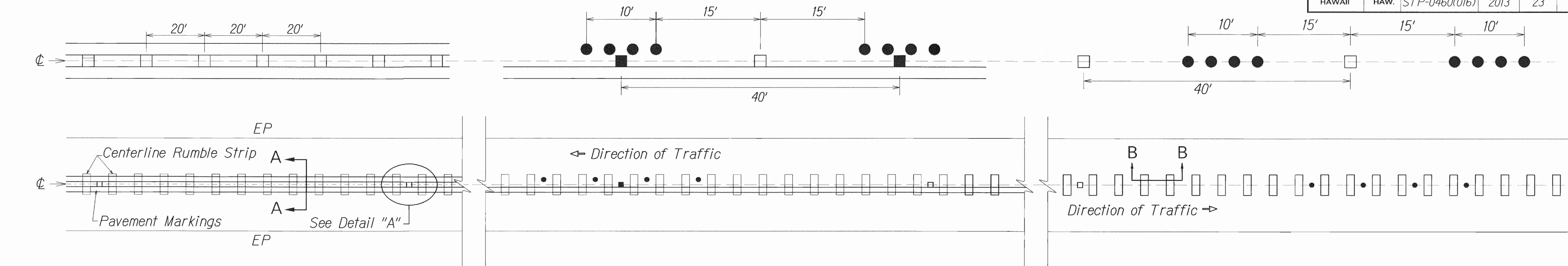
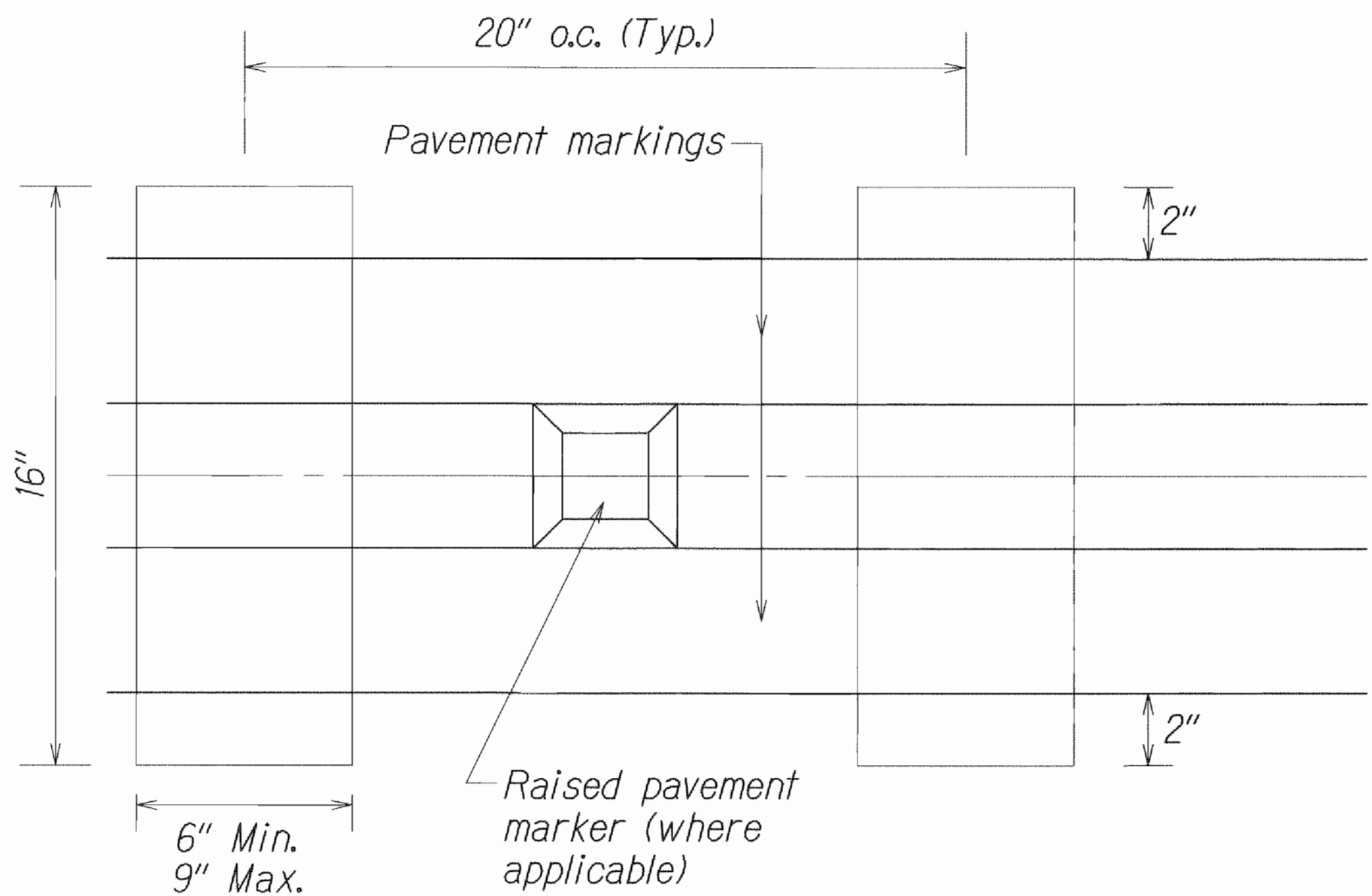


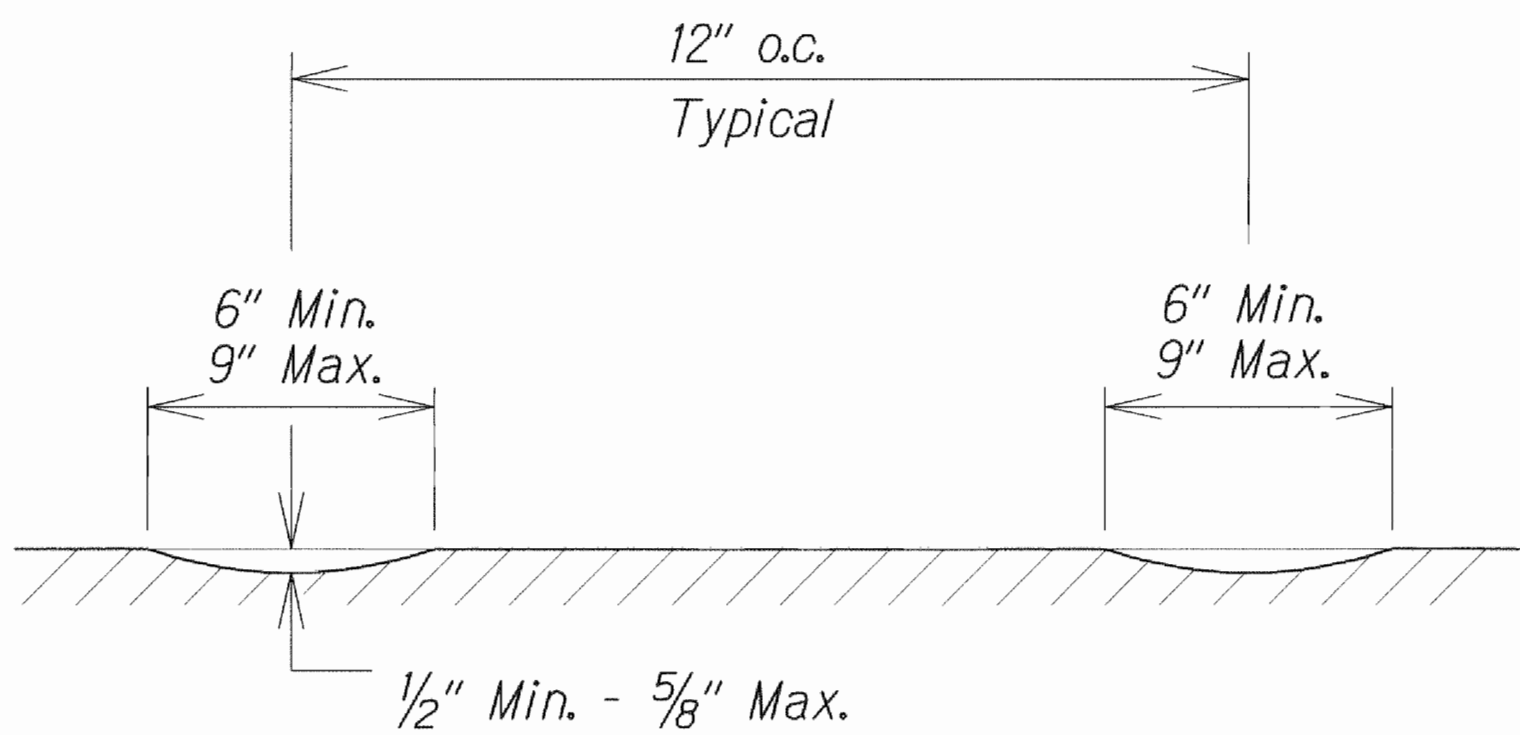
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0460(016)	2013	23	40



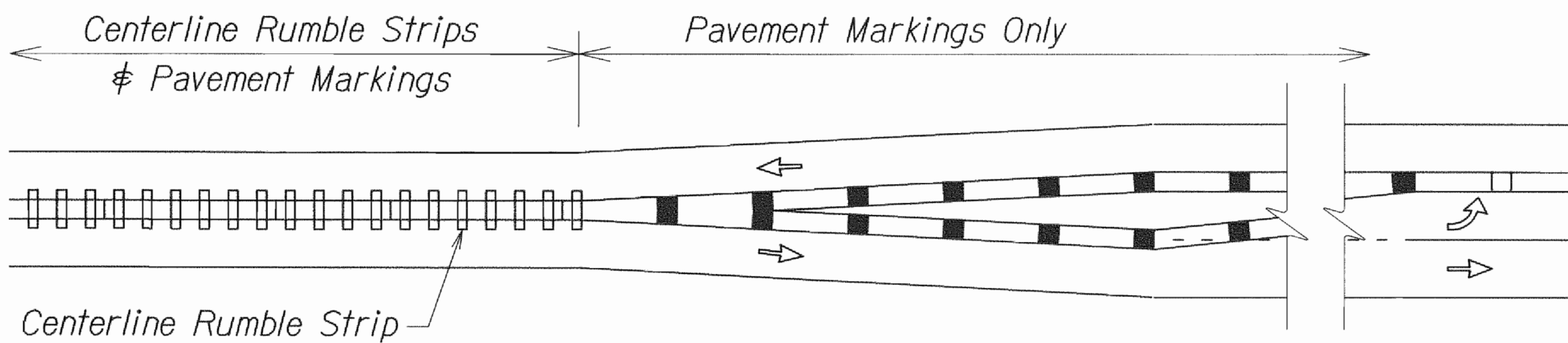
PLAN - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



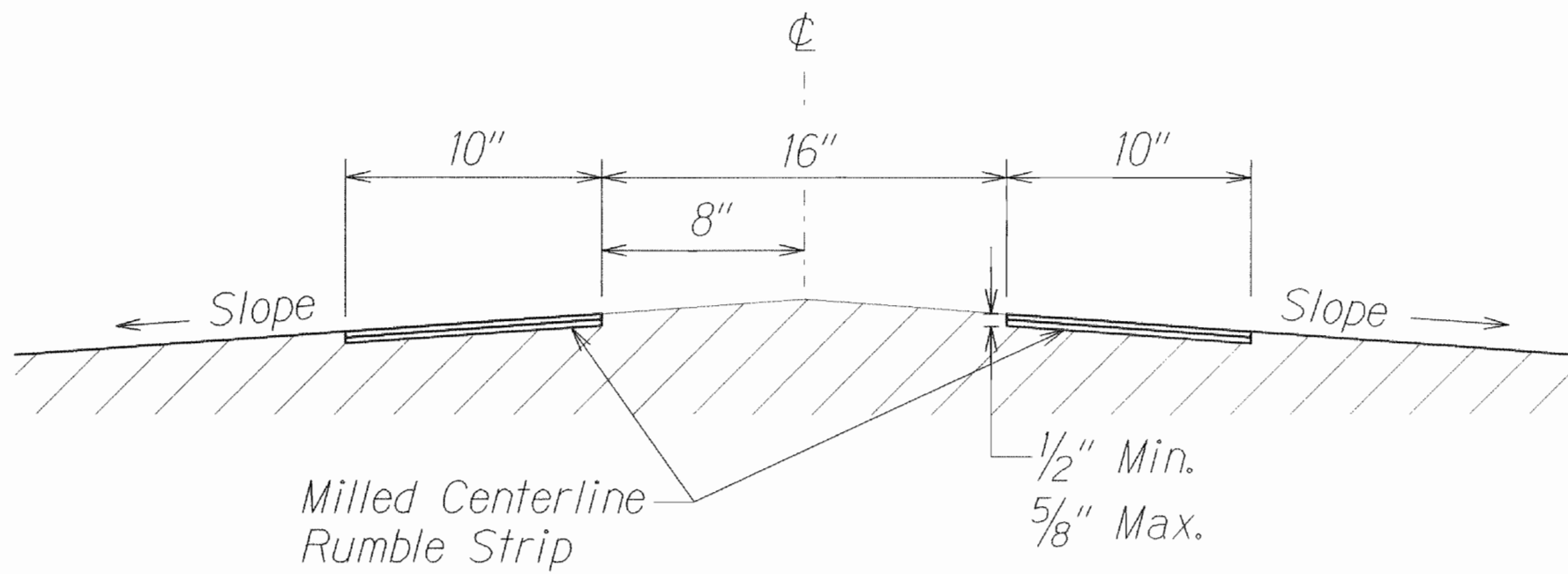
DETAIL "A"
Not to Scale



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



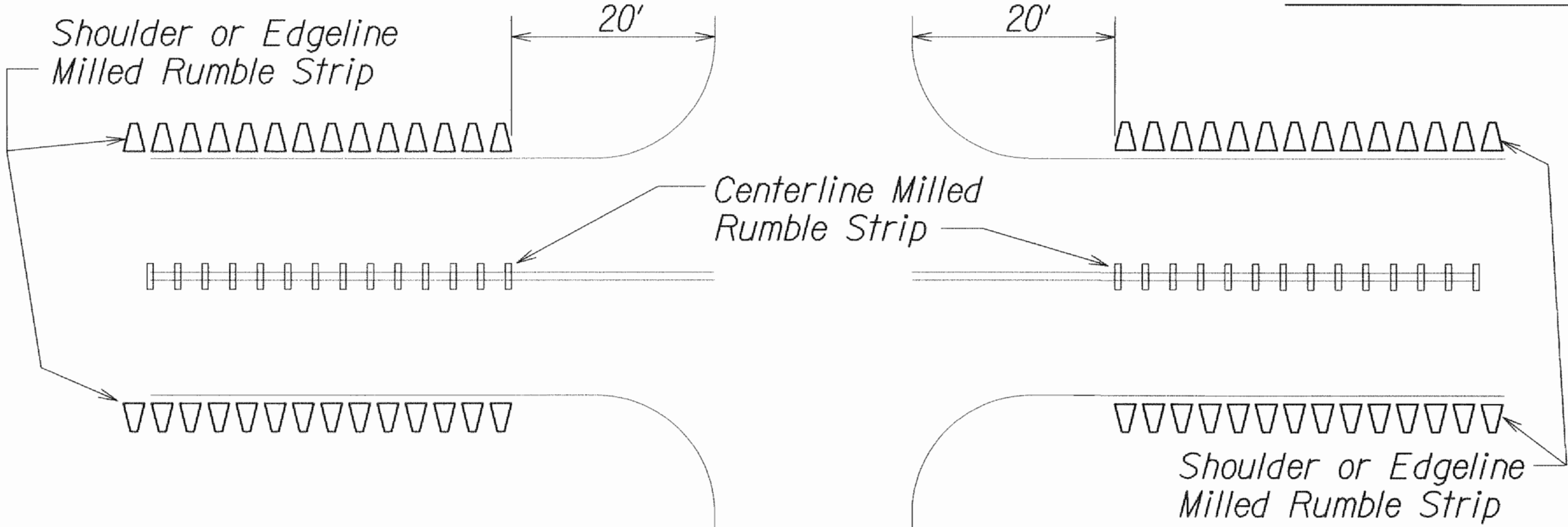
CENTERLINE MILLED RUMBLE STRIP INSTALLATION LIMIT
Not to Scale



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

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.



MILLED RUMBLE STRIP INSTALLATION LIMITS
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CENTERLINE MILLED RUMBLE STRIP DETAIL

MAUNALOA HIGHWAY RESURFACING

Maunaloa Village to Mahana

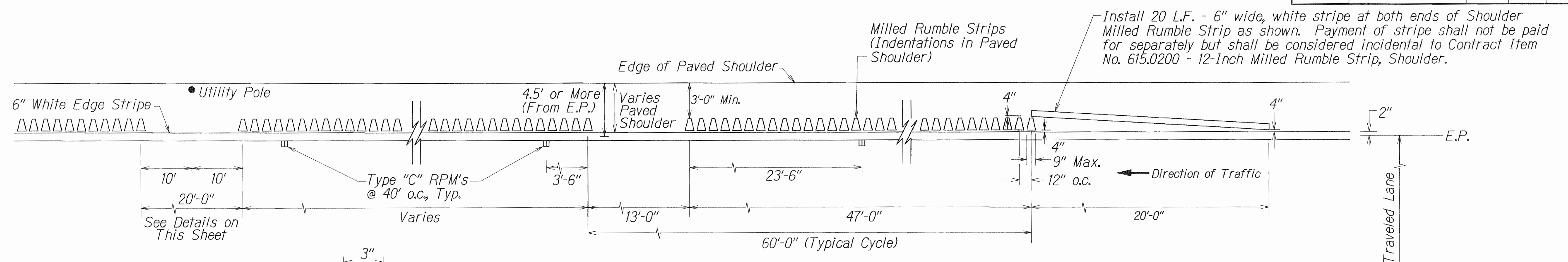
Federal-Aid Project No. STP-0460(016)

Scale: As Shown Date: July, 2012

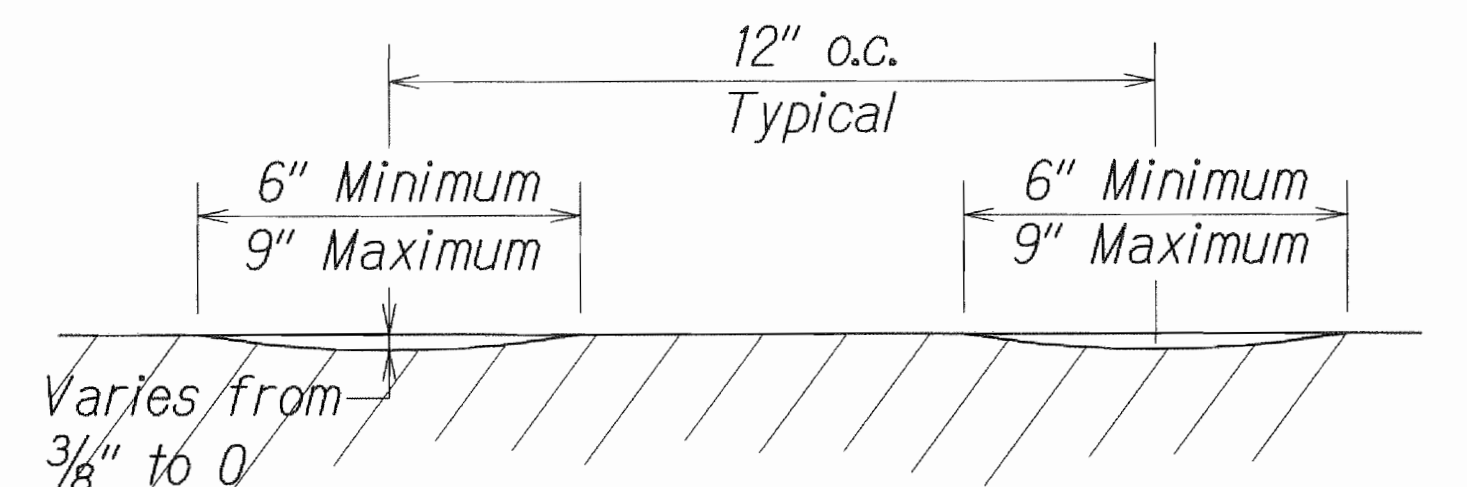
SHEET No. 1 OF 3 SHEETS

ORIGINAL PLAN	DATE
NOTED BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

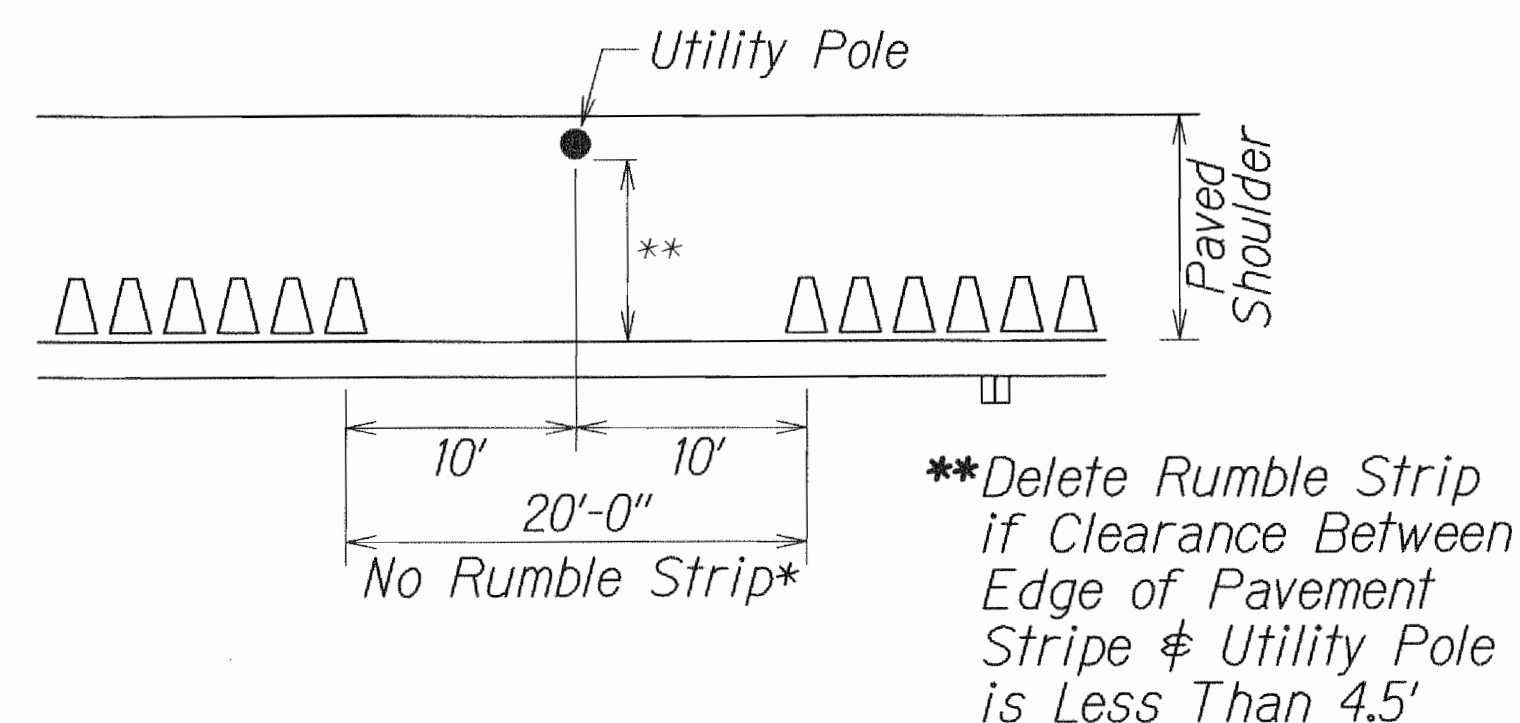
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0460(016)	2013	24	40



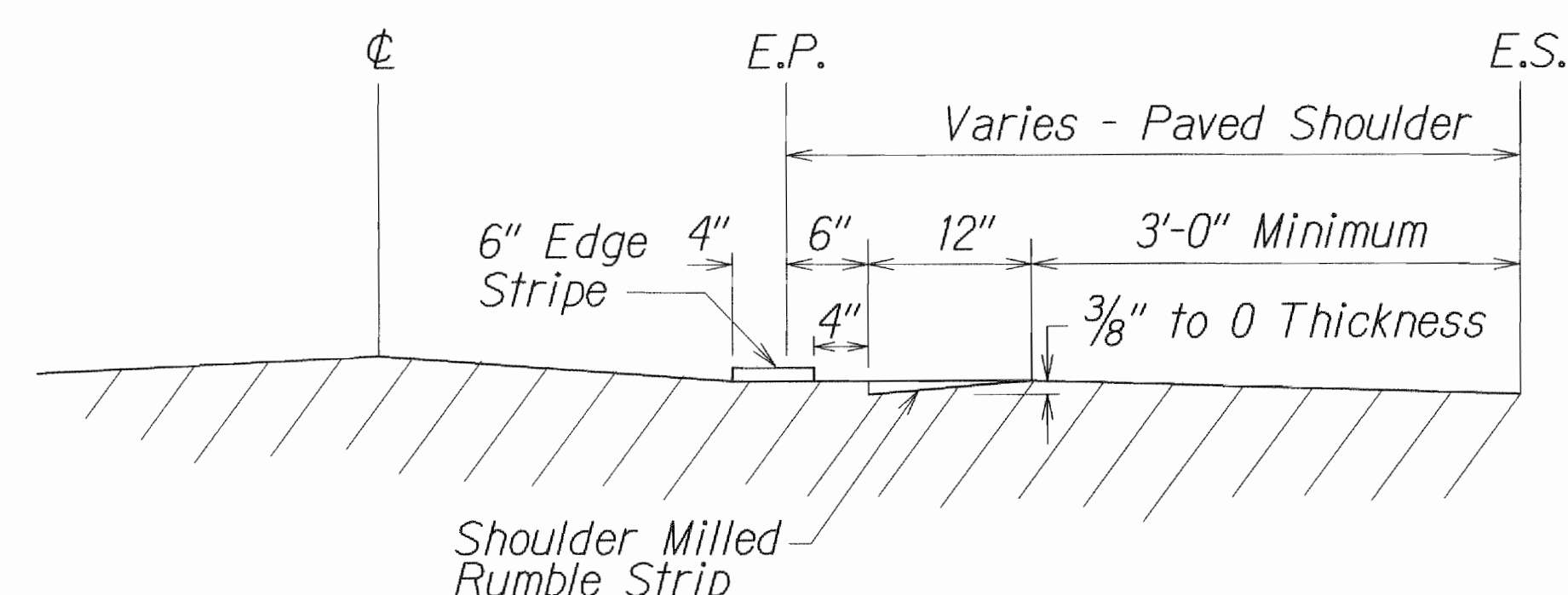
PLAN - SHOULDER MILLED RUMBLE STRIP
Not to Scale



CROSS SECTION - SHOULDER MILLED RUMBLE STRIP
Not to Scale



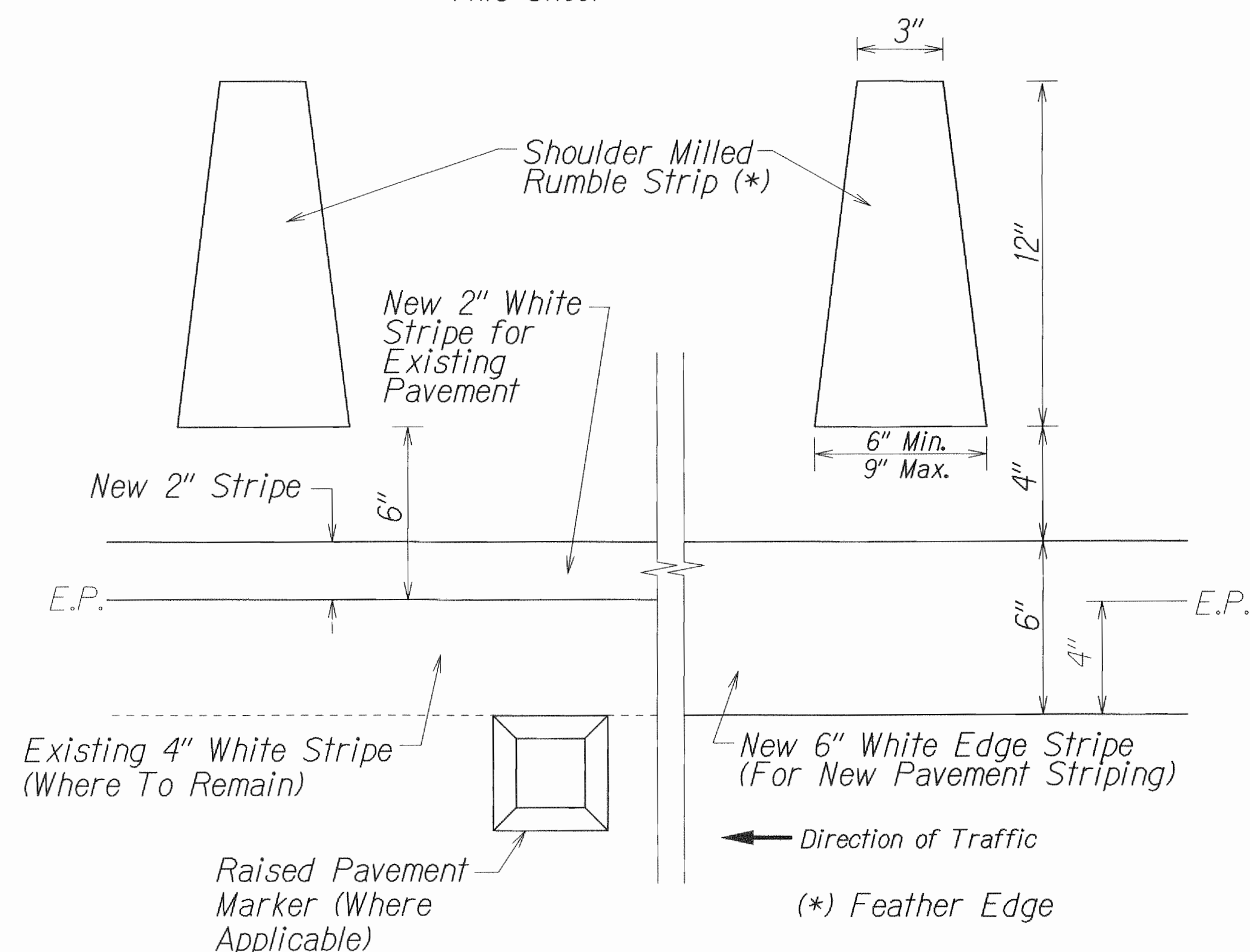
DETAIL - CONDITION WHERE UTILITY POLE EXISTS
Not to Scale



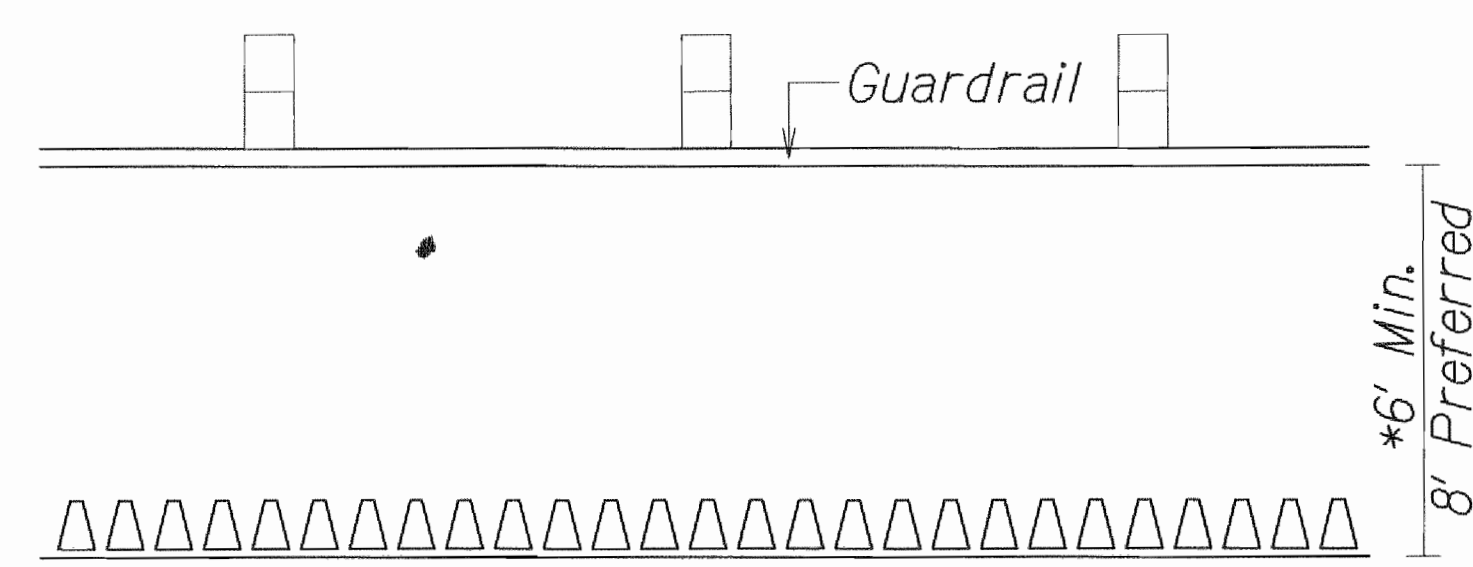
LONGITUDINAL SECTION - SHOULDER MILLED RUMBLE STRIP
Not to Scale

NOTES:

- Shoulder milled rumble strips may be installed for paved shoulder width of 4.5' or more from edge of pavement (E.P.).
- The method of constructing the shoulder milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
- Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement marking prior to installation.
- Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
- The construction of the shoulder milled rumble strip and 13-foot gaps shall be paid for under Item No. 615.0200 - 12-Inch Milled Rumble Strip, Shoulder.
- The milling apparatus, 20 L.F. - 6" white stripe, and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0200 - 12-Inch Milled Rumble Strip, Shoulder.
- Rumble strips shall be installed along all shoulders, except at right turn deceleration and acceleration lanes, as noted on the plans.
- Do not place Type "C" Raised Pavement markers within 2 ft. of the 13 ft. Rumble Strip opening.
- Do not install edgeline rumble strips on bridge decks.
- Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
- Shoulder Rumble Strips are to be installed after the edge of pavement stripe and before the installation of the Type "C" raised pavement markers.
- Hot spray thermoplastic shall be used for solid line markings within the shoulder milled rumble strip area.



DETAIL - SHOULDER MILLED RUMBLE STRIP
Not to Scale

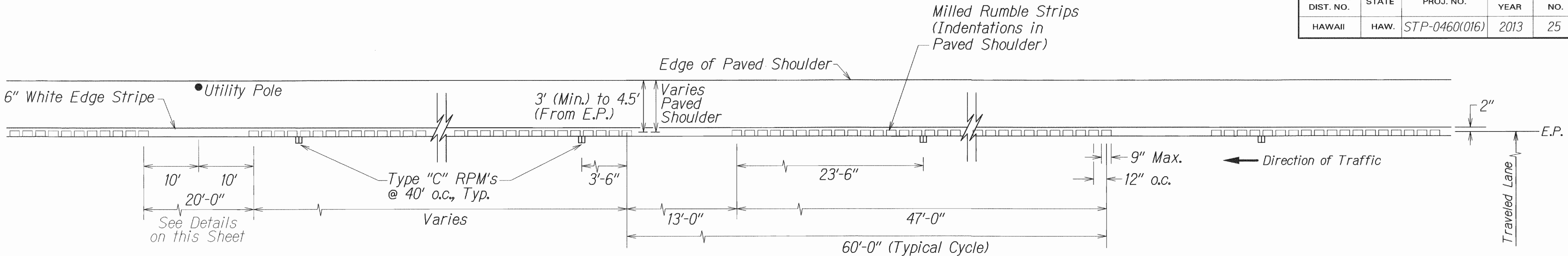


DETAIL - CONDITION WHERE GUARDRAIL EXISTS
Not to Scale

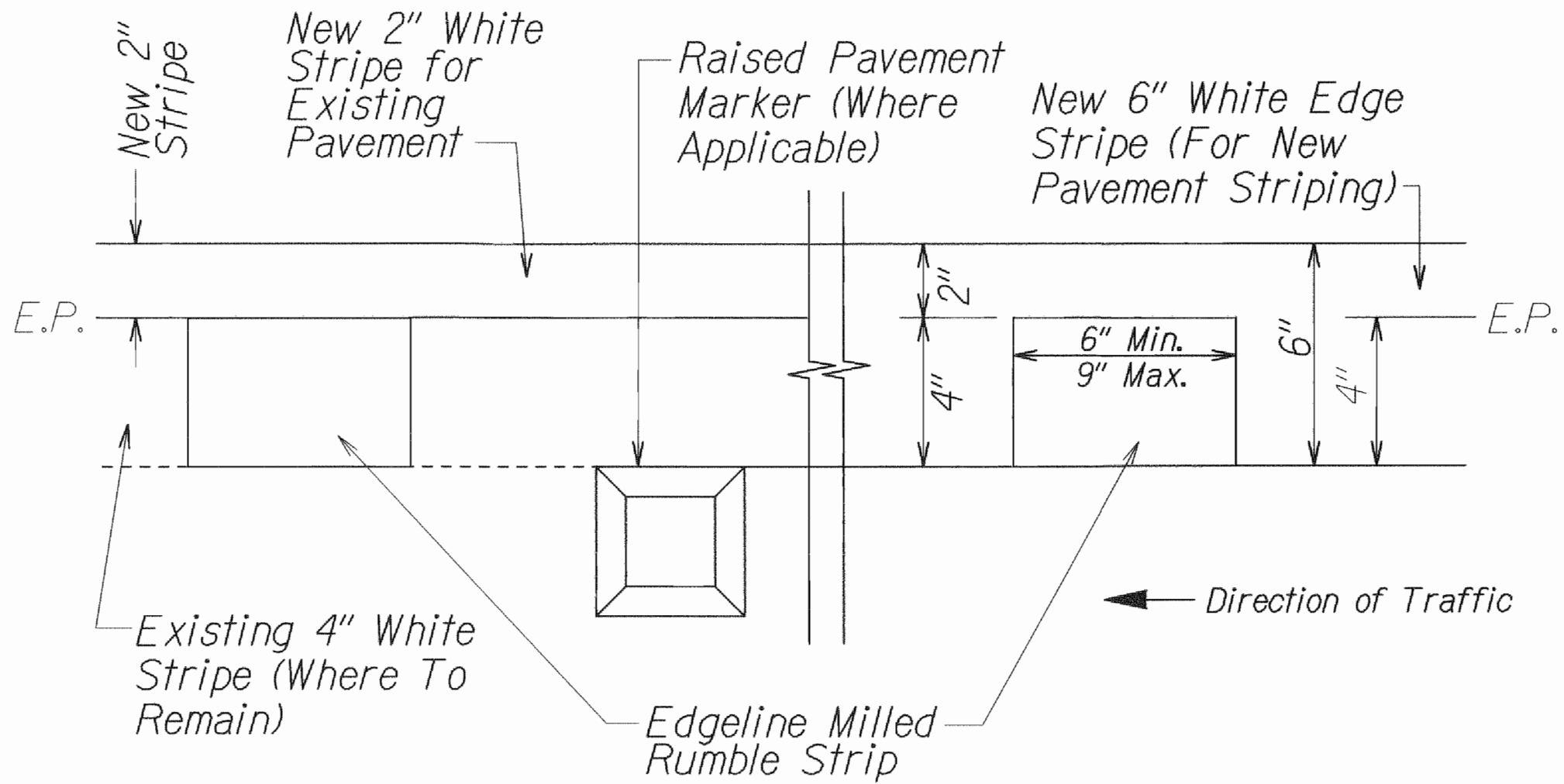
*If shoulder width is less than 6', do not install shoulder rumble strip where guardrail exists.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SHOULDER MILLED RUMBLE STRIP	
DETAIL FOR SHOULDER 4.5' OR MORE	
MAUNALOHA HIGHWAY RESURFACING	
Maunaloa Village to Mahana	
Federal-Aid Project No. STP-0460(016)	
Scale: As Shown	Date: July, 2012
SHEET No. 2 OF 3 SHEETS	

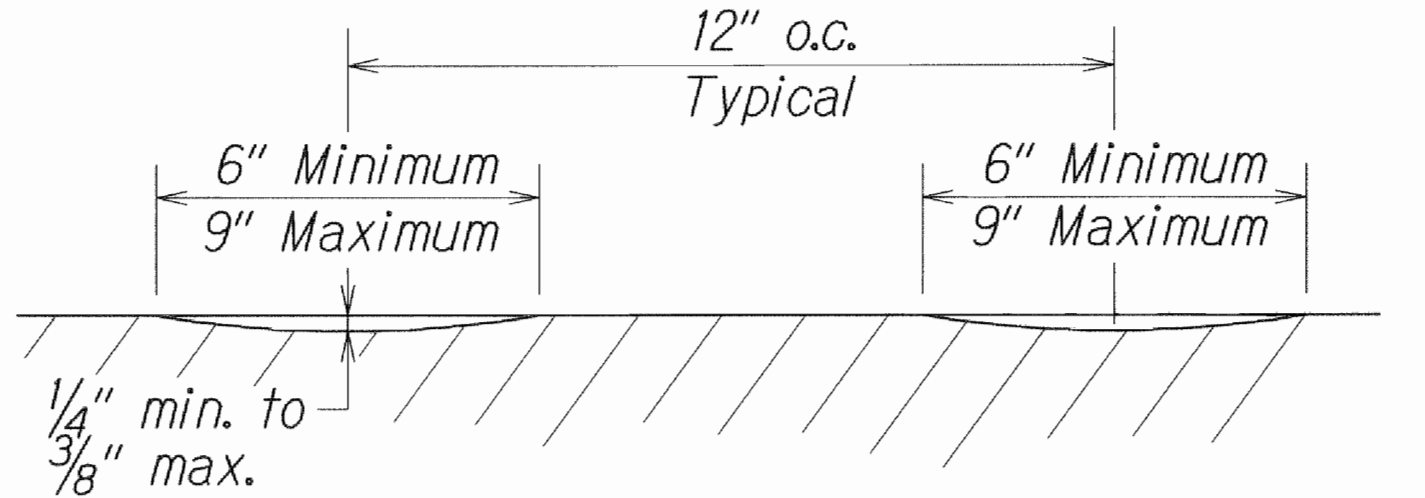
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0460(016)	2013	25	40



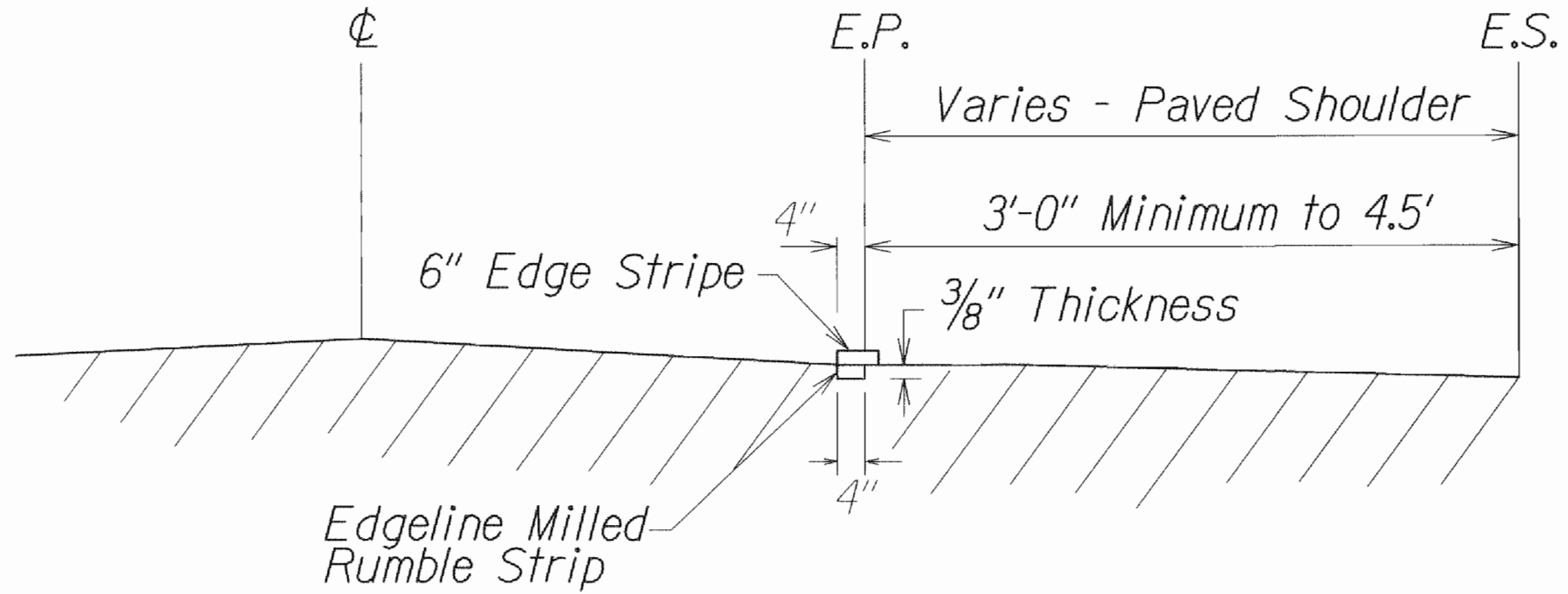
PLAN - EDGELINE MILLED RUMBLE STRIP (3' SHOULDER)
Not to Scale



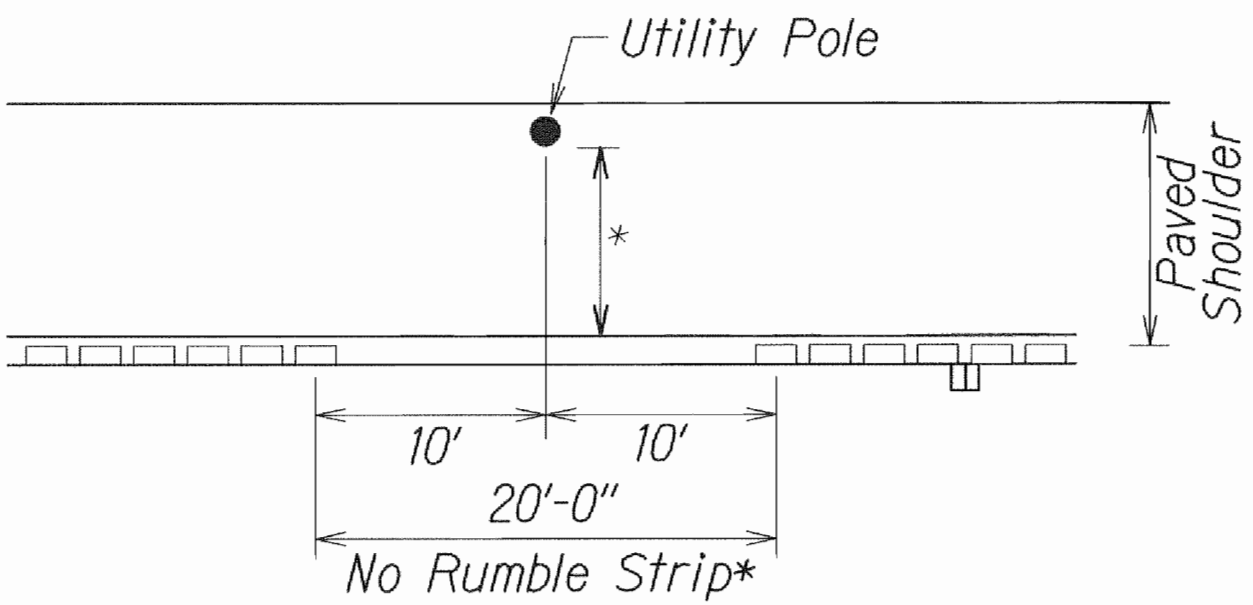
DETAIL - EDGELINE MILLED RUMBLE STRIP
Not to Scale



CROSS SECTION - EDGELINE MILLED RUMBLE STRIP
Not to Scale



LONGITUDINAL SECTION - EDGELINE MILLED RUMBLE STRIP
Not to Scale



DETAIL - CONDITION WHERE UTILITY POLE EXISTS
Not to Scale

- NOTES:
- Edgeline milled rumble strips may be installed for paved shoulder width of 3' minimum to 4.5' from edge of pavement (E.P.)
 - The method of constructing the edgeline milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
 - Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement marking prior to installation.
 - Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
 - The construction of the edgeline milled rumble strip and 13-foot gaps shall be paid for under Item No. 615.0300 - 4-Inch Milled Rumble Strip, Edgeline.
 - The milling apparatus and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0300 - 4-Inch Milled Rumble Strip, Edgeline.
 - Rumble strips shall be installed along all shoulders, except at right turn deceleration and acceleration lanes, as noted on the plans.
 - Do not place Type "C" Raised Pavement markers within 2 ft. of the 13 ft. Rumble Strip opening.
 - Do not install edgeline rumble strips on bridge decks.
 - Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
 - Edgeline Rumble Strips are to be installed before the edge of pavement stripe and before the installation of the Type "C" raised pavement markers.
 - Hot spray thermoplastic shall be used for solid line markings within the edgeline milled rumble strip area.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EDGELINE MILLED RUMBLE STRIP
DETAIL FOR SHOULDER 3' TO 4.5'
MAUNALOA HIGHWAY RESURFACING
Maunaloa Village to Mahana
Federal-Aid Project No. STP-0460(016)
Scale: As Shown Date: July, 2012

SHEET No. 3 OF 3 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	NOTED BY	
	CHECKED BY	