

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	12	22

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. All pavement striping shall be as noted on the legend or plans.
6. 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.
7. Backing for all new Regulatory and Warning Signs shall not be spliced.
8. 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 Streets and Highways" (MUTCD)
 - b. "Standard Highway Signs."
 - c. "Standard Alphabets for Highway Signs."
9. Borders, messages, arrows, symbols and shields shall conform to details as shown on the plans and as specified in the MUTCD.
10. Sign messages shall be as indicated on the plan.
11. All panels shall be reflectorized in accordance with Section 712.20 of the Standard Specifications. Minimum width of panels shall be 2 ft. abutting edges of panels shall be in only one direction if vertical abutting edges are used, no horizontal abutting edges shall be allowed and vice versa.
12. All new and relocated signs and markers installed on pipe posts, light standard or expressway sign post are to be mounted with band brackets and steel braces.
13. 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.
14. Removal of Existing Delineators and Posts shall be considered incidental to the various signing items.
15. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as directed by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
16. Removing and reinstalling existing Street Name Signs on Regulatory and Warning Sign Post shall not be paid for separately but shall be considered incidental to the various signing items.
17. Install type II object marker on all utility poles or trees that are within the State Highway right of way and within 30 feet of the roadway edge of pavement shall be marked as directed by the Engineer.
18. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
19. Reflector markers placed behind metal guard rails shall be installed with steel post.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY
N.	DESIGNED BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

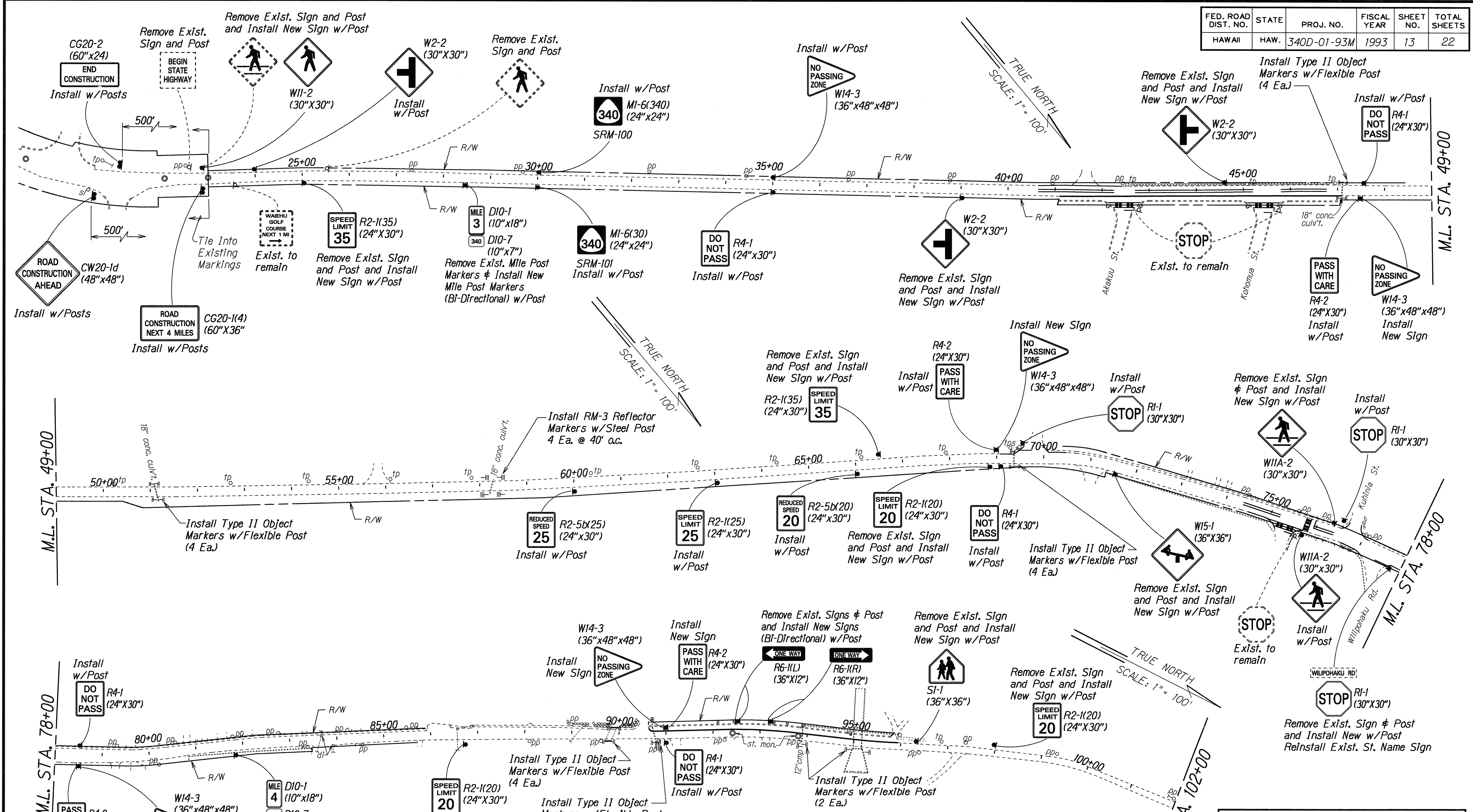
PAVEMENT MARKING & SIGNING NOTES

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Honokohau to Papanahoa
Project No. 340D-01-93M

Date: May, 1993

SHEET No. 11 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	13	22



SURVEY PLOTTED BY	DATE
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CHECKED BY	
NOTES BOOK	
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ROUTE 340 NOTES:

- Center line markings shall be 4" double yellow (Tape, Type I or Thermoplastic Extrusion) w/Type D raised pavement markers @ 20' o.c. or Type D w/Type J raised pavement markers. (See center line schedule for locations)
- All edge stripe shall be 4" or 8" white (Tape, Type II or Thermoplastic Extrusion) w/Type C raised pavement markers @ 40' o.c. or as noted on the plans.
- The final placement and spacing for all reflector markers and object markers shall be determined in the field by the Engineer.
- Removing and reinstalling existing St. Name sign on regulatory and warning sign post shall not be paid for separately, but shall be considered incidental to the various signing items.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
& SIGNING PLAN**

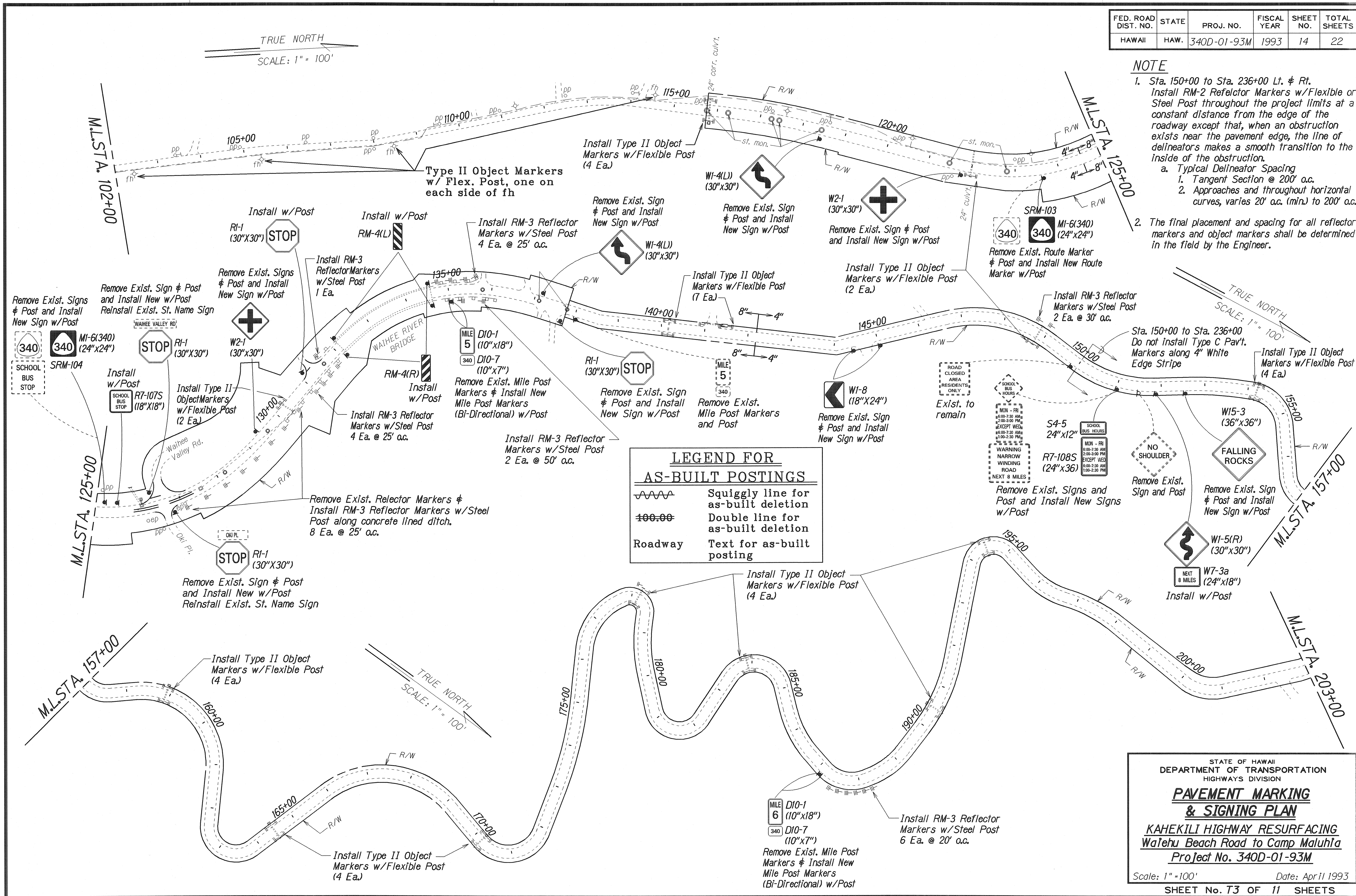
**KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhū
Project No. 340D-01-93M**

Scale: 1" = 100' Date: April 1993
SHEET No. T2 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	14	22

NOTE

- Sta. 150+00 to Sta. 236+00 Lt. & Rt. Install RM-2 Reflector Markers w/Flexible or Steel Post throughout the project limits at a constant distance from the edge of the roadway except that, when an obstruction exists near the pavement edge, the line of delineators makes a smooth transition to the inside of the obstruction.
 - Typical Delineator Spacing
 - Tangent Section @ 200' o.c.
 - Approaches and throughout horizontal curves, varies 20' o.c. (min.) to 200' o.c.
- The final placement and spacing for all reflector markers and object markers shall be determined in the field by the Engineer.



LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

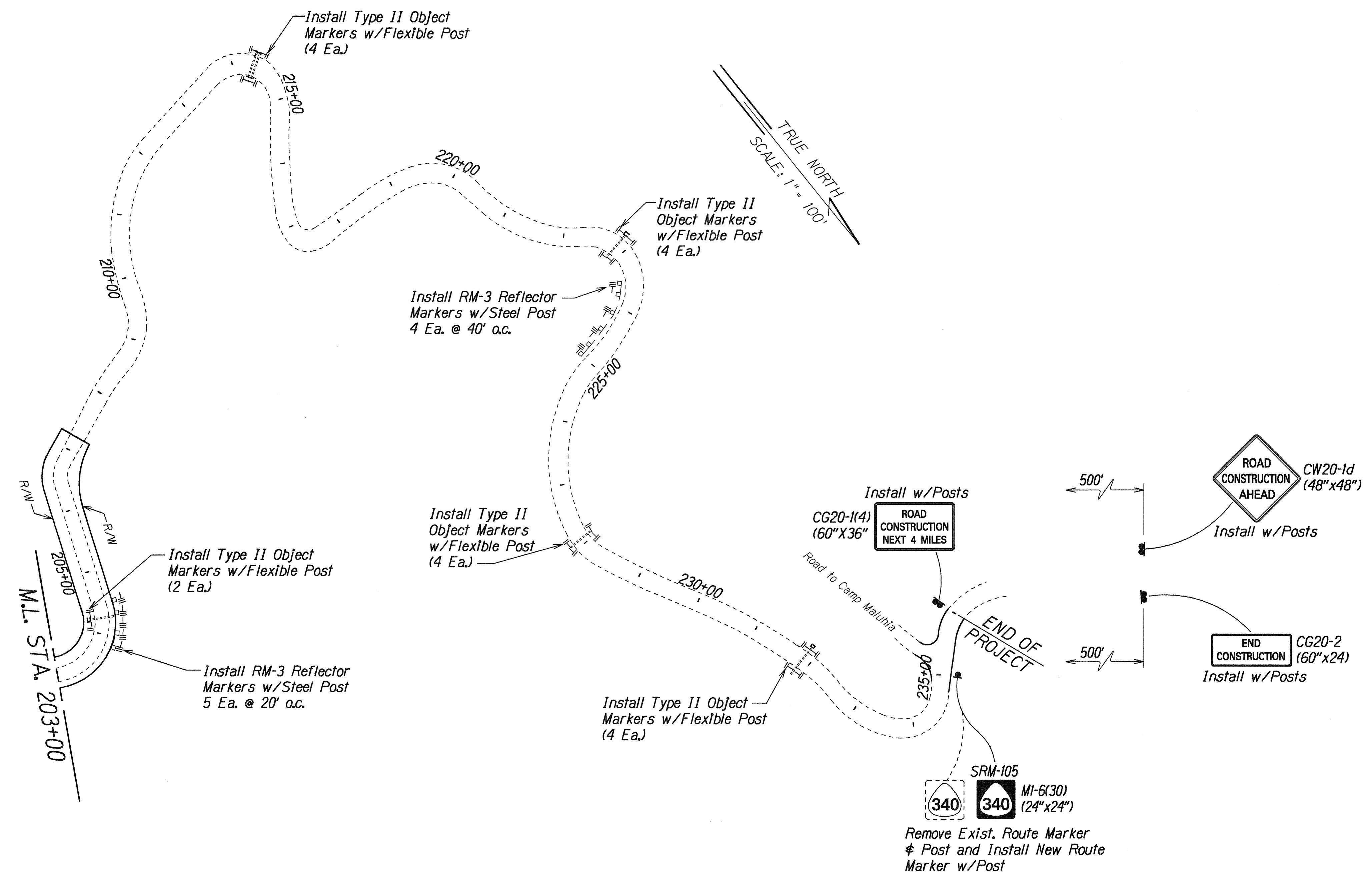
**KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Project No. 340D-01-93M**

Scale: 1" = 100' Date: April 1993

SHEET No. 73 OF 11 SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	15	22



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTIFIED BY	
CHECKED BY	
NO. _____	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

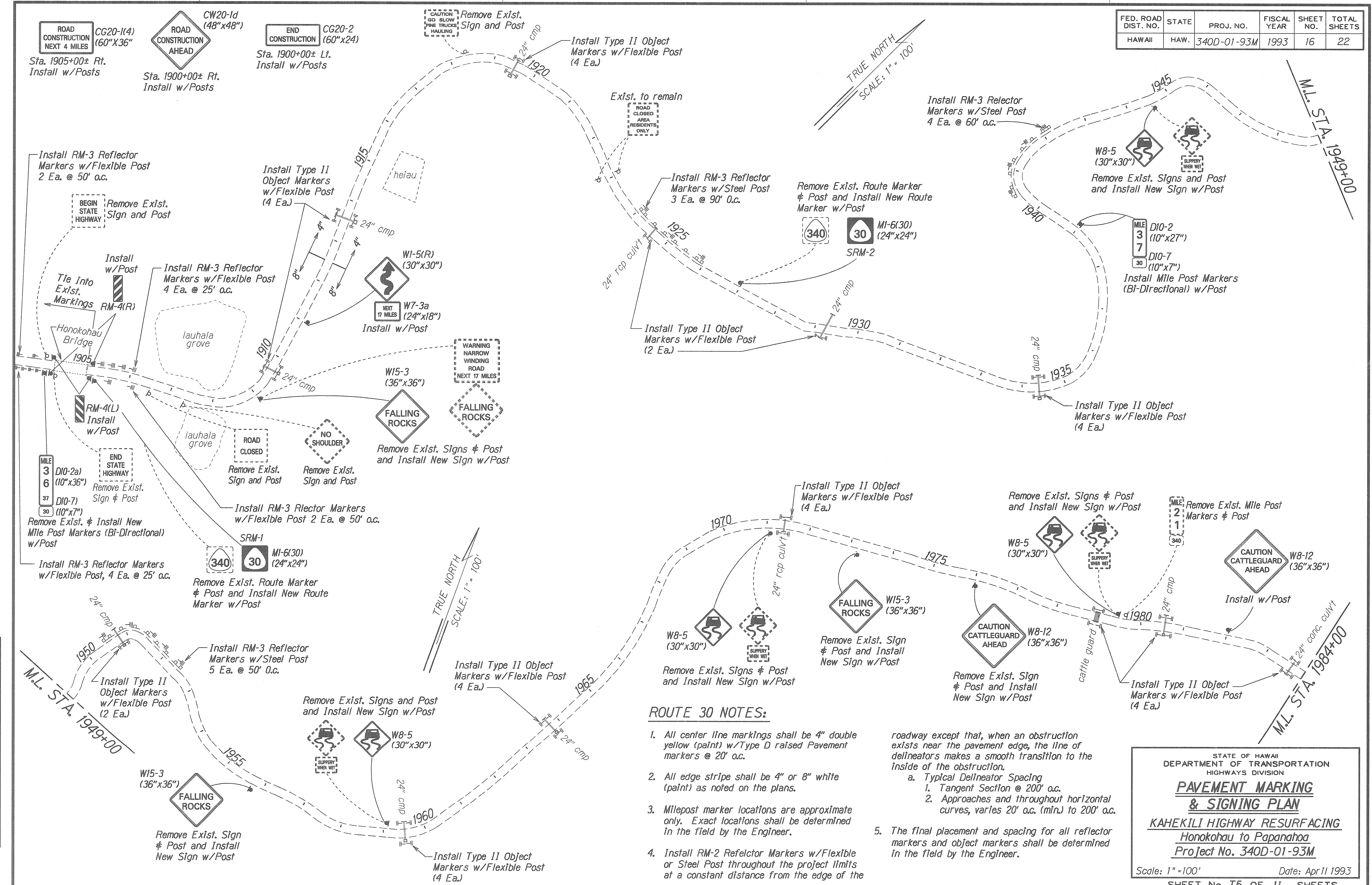
**PAVEMENT MARKING
& SIGNING PLAN**

**KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Project No. 340D-01-93M**

Scale: 1" = 100' Date: Apr 11 1993

SHEET No. 14 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	16	22



ROAD CONSTRUCTION NEXT 4 MILES CG20-1(4) (60"x36") Sta. 1905+00± Rt. Install w/Posts

ROAD CONSTRUCTION AHEAD CW20-1d (48"x48") Sta. 1900+00± Rt. Install w/Posts

END CONSTRUCTION CG20-2 (60"x24") Sta. 1900+00± Lt. Install w/Posts

TRUE NORTH
SCALE: 1" = 100'

TRUE NORTH
SCALE: 1" = 100'

ROUTE 30 NOTES:

- All center line markings shall be 4" double yellow (paint) w/Type D raised Pavement markers @ 20' o.c.
- All edge stripe shall be 4" or 8" white (paint) as noted on the plans.
- Milepost marker locations are approximate only. Exact locations shall be determined in the field by the Engineer.
- Install RM-2 Reflector Markers w/Flexible or Steel Post throughout the project limits at a constant distance from the edge of the roadway except that, when an obstruction exists near the pavement edge, the line of delineator makes a smooth transition to the inside of the obstruction.
 - Typical Delineator Spacing
 - Tangent Section @ 200' o.c.
 - Approaches and throughout horizontal curves, varies 20' o.c. (min.) to 200' o.c.
- The final placement and spacing for all reflector markers and object markers shall be determined in the field by the Engineer.

DATE
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
TRACED BY
NOTE BOOK
QUANTITIES BY
CHECKED BY
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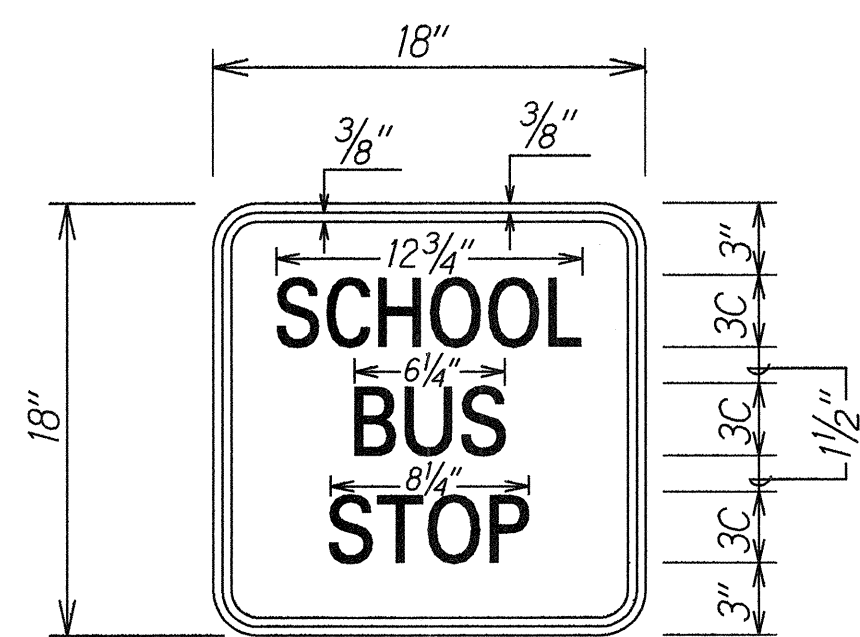
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

KAHEKILI HIGHWAY RESURFACING
Honokohau to Papanahoa
Project No. 340D-01-93M

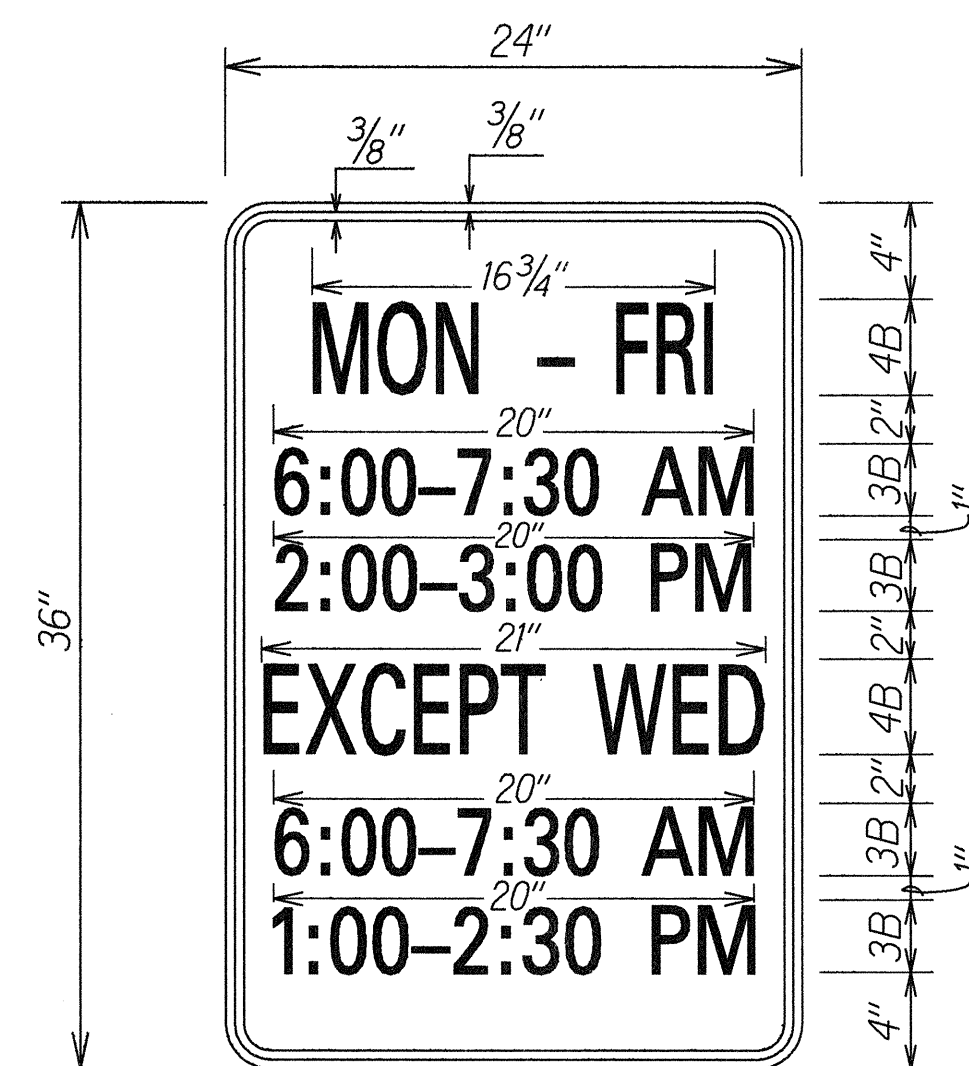
Scale: 1" = 100' Date: Apr 11 1993
SHEET No. 15 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	19	22



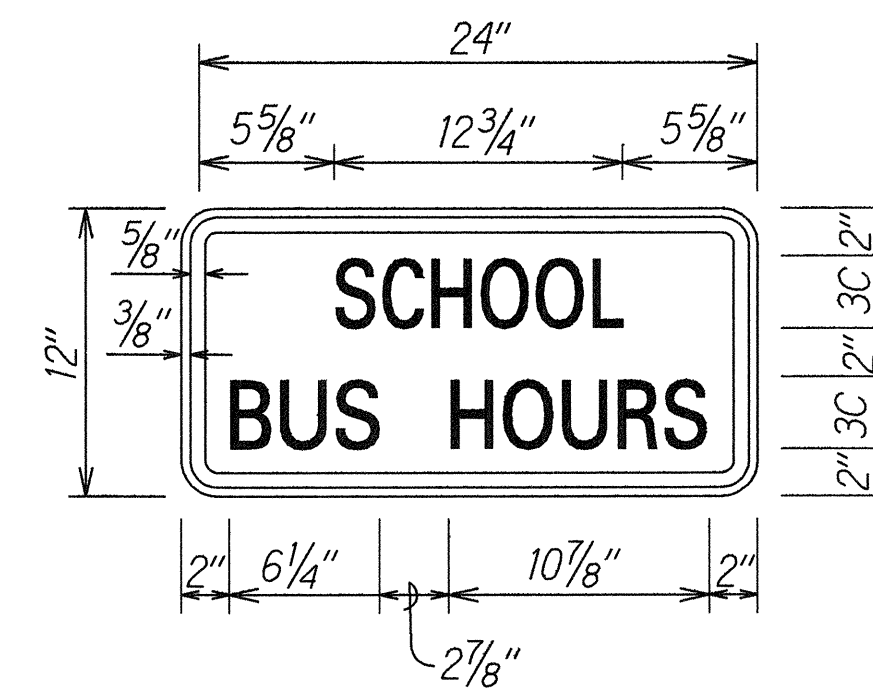
Colors:
Legend: Red
Background: White

R7-107S



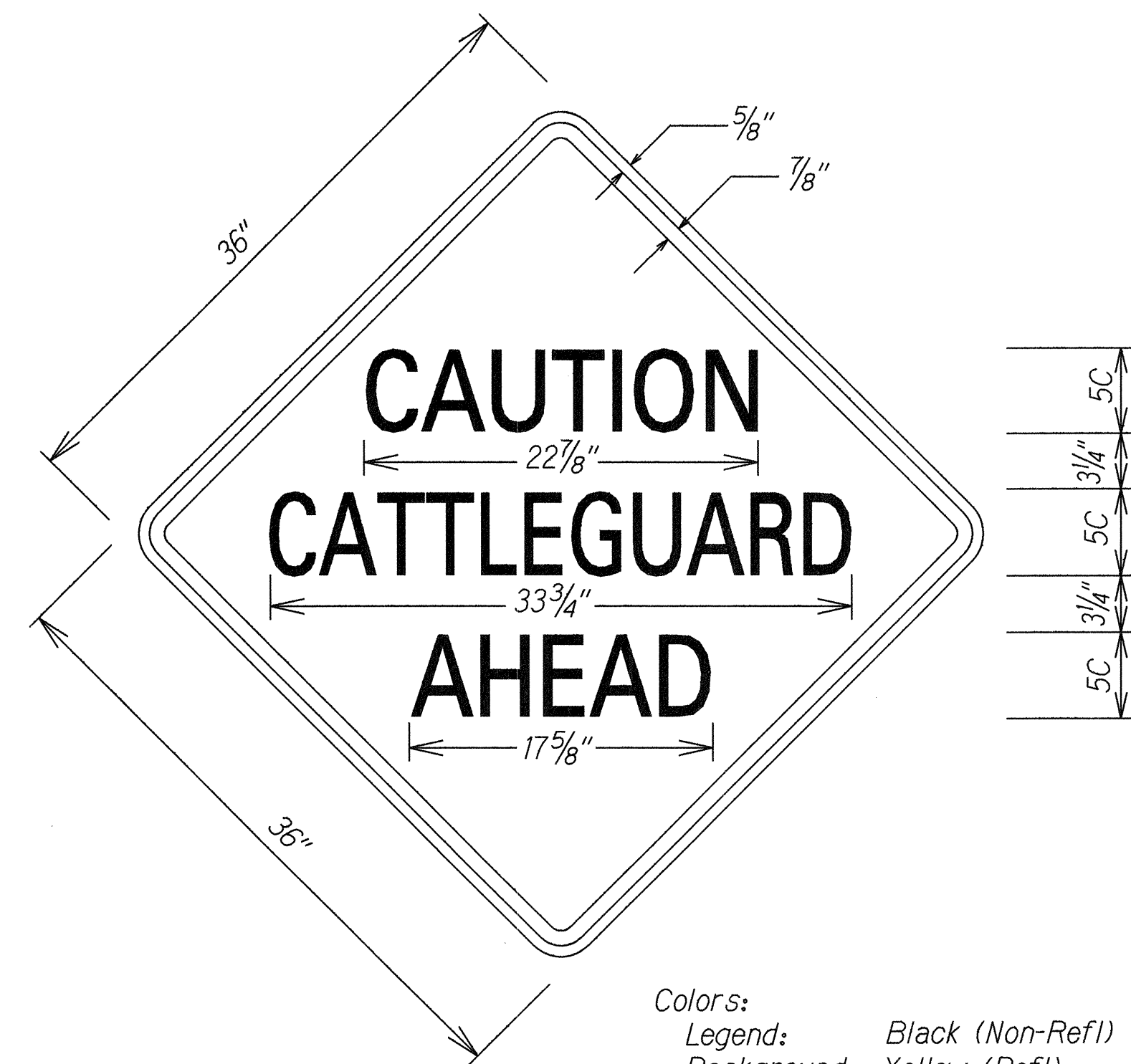
Colors:
Legend: Red
Background: White

R7-108S



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

S4-5



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

W8-12

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
N.	DESIGNED BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGN DETAILS
KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Honokohau to Papanahoa
Project No. 340D-01-93M
Scale: 1 1/2" = 1'-0" Date: May, 1993
SHEET No. 18 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	20	22

TRAFFIC SIGN SUMMARY			
SIGN NO.	MESSAGE	QUANTITY	
		10 SQ. FT. OR LESS	
		W/POST	W/O POST
R1-1	STOP	6	
R2-1(20)	SPEED LIMIT 20	3	
R2-1(25)	SPEED LIMIT 25	1	
R2-1(35)	SPEED LIMIT 35	2	
R2-5B(20)	REDUCED SPEED 20	1	
R2-5b(25)	REDUCED SPEED 25	1	
R4-1	DO NOT PASS	5	
R4-2	PASS WITH CARE	4	
R6-1(L)	ONE WAY	1	1
R6-1(R)	ONE WAY	1	1
R7-107S	SCHOOL BUS STOP	1	
R7-108S	MON-FRI, 6:00-7:00 AM, 2:00-3:30 PM, EXCEPT WED 6:00-7:30 AM, 1:00-2:30 PM	1	
W1-4(L)		2	
W1-5(R)		1	
W1-8		2	
W2-1		2	
W2-2		3	
W7-3a	NEXT 8 MILES		1
W11-2		1	
W11A-2		2	
W14-3	NO PASSING ZONE	5	
W15-1		1	
W15-3	FALLING ROCKS	1	
S1-1		1	
S4-5	SCHOOL BUS HOURS		1
TOTAL		48	4

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE C _____	634 Ea.
TYPE D _____	939 Ea.
TYPE J _____	344 Ea.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	16,410 L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	38,840 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	3,450 L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION	
12-INCH PAVEMENT STRIPE (WHITE) _____	215 L.F.
CROSSWALK MARKINGS _____	8 LANE

REFLECTOR MARKER SUMMARY				
TYPE	QUANTITY			
	W/FLEXIBLE POST		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE
RM-2		344		
RM-3			40	
RM-4			4	

ROUTE MARKER SUMMARY				
SIGN ASSEMBLY	LOCATION	SIGN NO. AND MESSAGE	TYPE A ASSEMBLY	
			W/POST	W/O POST
SRM-101	Sta. 31+00 LT.	M1-6(340) 340	1	
SRM-102	Sta. 31+00 RT.	M1-6(340) 340	1	
SRM-103	Sta. 123+70 RT.	M1-6(340) 340	1	
SRM-104	Sta. 125+20 LT.	M1-6(340) 340	1	
SRM-105	Sta. 235+00 RT.	M1-6(340) 340	1	
TOTAL			5	

MILEPOST MARKER SUMMARY			
LOCATION	SIGN NO. AND MESSAGE	QUANTITY	
		W/O POST	W/POST
Sta. 28+50± Rt.	D10-1 3 D10-7 340	1	1
Sta. 81+75± Rt.	D10-1 4 D10-7 340	1	1
Sta. 135+00± Rt.	D10-1 5 D10-7 340	1	1
Sta. 187+20± Rt.	D10-1 6 D10-7 340	1	1
TOTAL		4	4

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POST(S)	W/O POST
CW20-1d	Sta. 18+00 RT.	ROAD CONSTRUCTION AHEAD	1	
CG20-2	Sta. 18+00 LT.	END CONSTRUCTION	1	
CG20-1(4)	Sta. 23+00 Rt.	ROAD CONSTRUCTION NEXT 4 MILES	1	
CG20-1(4)	Sta. 236+00 LT.	ROAD CONSTRUCTION NEXT 4 MILES	1	
CG20-2	Sta. 241+00 RT.	END CONSTRUCTION	1	
CW20-1d	Sta. 241+00 LT.	ROAD CONSTRUCTION AHEAD	1	
TOTAL			6	

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

ROUTE 340 - WAIIEHU BEACH RD. TO CAMP MALUHIA

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS
TRAFFIC SUMMAIRES
 KAHEKILI HIGHWAY RESURFACING
 Waiehu Beach Road to Camp Maluhia
 Project No. 340D-01-93M
 Date: May, 1993
 SHEET No. 19 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	21	22

EDGE STRIPING SUMMARY

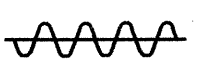
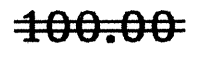
APPROXIMATE STATION TO STATION	PAVEMENT STRIPING				TYPE C (EACH)	REMARKS
	LT. E.P.		RT. E.P.			
	4"	8"	4"	8"		
23+00 TO 42+30			1,930		49	AKAKUU ST.
42+60 TO 45+30			270		7	KOHOMUA ST.
45+60 TO 75+20			2,960		74	SIDE ROAD
75+50 TO 77+10			160		4	WILIPOHAKU RD.
77+60 TO 124+50			4,690		118	OKI PL.
124+50 TO 126+50				200	5	SIDE ROAD
126+70 TO 137+20				1,050	27	
137+60 TO 142+10				450	12	
142+10 TO 150+00			790		20	
150+00 TO 236+00			8,600			DO NOT INSTALL TYPE C
23+00 TO 69+50	4,650				117	SIDE ROAD
70+00 TO 76+60	660				17	KUHINIA ST.
76+90 TO 124+50	4,760				119	
124+50 TO 126+70		220			6	WAIHEE VLY. RD
126+70 TO 131+30		460			12	SIDE ROAD
131+40 TO 142+10		1,070			27	
142+10 TO 150+00	790				20	
150+00 TO 235+20	8,520					DO NOT INSTALL TYPE C
235+40 TO 236+00	60					DO NOT INSTALL TYPE C
TOTAL	19,440	1,750	19,400	1,700	634	

CENTERLINE SUMMARY

APPROXIMATE STATION TO STATION	ZONE		PAVEMENT STRIPING		TYPE D (EACH)	TYPE J (EACH)	STOP BAR		X-WALK (LANE)
	TO WAIIEHU	TO MALUHIA	DOUBLE 4"	SINGLE 4"			LT	RT	
23+00 TO 35+00	PASS	PASS			30	120			
35+00 TO 42+30	NO PASS	NO PASS	730		37				
42+30 TO 42+70		AKAKUU ST.						20	2
42+70 TO 45+20	NO PASS	NO PASS	250		13				
45+20 TO 45+60		KOHOMUA ST.						20	2
45+60 TO 47+50	NO PASS	NO PASS	90		5				
47+50 TO 69+00	PASS	PASS			54	216			
69+00 TO 75+20	NO PASS	NO PASS	620		31		30		
75+20 TO 76+00		SIDE ROAD						30	4
76+00 TO 78+50	NO PASS	NO PASS	250		13		15	25	
78+50 TO 91+00	PASS NO PASS	PASS			32	128			
91+00 TO 126+50	NO PASS	NO PASS	3,550		178				
126+50 TO 126+80	WAIHEE VLY RD	OKI PL					30	15	
126+80 TO 236+00	NO PASS	NO PASS	10,920		546		15	15	
TOTAL			16,410		939	344	90	125	8

CHANGE TO "NO PASS" ZONE

ORIGINAL SURVEY PLOTTED BY _____ DATE _____
 PLAN DRAWN BY _____
 NOTE BOOK TRACED BY _____
 DESIGNED BY _____
 CHECKED BY _____

LEGEND FOR AS-BUILT POSTINGS
 Squiggly line for as-built deletion
 Double line for as-built deletion
 Roadway Text for as-built posting

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS TRAFFIC SUMMARIES
 KAHEKILI HIGHWAY RESURFACING
 Waiehu Beach Road to Camp Maluhia
 Project No. 340D-01-93M
 Date: May, 1993

ROUTE 340 - WAIIEHU BEACH ROAD TO CAMP MALUHIA

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	340D-01-93M	1993	22	22

TRAFFIC SIGN SUMMARY			
SIGN NO.	MESSAGE	QUANTITY	
		10 SQ. FT. OR LESS	
		W/POST	W/O POST
R1-2	YIELD	1	
R4-1	DO NOT PASS	2	
RSP-1	TO ONCOMING TRAFFIC	1	
W1-5(R)		2	
W3-2a		1	
W5-2	NARROW BRIDGE	2	
W5-3	ONE LANE BRIDGE	2	
W7-3a	NEXT 17 MILES		1
W8-5		6	
W8-12	CAUTION CATTLE GUARD AHEAD	4	
W13-1(10)	10 M.P.H.		2
W15-3	FALLING ROCKS	11	
TOTAL		32	3

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POST(S)	W/O POST
CW20-1d	Sta. 1900+00 Rt.	ROAD CONSTRUCTION AHEAD	1	
CG20-2	Sta. 1900+00 Lt.	END CONSTRUCTION	1	
CG20-1(4)	Sta. 1905+00 Rt.	ROAD CONSTRUCTION NEXT 4 MILES	1	
CG20-1(4)	Sta. 2110+00 Lt.	ROAD CONSTRUCTION NEXT 4 MILES	1	
CG20-2	Sta. 2115+00 Rt.	END CONSTRUCTION	1	
CW20-1d	Sta. 2115+00 Lt.	ROAD CONSTRUCTION AHEAD	1	
TOTAL			6	

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS TYPE D _____	1,025 EA.
PAINT	
4-INCH PAVEMENT STRIPE (WHITE) _____	34,610 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	6,350 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	10 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	20,500 L.F.

REFLECTOR MARKER SUMMARY				
TYPE	QUANTITY			
	W/FLEXIBLE POST		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE
RM-2		820		
RM-3	43		40	
RM-4			12	

MILEPOST MARKER SUMMARY				
LOCATION	SIGN NO. AND MESSAGE	QUANTITY		
		W/O POST	W/POST	
Sta. 1904+70± Rt.	D10-2a 36 37 D10-7 30	1	1	
Sta. 1939+00± Rt.	D10-2 37 D10-7 30	1	1	
Sta. 1992+00± Rt.	D10-2 38 D10-7 30	1	1	
Sta. 2044+80± Rt.	D10-2 39 D10-7 30	1	1	
Sta. 2098+00± Rt.	D10-2 40 D10-7 30	1	1	
TOTAL		5	5	

EDGE STRIPING SUMMARY				
APPROXIMATE STATION TO STATION	PAVEMENT STRIPING			
	LT. E.P.		RT. E.P.	
	4"	8"	4"	8"
1905+00 TO 1912+50		750		750
1912+50 TO 2034+80	12,230		12,230	
2034+75 TO 2050+00		1,500		1,500
2050+00 TO 2100+75	5,075		5,075	
2100+75 TO 2110+00		925		925
TOTAL	17,305	3,175	17,305	3,175

ROUTE MARKER SUMMARY				
SIGN ASSEMBLY	LOCATION	SIGN NO. AND MESSAGE	TYPE A ASSEMBLY	
			W/POST	W/O POST
SRM-1	Sta. 1905+15 Rt.	M1-6(30) 30	1	
SRM-2	Sta. 1927+00 Lt.	M1-6(30) 30	1	
TOTAL			2	

CENTERLINE SUMMARY						
APPROXIMATE STATION TO STATION	ZONE		PAVEMENT STRIPING	TYPE D (EACH)	STOP BAR	
	TO KAHULUI	TO LAHAINA			LT	RT
	1905+00 TO 2042+00	NO PASS	NO PASS	13,700	685	
2042+00 TO 2042+80	ONE LANE	BRIDGE				
2042+80 TO 2110+00	NO PASS	NO PASS	6,800	340		
TOTAL			20,500	1,025		10

SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 TRACED BY _____
 REVISIONS BY _____
 CHECKED BY _____
 ORIGINAL PLAN NO. _____

ROUTE 30 - HONOKOHAU TO PAPANAHOA

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS
TRAFFIC SUMMAIRES
 KAHEKILI HIGHWAY RESURFACING
 Honokohau to Papanahoa
 Project No. 340D-01-93M
 Date: May, 1993
 SHEET No. 11 OF 11 SHEETS