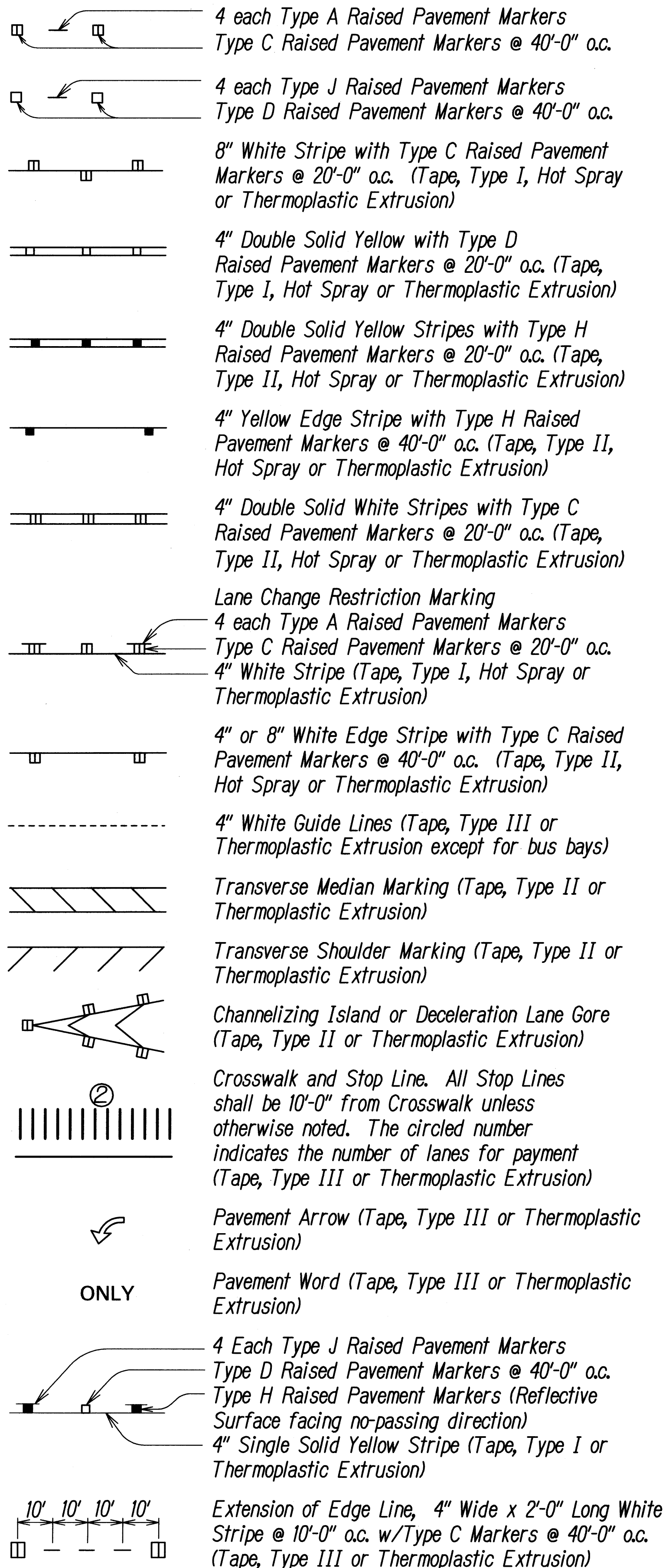


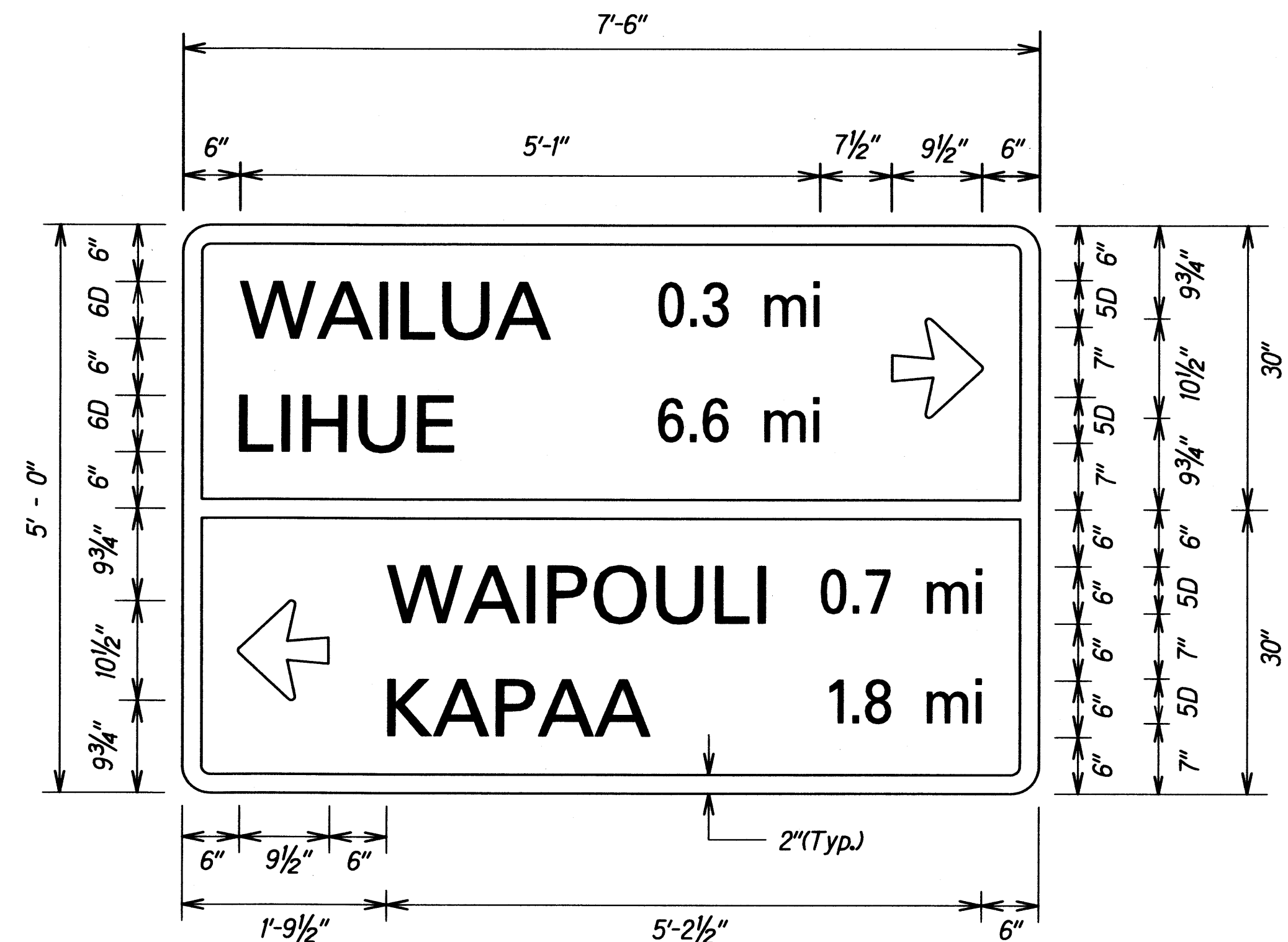
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	15	29

LEGEND



NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- 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.
- Raised pavement markers shall not be installed within crosswalks.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- 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.
- Final locations of all stop lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the legend or plans.
- 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.
- 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. The signs shall be kept in place for the duration of the 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 - Work Zone Traffic Control. The advance construction warning signs shall be new and become the property of the Contractor.
- 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.
- Backing for all new regulatory and warning signs shall not be spliced.
- All sign panels shall conform to Section 630 of Special Provisions and the latest editions and amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - "Standard Highway Signs"
 - "Standard Alphabets for Highway Signs"
- State Route Marker Symbols, borders, messages, arrows, symbols and shields shall conform to details as shown on the plans and as specified in the MUTCD.
- 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.
- Removal of existing delineators and posts, as directed by the Engineer or shown on the plans, shall be considered incidental to the various signing items.
- Removal 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.
- All Reflector Marker (RM-2) not protected by a vehicular barrier shall be mounted on a flexible delineator post unless otherwise directed by the Engineer.



D-1
(with 2 - 4.00 Lbs./Ft. Flanged Channel Posts)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING, NOTES,
LEGEND & SIGN DETAILS**

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Date: Dec. 2009

SHEET No. 11 OF 10 SHEETS

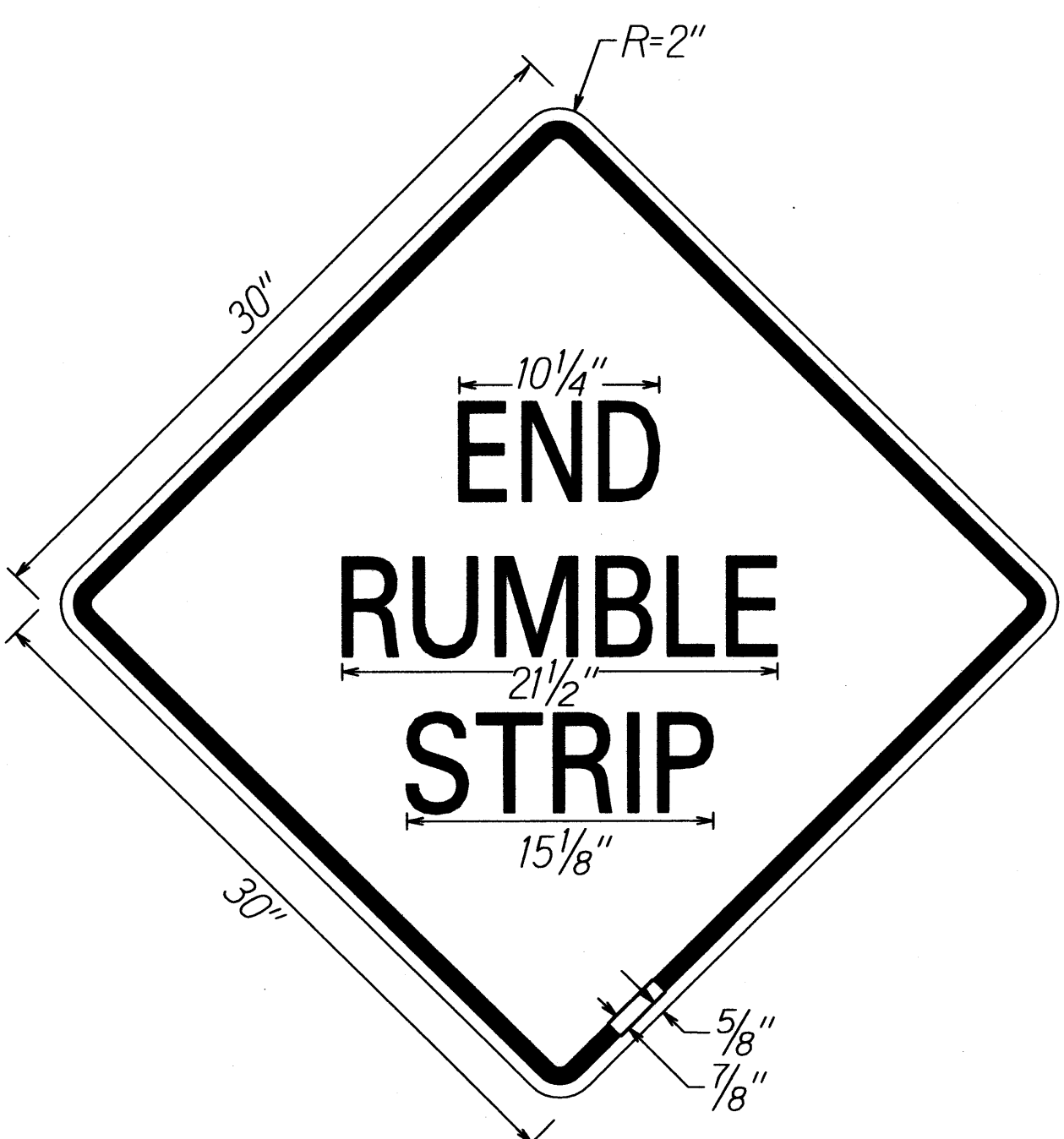
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	16	29

SIGN NOTES

- All signs shall conform to Section 630 of the Hawaii Standard Specifications for Road & Bridge Construction dated 2005 and the latest editions and amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - "Standard Highway Signs"
 - "Standard Alphabets for Highway Signs"
- Sign W17-2 shall be reflectorized with reflective sheeting and shall have $\frac{3}{8}$ o bolt holes drilled at appropriate locations.
- Borders, messages, arrows, symbols and shield shall conform to details as shown on the plans and as specified in the MUTCD.
- Sign messages shall be as indicated on the plan, or as directed by the Engineer.
- Backing for all new Regulatory and Warning Signs shall not be spliced.
- Final locations of all signs shall be accepted by the Engineer prior to any installation work.
- 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.
- 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.
- All signs shall be installed on square tube posts, unless otherwise noted.
- Sign posts shall be painted with yellow reflective paint, except where located behind guardrails. Such paint work shall be considered incidental to sign items.
- Contractor shall mark the back of all signs using labels and equipment provided by the State. Payment to be incidental to various contract items.



W17-2a



W17-2b

- NOTE:
- Black legend on reflectorized yellow background.
 - Begin Rumble Strip signs shall be installed 50 feet before the first rumble strip depression
End Rumble Strip signs shall be installed 50 feet beyond the last rumble strip depression.

DESIGNED BY	DATE
12/09	
DRIVEN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RUMBLE STRIP SIGN DETAILS AND NOTES

TEMPORARY KAPAA BYPASS ROAD RESURFACING

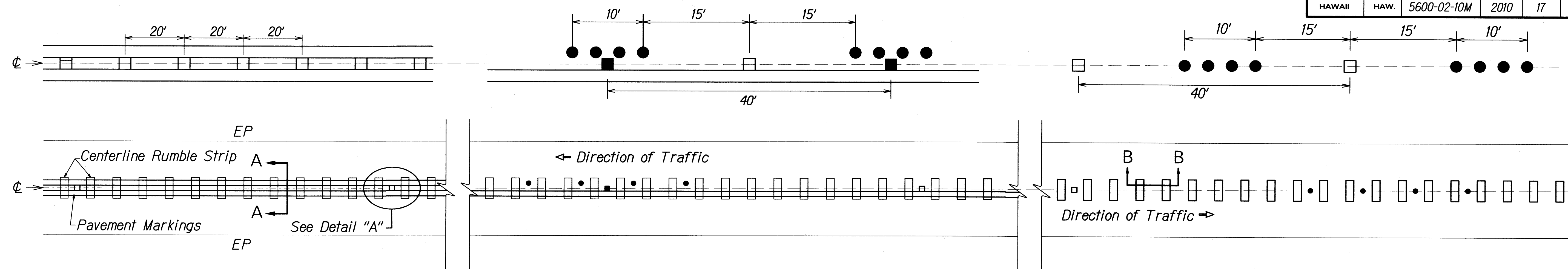
Mile Post 0.07 to Mile Post 2.26

Project No. 5600-02-10M

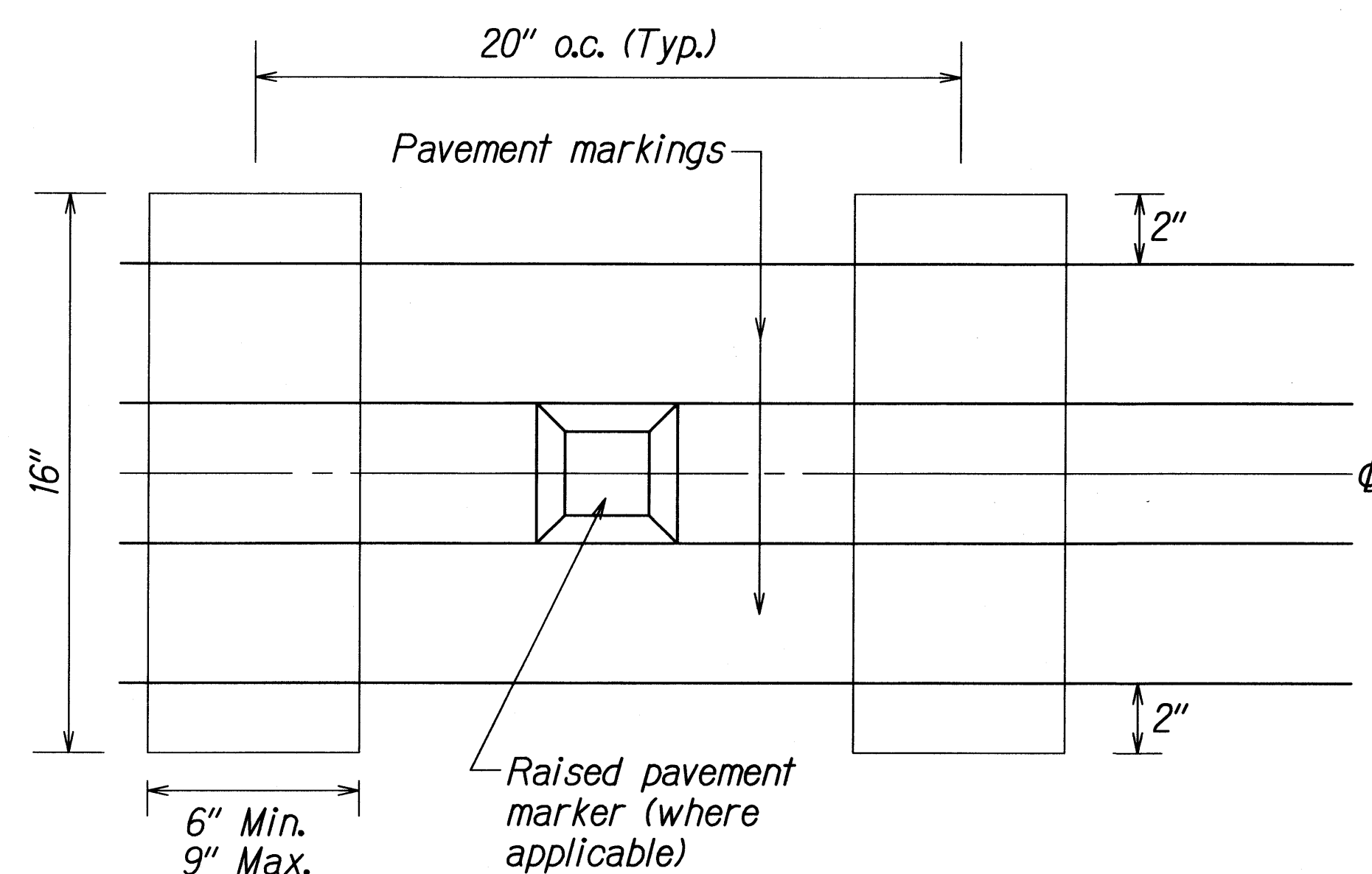
Date: Dec. 2009

SHEET No. 72 OF 10 SHEETS

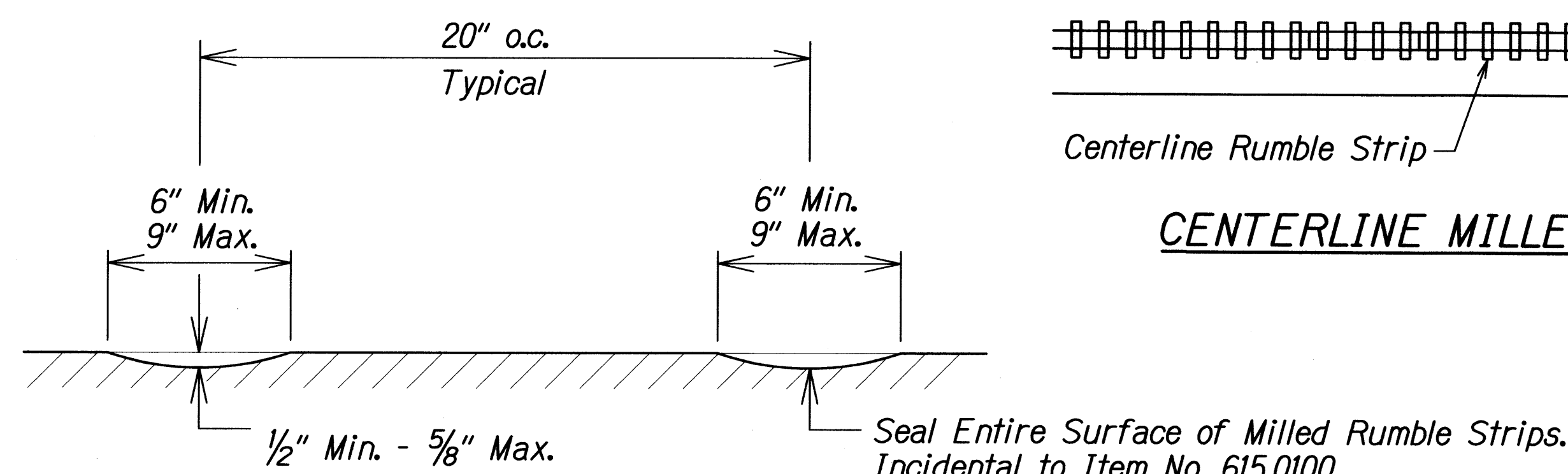
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	17	29



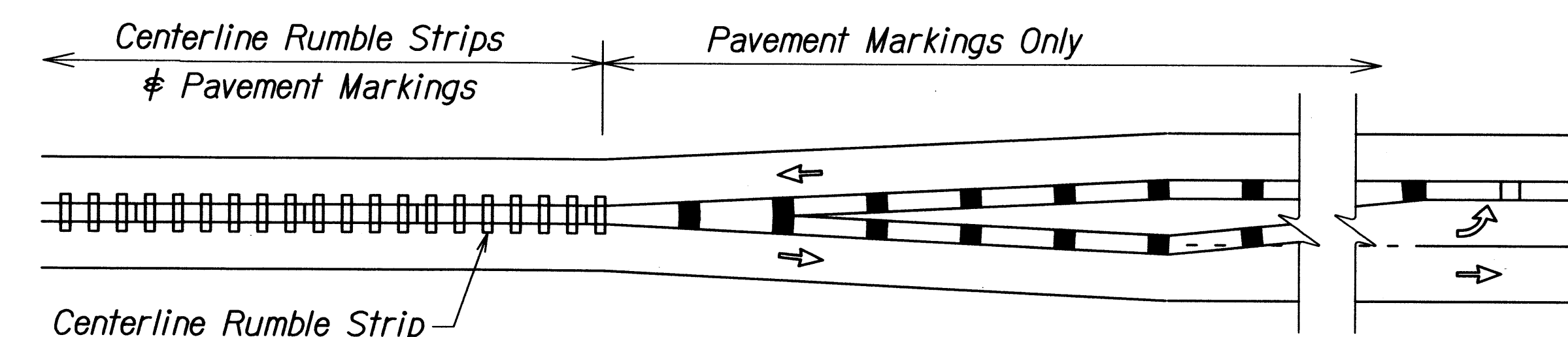
PLAN - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



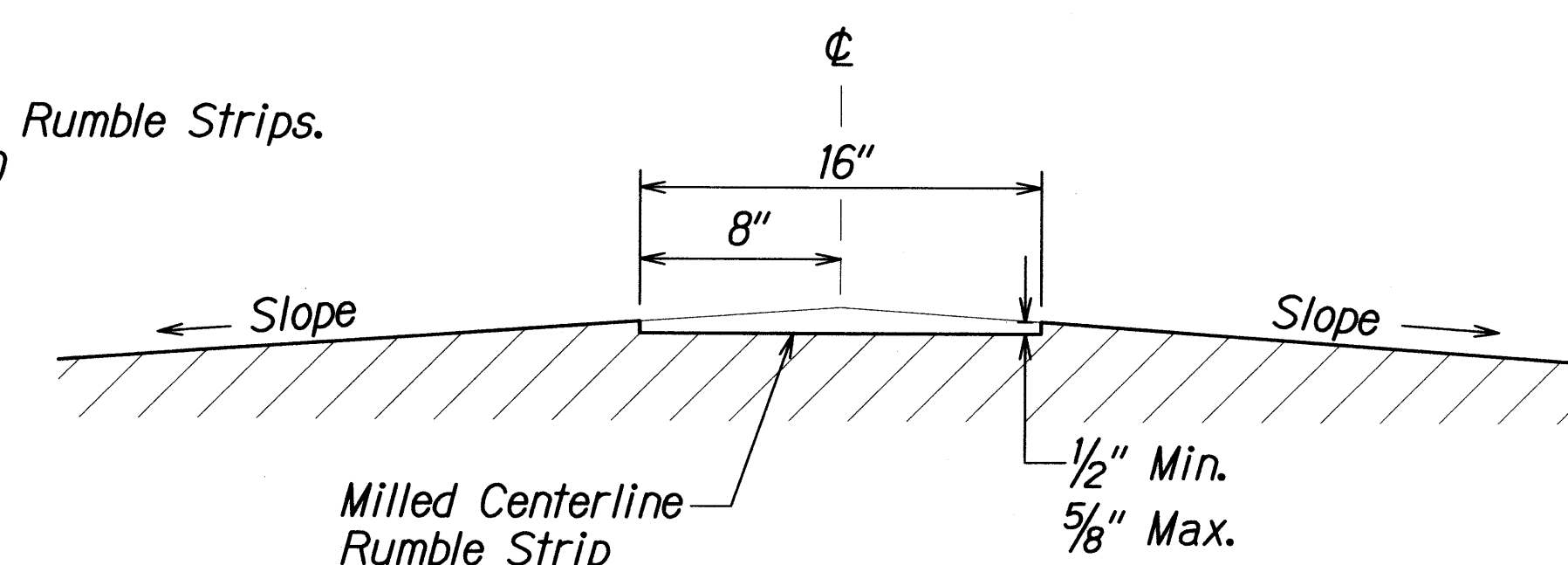
DETAIL "A"
Not to Scale



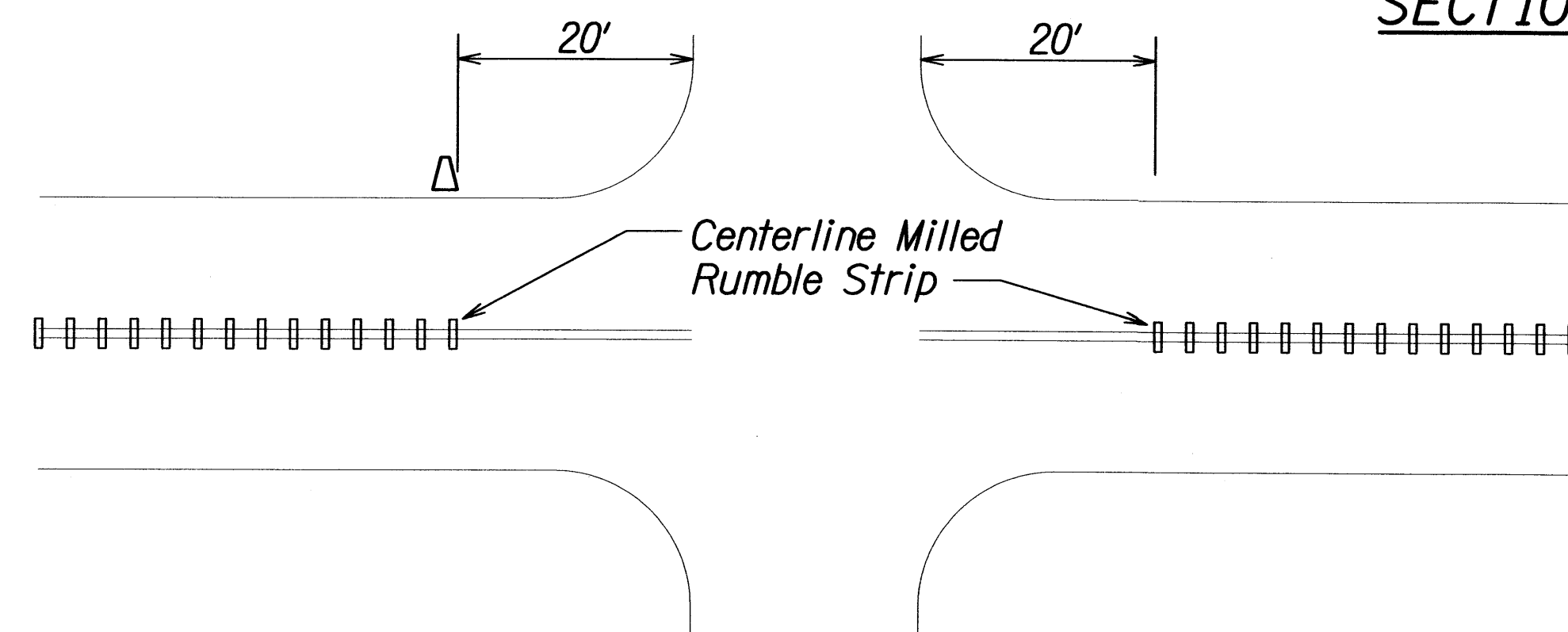
SECTION B-B - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



CENTERLINE MILLED RUMBLE STRIP INSTALLATION LIMIT
Not to Scale



SECTION A-A - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



MILLED RUMBLE STRIP INSTALLATION LIMITS
Not to Scale

NOTES:

1. The method of constructing the centerline milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
2. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement markings prior to installation.
3. Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
4. The construction of the centerline milled rumble strip shall be paid for under Item No. 615.0100 - 16-Inch Milled Rumble Strip, Centerline.
5. The milling apparatus and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0100 - 16-Inch Milled Rumble Strip, Centerline.
6. Do not install centerline rumble strips on bridge decks.
7. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
8. Hot spray thermoplastic shall be used for solid line markings within the milled centerline rumble strip area.
9. Seal entire surface of Milled Rumble Strips. This scope of work shall be Incidental to Item No. 615.0100 - 16-Inch Milled Rumble Strip.

ORIGINAL PLAN	DATE	12/09
DESIGNED BY	DESIGNED BY	
CHECKED BY	CHECKED BY	
NOTED BY	NOTED BY	
QUANTITIES BY	QUANTITIES BY	
DATE	DATE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

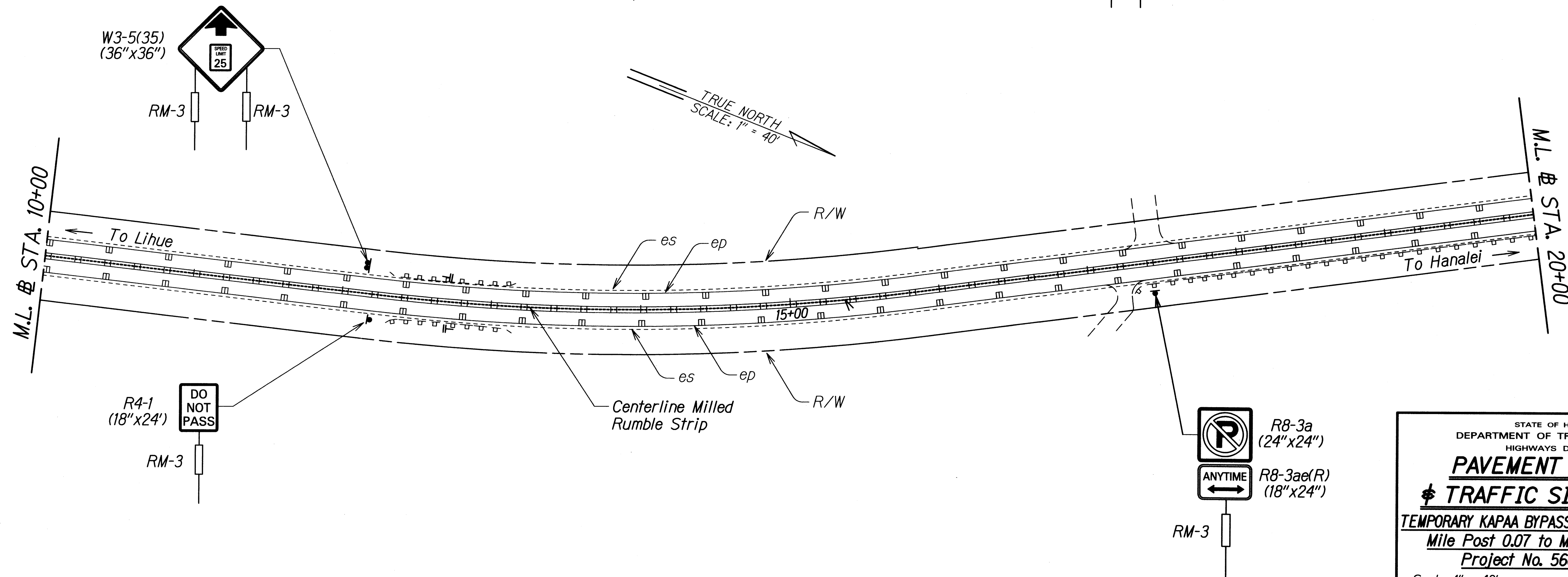
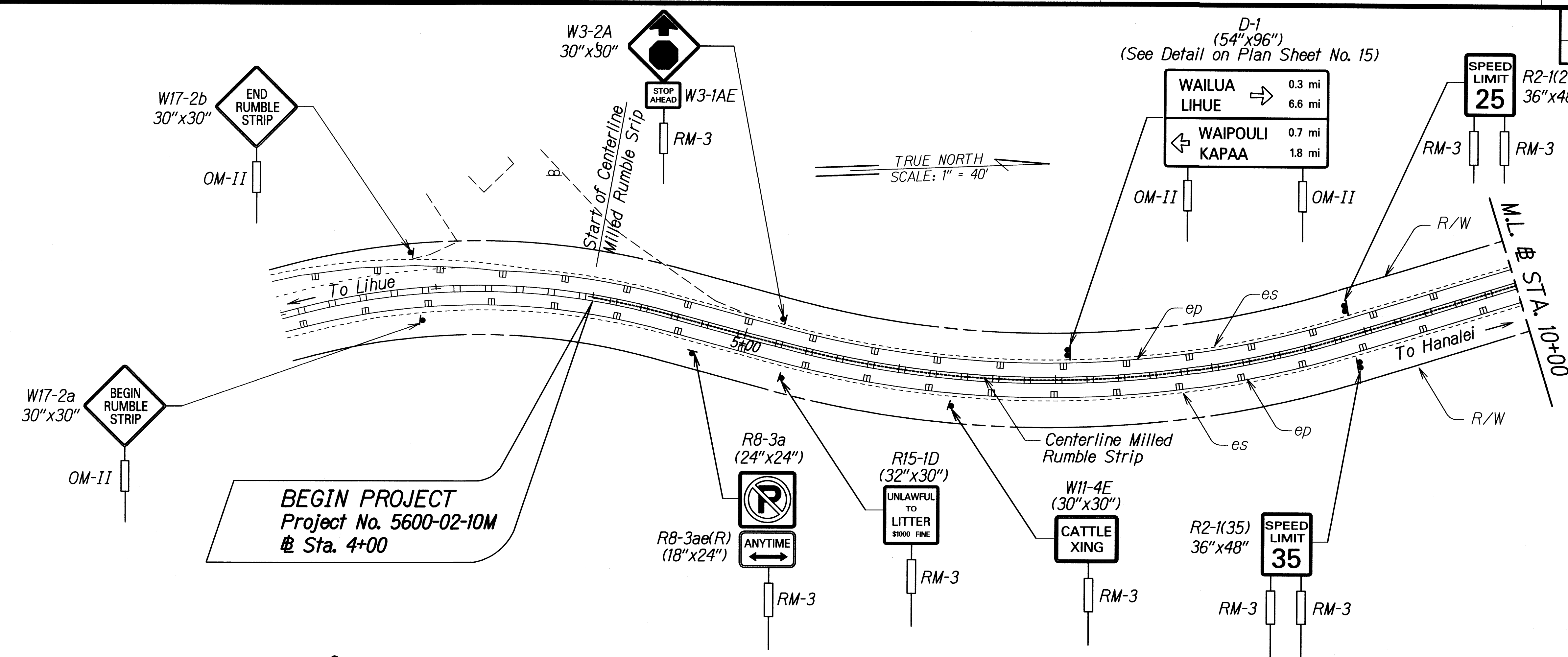
CENTERLINE MILLED RUMBLE STRIP DETAIL

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: As Shown Date: Dec. 2009

SHEET No. T3 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	18	29



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	12/09
QUANTITIES BY	DESIGNED BY	
CHECKED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

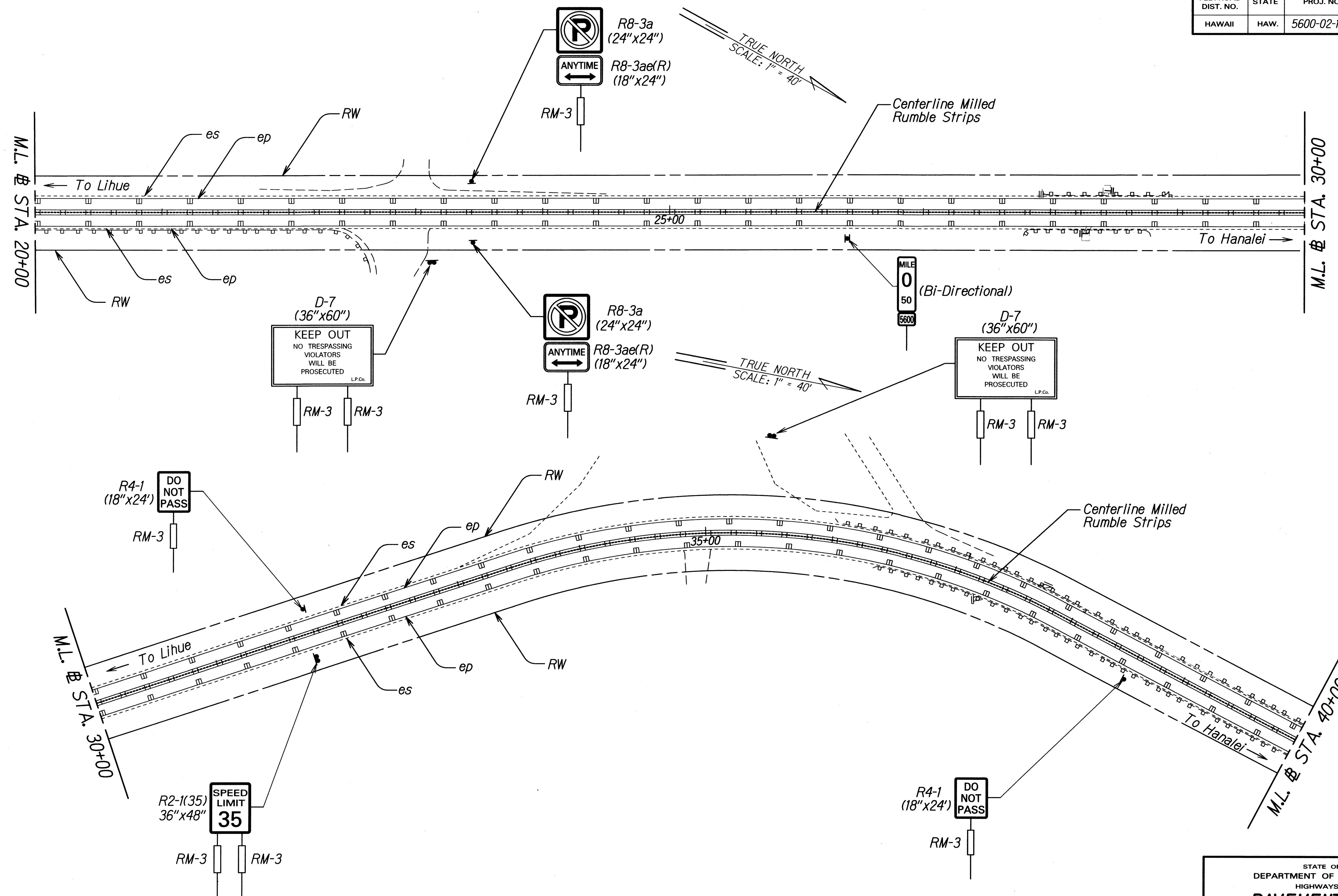
PAVEMENT MARKING
TRAFFIC SIGNING PLAN

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: 1" = 40' Date: Dec. 2009

SHEET No. T4 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	19	29



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	12/19
DESIGNED BY	CHECKED BY	
QUANTITIES BY		
CHECKED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

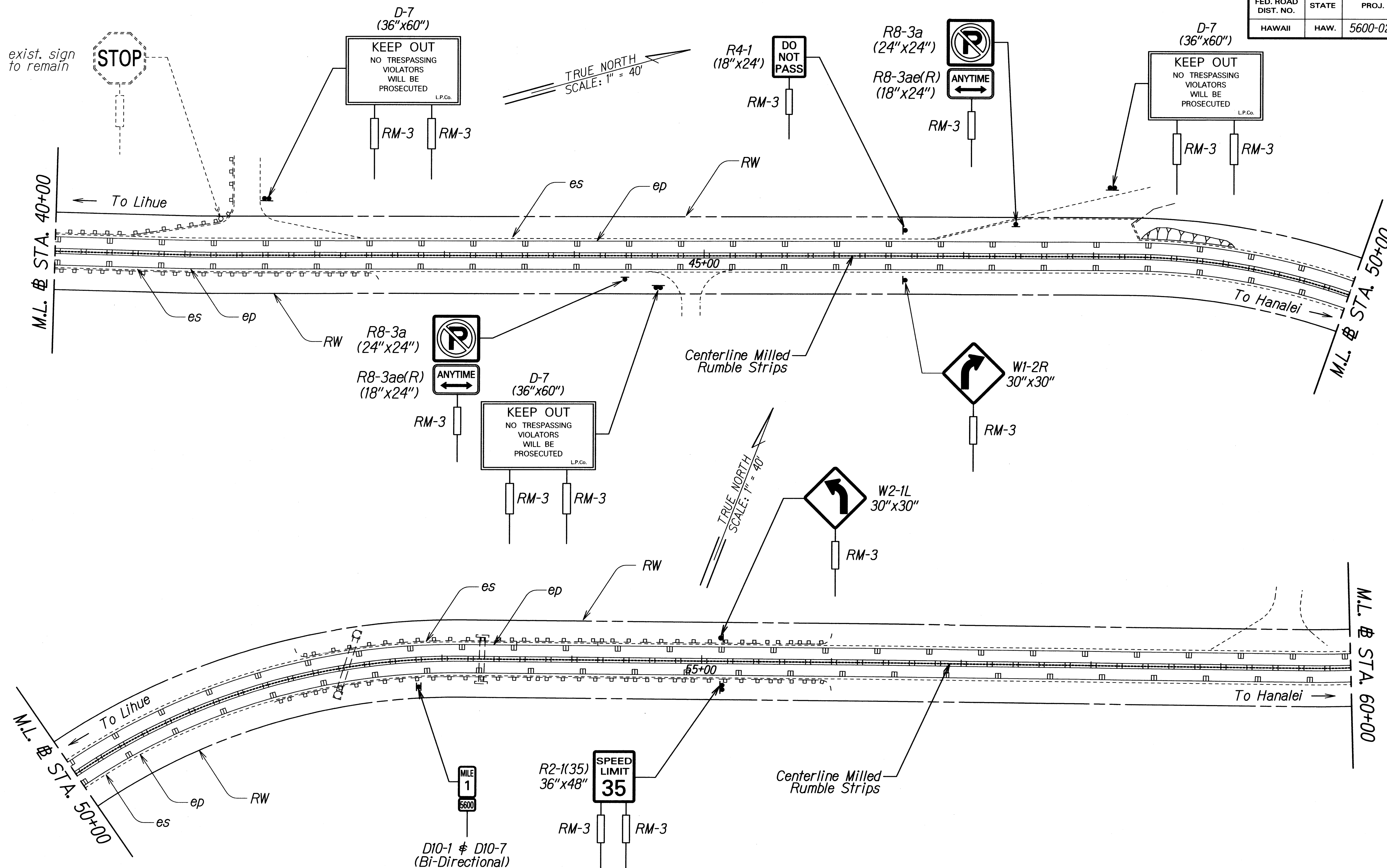
PAVEMENT MARKING
TRAFFIC SIGNING PLAN

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: 1" = 40' Date: Dec. 2009

SHEET No. 15 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	20	29



ORIGINAL PLAN	DATE	12/09
DRAWN BY		
DESIGNED BY		
CHECKED BY		
NOTED BY		
QUANTITIES BY		
CHECKED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

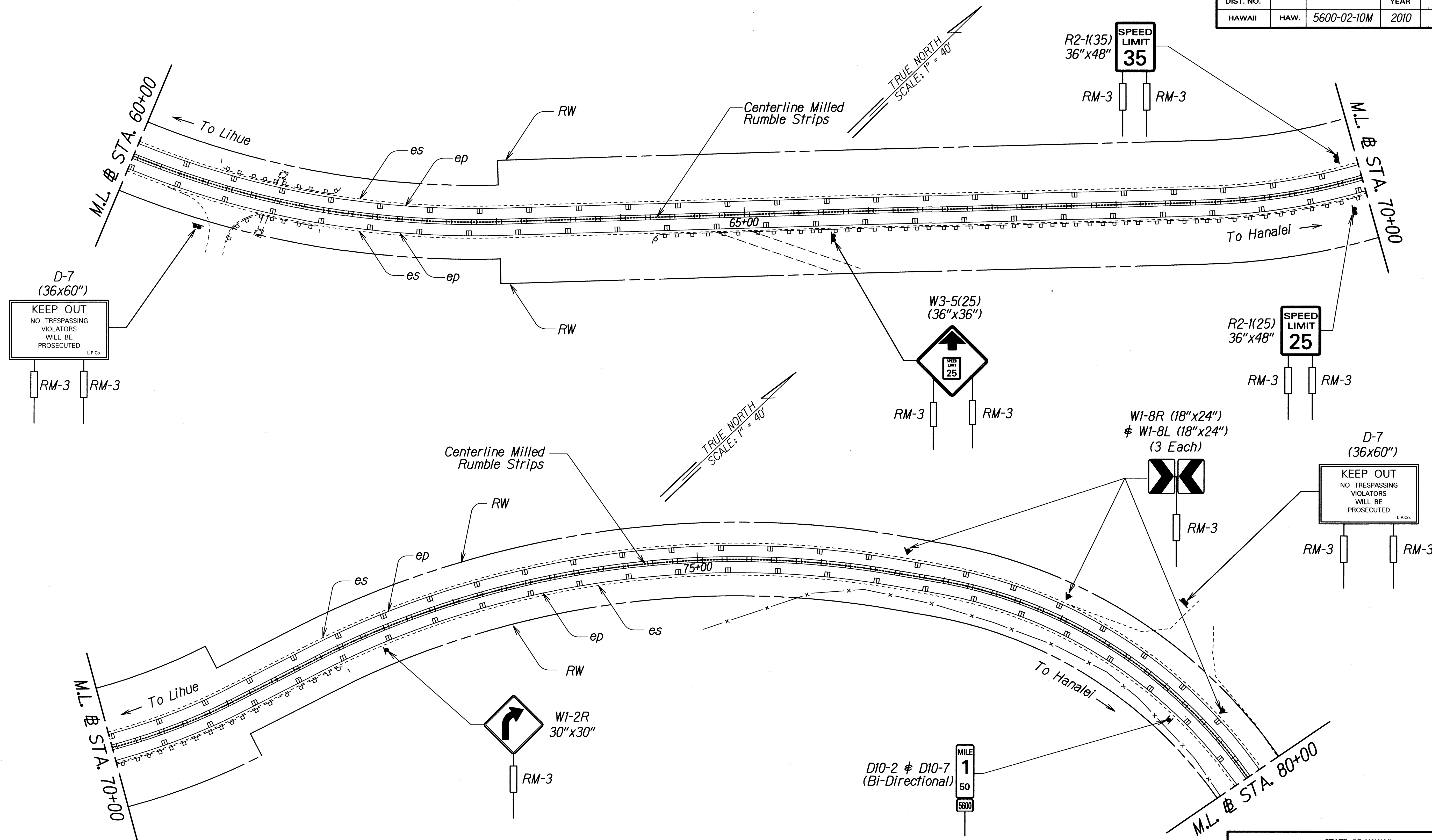
**PAVEMENT MARKING
& TRAFFIC SIGNING PLAN**

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: 1" = 40' Date: Dec. 2009

SHEET No. T6 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	21	29



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	22/09
DESIGNED BY	DESIGNED BY	
QUANTITIES BY	QUANTITIES BY	
CHECKED BY	CHECKED BY	
N.	N.	

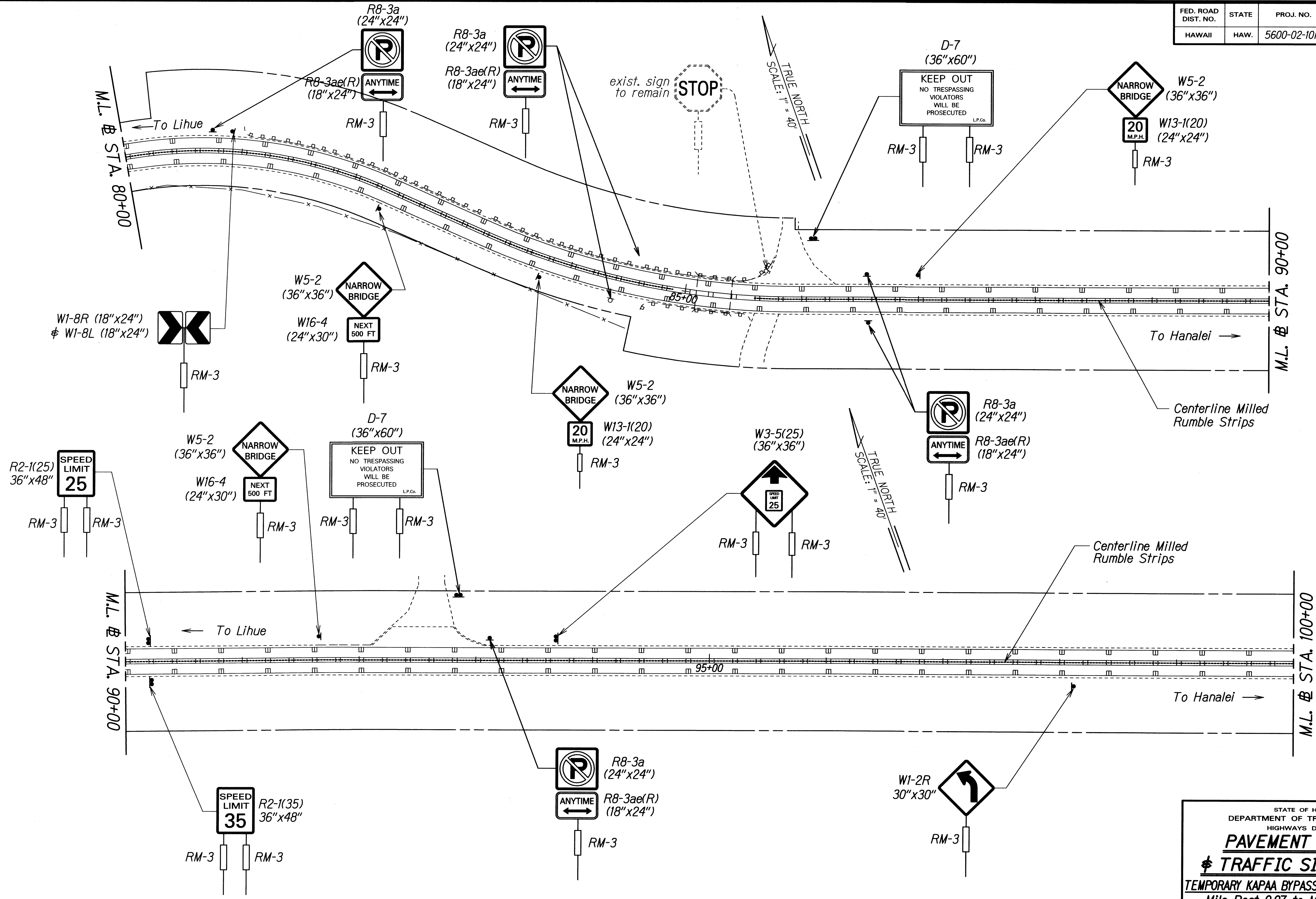
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
& TRAFFIC SIGNING PLAN**

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M
Scale: 1" = 40' Date: Dec. 2009

SHEET No. 17 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	22	29



ORIGINAL PLAN	DATE	12/09
DESIGNED BY	DRWN BY	
NOTED BY	CHECKED BY	
QUANTITIES BY		
CHECKED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

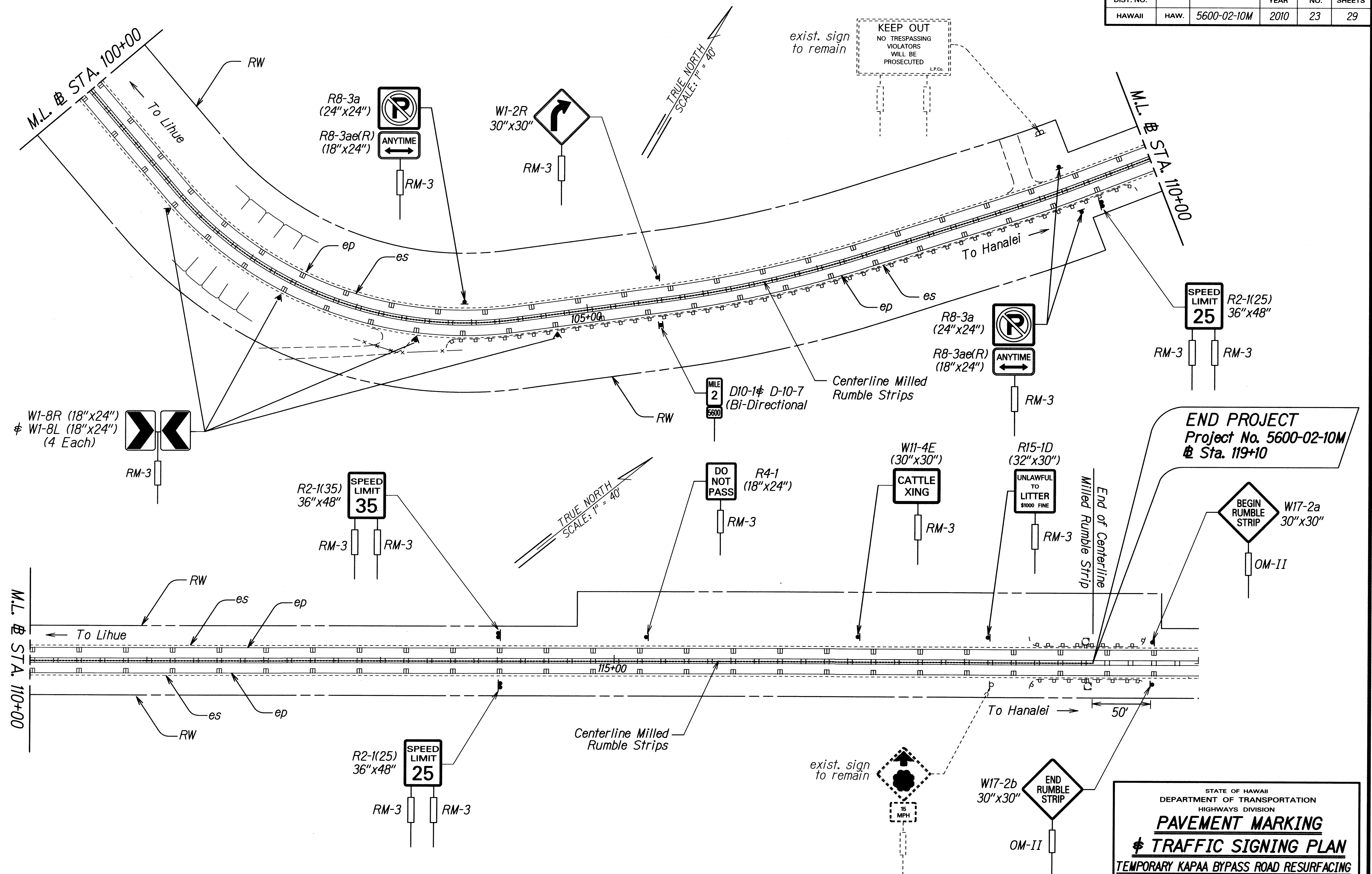
PAVEMENT MARKING
TRAFFIC SIGNING PLAN

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: 1" = 40' Date: Dec. 2009

SHEET No. 22 OF 29 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5600-02-10M	2010	23	29



ORIGINAL PLAN	DATE	12/10
DESIGNED BY	DESIGNED BY	
NOTED BY	NOTED BY	
CHECKED BY	CHECKED BY	
DATE	DATE	

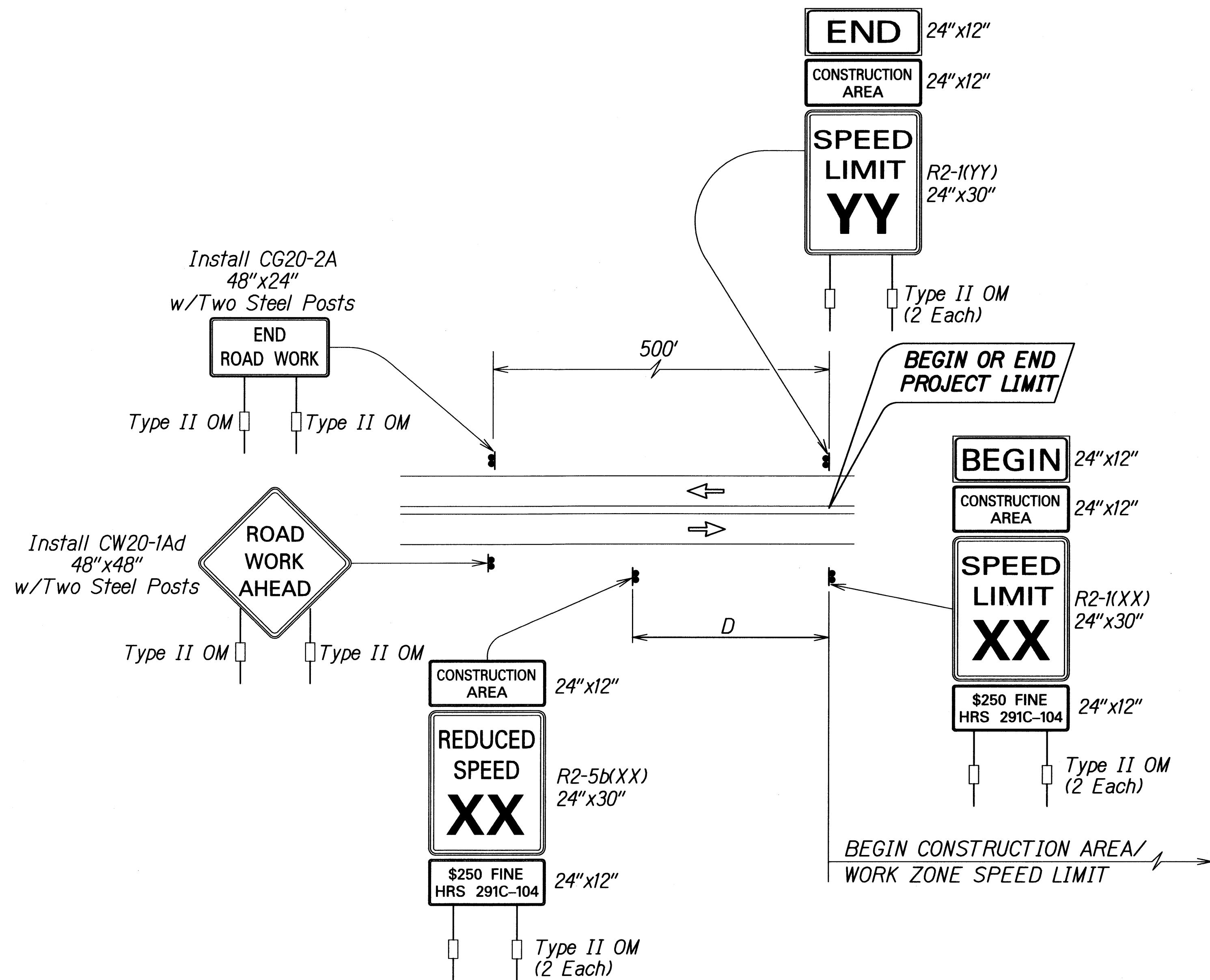
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING
TRAFFIC SIGNING PLAN

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: 1" = 40' Date: Dec. 2009

SHEET No. T9 OF 10 SHEETS

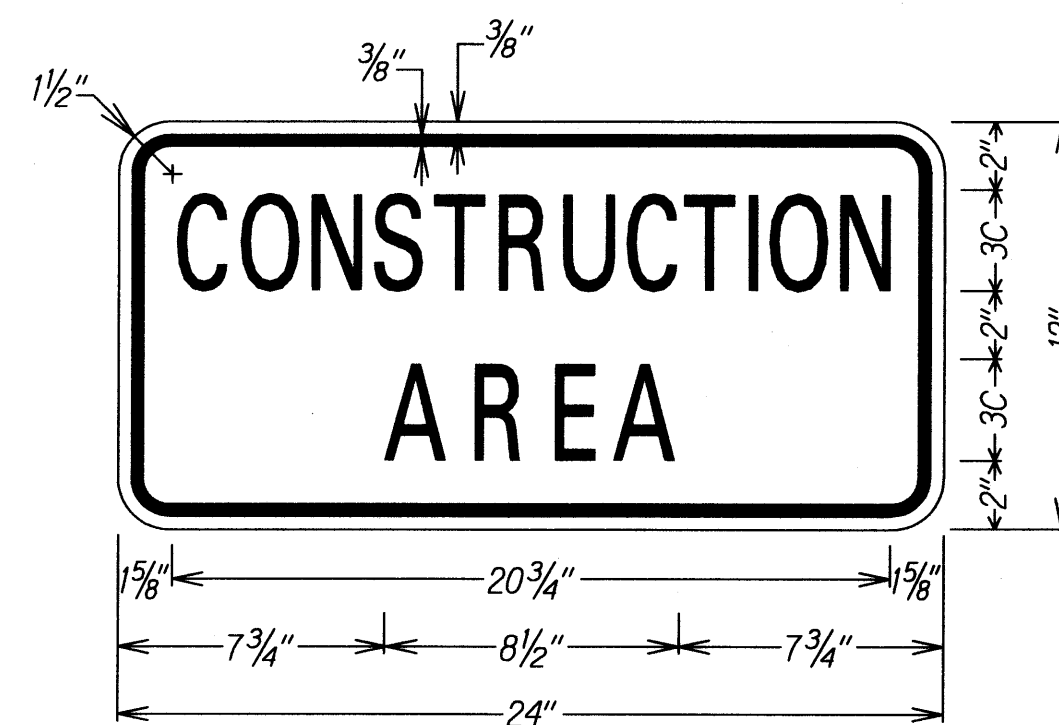


TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY

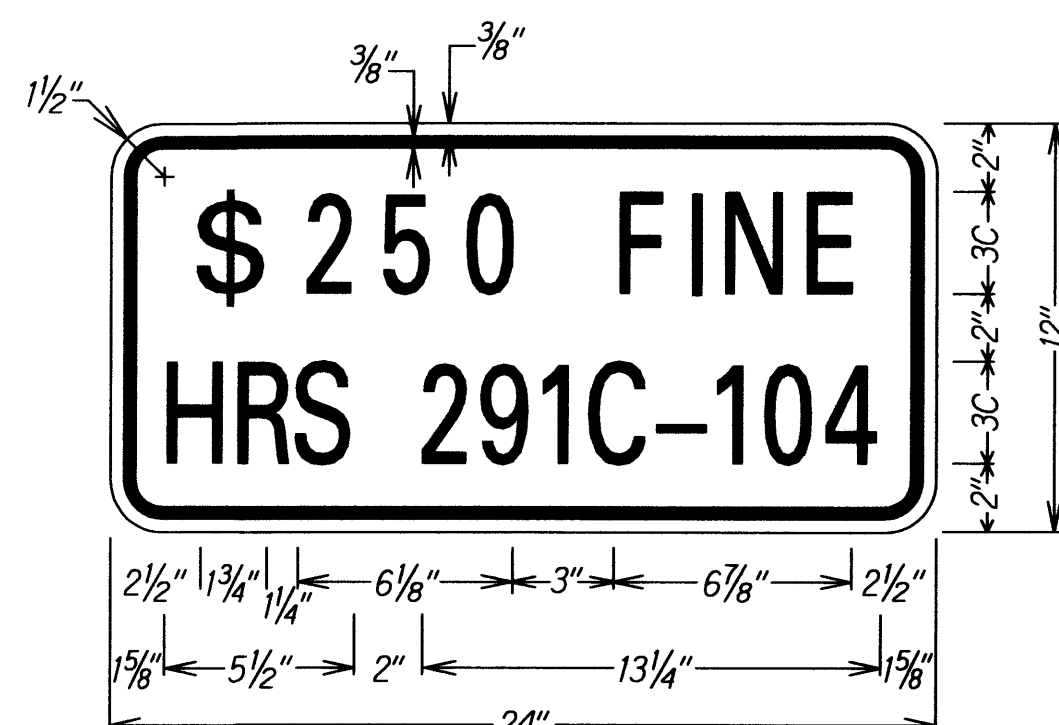
Work Zone Note:

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(XX) and R2-5b(XX) 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 and work zone speed limit assembly shall have a minimum of two (2) 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 shall be considered incidental to Item No. 645.0100 - Traffic Control.
8. The installation, maintenance and removal of work zone speed limit sign assemblies shall be paid for under Item No. 645.0100 - Traffic Control.
9. The work zone speed limit signs shall be new and become the property of the Contractor.

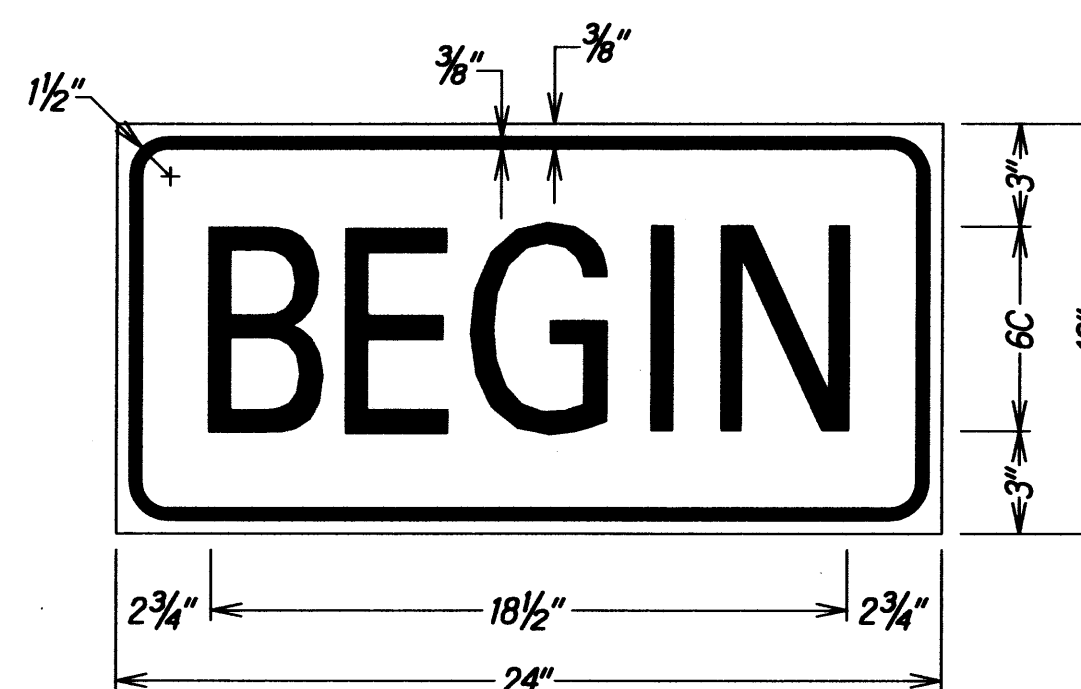
TABLE I GUIDELINE FOR ADVANCE PLACEMENT OF SPEED REDUCTION SIGN R2-5b(XX)-A, CONSTRUCTION AREA SPEED LIMIT		
YY - EXISTING POSTED SPEED LIMIT (MPH)	XX - NEW CONSTRUCTION AREA SPEED LIMIT (MPH)	D-REDUCED SPEED LIMIT SIGN SPACING TO FIRST CONSTRUCTION AREA SPEED LIMIT SIGN (FEET)
≤ 25	EXIST. SPEED LIMIT TO REMAIN	
30	25	100
35	25	175
40	30	175



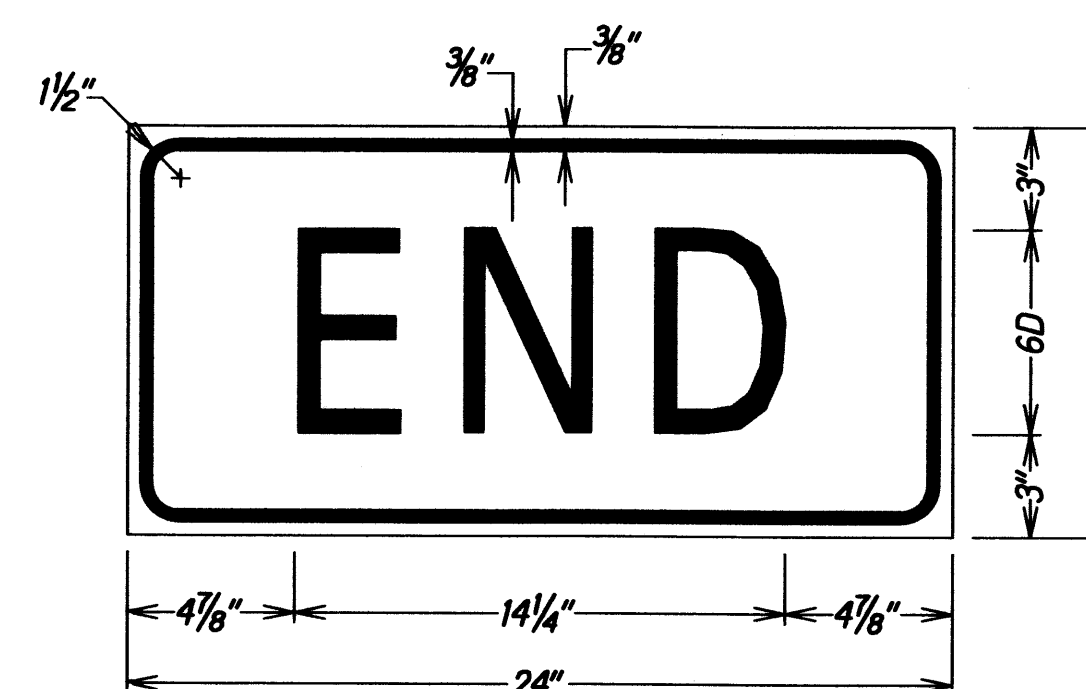
LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**LOW SPEED UNDIVIDED HIGHWAY
WORK ZONE SIGNING PLAN, NOTES+DETAILS**

TEMPORARY KAPAA BYPASS ROAD RESURFACING
Mile Post 0.07 to Mile Post 2.26
Project No. 5600-02-10M

Scale: Not to Scale Date: Dec. 2009

SHEET No. T10 OF 10 SHEETS