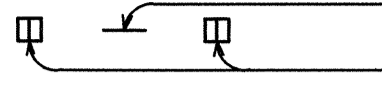
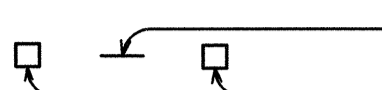


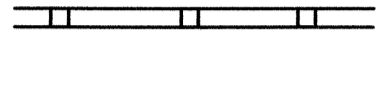


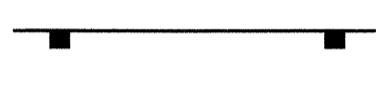



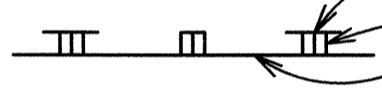


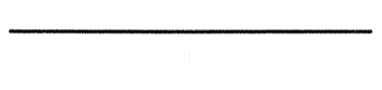
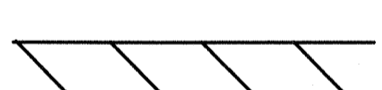
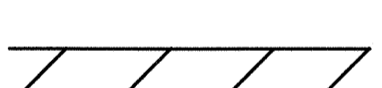



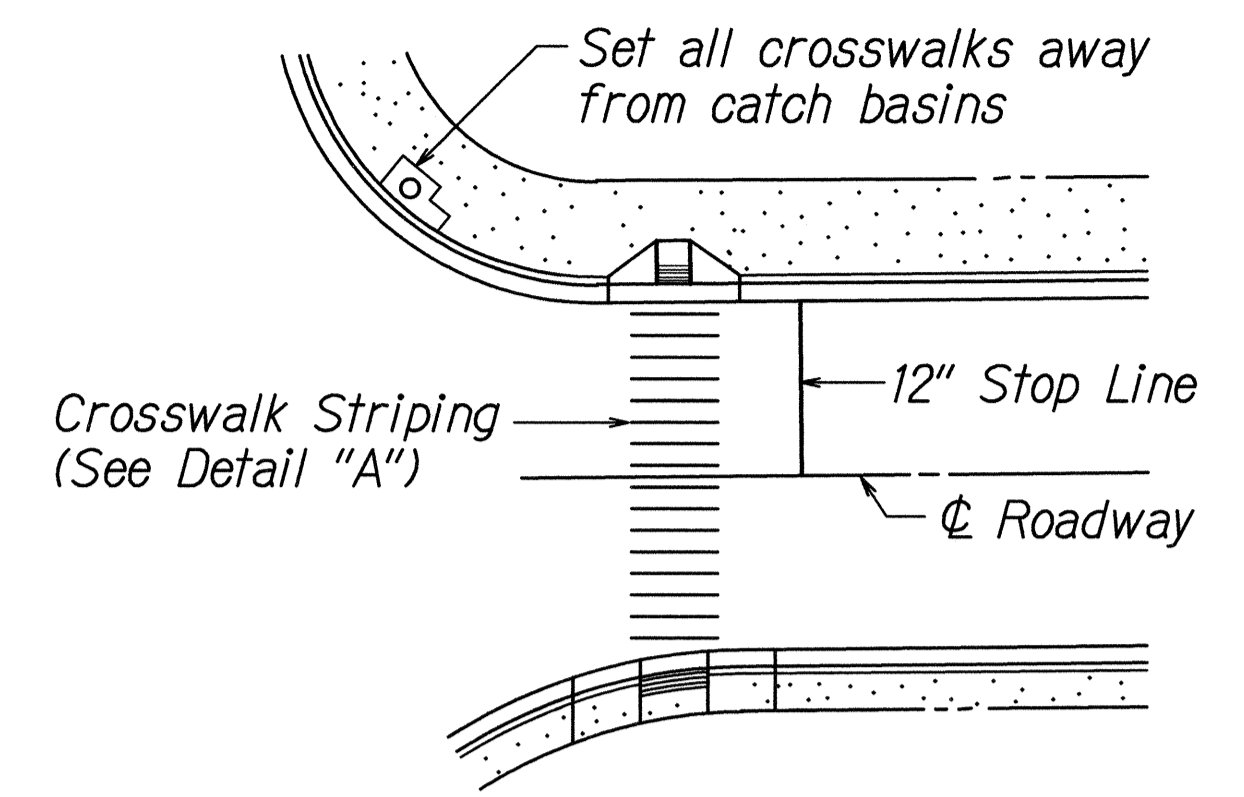
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-030-1(33)	2000	14	29

LEGEND

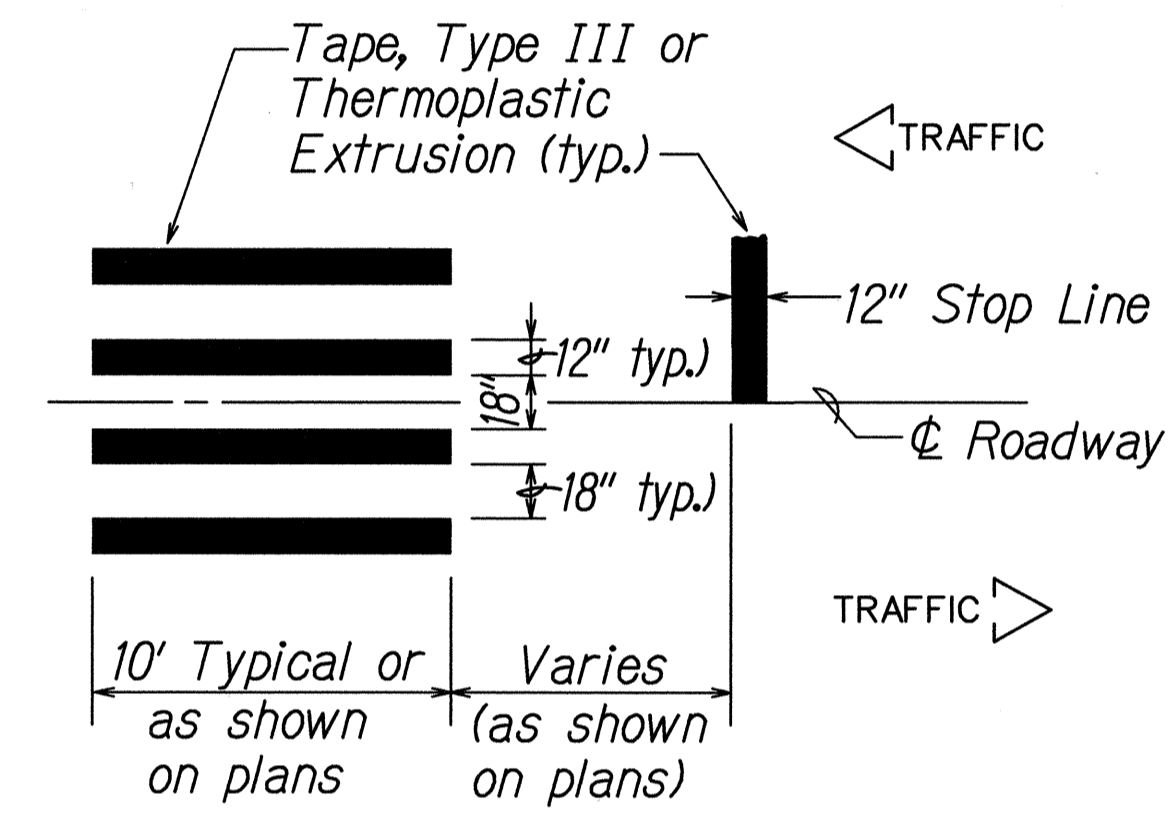
-  4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
-  4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
-  8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid 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 not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be 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 shall be 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. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs placed 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 Maui District Baseyard or as directed by the Engineer upon completion of the job.



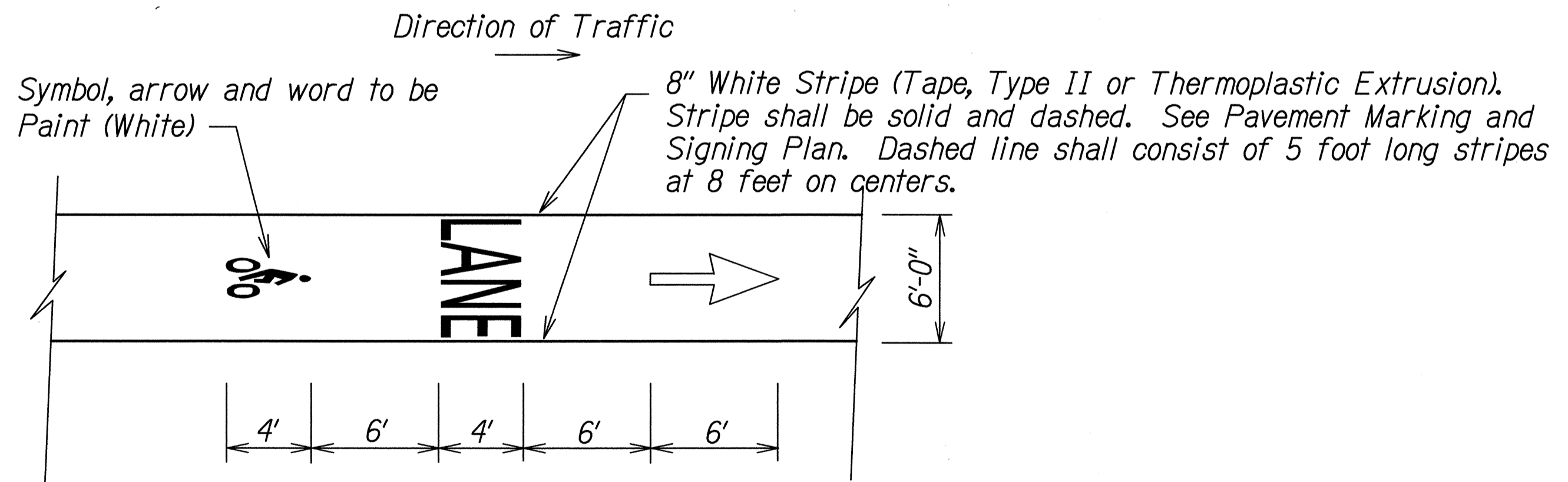
PLAN



DETAIL "A"

CROSSWALK STRIPING DETAIL

Not to Scale



BIKE LANE STRIPING

Not to Scale

Note:
The pavement bike lane symbol, word, and arrow markings shall be considered as one unit and shall be paid as one complete unit, per each, complete in place.

DATE	02/99
DESIGNED BY	Paul T. Taniguchi, Ltd.
CHECKED BY	
DATE	02/99
DESIGNED BY	Paul T. Taniguchi, Ltd.
CHECKED BY	
DATE	
DESIGNED BY	
CHECKED BY	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING
LEGEND & NOTES
HONOAPIILANI HIGHWAY
Installation of Traffic Signals at Napili Hau Street

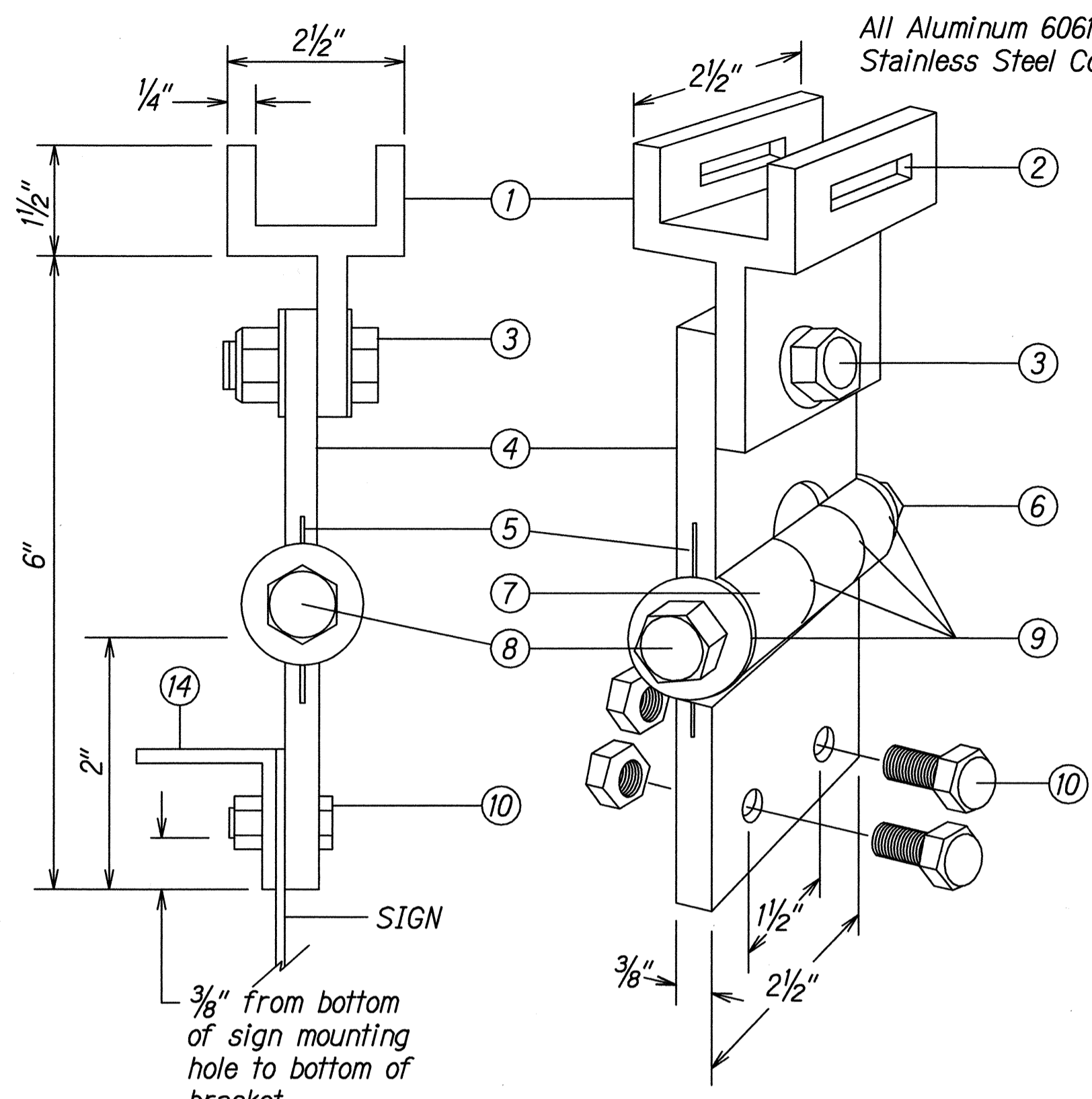
F.A. Project No. STP-030-1(33)
Scale: As Noted Date: Feb., 1999

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-030-1(33)	2000	16	29

STREET NAME (D3) SIGN NOTES:

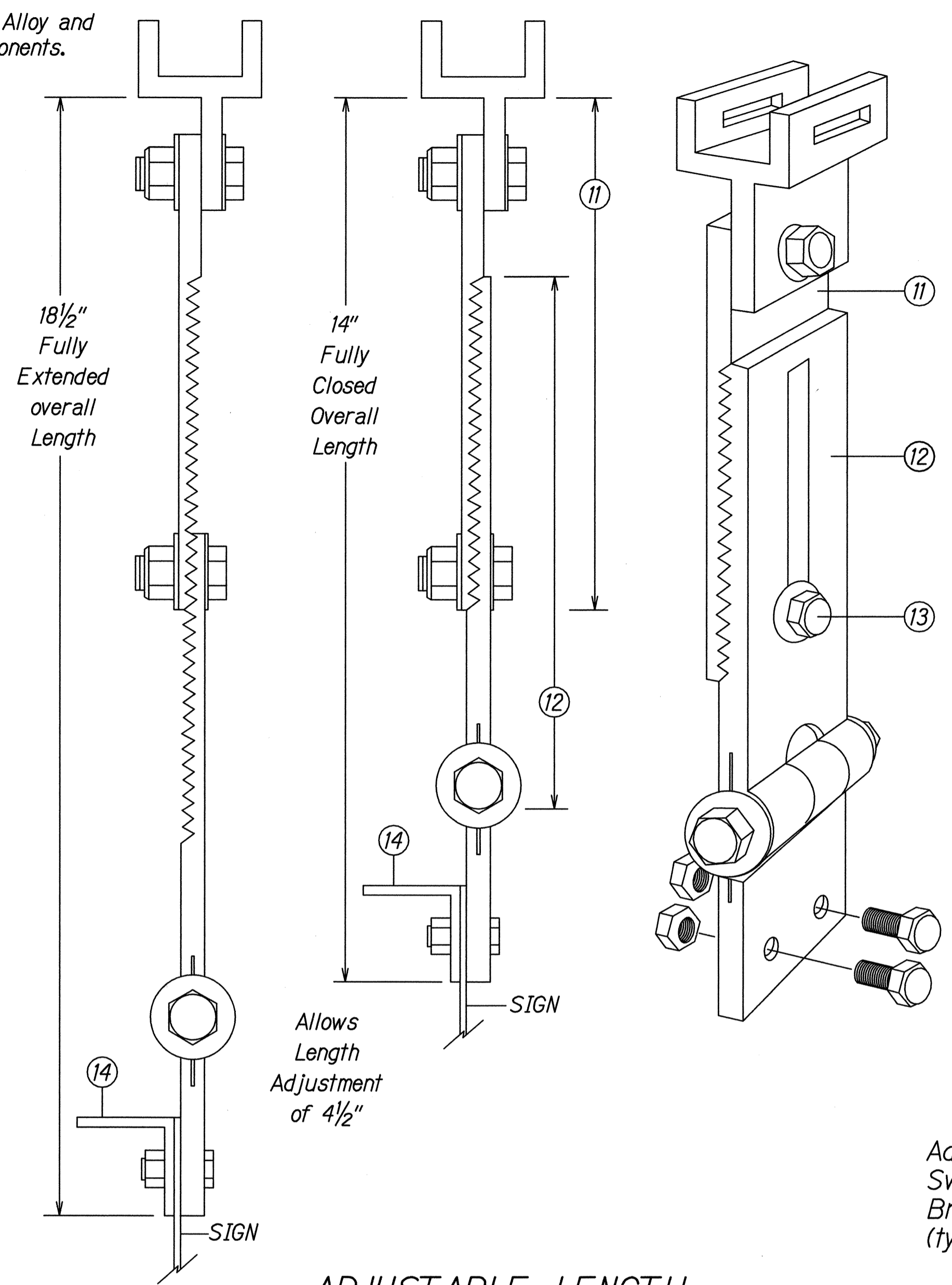
1. Sign D3-1 shall be a new Street Name Sign. The Contractor shall provide the same message on the front and back side of the sign. Payment will not be made separately but shall be considered as one unit.
2. Colors:
Legend - White (Reflectorized)
Background - Green (Reflectorized)
3. All panels shall be reflectorized with Type III or IV retroreflective sheeting in accordance with Section - 712.20 of the Standard Specifications.
4. 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"
5. Borders and messages shall conform to details as shown on the plans and as specified in the MUTCD.
6. 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.
7. Number of Swing Sign Brackets required per Sign Panel:
3 Brackets - Panel length 7' or less
4 Brackets - Panel length greater than 7' with a maximum length of 9'-6"
8. Diacritical marks for Street Name are not authorized.



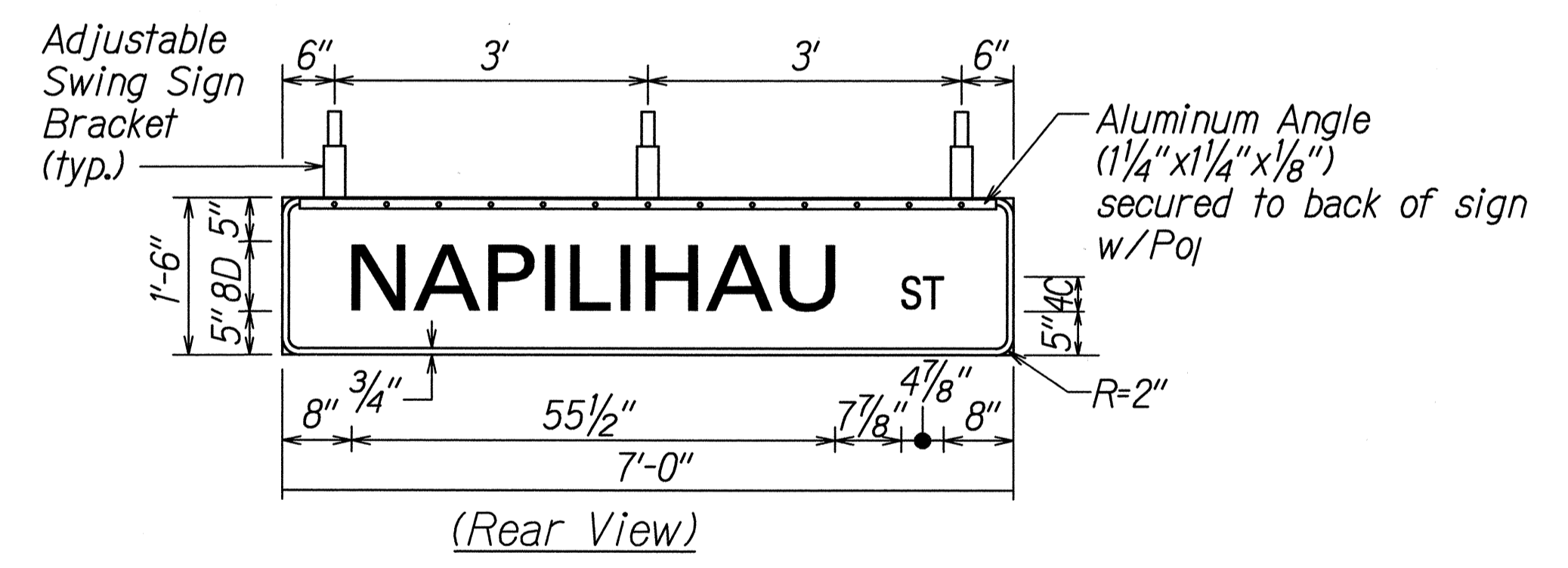
FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET

- 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 Oillite 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 1/2" 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

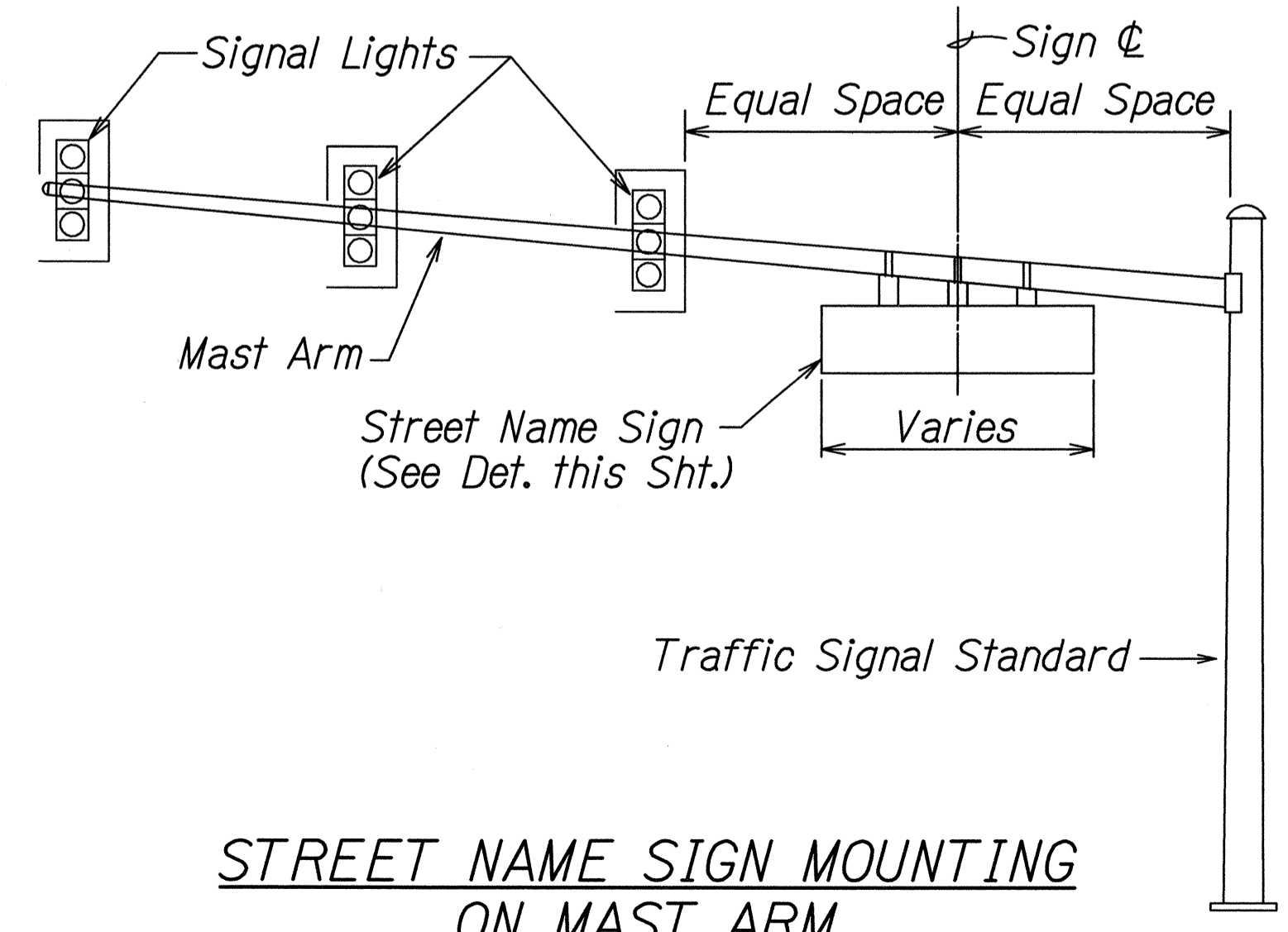
Note: Dimensions may vary slightly.



ADJUSTABLE LENGTH SWING SIGN BRACKET



PANEL & SWING BRACKET LAYOUT FOR STREET NAME SIGN



STREET NAME SIGN MOUNTING ON MAST ARM

DESIGNED BY	DATE
TRACED BY	02/99
DESIGNED BY	02/99
QUANTITIES BY	
CHECKED BY	

R12-15-97 TE-38A



THIS WORK WAS DONE BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

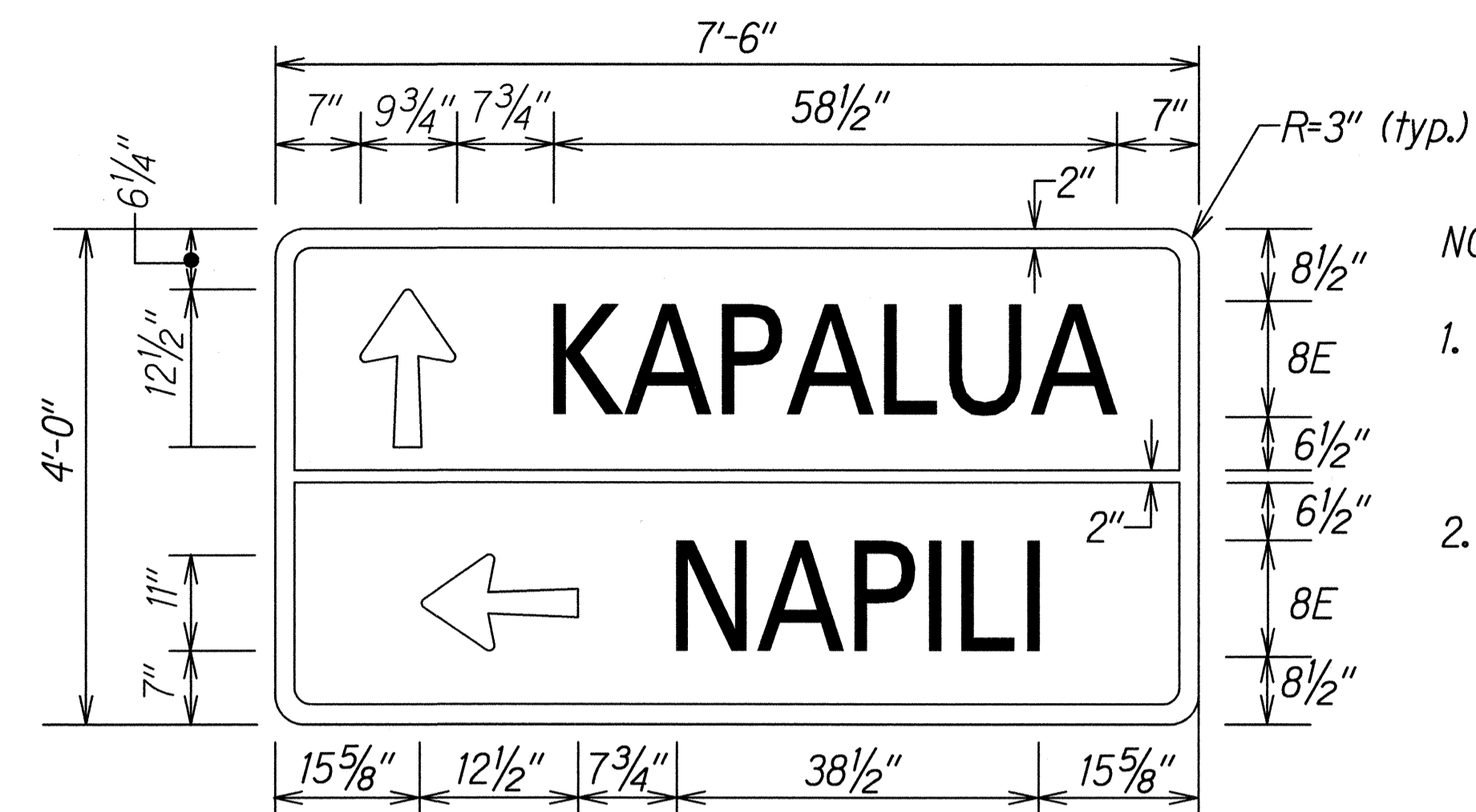
SIGN MOUNTING DETAIL

HONOAPIILANI HIGHWAY
Installation of Traffic Signals at Napilihou Street
F.A. Project No. STP-030-1(33)

Scale: As Shown Date: Feb., 1999
SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-030-1(33)	2000	17	29

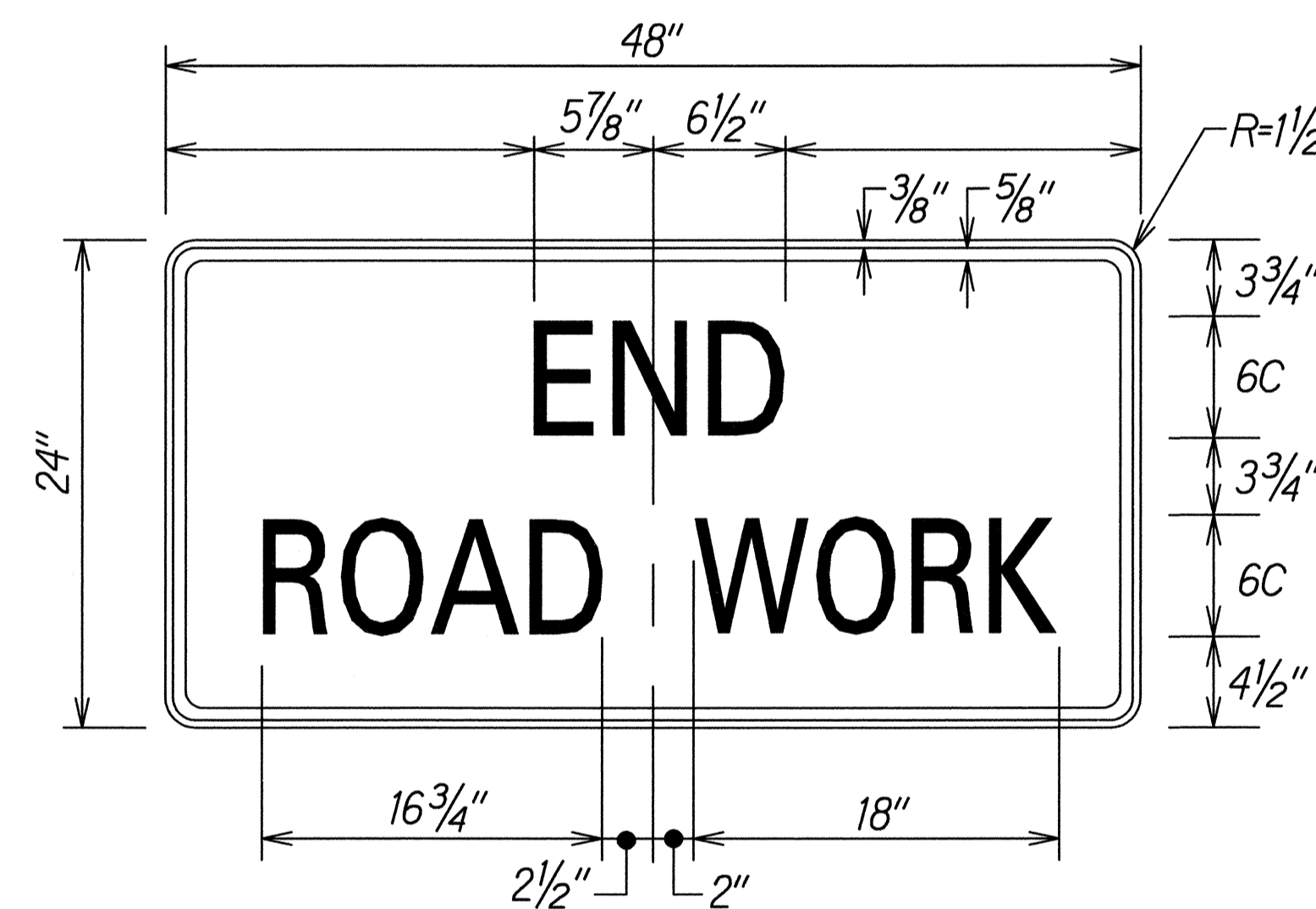
TRAFFIC SIGN SUMMARY					
SIGN NO.	MESSAGE	QUANTITY			
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.	
		W/POST	W/O POST	W/POSTS	W/O POSTS
D3-1	NAPILIHAI ST. (MAST ARM MOUNT)		1		
D1-2	NAPILIHAI/KAPALUA (SEE NOTES)			1	
R3-5(R)	(SYMBOL) BIKE LANE (MAST ARM MOUNT)		1		
R3-4	(SYMBOL) RIGHT TURN ONLY (MAST ARM MOUNT)		1		
R17-3A(L)	TURN LEFT ON LEFT ARROW ONLY (MAST ARM MOUNT)		2		
W3-3	(SYMBOL) SIGNAL AHEAD	3			
R4-4	BEGIN RIGHT TURN LANE YIELD TO BIKES	1			
R1-2	YIELD (ON NEW TSS)		1		
TOTAL		4	6	1	



- NOTES ON SIGN D1-2:
- Colors:
Legend: White (Reflect.)
Background: Green
 - Sign shall be supported on two (2) S 3x5.7 breakaway supports.

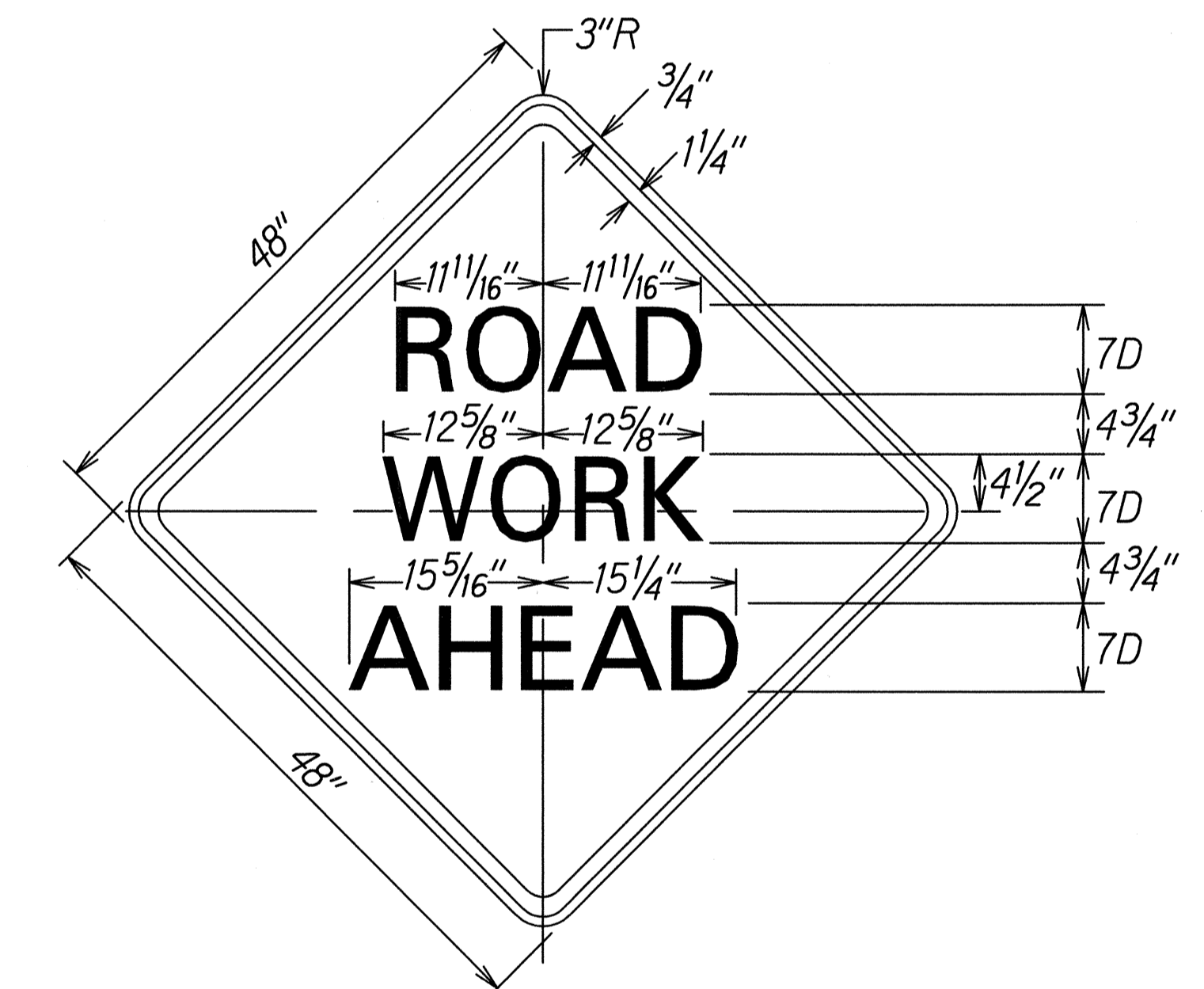
D1-2
Not to Scale

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	16 EA.
TYPE C _____	108 EA.
TYPE D _____	24 EA.
TYPE H _____	82 EA.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
8-INCH PAVEMENT STRIPE (WHITE) _____	240 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	419 L.F.
4-INCH PAVEMENT STRIPE (WHITE) _____	115 L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	2484 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	1278 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	270 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	1578 L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	339 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	381 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	237 L.F.
CROSSWALK MARKINGS _____	10 LANES
PAVEMENT ARROW _____	10 EA.
PAVEMENT BIKE SYMBOL, WORD & ARROW _____	8 EA.



CG20-2A
Scale: 1 1/2" = 1'-0"

- Colors:
Legend: Black (Non Refl)
Background: Orange



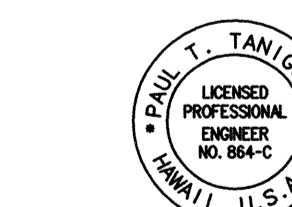
CW20-1Ad
Scale: 1" = 1'-0"

- Colors:
Legend: Black (Non Refl)
Background: Orange

CONSTRUCTION SIGN SUMMARY

SIGN NO.	LOCATION	MESSAGE	W/POST	WO/POST
CG20-2A	Sta. 174+00, Honoapiilani Hwy	END ROAD WORK	1	0
CW20-1Ad	Sta. 174+00, Honoapiilani Hwy	ROAD WORK AHEAD	1	0
CG20-2A	Sta. 198+00, Honoapiilani Hwy	END ROAD WORK	1	0
CW20-1Ad	Sta. 198+00, Honoapiilani Hwy	ROAD WORK AHEAD	1	0
CG20-2A	Sta. 10+00, Napili Hwy	END ROAD WORK	1	0
CW20-1Ad	Sta. 10+00, Napili Hwy	ROAD WORK AHEAD	1	0
TOTALS			6	0

SURVEY PLOTTED BY _____	DATE _____
DESIGNED BY _____	DATE _____
QUANTITIES BY _____	DATE _____
CHECKED BY _____	DATE _____



THIS WORK WAS DONE BY ME OR UNDER MY SUPERVISION
by Paul J. Taniguchi

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGN DETAILS AND TRAFFIC SUMMARIES
HONOAPIILANI HIGHWAY
Installation of Traffic Signals at Napili Hwy Street
F.A. Project No. STP-030-1(33)
Scale: As Shown Date: Feb., 1999
SHEET No. 1 OF 1 SHEETS