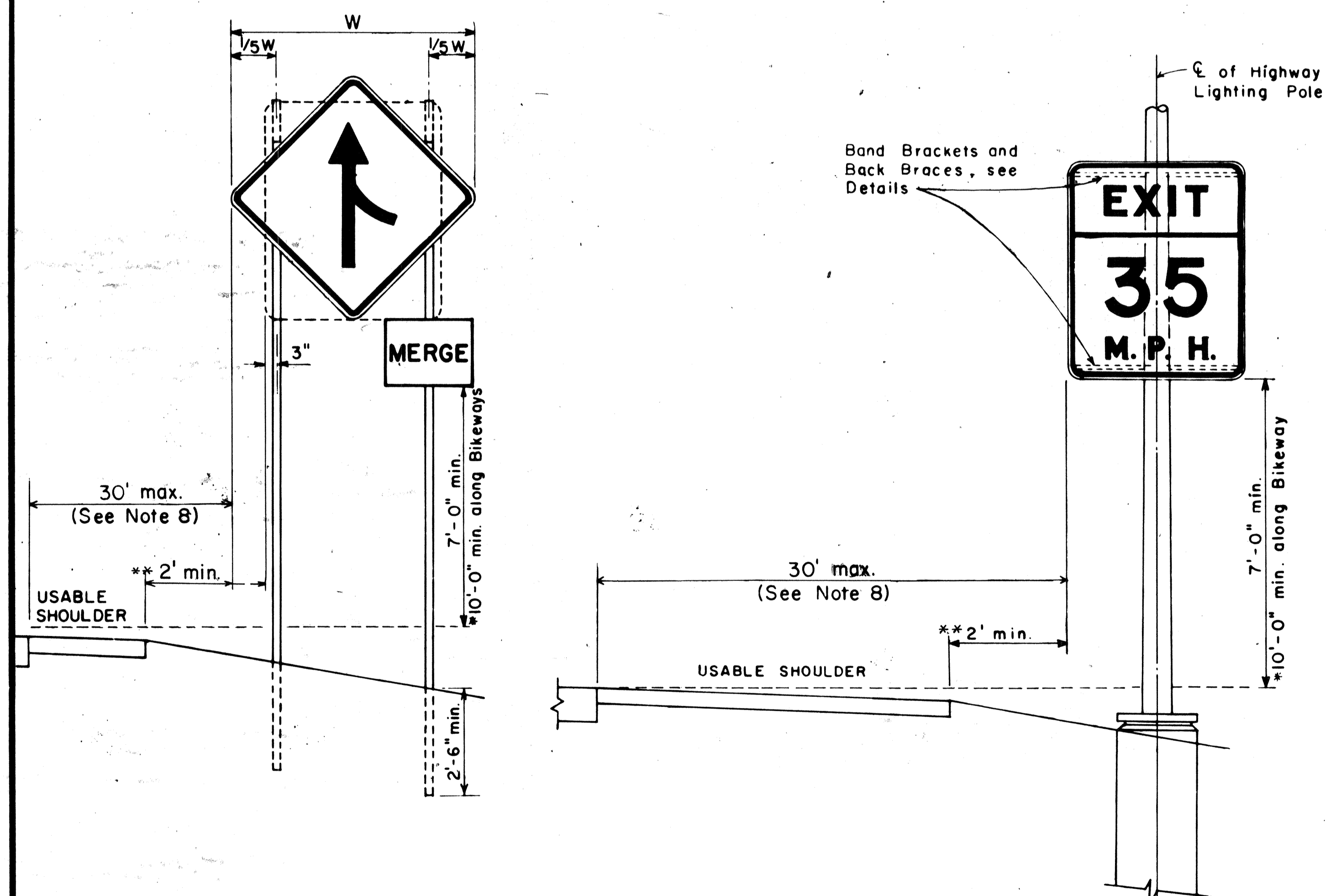
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(18)	1982	79	165

GENERAL NOTES

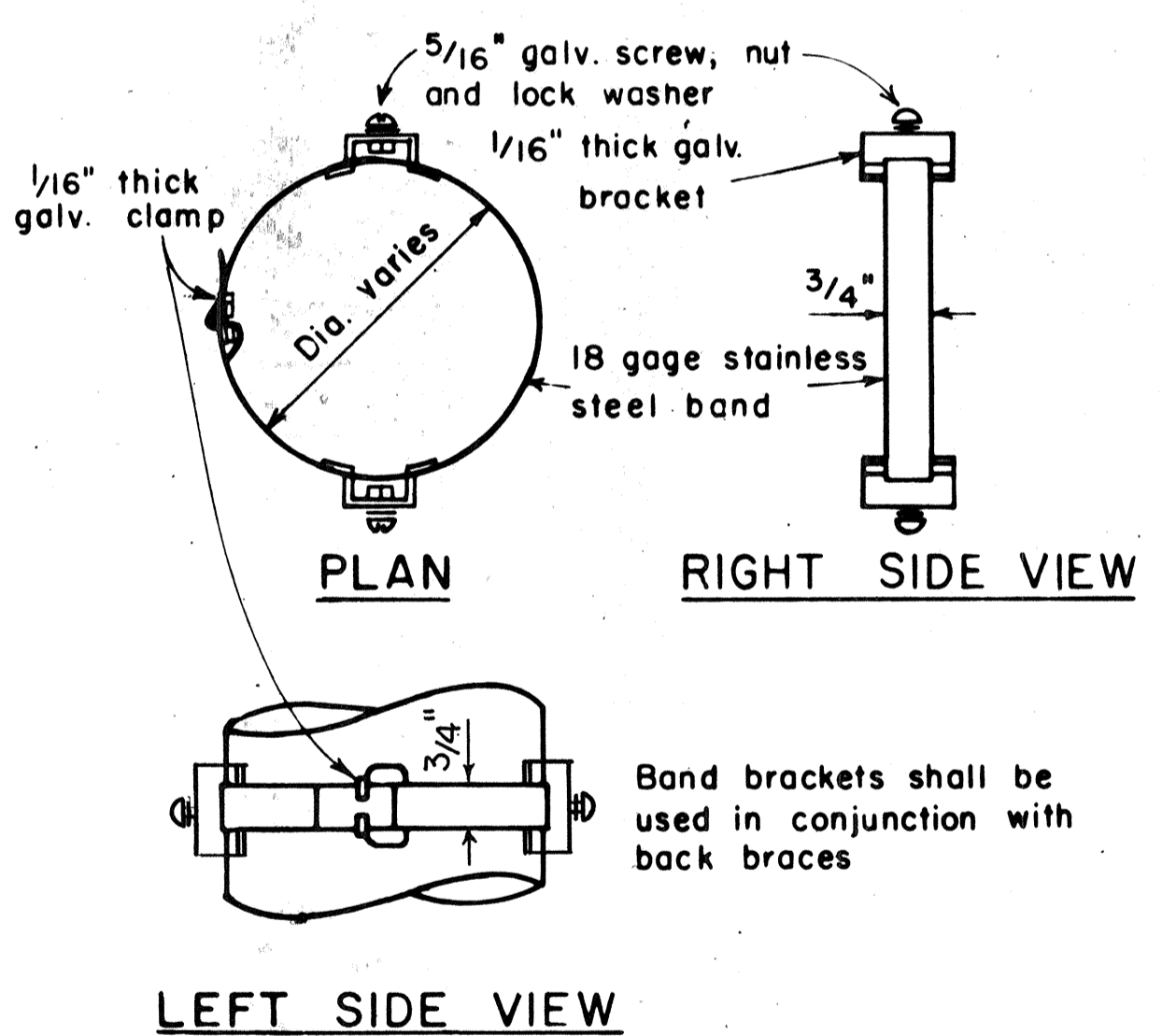
- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two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



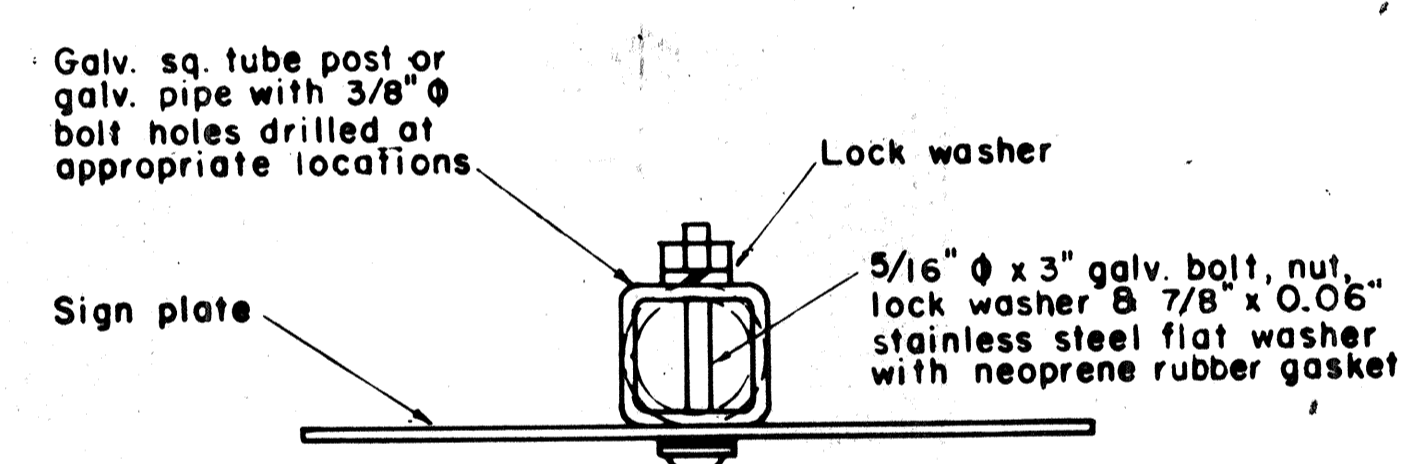
BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



BAND BRACKET



GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)

TYPICAL MOUNTING DETAILS

NOT TO SCALE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT - 100 approved 12/30/69	H.T.	11/15/77
2	Revised depth of signpost	H.T.	5/8/79
3	Added Notes No. 8 & No. 9	H.T.	5/18/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80
5	Revised General Notes, Lateral Sign Locations and Mounting Details	H.T.	5/15/81

APPROVAL RECOMMENDED:
Eishi Tanaka 11/15/77
 TRAFFIC ENGINEER DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

SHEET No. 147 OF 26 SHEETS DT 100

DATE: _____
 SURVEY ELABORATED BY: _____
 PLAN: _____
 DRAWN BY: _____
 TRACED BY: _____
 NOTE BOOK: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-11-1(118)	1982	80	165

 R1-1 30" x 30" R1-1-A 36" x 36" 4-WAY R1-3 12" x 6" R1-3-A 18" x 9"	 R1-2 36" x 36" x 36" R1-2-A 48" x 48" x 48"	 R2-1(50) 24" x 30" R2-1(50)-A 48" x 60"	 R2-2(40) 24" x 24" R2-2(40)-A 48" x 48"	 R2-4a(50/40) 24" x 48" R2-4a(50/40)-A 48" x 96"	 R2-5b(30) 24" x 30" R2-5b(30)-A 48" x 60"	 R3-1 24" x 24" 24" x 18" R3-1-A 48" x 48" 48" x 36"	 R3-2 24" x 24" 24" x 18" R3-2-A 48" x 48" 48" x 36"	 R3-3 24" x 24" R3-3-A 48" x 48"	 R3-4 24" x 24" 24" x 18" R3-4-A 48" x 48" 48" x 36"	 R3-5(L) 30" x 36" R3-5(L)-A 48" x 60"	 R3-6(L) 30" x 36" R3-6(L)-A 48" x 60"
 R3-7(R) 30" x 30" R3-7(R)-A 48" x 48"	 R3-8(L) 30" x 30" R3-8(L)-A 36" x 36" R3-8(L)-B 48" x 48"	 R3-9 24" x 30"	 R4-1 24" x 30"	 R4-2 24" x 30"	 R4-3 24" x 30" R4-3-A 48" x 60"	 R4-5 24" x 30"	 R4-6(500) 24" x 30"	 R4-7 24" x 30" 24" x 18"	 R4-8 24" x 30" 24" x 18"	 R5-1 30" x 30" R5-1-A 48" x 48"	 R5-2 24" x 24" 24" x 18"
 R5-4 24" x 30"	 R5-6 24" x 24" 24" x 18"	 R5-9 36" x 24"	 R6-1(R) 36" x 12"	 R6-2(R) 18" x 24"	 R7-1 12" x 18" R7-1-A 24" x 30"	 R7-4 12" x 18" R7-4-A 24" x 30"	 R7-1,7(R) 12" x 18"	 R7-108 12" x 18"	 R7-201 12" x 6" R7-201-A 24" x 12"	 R8-1 24" x 30"	 R8-2 24" x 30"
 R8-3 24" x 30"	 R8-4 30" x 24" R8-4-A 48" x 36"	 R8-5 24" x 30"	 R8-6 24" x 30"	 R8-7 30" x 24" R8-7-A 48" x 36"	 R9-1 18" x 24"	 R9-2 12" x 18"	 R9-3 12" x 18"	 R9-4 18" x 24"	 R10-1 12" x 18"	 R10-2 12" x 18"	 R10-3 9" x 12"
 R10-4 9" x 12"	 R10-5 24" x 30"	 R10-6 24" x 36"	 R10-7 24" x 30"	 R10-8 24" x 30"	 R10-9 24" x 30"	 R10-10 24" x 30"					
 R11-1 24" x 30"	 R11-2 48" x 30"	 R11-3(10) 60" x 30"	 R11-4 60" x 30"	 R12-1(10) 24" x 30"							

GENERAL NOTES

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

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

APPROVED:
Salvatore Zappala 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1.	H.T.	10/14/74
3	Added General Note 5	H.T.	8/3/77

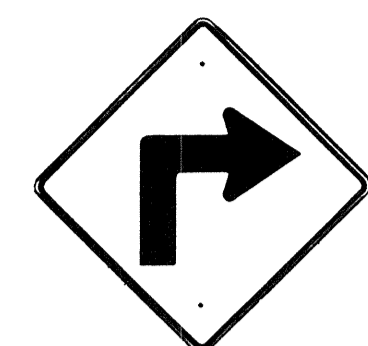
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

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

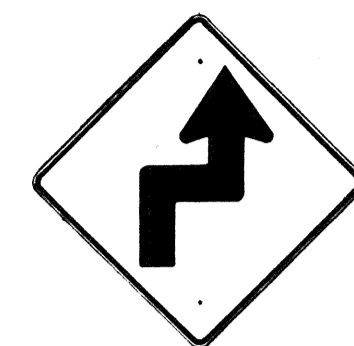
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(18)	1982	81	165



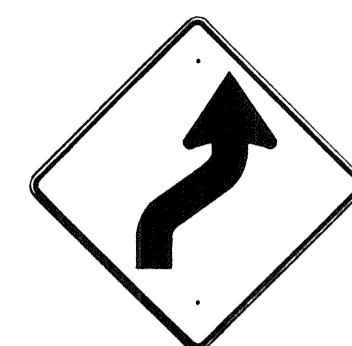
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



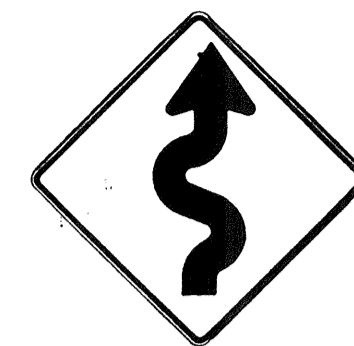
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



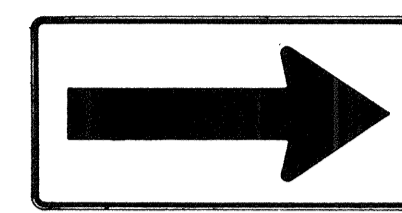
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



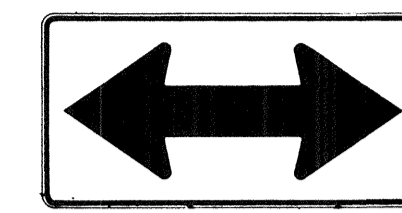
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



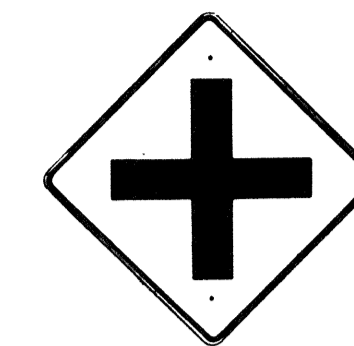
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



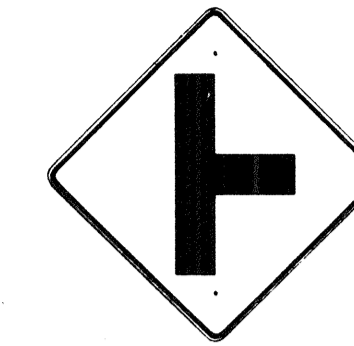
W1-6 48"x24"



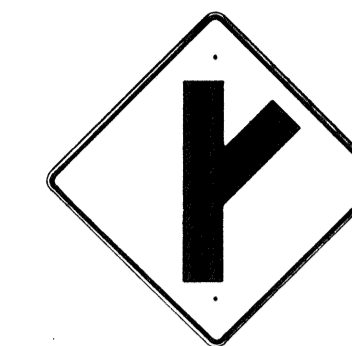
W1-7 48"x24"



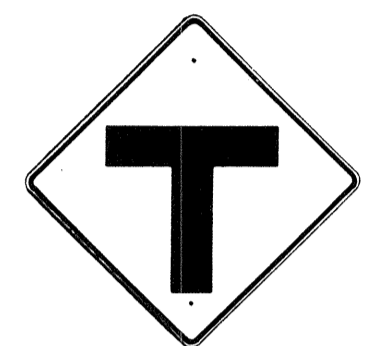
W2-1 30"x30"
W2-1-A 48"x48"



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



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



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



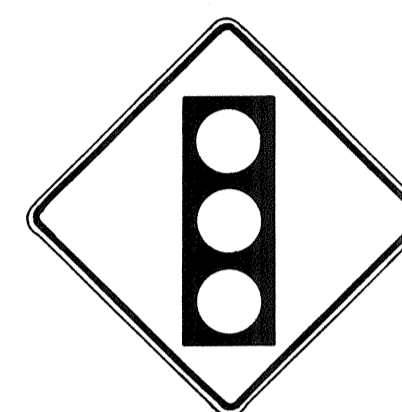
W2-5 30"x30"
W2-5-A 48"x48"



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



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

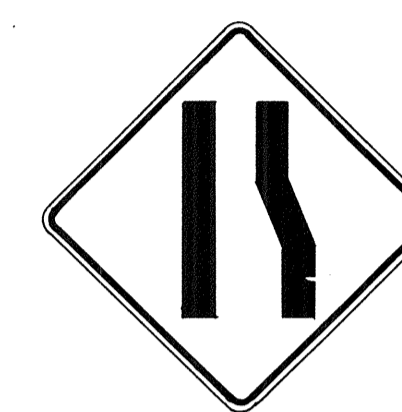


W3-3 36"x36"
24"x18"



W4-1(R) 30"x30"
24"x18"

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



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



W5-1 36"x36"



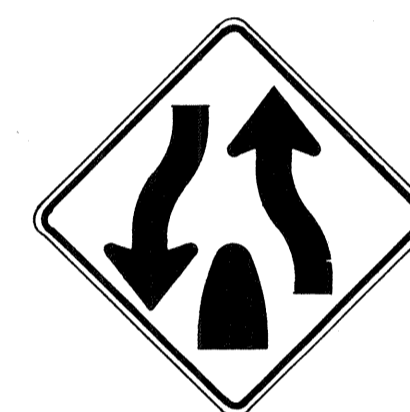
W5-2 30"x30"
W5-2-A 36"x36"



W5-3 36"x36"



W6-1 36"x36"
24"x18"



W6-2 36"x36"
24"x18"



W6-3 30"x30"
24"x18"

W6-3-A 36"x36"
24"x18"

W6-3-B 48"x48"
24"x18"



W7-1 30"x30"
24"x18"

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



W7-2 24"x18"



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



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



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



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



W8-5 30"x30"
24"x18"

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



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



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



W10-1 36" Diameter



W11-1 30"x30"
24"x18"

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



W11-2 30"x30"
24"x18"

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



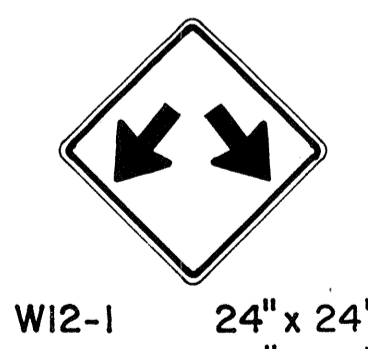
W11-4 30"x30"
24"x18"

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



W11-5 30"x30"
24"x18"

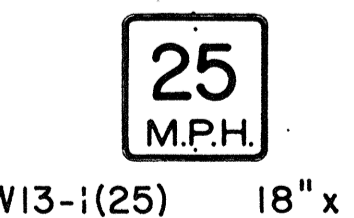
W11-5-A 36"x36"
24"x18"



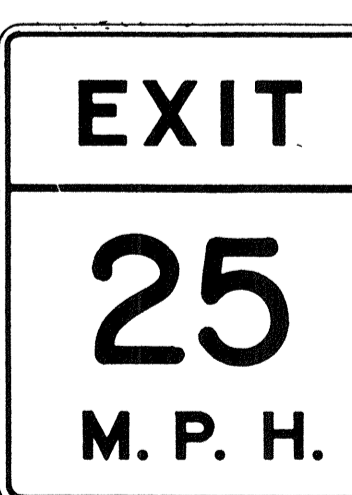
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



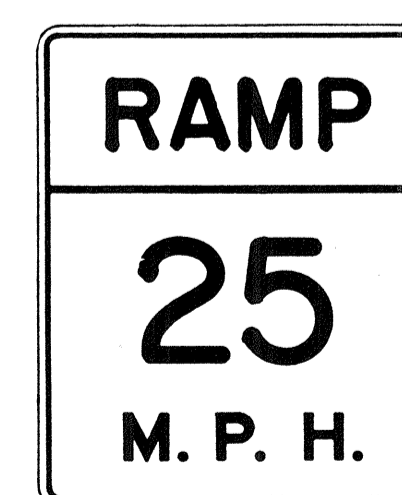
W12-2(12'-6") 36"x36"
24"x18"



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



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

GENERAL NOTES

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

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

APPROVED:
Walter Ralskin 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 5	MF	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-77

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

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

DATE: _____
 ORIGINAL PLAN
 DRAWN BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 NO. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-11-1(18)	1982	82	165

General Notes

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

ALL WAY
R1-4 18" x 6"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STOP AHEAD
W3-1a 36" x 36"
24" x 18"
W3-1a-A 48" x 48"
24" x 18"

YIELD AHEAD
W3-2a 36" x 36"
24" x 18"
W3-2a-A 48" x 48"
24" x 18"

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

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

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

EQUESTRIAN XING
W11-7 36" x 36"
24" x 18"
W11-7-A 48" x 48"
24" x 18"

FIRE STATION
W11-8 36" x 36"
24" x 18"
W11-8-A 48" x 48"
24" x 18"

LIMITED SIGHT DISTANCE
W14-4 36" x 36"
W14-4-A 48" x 48"

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

ADVANCE GREEN
W15-2 24" x 24"

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

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

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

SCHOOL
S4-1 24" x 10"
S4-2 24" x 10"

SCHOOL WHEN CHILDREN ARE PRESENT
S4-3 24" x 8"
S4-4 24" x 10"

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

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

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

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

APPROVED:
Robert S. Dakeishi 5/2/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/9/78

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
 SHEET No. 117 OF 26 SHEETS DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HH(118)	1978	83	165



CW20-1a 48" x 48"



CW20-2d 48" x 48"



CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



CW21-1 30" x 30"



CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



CW21-6 30" x 30"



CW22-1b 48" x 48"



CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



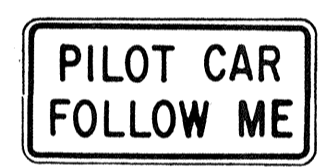
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



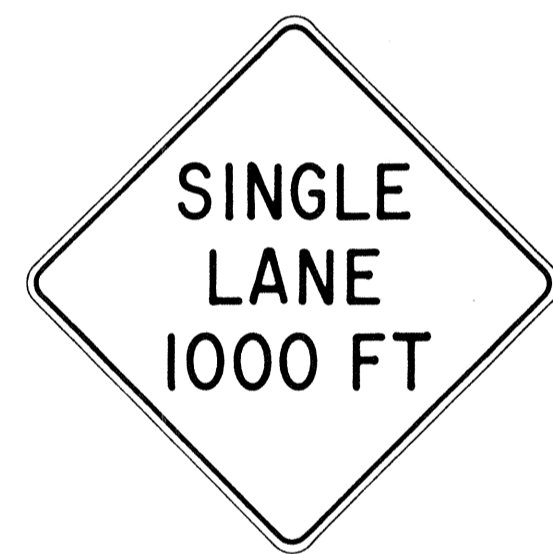
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

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

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

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

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

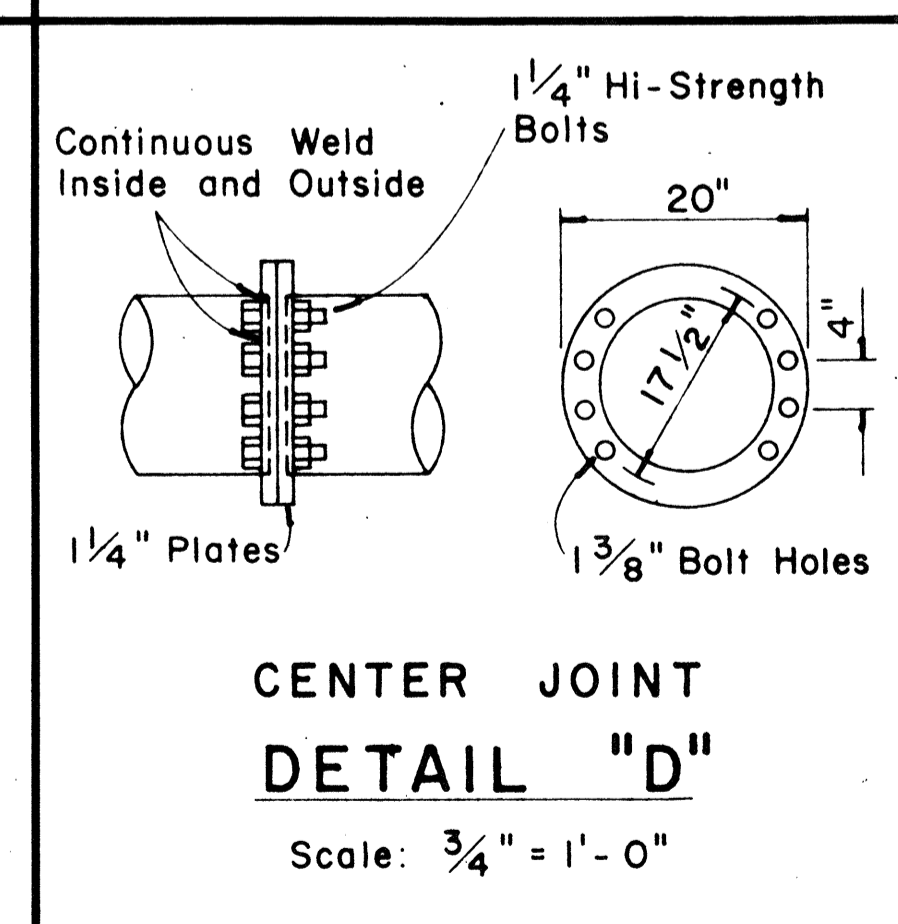
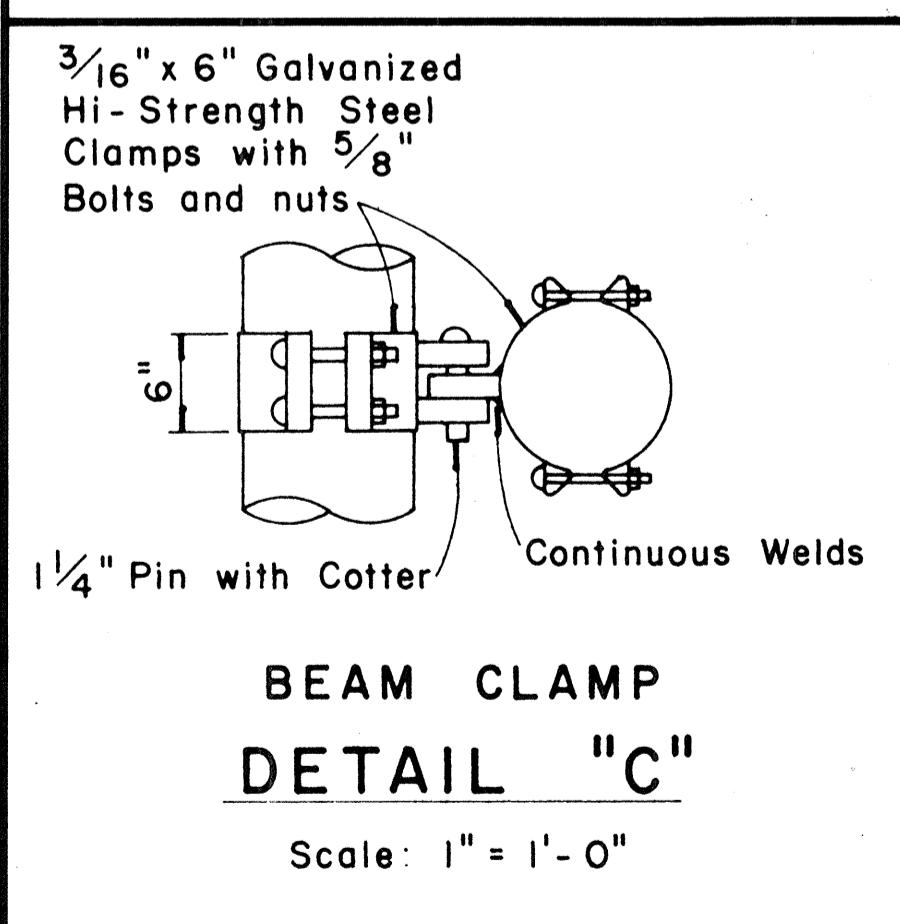
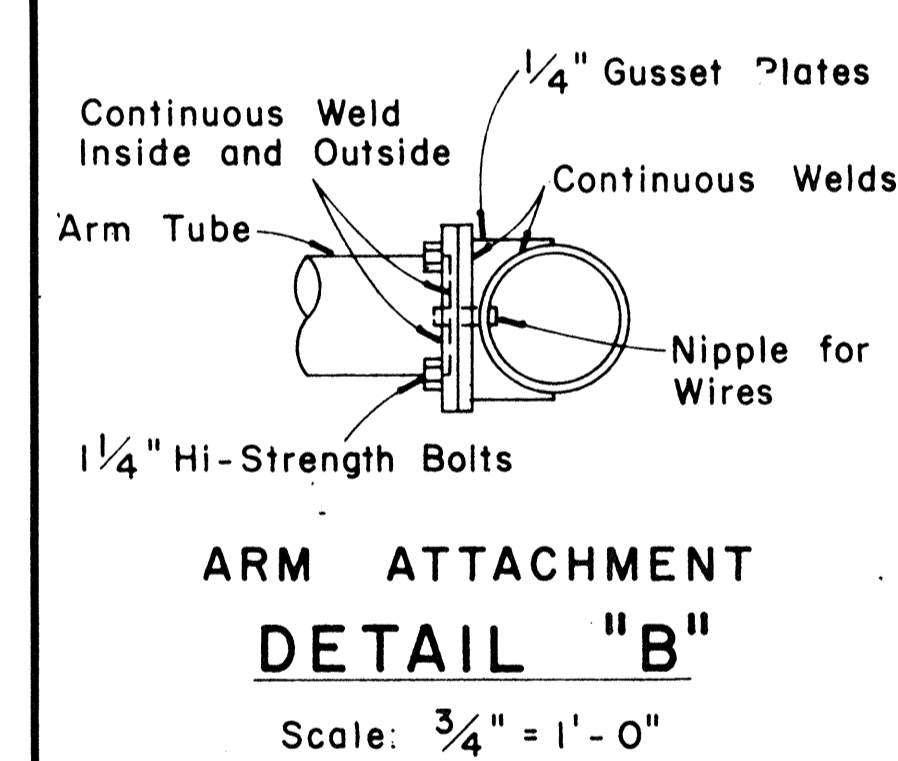
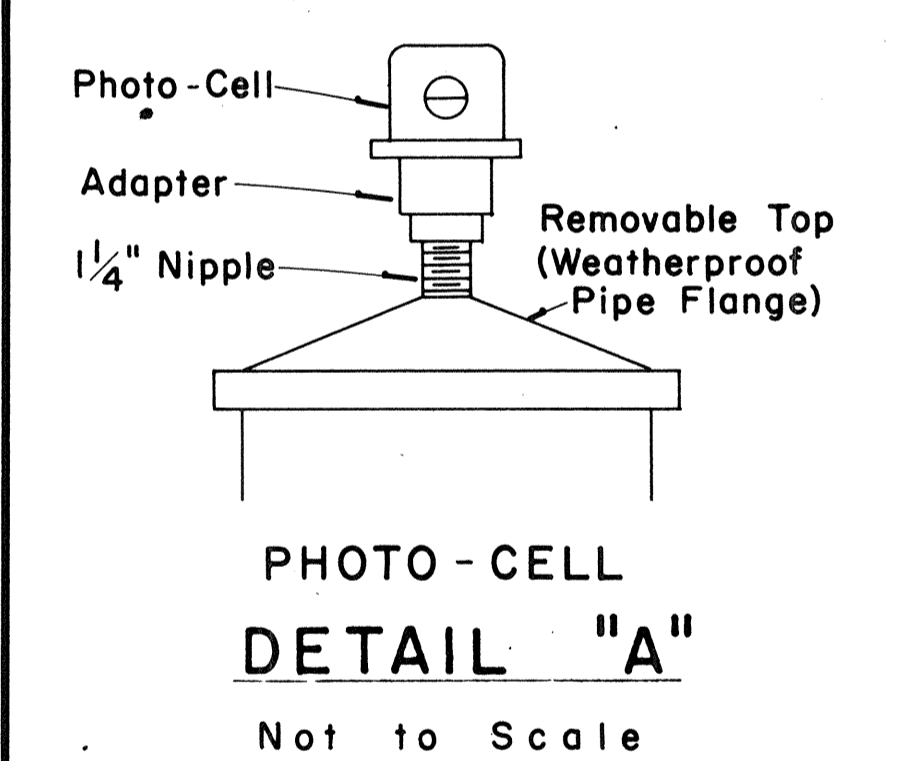
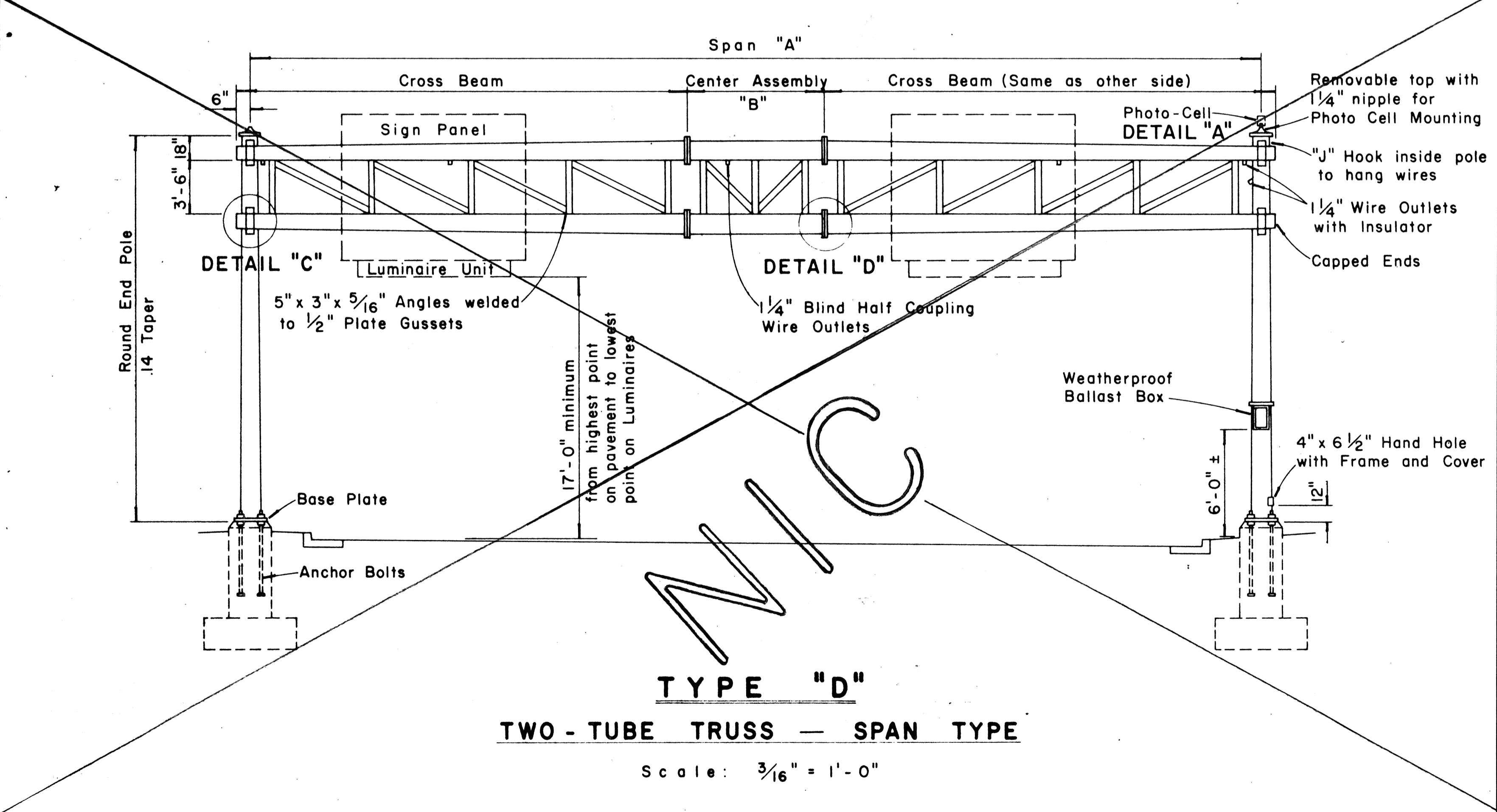
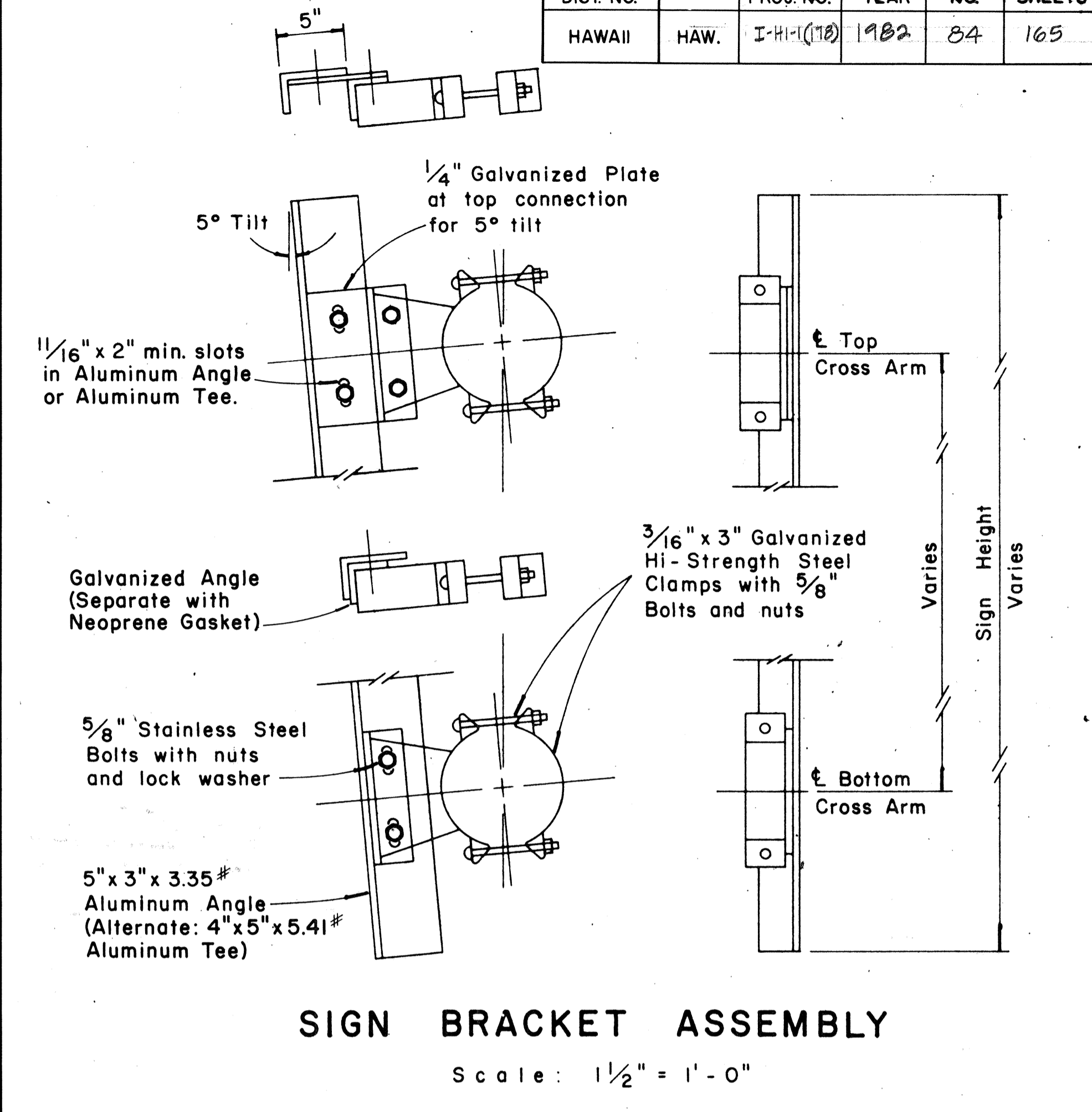
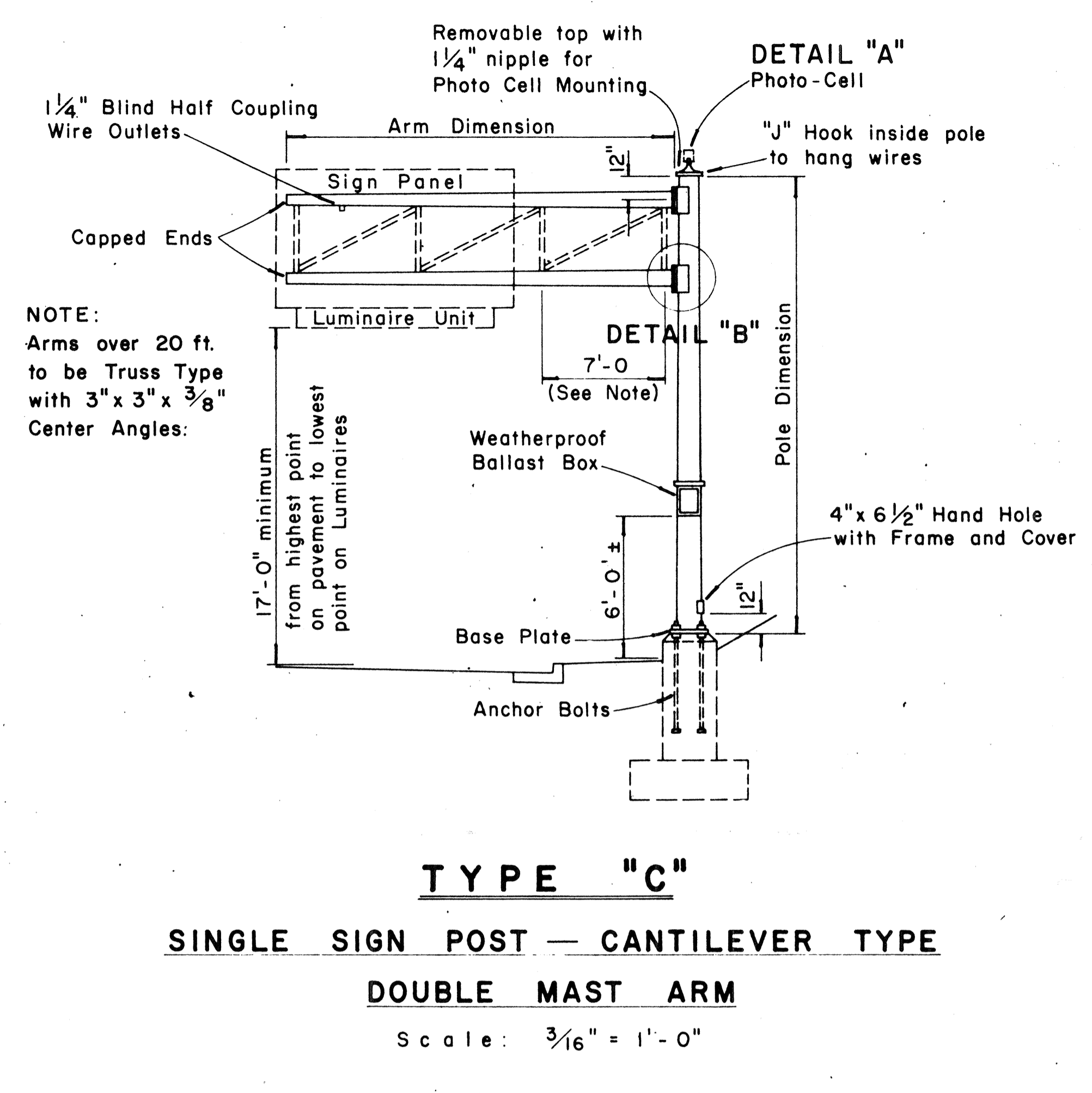
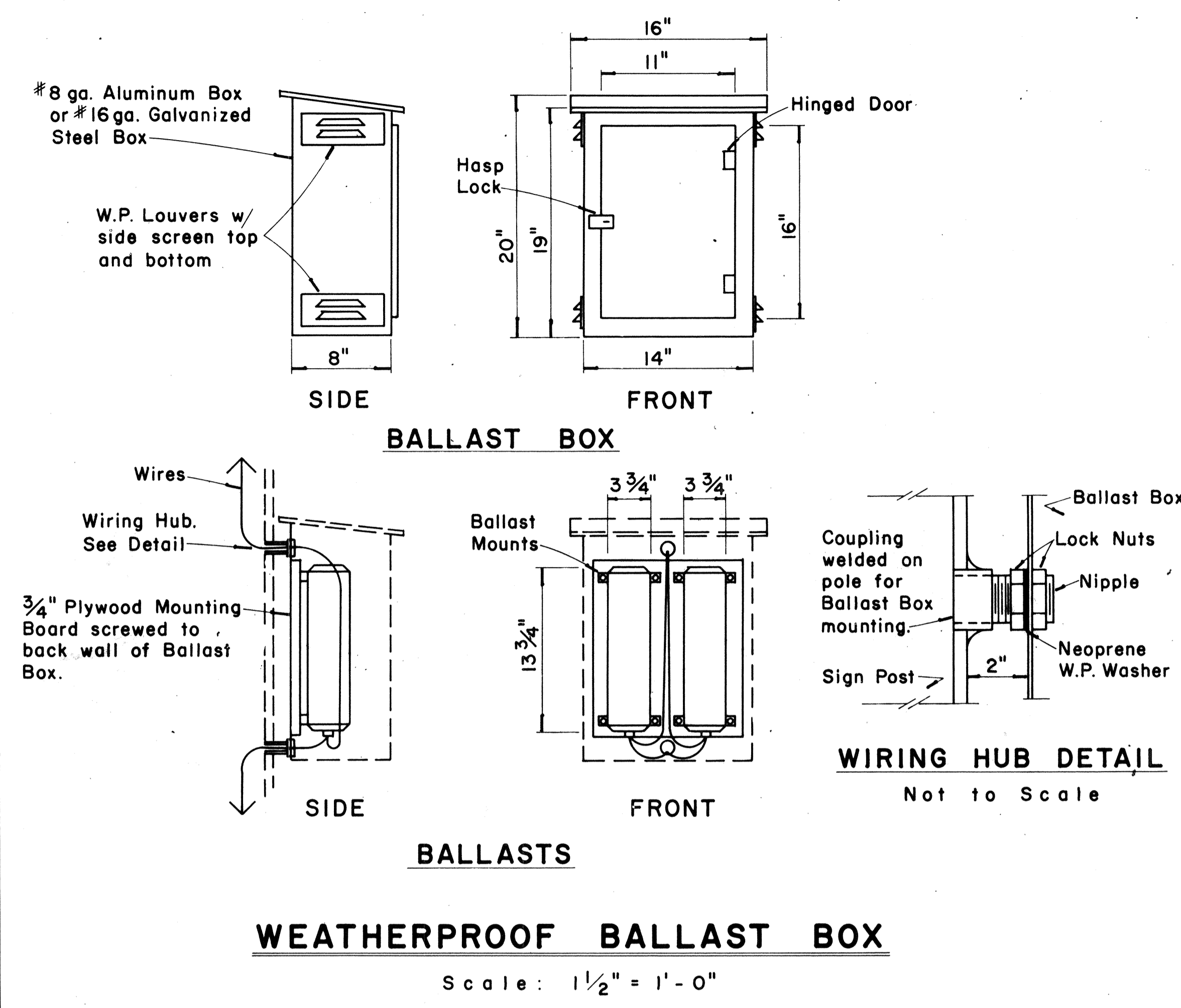
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-11(118)	1982	84	165



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

APPROVED:
John J. Seibel 12-30-89
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
OVERHEAD SIGN SUPPORTS

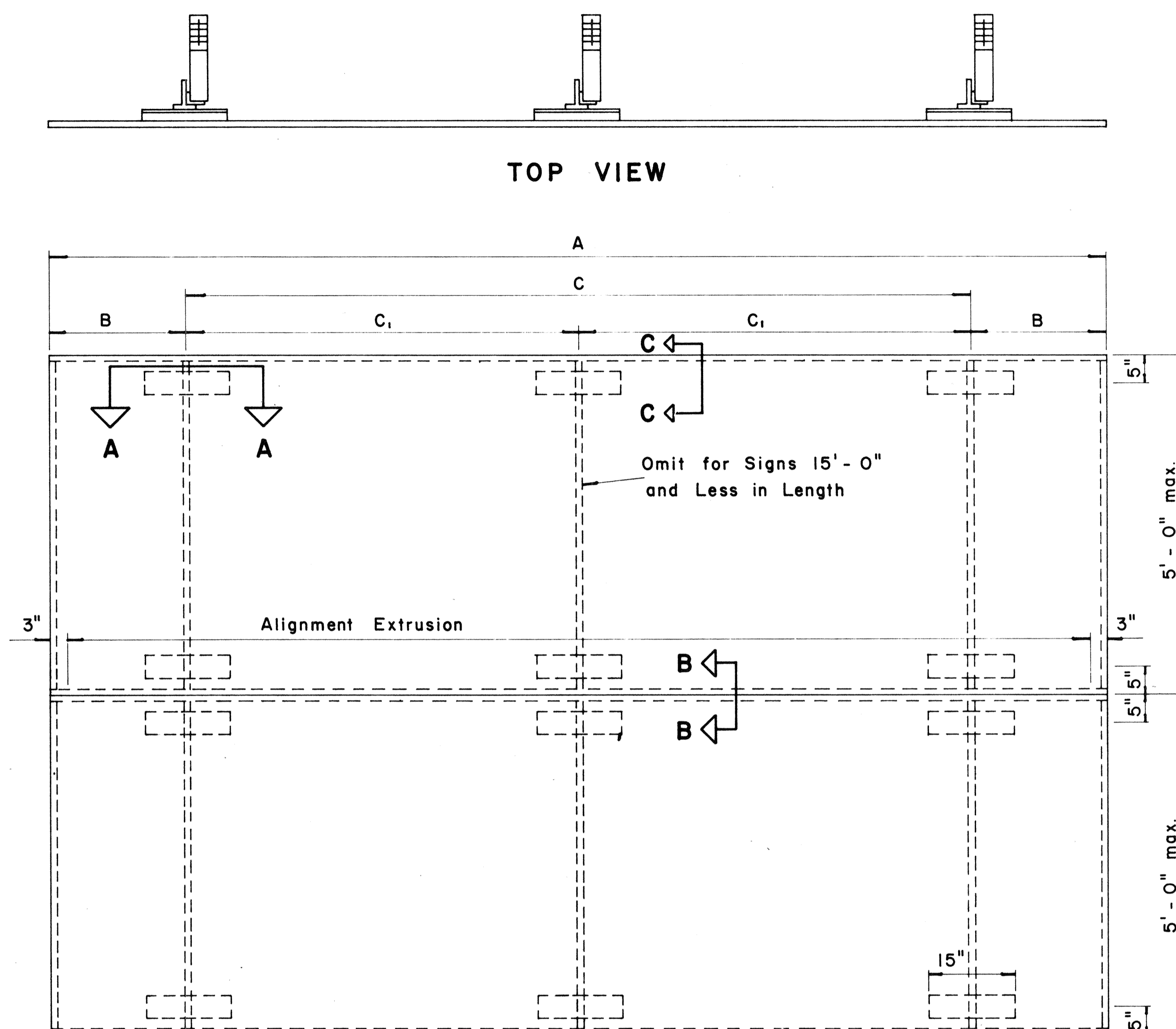
Scale: As Shown
 SHEET No. 197 OF 206 SHEETS DT 200

DRAWN BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 DATE: _____
 NOTE BOOK: _____

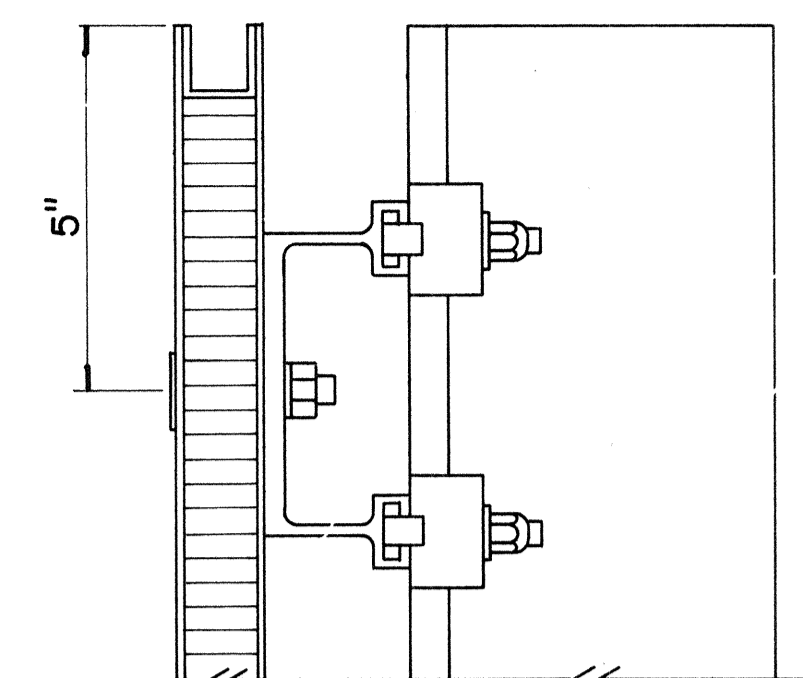
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(18)	1982	85	165

(OVERHEAD SIGNS)
SUPPORT SPACING TABLE

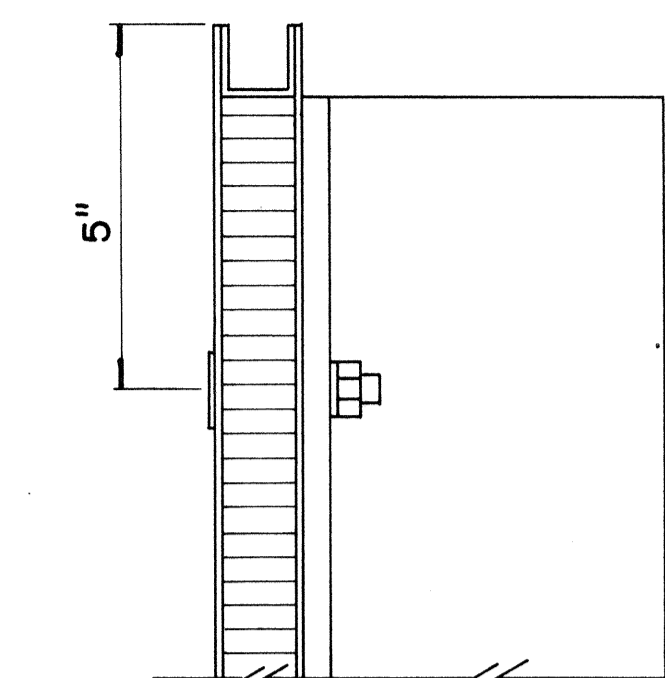
PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG	SUPPORT SPACING
	A		B	C or C ₁
1"	6'-0"	2	12"	48"
1"	6'-6"	2	15"	48"
1"	7'-0"	2	15"	54"
1"	7'-6"	2	18"	54"
1"	8'-0"	2	18"	60"
1"	8'-6"	2	20"	62"
1"	9'-0"	2	22"	64"
1"	9'-6"	2	23"	68"
1"	10'-0"	2	24"	72"
1"	10'-6"	2	24"	78"
1"	11'-0"	2	24"	84"
1"	11'-6"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



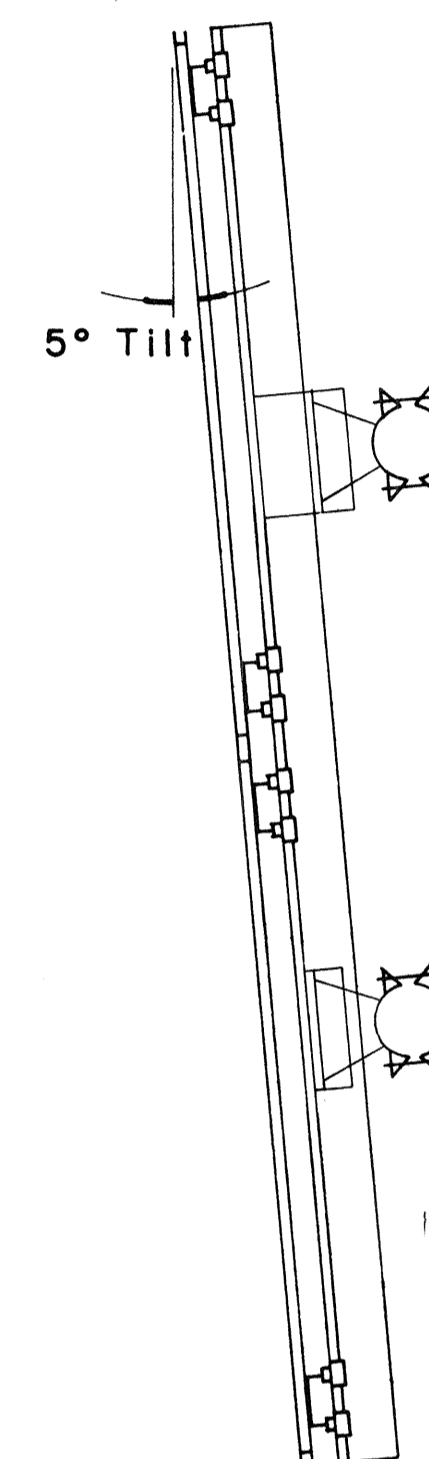
TYPICAL SIGN ASSEMBLY
Scale: $\frac{3}{4}$ " = 1'-0"



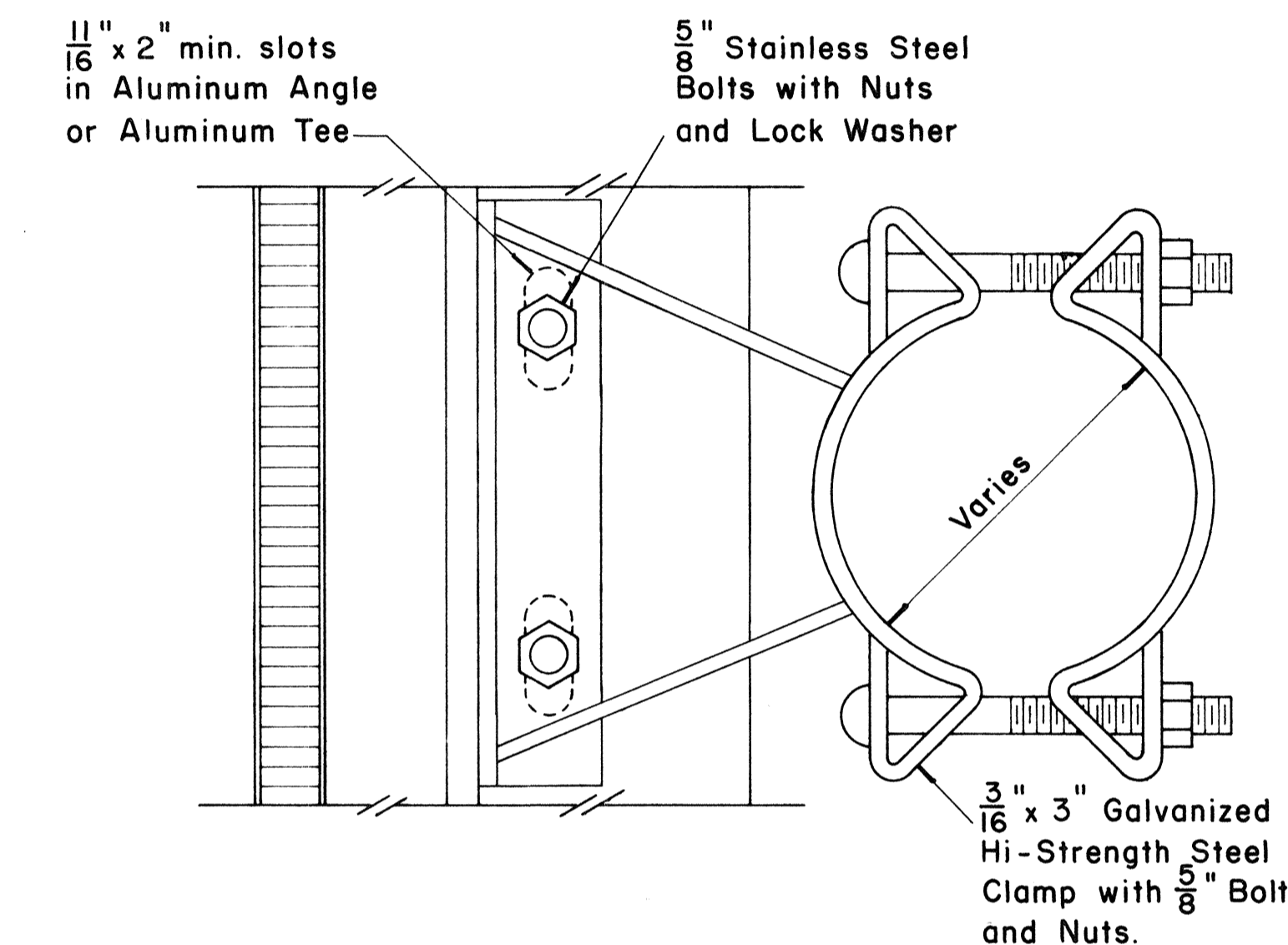
SECTION "C-C"
Scale: $\frac{3}{8}$ " = 1"



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



SIDE VIEW



SIGN BRACKET ASSEMBLY

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

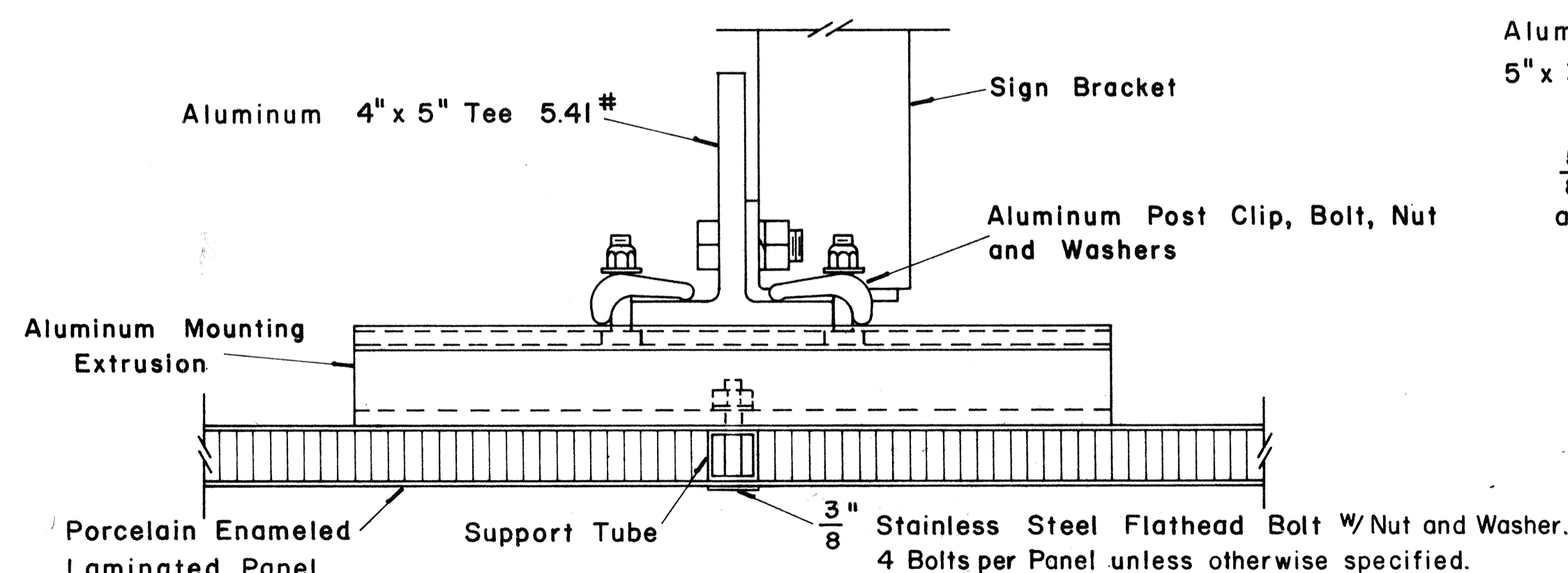
NOTE: For additional details of Sign Bracket Assembly, see Standard Detail Sheet "Overhead Sign Supports."

APPROVAL RECOMMENDED:

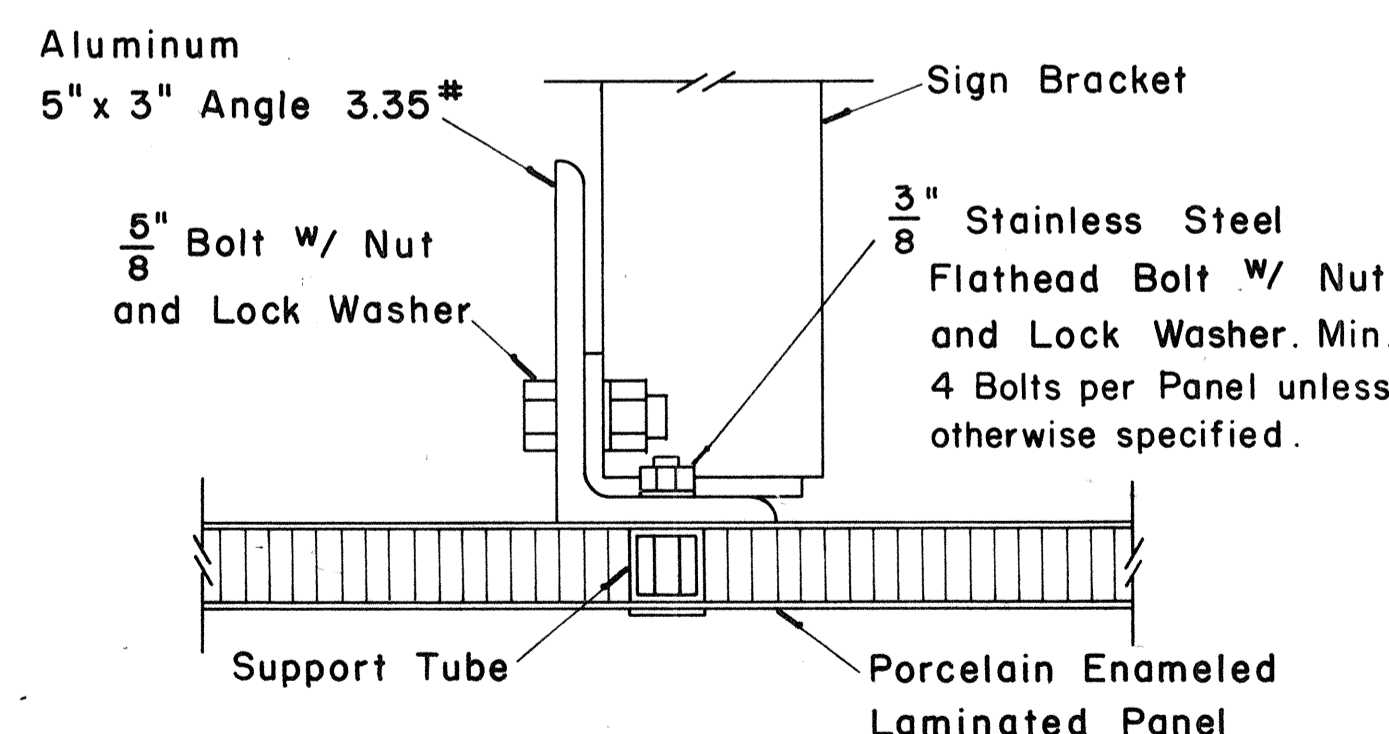
Eishi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:

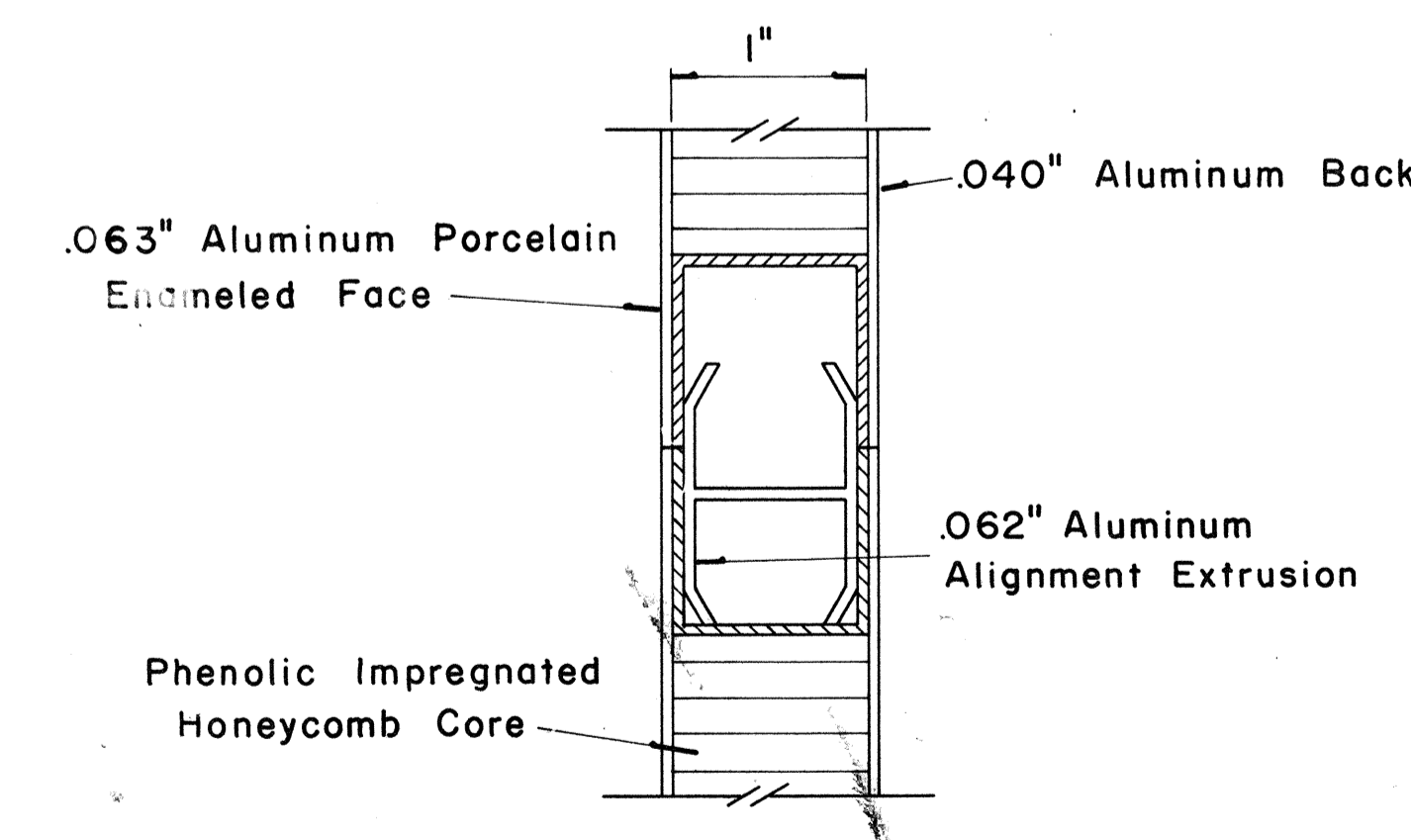
John J. J. J. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE



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



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



CLOSURE DETAIL SECTION "B-B"
FULL SCALE

NO.	REVISION	APPROVED BY	DATE

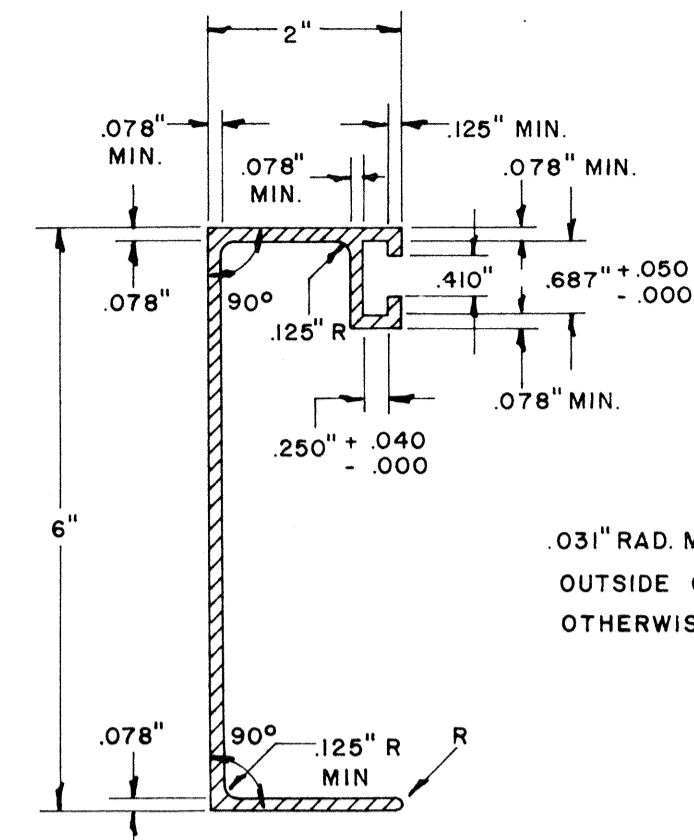
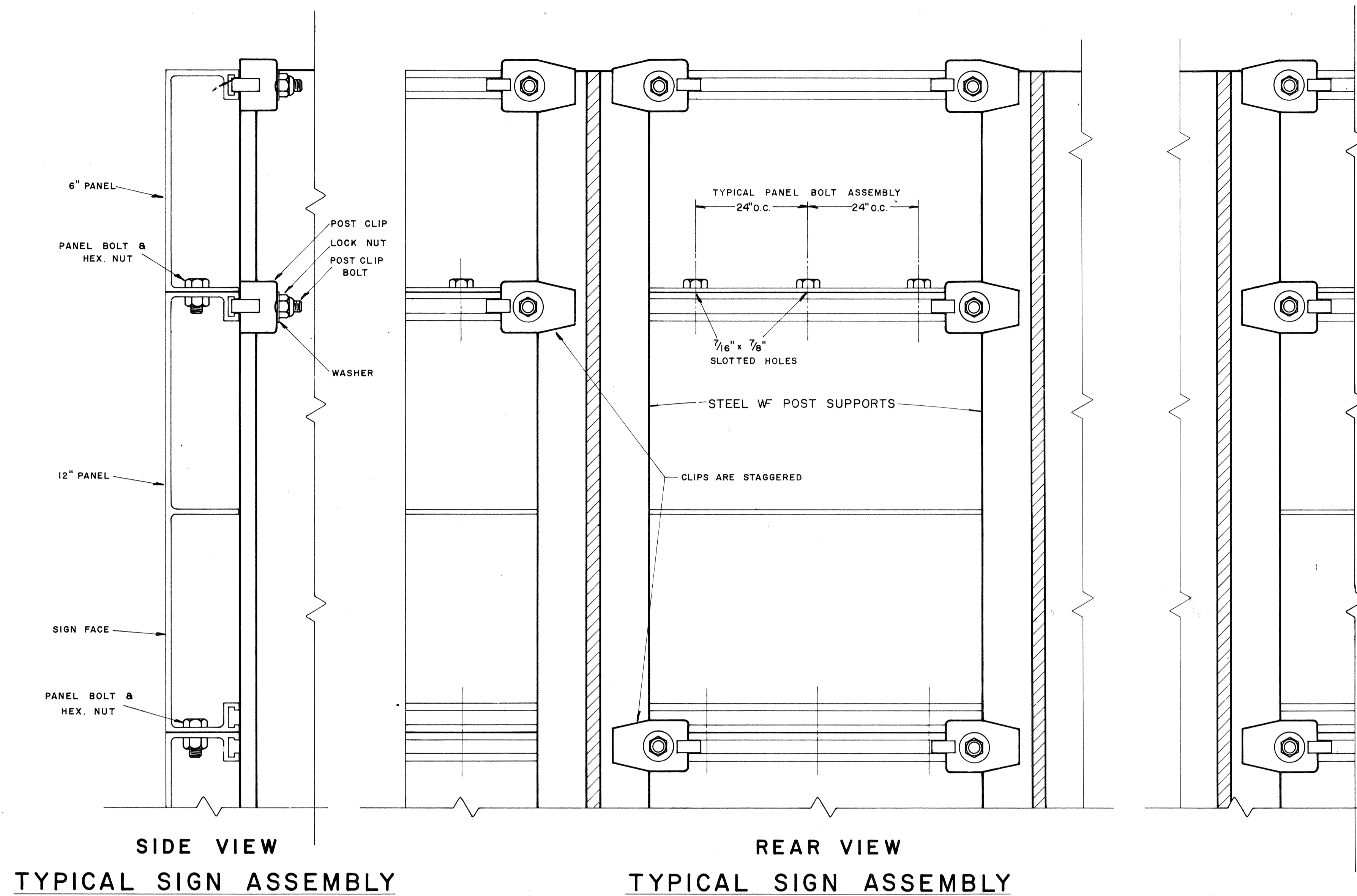
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(OVERHEAD)

Scale: As Shown

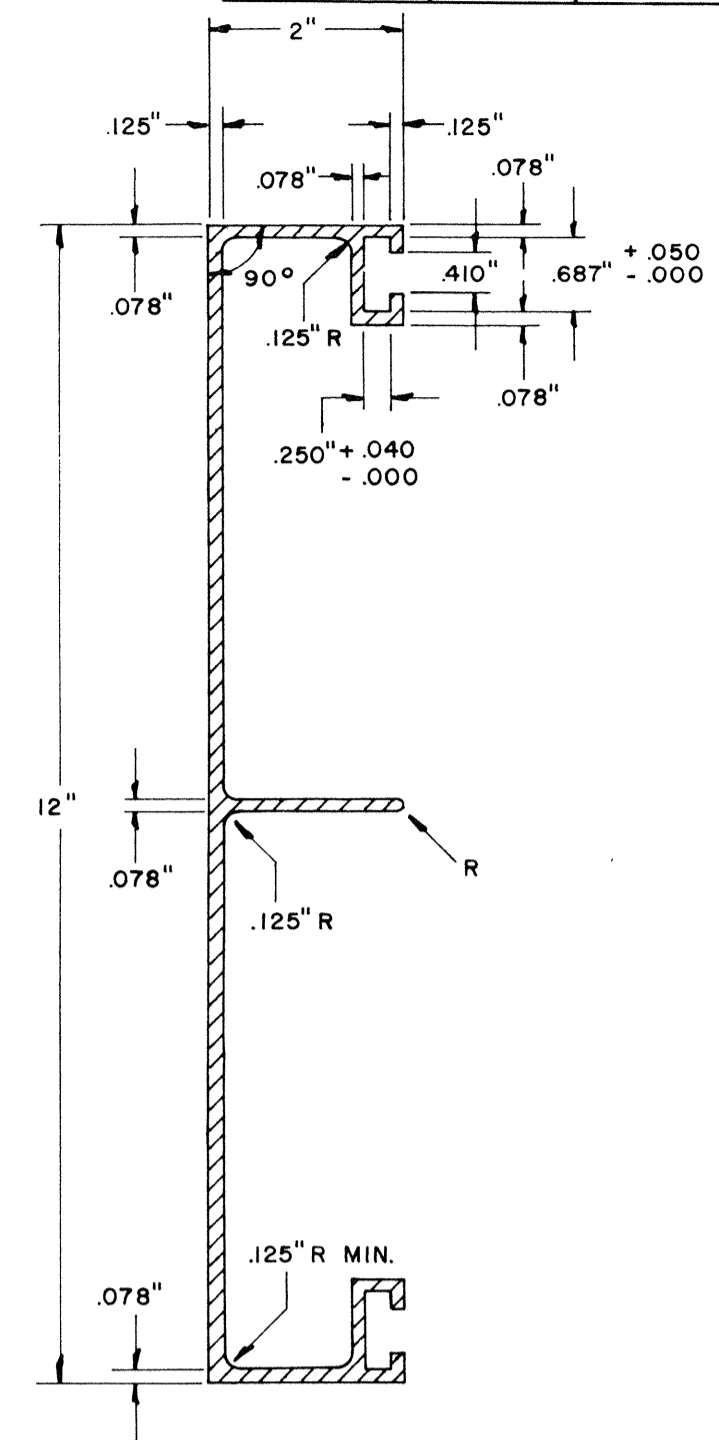
SHEET No. 20 OF 26 SHEETS DT 205

ORIGINAL PLAN
NO. _____
DATE _____
DESIGNED BY _____
CHECKED BY _____
SURVEY PLOTTED BY _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-111(10)	1982	86	165

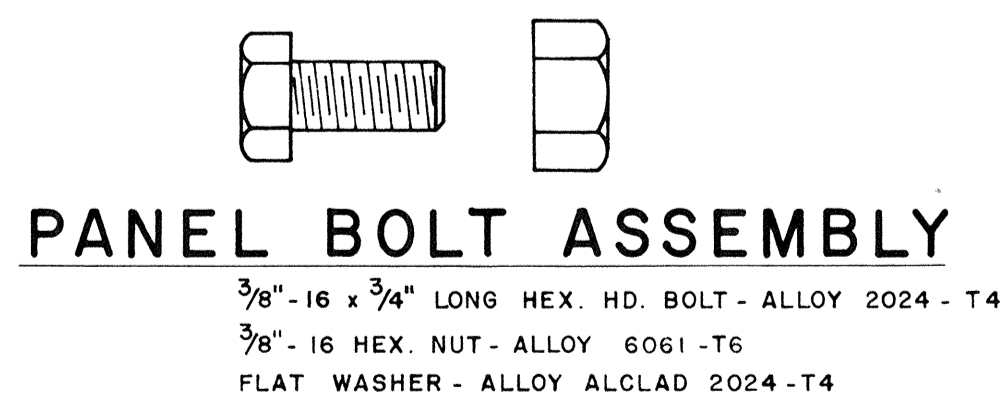
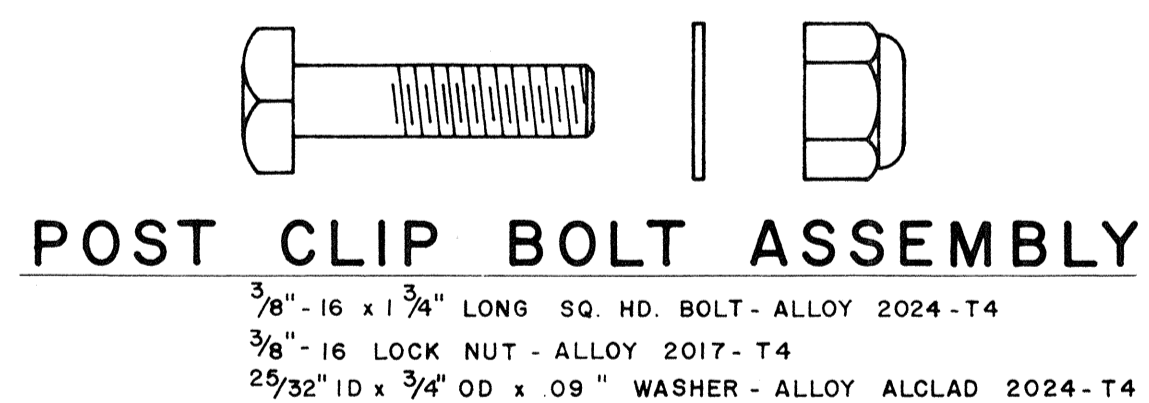
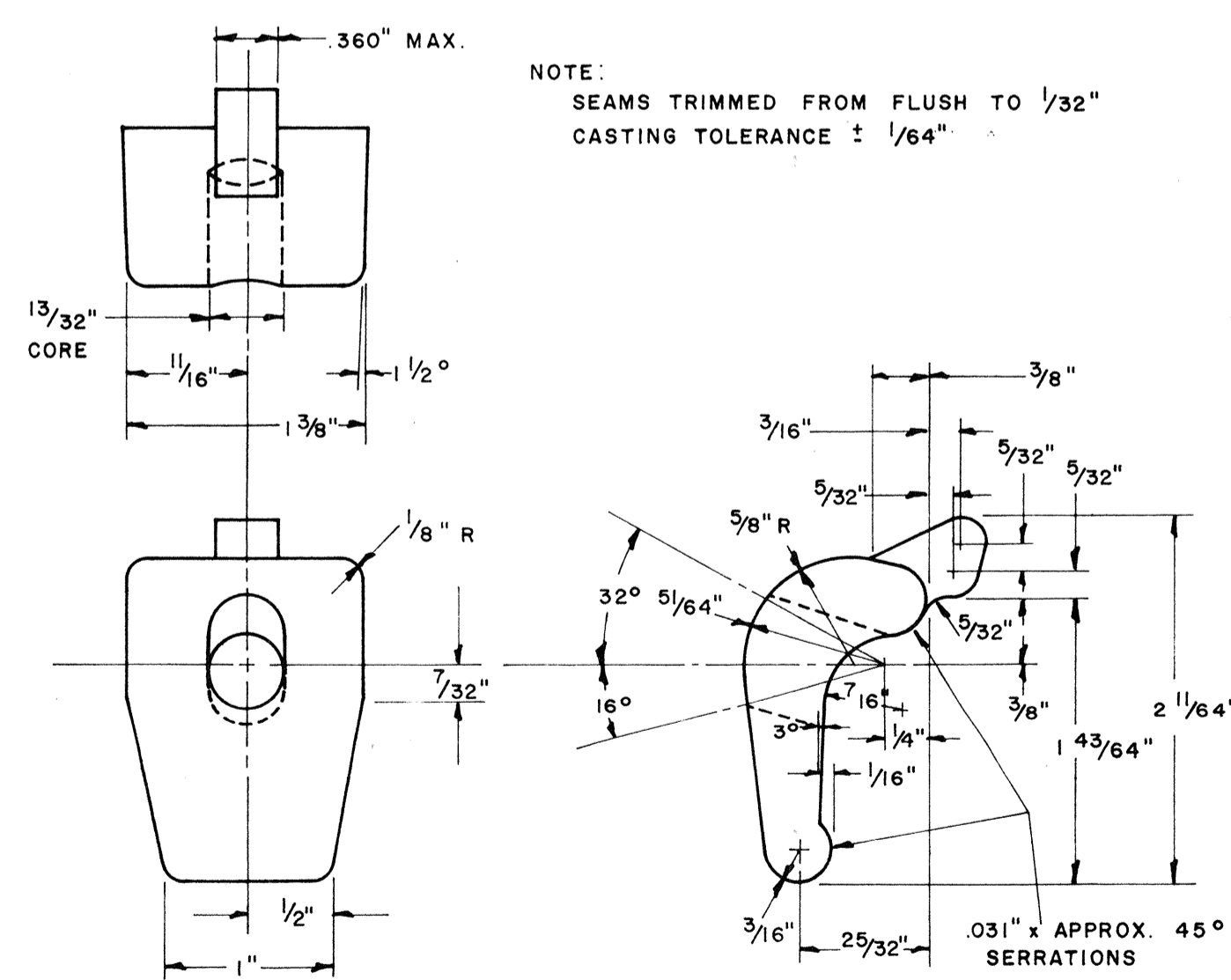


SOLID EXTRUDED SIGN PANEL DETAILS



TYPICAL SIGN ASSEMBLY

TYPICAL SIGN ASSEMBLY



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

APPROVAL RECOMMENDED:
Eiichi Tanaka
TRAFFIC ENGINEER
12/29/82
DATE

APPROVED:
John S. [Signature]
ASSISTANT CHIEF, ENGINEERING
12-30-82
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

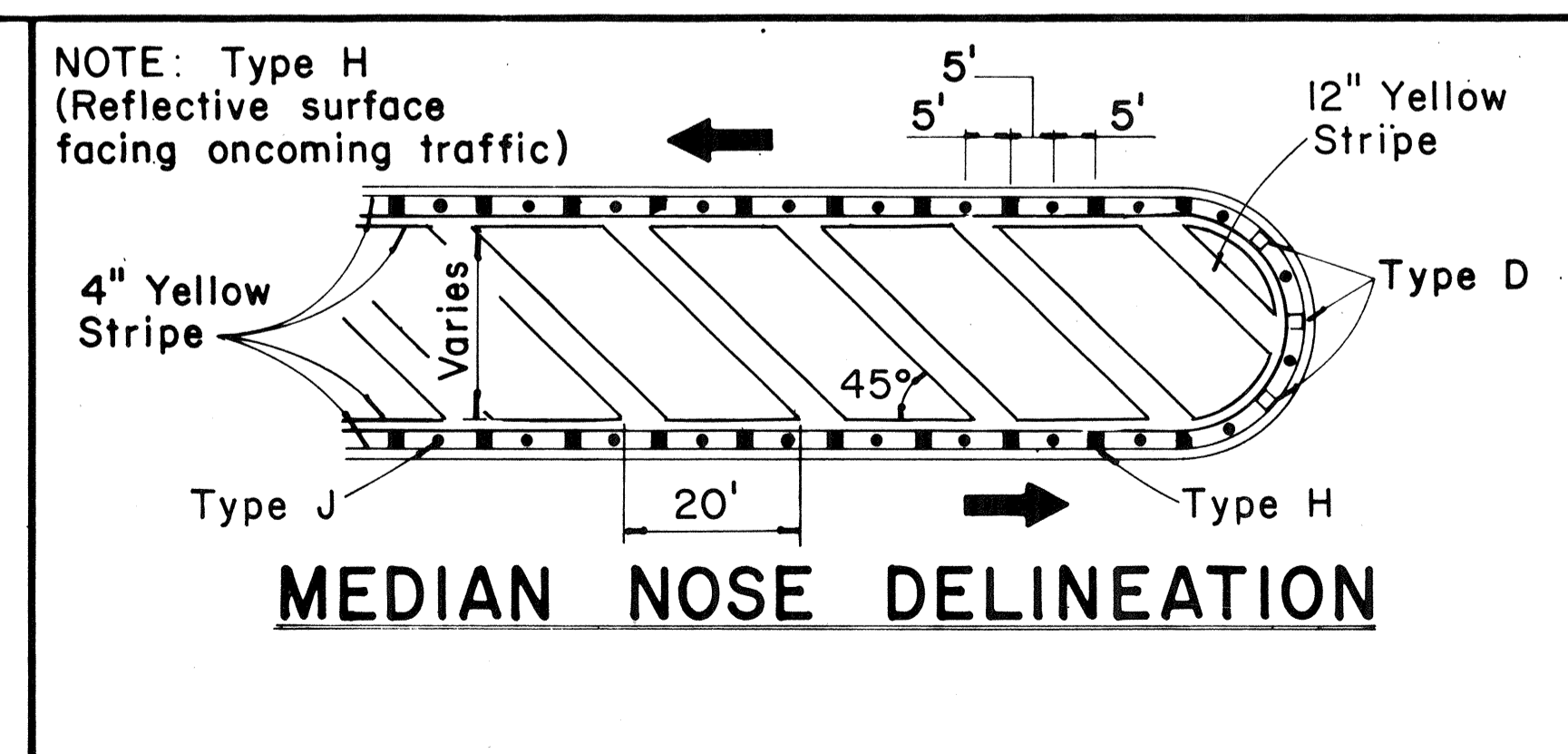
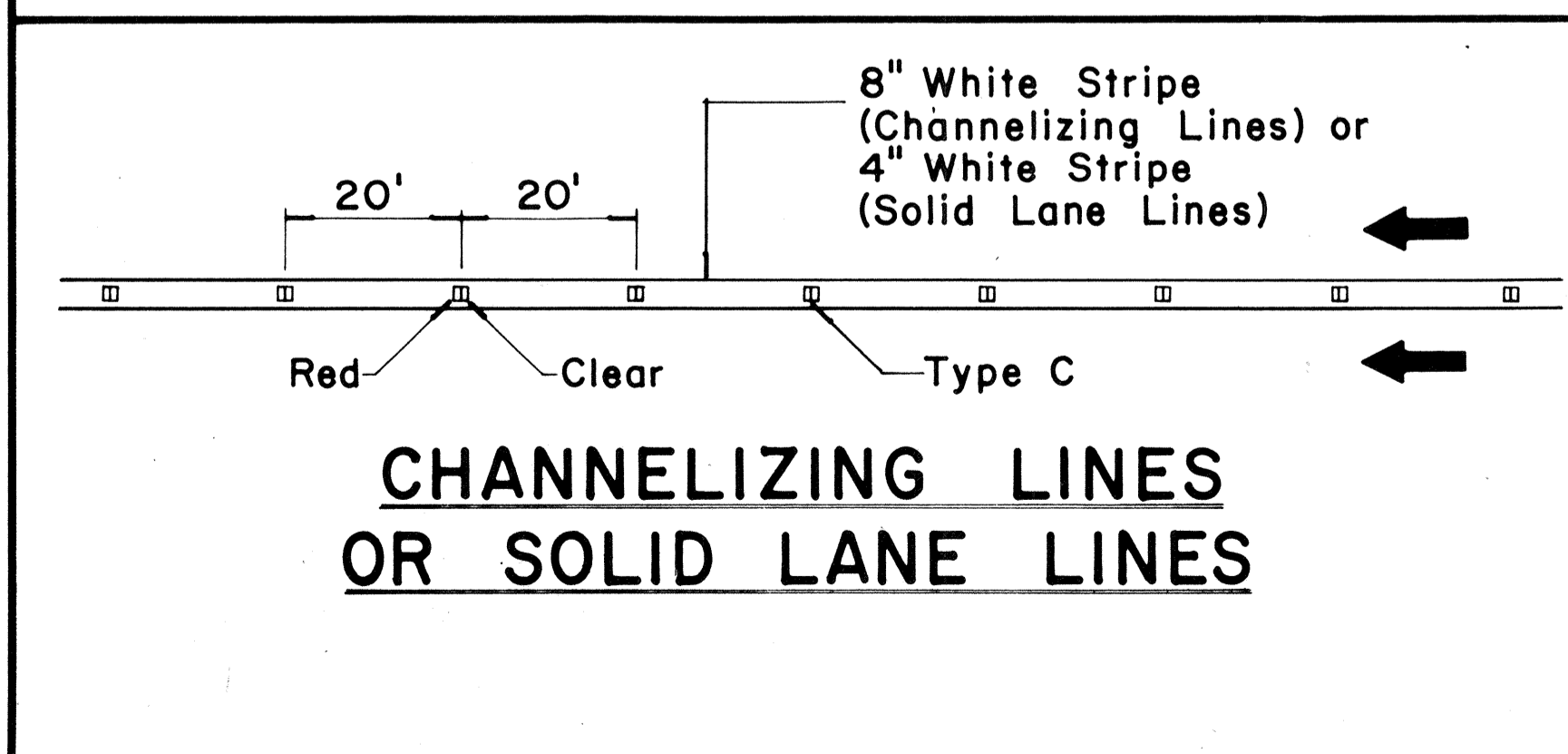
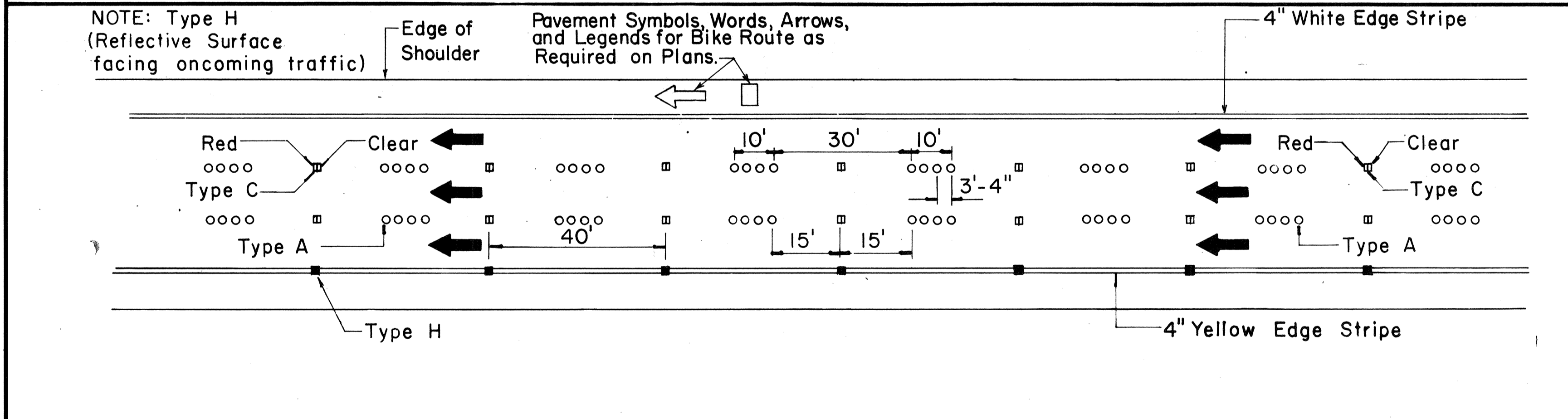
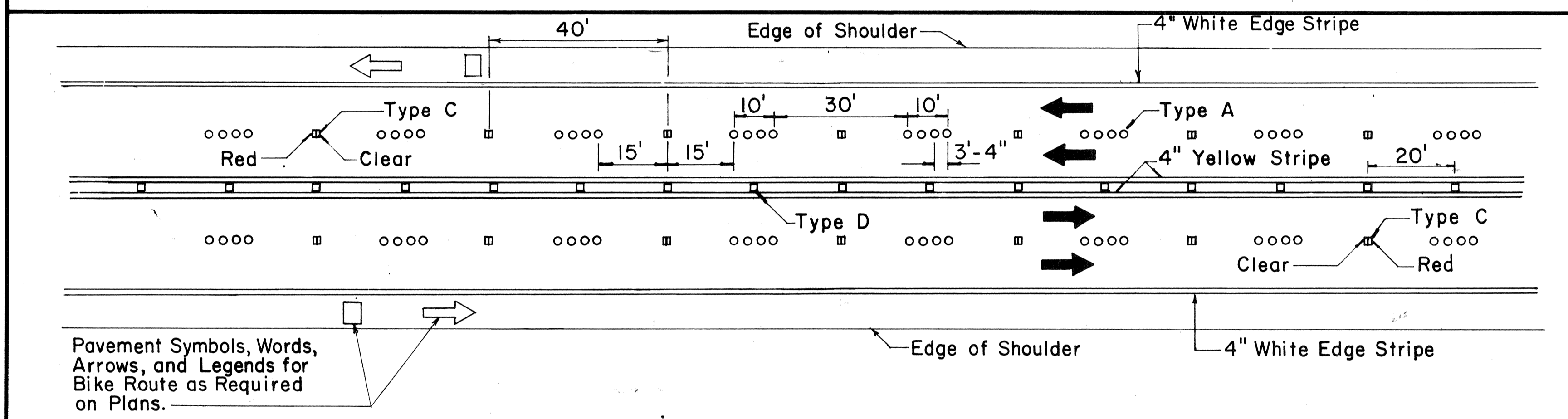
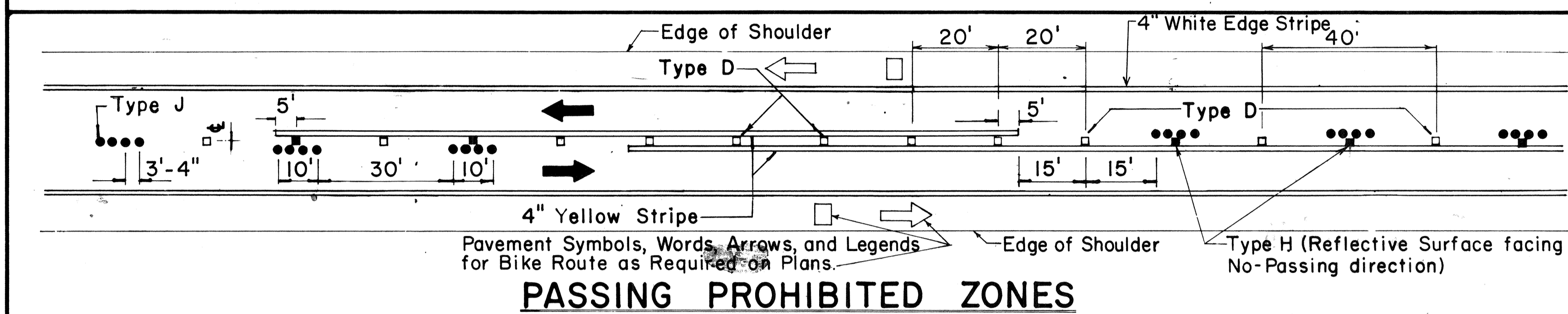
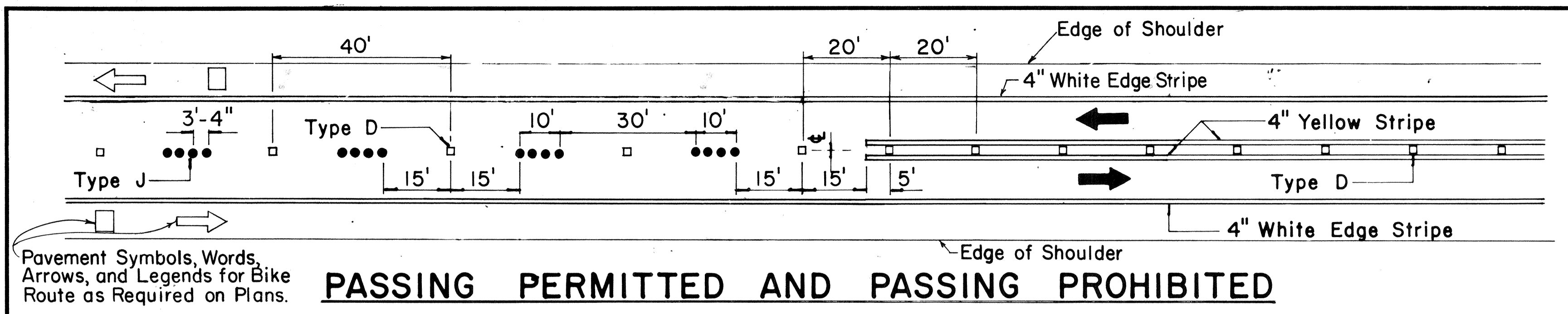
STANDARD DETAILS

SOLID ALUMINUM
EXTRUDED SIGN PANEL
AND
ACCESSORY DETAILS

SCALE:

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-111(118)	1982	87	165

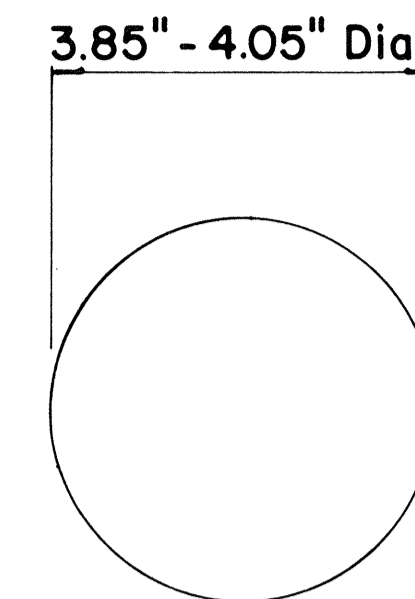


TWO - LANE

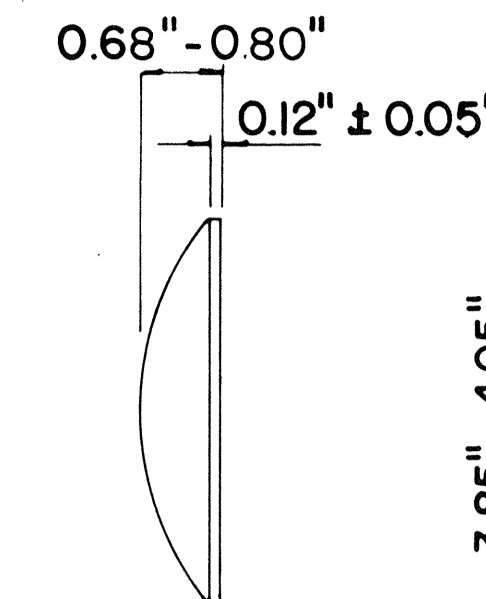
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

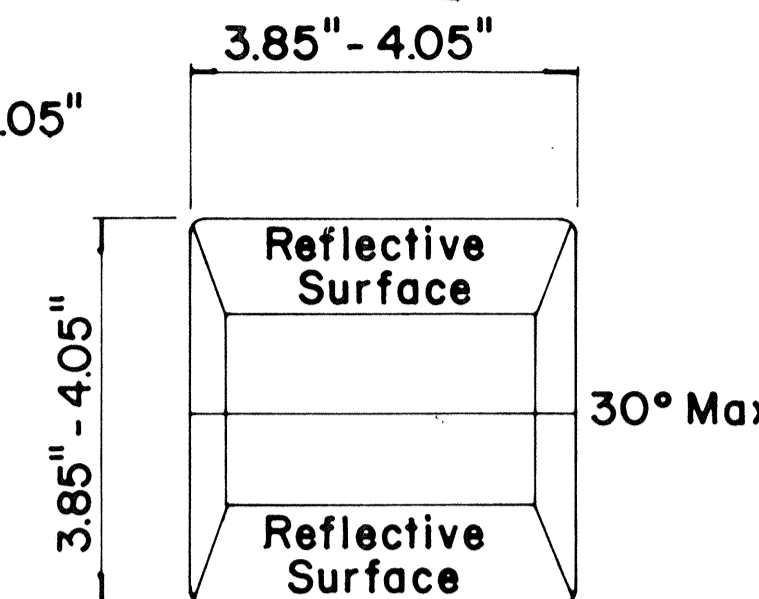
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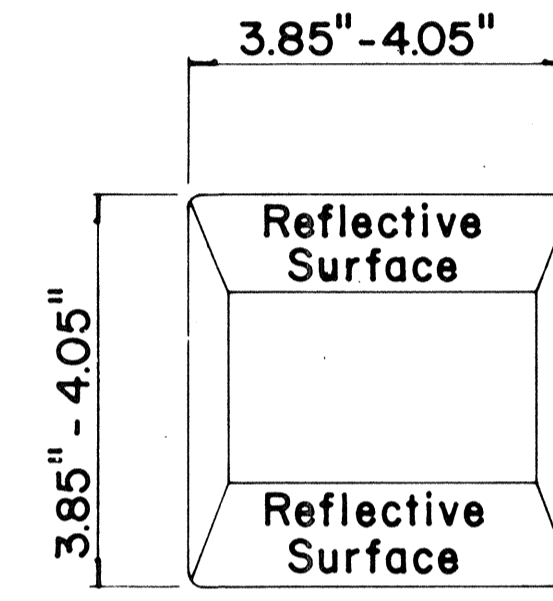
TYPE A
NON-REFLECTIVE WHITE MARKER



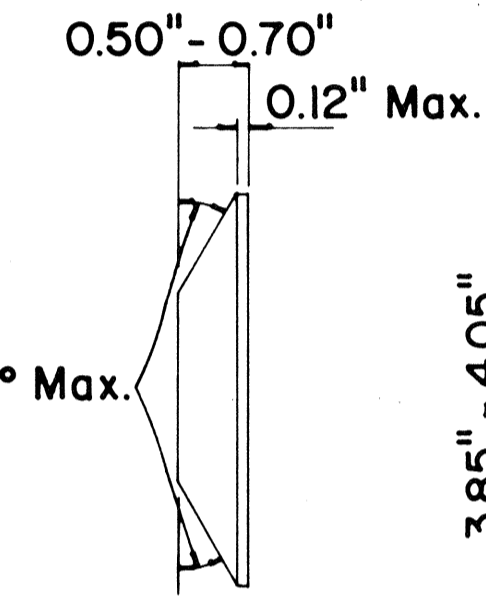
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

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

LEGEND

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

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

APPROVED:
Robert J. Zakiishi 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

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

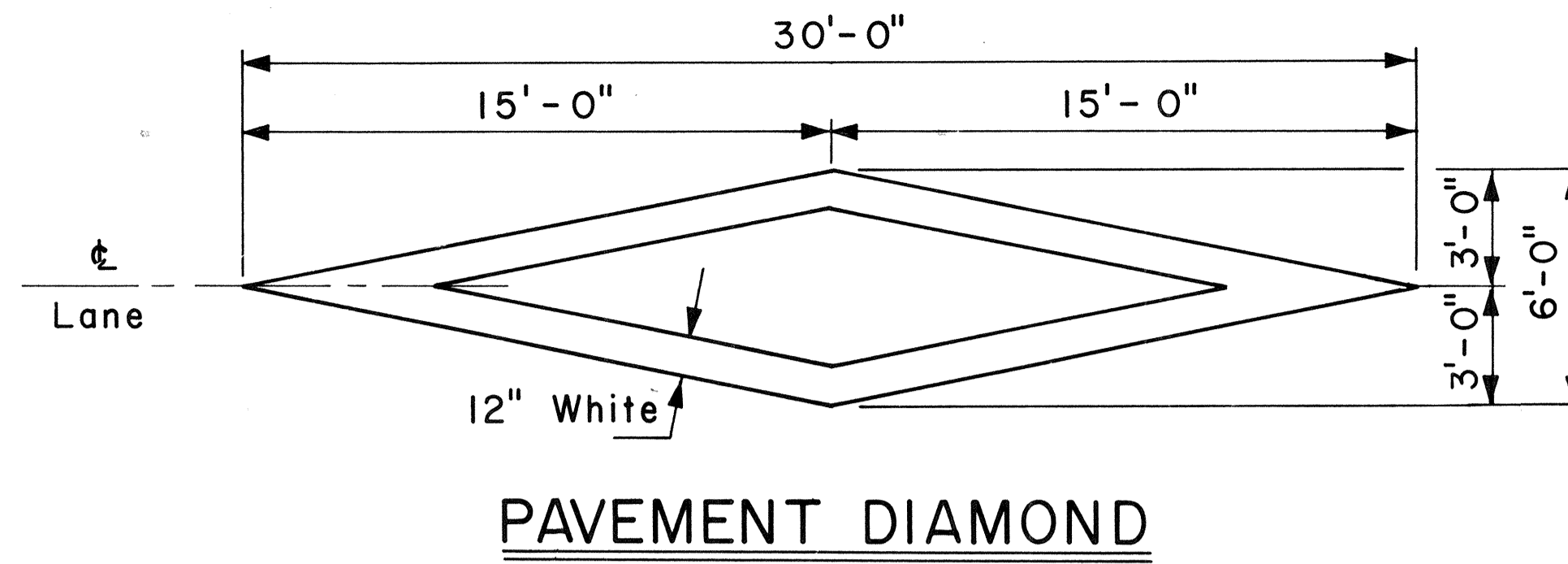
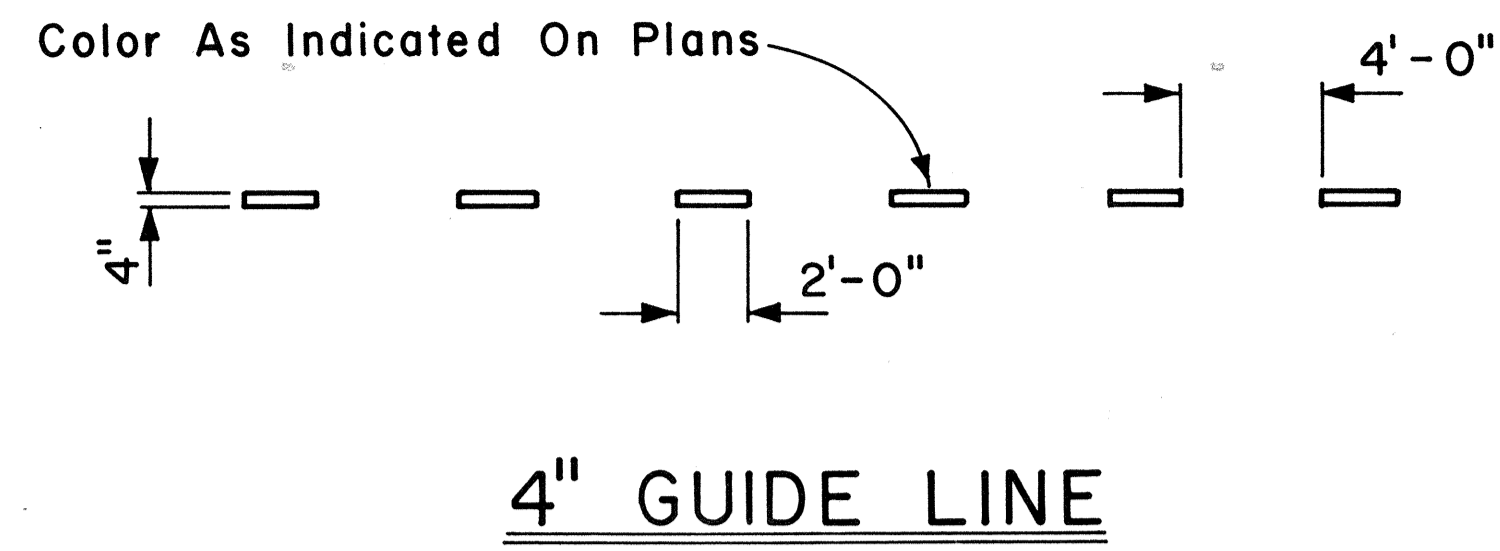
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

Not to Scale July 1978
SHEET No. 22 OF 26 SHEETS DT 300

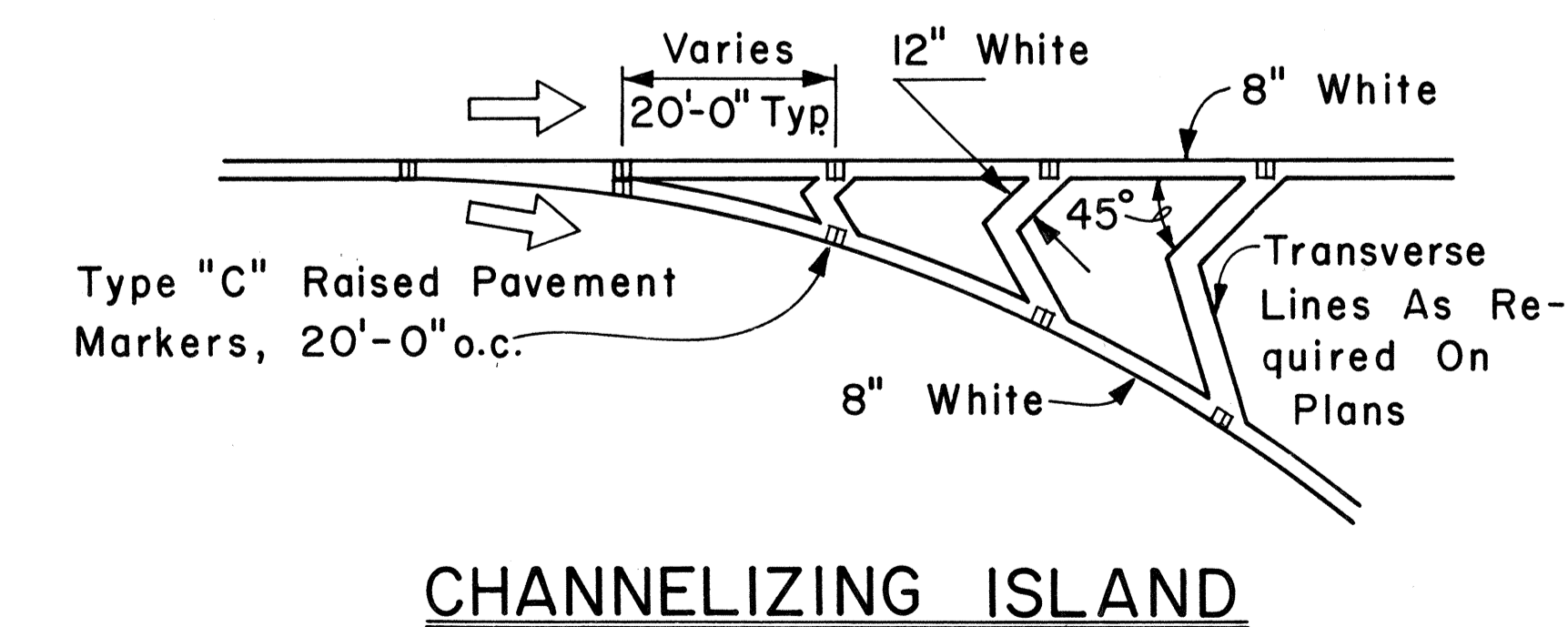
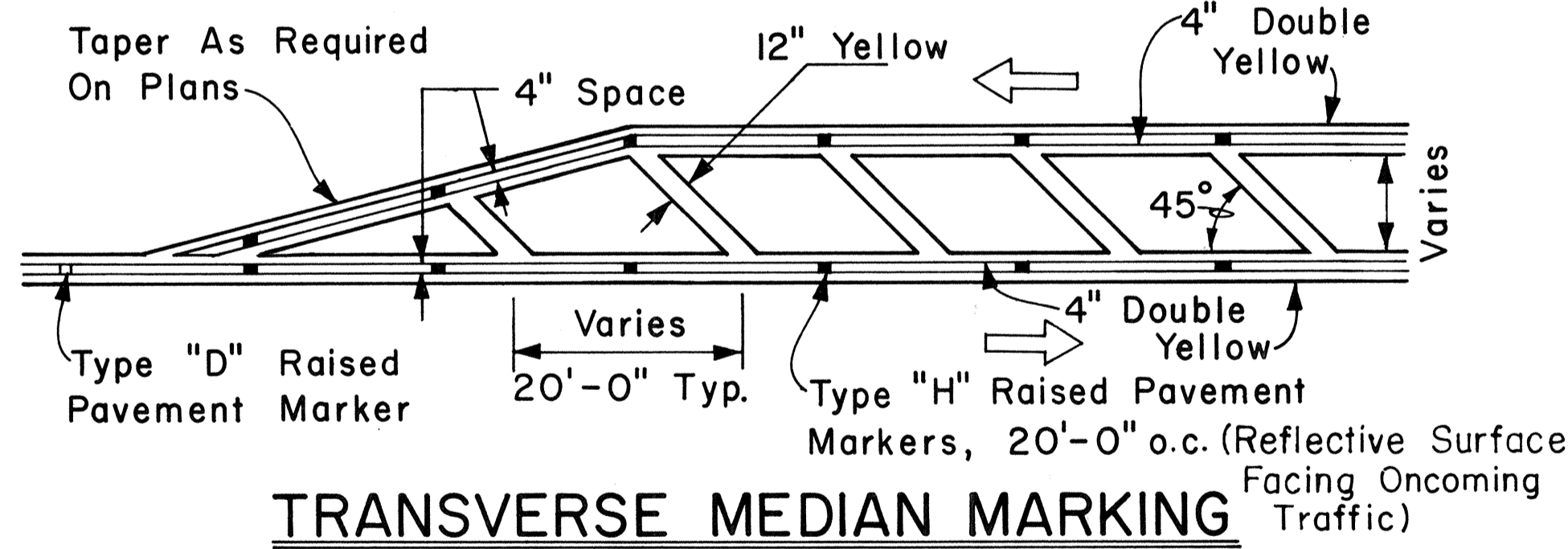
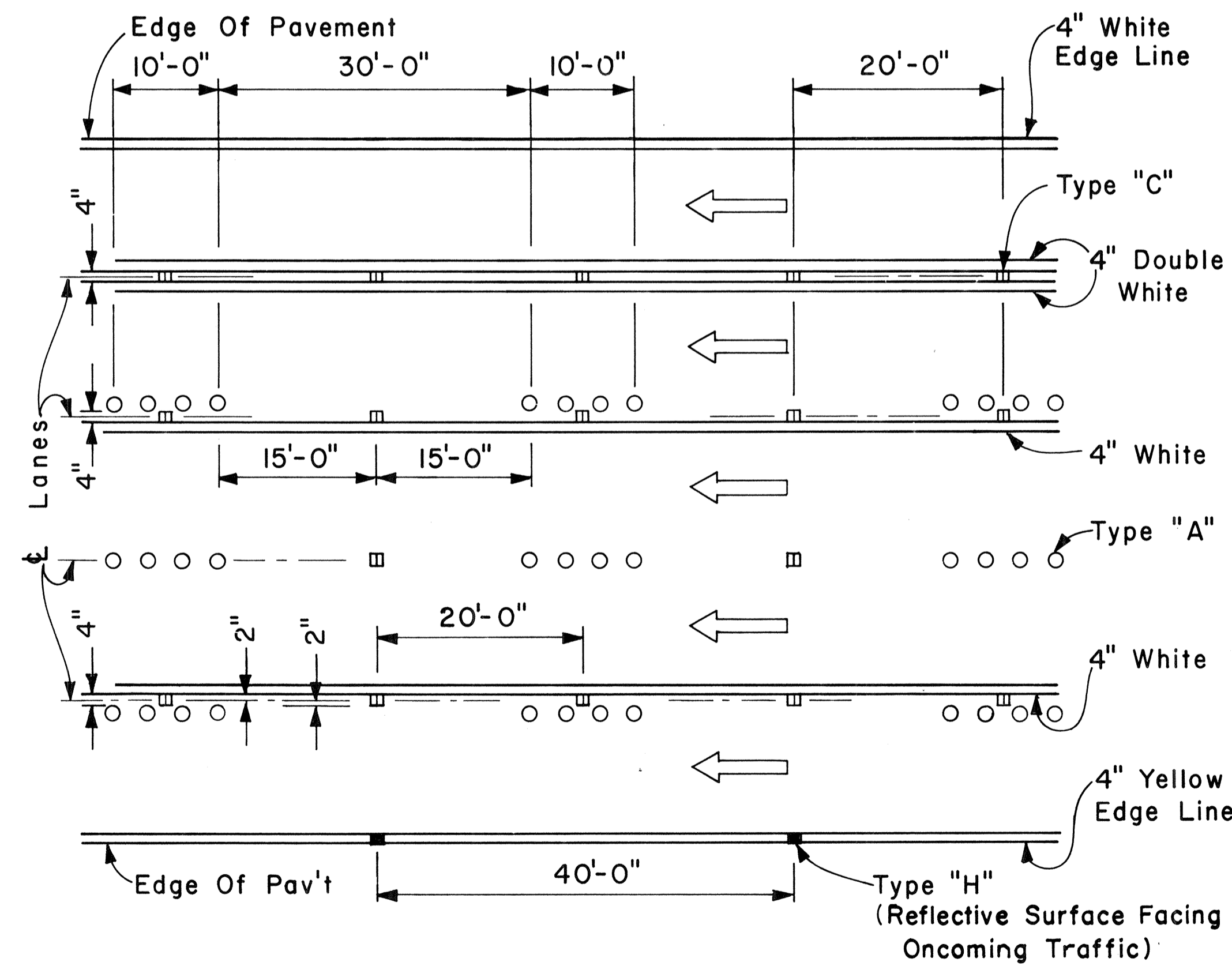
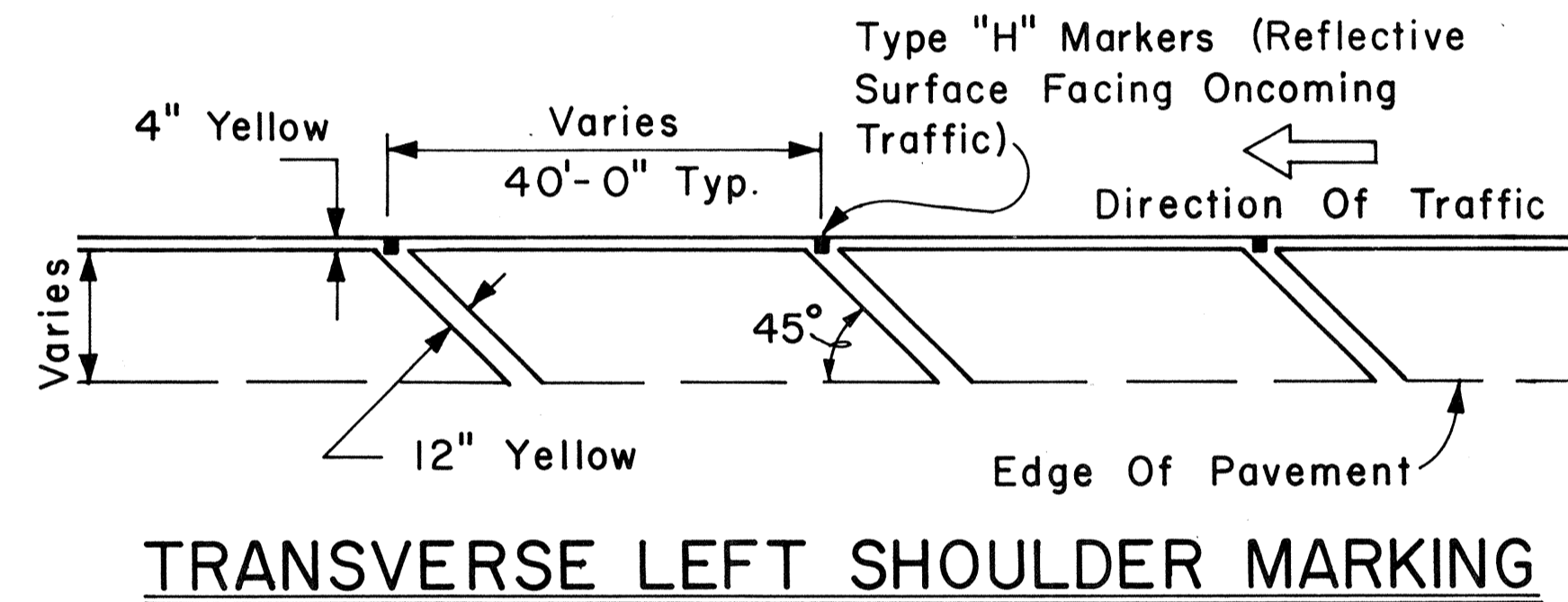
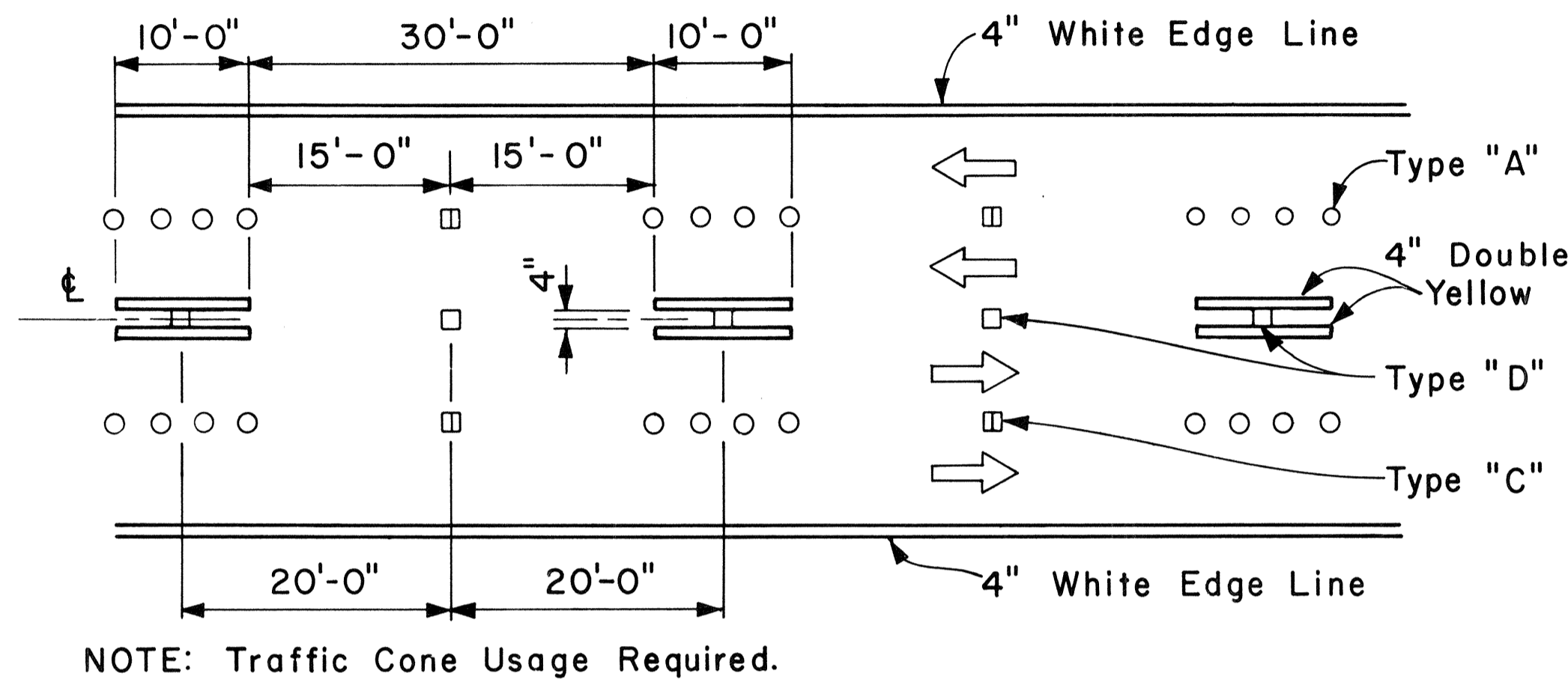
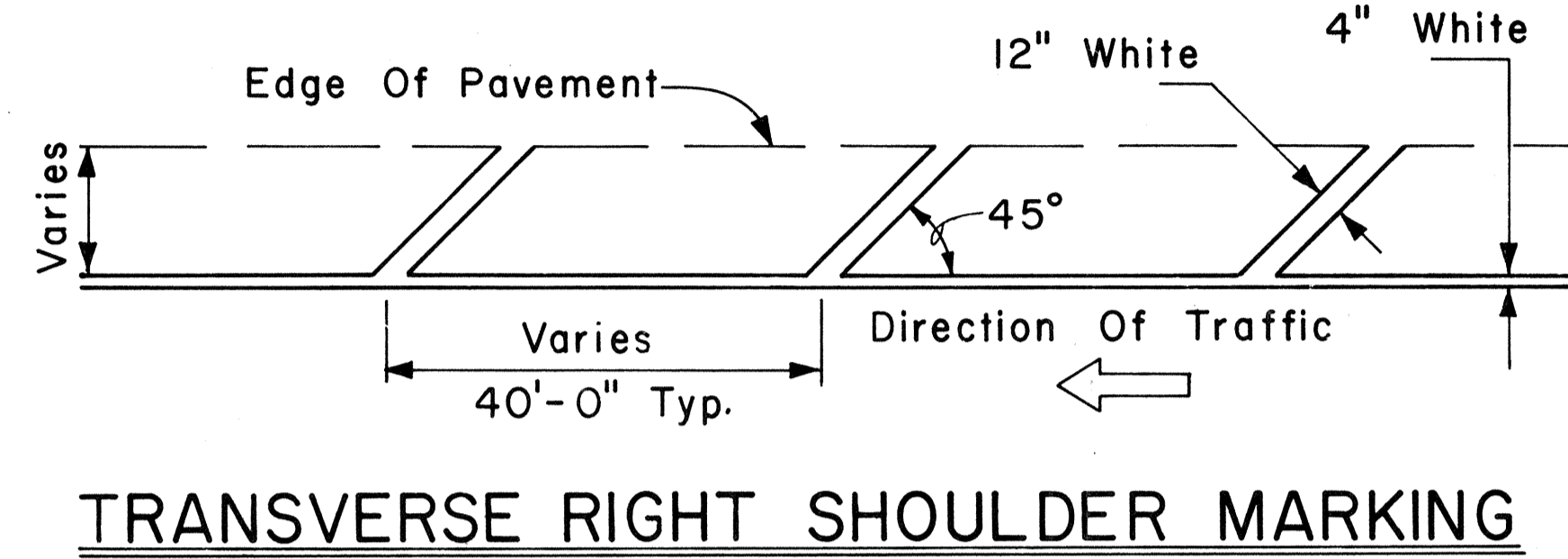
DATE _____
SURVEY PLOTTED BY _____
DRAWN BY _____
TRACED BY _____
CHECKED BY _____
NOTE BOOK _____
No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(118)	1982	88	165



GENERAL NOTES:

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



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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978
 SHEET NO. 237 OF 26 SHEETS DT 302

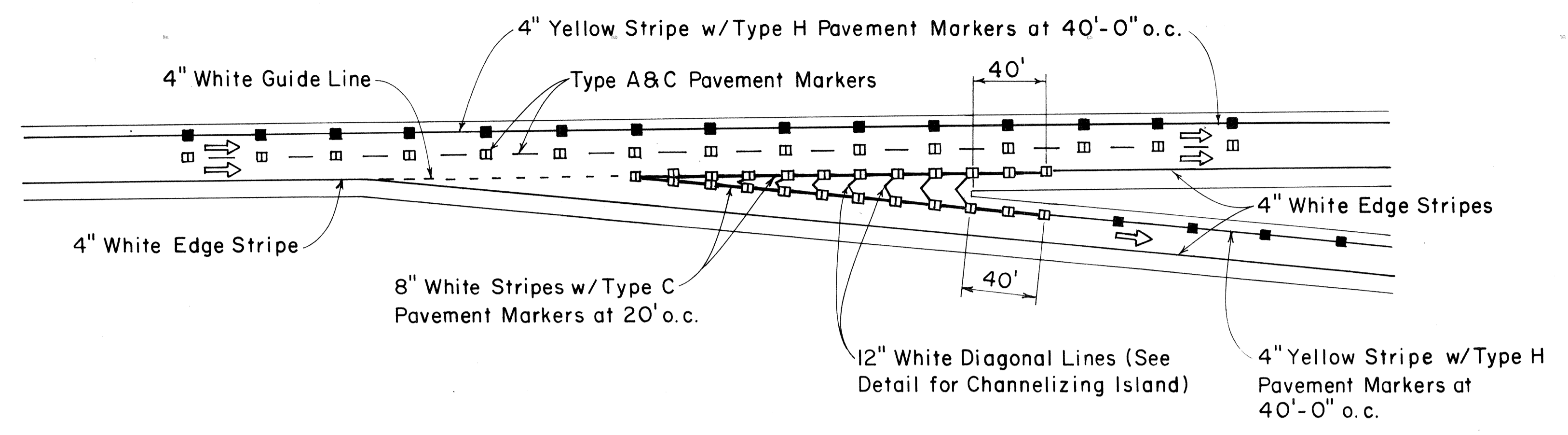
DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 TRACED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-111(118)	1982	89	165

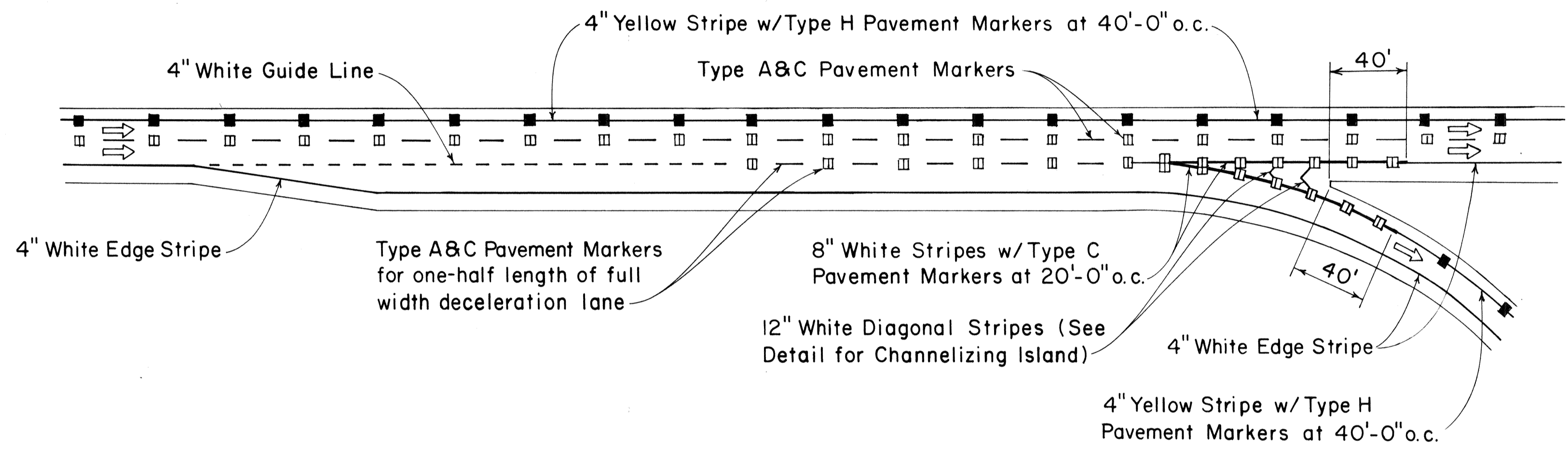
GENERAL NOTES:

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

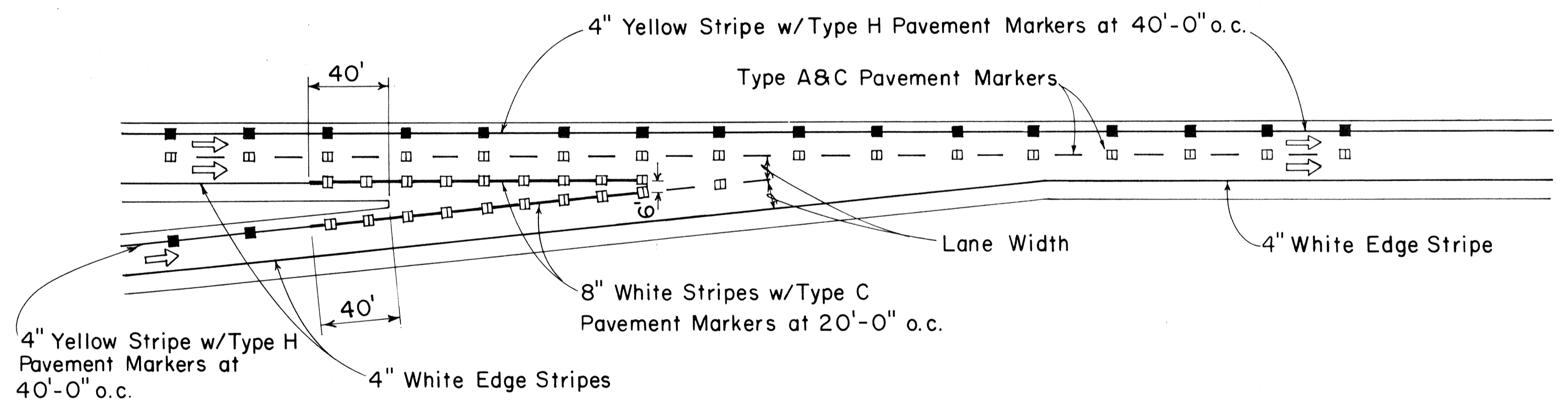
TAPERED DECELERATION LANE
TYPICAL ROADWAY EXIT MARKINGS



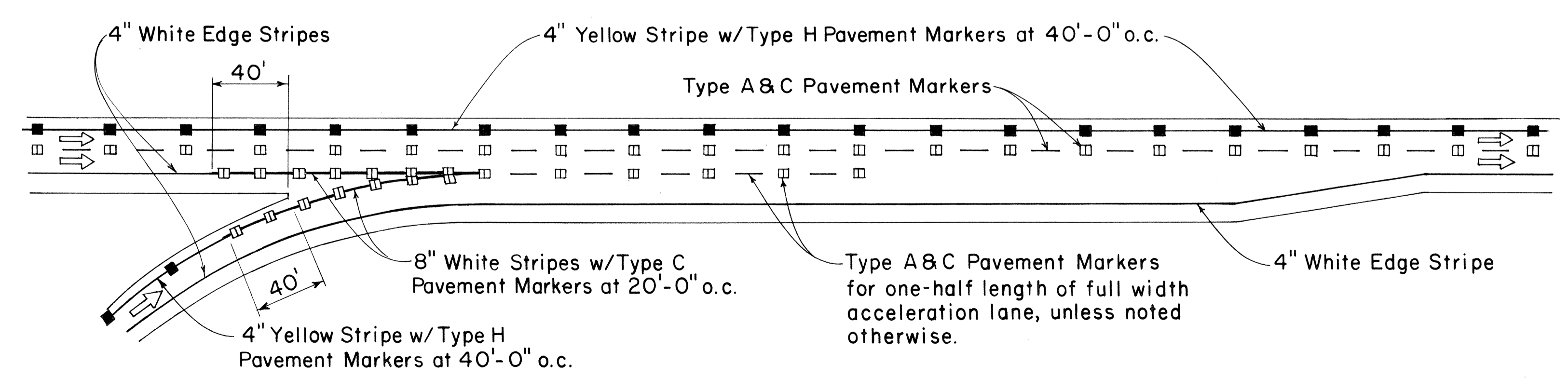
PARALLEL DECELERATION LANE
TYPICAL ROADWAY EXIT MARKINGS



TAPERED ACCELERATION LANE
TYPICAL ROADWAY ENTRANCE MARKINGS



PARALLEL ACCELERATION LANE
TYPICAL ROADWAY ENTRANCE MARKINGS



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NO.	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

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

APPROVED:
Hubert S. Sakaiishi 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

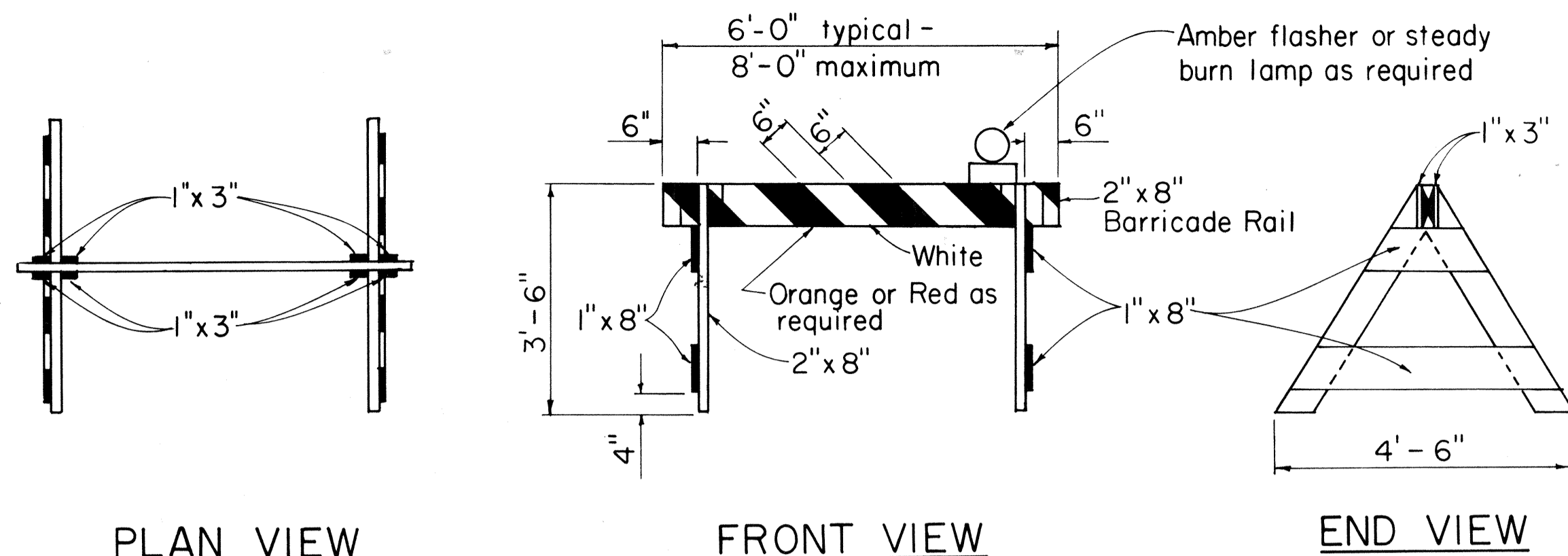
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

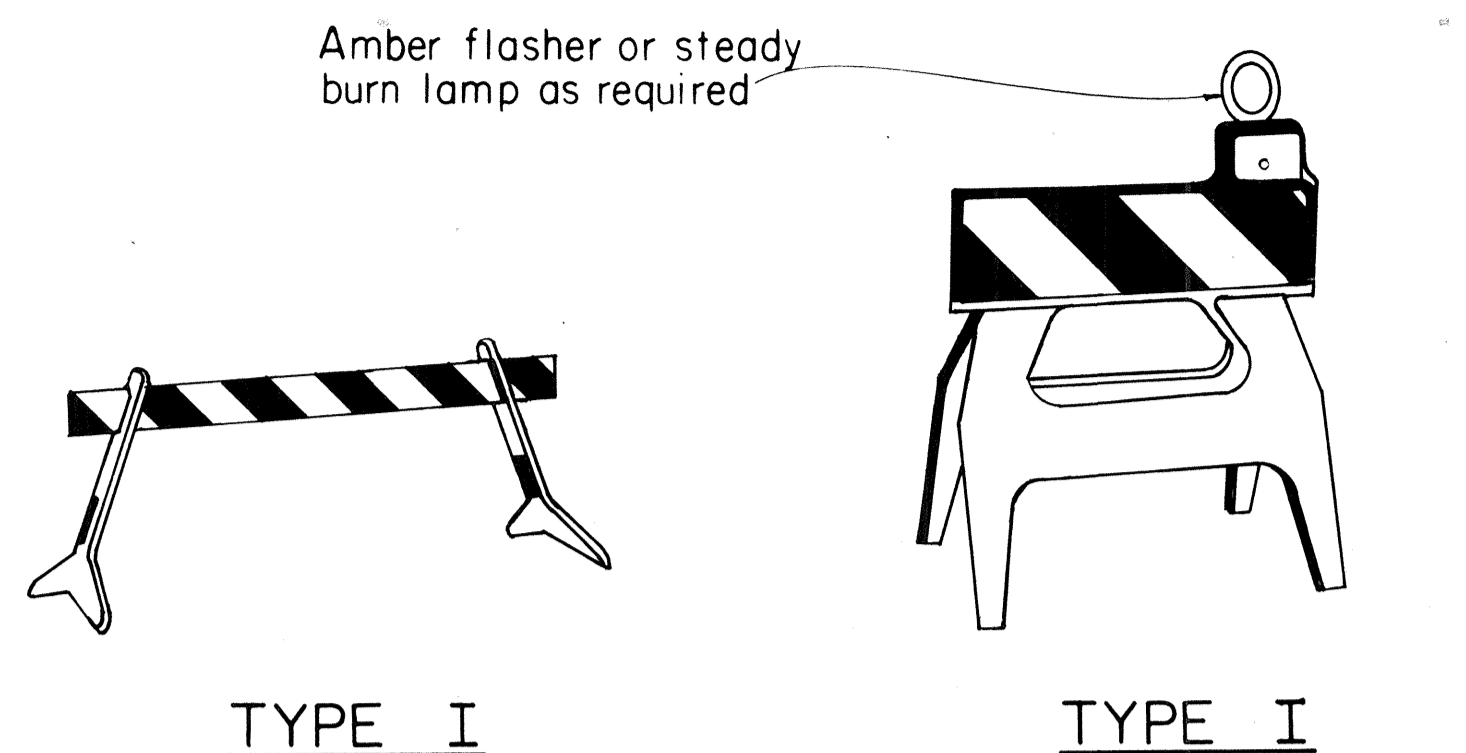
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978
 SHEET No. 241 OF 26 SHEETS DT 304

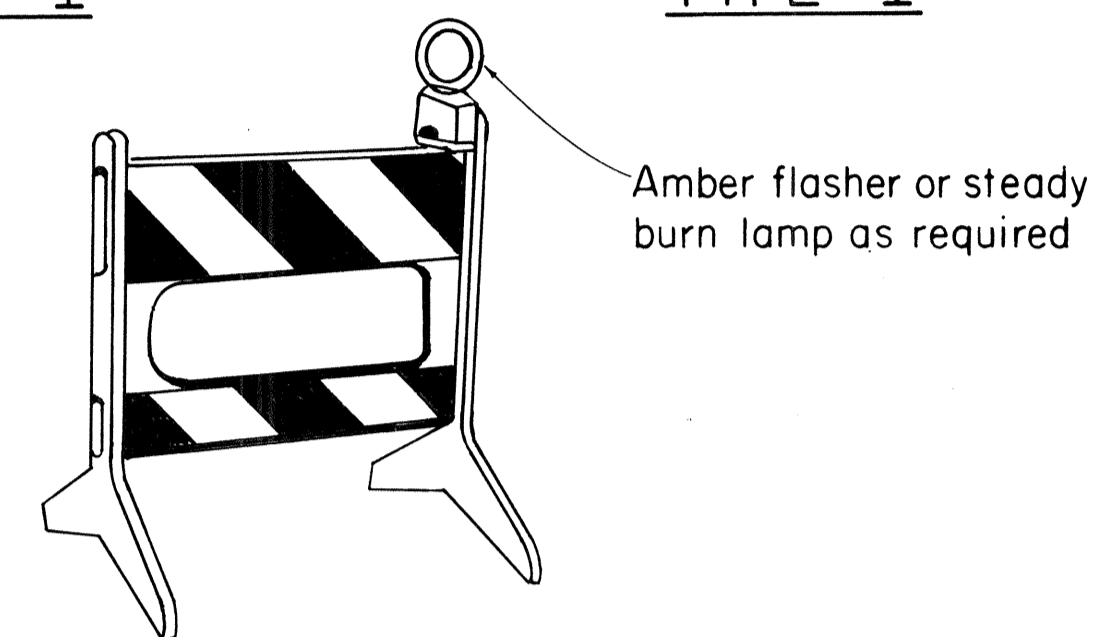
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-10(10)	1982	91	105



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



TYPE I

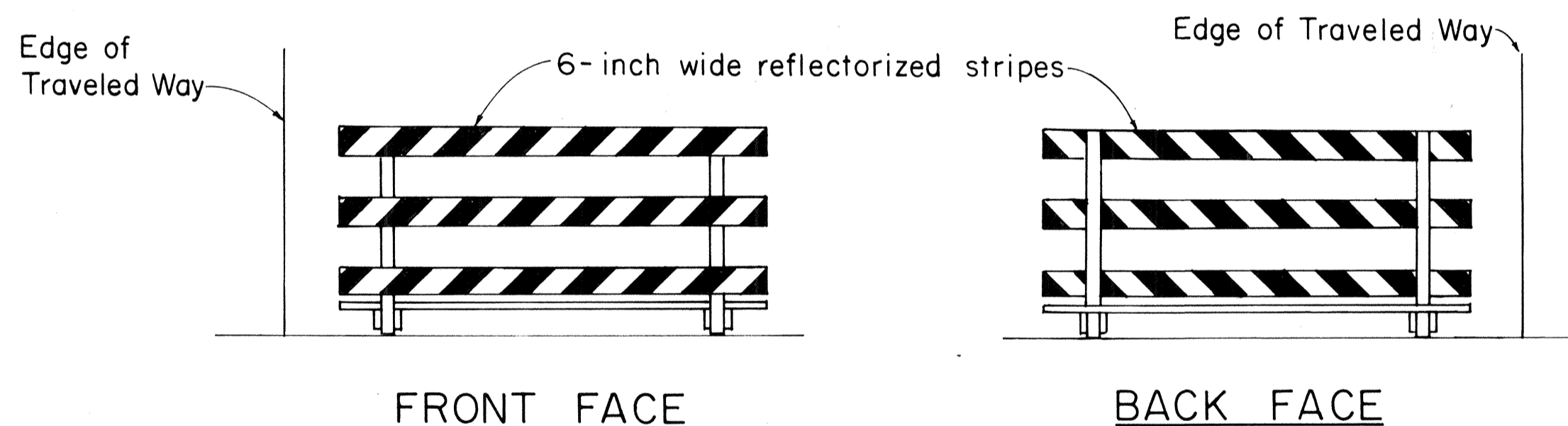


TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.



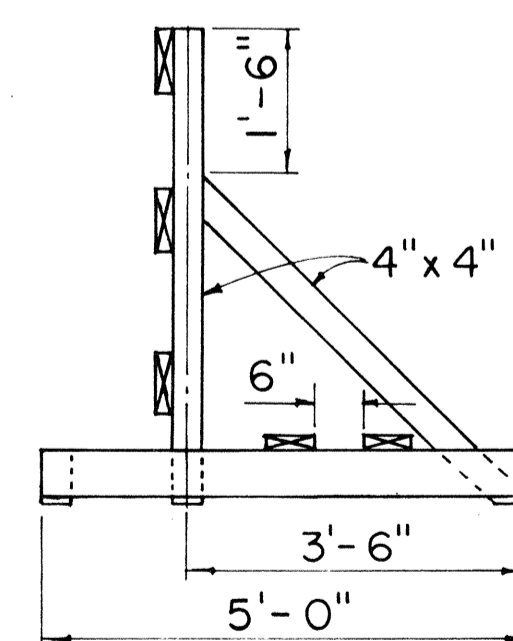
FRONT FACE

BACK FACE

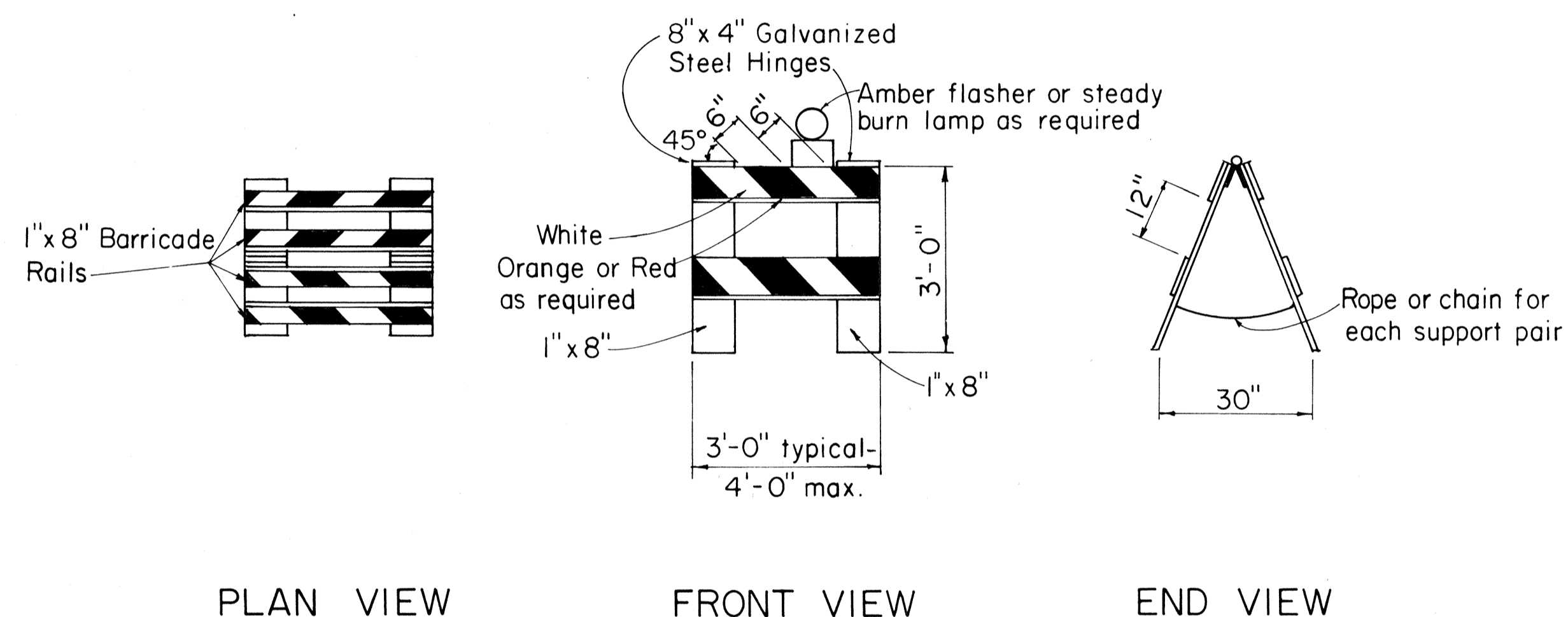
TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

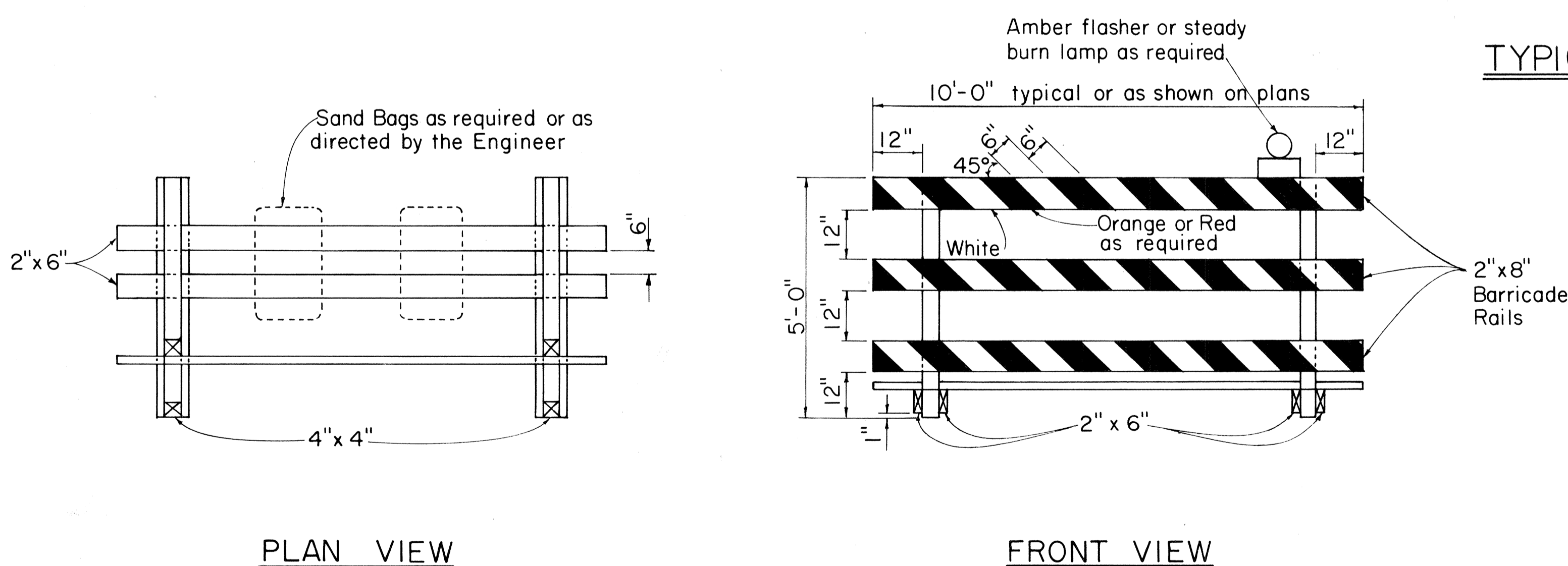
** Similar for Types I & II



END VIEW



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



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

GENERAL NOTES

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

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

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

APPROVED:
Robert P. ... 10/23/81
 ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET No. 26 OF 26 SHEETS DT 800