

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	25	32

LEGEND

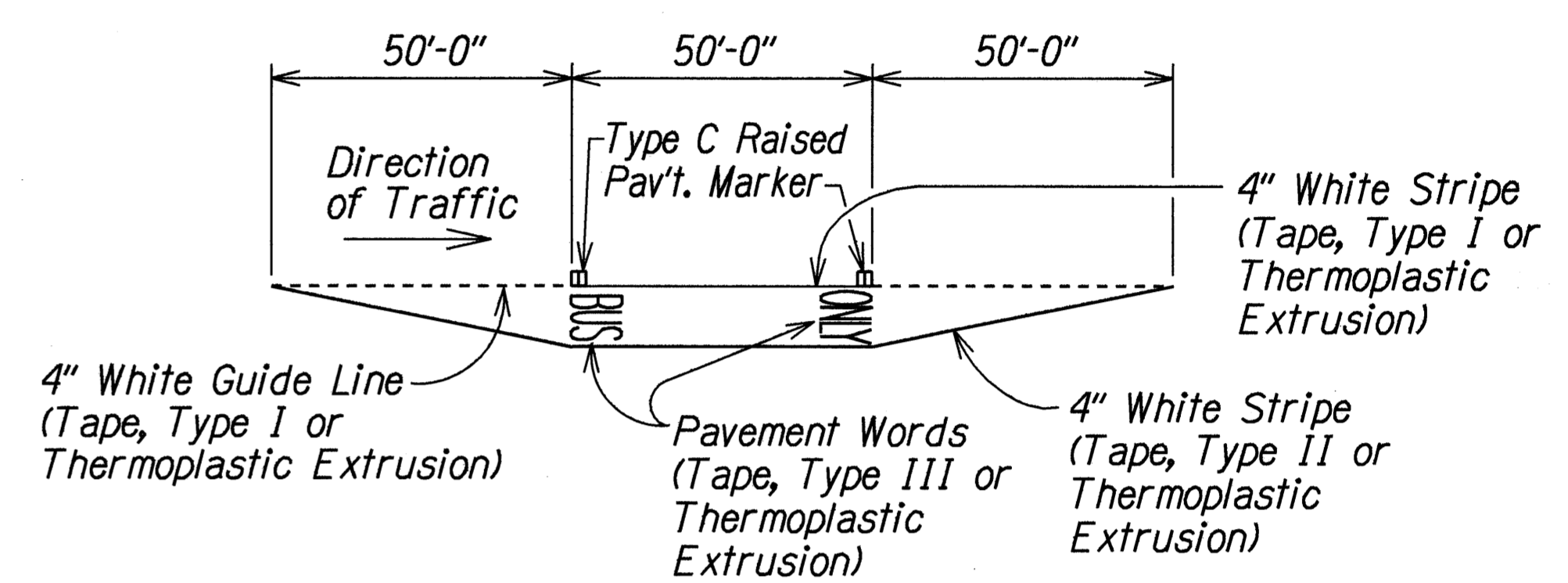
- 4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
- 4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
- 8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow 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)
- Bike Lane Marking, 4" Wide x 3'-0" Long White Stripe (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. Curb marking shall include top of curb and both sides.
10. Backing for all new Regulatory and Warning Signs shall not be spliced.
11. 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"
12. Border, messages, arrows, symbols and shields shall conform to details as shown on the plans and as specified in the MUTCD.
13. Sign messages shall be as indicated on the plan.
14. All panels shall be reflectorized in accordance with Section 712.20 of the Standard Specifications. Minimum width of panels shall be 2 feet, 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.
15. 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.
16. Final location of all sign post installed within the sidewalk areas shall maintain a minimum clearance width of 36 inches from sidewalk edge to provide for wheelchair accessibility.
17. Removing existing signs and reinstalling on new post shall not be paid for separately, but shall be considered incidental to the various signing items.
18. Signs placed along bikeways shall have a minimum height clearance of 8'-0".
19. All existing sign post(s) to remain within the sidewalk area shall meet the minimum clear width of 36 inches from the sidewalk edge. Where necessary, the existing sign post(s) shall be relocated to meet the minimum clear width. This work shall not be paid for separately but shall be considered incidental to the various signing items.
20. Removing and Reinstalling existing Street Name Signs on Regulatory and Warning Signs Post shall not be paid for separately but shall be considered incidental to the various Signing Items.
21. Install Type II Object Marker on all utility poles or trees that are within the State Highway right-of-way and within 50 feet of the roadway edge of pavement shall be marked as directed by the Engineer.
22. Sign No. R1-1 (Stop Sign) shall use the Nippon Carbide Industries (USA) Inc., Nikkalite, F-Cal "Premium Graffiti Resistant" Film (EF-40801).

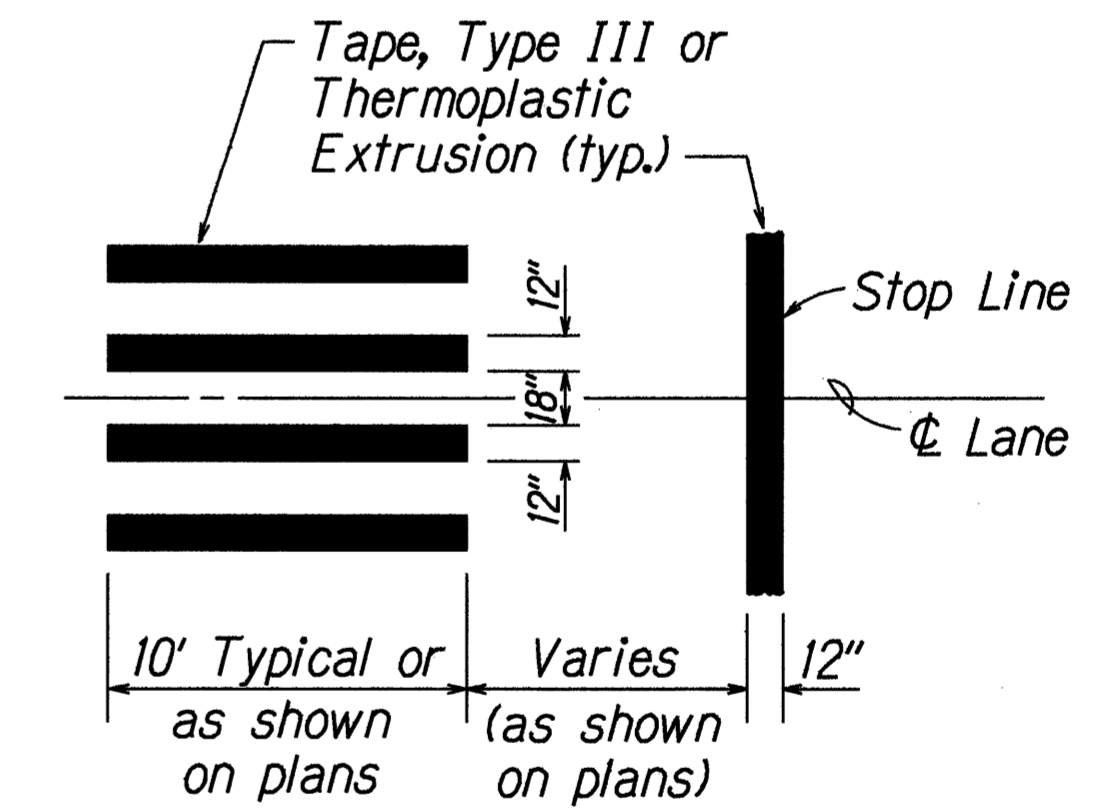
REFLECTOR MARKER LEGEND

RM-3 Reflector Marker w/Flexible Delineator Post



TYPICAL BUS BAY STRIPING

Not to Scale



CROSSWALK STRIPING DETAIL

Not to Scale

DATE	1
SURVEY PLOTTED BY	
DRAWN BY	M. Takahashi
CHECKED BY	GARY KAGELI
DATE	
ORIGINAL PLAN	
NOTES	to be
DATE	
CHECKED BY	
DATE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

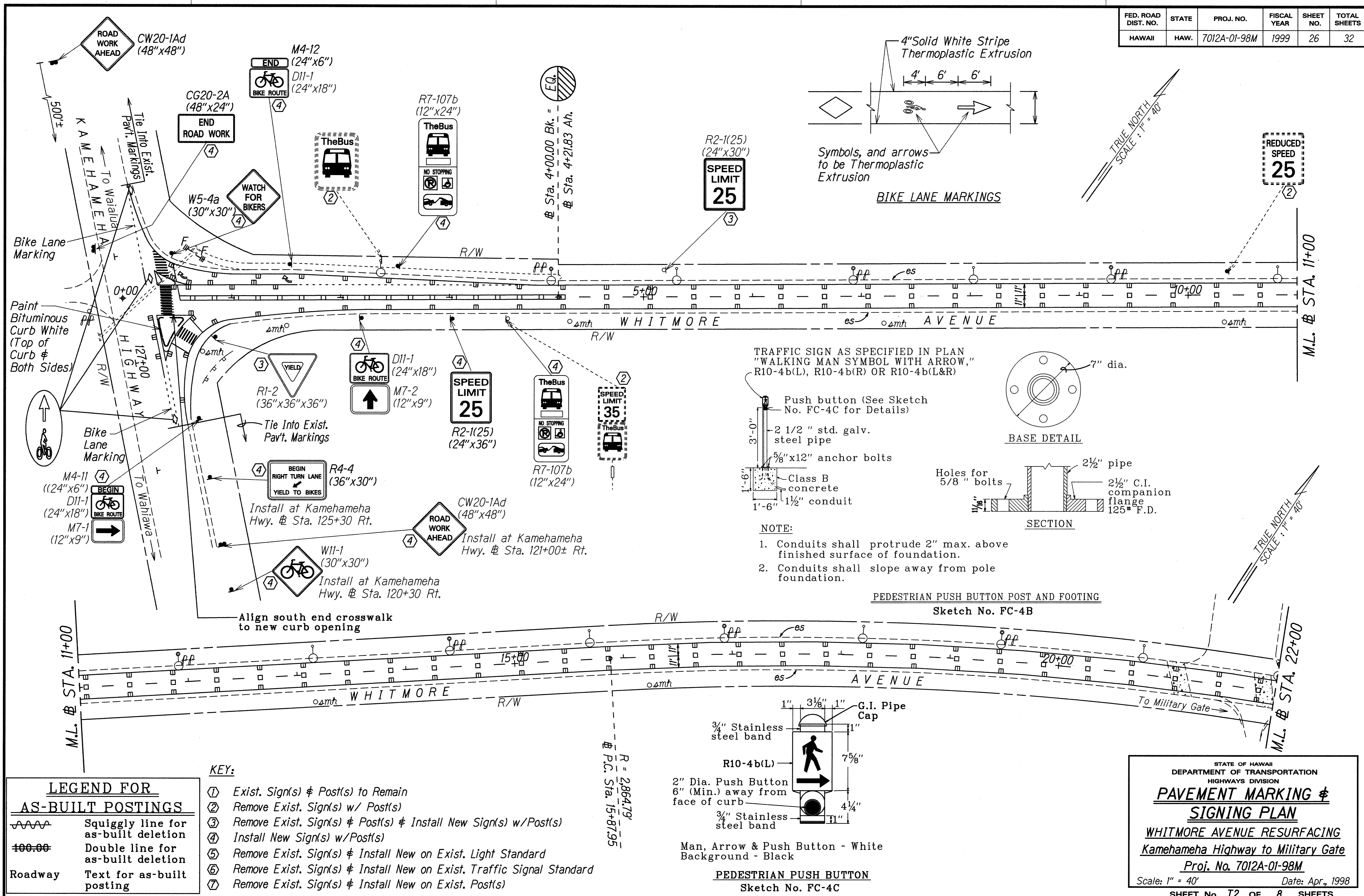
**PAVEMENT MARKING
LEGEND, DETAILS & NOTES**

**WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate
Project No. 7012A-01-98M**

Scale: As Shown Date: Apr., 1998

SHEET No. 21 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	26	32

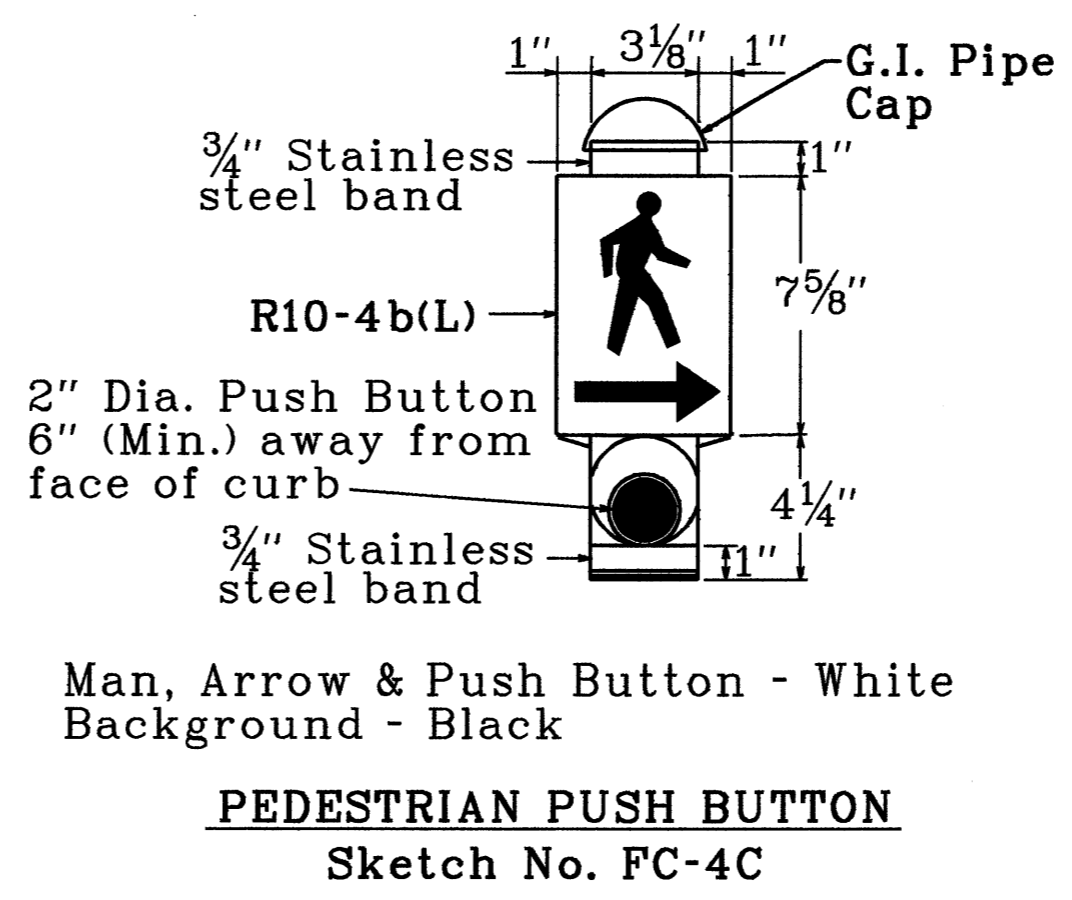


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTES BOOK	
QUANTITIES BY	
CHECKED BY	

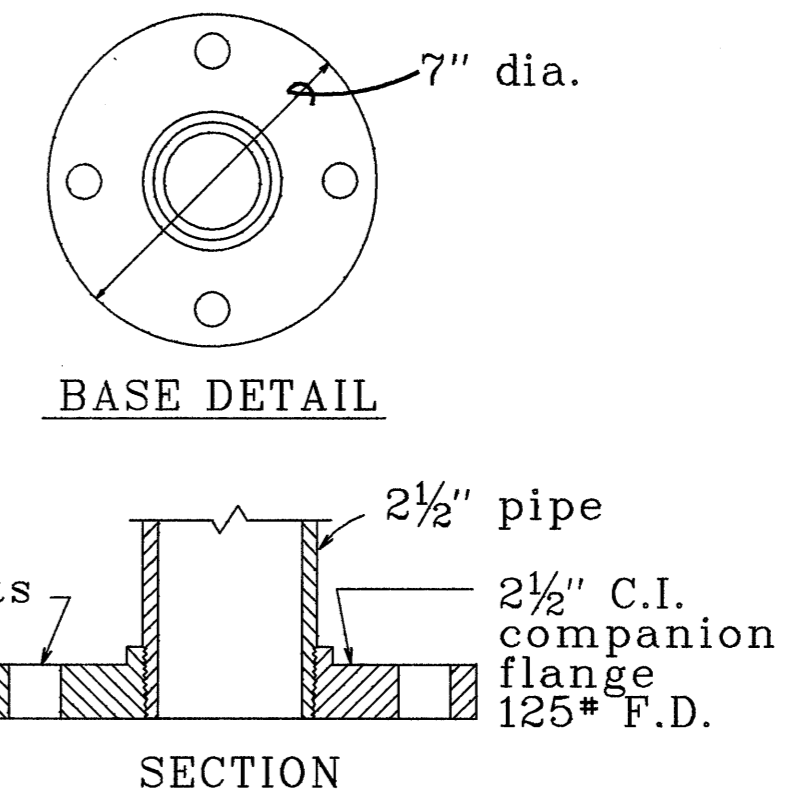
LEGEND FOR AS-BUILT POSTINGS

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

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/ Post(s)
 - ④ Install New Sign(s) w/ Post(s)
 - ⑤ Remove Exist. Sign(s) & Install New on Exist. Light Standard
 - ⑥ Remove Exist. Sign(s) & Install New on Exist. Traffic Signal Standard
 - ⑦ Remove Exist. Sign(s) & Install New on Exist. Post(s)



PEDESTRIAN PUSH BUTTON POST AND FOOTING
Sketch No. FC-4B



TRAFFIC SIGN AS SPECIFIED IN PLAN "WALKING MAN SYMBOL WITH ARROW," R10-4b(L), R10-4b(R) OR R10-4b(L&R)

Push button (See Sketch No. FC-4C for Details)

2 1/2" std. galv. steel pipe

5/8" x 12" anchor bolts

Class B concrete

1 1/2" conduit

NOTE:

- Conduits shall protrude 2" max. above finished surface of foundation.
- Conduits shall slope away from pole foundation.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

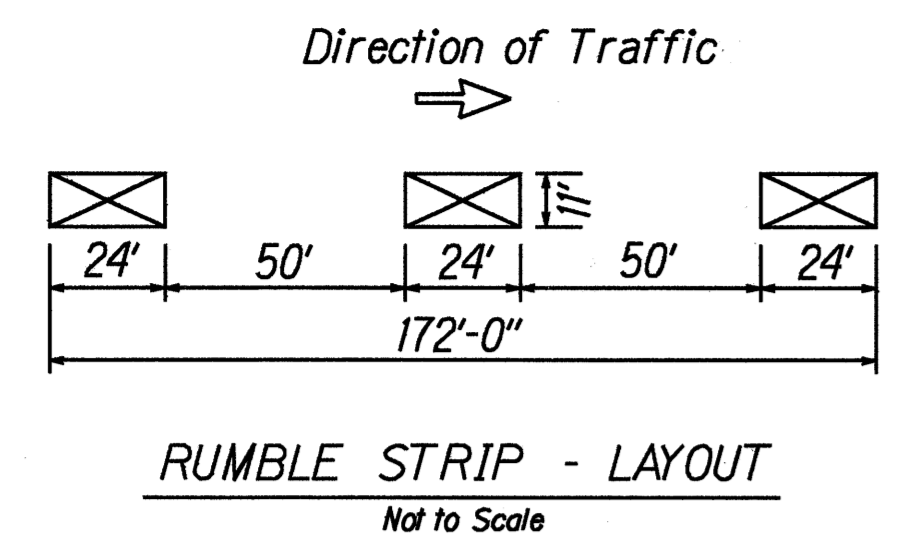
PAVEMENT MARKING & SIGNING PLAN

WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate
Proj. No. 7012A-01-98M

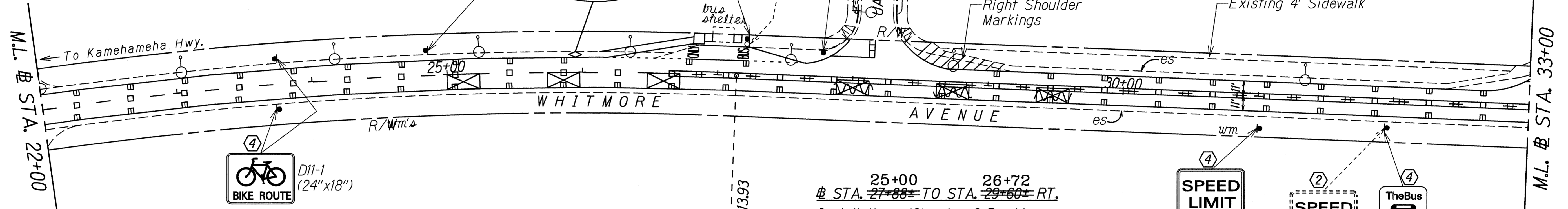
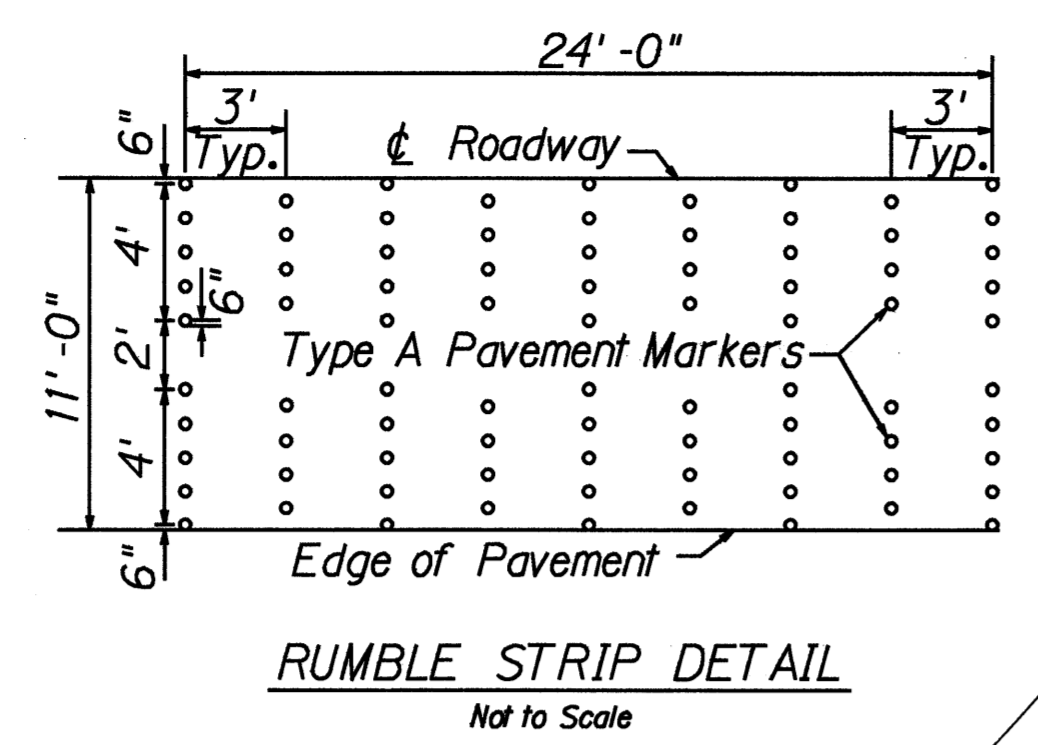
Scale: 1" = 40' Date: Apr., 1998

SHEET No. T2 OF 8 SHEETS

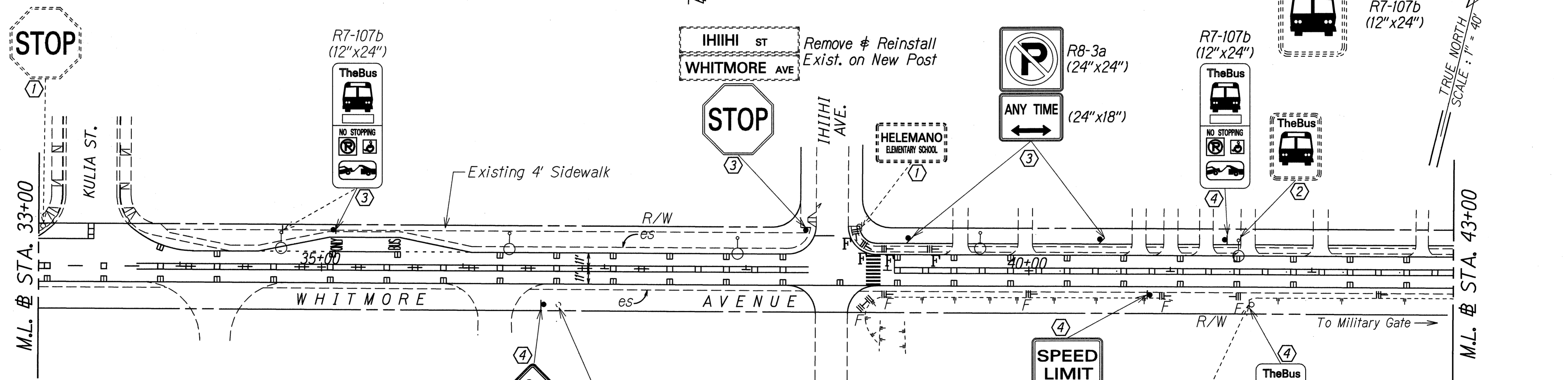
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	27	32



NOTE: Rumble Strip will be paid under Item No. 529.2010 - Type A Pavement Markers



25+00 # STA. ~~27+88~~ TO STA. ~~29+60~~ RT.
Install three (3) sets of Rumble Strip. For Details, see this sheet.



- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/Post(s)
 - ④ Install New Sign(s) w/Post(s)
 - ⑤ Remove Exist. Sign(s) & Install New on Exist. Light Standard
 - ⑥ Remove Exist. Sign(s) & Install New on Exist. Traffic Signal Standard
 - ⑦ Remove Exist. Sign(s) & Install New on Exist. Post(s)

Remove and dispose existing Type I Traffic Signal Post & Foundation. This work shall be considered incidental to the various contract items.

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

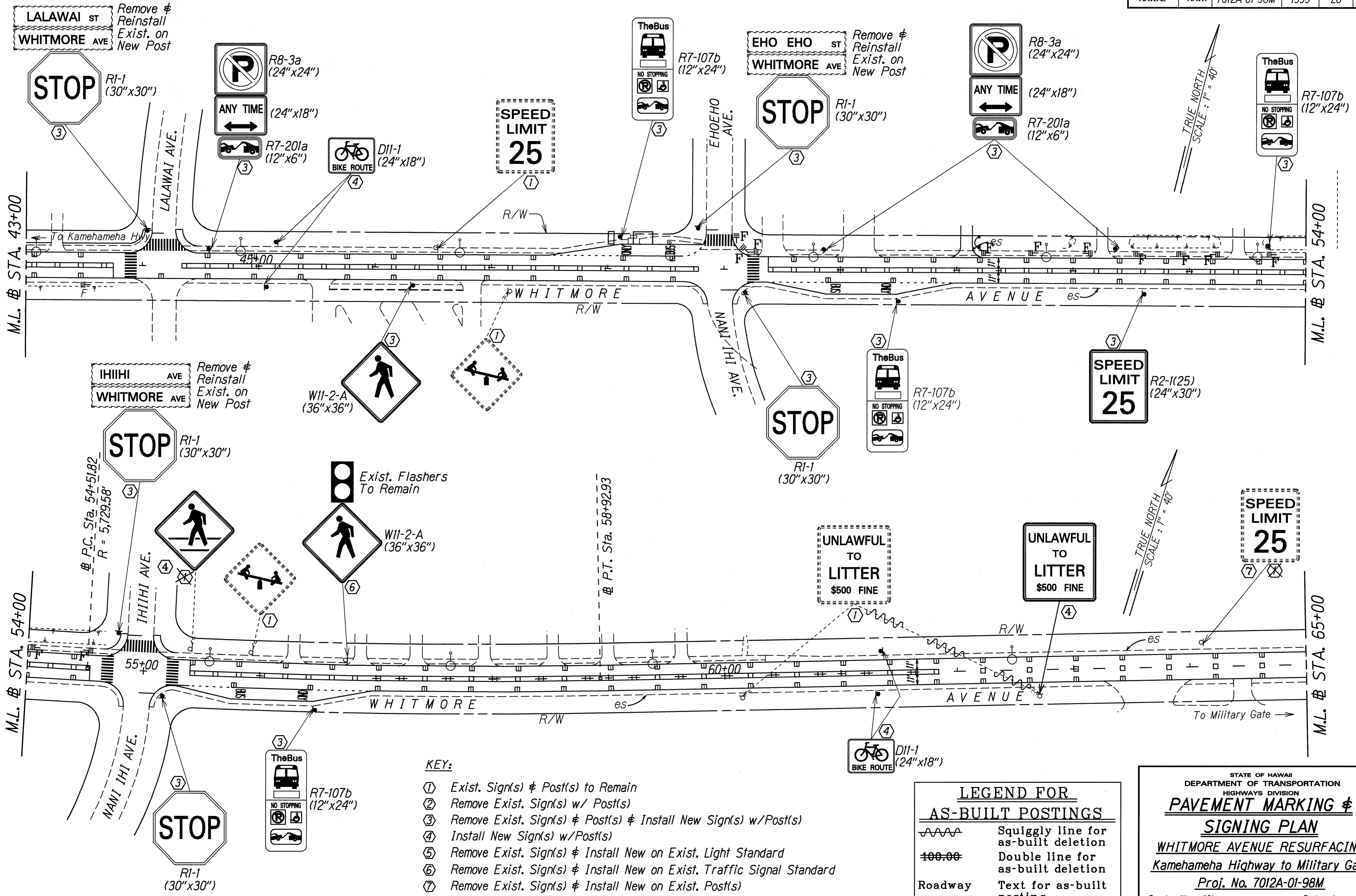
PAVEMENT MARKING & SIGNING PLAN

WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate
Proj. No. 7012A-01-98M
Scale: 1" = 40' Date: Apr., 1998

SHEET No. T3 OF 8 SHEETS

SURVEY PLOTTED BY: DATE: 2/1/98
 DRAWN BY: M. Lehoullier
 DESIGNED BY: Gary Kikuchi
 CHECKED BY: J. Williams

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	28	32



DATE:	118-98
SURVEY PLOTTED BY:	
DRAWN BY:	M. Takahashi
CHECKED BY:	GARY L. GREGG
NO. IN/REVISED:	
NO. IN/REVISED:	
NO. IN/REVISED:	

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/Post(s)
 - ④ Install New Sign(s) w/Post(s)
 - ⑤ Remove Exist. Sign(s) & Install New on Exist. Light Standard
 - ⑥ Remove Exist. Sign(s) & Install New on Exist. Traffic Signal Standard
 - ⑦ Remove Exist. Sign(s) & Install New on Exist. Post(s)

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

*WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate*

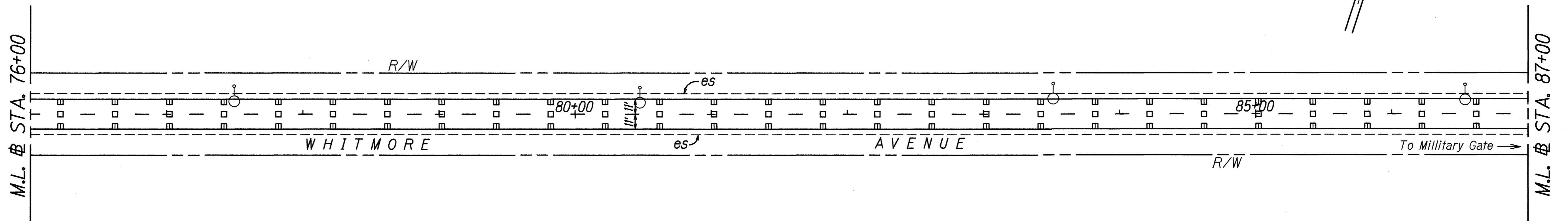
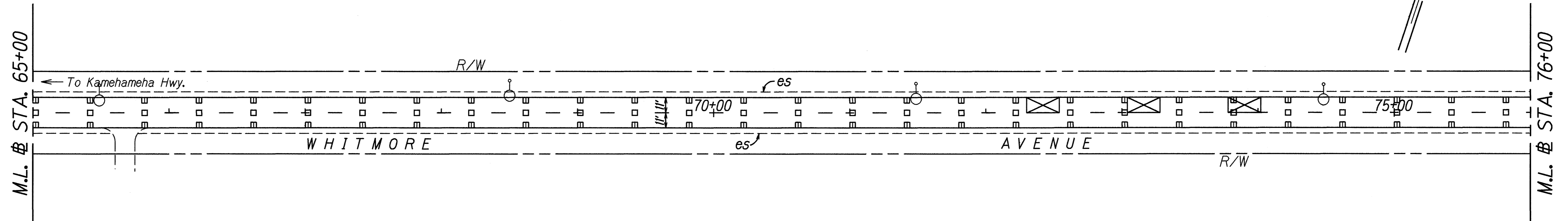
Proj. No. 7012A-01-98M

Scale: 1" = 40' Date: Apr., 1998

SHEET No. T4 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	29	32

STA. 72+30± TO STA. 74+02± LT.
Install three (3) sets of Rumble Strip.
For Details, see Sheet No. T- 3.



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	1/28/98
DRAWN BY	M. Takafuji
TRACED BY	
NOTES BOOK	
NO. 1010104	
QUANTITIES BY	GETY KAGAMI
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING

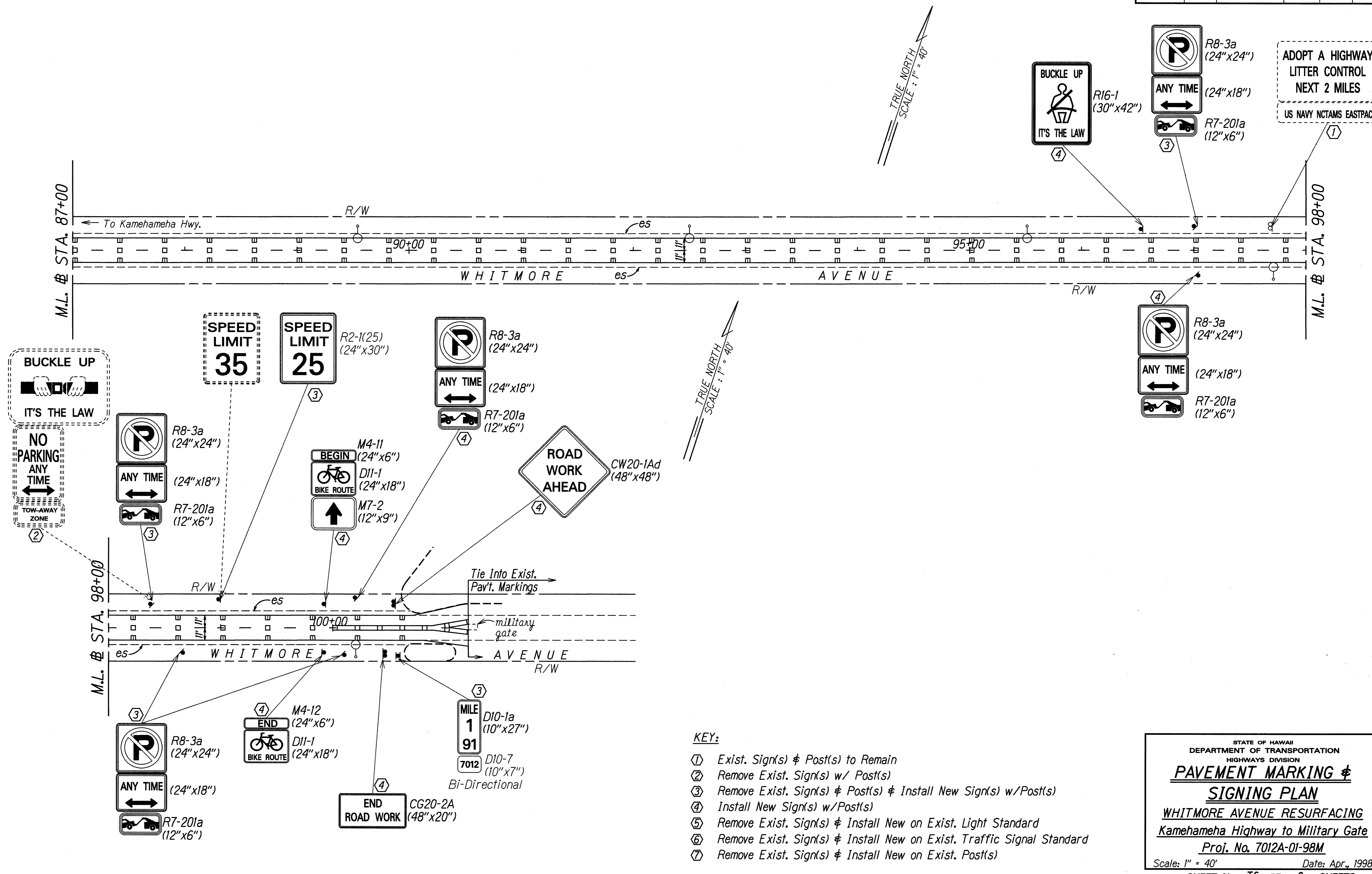
SIGNING PLAN

WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate
Proj. No. 7012A-01-98M

Scale: 1" = 40' Date: Apr., 1998

SHEET No. T5 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	30	32



SURVEY PLOTTED BY	DATE
DRAWN BY	18-98
TRACED BY	
NOTES	
QUANTITIES BY	
CHECKED BY	

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/Post(s)
 - ④ Install New Sign(s) w/Post(s)
 - ⑤ Remove Exist. Sign(s) & Install New on Exist. Light Standard
 - ⑥ Remove Exist. Sign(s) & Install New on Exist. Traffic Signal Standard
 - ⑦ Remove Exist. Sign(s) & Install New on Exist. Post(s)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

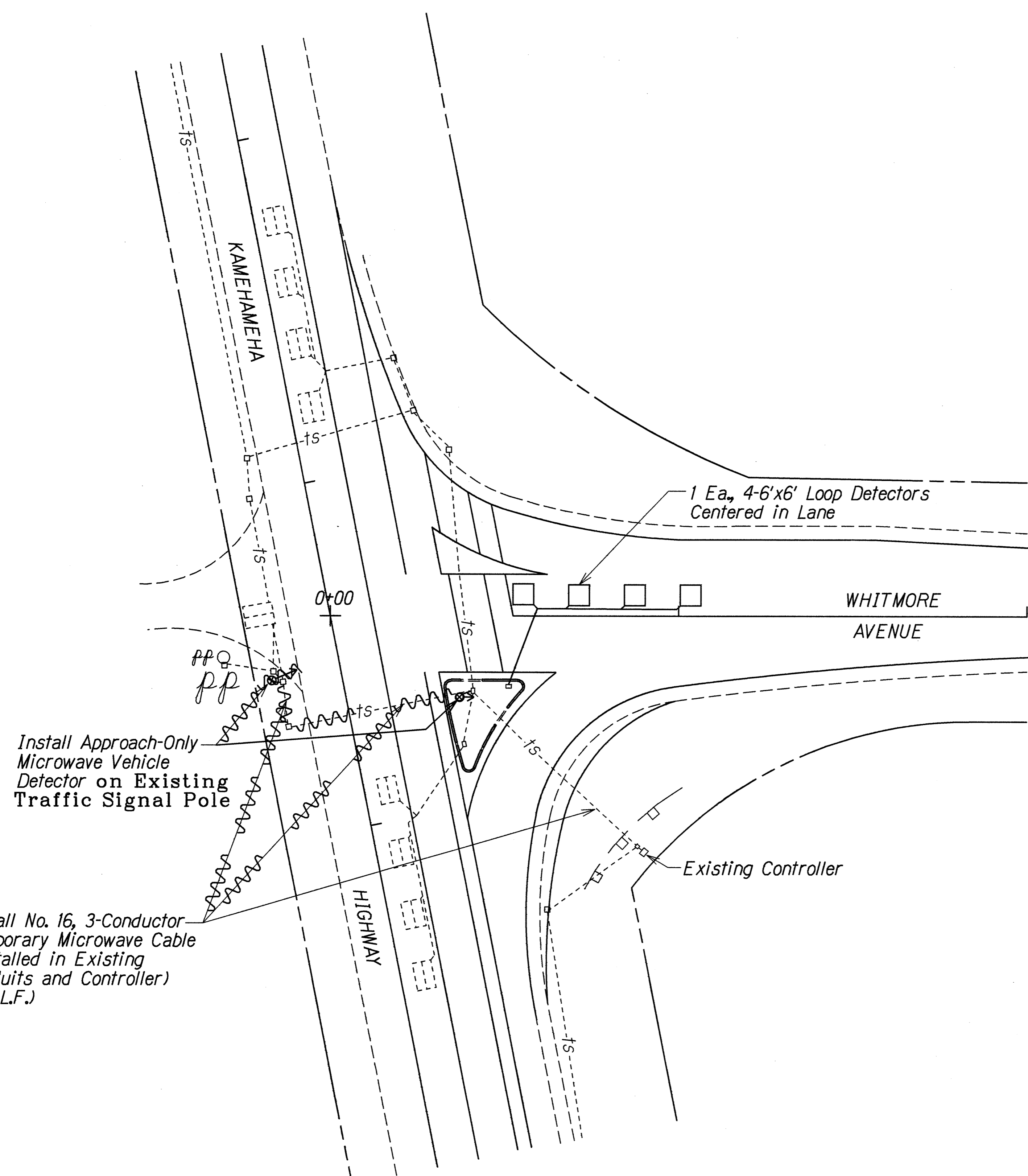
**PAVEMENT MARKING &
SIGNING PLAN**

WHITMORE AVENUE RESURFACING
Kamehameha Highway to Military Gate
Proj. No. 7012A-01-98M

Scale: 1" = 40' Date: Apr., 1998

SHEET No. T6 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7012A-01-98M	1999	31	32



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY M. Takahira	
DESIGNED BY Gary Kagehi	
CHECKED BY	
NOTE BOOK	
10/29/98	
S. M. Takahira	

Install No. 16, 3-Conductor
Temporary Microwave Cable
(Installed in Existing
Conduits and Controller)
~~170~~ L.F.)
85

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

**LOOP DETECTOR PLAN**

*WHITMORE AVENUE RESURFACING  
Kamehameha Highway to Military Gate  
Project No. 7012A-01-98M*

Scale: 1"=20'      Date: Apr., 1998

SHEET No. 77 OF 8 SHEETS

PAVEMENT MARKING SUMMARY		
DESCRIPTION	QUANTITY	
<b>PAVEMENT MARKERS</b>		
TYPE A _____	492	EA.
TYPE C _____	530	EA.
TYPE D _____	<del>345</del> <del>310</del>	EA.
TYPE J _____	<del>624</del> <del>780</del>	EA.
<b>TAPE - TYPE I OR THERMOPLASTIC EXTRUSION</b>		
4-INCH PAVEMENT STRIPE (WHITE) _____	280	L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	100	L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	<del>2,300</del>	L.F.
	<b>3,800</b>	
<b>TAPE - TYPE II OR THERMOPLASTIC EXTRUSION</b>		
4-INCH PAVEMENT STRIPE (WHITE) _____	20,400	L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	220	L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	135	L.F.
<b>TAPE - TYPE III OR THERMOPLASTIC EXTRUSION</b>		
4-INCH PAVEMENT STRIPE (WHITE) _____	900	L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	265	L.F.
CROSSWALK MARKINGS _____	20	LANES
PAVEMENT ARROW _____	2	EA.
PAVEMENT WORD _____	10	EA.
BIKE LANE MARKINGS _____	4	EA.
<b>PAINT</b>		
ASPHALT CONCRETE CURB (WHITE) _____	90	L.F.

TRAFFIC SIGN SUMMARY			
SIGN NO.	MESSAGE	QUANTITY	
		10 SQ. FT. OR LESS	
		W/POST	W/O POST
R1-1	STOP	7	
R1-2	YIELD	1	
R2-1(25)	SPEED LIMIT 25	7	
R4-4	BEGIN RIGHT TURN LANE  YIELD TO BIKES	1	
R7-107b	THE BUS SYMBOL  LOGOS	11	
R7-201a	TOW-AWAY SYMBOL		<del>5</del> 9
R8-3a	ANYTIME	<del>10</del> 11	
R16-1	BUCKLE-UP SYMBOL	1	
W5-4a	WATCH FOR BIKES	1	
W11-1	ADVANCE BIKE CROSSING SYMBOL	1	
W11-2-A	ADVANCE PEDESTRIAN CROSSING SYMBOL	2	1
	ADVANCE PEDESTRIAN SYMBOL		1
	UNLAWFUL TO LITTER		1
	SPEED LIMIT		1
TOTAL		<del>42</del> 43	<del>6</del> 13
D11-1	BIKE ROUTE SYMBOL	11	
M4-11	BEGIN		2
M4-12	END		2
M7-1			1
M7-2			2
TOTAL		11	7

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POSTS	W/O POST
CW20-1Ad	KAMEHAMEHA HWY. @ STA. 121+00± RT.	ROAD WORK AHEAD	1	
CW20-1Ad	KAMEHAMEHA HWY. @ STA. 133+00± LT.	ROAD WORK AHEAD	1	
CG20-2A	KAMEHAMEHA HWY @ STA. 128+00± LT.	END ROAD WORK	1	
CW20-1Ad	WHITMORE AVE. @ STA. 100+50±LT.	ROAD WORK AHEAD	1	
CG20-2A	WHITMORE AVE. @ STA. 100+50±RT.	END ROAD WORK	1	
TOTAL			5	

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

**TRAFFIC SUMMARIES**

*WHITMORE AVENUE RESURFACING  
Kamehameha Highway to Military Gate  
Project No. 7012-01-98M*

Date: Apr., 1998

SURVEY PLOTTED BY _____ DATE _____  
 DRAWN BY M. Takahashi  
 DESIGNED BY Gary Kagan  
 CHECKED BY _____  
 ORIGINAL PLAN _____  
 NOTE BOOK _____  
 No. _____  
 M. Takahashi