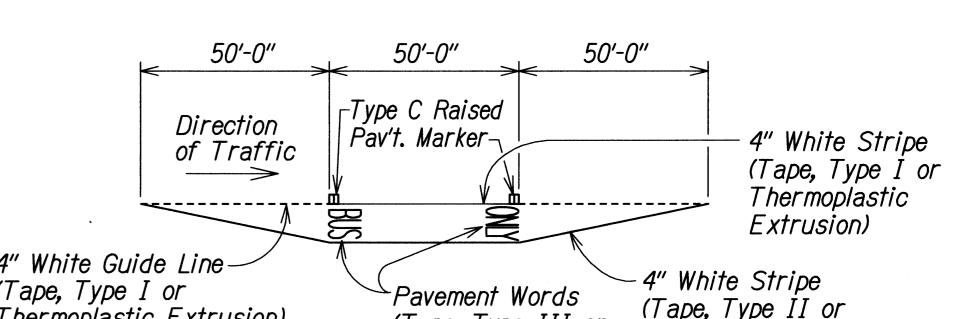
LEGEND

SURVEY PLOTTE
DRAWN BY JG
TRACED BY
DESIGNED BY QUANTITIES BY
CHECKED BY

ORIGINAL PLAN NOTE BOOK login: fred lwaimleg.dgn No.

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 and should be Thermoplastic Extrusion.
- 8. All signs not shown in detail on this plan or the Standard Plans shall be made to match existing regulatory or warning signs.
- 9. Rumble strip shall not be paid for separately but shall be paid under Item No. 629.2020 Type A pavement markers.



FED. ROAD

FISCAL YEAR

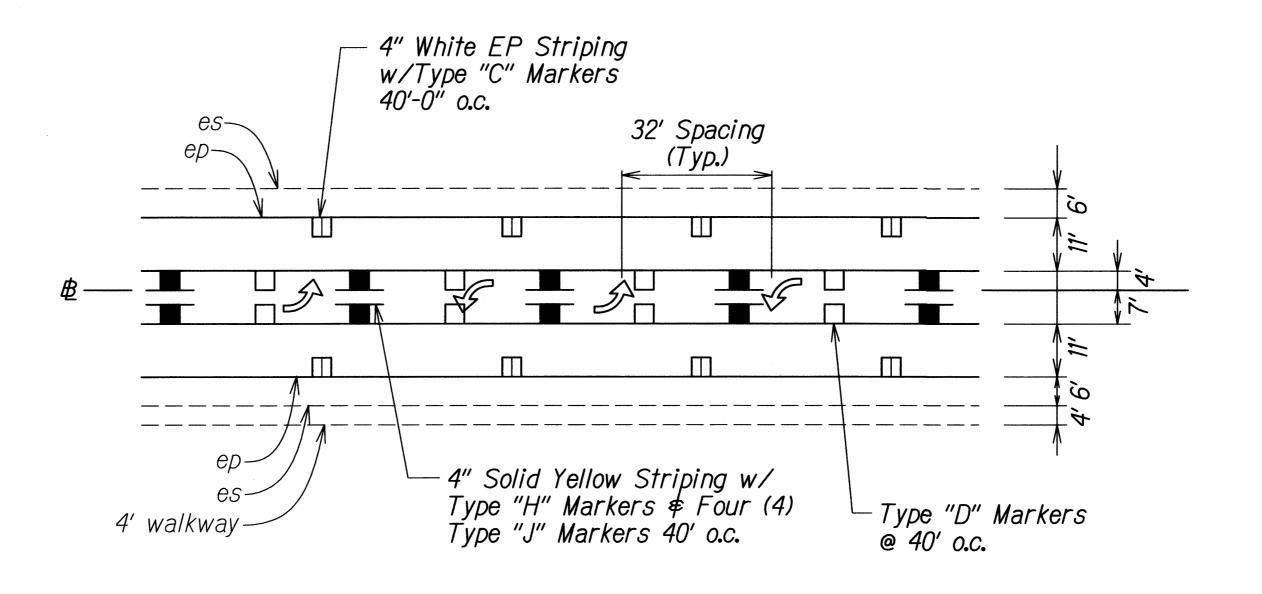
2010

PROJ. NO.

HAW. 3400B-01-10M

SHEET TOTAL

18



DETAIL - TYPICAL DOUBLE LEFT TURN LANE Scale: 1" = 20'-0"

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION PAVEMENT MARKING LEGEND, DETAILS * NOTES

WAIEHU BEACH ROAD RESURFACING Kahekili Highway to Kahului Beach Road Project No. 3400B-01-10M

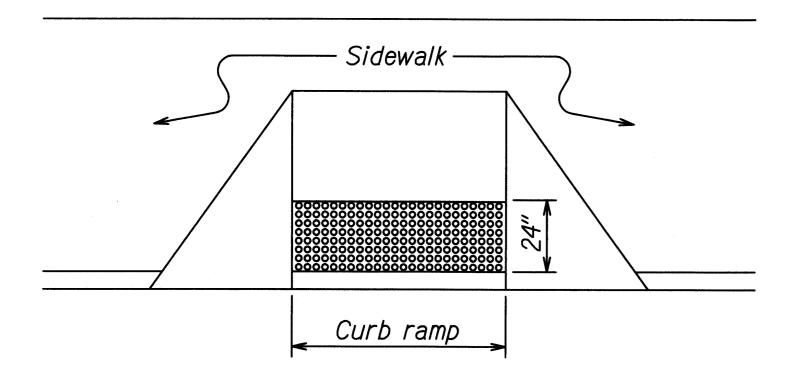
Scale: As Shown Date: March, 2010

SHEET No. 1 OF *1*

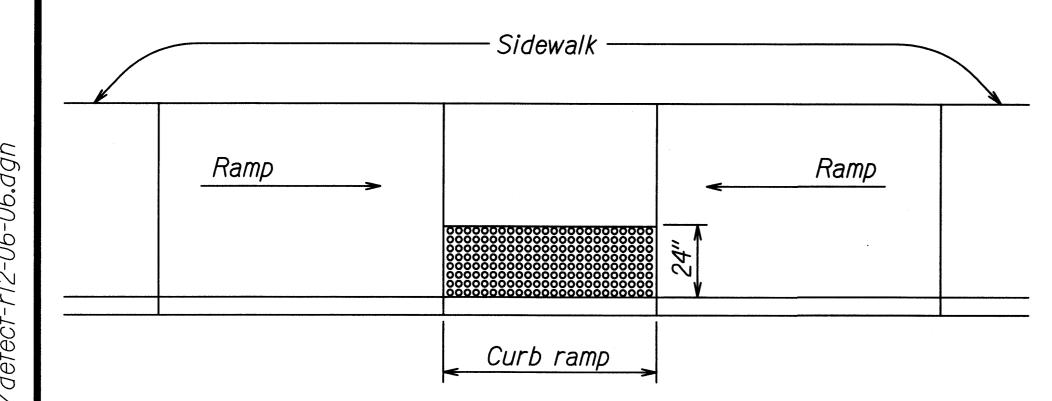
18

SHEETS

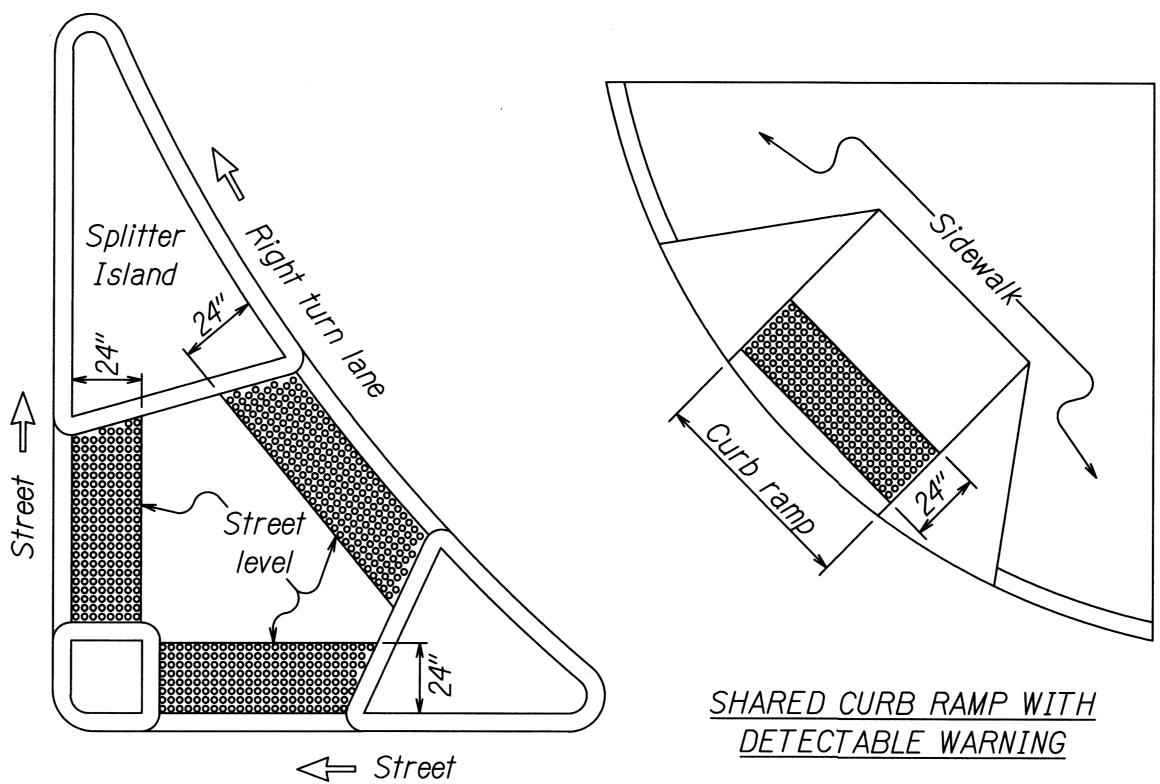
4" White Guide Line-(Tape, Type I or (Tape, Type II or Thermoplastic Extrusion) (Tape, Type III or Thermoplastic Thermoplastic Extrusion) Extrusion) TYPICAL BUS BAY STRIPING Not to Scale



DETECTABLE WARNING AT CURB RAMP



TRANSITION RAMP WITH DETECTABLE WARNING



FISCAL YEAR

19

HAW. 3400B-01-10M 2010

FED. ROAD DIST. NO.

STATE

END OF SIDEWALK CURB RAMP WITH DETECTABLE WARNING

Level Landing

(Street level)

TYPICAL INSTALLATION OF DETECTABLE WARNINGS

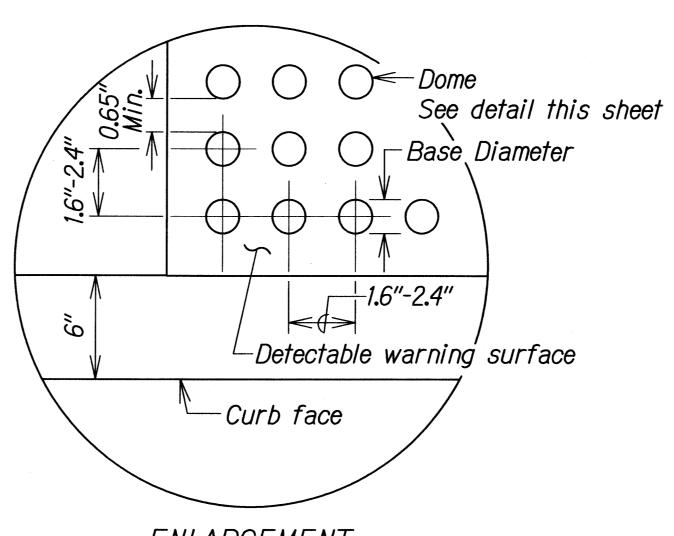
Not to Scale

REFUGE ISLAND WITH

DETECTABLE WARNING

NOTES:

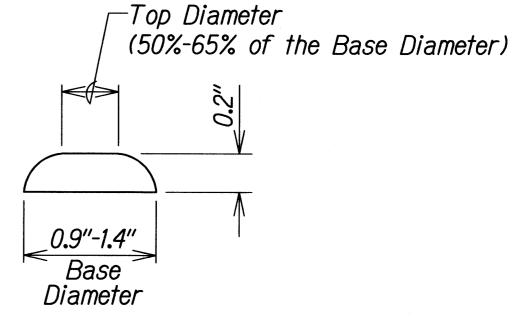
- 1. Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface (does not include flares).
- 2. Truncated domes shall have a diameter of 0.9 to 1.4 inch at the bottom, a diameter of 50%-65% of the base diameter at the top, a height of 0.2 inch and a center-to-center spacing of 1.6 to 2.4 inches measured along one side of a square arrangement.
- 3. Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between the domes.
- 4. There shall be a minimum of 70 percent contrast in light reflectance between the detectable warning and an adjoining surface, or the detectable warning shall be "safety yellow".
- 5. The material used to provide visual contrast shall be an integral part of the detectable warning surface.
- 6. The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line.



ENLARGEMENT

DETECTABLE WARNING DETAIL

Not to Scale



DOME SECTION

HIGHWAYS DIVISION

DETECTABLE WARNING DETAILS

STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION**

WAIEHU BEACH ROAD RESURFACING Kahekili Highway to Kahului Beach Road Project No. 3400B-01-10M

Scale: As Noted SHEET No. 1

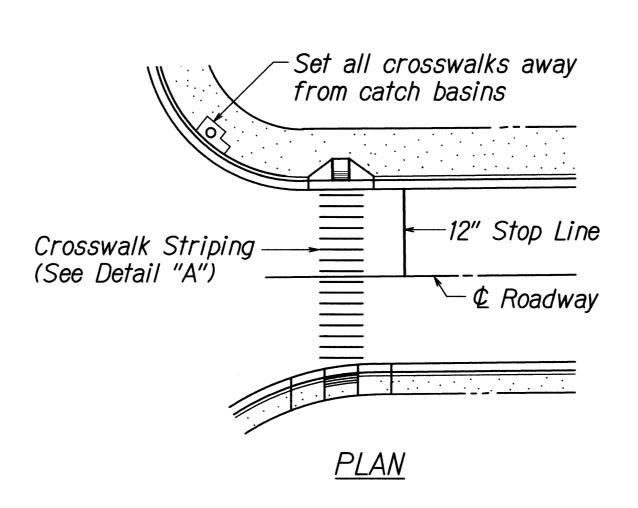
Date: March, 2010 OF 2 SHEETS

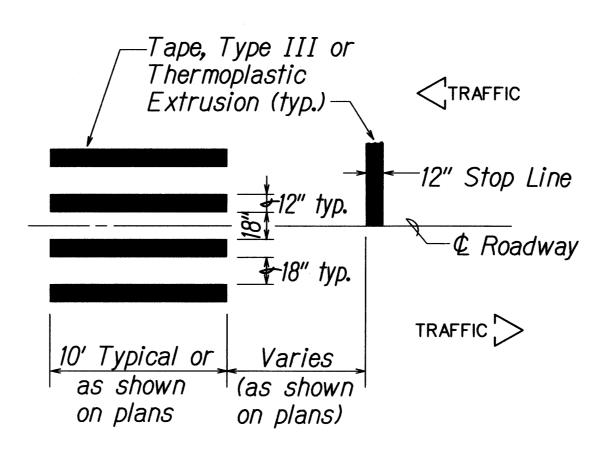
19

CURB RAMP AND SIDEWALK NOTES:

- 1. These typical details are intended as curb ramp guidelines for design and construction. These guidelines shall not replace site specific curb ramp plans.
- 2. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
- 3. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
- 4. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- 5. Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
- 6. Transitions from ramps to gutters and roadways shall be flush.
- 7. Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- 8. The pedestrian push button shall meet operational and reach requirements of the American with Disabilities Act Accessibility Guidelines (ADAAG): a) Forward Reach. The maximum height for forward reach shall be 48".
 - b) Side Reach. The maximum height for side reach shall be 48".
 - c) Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
- 9. The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A, D and Combination ramps and 8.33% for Type B, C, and E ramps.
- 10. There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
- 11. Construction joints are required to join curb ramps with sidewalks.
- 12. Unless otherwise noted, new gutters are required as shown.
- 13. All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
- 14. Surface of sidewalks and curb ramps shall be firm, stable, and slipresistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
- 15. Bed course material is required for curb ramps, sidewalks, and gutters.
- 16. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
- 17. Passing spaces along new sidewalks with 5' clear width or less shall be provided at maximum 200' intervals as required by ADA guidelines. The passing area shall be a minimum 5' wide by 5' long as feasible.
- 18. If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.

- 19. Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the current American with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.
- 20. If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/2 inch per 10 ft. (±0.2%). Remedial measures will not be accepted.

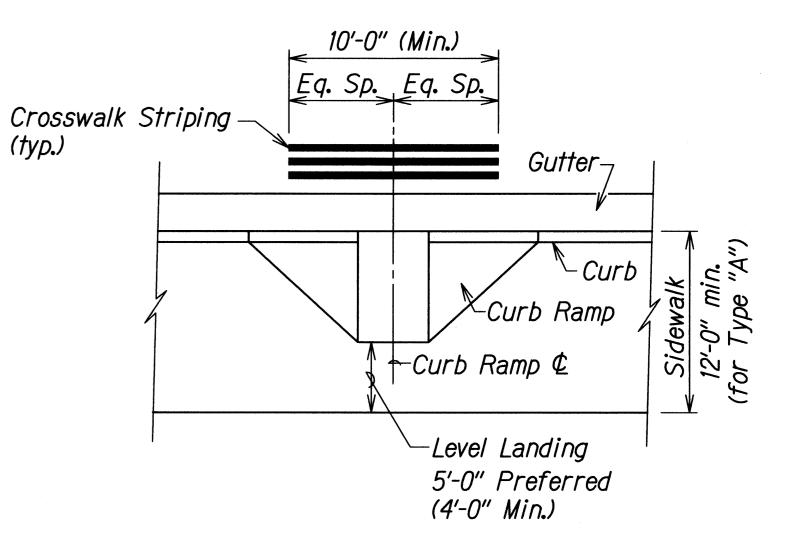




DETAIL "A"

CROSSWALK STRIPING DETAIL

NOTE: Longitudinal lines shall be parallel to traffic flow.



FED. ROAD

DIST. NO.

STATE

PROJ. NO.

наw. | *3400В-01-10М* |

TYPICAL CROSSWALK STRIPING AT CURB RAMP

STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION

CURB RAMP AND SIDEWALK NOTES

WAIEHU BEACH ROAD RESURFACING Kahekili Highway to Kahului Beach Road Project No. 3400B-01-10M

Scale: As Noted

Date: March, 2010

SHEET No. 2 OF 2 SHEETS

20

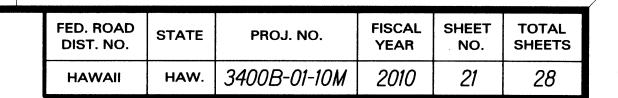
FISCAL SHEET TOTAL YEAR NO. SHEETS

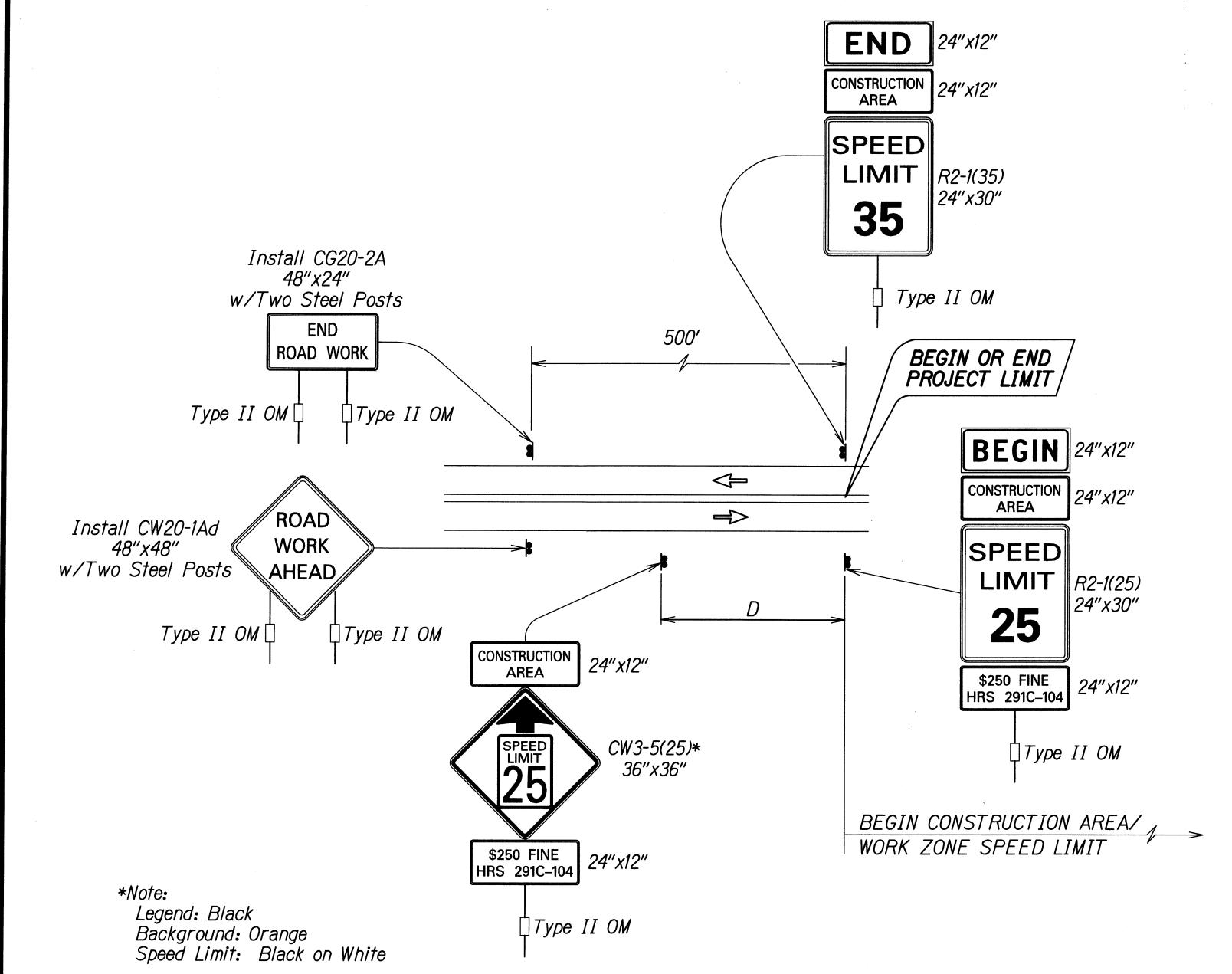
20

2010

SURVEY PLOTTE
DRAWN BY X
TRACED BY
DESIGNED BY X
QUANTITIES BY
CHECKED BY

R02-13-08

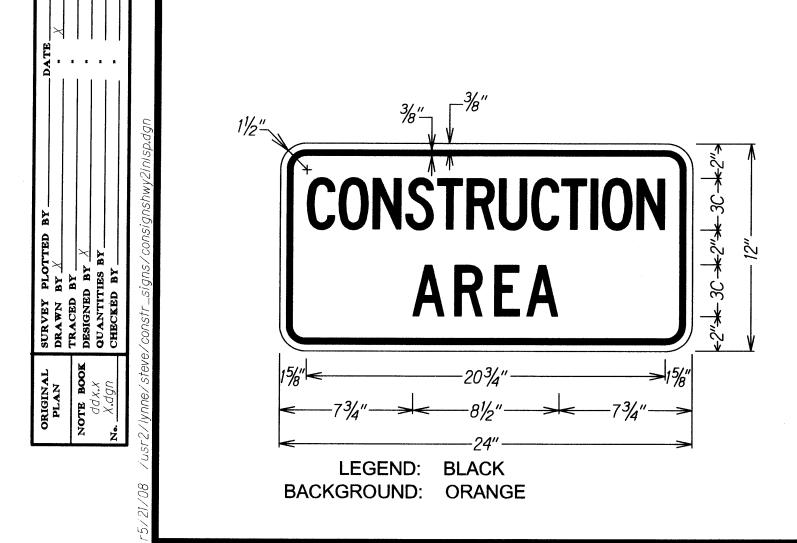


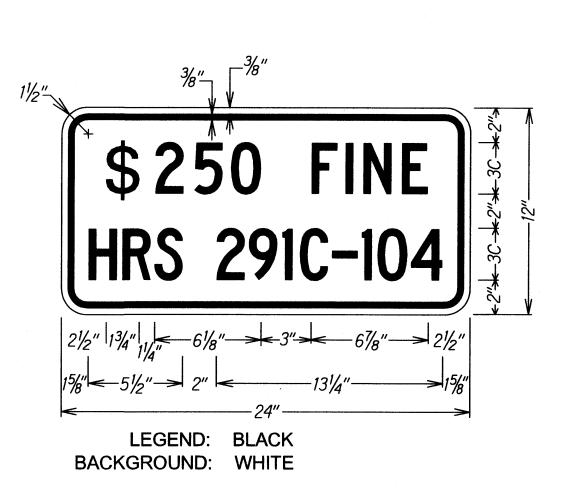


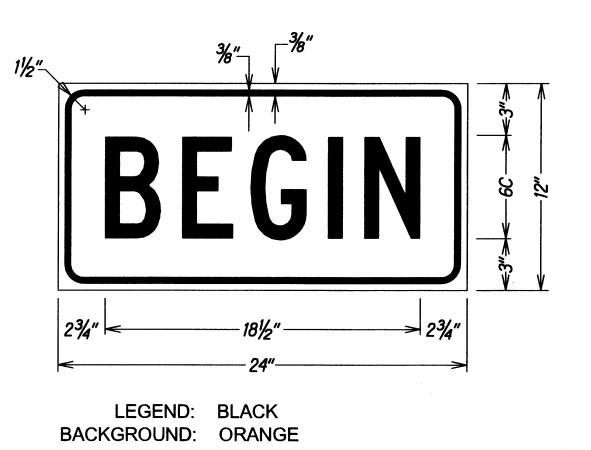
Work Zone Notes:

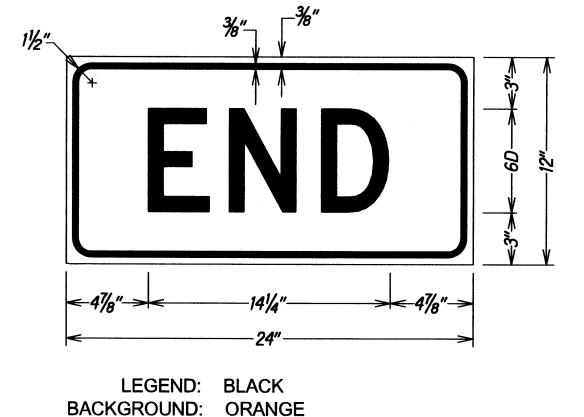
- 1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
- 2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and "\$250 FINE HRS 291C-104" Supplemental Signs).
- 3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
- 4. Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.0100, Traffic Control.
- 5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
- 6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
- 7. The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.0100, Traffic Control.

TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY









DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOW SPEED UNDIVIDED HIHGWAY
WORK ZONE SIGNING PLAN, NOTES DETAILS
WAIEHU BEACH ROAD RESURFACING
Kahekili Highway to Kahului Beach Road
Project No. 3400B-01-10M

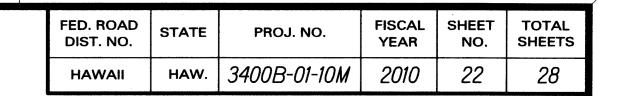
Not To Scale Date: March, 2010

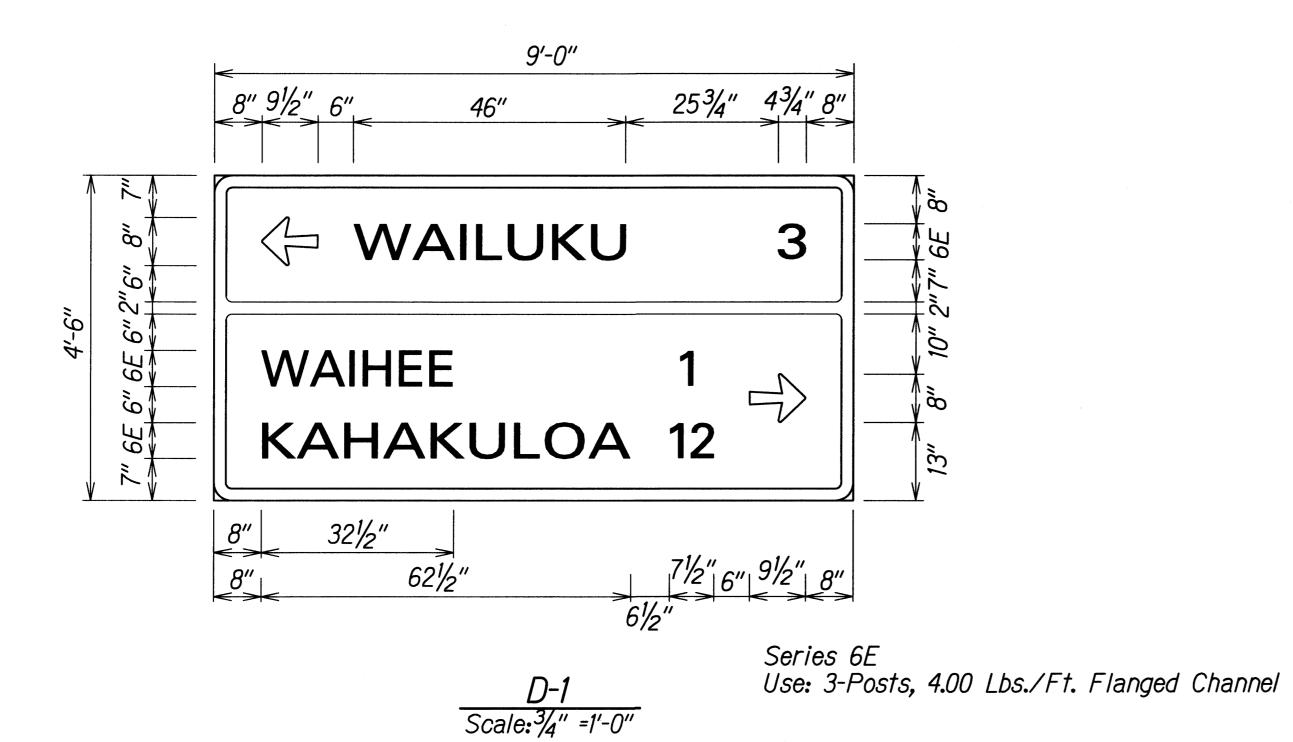
SHEET No. 1 OF 1

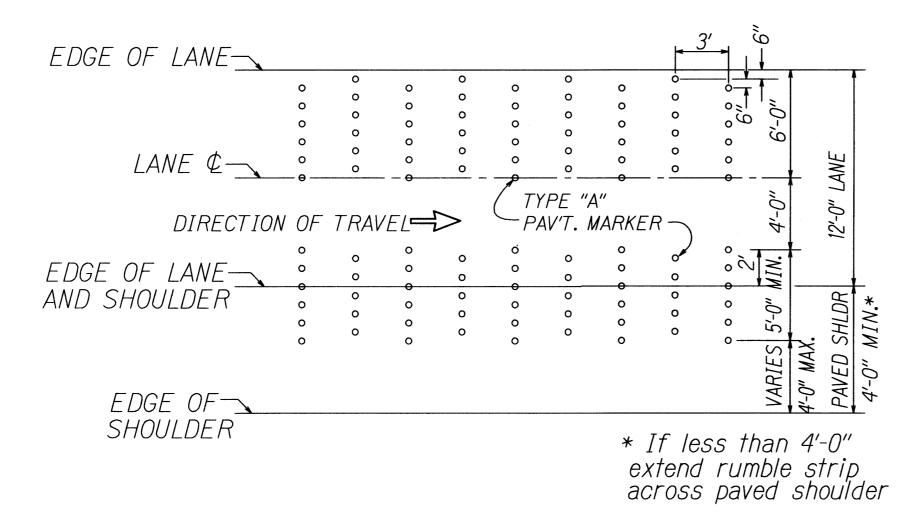
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21

SHEETS







RUMBLE STRIPS 12'-0" 2 LANE 2 WAY Scale:1/4" =1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

SIGN PANEL LAYOUT

* MISCELLANEOUS DETAILS

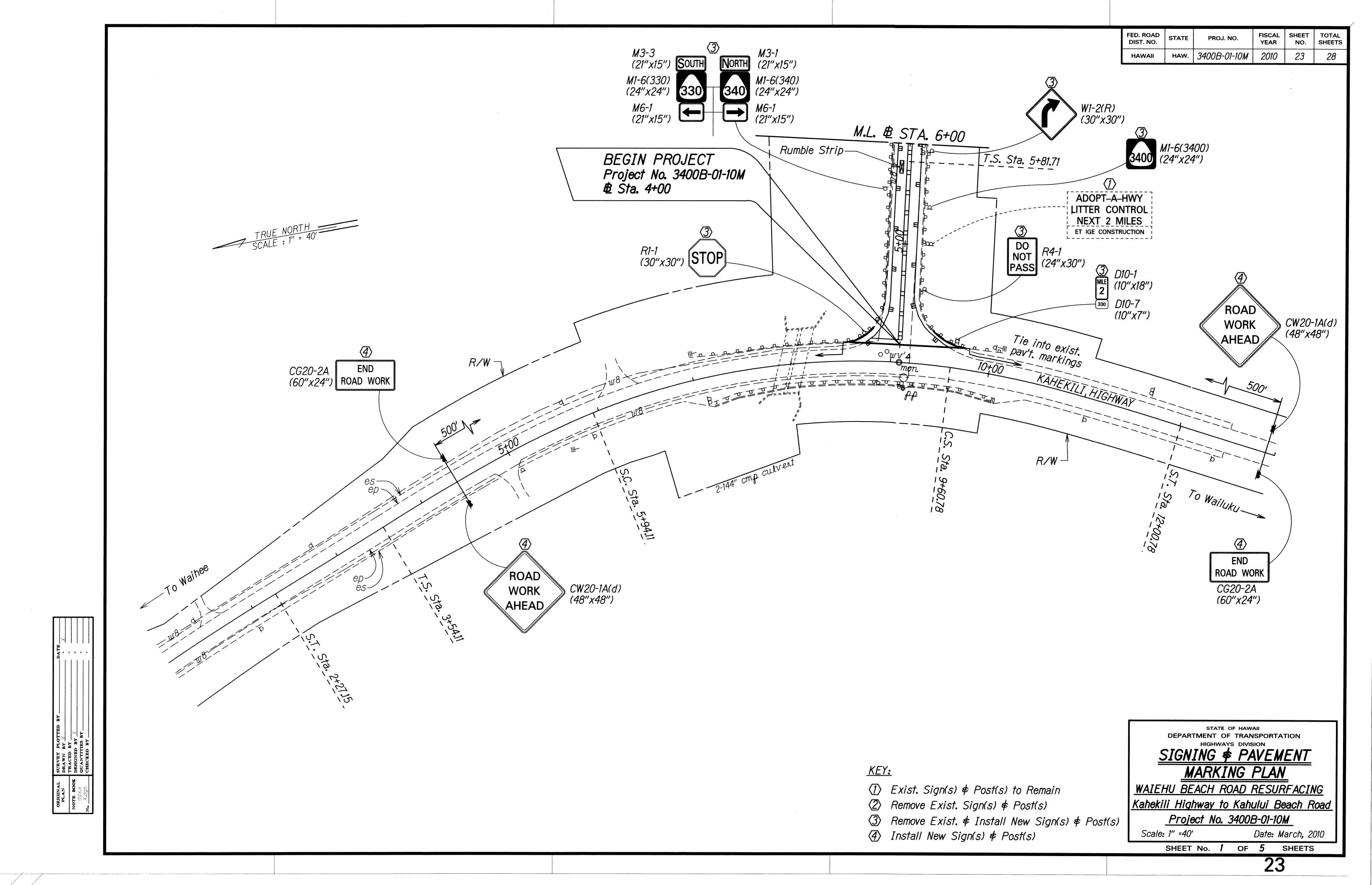
WAIEHU BEACH ROAD RESURFACING

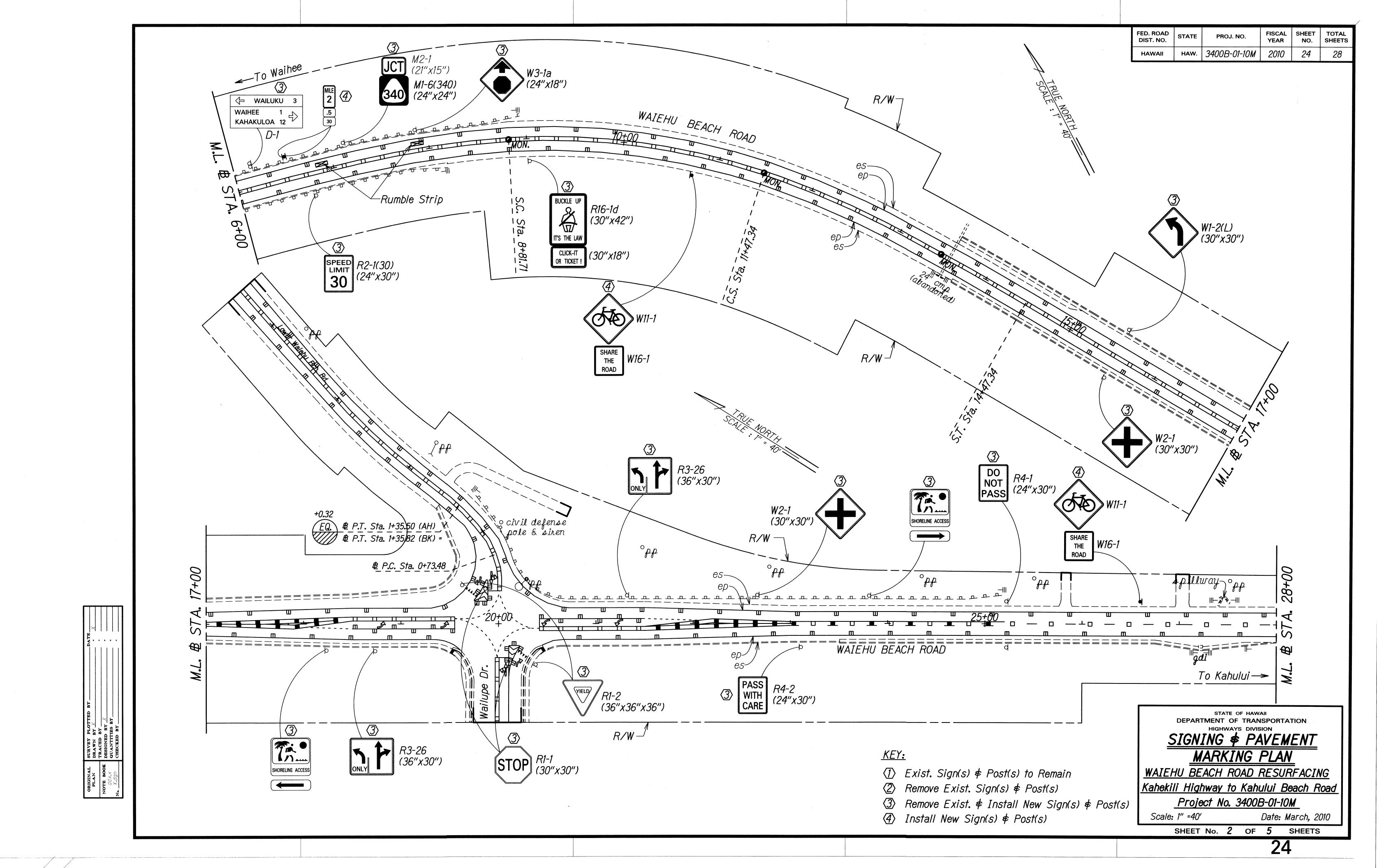
Kahekili Highway to Kahului Beach Road Project No. 3400B-01-10M

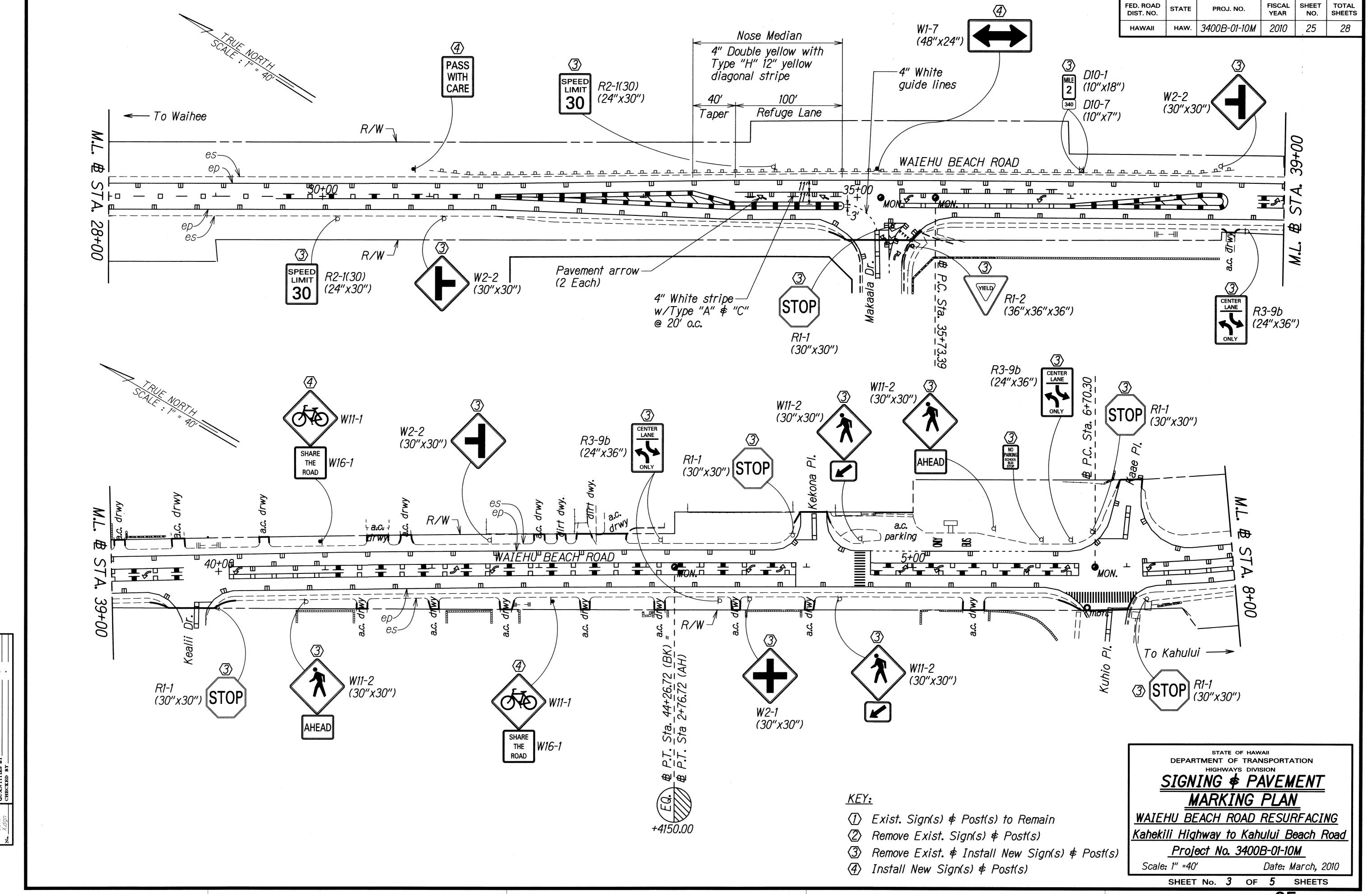
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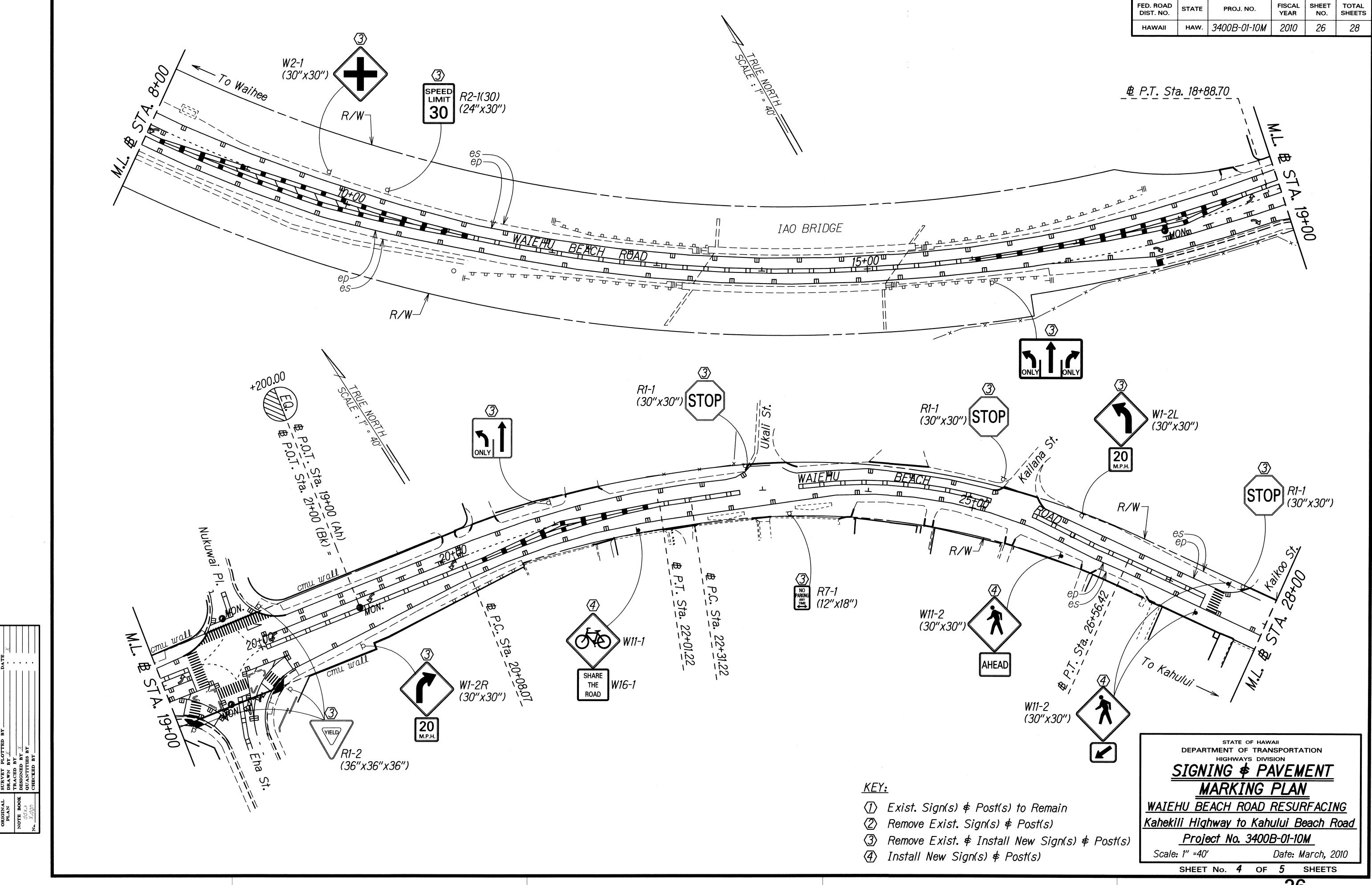
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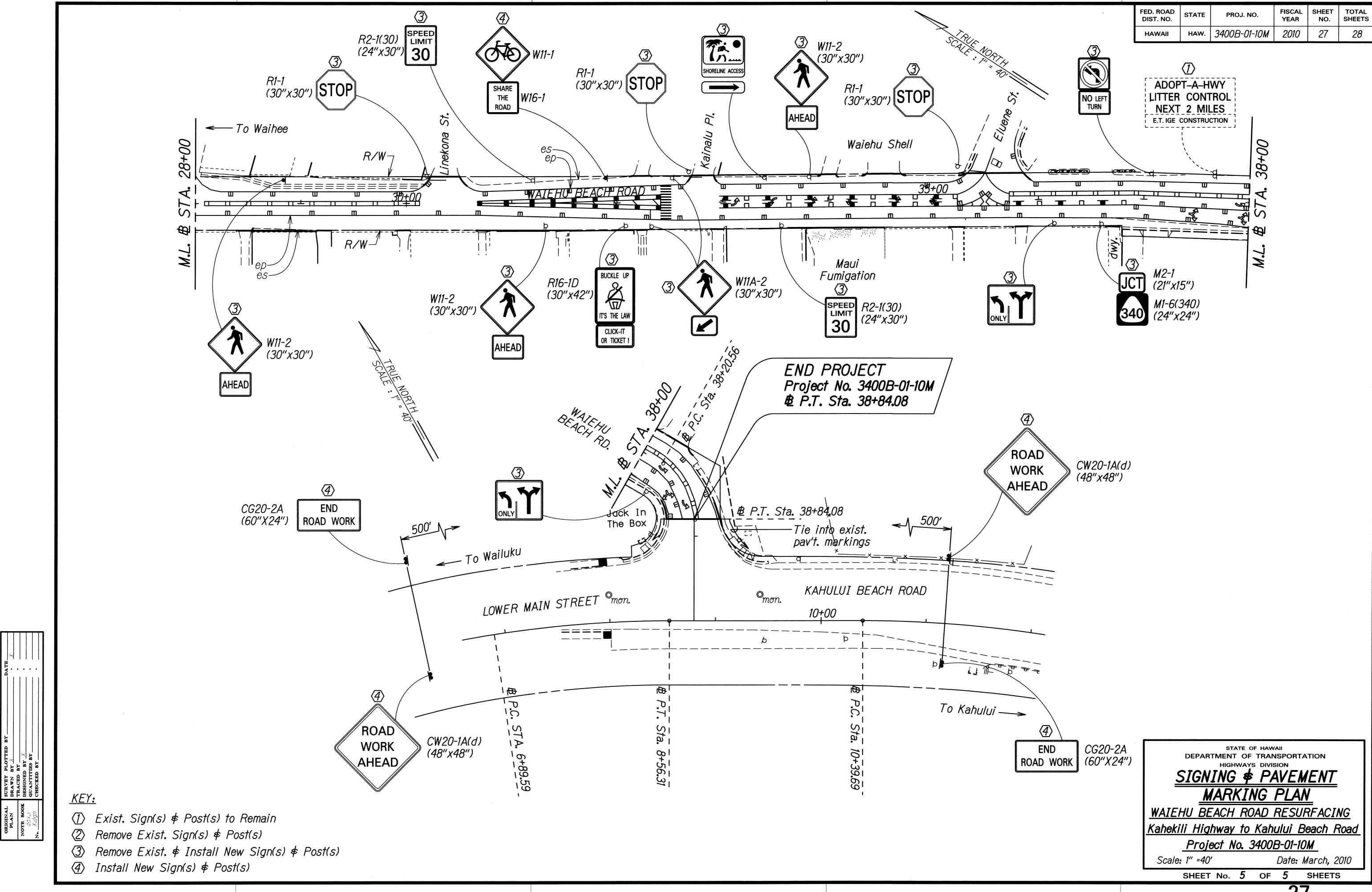
SHEET No. 1 OF 1 SHEETS

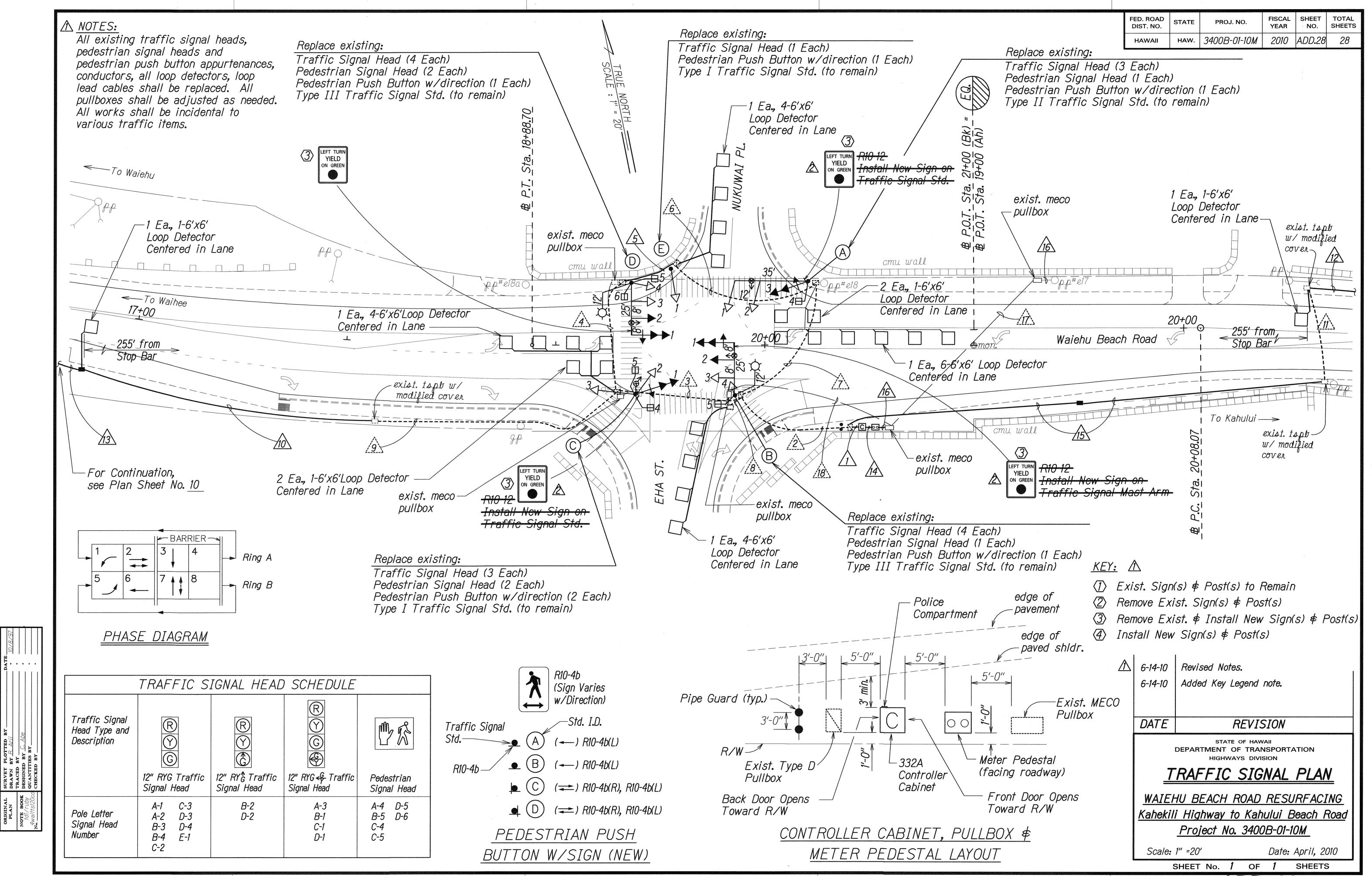




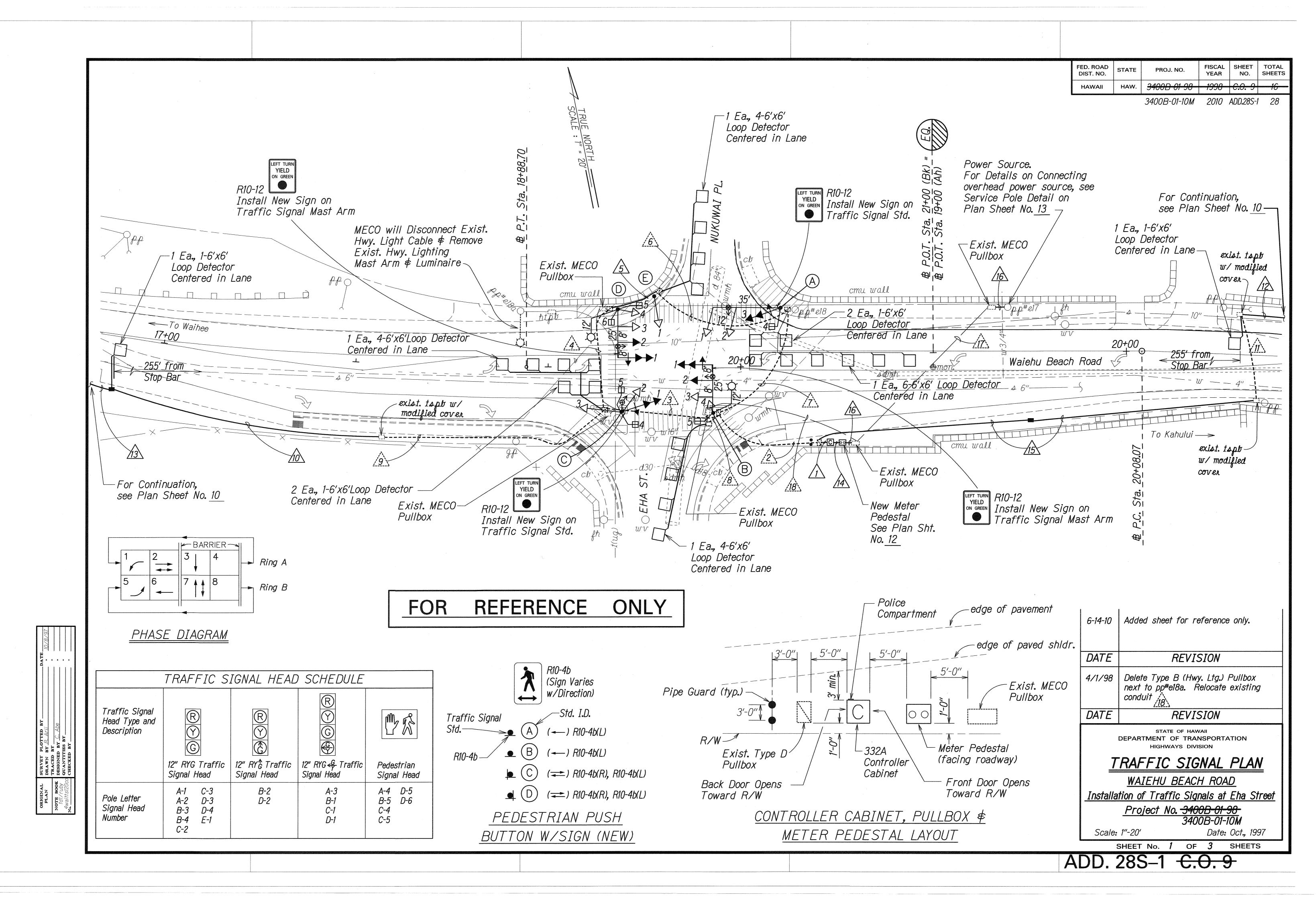


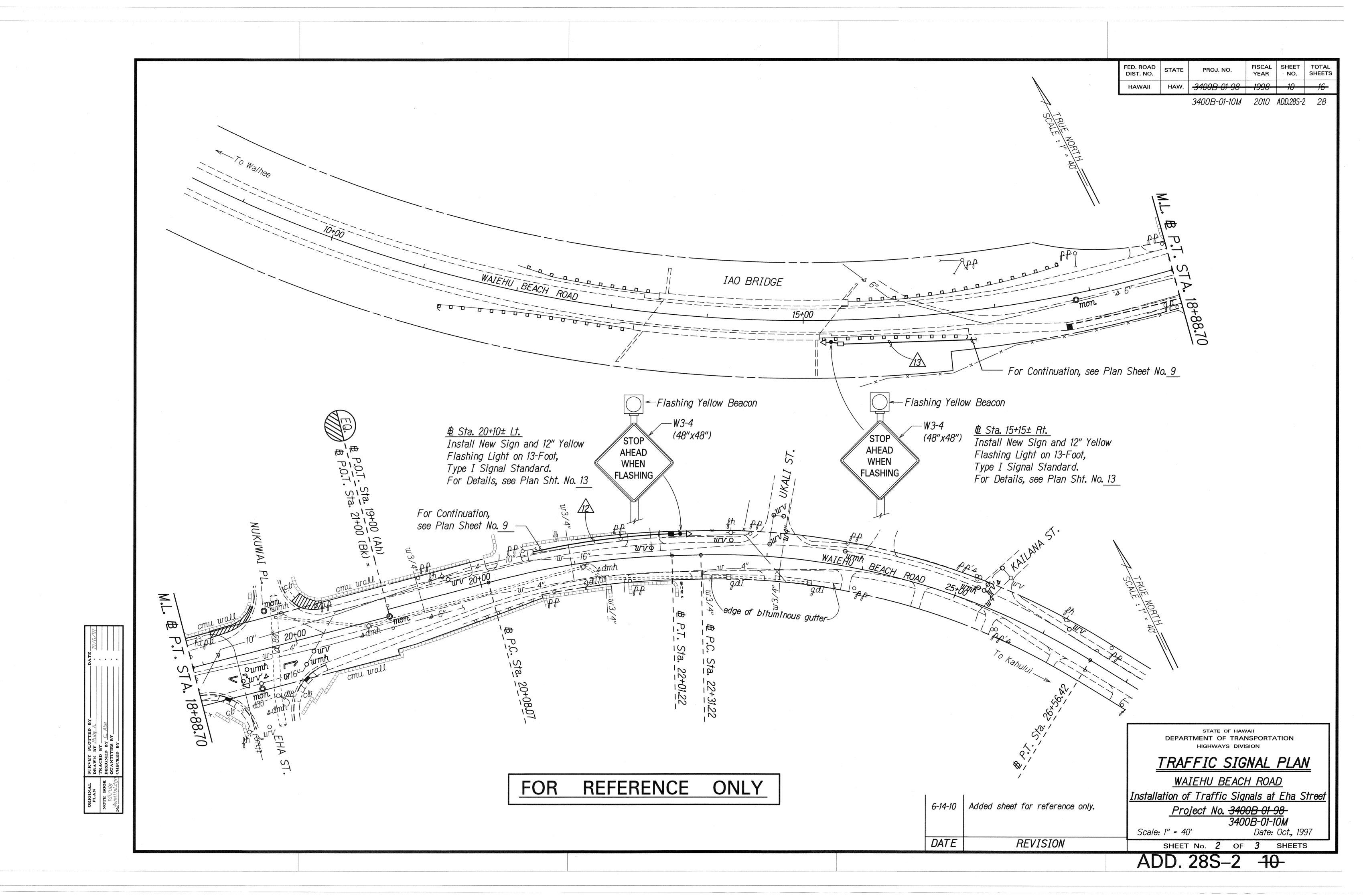






ADD. 28





NEW CONDUITS (conc. encased)	NEW CABLE
3"	2-26c #14 (Type 1)
3"	2-26c #14 (Type 1)
3"	Spare *
2"	6-2c #14 (Type 2)
2"	4-2c #14 (Type 2)
2" 2"	4-4c #20 (Type 7) 2-3c #12 (Type 8)

2	exist. conduits (conc. encased)	NEW CABLE
	3" 2" 2" 2" 2" 2" 2"	2-26c #14 (Type 1) 2-26c #14 (Type 1) 5-2c #14 (Type 2) 4-2c #14 (Type 2) 4-4c #20 (Type 7) 1-3c #12 (Type 8) Spare * Spare **

exist. conduits (conc. encased)			
2" 1-26c #14 (Type 1) 2" 4-2c #14 (Type 2) 2" 2-4c #20 (Type 7) 2" 1-3c #12 (Type 8) 2" Hwy. Ltg. *** 2" Spare *	3		NEW CABLE
		2" 2" 2" 2" 2"	1-26c #14 (Type 1) 4-2c #14 (Type 2) 2-4c #20 (Type 7) 1-3c #12 (Type 8) Hwy. Ltg. *** Spare *

4	exist. conduits (conc. encased)	NEW CABLE
	2" 2" 2" 2" 2" 2"	1-26c #14 (Type 1) 1-26c #14 (Type 1) 1-2c #14 (Type 2) 1-4c #20 (Type 7) Hwy. Ltg. *** Spare

	3400B-01-10M 2010 ADD \$28-		DD . S28-3	28	
5	NEW CONDUITS (conc. encased)	NEW	CABLE		
	2" 2" 2" 2"	1-26c #1 1-26c #1 Spare Spare	4 (Type 4 (Type	: 1) : 1)	

DIST. NO.

6	exist. conduits (conc. encased)	NEW CABLE
	2" 2" 2" 2"	1-26c #14 (Type 1) 1-26c #14 (Type 1) 2-2c #14 (Type 2) Spare

\triangle	exist. conduits (conc. encased)	NEW CABLE
	2" 2" 2" 2" 2"	1-26c #14 (Type 1) 1-26c #14 (Type 1) 4-2c #14 (Type 2) 1-4c #20 (Type 7) Spare

8	exist. conduit (conc. encased)	NEW CABLE
	2"	1-2c #14 (Type 2)
	·	

9	exist. conduits (conc. encased)	NEW CABLE
	2" 2" 2" 2"	1-2c #14 (Type 2) 1-3c #12 (Type 8) Spare * Spare **

10	NEW CONDUITS (conc. encased)	NEW CABLE
	2" 2" 2" 2"	1-2c #14 (Type 2) 1-3c #12 (Type 8) Spare * Spare **

exist. conduits (conc. encased)	NEW CABLE
2" 2" 2" 2"	1-2c #14 (Type 2) 1-3c #12 (Type 8) spare spare

12	NEW CONDUIT (conc. encased)	NEW CABLE
	2"	1-3c #12 (Type 8)

13	NEW CONDUITS (conc. encased)	NEW CABLE
	2" 2" 2"	1-3c #12 (Type 8) Spare * Spare **

	_	
14	NEW CONDUIT (conc. encased)	NEW CABLE
	2"	1-3c #4 (Type 6)
	•	

15	NEW CONDUITS (conc. encased)	NEW CABLE		
	2" 2" 2" 2"	1-2c #14 (Type 2) 1-3c #12 (Type 8) Spare * Spare **		

16	NEW CONDUIT (conc. encased)	NEW CABLE			
	3"	MECO Power Cable			
	·				

\triangle	exist. conduit (conc. encased)	NEW CABLE
	3"	MECO Power Cable

18	exist. conduit (conc. encased)	NEW CABLE
	2"	Hwy. Ltg. ***

6-14-10	Added sheet for reference only.
DATE	REVISION
4/3/98	Change 17 \$ 18 to existing
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN

WAIEHU BEACH ROAD

Installation of Traffic Signals at Eha Street

Project No. 3400B-01-98

Project No. 3400B-01-98
3400B-01-10M
Date: Oct., 1997

SHEET No. 3 OF 3 SHEETS

ADD. S28-3 -C.O. 11

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Waittssum CHB

* Future Interconnect Cable

** Future Fiberoptic Cable

*** Highway Lighting Cable (per MECO Standards)

FOR REFERENCE ONLY