

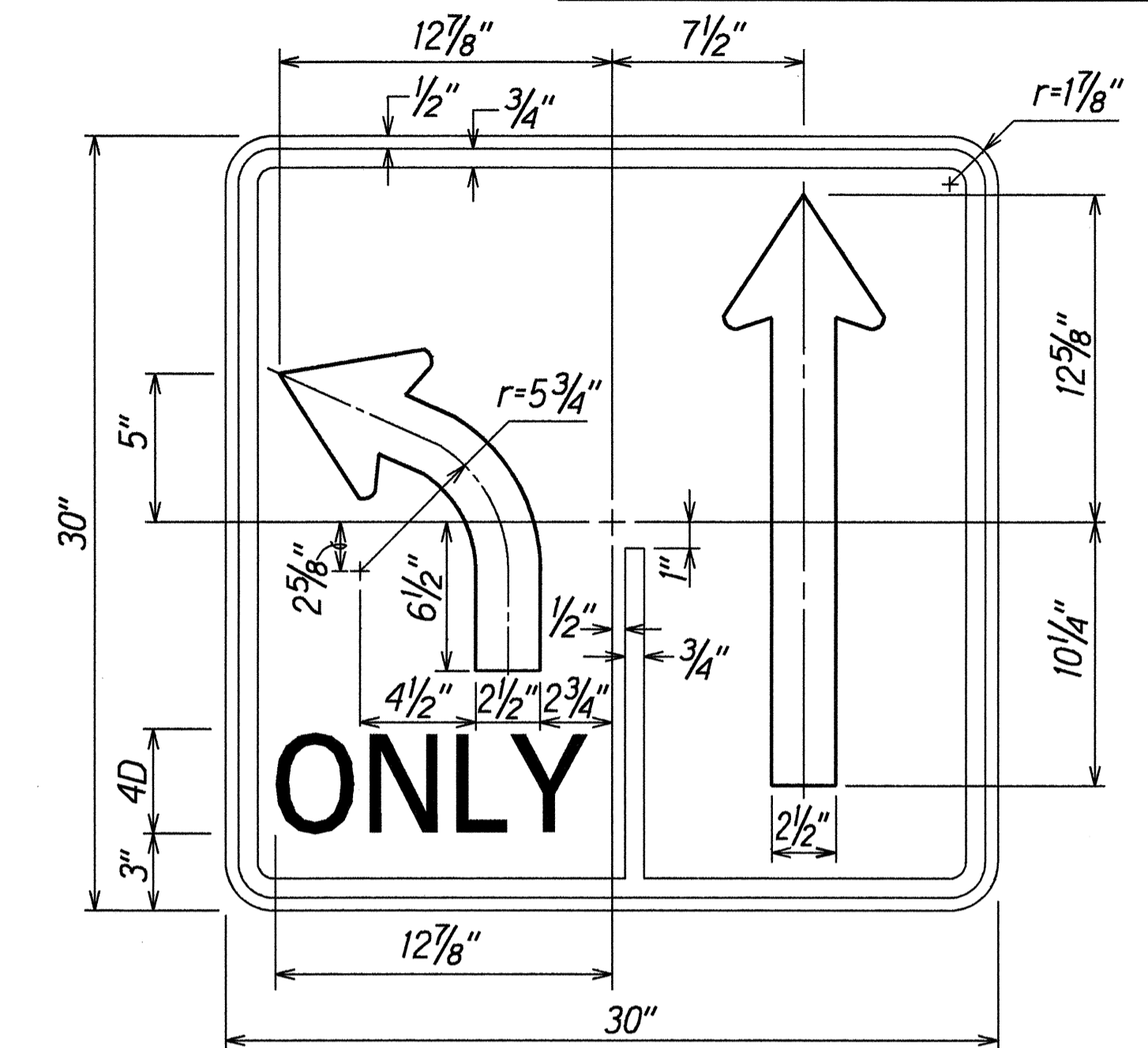
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-072-1(42)	1996	13	24

LEGEND

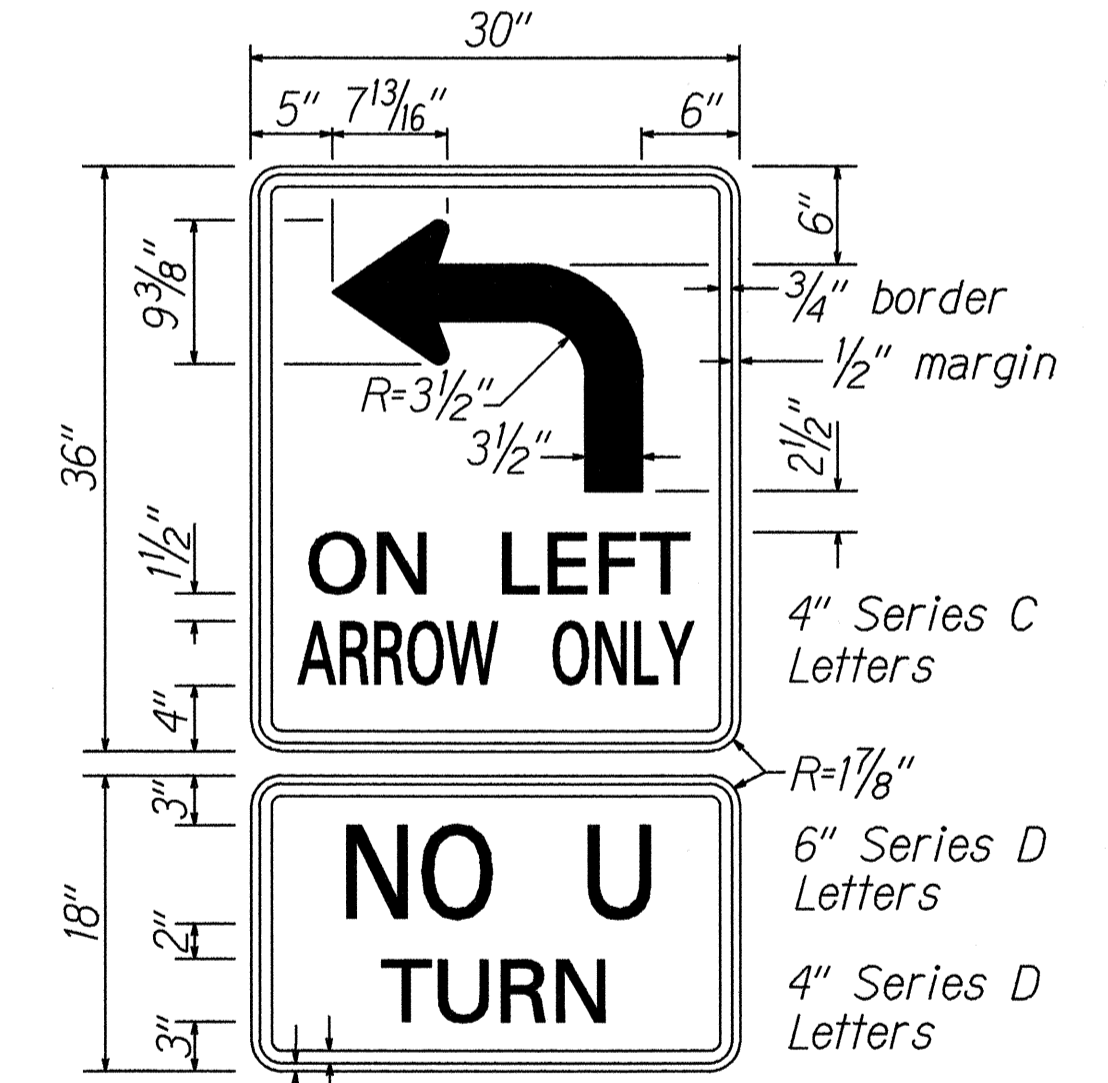
- 4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
- 4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
- 8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow with Type D Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow Stripes with Type H Raised Pavement Markers @ 20'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
- 4" Yellow Edge Stripe with Type H Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
- 4" Double Solid White Stripes with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- Lane Change Restriction Marking
4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 20'-0" o.c.
4" White Stripe (Tape, Type I or Thermoplastic Extrusion)
- 4" or 8" White Edge Stripe with Type C Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
- 4" White Guide Lines (Tape, Type III or Thermoplastic Extrusion except for bus bays)
- Transverse Median Marking (Tape, Type II or Thermoplastic Extrusion)
- Transverse Shoulder Marking (Tape, Type II or Thermoplastic Extrusion)
- Channelizing Island or Deceleration Lane Gore (Tape, Type II or Thermoplastic Extrusion)
- Crosswalk and Stop Line. All Stop Lines shall be 10'-0" from Crosswalk unless otherwise noted. The circled number indicates the number of lanes for payment (Tape, Type III or Thermoplastic Extrusion)
- Pavement Arrow (Tape, Type III or Thermoplastic Extrusion)
- Pavement Word (Tape, Type III or Thermoplastic Extrusion)
- 4 Each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
Type H Raised Pavement Markers (Reflective Surface facing no-passing direction)
4" Single Solid Yellow Stripe (Tape, Type I or Thermoplastic Extrusion)
- Extension of Edge Line, 4" Wide x 2'-0" Long White Stripe @ 10'-0" o.c. w/Type C Markers @ 40'-0" o.c. (Tape, Type III or Thermoplastic Extrusion)

NOTES

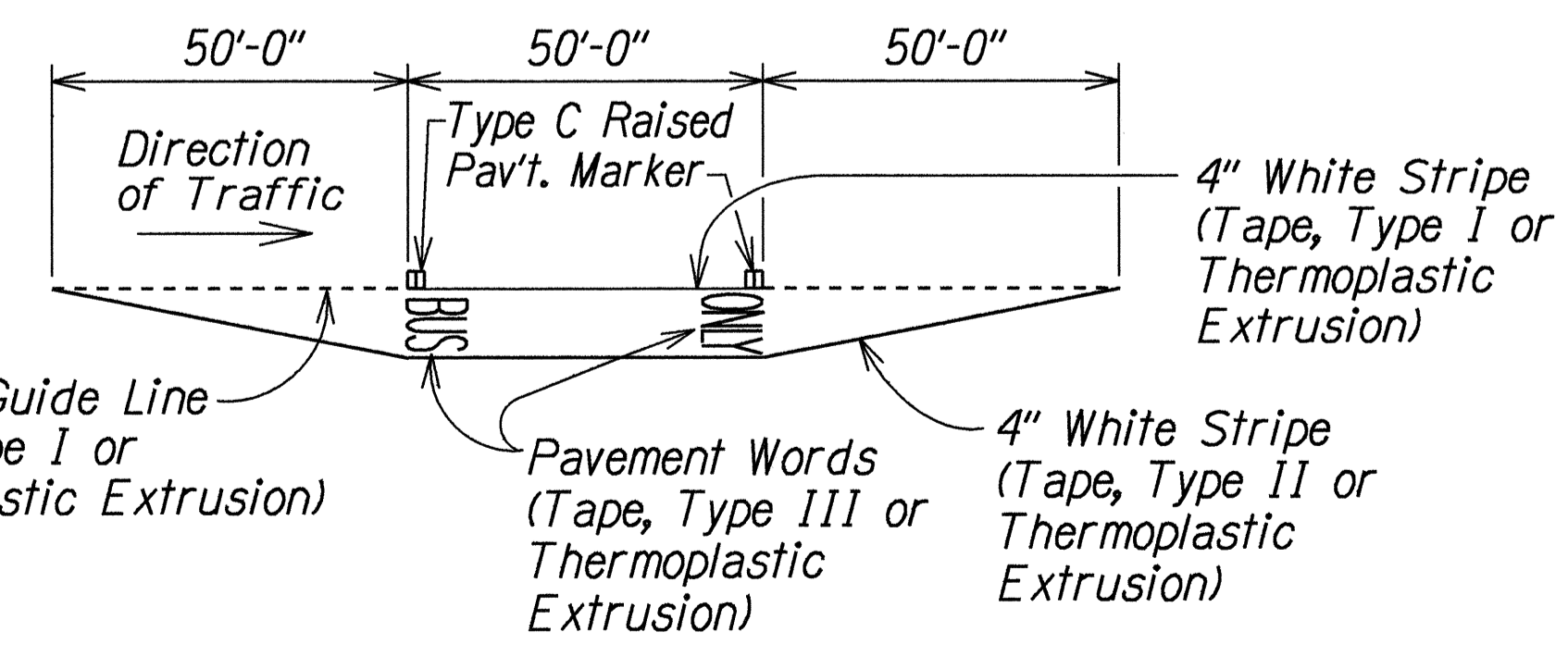
1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings and striping not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The removal of the existing pavement markings shall not be paid for separately but shall be considered incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans or directed by the Engineer shall not be paid for and shall be considered incidental to the various signing items.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All pavement striping shall be as noted on the Legend or plans.
8. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
9. Stop signs indicated to be removed shall be removed after the traffic signal system is operational.
10. Removal of Existing Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
11. Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
12. Backing for all new regulatory and warning signs shall not be spliced.
13. All sign panels shall conform to Section 621 of Special Provisions and the latest editions and amendments of the following FHWA publications:
 - a. "Manual on Uniform Traffic Control Devices for Street and Highways" (MUTCD)
 - b. "Standard Highway Signs"
 - c. "Standard Alphabets for Highway Signs"
14. All new and relocated signs and markers installed on pipe post or light standard are to be mounted with band brackets and steel braces.
15. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs as indicated on the plans or as directed by the Engineer for the duration of the highway project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645-Traffic Control. The advance construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean, and deliver the signs and posts to the Oahu District Baseyard or as directed by the Engineer at the end of the project. The advance construction warning signs shall be paid under Item No. 621.7110, Construction Sign with Two Posts.



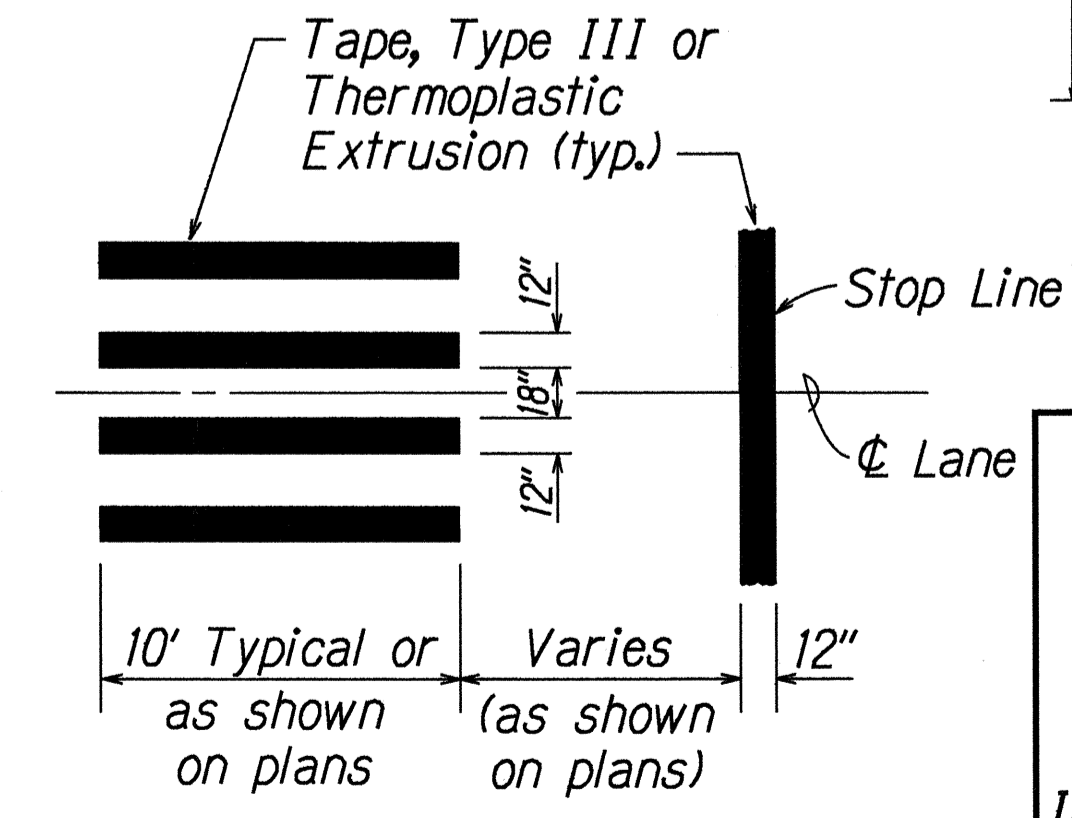
Note:
Signs R3-40(L) & R3-40(R) is a variation of sign R3-8. Plate & arrow details shall conform to sign R3-8.
R3-40(L)
Not to Scale
R3-40(R) Mirror of Sign R3-40(L)



R17-3
Not to Scale



TYPICAL BUS BAY STRIPING
Not to Scale

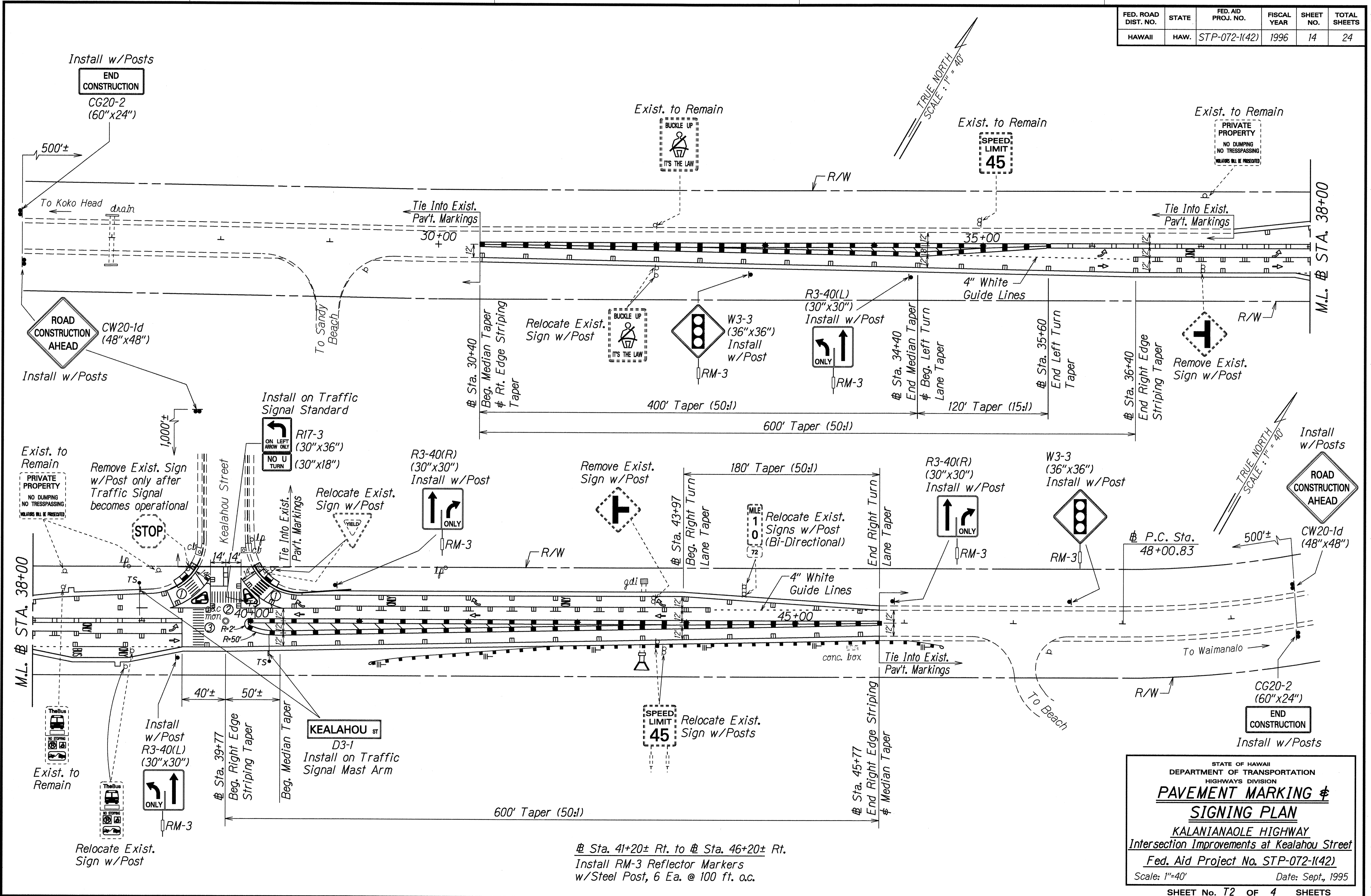


CROSSWALK STRIPING DETAIL
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING
LEGEND, DETAILS & NOTES
KALANIANA'OLE HIGHWAY
Intersection Improvements at Kealahou Street
Fed. Aid Project No. STP-072-1(42)
Not to Scale Date: Sept., 1995
SHEET No. 11 OF 4 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-072-1(42)	1996	14	24



SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

KALANIANA'OLE HIGHWAY
Intersection Improvements at Kealahou Street

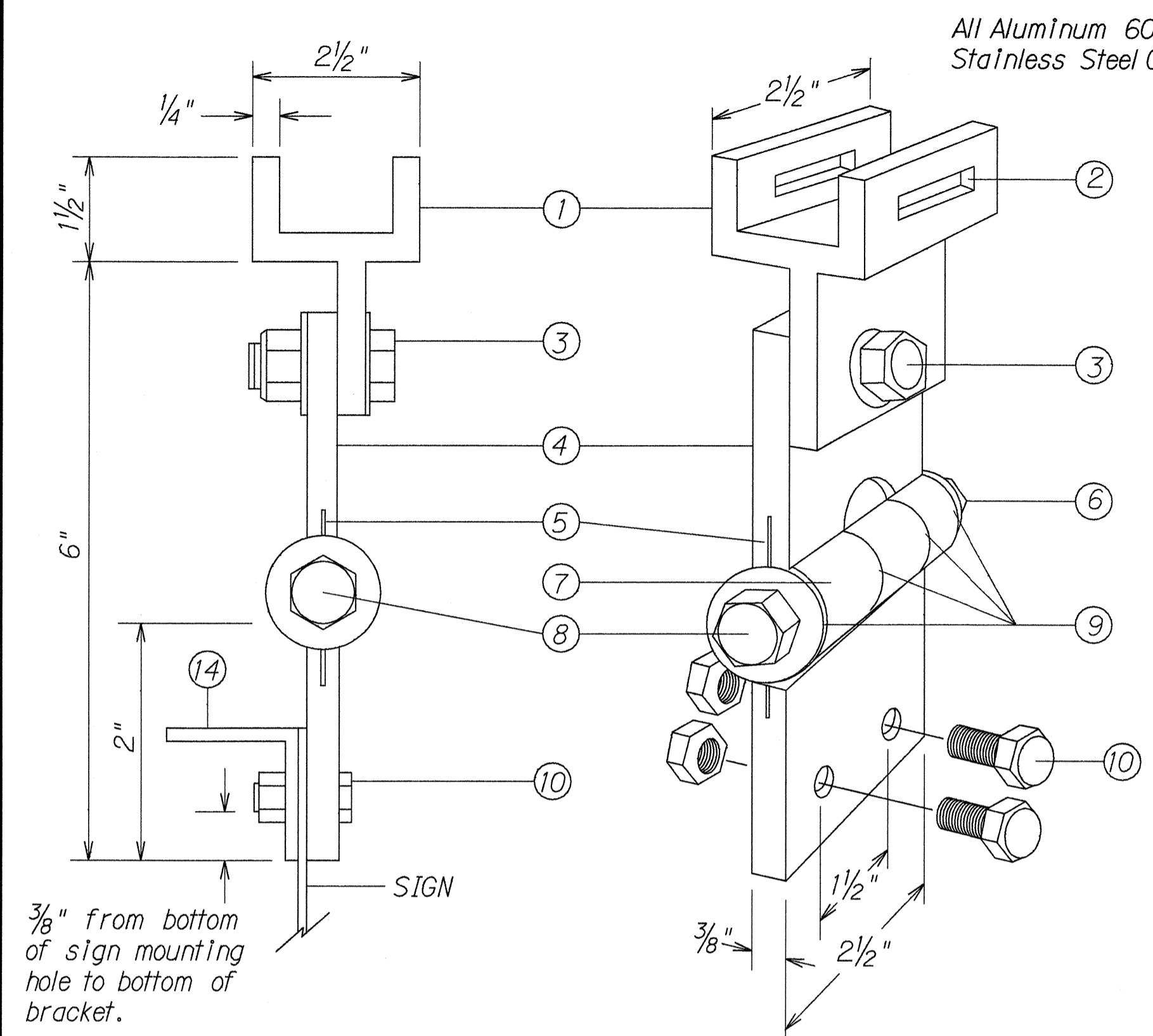
Fed. Aid Project No. STP-072-1(42)

Scale: 1"=40' Date: Sept., 1995

SHEET No. T2 OF 4 SHEETS

Sta. 41+20± Rt. to # Sta. 46+20± Rt.
Install RM-3 Reflector Markers
w/Steel Post, 6 Ea. @ 100 ft. o.c.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-072-(K42)	1996	15	24

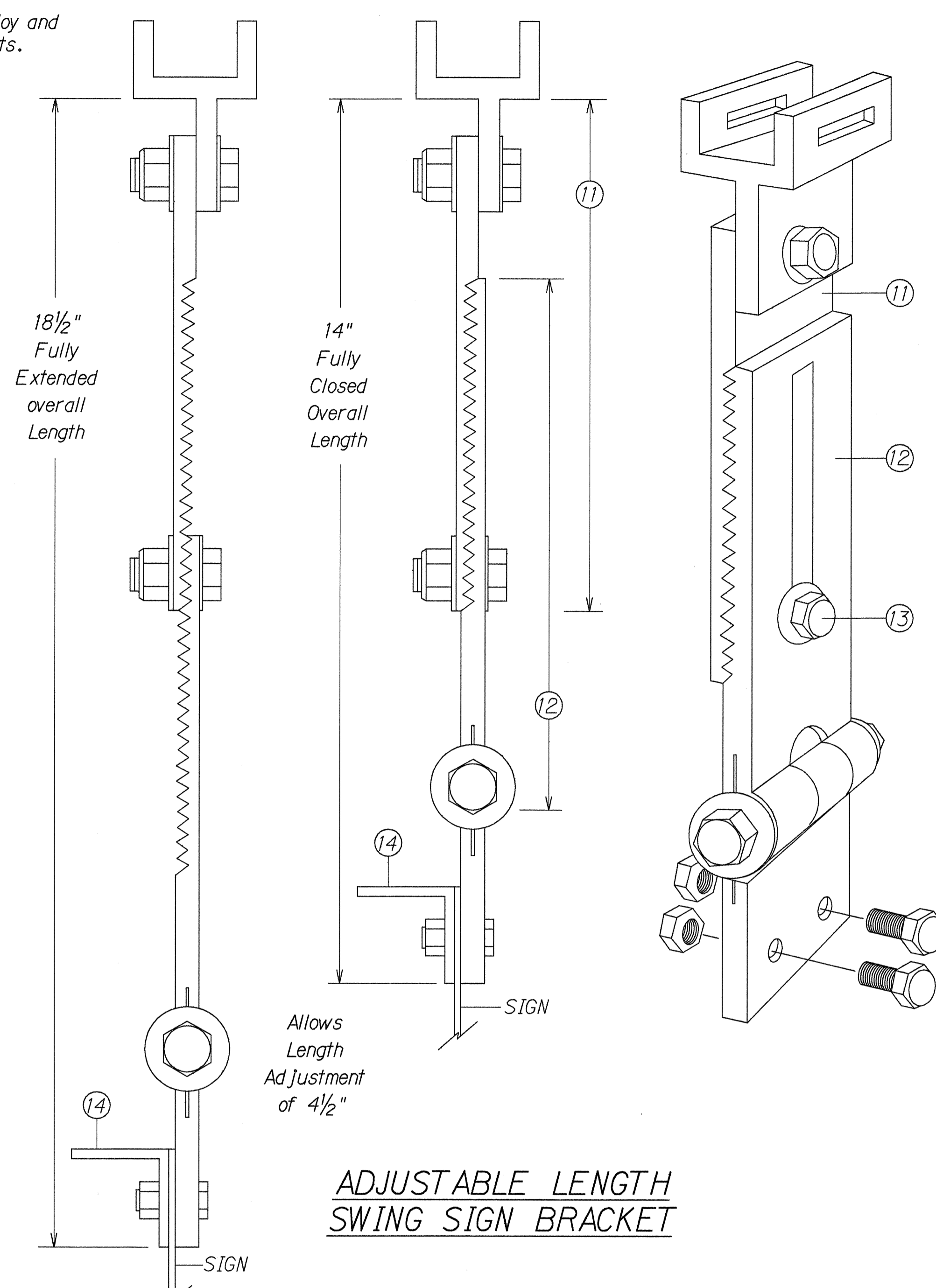


FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET

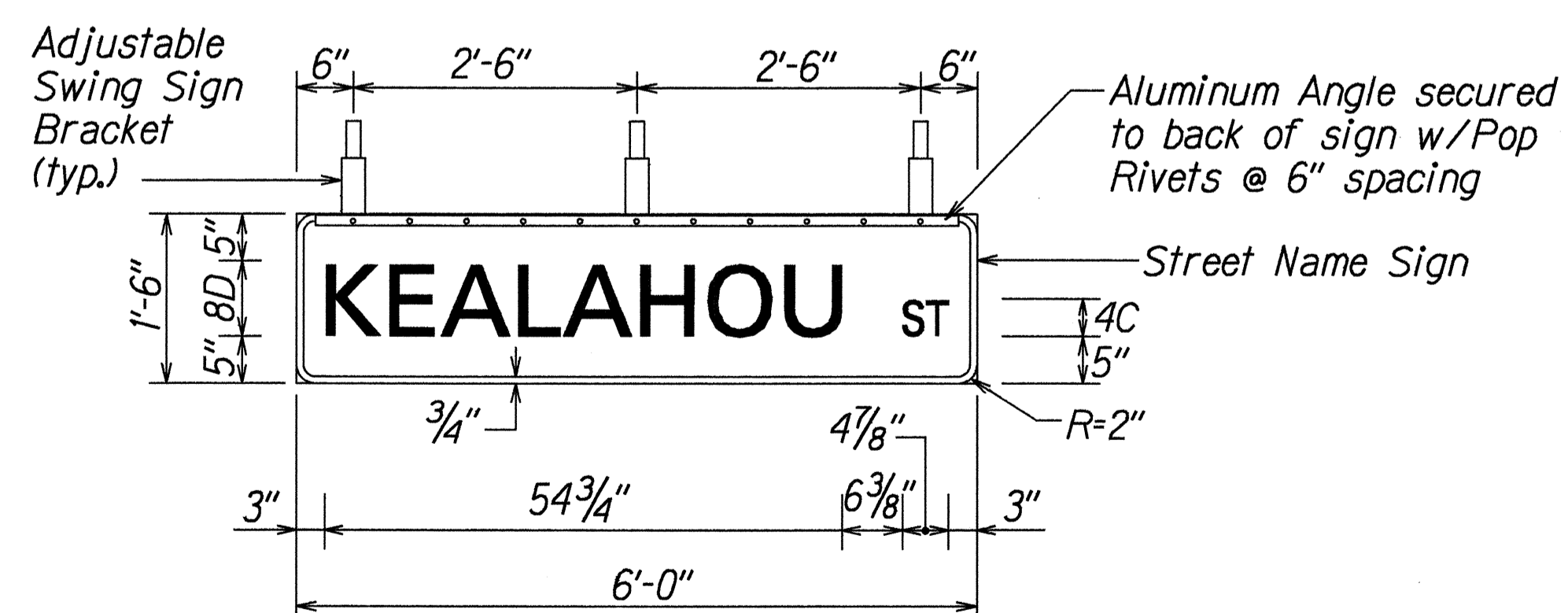
- ① Pivotal Upper Bracket
- ② 1 5/8" x 1/4" Slot for double strapping to electrolier mast arm. (M2G-34S(HD) .030" x 3/4" Heavy Duty Stainless Steel Strap with M2G-34B(HD) Buckle recommended.)
- ③ 1/2" - 13 x 1 1/2" Stainless Steel Hex Head Bolt with Stainless Steel Hex Lock Nut and 1/16" Stainless Steel Washer (both sides). Allows upper bracket to pivot and align with electrolier mast arm.
- ④ 6" Overall drop with Fixed Length Sign Bracket
- ⑤ Stainless Steel Dampener Spring (Removable)
- ⑥ Stainless Steel Hex Lock Nut with 1/16" Stainless Steel Washer
- ⑦ 1" O.D. Axle Housing
- ⑧ 1/2" - 13 x 4" Stainless Steel Hex Head Bolt with 1/16" Stainless Steel Washer
- ⑨ Ollite Bushing
- ⑩ Sign Mounting Sets, consisting of two each 5/16" - 18 x 1" Stainless Steel Hex Head Bolt with Stainless Steel Hex Lock Nut. Two holes on 1 1/2" centers provide positive lock sign mounting to bracket.
- ⑪ 8 1/4" overall length Upper Adjustable Sign Bracket section
- ⑫ 9" overall length Lower Adjustable Sign Bracket section, including Axle Housing (8" overall length to top of Axle Housing)
- ⑬ 1/2" - 13 x 1 1/2" Stainless Steel Hex Bolt with Stainless Steel Hex Lock Nut and 1/16" Stainless Steel Washers (both sides). Loosen lock nut, adjust bracket teeth to level sign.
- ⑭ 1 1/4" x 1 1/4" x 1/8" Aluminum Angle

Note: Dimensions may vary slightly.

All Aluminum 6061T6 Alloy and Stainless Steel Components.



ADJUSTABLE LENGTH SWING SIGN BRACKET

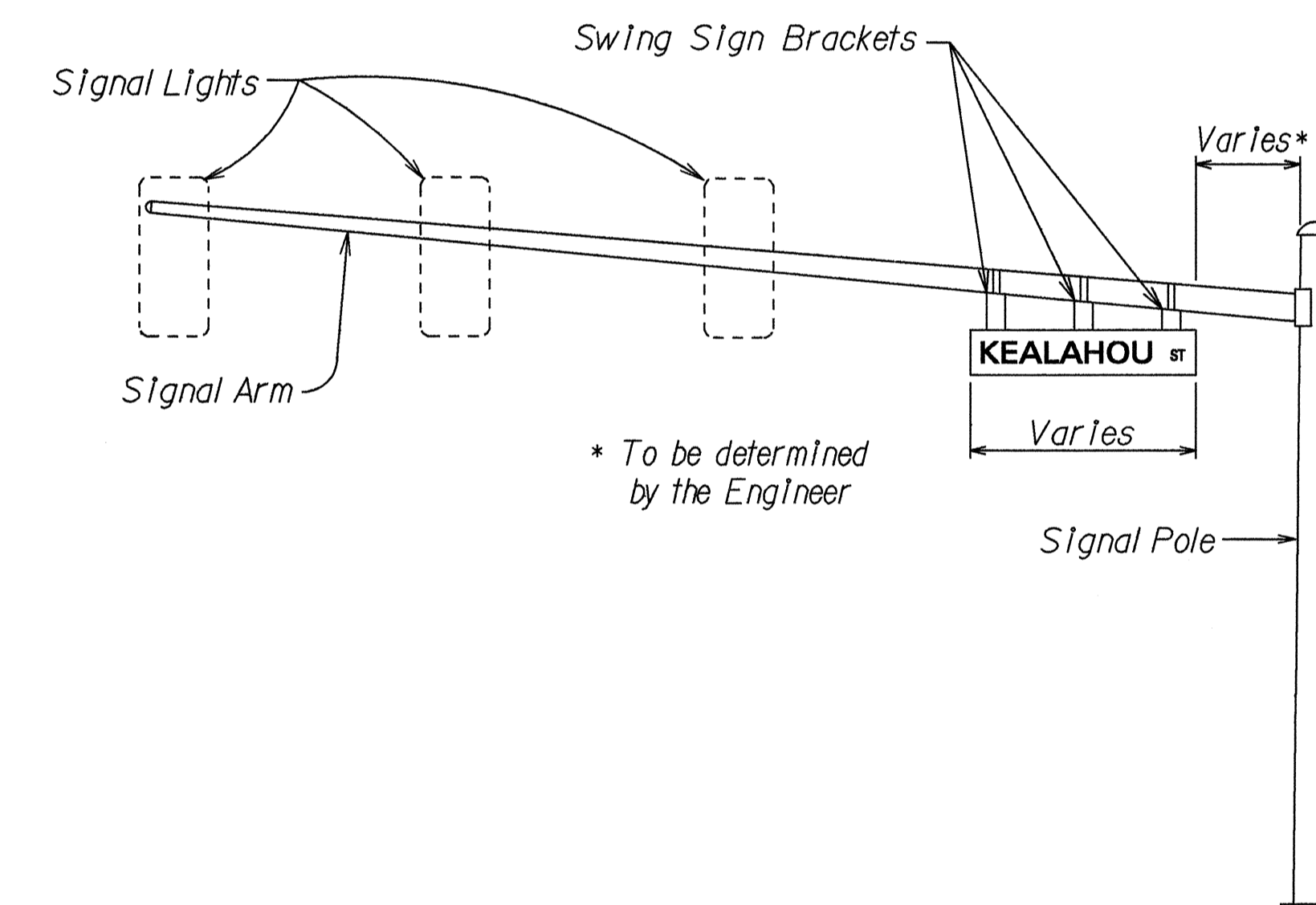


D3-1 (Rear View)

PANEL & SWING BRACKET LAYOUT FOR STREET NAME SIGN

NOTES:

1. Sign D3-1 shall be new Street Name Sign. The Contractor shall provide the same message on the front and back side of the sign. Payment will not be made separately but shall be considered as one unit.
2. Colors:
Legend - White (Reflectorized)
Background - Green (Reflectorized)
3. All panels shall be reflectorized with Type B reflective sheeting in accordance with Section 712.20 of the Standard Specifications.
4. Borders and messages shall conform to details as shown on the plans and as specified in the MUTCD.
5. Sign mounting brackets, aluminum angle, fixtures, fasteners, and all necessary hardware, and equipment, tools, labor, materials and other incidentals for installation, will not be paid for separately but shall be considered incidental to street name sign installation.
6. All signs shall conform to section 621 of the Standard Specifications and the latest editions and amendments of the following FHWA publications:
 - a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - b. "Standard Highway Signs"
 - c. "Standard Alphabets for Highway Signs"



STREET NAME SIGN MOUNTING ON MAST ARM

SURVEY PLANNED BY	DATE	7/20/95
DRAWN BY		
DESIGNED BY		
QUANTITIES BY		
CHECKED BY		
ORIGINAL PLAN		
NOTE BOOK		
10/1/95		
N. HERRICK		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION




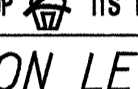

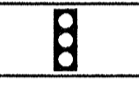
SWING SIGN BRACKET DETAIL

KALANIANA'OLE HIGHWAY
Intersection Improvements at Kealahou Street
Fed. Aid Project No. STP-072-(K42)

Not to scale Date: Sept, 1995
SHEET No. T3 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-072-1(42)	1996	16	24

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	60 EA.
TYPE C _____	110 EA.
TYPE D _____	20 EA.
TYPE H _____	114 EA.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	600 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	150 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	480 L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	2,355 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	240 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	40 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	140 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	2,200 L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	460 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	110 L.F.
CROSSWALK MARKINGS _____	7 LANES
PAVEMENT ARROW _____	12 EA.
PAVEMENT WORD _____	6 EA.

TRAFFIC SIGN SUMMARY						
SIGN NO.	MESSAGE	QUANTITY				
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.		RELOCATE
		W/POST	W/O POST	W/POSTS	W/O POSTS	W/POST(S) W/O POST
R1-2	YIELD					1
R2-1(45)	SPEED LIMIT 45					1
R3-40(L)		2				
R3-40(R)		2				
R7-107b						1
R16-1	BUCKLE UP  ITS THE LAW					1
R17-3	 ON LEFT ARROW ONLY, NO U TURN				1	
W3-3		2				
TOTAL		6			1	4

CONSTRUCTION SIGN SUMMARY			
SIGN NO.	LOCATION	MESSAGE	W/POSTS
CG20-2	# STA. 25+40± LT.	END CONSTRUCTION	1
CW20-1d	# STA. 25+40± RT.	ROAD CONSTRUCTION AHEAD	1
CW20-1d	KEALAHOU ST. - 1,000 FT. BEFORE INTERSECTION	ROAD CONSTRUCTION AHEAD	1
CW20-1d	# STA. 50+77± LT.	ROAD CONSTRUCTION AHEAD	1
CG20-2	# STA. 50+77± RT.	END CONSTRUCTION	1
TOTAL			5

MILEPOST MARKER SUMMARY			
LOCATION	SIGN NO. AND MESSAGE	QUANTITY	
		RELOCATE W/POST	W/O POST
# STA. 44+50± LT.	D10-2 10 D10-7 72	1	
TOTAL		1	

REFLECTOR MARKER SUMMARY				
TYPE	QUANTITY			
	W/O POST		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE
RM-3	6		6	

SURVEY PLOTTED BY _____ DATE 1/28/95
 DRAWN BY H. Aoki
 NOTE BOOK DESIGNED BY G. K. Kishi
 QUANTITIES BY H. Ruby
 CHECKED BY N. K. Kishi

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS TRAFFIC SUMMARIES
 KALANIANA'OLE HIGHWAY
 Intersection Improvements at Kealahou Street
 Fed. Aid Project No. STP-072-1(42)
 Not to scale Date: Sept., 1995
 SHEET No. T4 OF 4 SHEETS