

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	19	81

CURB RAMP AND SIDEWALK NOTES:

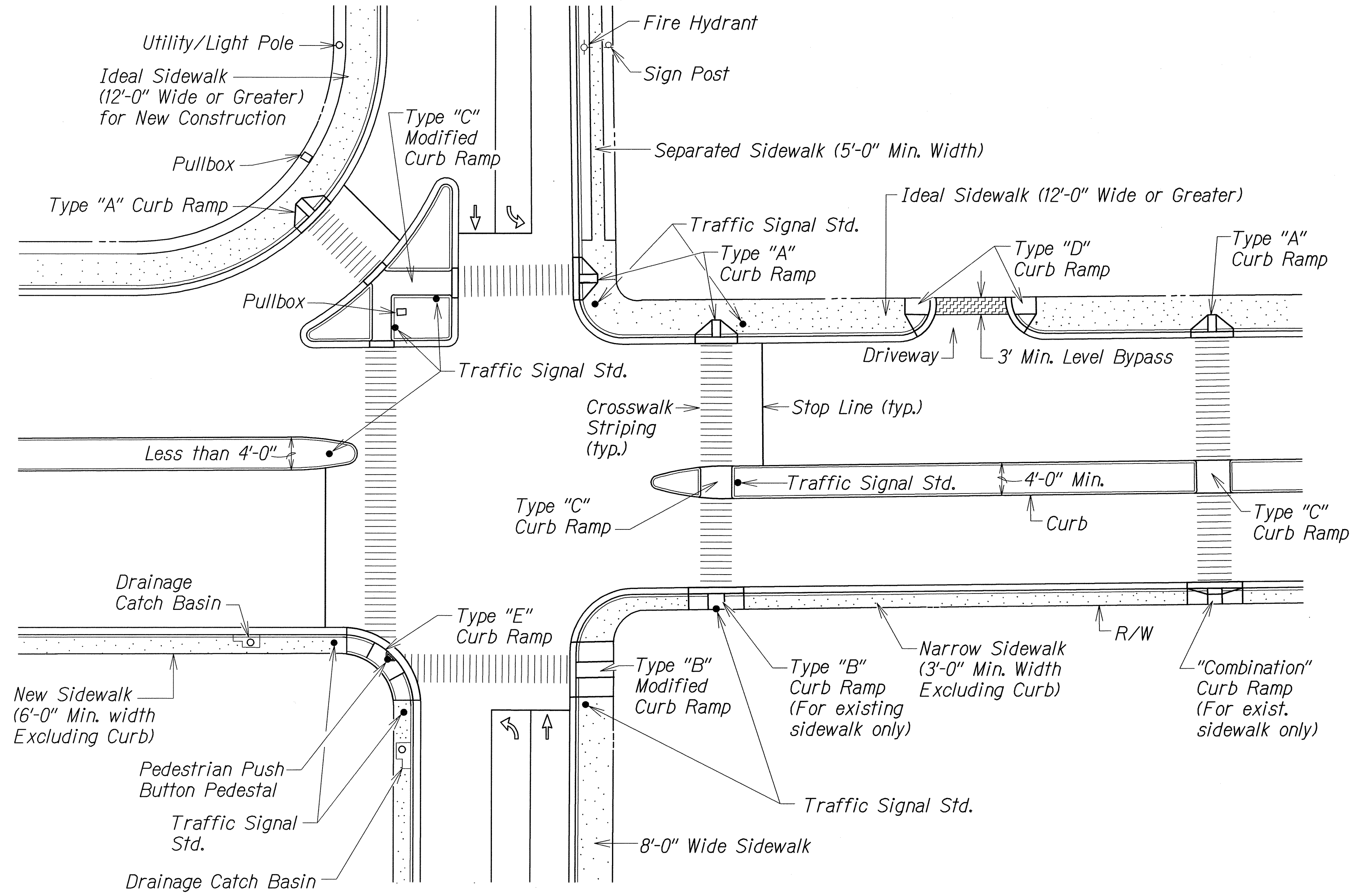
1. These typical details are intended as curb ramp guidelines for design and construction.
2. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
3. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
4. All pullboxes shall be installed 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 54".
 - 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 slip-resistant. 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 1/4 inch per 10 ft. (±0.2%). Remedial measures will not be accepted.
21. Additional information is available from:
 - a) American with Disabilities Act Accessibility Guidelines (ADAAG), Jan. 1998, The Access Board.
 - b) Accessible Rights-of-Way: A Design Guide, Nov. 1999, The Access Board.
 - c) Designing Sidewalks and Trails for Access, Part 1, July 1999, FHWA.
 - d) Designing Sidewalks and Trails for Access, Part 2, Sept. 2001, FHWA.

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

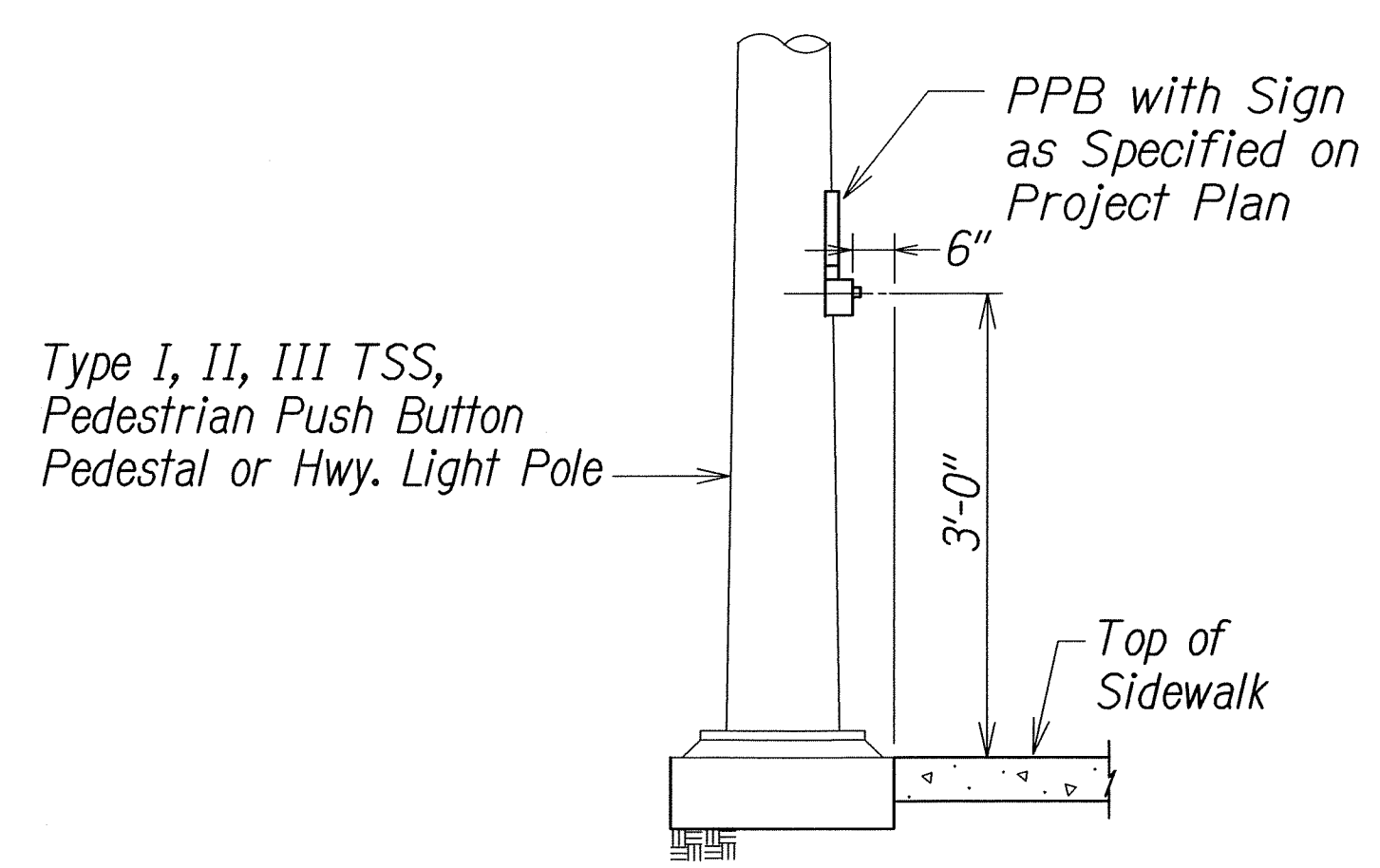
R 12-06-06 TE-00 sht. 1 of 9 tdl/usr2/traffic/std/curbrampnote.dgn

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>CURB RAMP AND SIDEWALK NOTES</u>
<u>Kaneohe Bay Dr. Rehabilitation</u> <u>Kamehameha Hwy to Nanamoana Street</u> <u>Project No. 65AB-01-04M</u>
Date: May, 2012
SHEET No. 1 OF 12 SHEETS

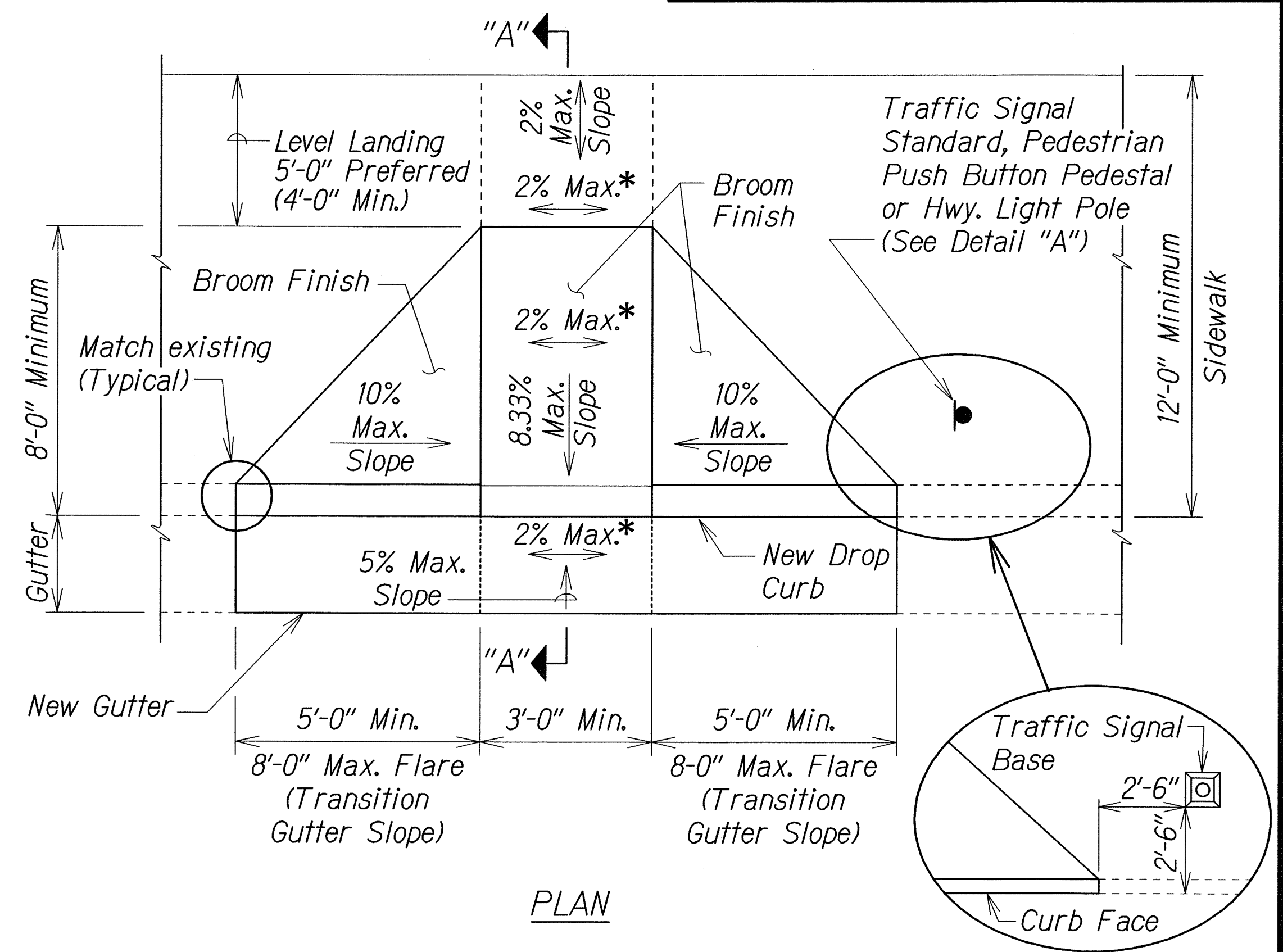
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	20	81



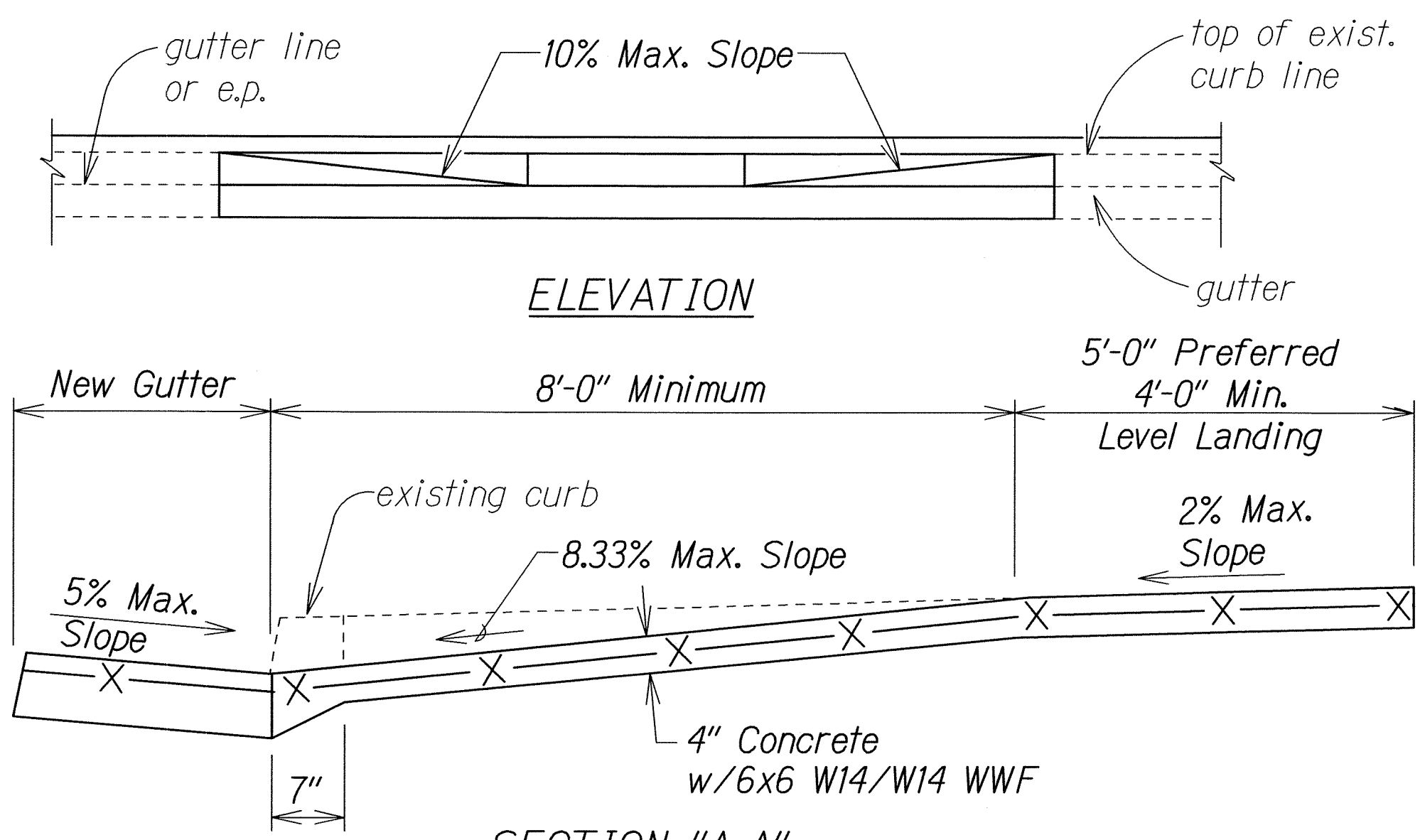
TYPICAL CURB RAMPS



DETAIL "A"



PLAN



ELEVATION

SECTION "A-A"

CURB RAMP - TYPE "A"

SIDEWALK WIDTH 12'-0" OR GREATER

* If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (TI) Statement

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

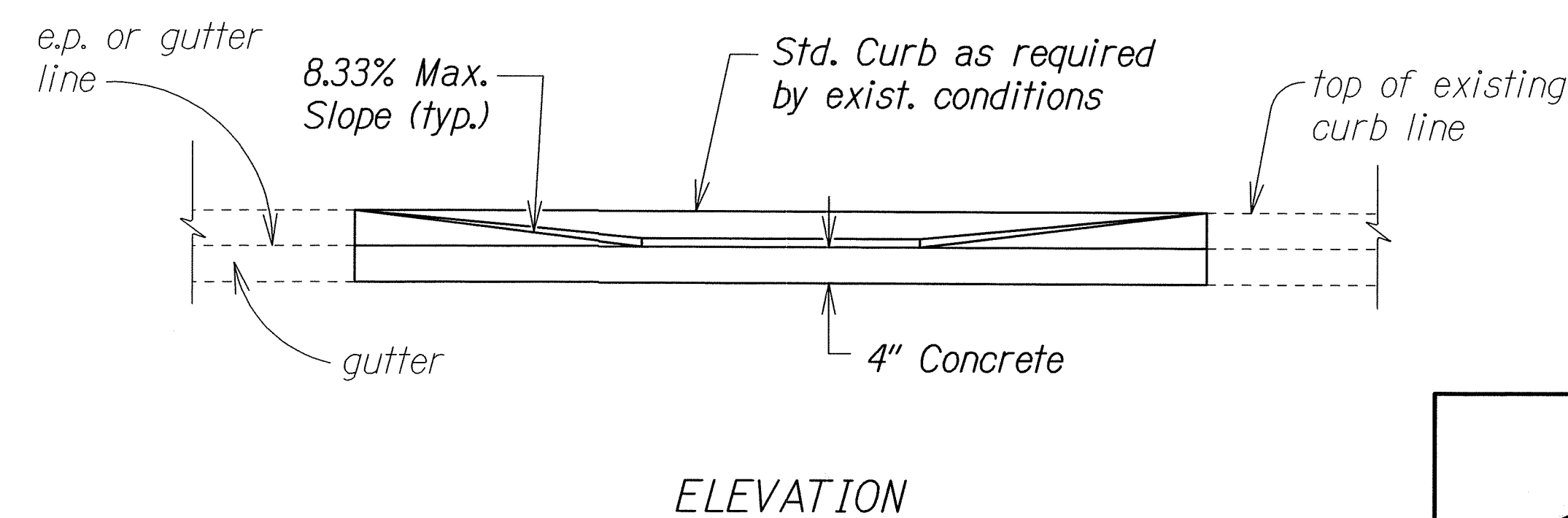
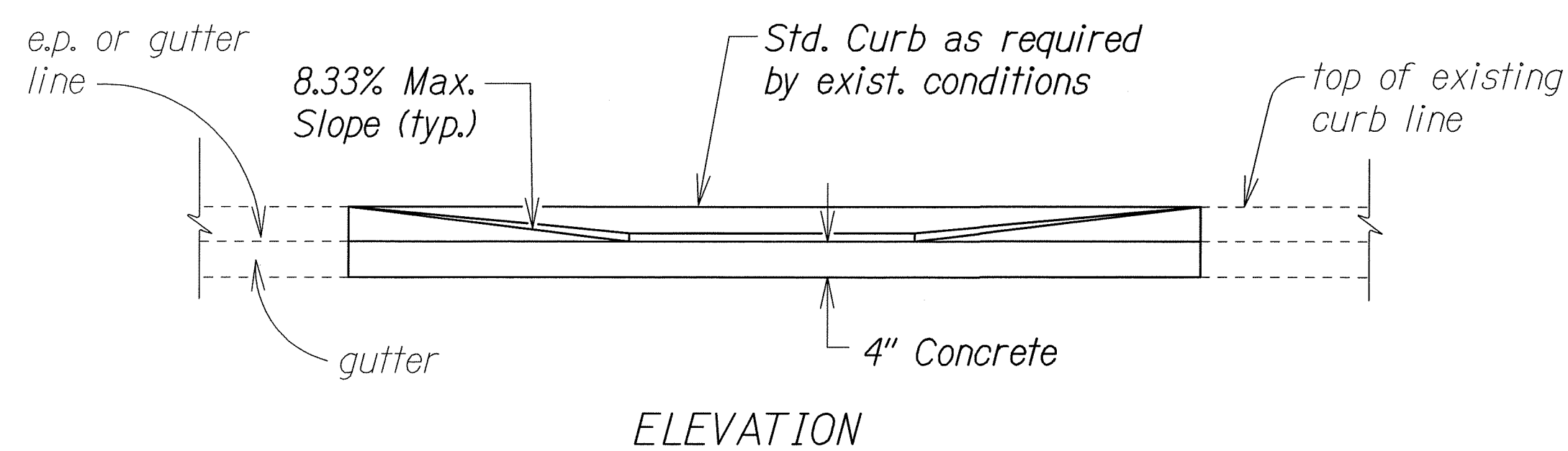
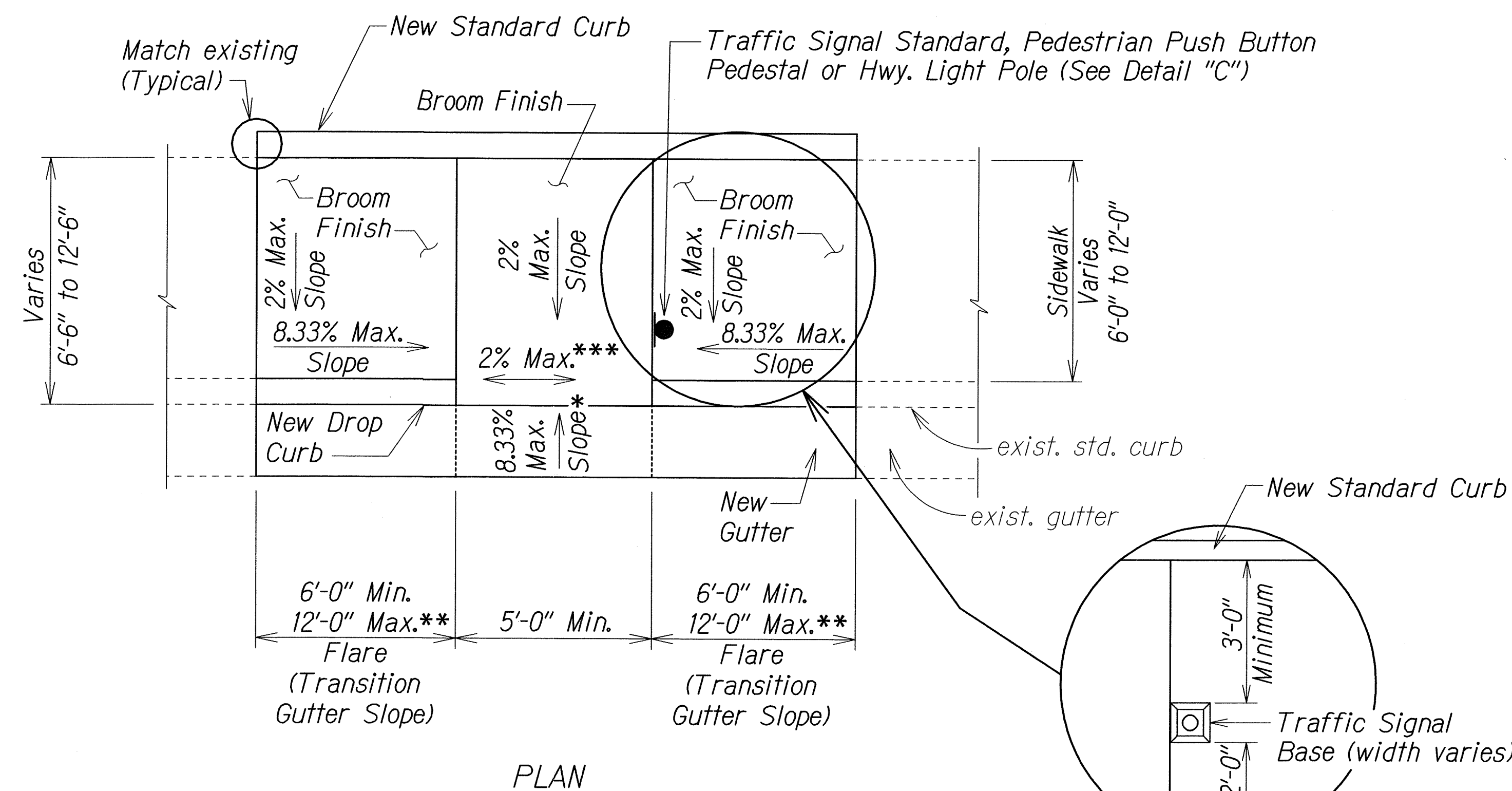
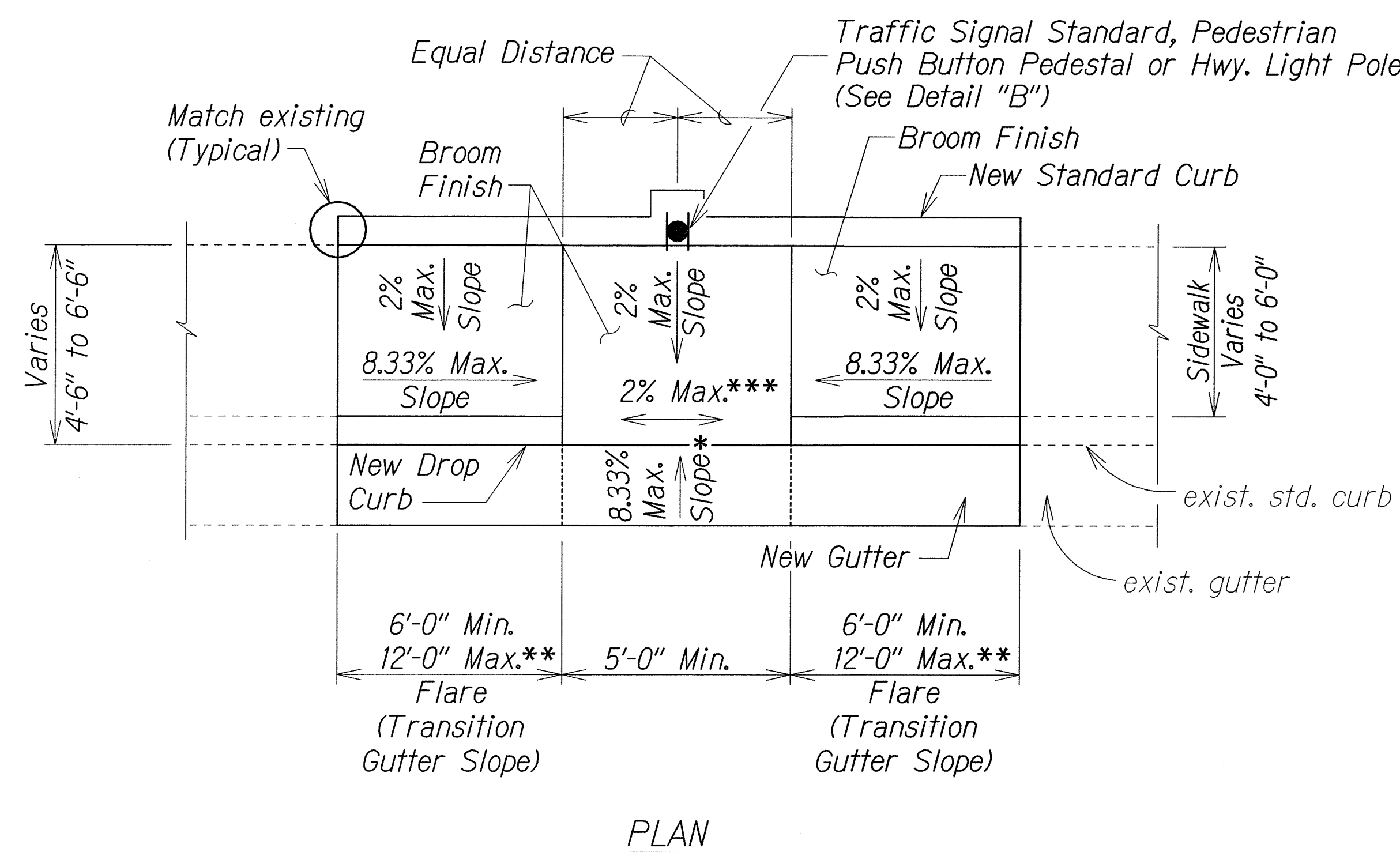
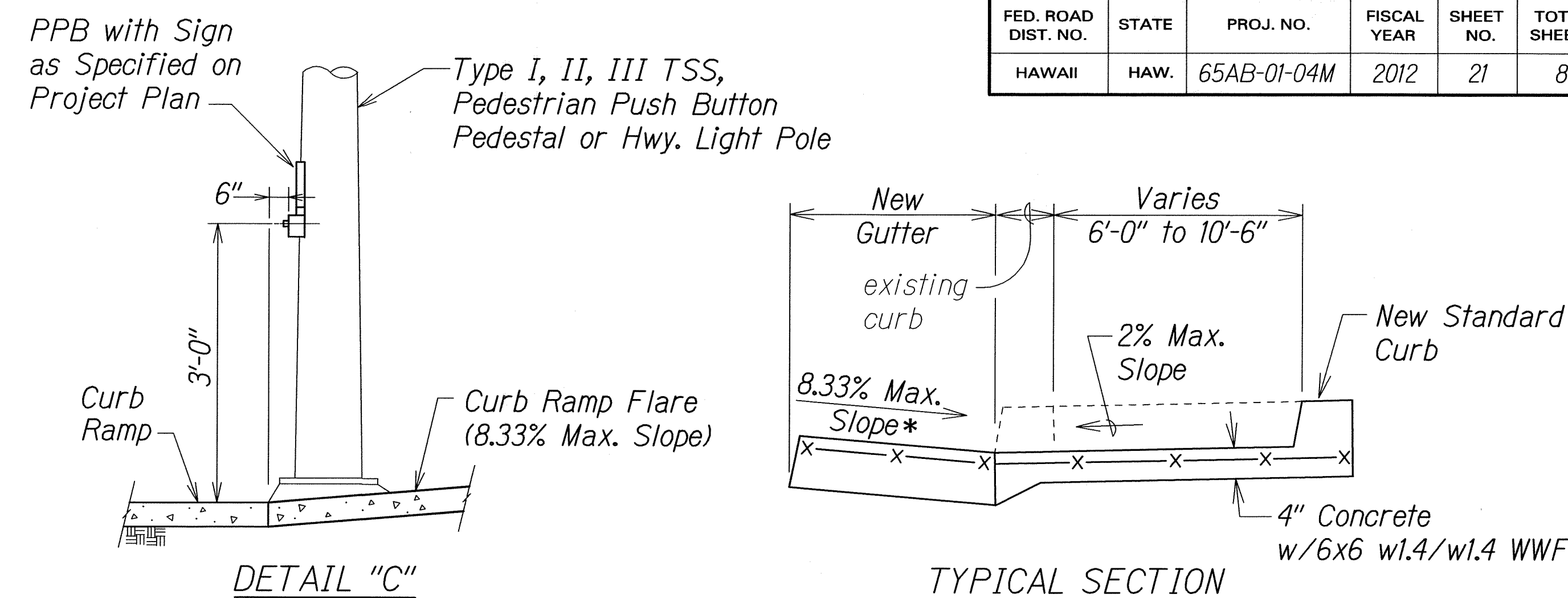
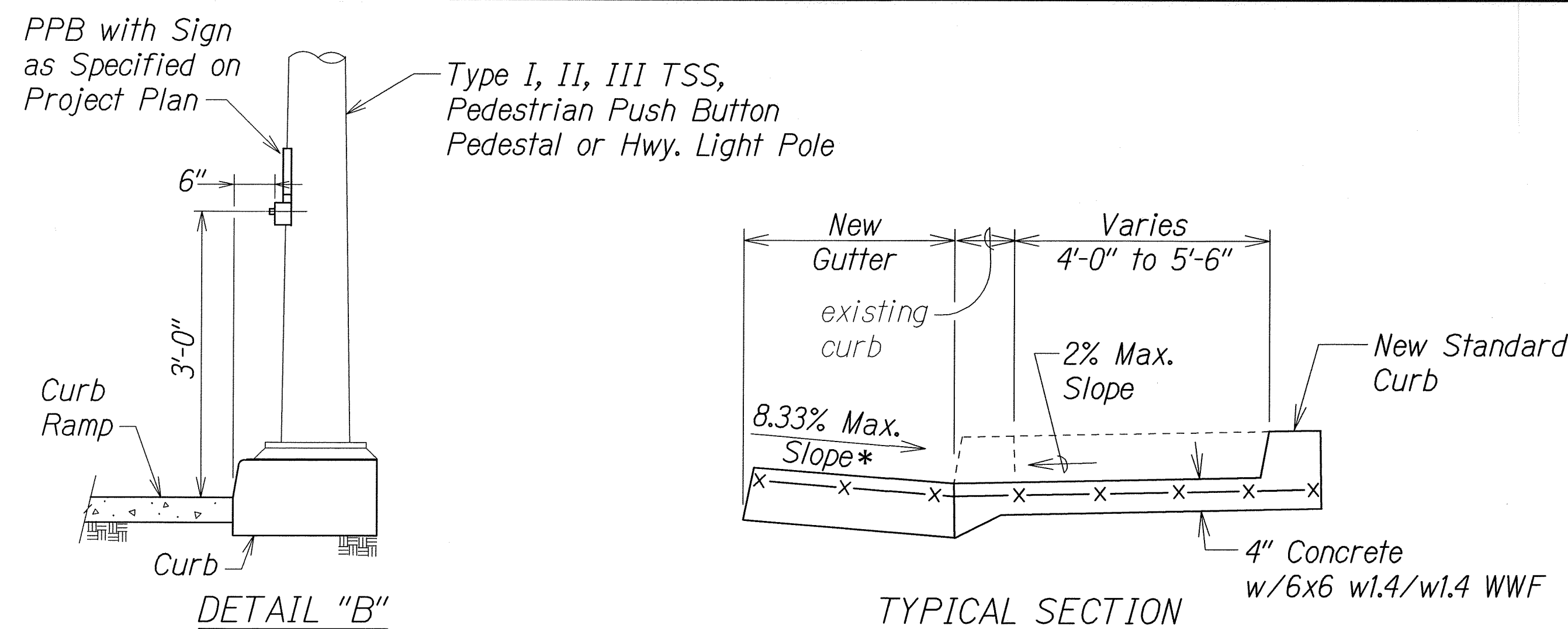
KANEOHE BAY DR. REHABILITATION
Kamehameha Hwy. to Nanamoana Street
Project No. 65AB-01-04M

Not to Scale Date: May, 2012

ORIGINAL PLAN	DATE
NOTED BY	DESIGNED BY
QUANTITIES BY	CHECKED BY
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	21	81



CURB RAMP - TYPE "B"
 SIDEWALK WIDTH 4'-0" OR GREATER
 BUT LESS THAN 6'-0" WIDTH

CURB RAMP - TYPE "B" MODIFIED
 SIDEWALK WIDTH 6'-0" OR GREATER
 BUT LESS THAN 12'-0" WIDTH

- * See Curb Ramp and Sidewalk Note No. 9
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
- *** If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (TI) Statement

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP DETAILS

KANE OHE BAY DR. REHABILITATION
 Kamehameha Hwy to Nanamoana Street
 Project No. 65AB-01-04M

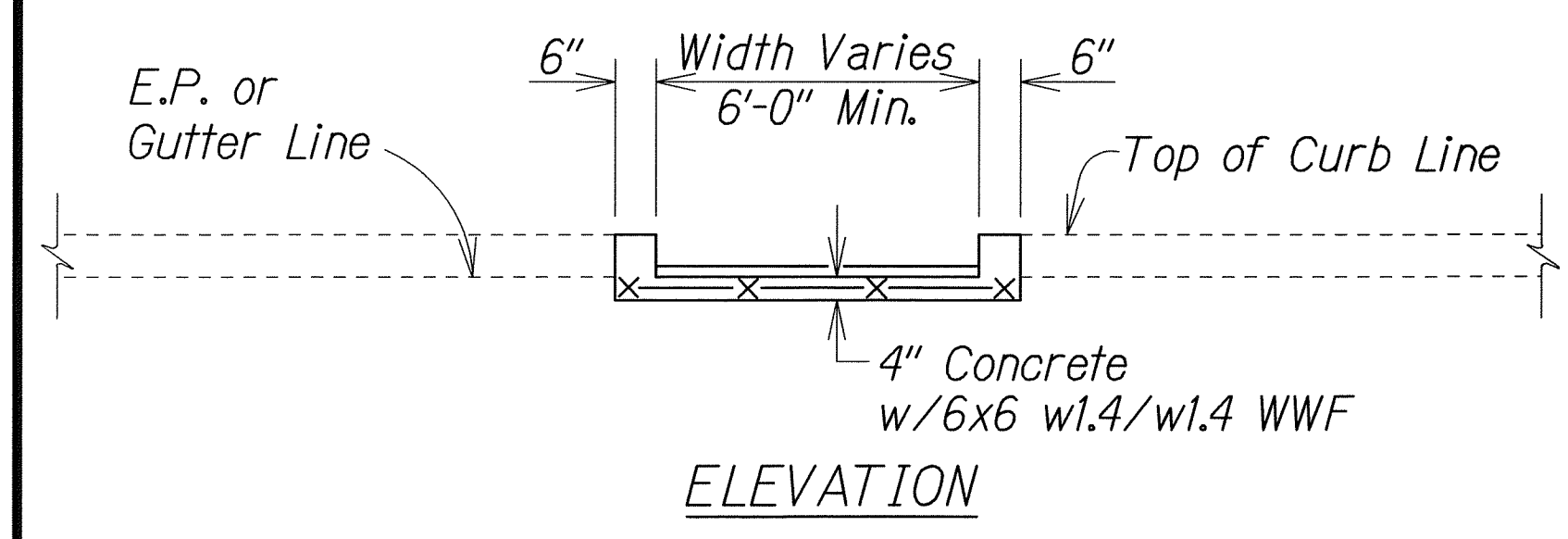
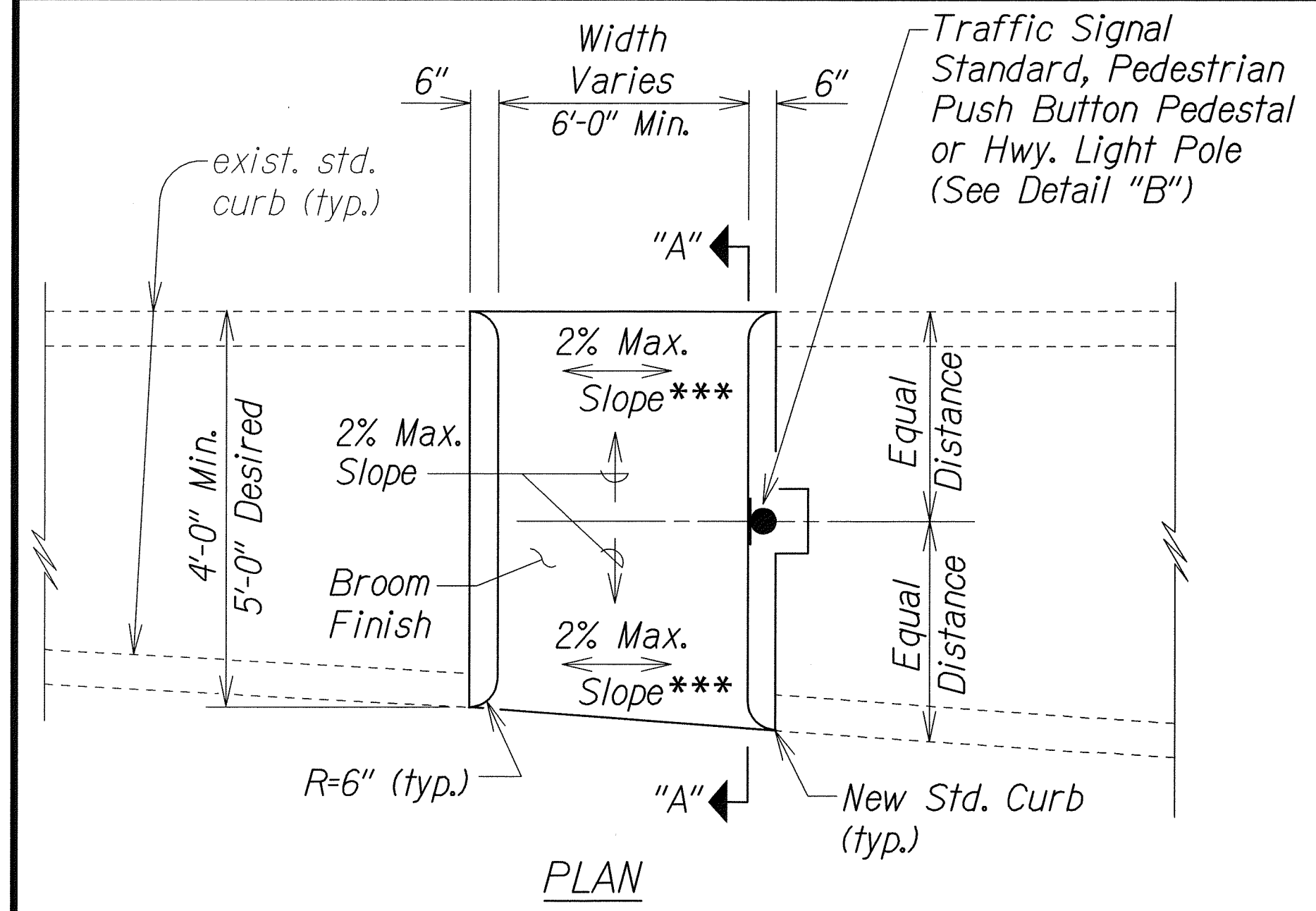
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SHEET No. 3 OF 12 SHEETS

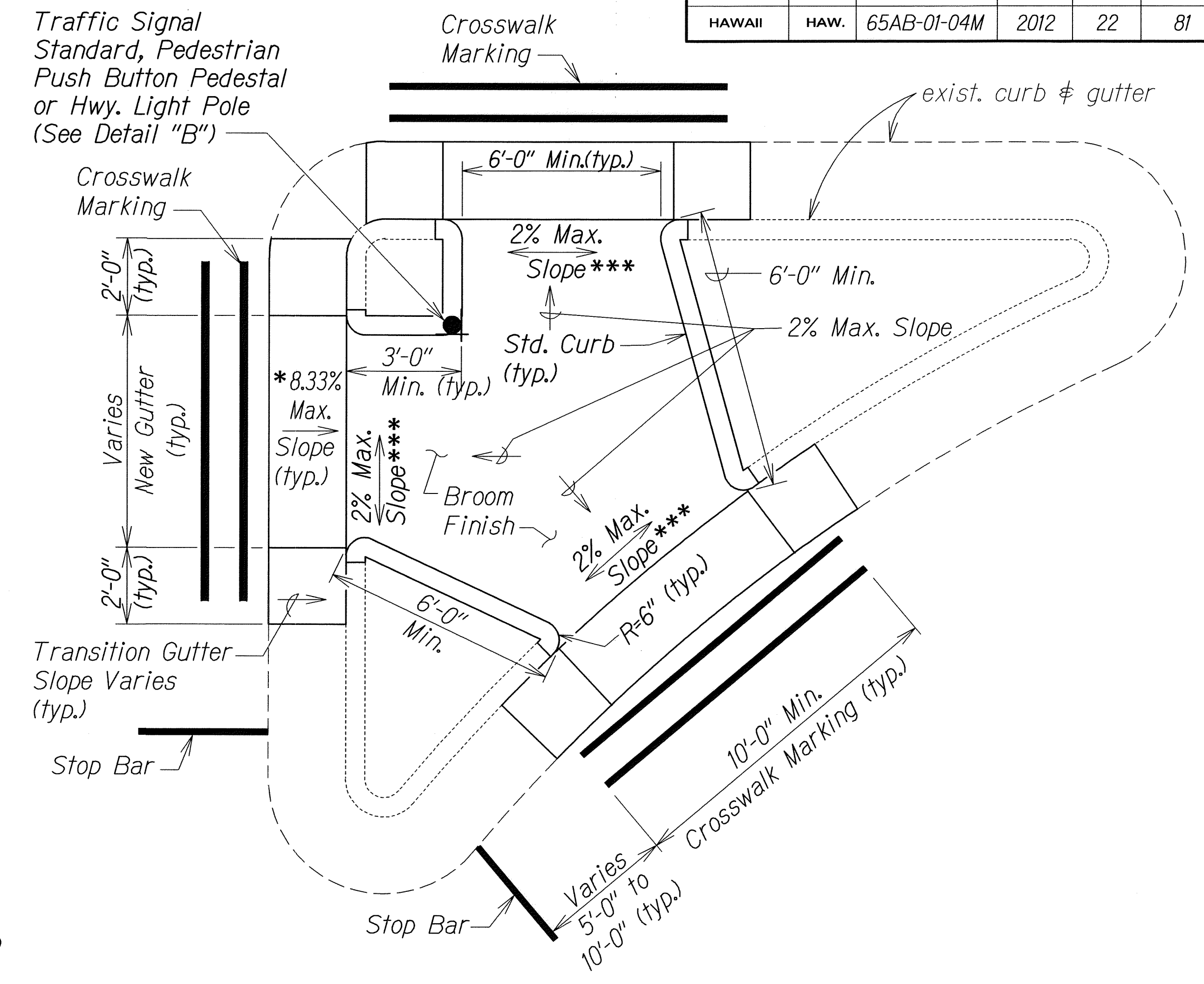
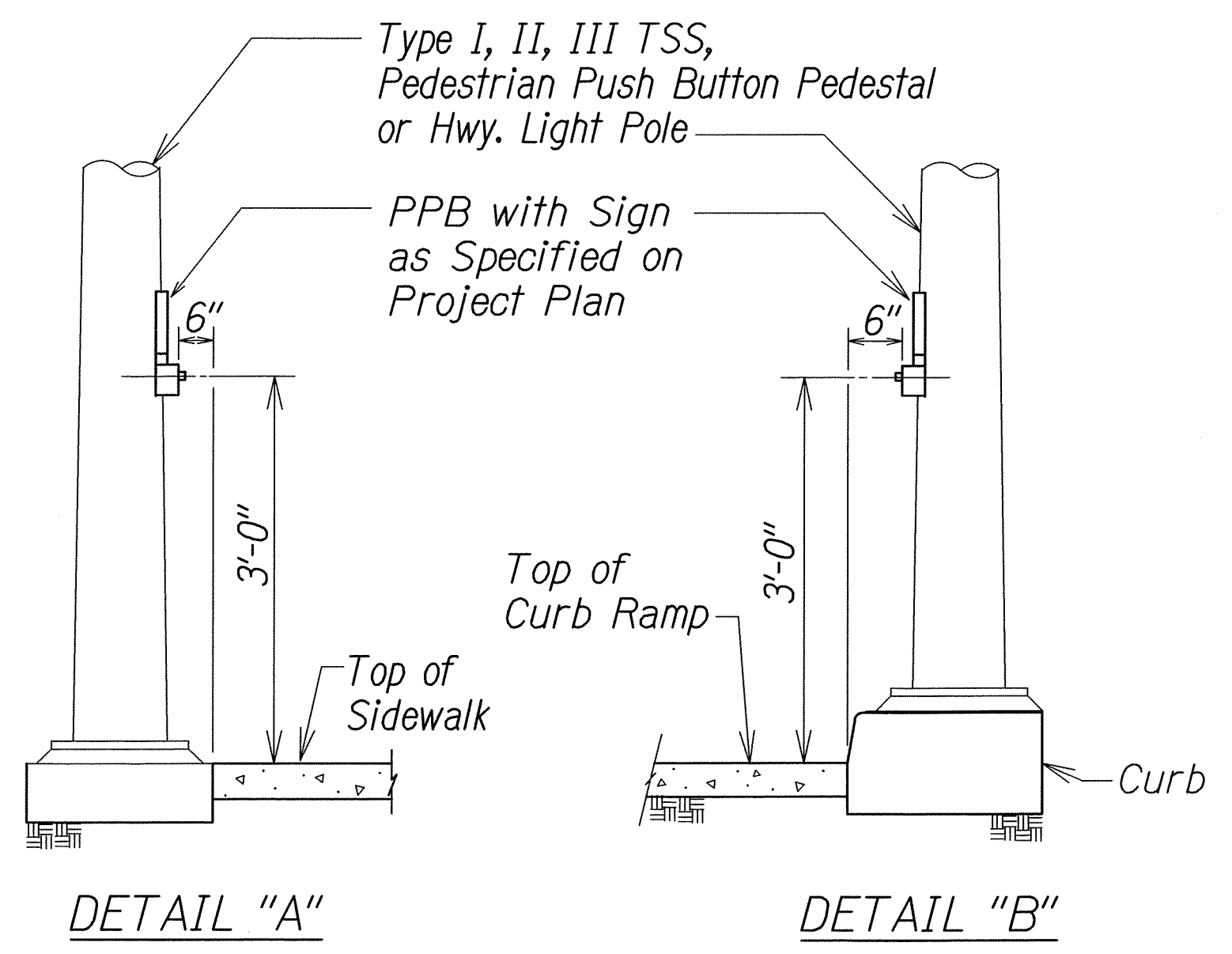
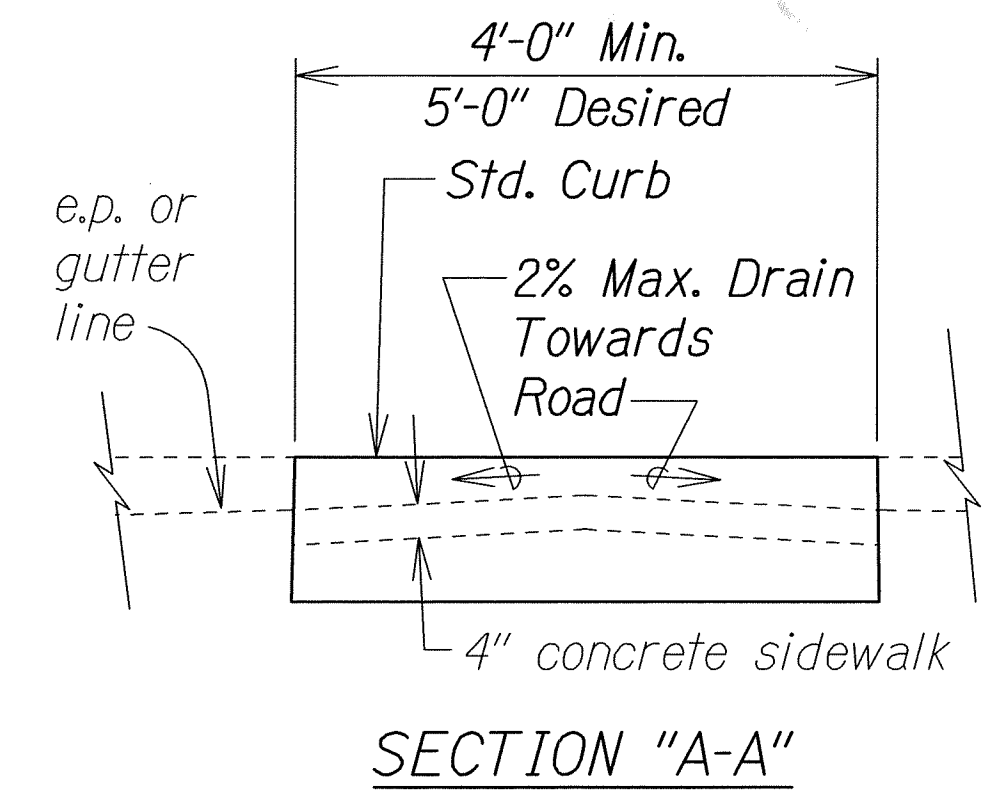
ORIGINAL PLAN	DATE
NOTED BY	DESIGNED BY
QUANTITIES BY	CHECKED BY
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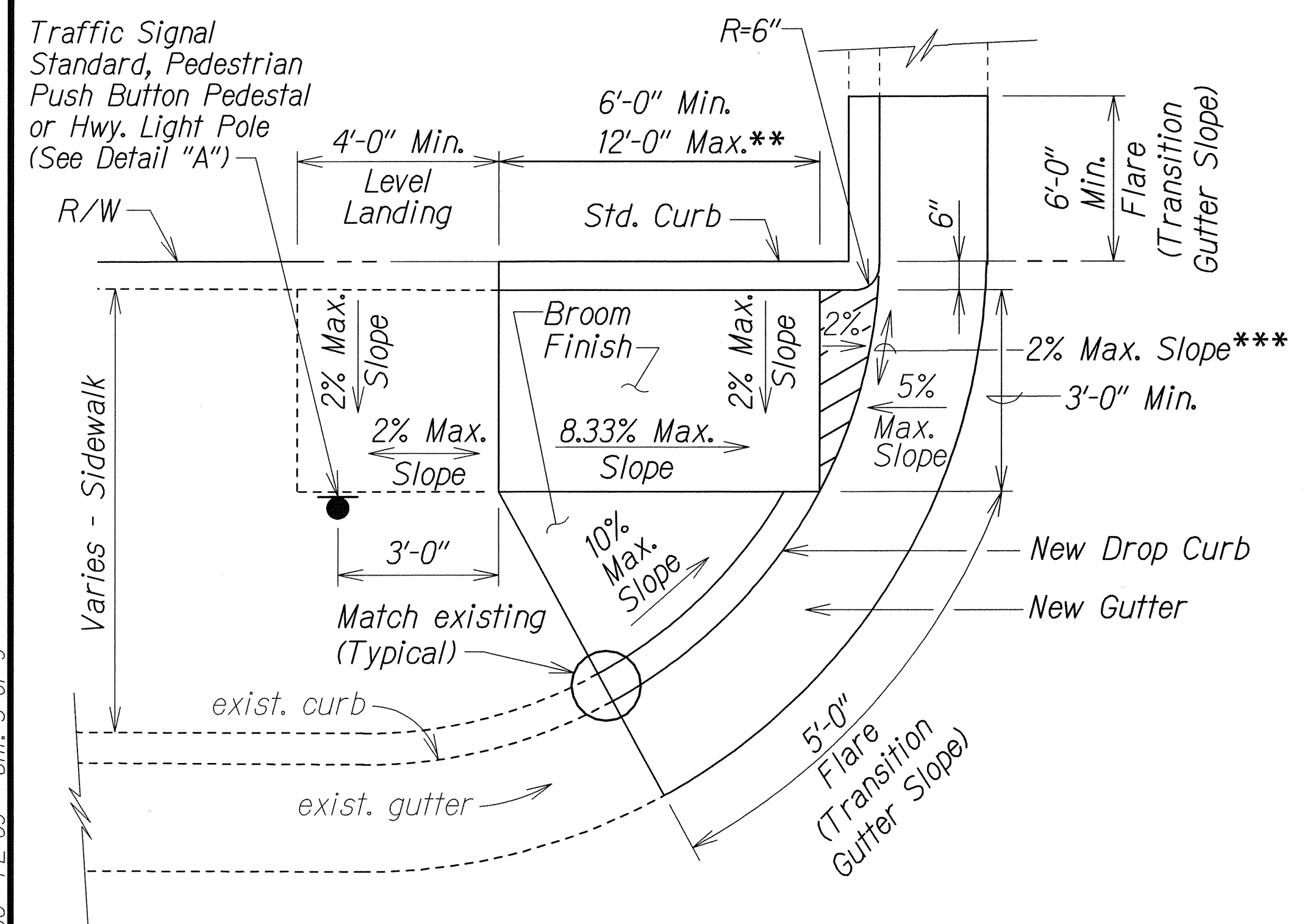
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HAWAII	HAW.	65AB-01-04M	2012	22	81



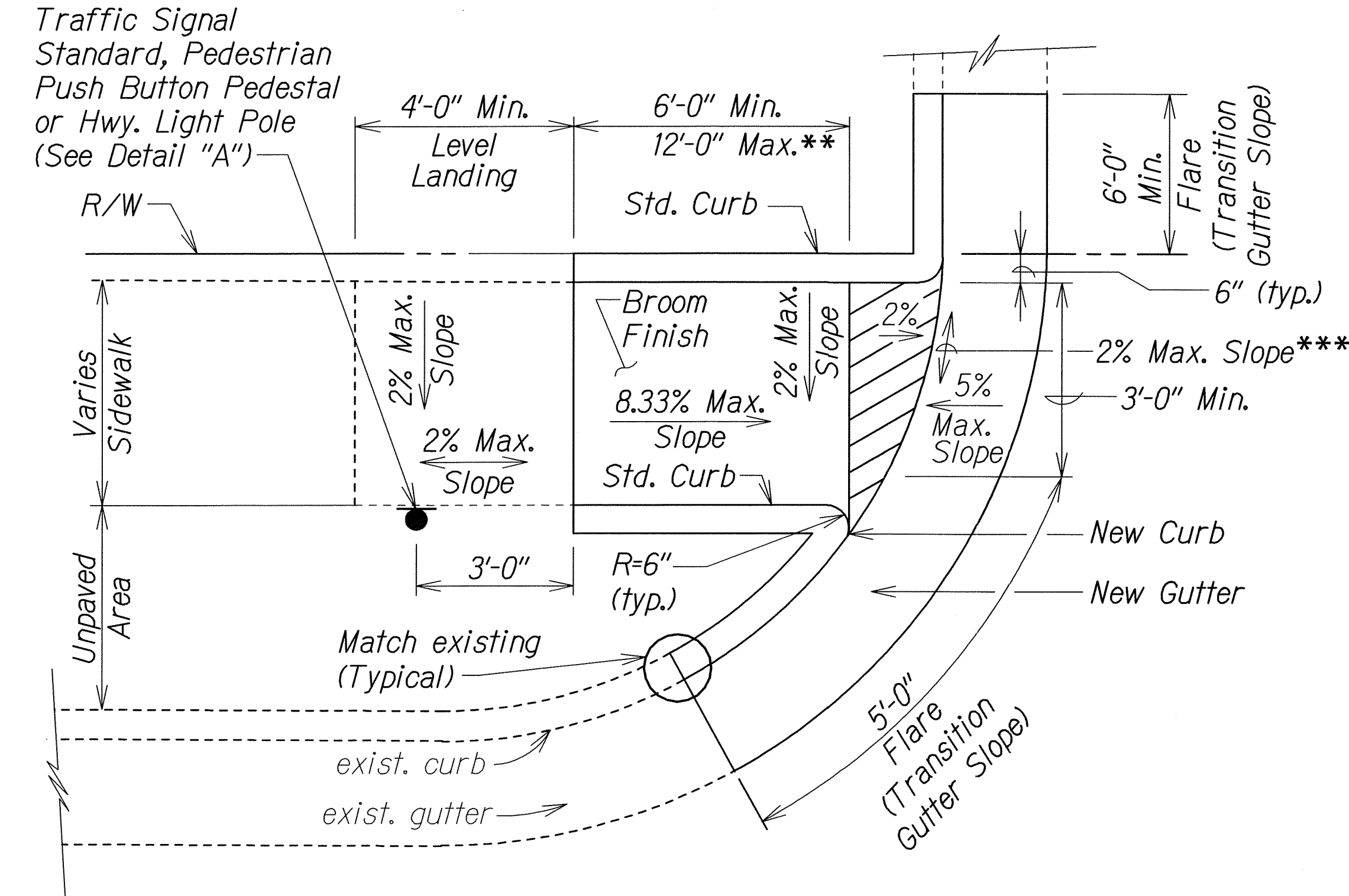
CURB RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS



CURB RAMP - TYPE "C" MODIFIED



CURB RAMP - TYPE "D"



CURB RAMP - TYPE "D" MODIFIED

- * See Curb Ramp and Sidewalk Note No. 9.
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
- *** If Roadway Slope >2% Conform to Roadway Slope and File a Technical Infeasibility (TI) Statement

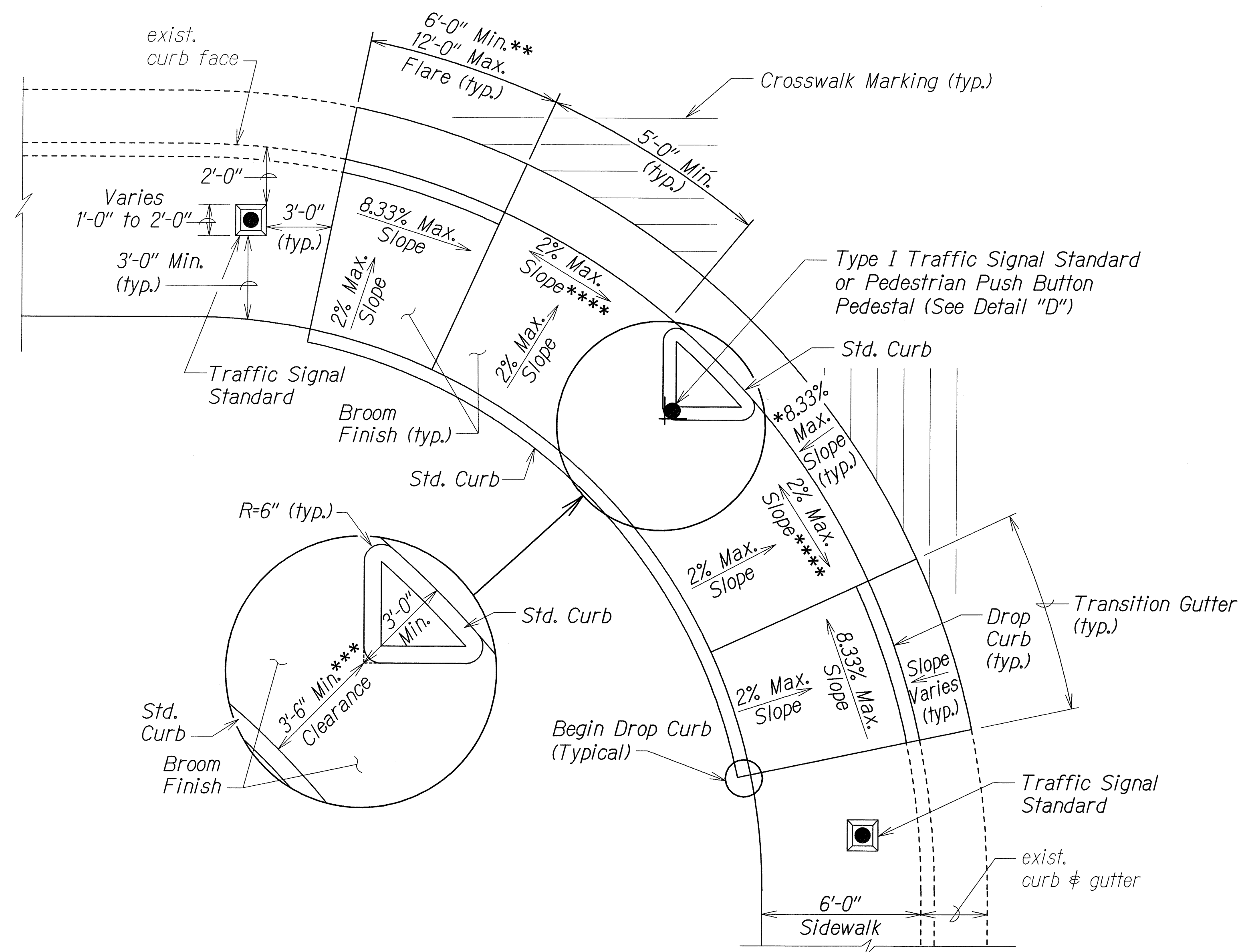
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS
KANEHOE BAY DR. REHABILITATION
Kamehameha Hwy to Nanamoana Street
Project No. 65AB-01-04M
Not to Scale Date: May, 2012

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DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

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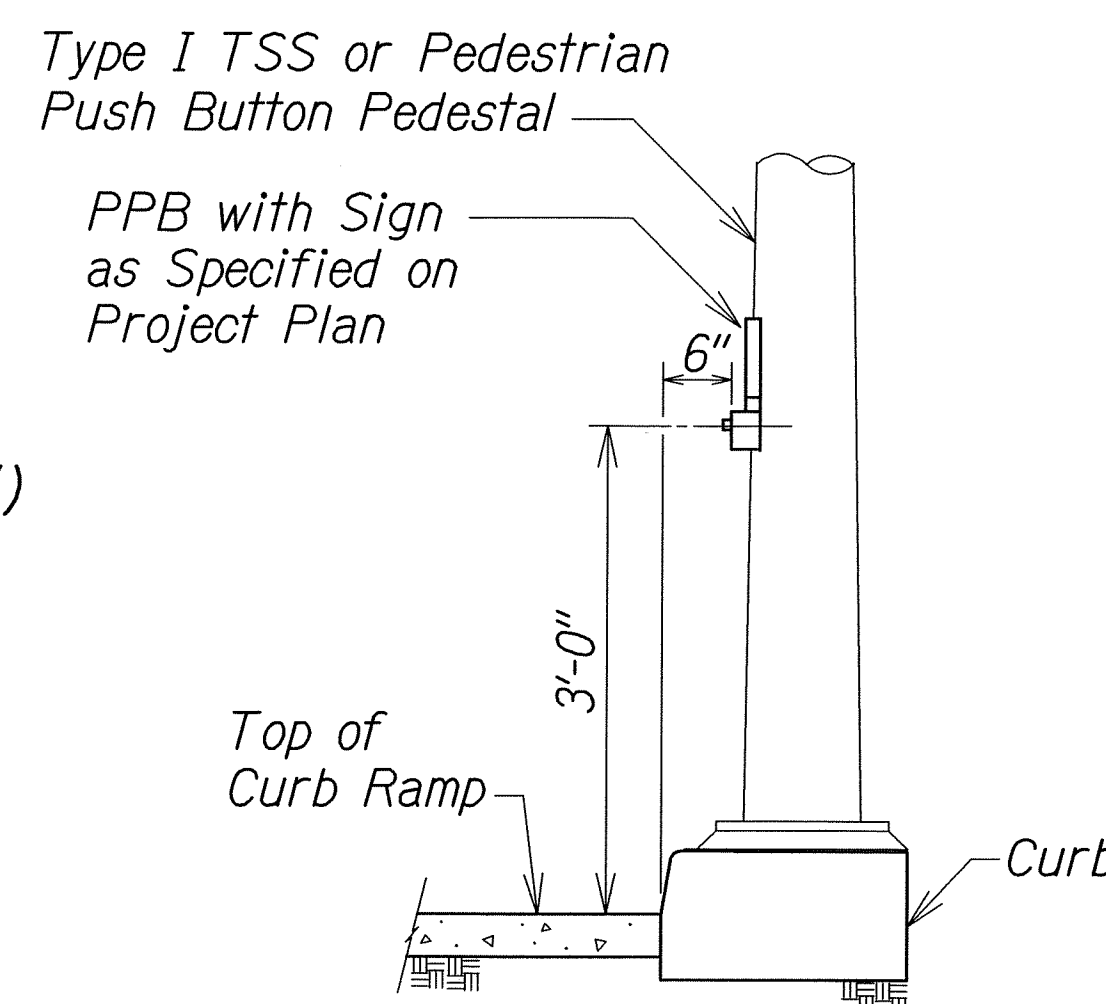
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HAWAII	HAW.	65AB-01-04M	2012	23	81



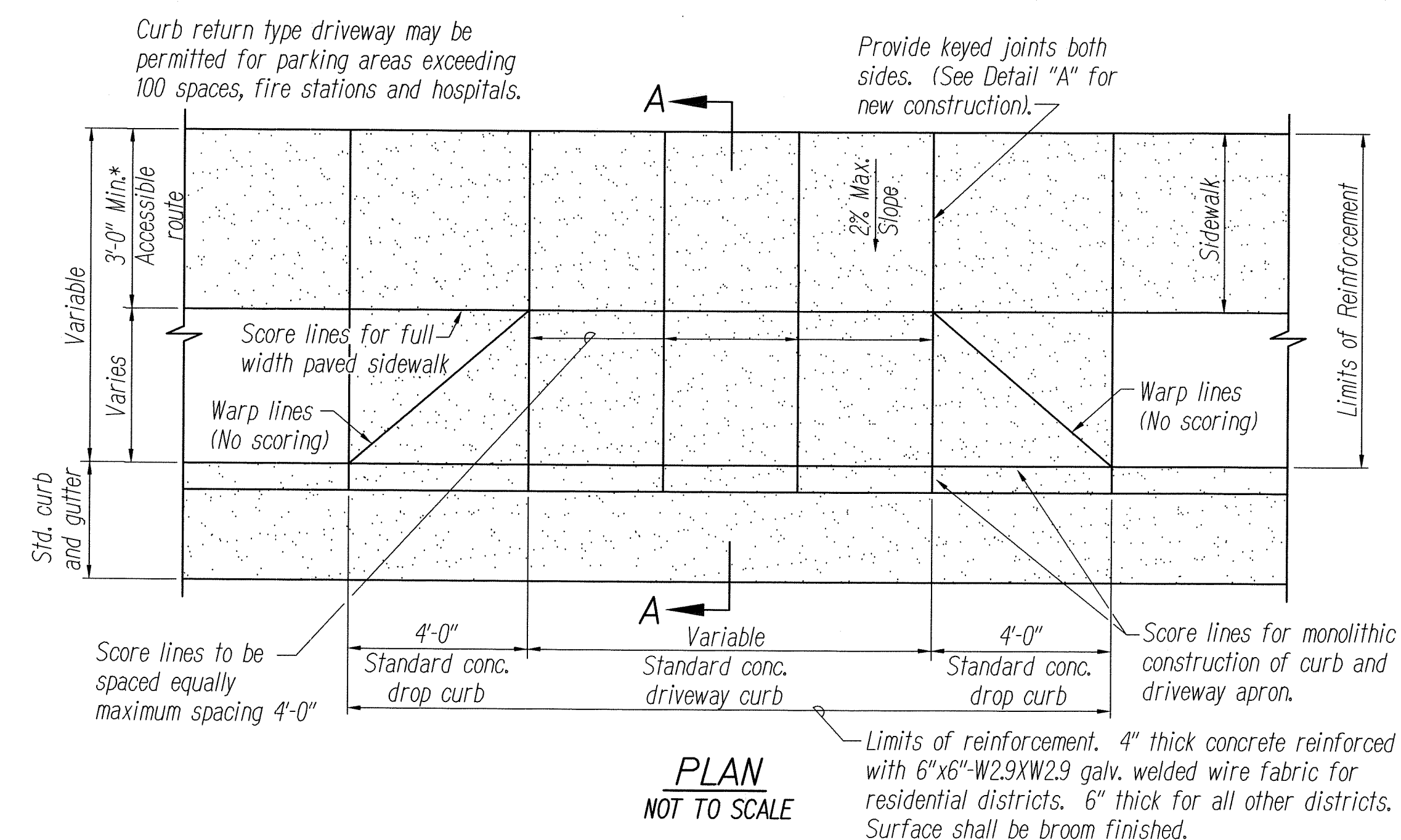
CURB RAMP - TYPE "E"
SIDEWALK WIDTH 7'-0" OR GREATER

(TO BE USED ONLY WITH TRAFFIC SIGNAL STANDARD OR
PEDESTRIAN PUSH BUTTON PEDESTAL ON TRIANGULAR "ISLAND")

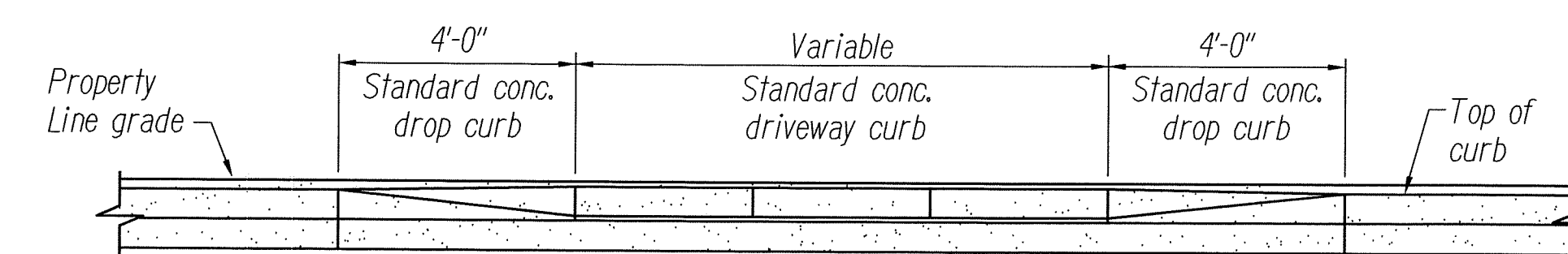
- * See Curb Ramp and Sidewalk Note No. 9*
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.*
- *** The Clearance shall be increased to 6'-0" or wider at areas with high pedestrian traffic or as directed by the Engineer or as shown on the plans.*
- **** If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (TI) Statement*



DETAIL "D"

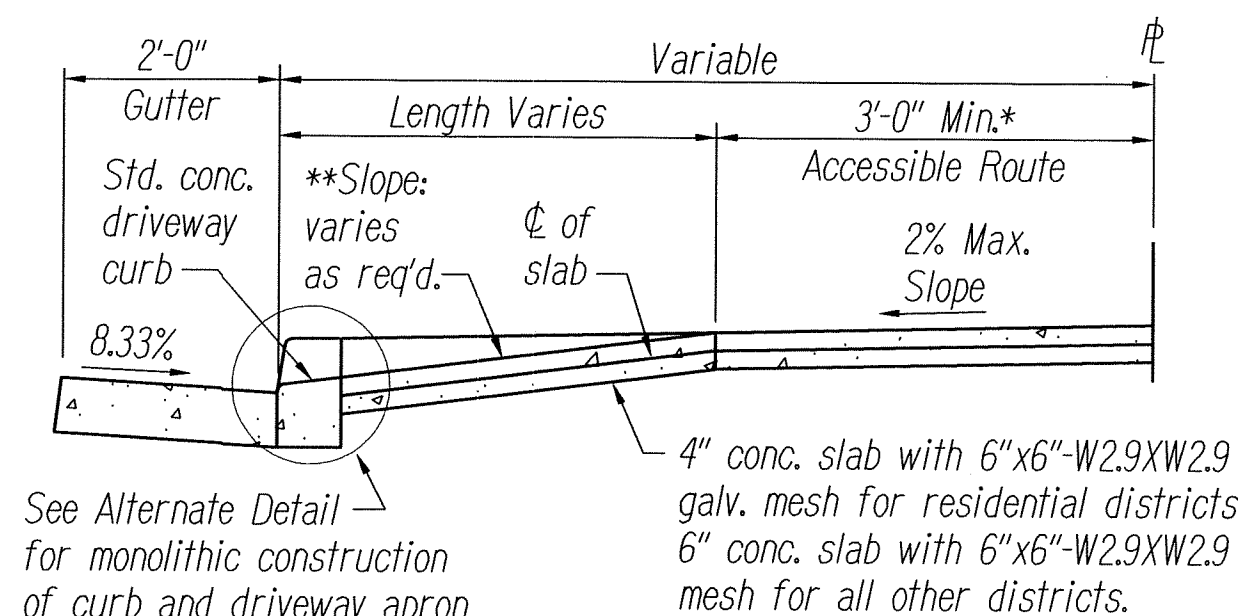


PLAN
NOT TO SCALE

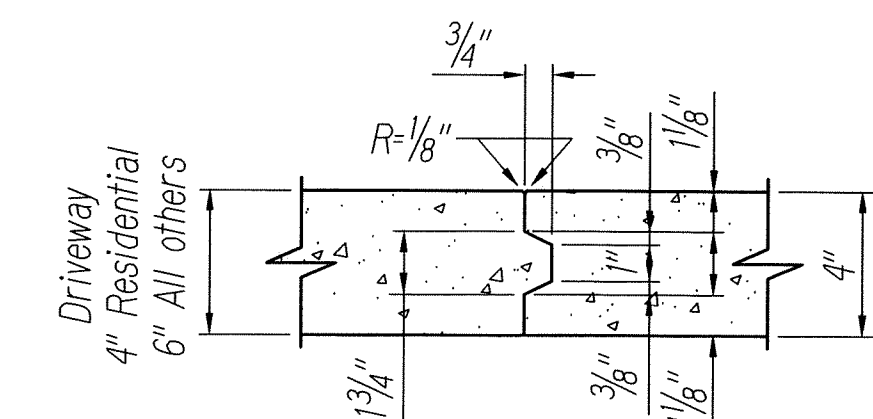


ELEVATION
NOT TO SCALE

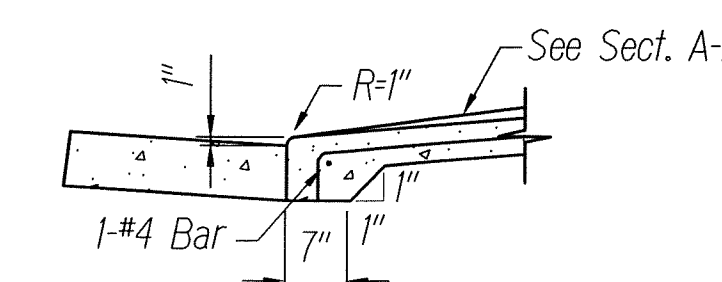
- * Match width of existing sidewalk whenever possible.
- ** Breakover and departure angles should not exceed 10 degrees or 17%.



SECTION A-A
NOT TO SCALE



DETAIL "A"
NOT TO SCALE
(NEW CONSTRUCTION)



ALTERNATE DETAIL
NOT TO SCALE

DRIVEWAY APRON

- NOTES:**
1. For extension to existing driveway, scoring and finish shall match existing scoring and finish. For driveway constructed in built up areas, scoring conforming to scoring at adjacent driveways may be authorized.
 2. This detail is only one method for providing ADA access. Other methods can be used. These methods are shown in references listed in Curb Ramp and Sidewalk Note No. 21.

STATE OF HAWAII
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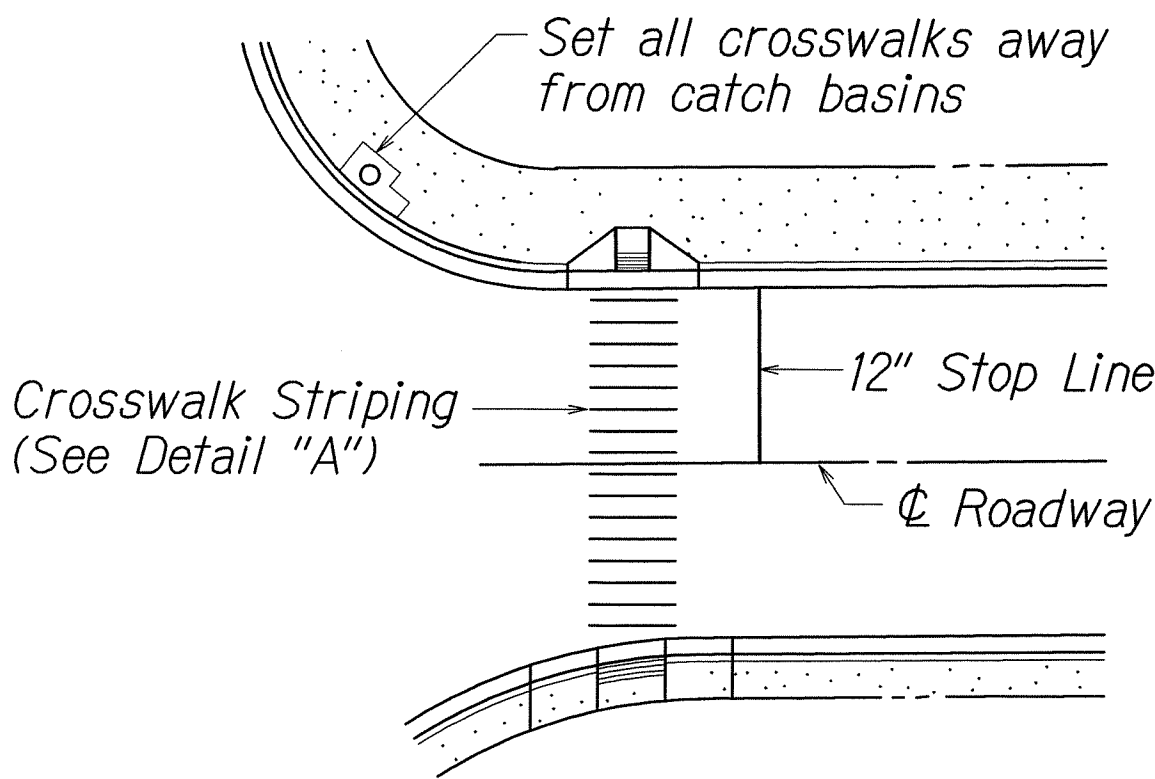
CURB RAMP DETAILS

KANEHOE BAY DR. REHABILITATION
Kamehameha Hwy to Nanamoana Street
Project No. 65AB-01-04M

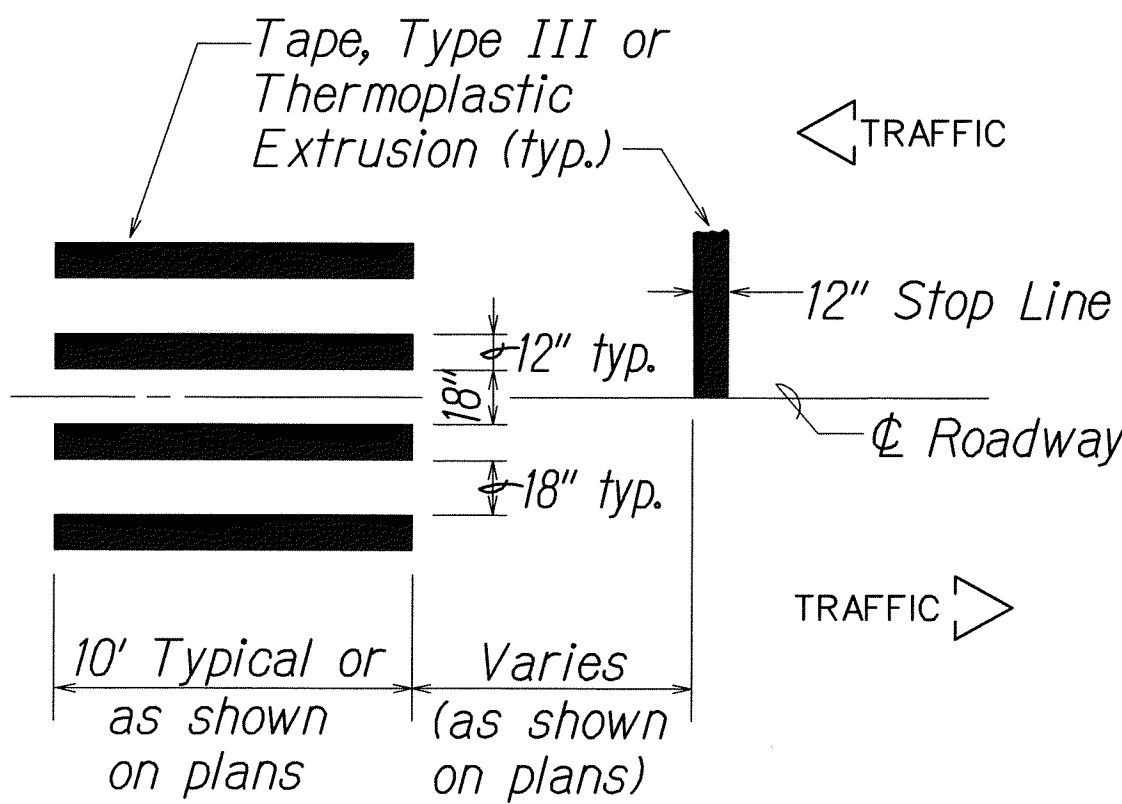
Not to Scale *Date: May, 2012*

SHEET No. 5 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	24	81



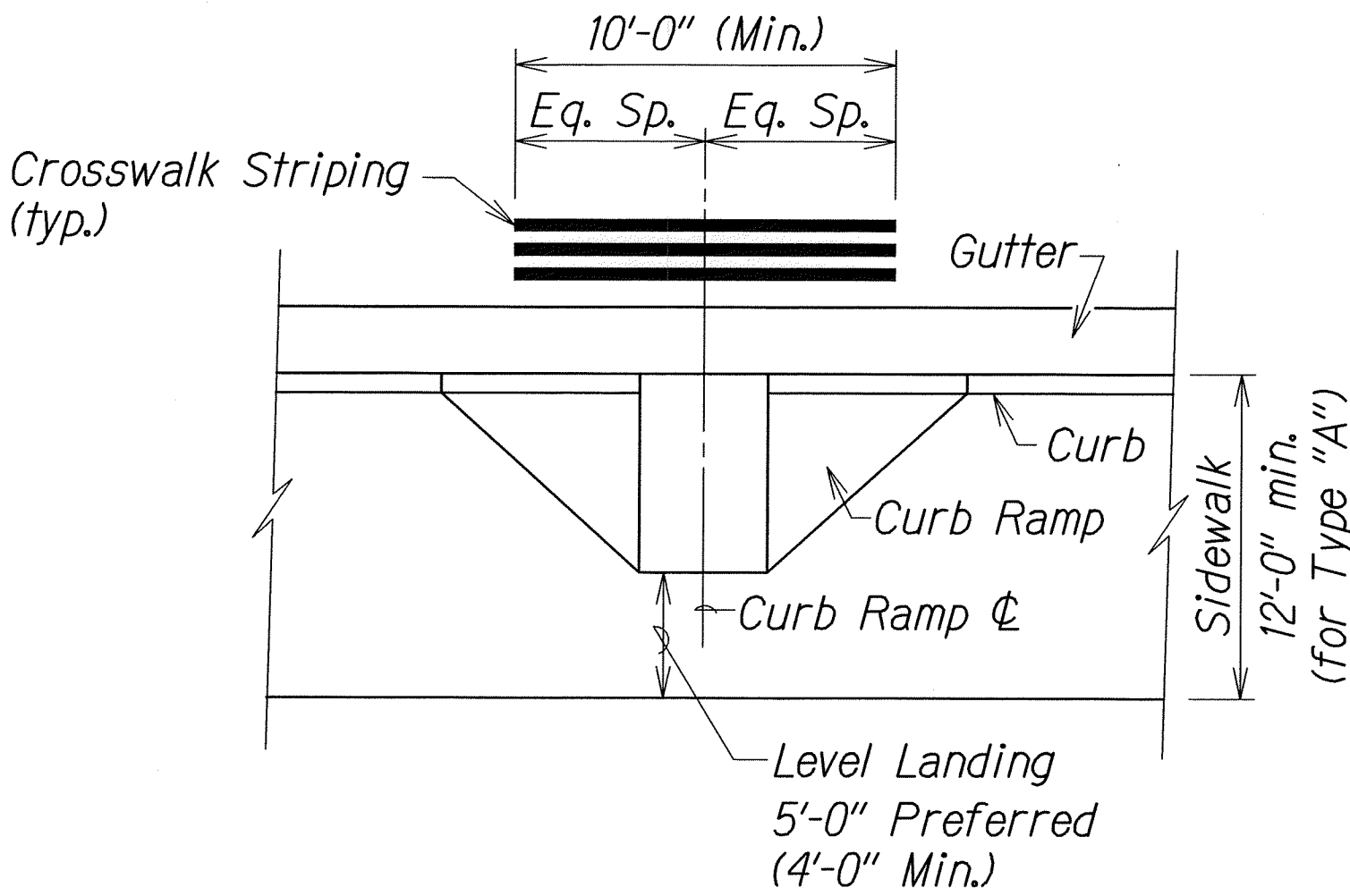
PLAN



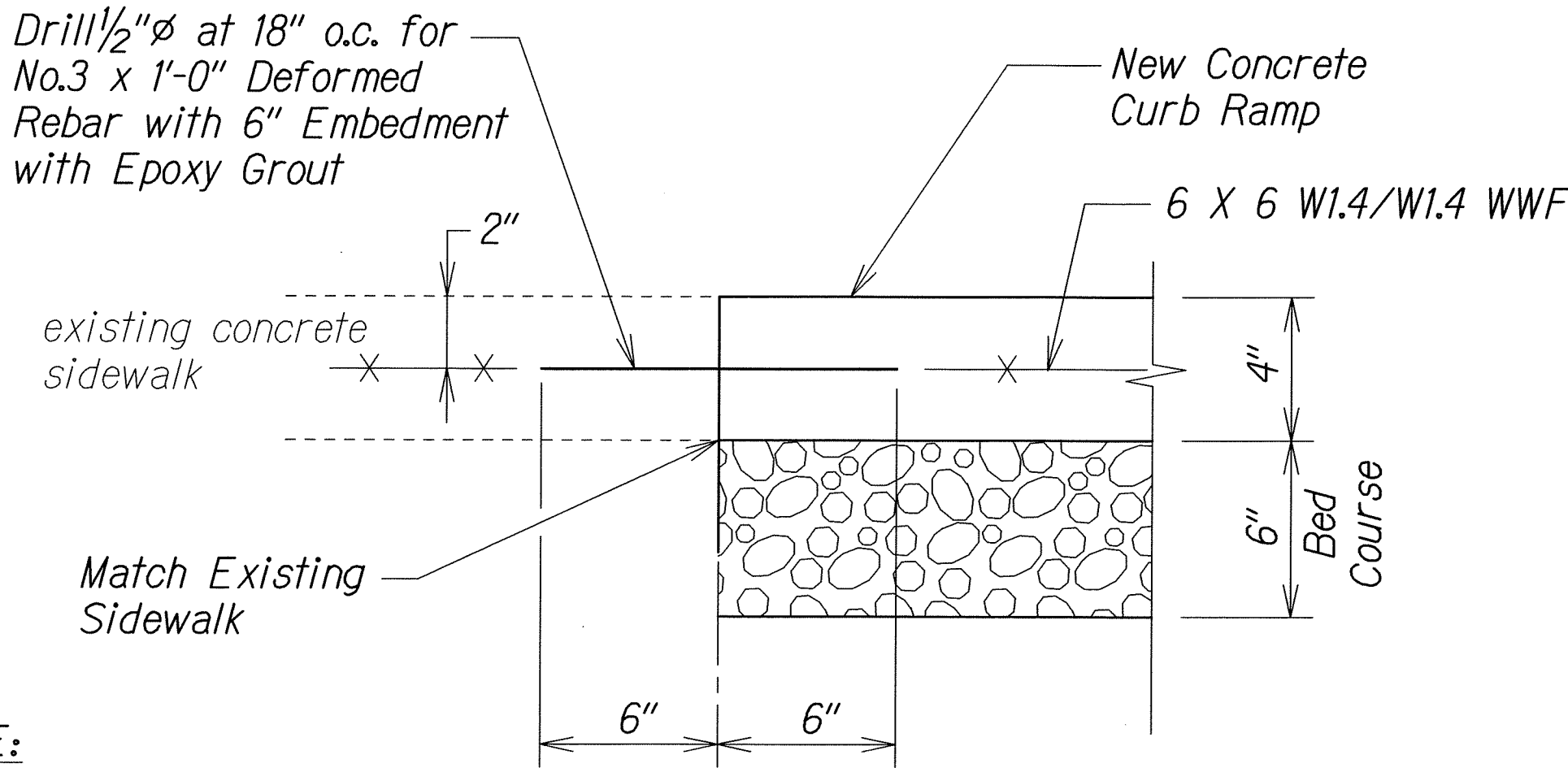
DETAIL "A"

CROSSWALK STRIPING DETAIL

NOTE:
Longitudinal lines shall be parallel to traffic flow.

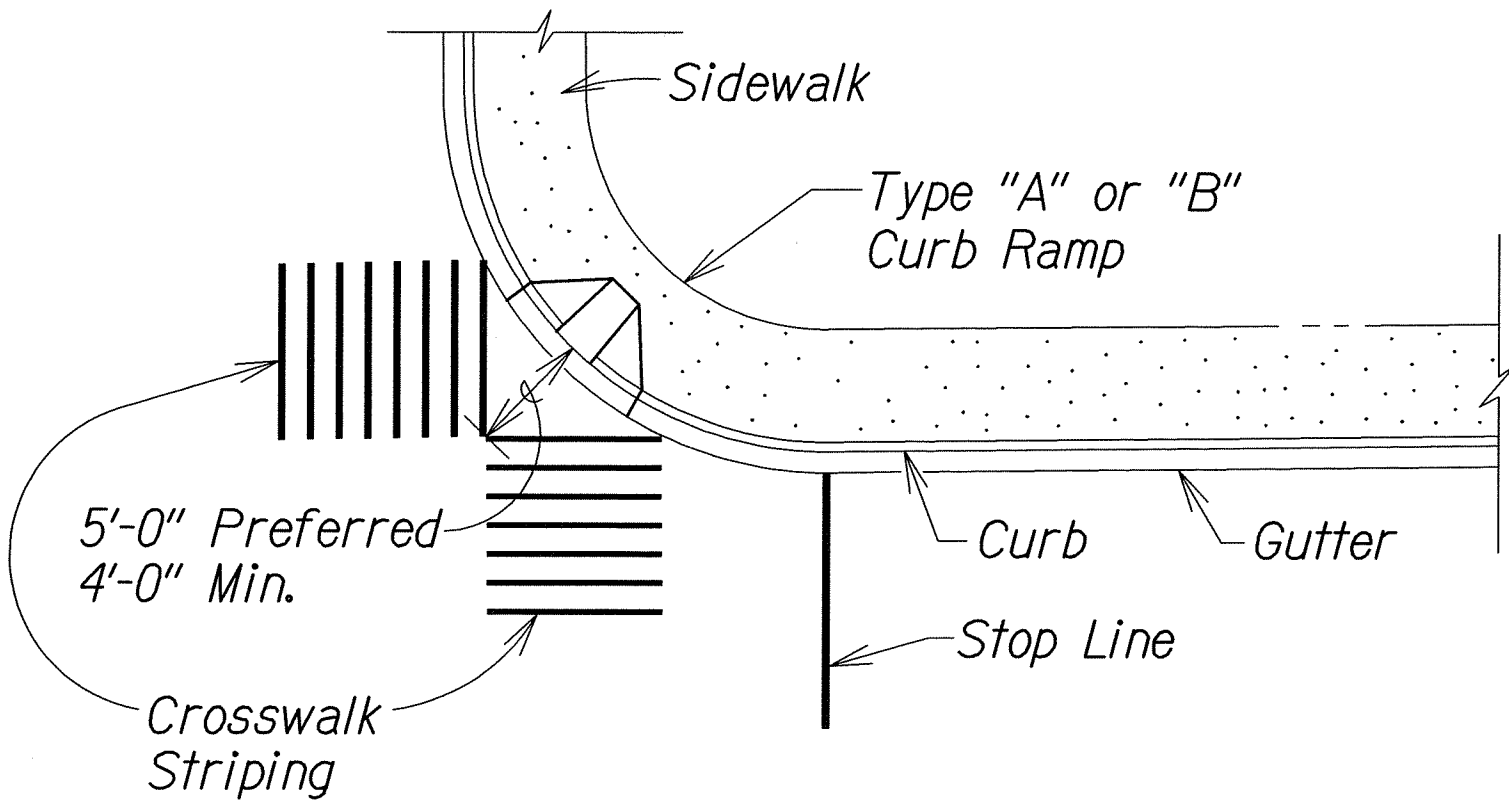


TYPICAL CROSSWALK STRIPING AT CURB RAMP

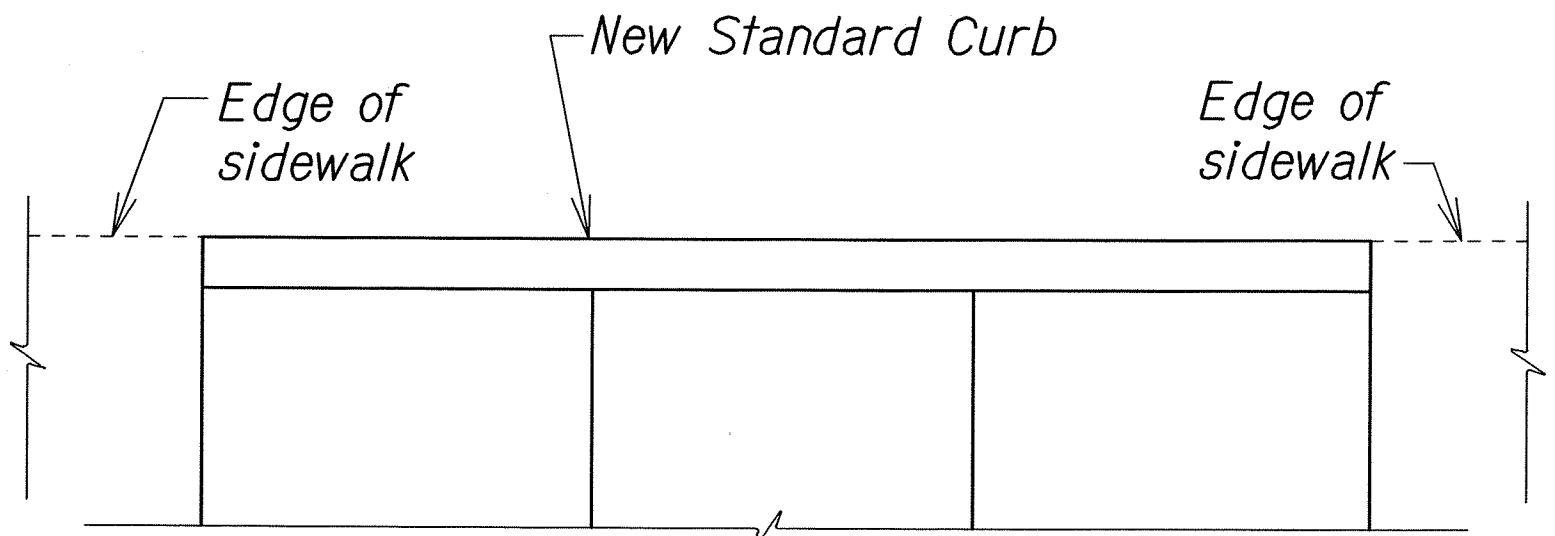


NOTE:
All curb ramps shall be reinforced.

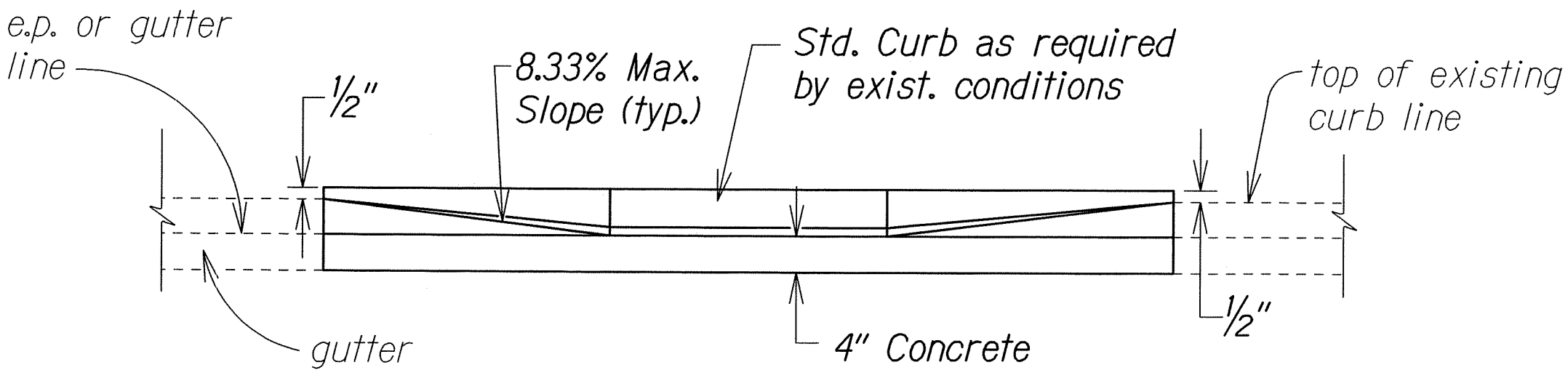
TYPICAL CONSTRUCTION JOINT AT EXISTING SIDEWALK



TYPICAL CROSSWALK STRIPING AT DIAGONAL CURB RAMP



PLAN



ELEVATION

DETAIL - BACK CURB

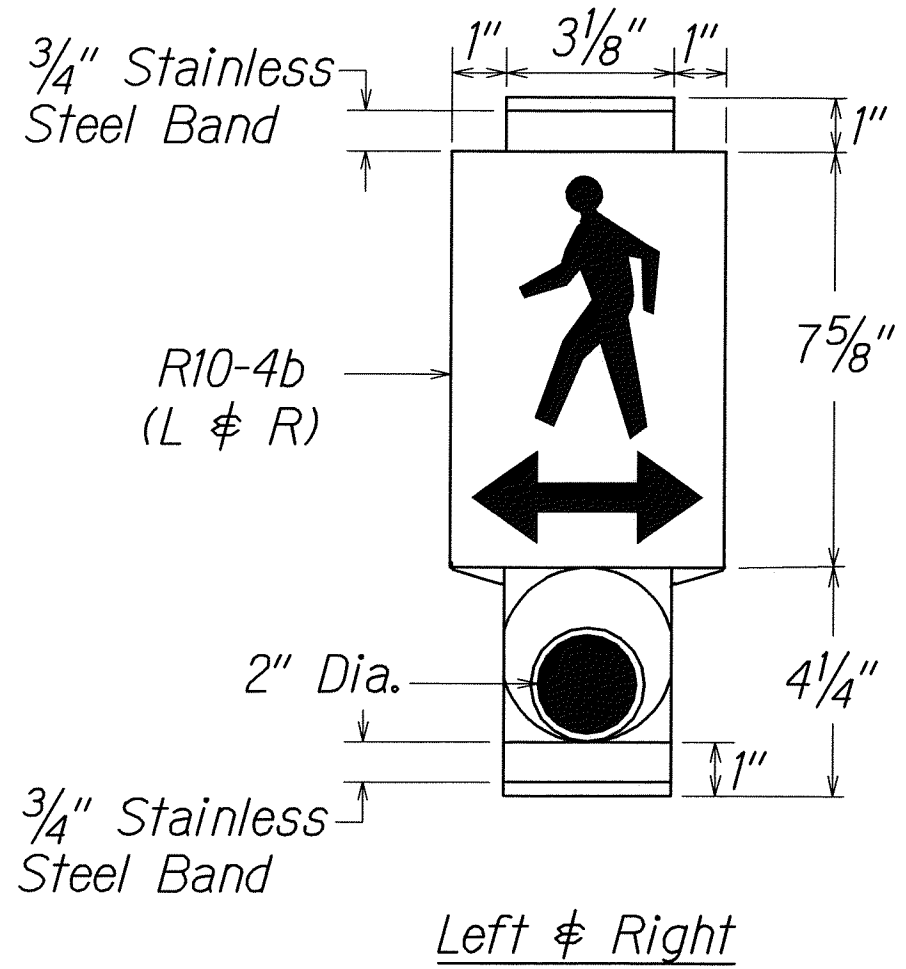
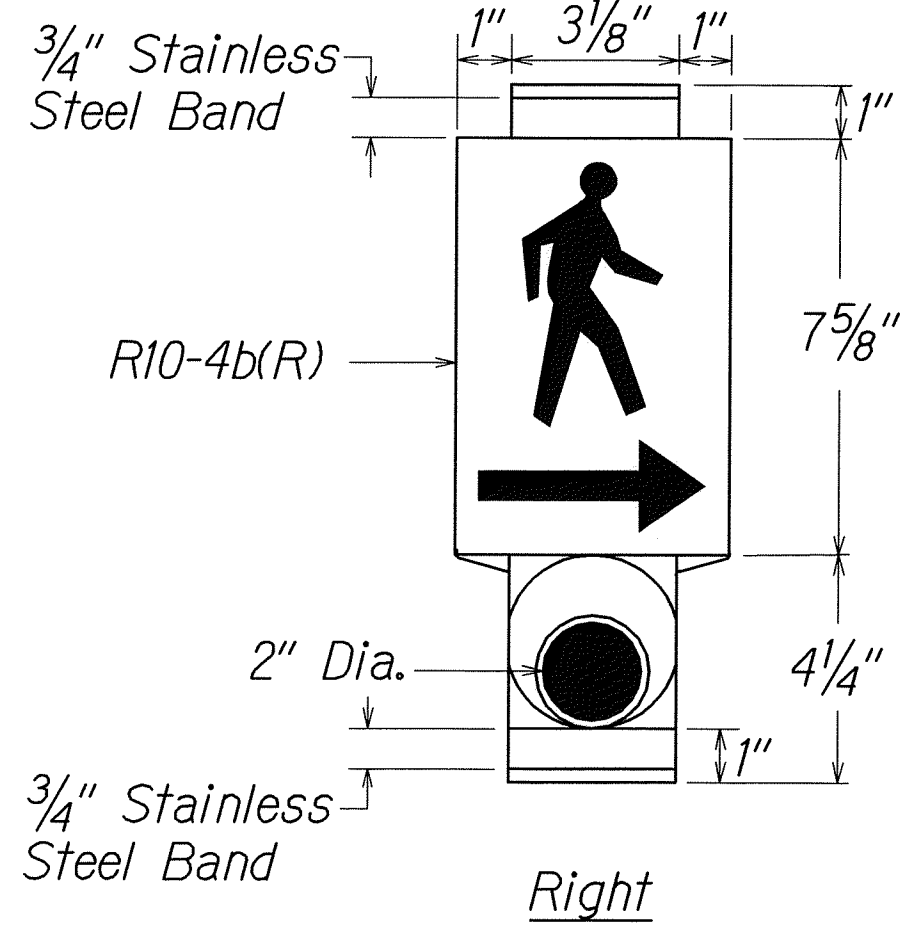
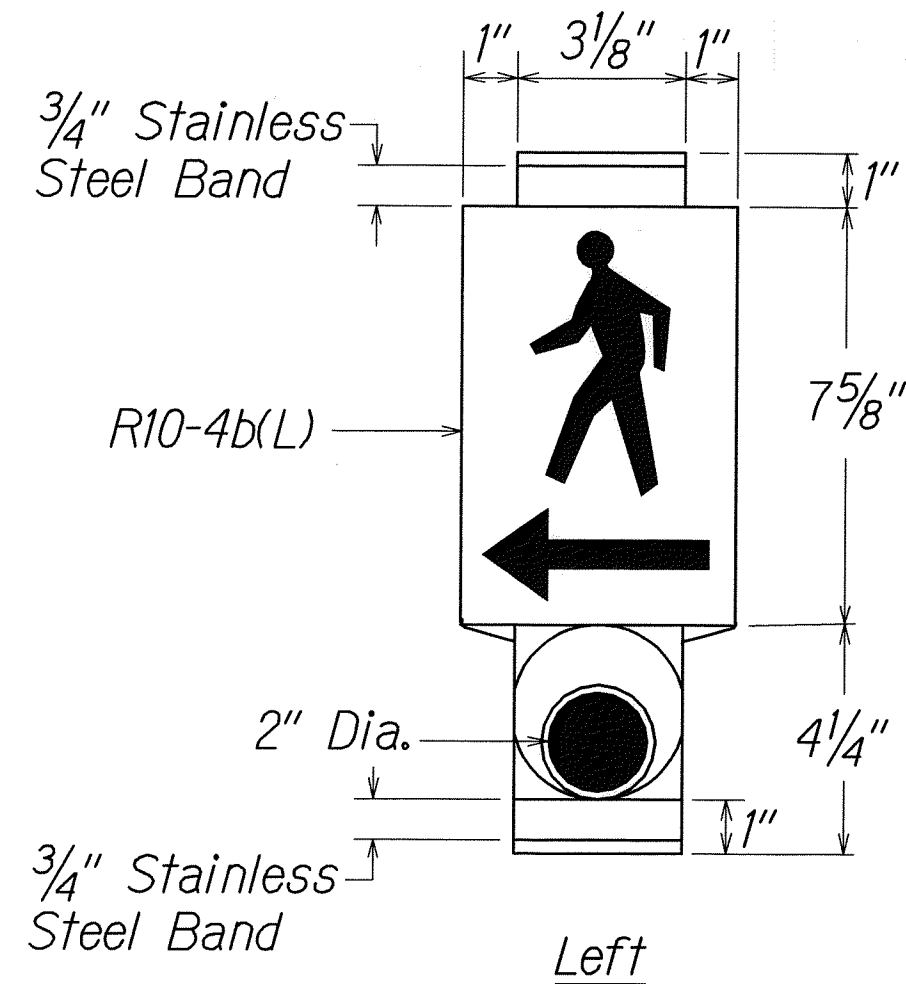
NOTE:
This detail can be used in situations where the edge of sidewalk cannot be flush with the face of (back) curb due to right of way restrictions.

STATE OF HAWAII
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HIGHWAYS DIVISION

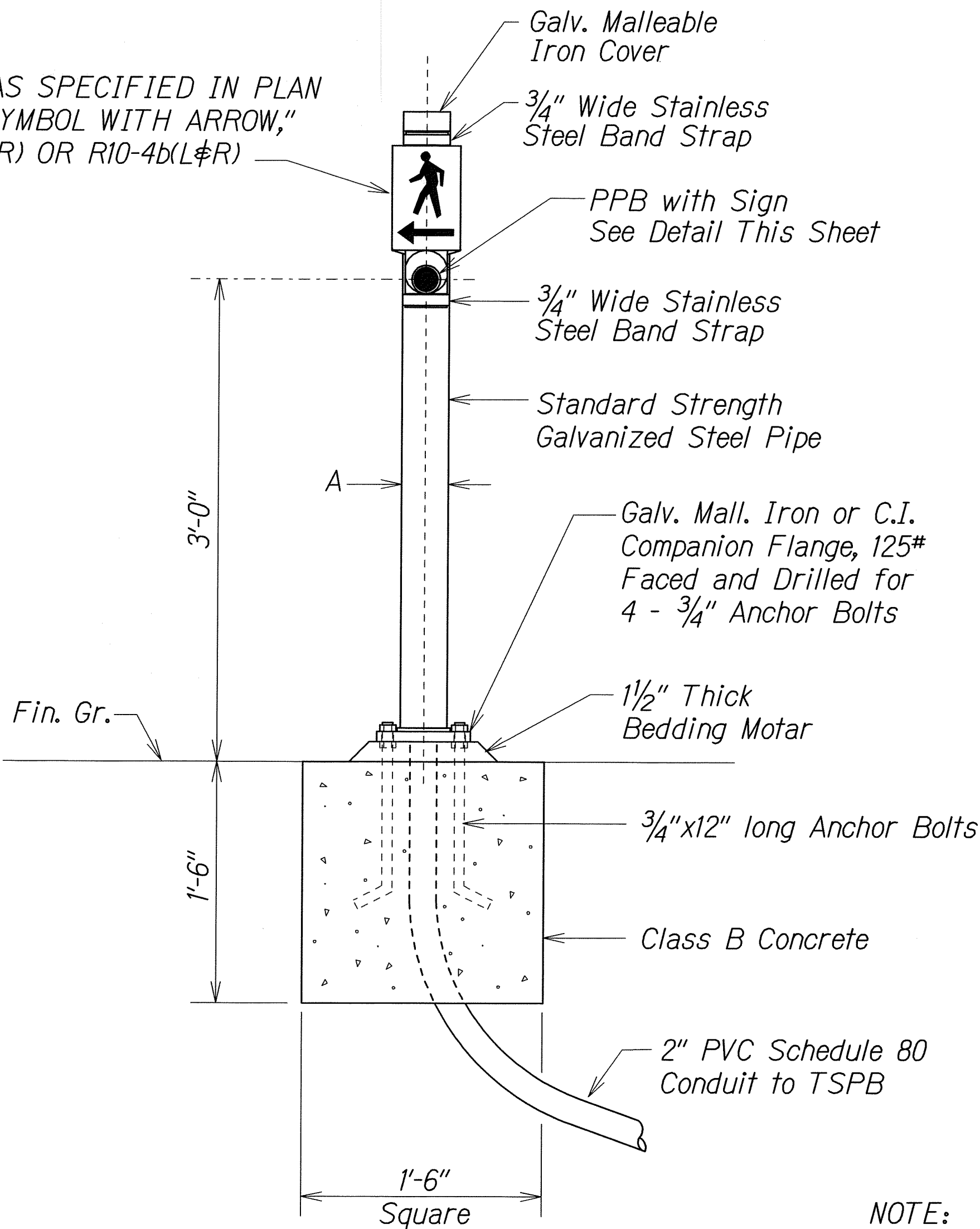
MISCELLANEOUS DETAILS
KANEOHE BAY DR. REHABILITATION
Kamehameha Hwy to Nanamoana Street
Project No. 65AB-01-04M
Not to Scale
Date: May, 2012

SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	25	81

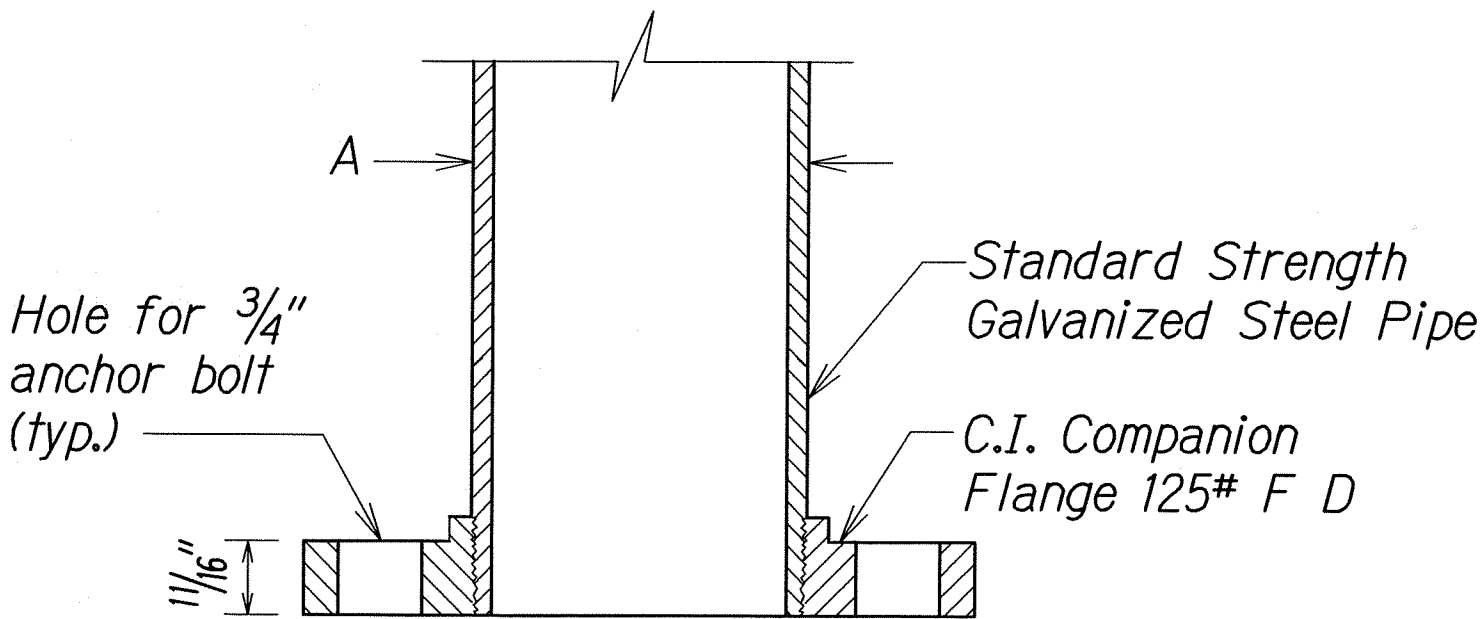


TRAFFIC SIGN AS SPECIFIED IN PLAN
"WALKING MAN SYMBOL WITH ARROW,"
R10-4b(L), R10-4b(R) OR R10-4b(L&R)

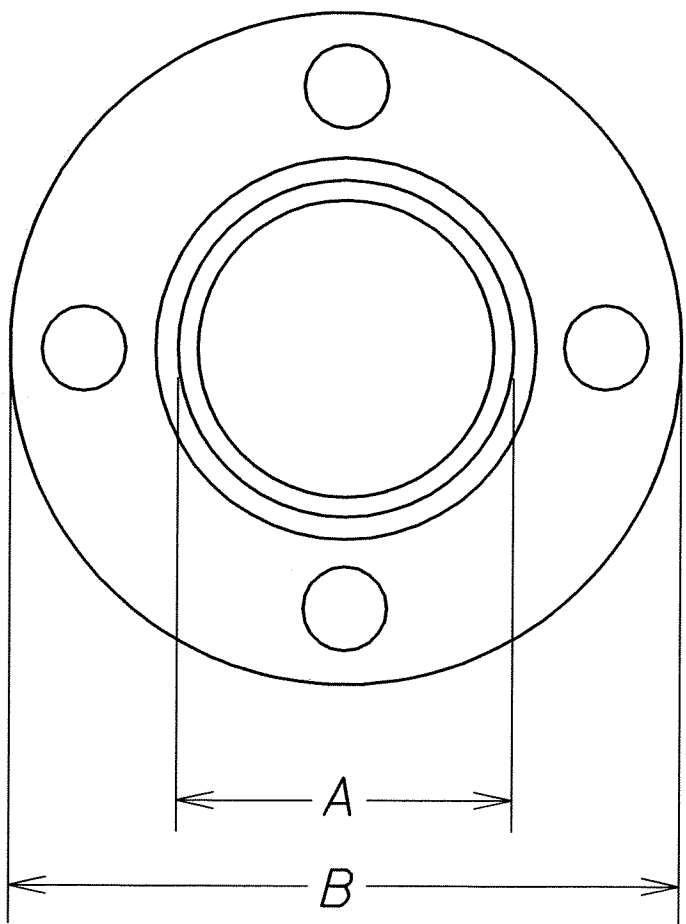


PPB POST AND FOOTING DETAIL

DATA TABLE FOR PPB POST		
AMOUNT OF PPB	DIMENSIONS	
	A	B
1	3 1/2"	8"
2-3	4 1/2"	9"



SECTION



TOP VIEW

FLANGE DETAIL

NOTE:

1. Conduits shall protrude 2" max. above finished surface of foundation.
2. Conduits shall slope away from post foundation.

PEDESTRIAN PUSH BUTTON WITH SIGN

Man, Arrow & Push Button - White
Background - Black

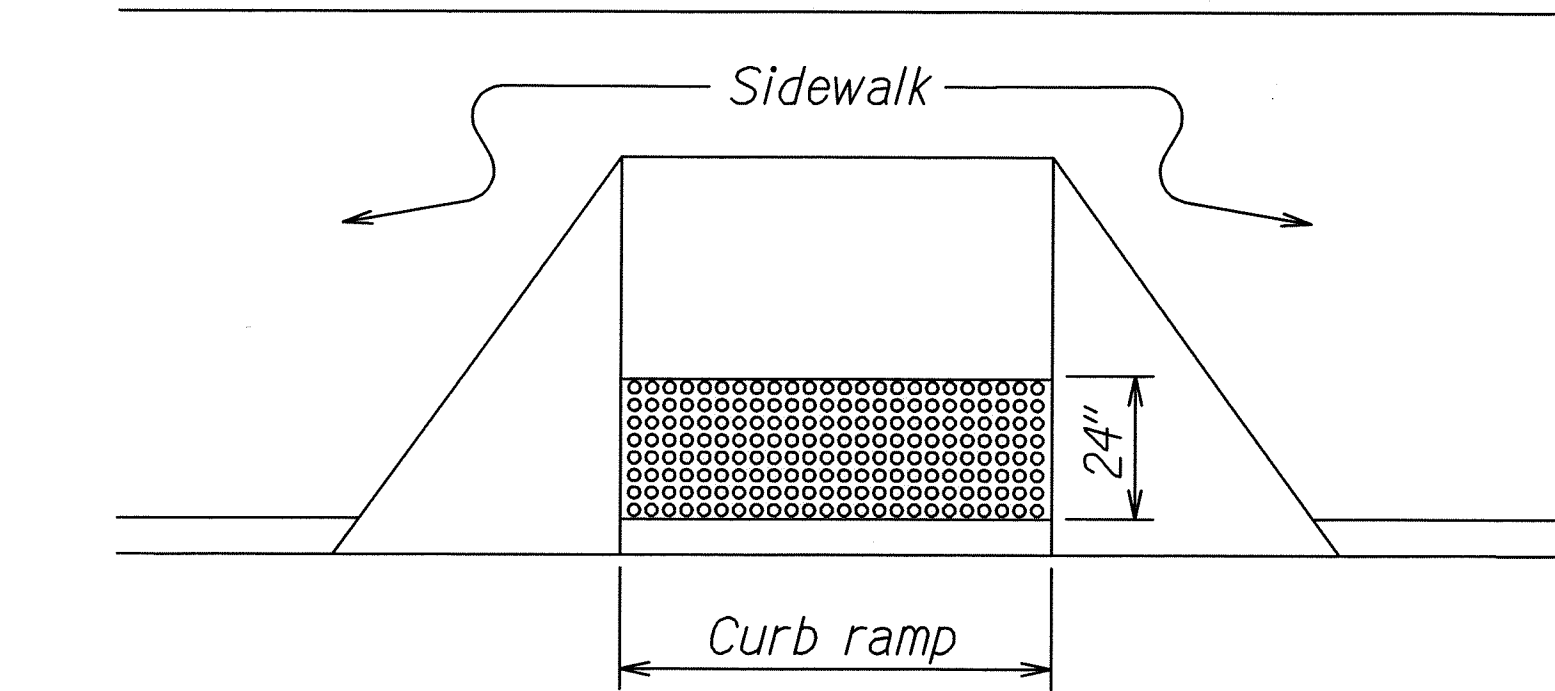
NOTE:

There shall be a 30" x 48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button. Location of pedestrian push button shall be shown on Civil Plans in addition to Electrical Plans.

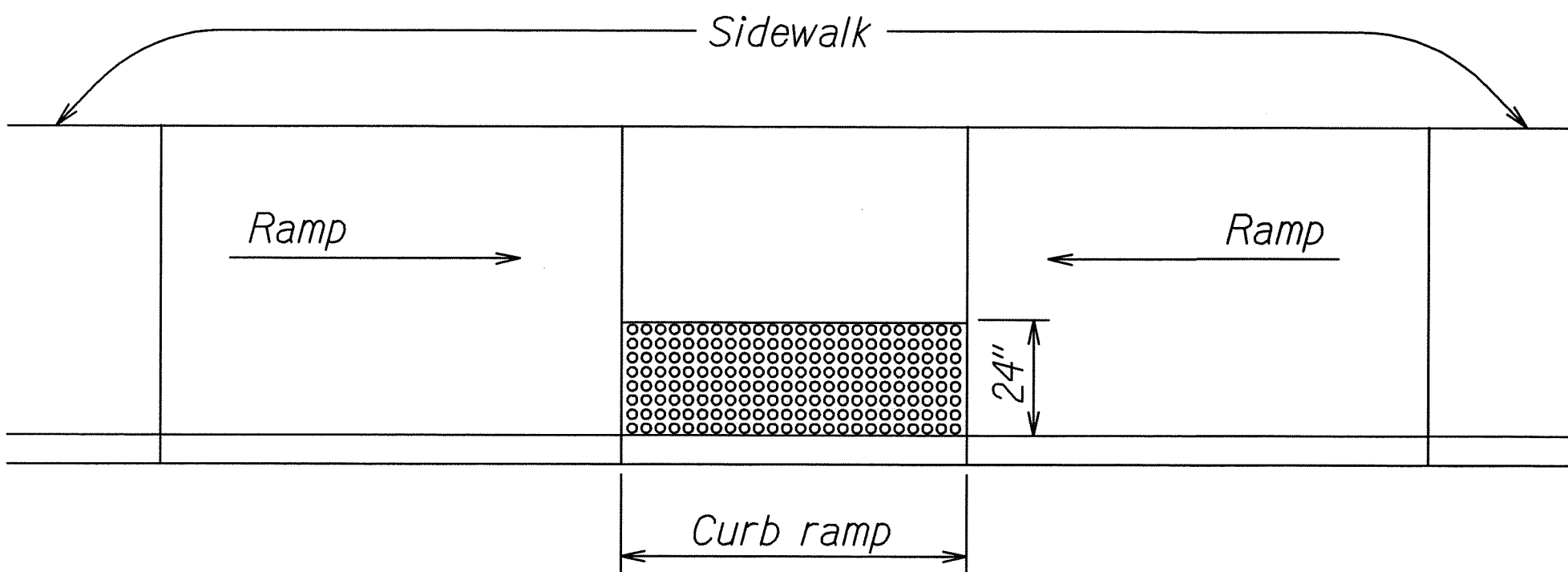
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PEDESTRIAN PUSH BUTTON DETAILS
Kaneohe Bay Dr. Rehabilitation
Kamehameha Hwy to Nanamoana Street
Project No. 65AB-01-04M
Scale: Not to scale Date: May, 2012
SHEET No. 7 OF 12 SHEETS

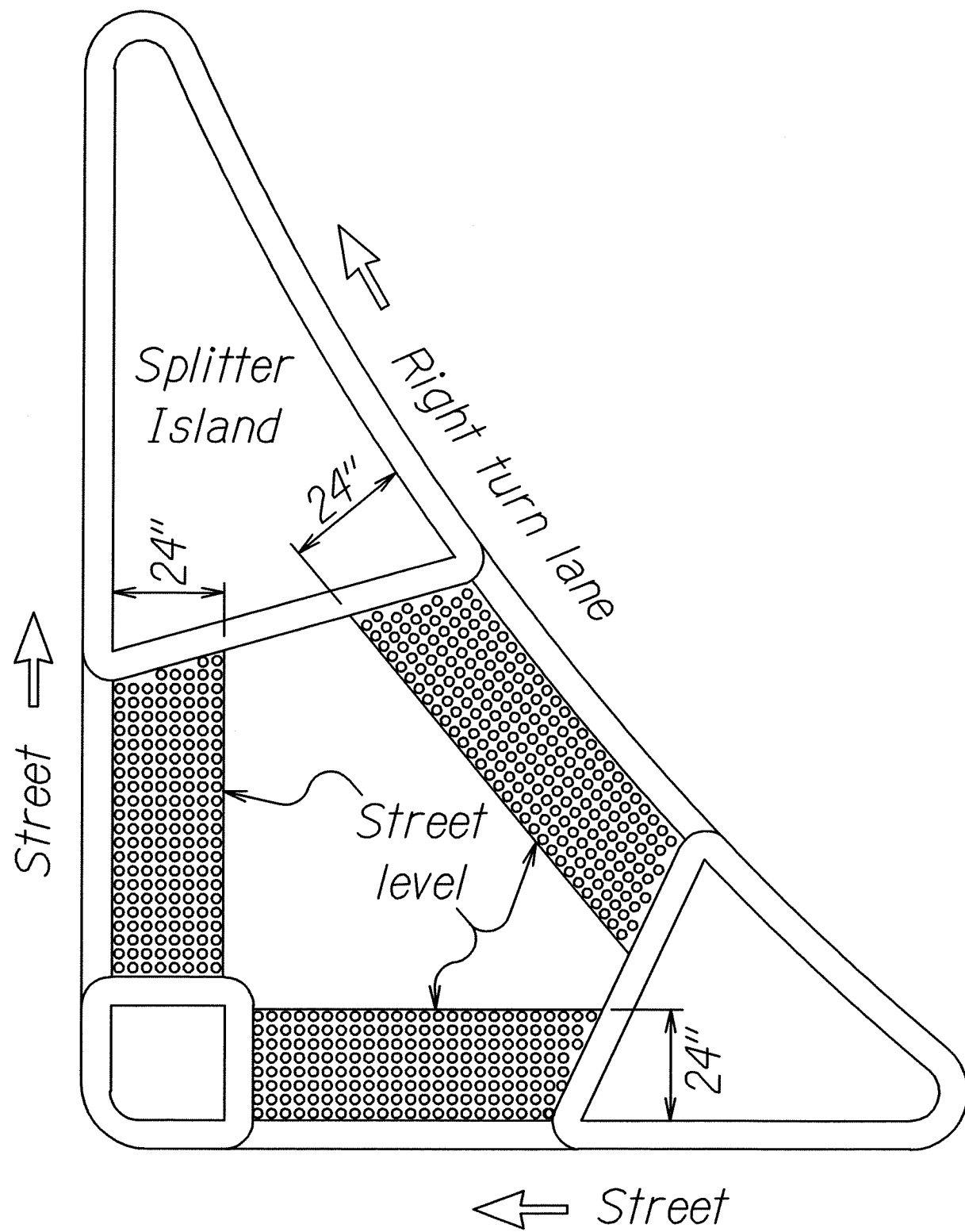
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HAWAII	HAW.	65AB-01-04M	2012	26	81



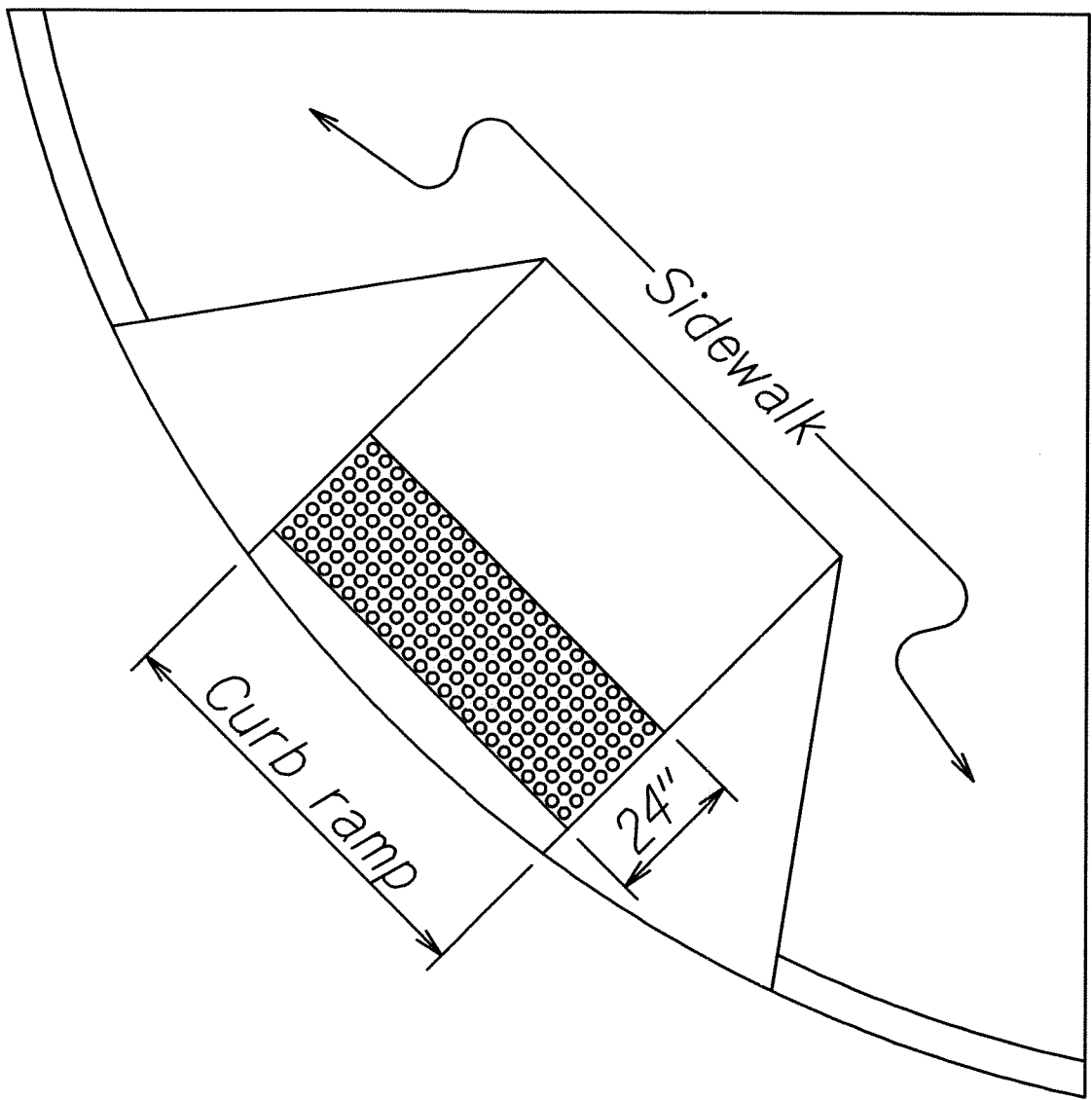
DETECTABLE WARNING AT CURB RAMP



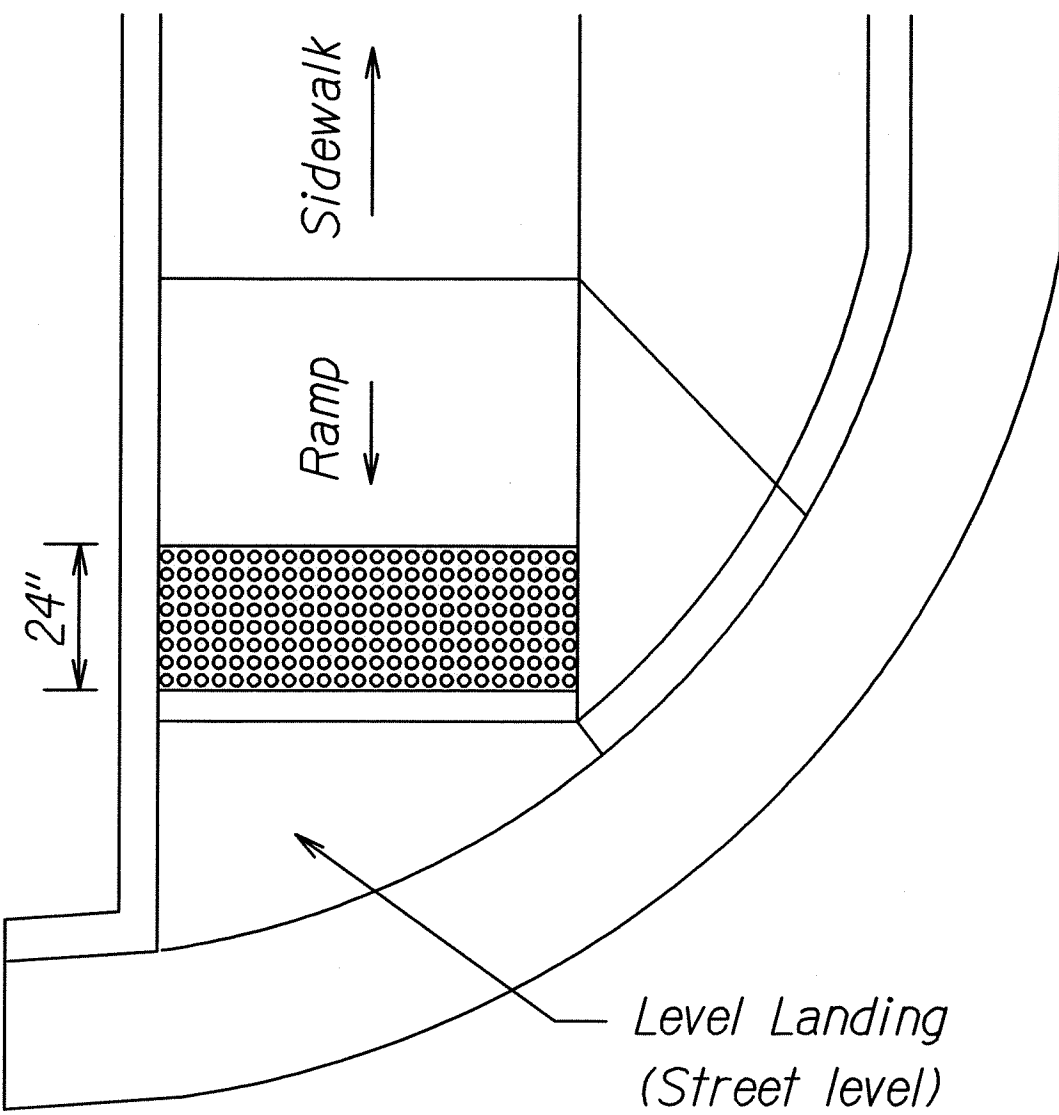
TRANSITION RAMP WITH DETECTABLE WARNING



REFUGE ISLAND WITH DETECTABLE WARNING



SHARED CURB RAMP WITH DETECTABLE WARNING



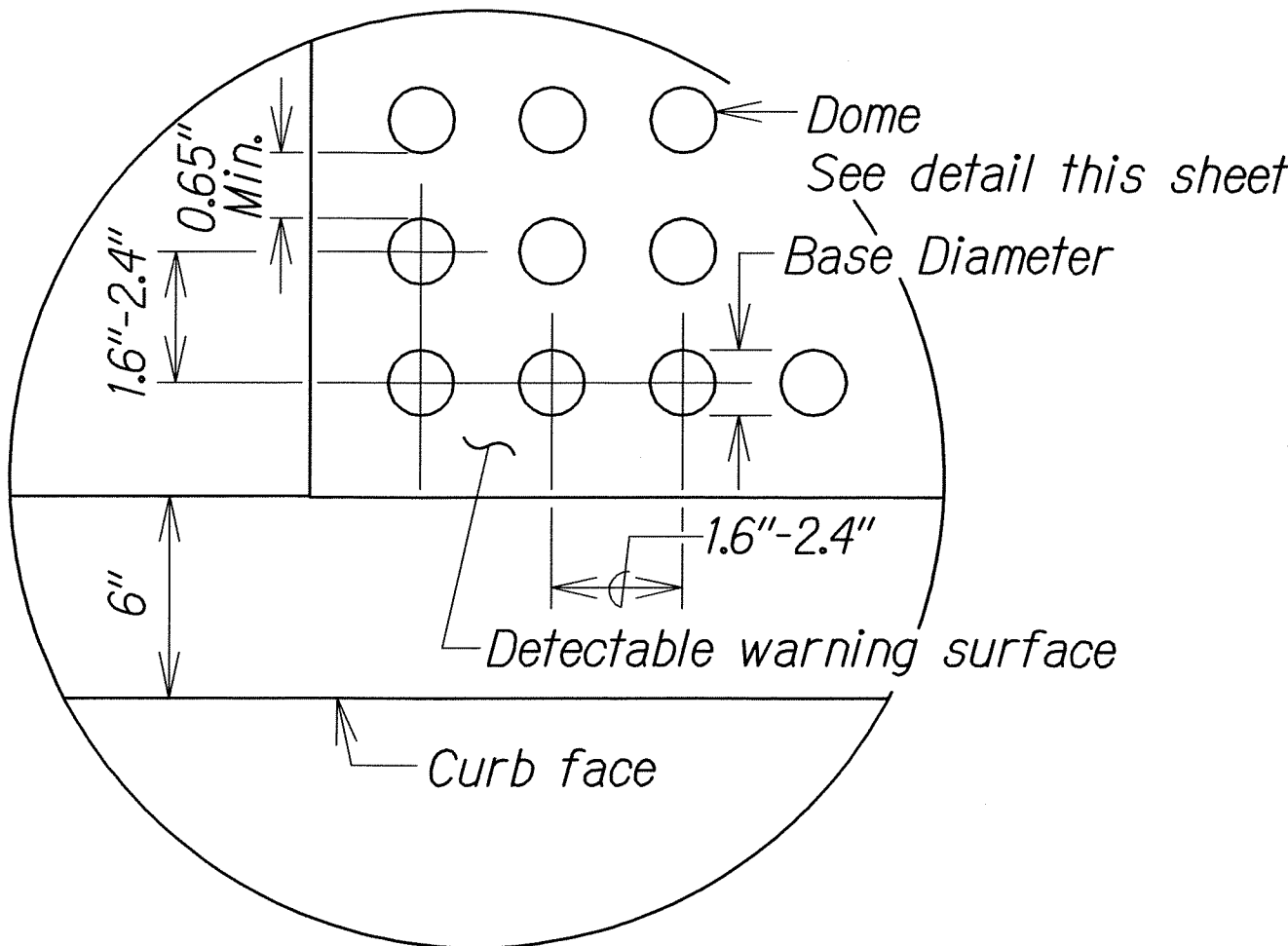
END OF SIDEWALK CURB RAMP WITH DETECTABLE WARNING

TYPICAL INSTALLATION OF DETECTABLE WARNINGS

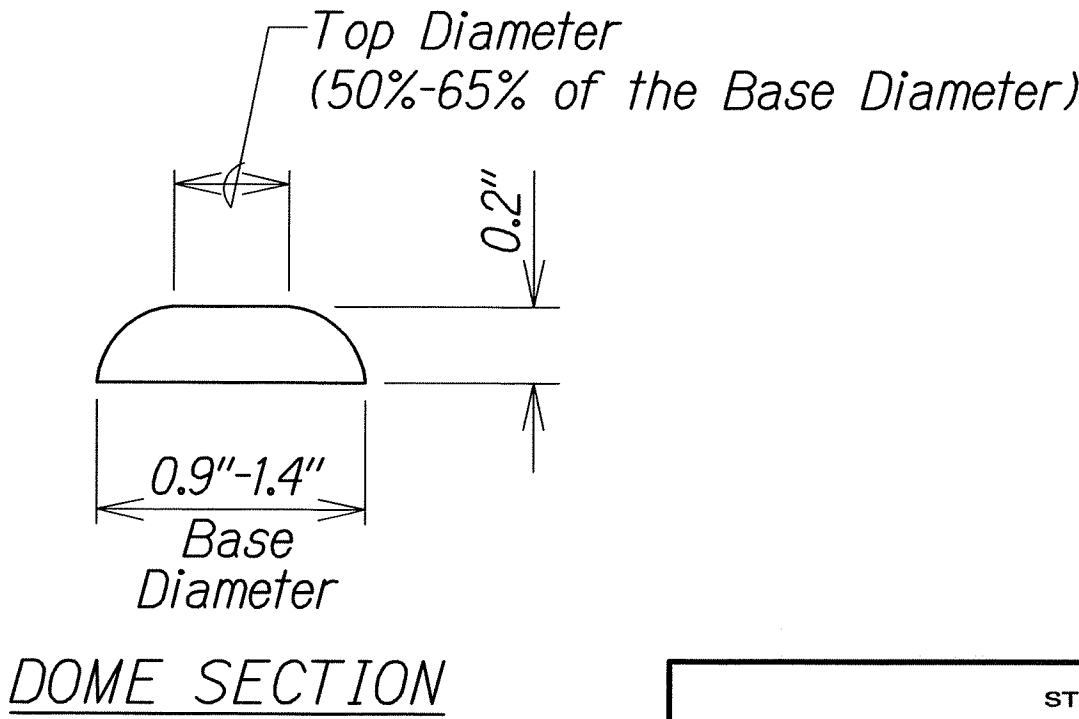
Not to Scale

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



DOMES SECTION

DETECTABLE WARNING DETAIL

Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETECTABLE WARNING DETAILS
KANEQHE BAY DR. REHABILITATIOIN
Kamehameha Hwy to Nanamoana Street
Project No. 65AB-01-04M
Not to Scale

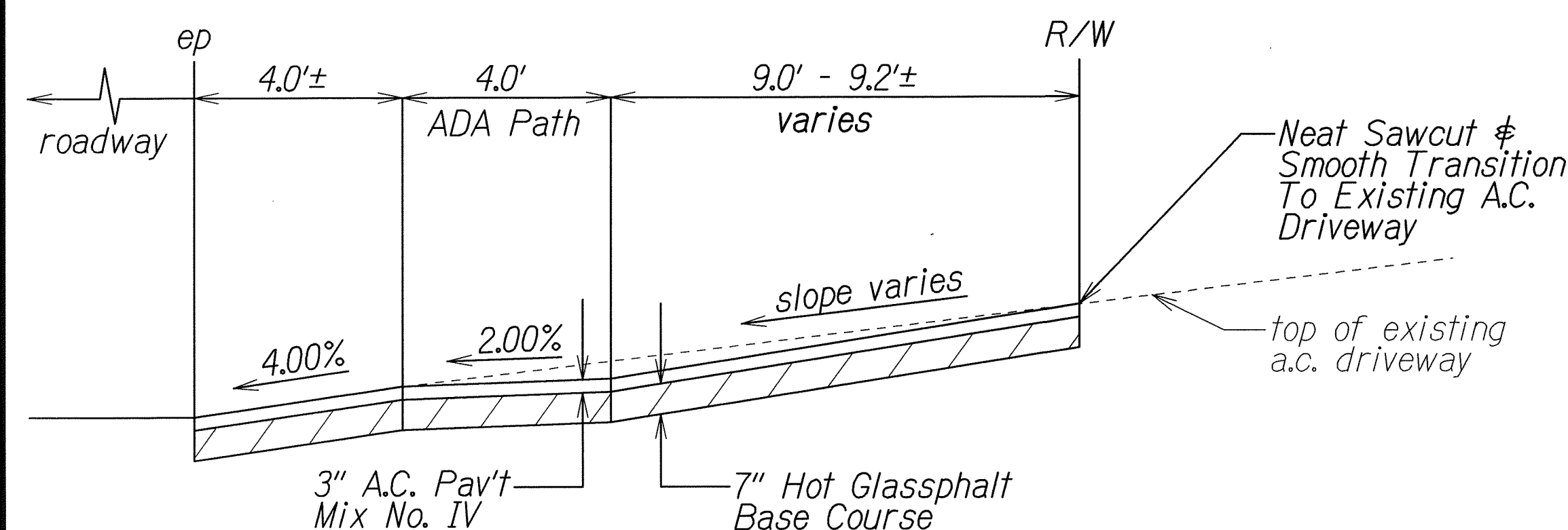
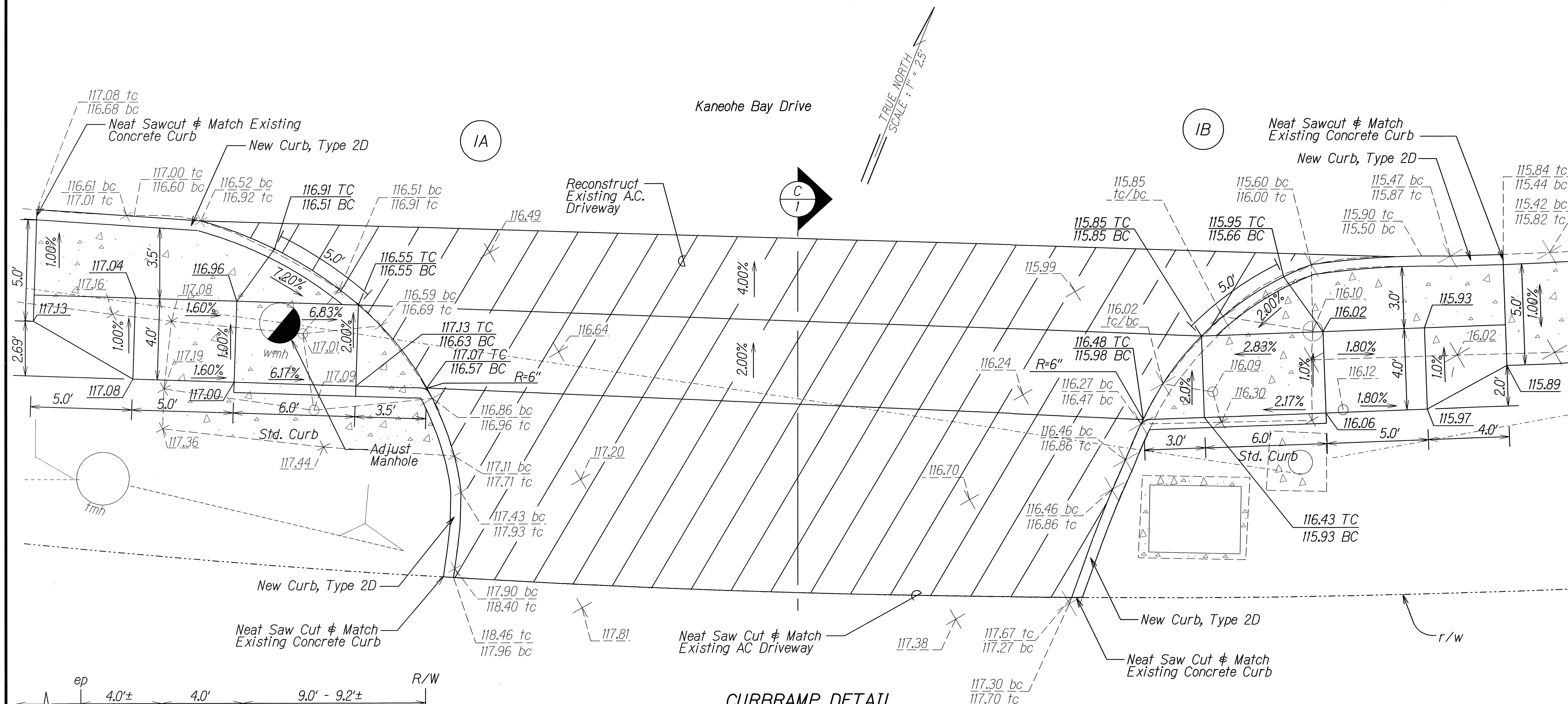
Date: May, 2012
SHEET No. 8 OF 12 SHEETS

ORIGINAL PLAN	DATE
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CHECKED BY	QUANTITIES BY

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td1/usr2/traffic/std/detect r1.dgn

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	27	81



CURBRAMP DETAIL
Scale: 1"=2.50'

SURVEY PLOTTED BY	DATE
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DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

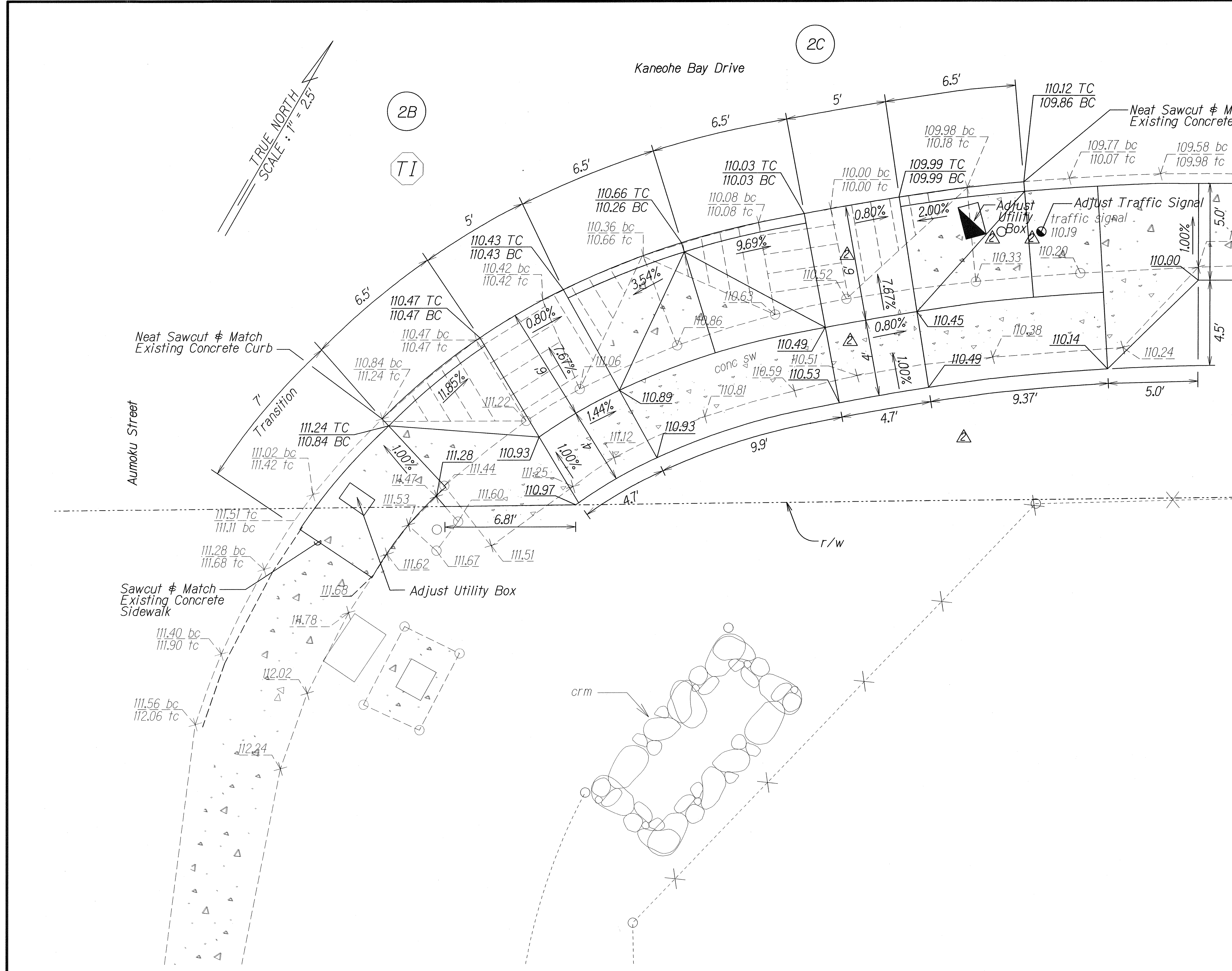
CURBRAMP DETAIL

Kaneohe Bay Drive Rehabilitation
Kamehameha Highway to Nanamoa Street
Project No. 65AB-01-04M

Scale: As Noted Date: May, 2012

SHEET No. 9 OF 12 SHEETS

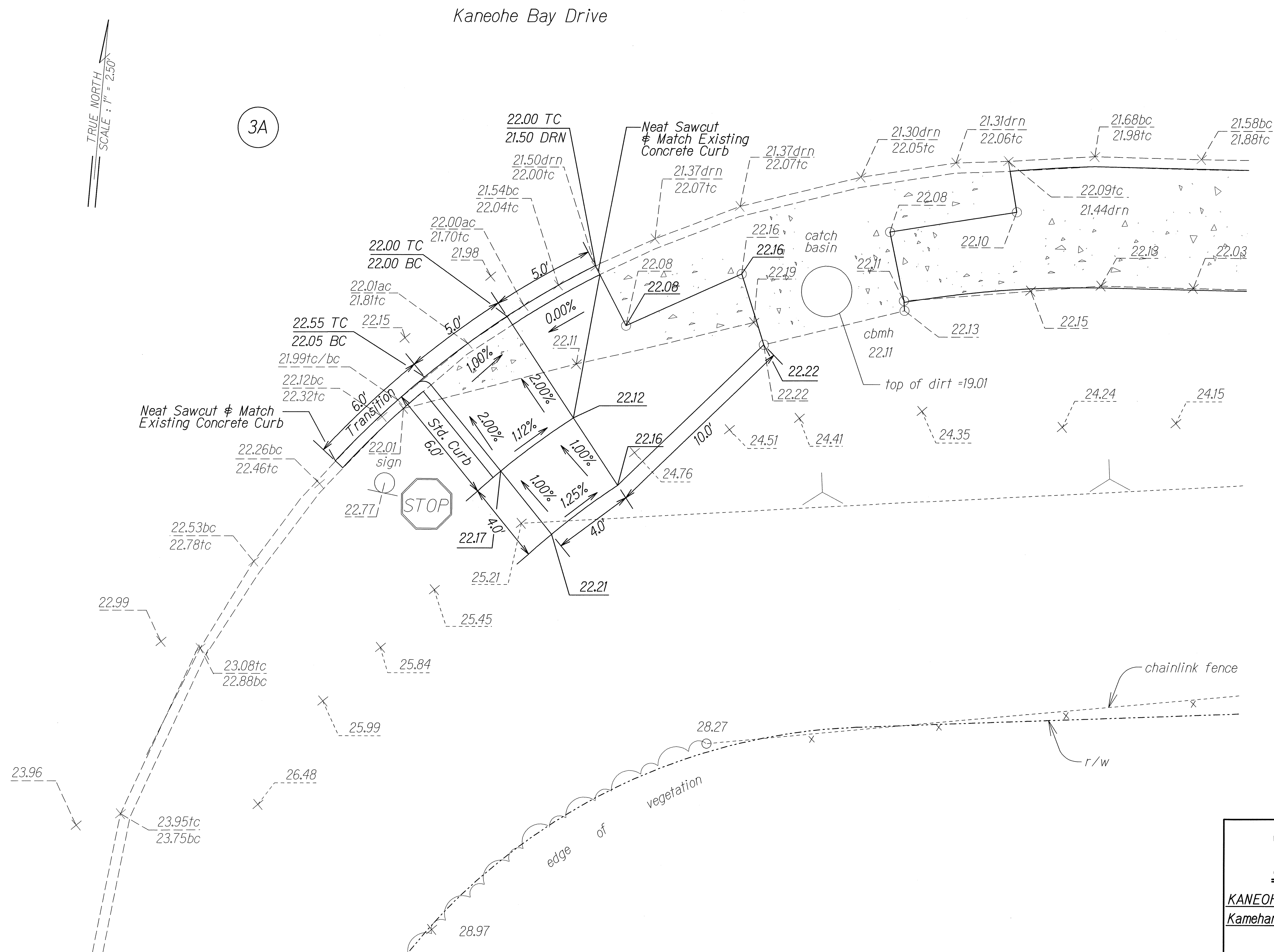
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	ADD.29	81



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	TRACED BY	
	CHECKED BY	
	QUANTITIES BY	
	CHECKED BY	

6/18/12	△ Included leader lines, utility box and traffic signal
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION CURBRAMP DETAIL KANEOHE BAY DRIVE REHABILITATION Kamehameha Highway to Nanamoana Street Project No. 65AB-01-04M Scale: 1" = 2.50' Date: May, 2012 SHEET No. 11 OF 12 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	65AB-01-04M	2012	30	81



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURBRAMP DETAIL

KANEQHE BAY DRIVE REHABILITATION
Kamehameha Highway to Nanamoana Street
Project No. 65AB-01-04M

Scale: 1" = 2.50' Date: May, 2012

SHEET No. 12 OF 12 SHEETS