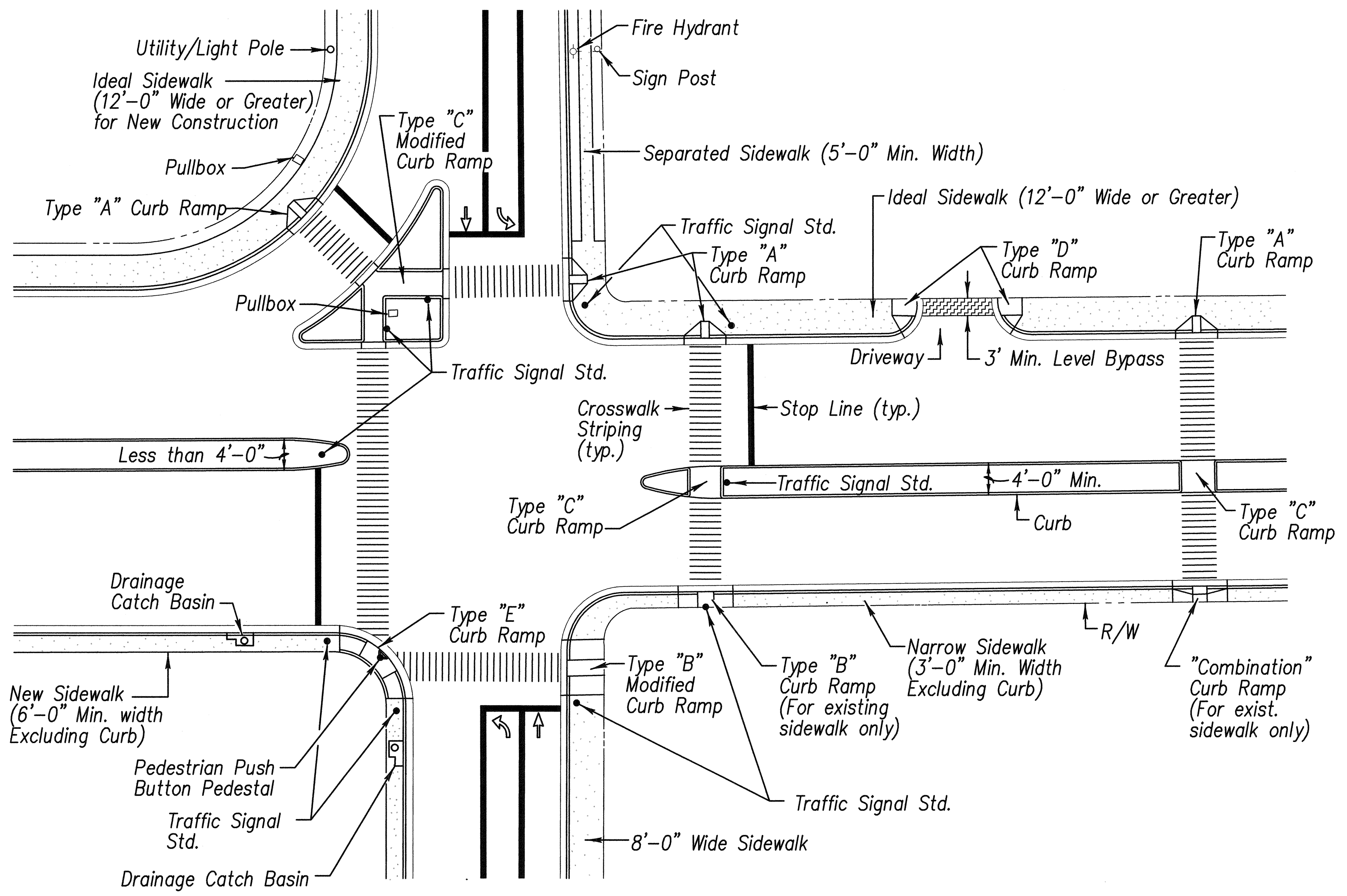


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	12	109



TYPICAL CURB RAMPS

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

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04/30/06
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

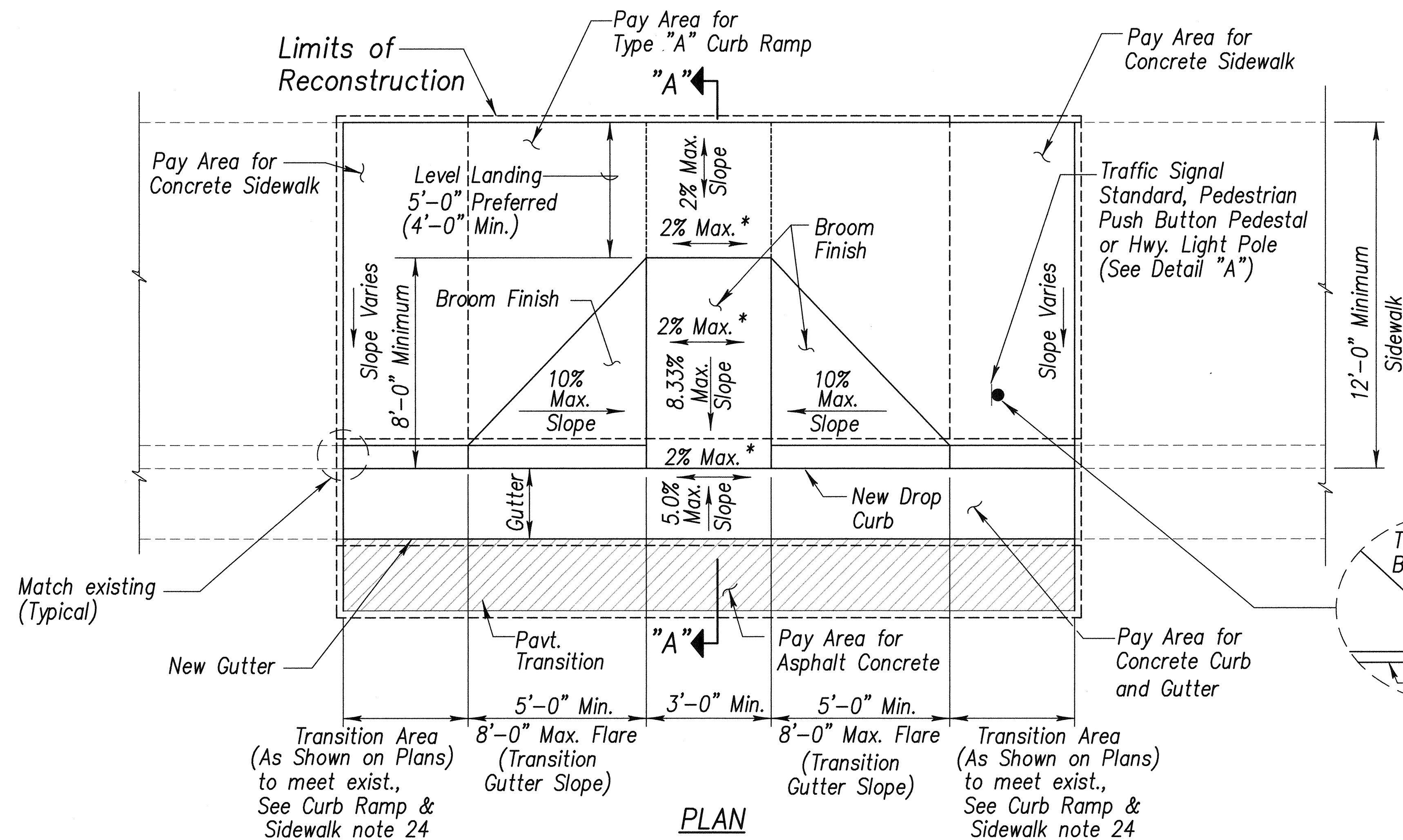
TYPICAL CURB RAMP LAYOUT

PEDESTRIAN FACILITIES & ADA
COMPLIANCE AT VARIOUS
LOCATIONS ON MAUI

Federal - Aid Project No. CMAQ-0900(67)R
Scale: As Shown Date: August 2004

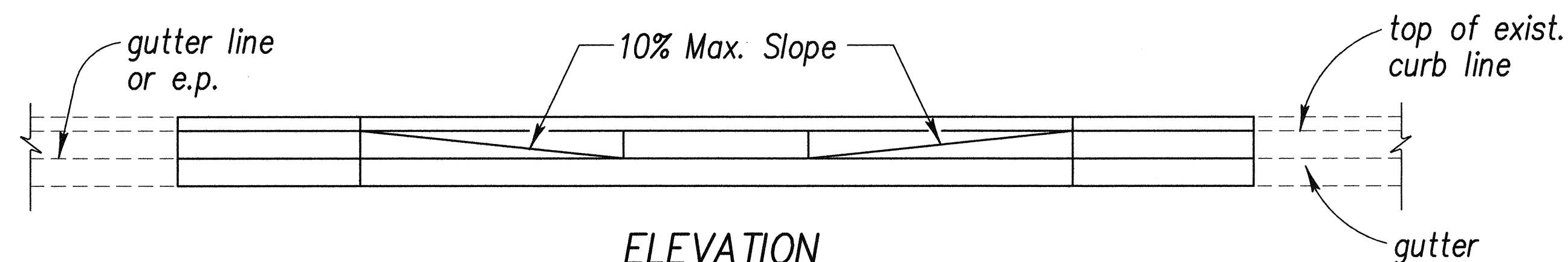
SHEET No. CB-1 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	13	109

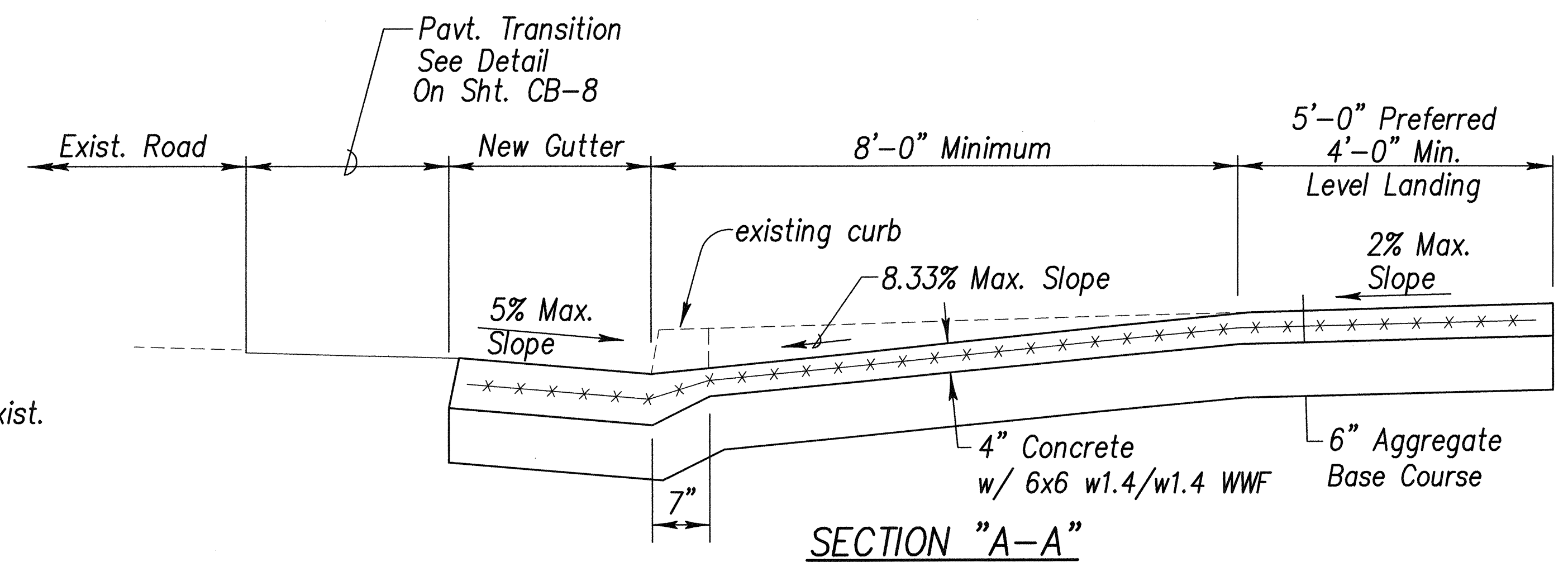
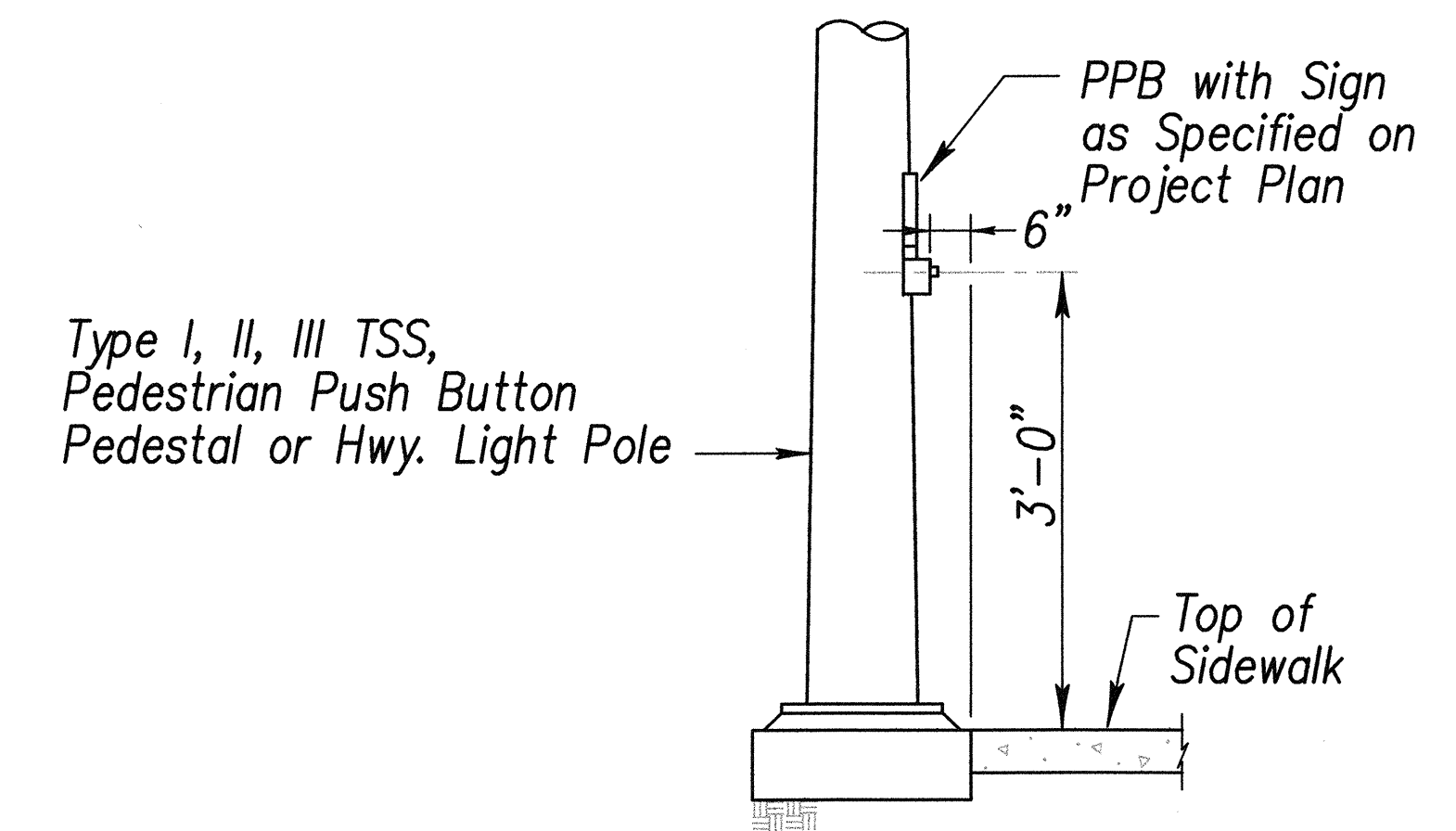


* If roadway slope >2% conform to roadway slope and file Technical Infeasibility (TI) Statement.

Note: Dimensions measured along curbline.

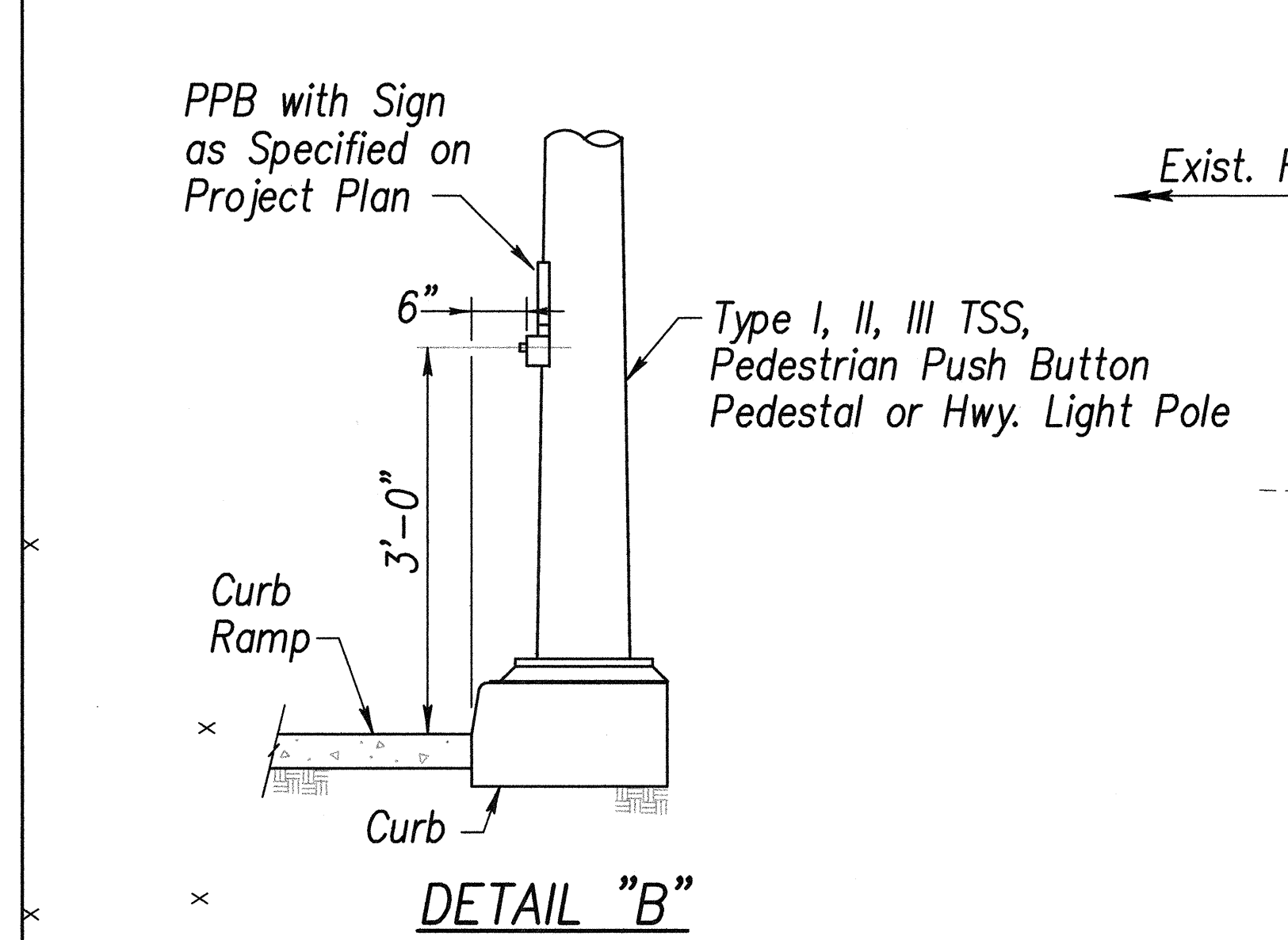
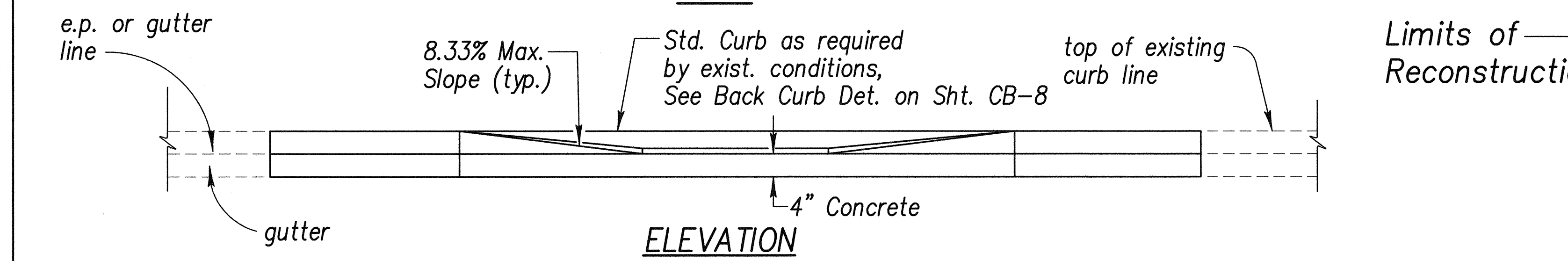
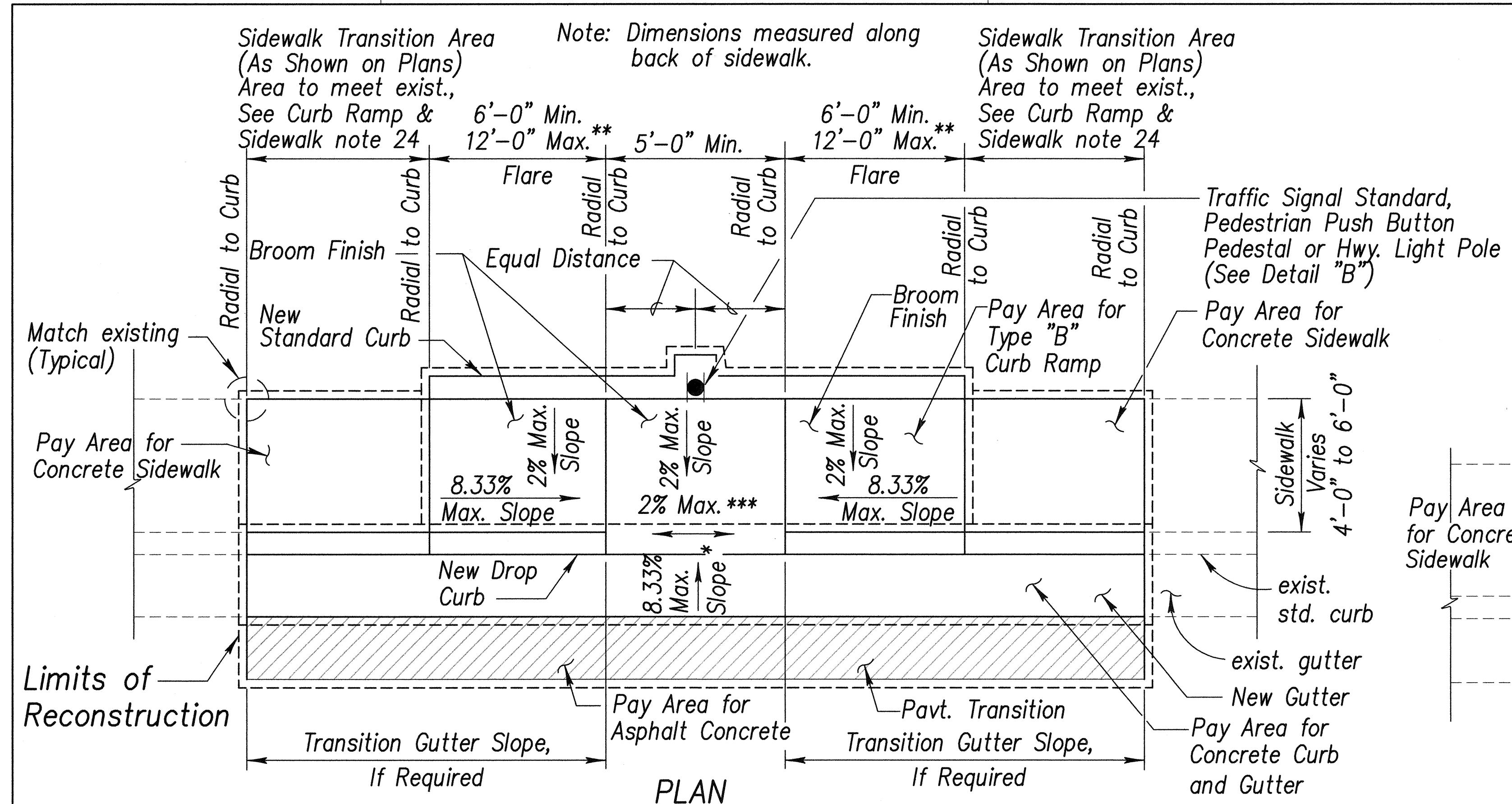


CURB RAMP - TYPE "A"
SIDEWALK WIDTH 12'-0" OR GREATER

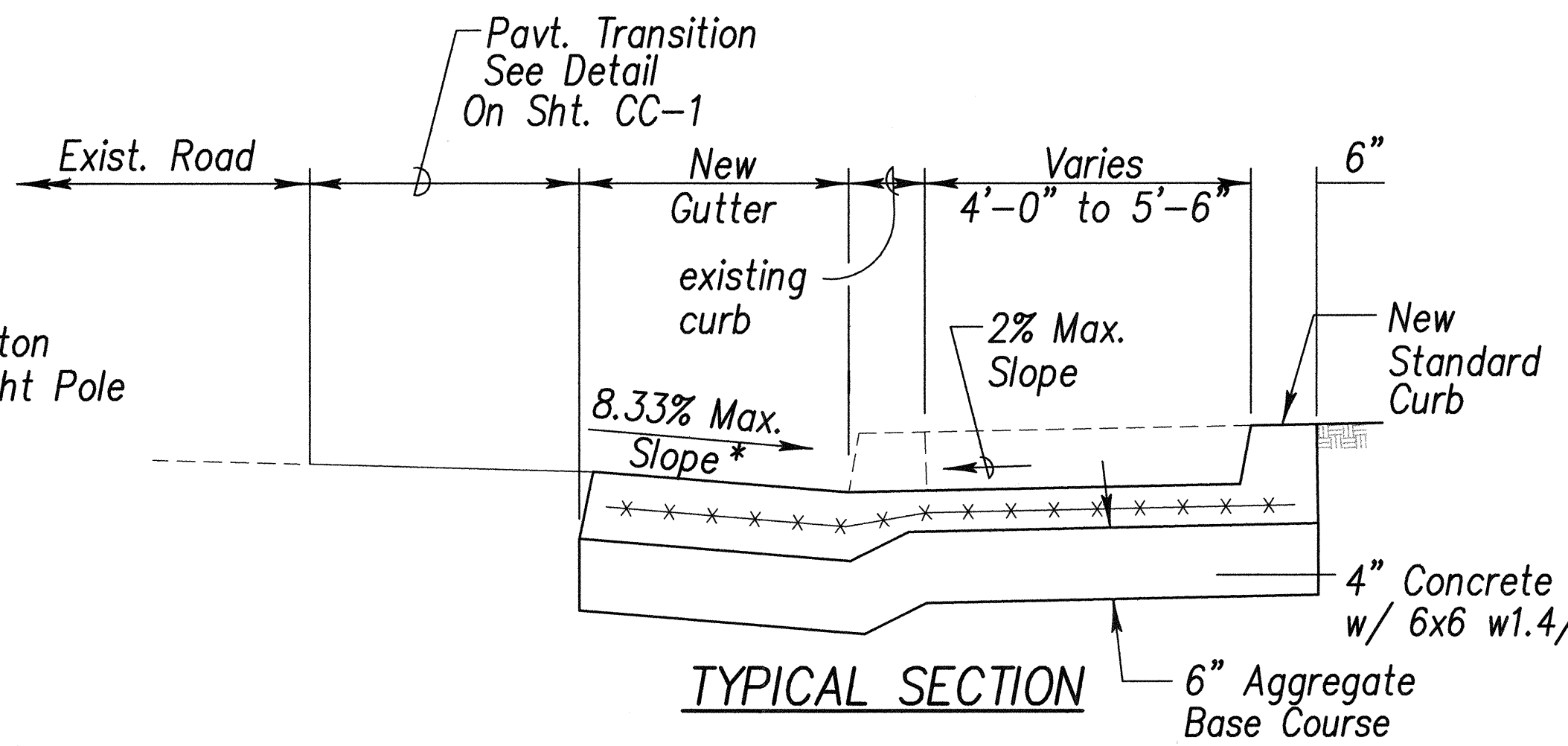


	STATE OF HAWAII	
	DEPARTMENT OF TRANSPORTATION	
	HIGHWAYS DIVISION	
	CURB RAMP DETAILS-1 PEDESTRIAN FACILITIES & ADA COMPLIANCE AT VARIOUS LOCATIONS ON MAUI Federal - Aid Project No. CMAQ-0900(67)R Scale: As Shown Date: August 2004 SHEET No. CB-2 OF 10 SHEETS	

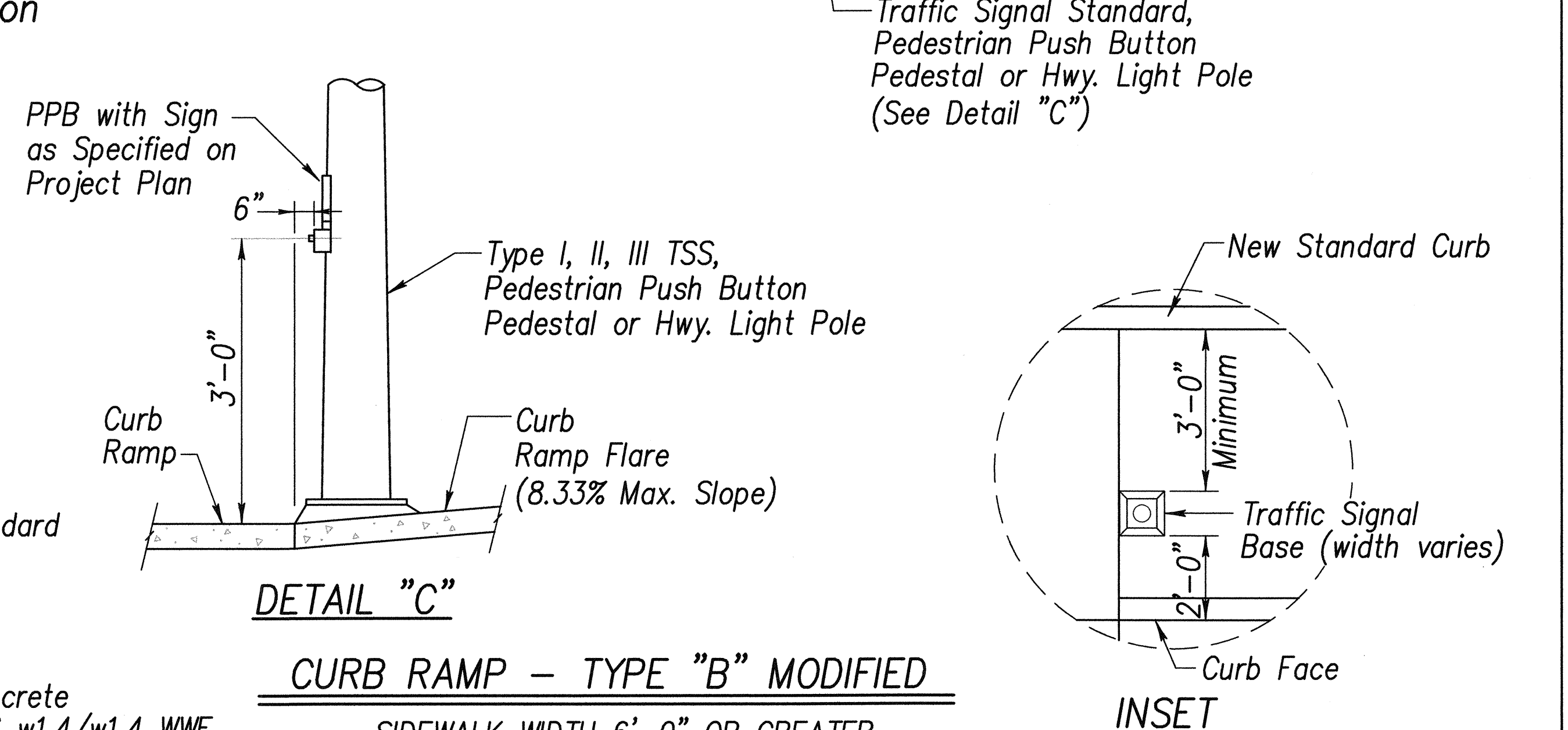
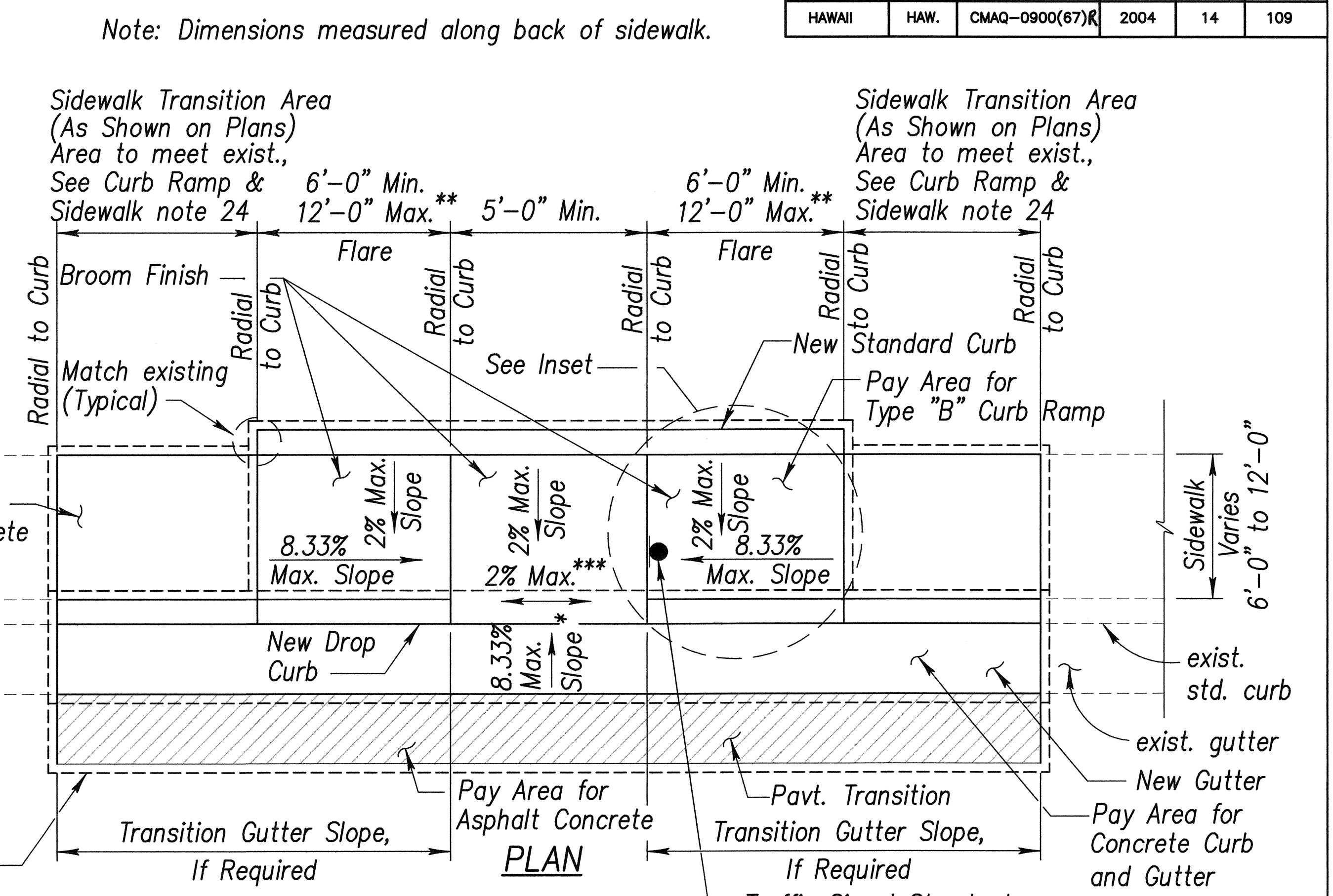
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	14	109



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



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS-2

PEDESTRIAN FACILITIES & ADA
COMPLIANCE AT VARIOUS
LOCATIONS ON MAUI

Federal - Aid Project No. CMAQ-0900(67)R
Scale: As Shown Date: August 2004

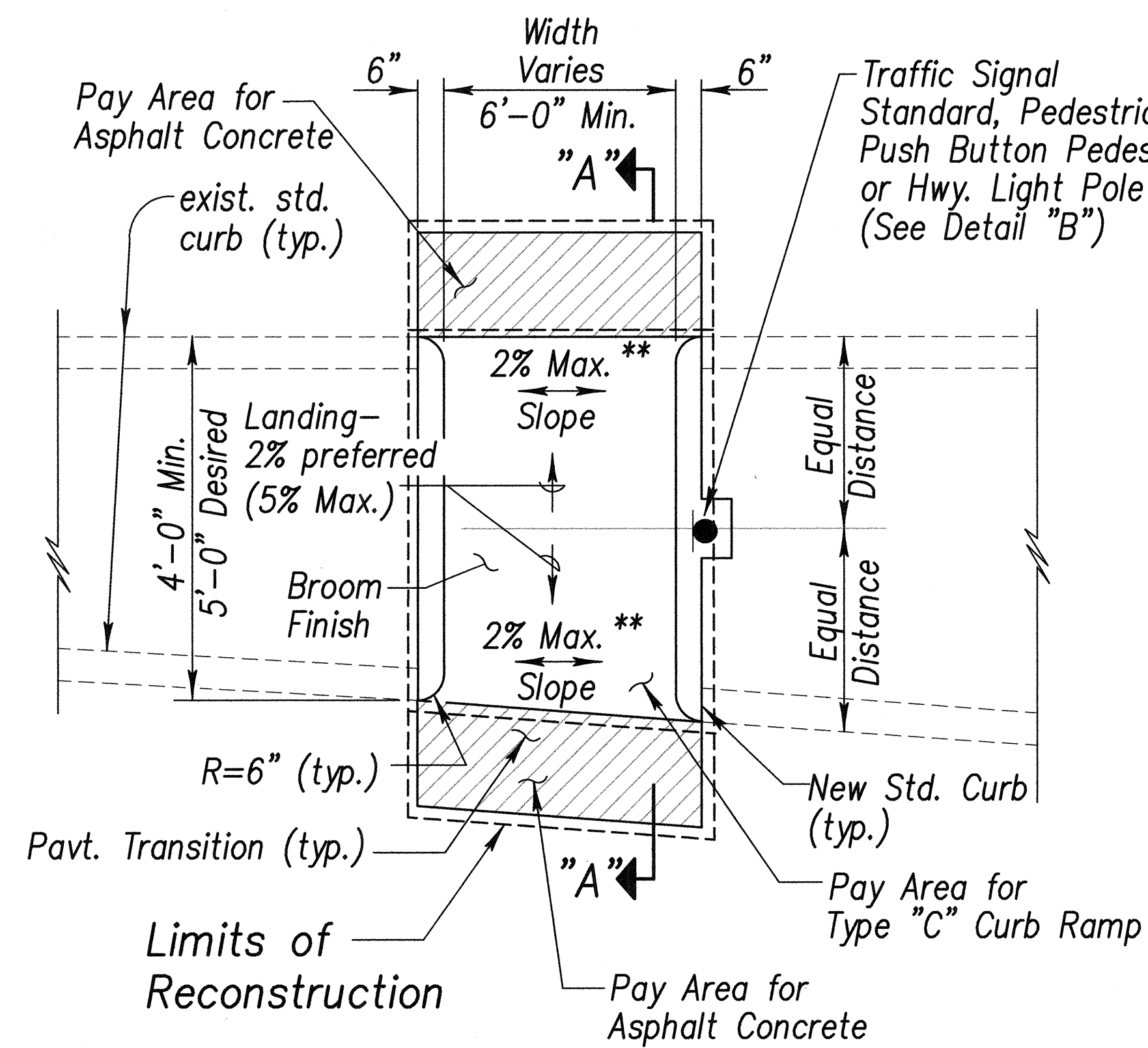
SHEET No. CB-3 OF 10 SHEETS

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ME OR UNDER MY SUPERVISION

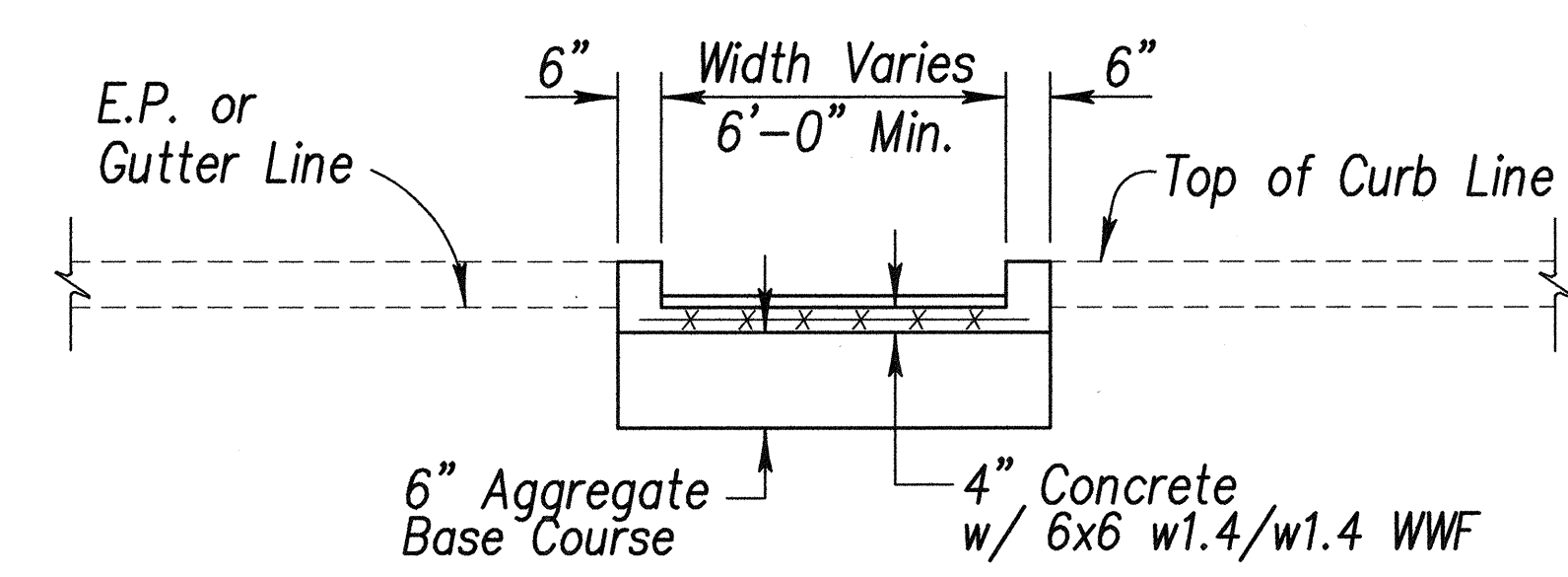
04/30/06
EXPIRATION DATE OF THE LICENSE

DANIEL S. MIYASHIRO
LICENSED PROFESSIONAL ENGINEER
No. 3443-C
HAWAII U.S.A.

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	15	109



PLAN

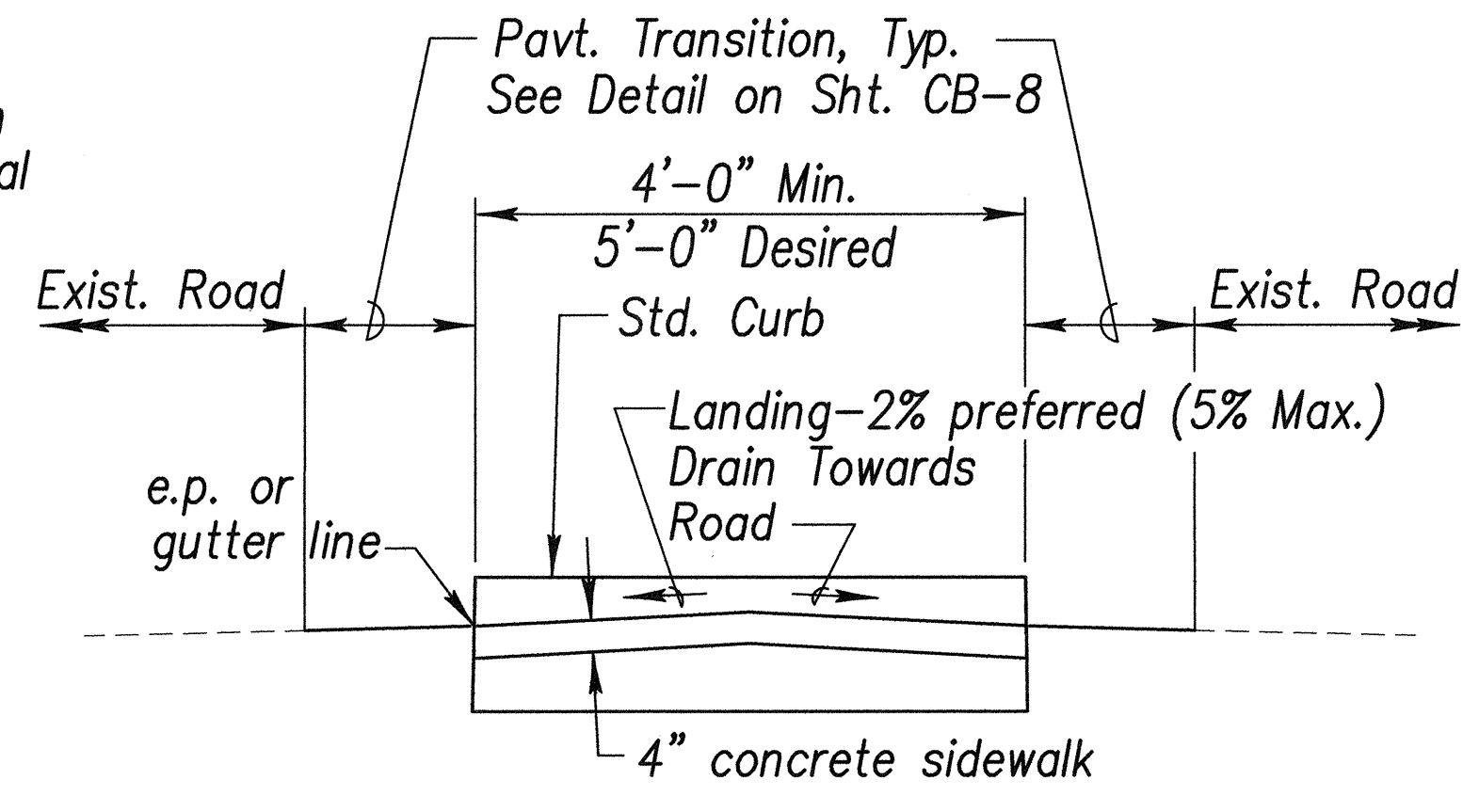


ELEVATION

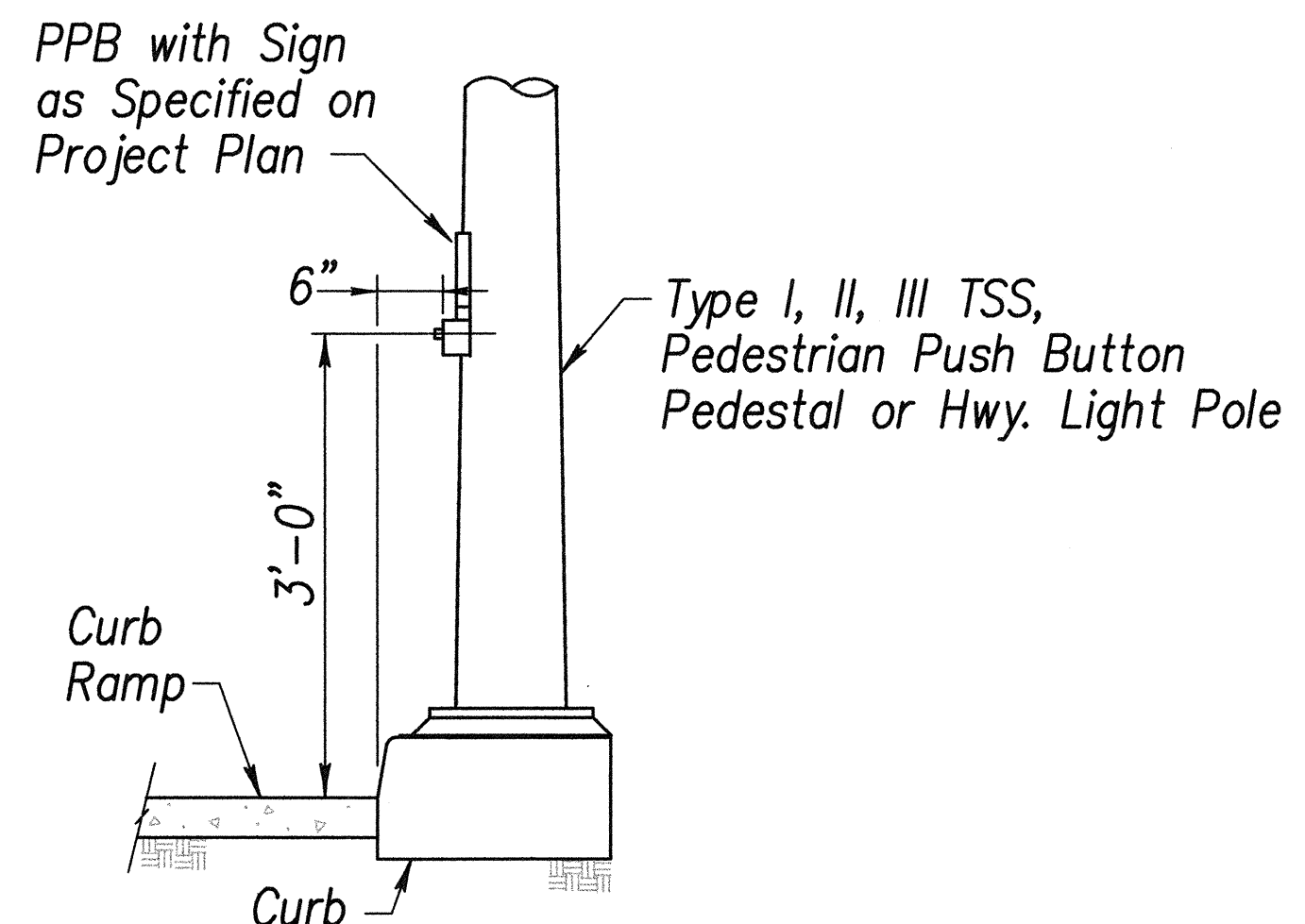
CURB RAMP - TYPE "C"

Not to scale
USE AT MEDIAN CROSSINGS, ISLANDS

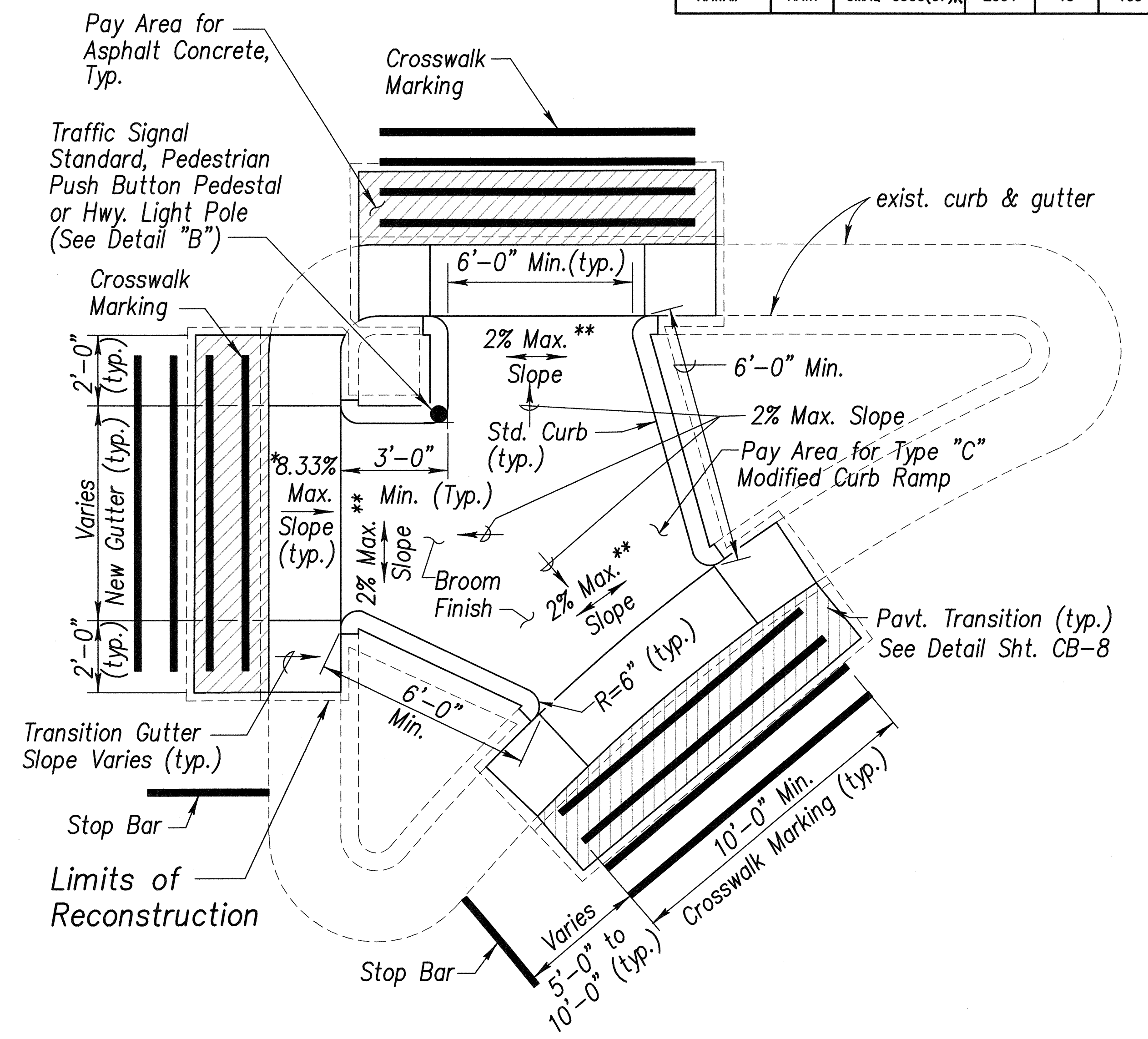
- * See Curb Ramp and Sidewalk Note No. 9
- ** If roadway slope >2% conform to roadway slope and file Technical Infeasibility (TI) Statement.



SECTION "A-A"



DETAIL "B"



CURB RAMP - TYPE "C" MODIFIED

Not to scale

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	
NO.	

DANIEL S. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 3443-C
HAWAII U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS-3

PEDESTRIAN FACILITIES & ADA
COMPLIANCE AT VARIOUS
LOCATIONS ON MAUI

Federal - Aid Project No. CMAQ-0900(67)R
Scale: As Shown Date: August 2004

SHEET No. CB-4 OF 10 SHEETS

CURB RAMP - TYPE "D"

Pay Area for Type "D" Curb Ramp

Sidewalk Transition Area (As Shown on Plans) Area to meet exist., See Curb Ramp & Sidewalk note 24

4'-0" Min. Level Landing

6'-0" Min. 12'-0" Max. **

R=6"

Std. Curb

6"-0" Min. Transition Gutter Slope If Required

2% Max. Slope

2% Max. Slope

8.33% Max. Slope

2% Max. Slope

10% Max. Slope

5% Max. Slope

2% Max. Slope***

3'-0" Min.

5'-0" Flare (Transition Gutter Slope)

New Drop Curb

New Gutter

Pavt. Transition See Detail Sht. CB-8

Pay Area for Concrete Sidewalk

Pay Area for Asphalt Concrete

Pay Area for Concrete Curb and Gutter

Traffic Signal Standard. Pedestrian Push Button Pedestal or Hwy. Light Pole (See Detail "A")

Limits of Reconstruction

Match existing exist. curb

Varies - Sidewalk

exist. gutter

R/W

Broom Finish

Pay Area for Concrete Sidewalk

Unpaved Area

exist. curb

exist. gutter

Match existing

Pay Area for Concrete Curb and Gutter

Pay Area for Asphalt Concrete

Traffic Signal Standard. Pedestrian Push Button Pedestal or Hwy. Light Pole (See Detail "A")

CURB RAMP - TYPE "D" MODIFIED

Pay Area for Type "D" Modified Curb Ramp

Sidewalk Transition Area (As Shown on Plans) Area to meet exist., See Curb Ramp & Sidewalk note 24

4'-0" Min. Level Landing

6'-0" Min. 12'-0" Max. *

R=6" (typ.)

Std. Curb

2% Max. Slope

2% Max. Slope

8.33% Max. Slope

2% Max. Slope

2% Max. Slope

3'-0"

Pay Area for Concrete Sidewalk

Pay Area for Concrete Curb and Gutter

Pay Area for Asphalt Concrete

Traffic Signal Standard. Pedestrian Push Button Pedestal or Hwy. Light Pole (See Detail "A")

Limits of Reconstruction

Match existing

Varies - Sidewalk

Unpaved Area

exist. curb

exist. gutter

Match existing

Pay Area for Concrete Curb and Gutter

Pay Area for Asphalt Concrete

Traffic Signal Standard. Pedestrian Push Button Pedestal or Hwy. Light Pole (See Detail "A")

CURB RAMP - TYPE "D" MODIFIED

Type I, II, III TSS,
Pedestrian Push Button Pedestal
or Hwy. Light Pole

PPB with Sign
as Specified on
Project Plan

6"

3'-0"

Top of
Sidewalk

DETAIL "A"

16

Technical Drawing: Sidewalk Reconstruction Cross-Section

Notes:

- Sidewalk Transition Area (As Shown on Plans):** Area to meet exist., See Curb Ramp & Sidewalk note 24
- Note:** Dimensions measured along back of sidewalk.
- Sidewalk Transition Area (As Shown on Plans):** Area to meet exist., See Curb Ramp & Sidewalk note 24

Dimensions and Slopes:

- Flare:** 6'-0" Min. to 12'-0" Max. (on both sides)
- Radial to Curb:** 5'-0" Min. (between flare areas)
- Equal Distance:** Indicated for the transition area.
- Slopes:**
 - 8.33% Max. Slope (horizontal)
 - 2% Max. Slope (vertical)
 - 2% Max. Slope (horizontal)
 - 2% Max. Slope (vertical)
 - 8.33% Max. Slope (horizontal)
 - 2% Max. Slope (vertical)
 - 2% Max. Slope (horizontal)
 - 2% Max. Slope (vertical)
 - 10% Max. Slope (horizontal)
 - 5% Max. Slope (vertical)
 - 10% Max. Slope (horizontal)
- Vertical Dimensions:**
 - 4' Min. (height of curb)
 - 8'-0" Max. (width of gutter)

Materials and Areas:

- New Curb:** Indicated on the left and right sides.
- Pay Area for Concrete Sidewalk, Typ.:** The main sidewalk area.
- Pay Area for Asphalt Concrete:** The gutter area.
- Pay Area for Concrete Curb and Gutter:** The combined curb and gutter area.
- Transition Gutter Slope, If Required:** Indicated at the bottom.

Other Labels:

- Match existing (Typical):** Indicated on the left side.
- Limit of Reconstruction:** Indicated on the left side.
- exist. std. curb:** Existing standard curb.
- exist. gutter:** Existing gutter.
- New Gutter:** New gutter.
- Pay Area for Combination Curb Ramp:** Indicated on the right side.
- Pay Area for Concrete Sidewalk, Typ.:** Indicated on the right side.
- Pay Area for Asphalt Concrete:** Indicated on the right side.
- Pay Area for Concrete Curb and Gutter:** Indicated on the right side.
- Transition Gutter Slope, If Required:** Indicated at the bottom.

DIST. NO.	STATE	PROJ. NO.	YEAR	SHEET NO.	S
HAWAII	HAW.	CMAQ-0900(67)K	2004	17	-

Traffic Signal Standard, Pedestrian Push Button Pedestal or Hwy. Light Pole (See Detail "A")

Modified Grade Adjustment Curb See Detail This Sheet

Equal Distance

Sidewalk Varies

Varies

8" 6"

e.p. or gutter line

8.33% Max. Slope (typ.)

Curb as required by exist. conditions, See Back Curb Det. on Sht. CB-8

top of existing curb line

gutter

4" Concrete

PPR with Sign

Diagram illustrating the modified grade base for a TSS (Type I, II, III TSS, Pedestrian Push Button Pedestal or Hwy. Light Pole).

The diagram shows a vertical pole (Type I, II, III TSS) mounted on a base. The base is labeled "Curb Ramp" and "Curb". The pole is labeled "Type I, II, III TSS, Pedestrian Push Button Pedestal or Hwy. Light Pole".

The diagram includes dimensions: a vertical dimension of 3'-0" from the curb to the base, and a horizontal dimension of 6" from the curb to the pole.

Note: Modified Grade Base to be provided separately for payment. Curb will be considered Contract items.

Varies
7"-13"

Varies
6"-12"

1"

Pole

Curb Grade

$R=1'' R=\frac{1}{4}''$

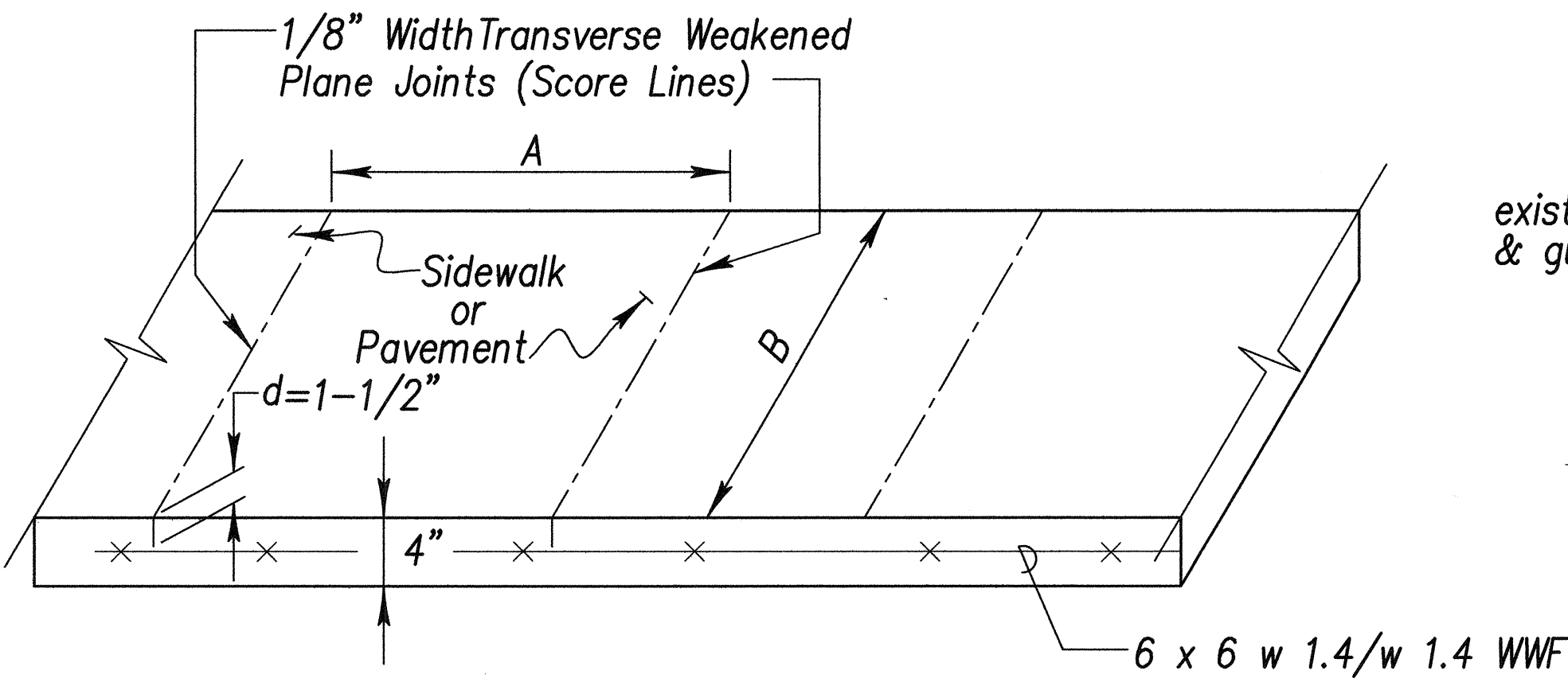
Varies

4'

- * 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.

 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION 04/30/06 EXPIRATION DATE OF THE LICENSE	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>CURB RAMP DETAILS-5</u> <u>PEDESTRIAN FACILITIES & ADA</u> <u>COMPLIANCE AT VARIOUS</u> <u>LOCATIONS ON MAUI</u> <u>Federal - Aid Project No. CMAQ-0900(67)R</u> Scale: As Shown Date: August 2004 SHEET NO. CB-6 OF 10 SHEETS
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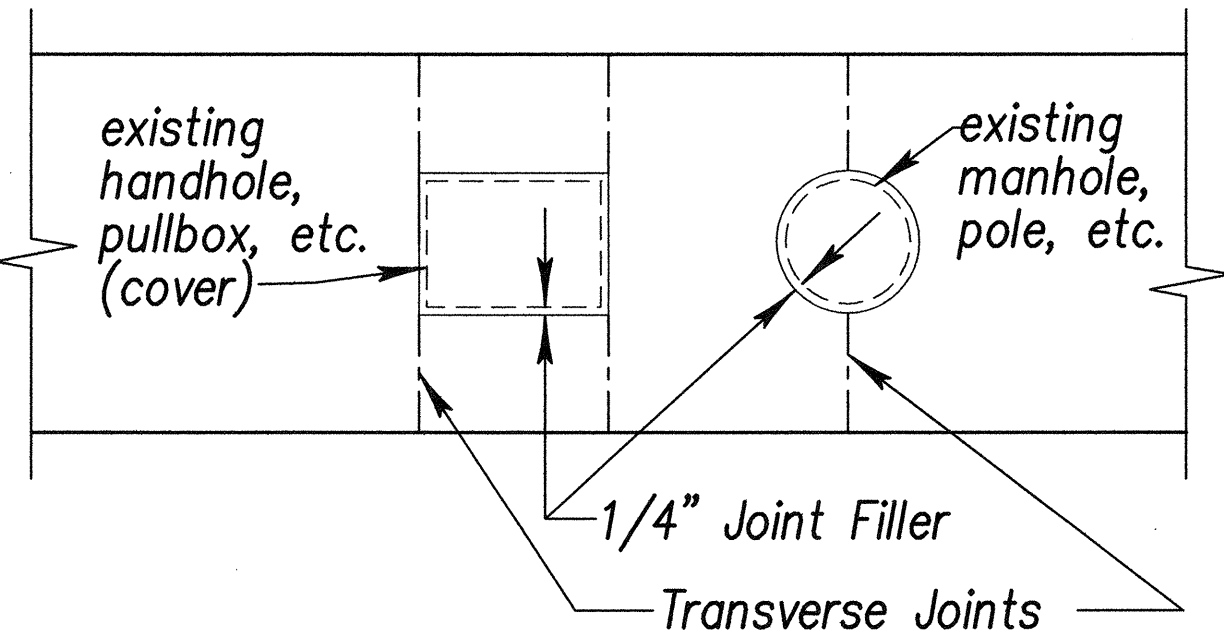
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	18	109



Note: A = 6' if B ≤ 8'
If B > 8', Add Longitudinal Joint

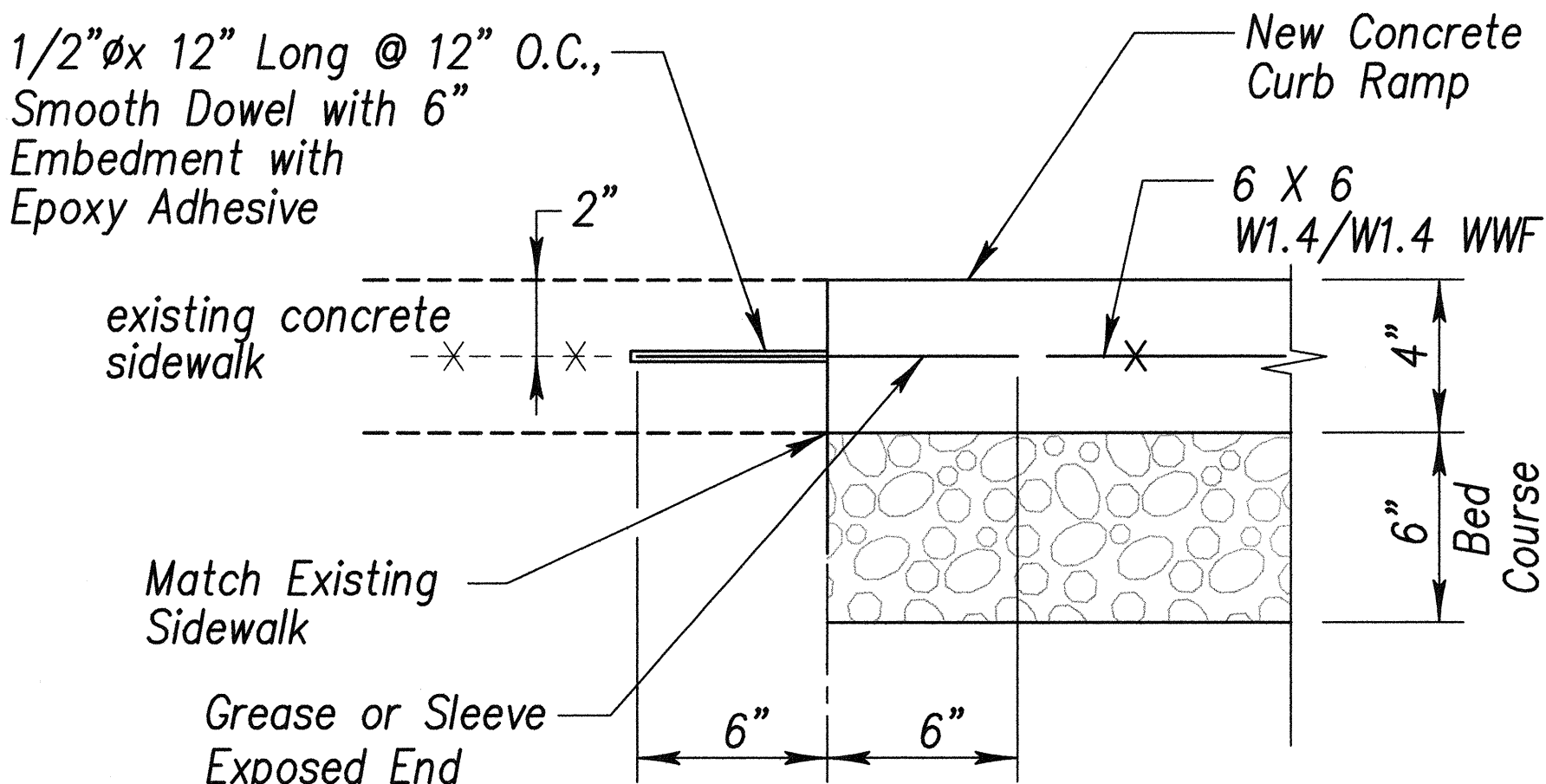
SIDEWALK SCORE LINE DETAIL

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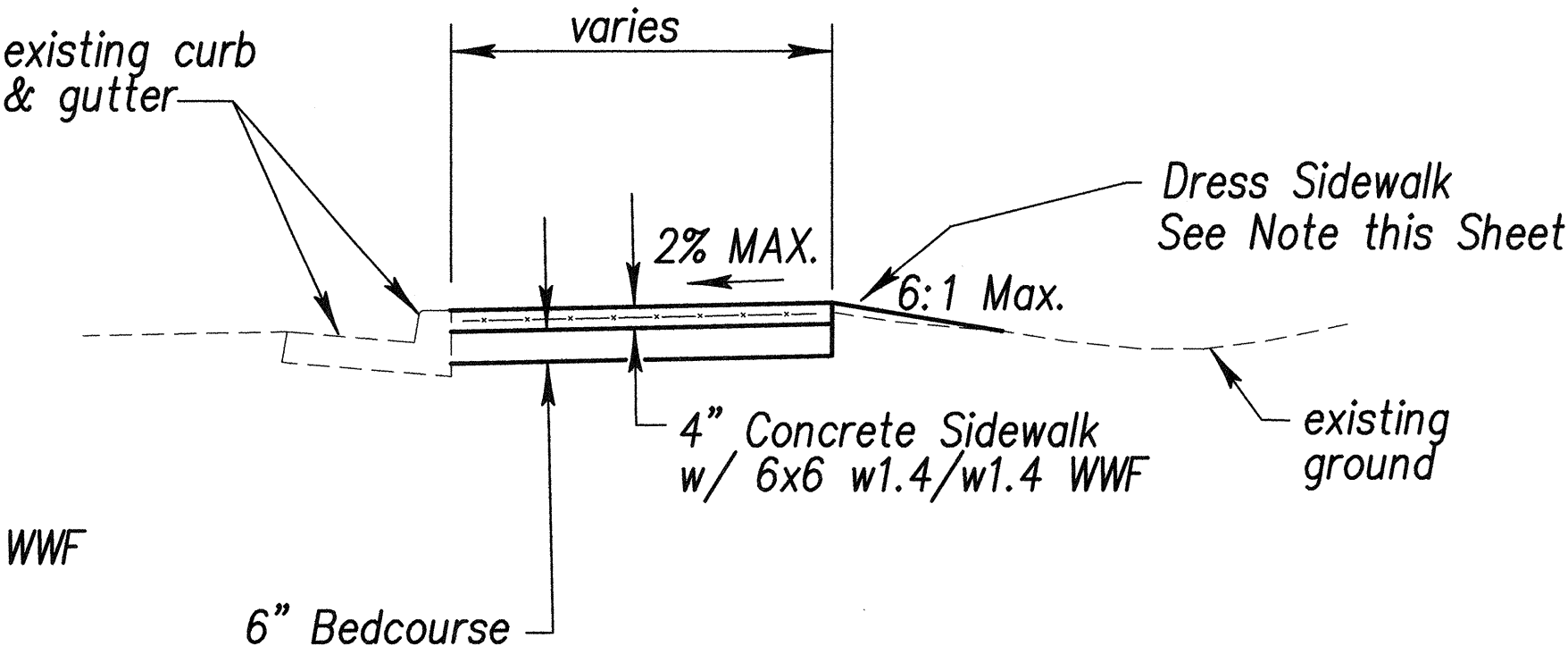
SIDEWALK ISOLATION JOINT DETAIL

Not to scale



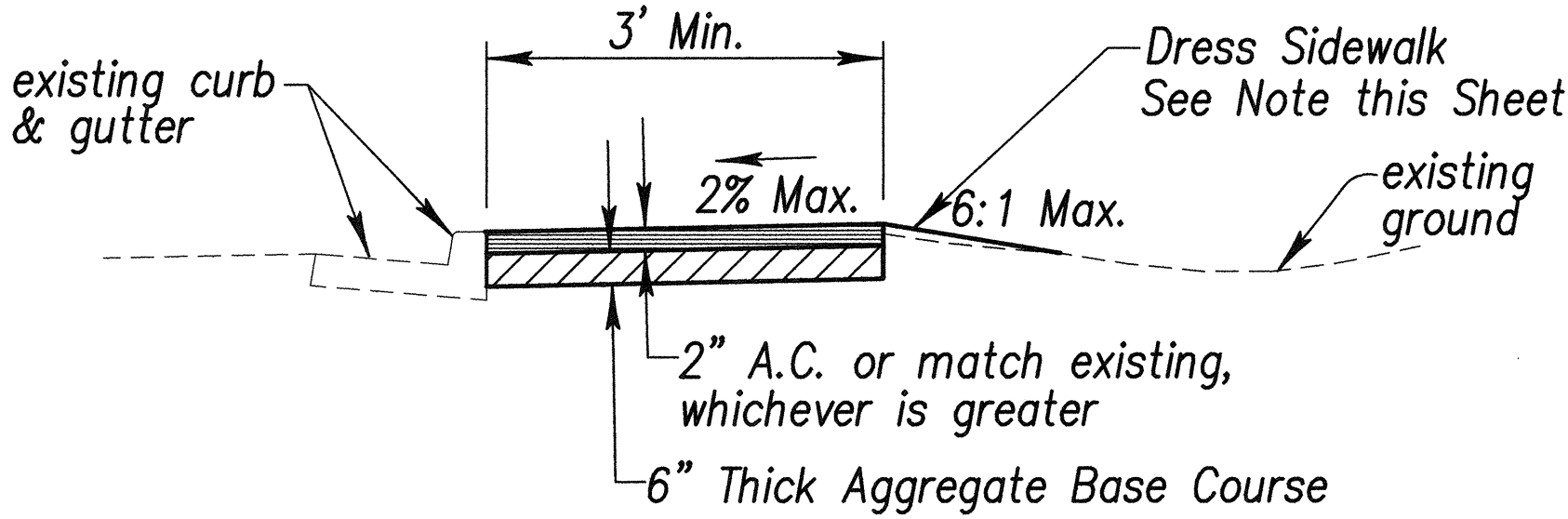
TYPICAL CONSTRUCTION JOINT AT EXISTING SIDEWALK

Not to scale



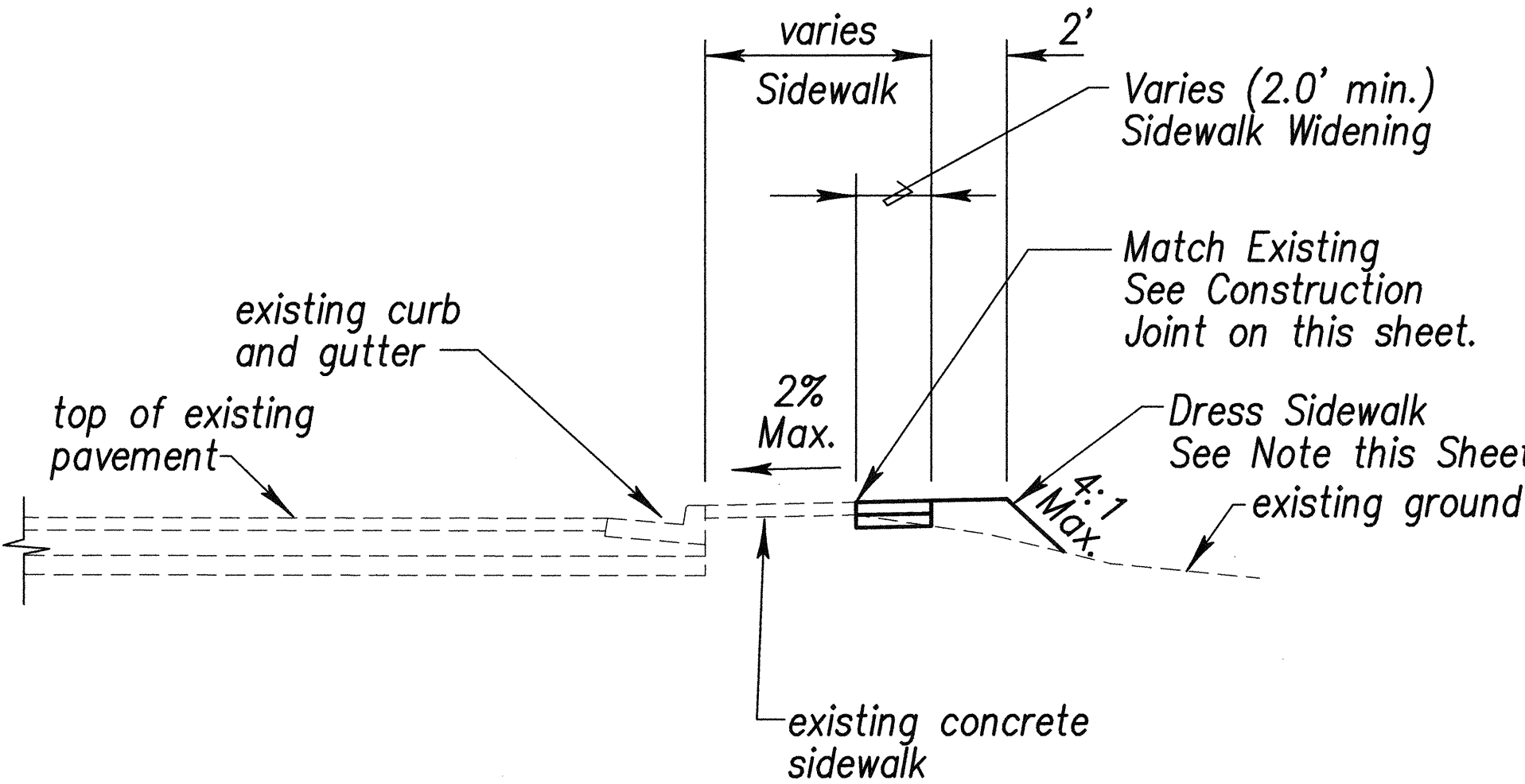
SIDEWALK DETAIL

Not to scale



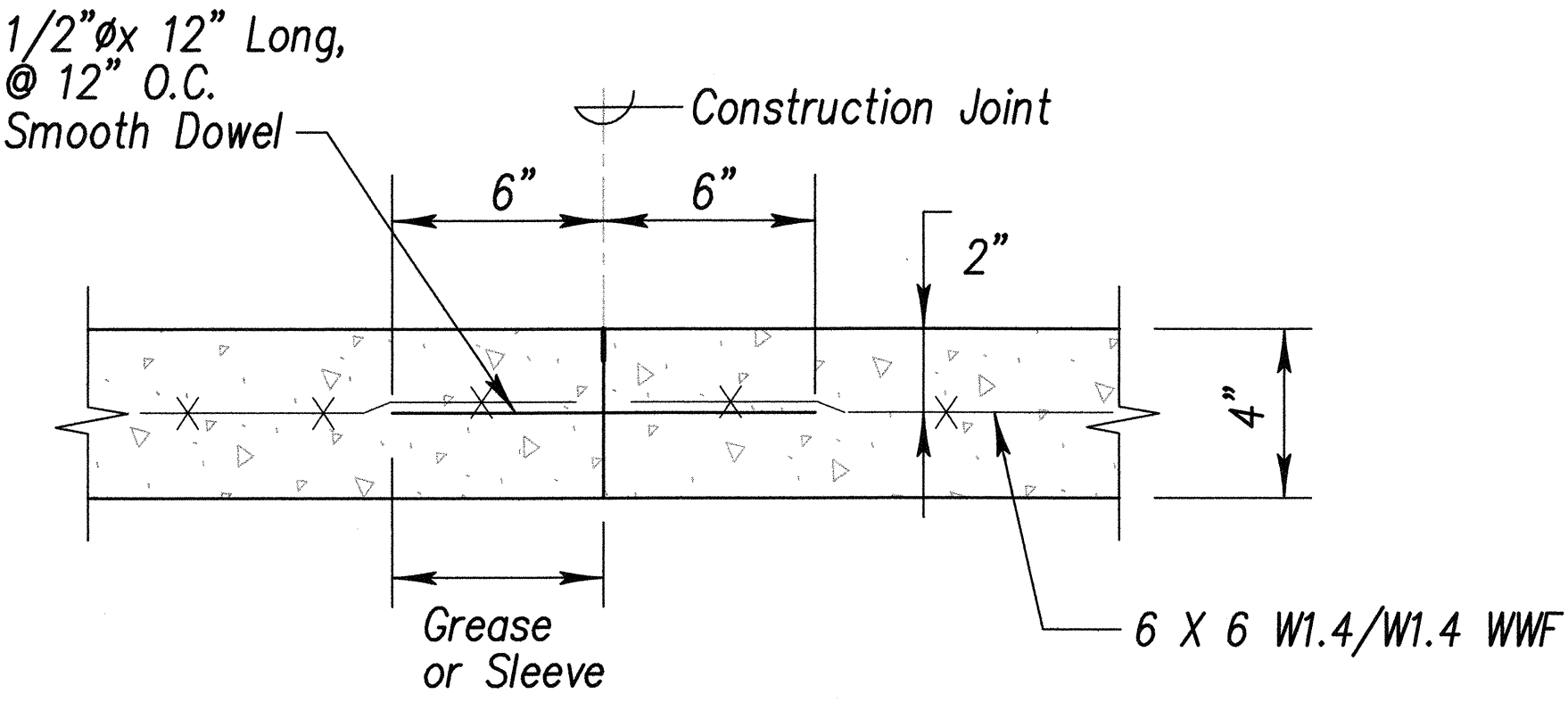
A.C. SIDEWALK DETAIL

Not to scale



SIDEWALK WIDENING SECTION

Not to scale



TRANSVERSE CONSTRUCTION JOINT DETAIL

Not to scale

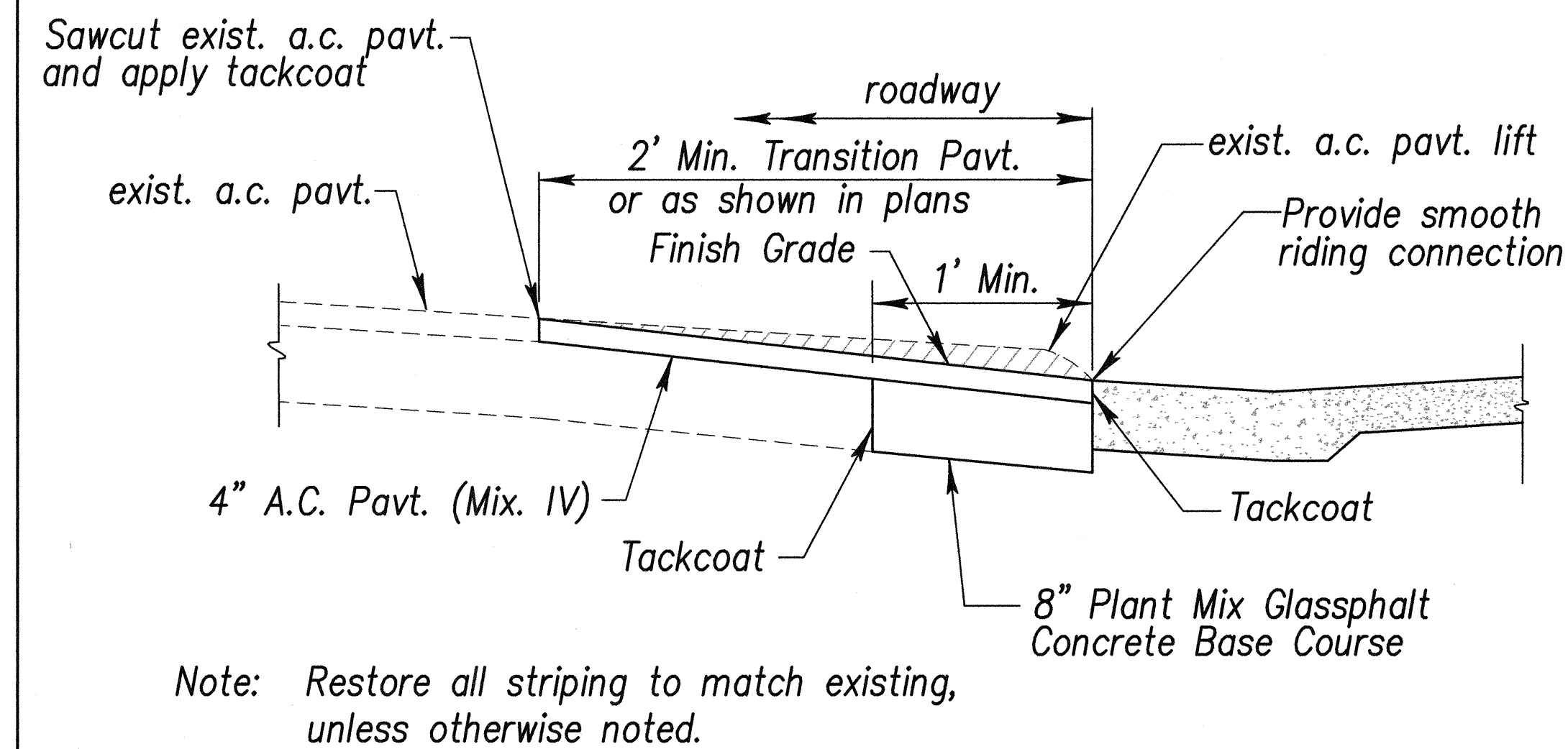
- NOTES:
1. Dressing of sidewalk shall consist of clearing, grubbing, grading, reshaping and compacting the area adjacent to the improvement with suitable material as shown on the plans and/or as directed by the Engineer. If existing ground is asphalt or concrete surface, dress sidewalk with A.C. pavement, Mix No. IV. This work shall be considered incidental to the new sidewalk.
 2. Transverse and longitudinal weakened Plane Joints for sidewalk shall be considered incidental to the New Sidewalk.
 3. Installation of dowels and tie bars including drilling, and epoxy grout shall be incidental to Sidewalk.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIDEWALK DETAILS
 PEDESTRIAN FACILITIES & ADA
 COMPLIANCE AT VARIOUS
 LOCATIONS ON MAUI
 Federal - Aid Project No. CMAQ-0900(67)R
 Scale: As Shown Date: August 2004
 SHEET No. CB-7 OF 10 SHEETS

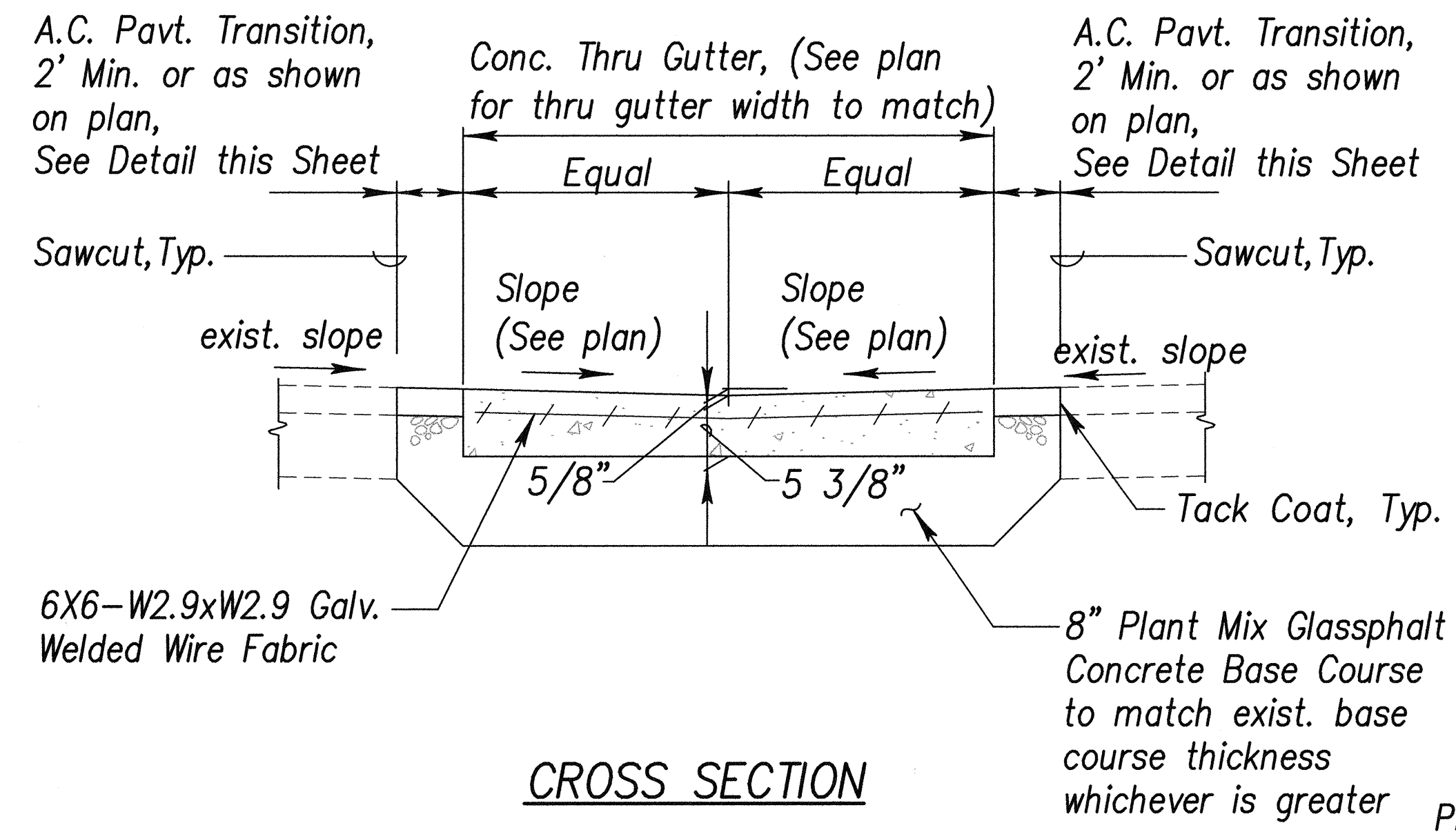
EXPIRATION DATE OF THE LICENSE
 04/30/06

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

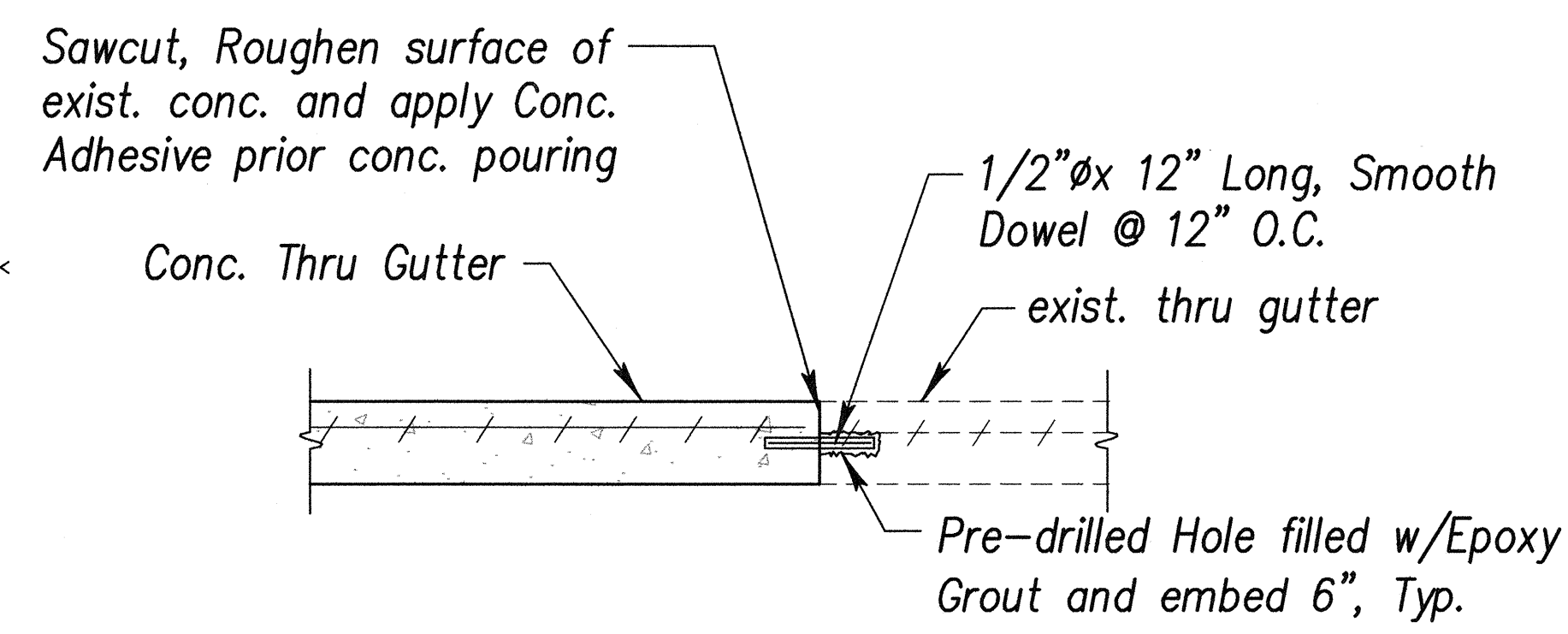
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	19	109



PAVEMENT TRANSITION DETAIL
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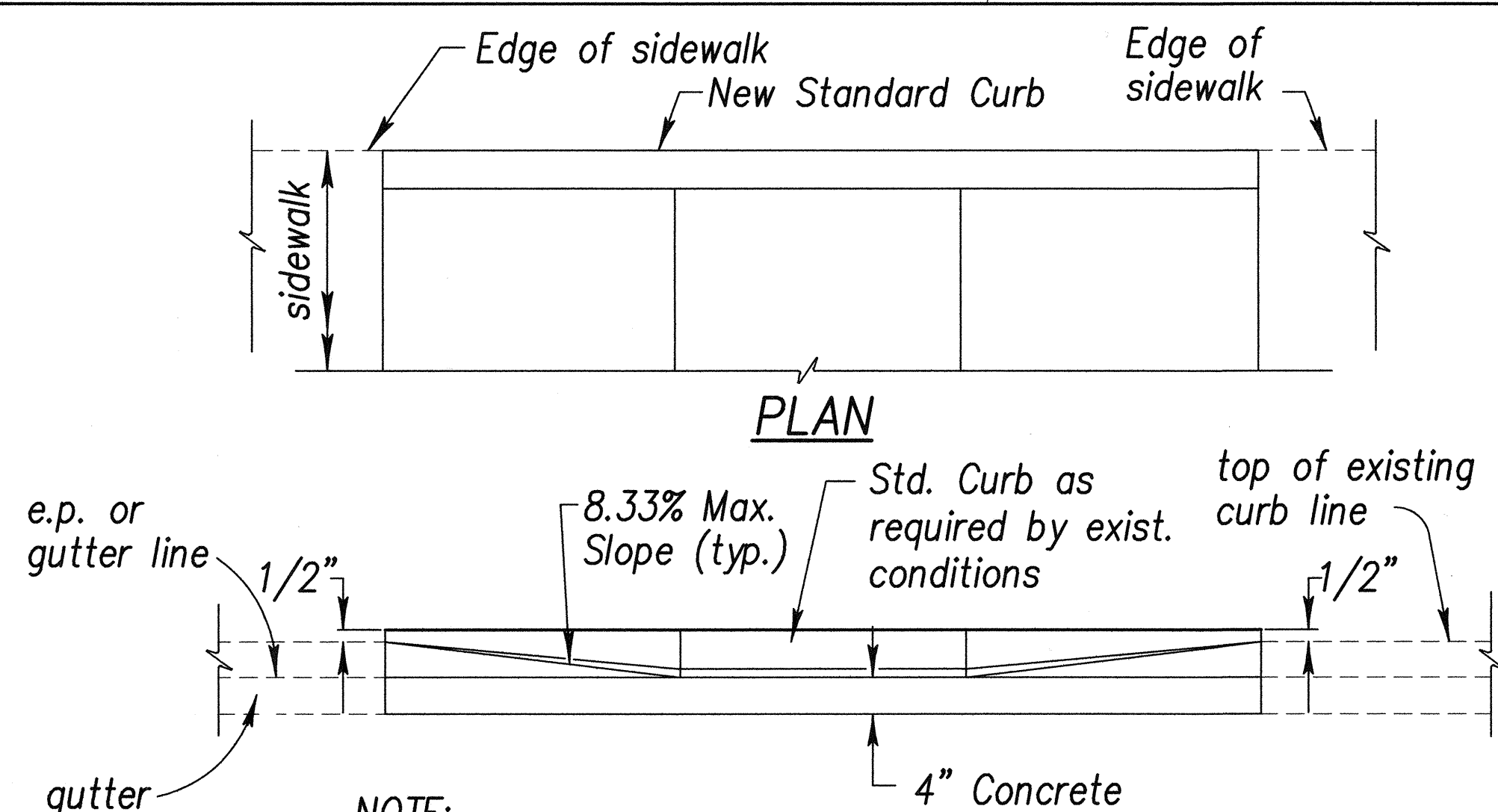


CROSS SECTION

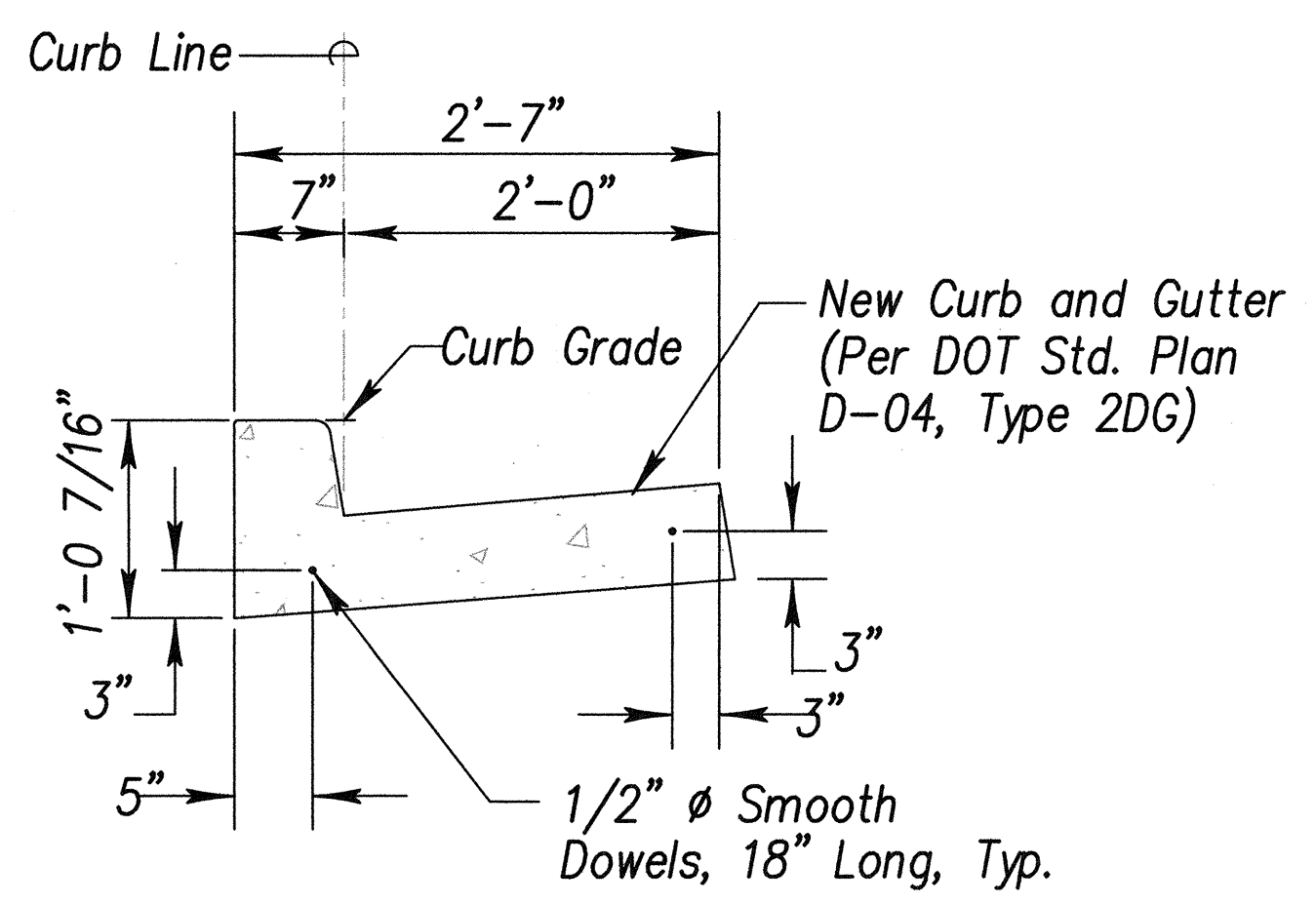


LONGITUDINAL SECTION

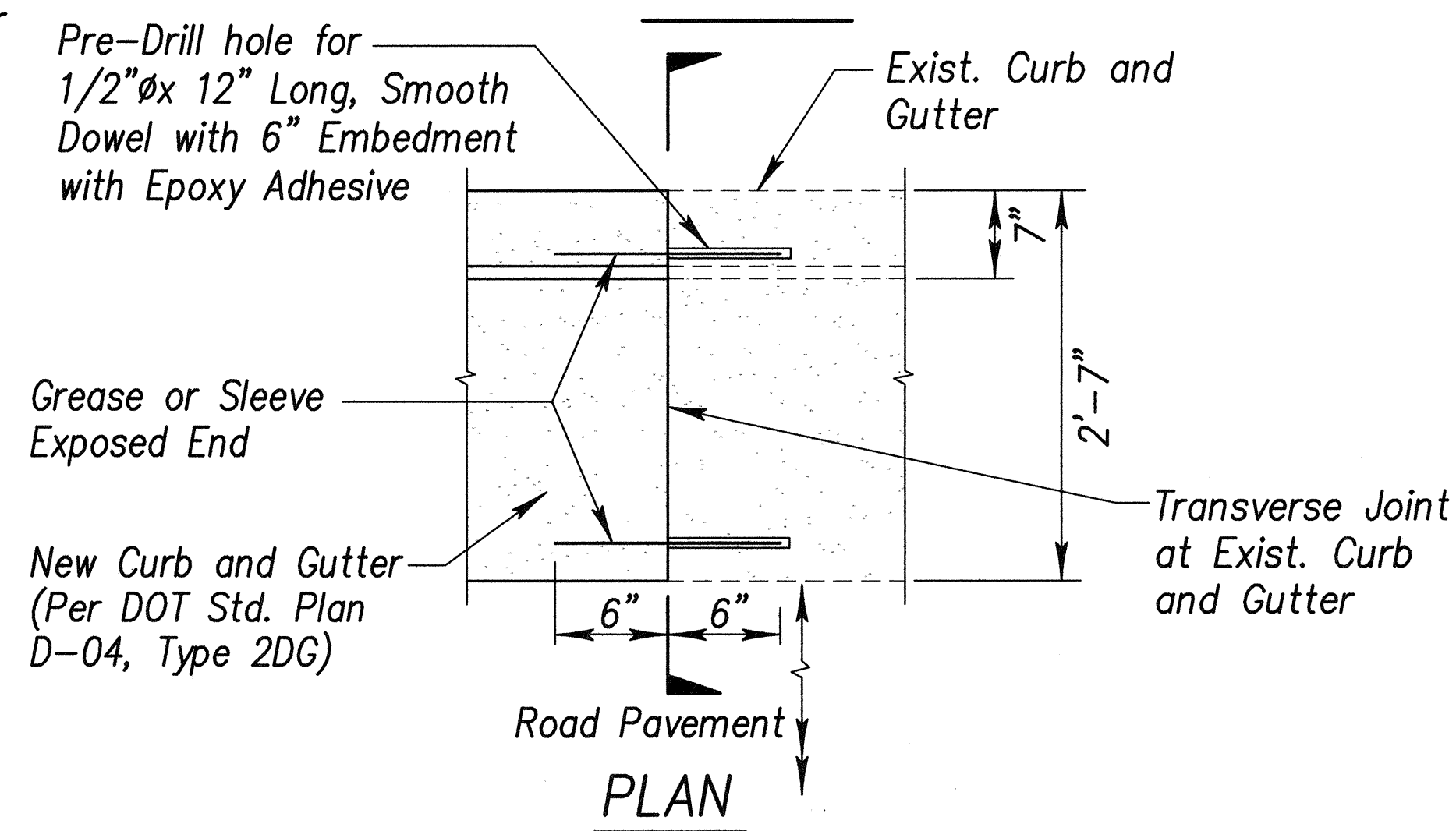
CONCRETE THRU GUTTER CONNECTION DETAIL
Not to scale



ELEVATION DETAIL - BACK CURB
Not to scale

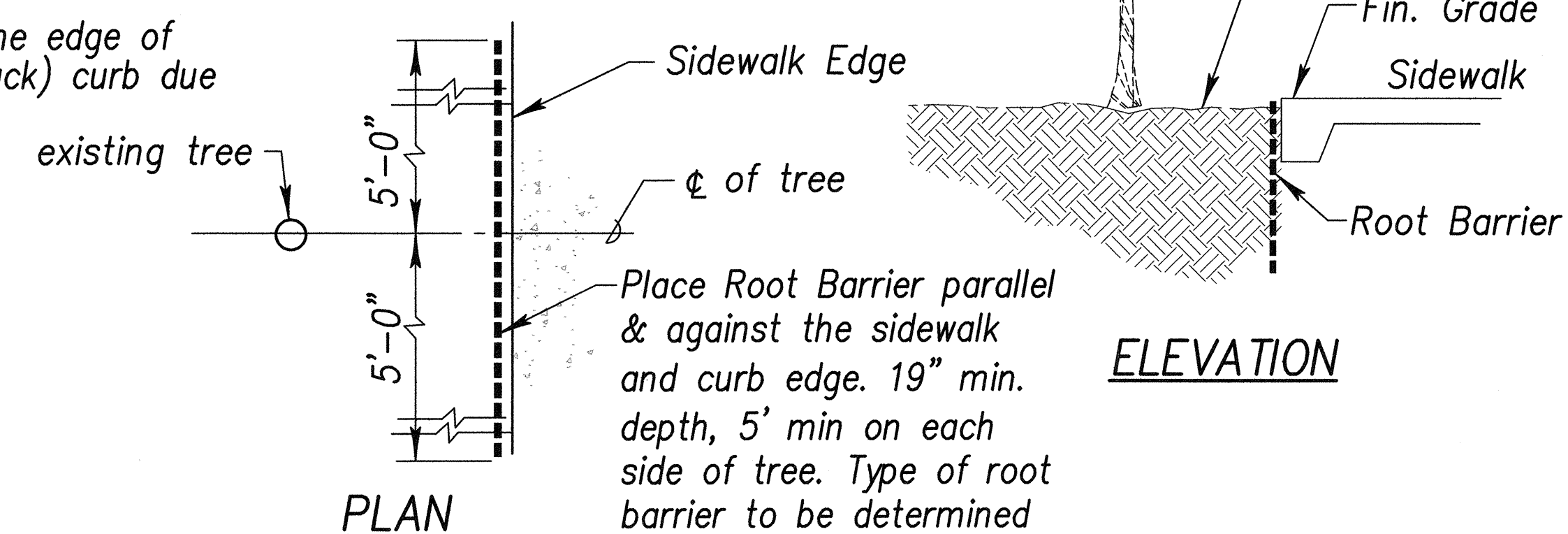


SECTION



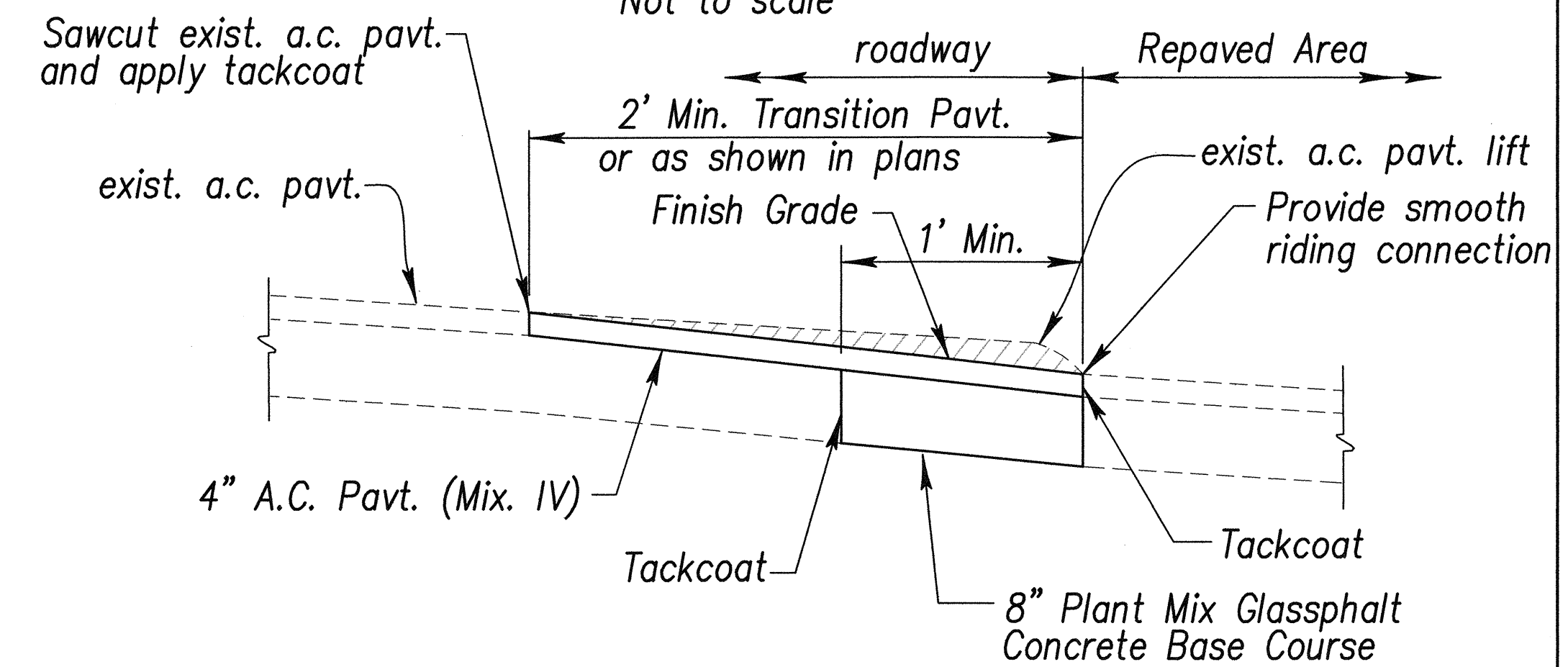
CURB AND GUTTER CONNECTION
Not to scale

Note: Payment for Root Barrier shall be considered incidental to Concrete Sidewalk work.



ELEVATION

ROOT BARRIER DETAIL
Not to scale



PAVEMENT RESTORATION DETAIL
Not to scale

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04/30/06

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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

PEDESTRIAN FACILITIES & ADA COMPLIANCE AT VARIOUS LOCATIONS ON MAUI

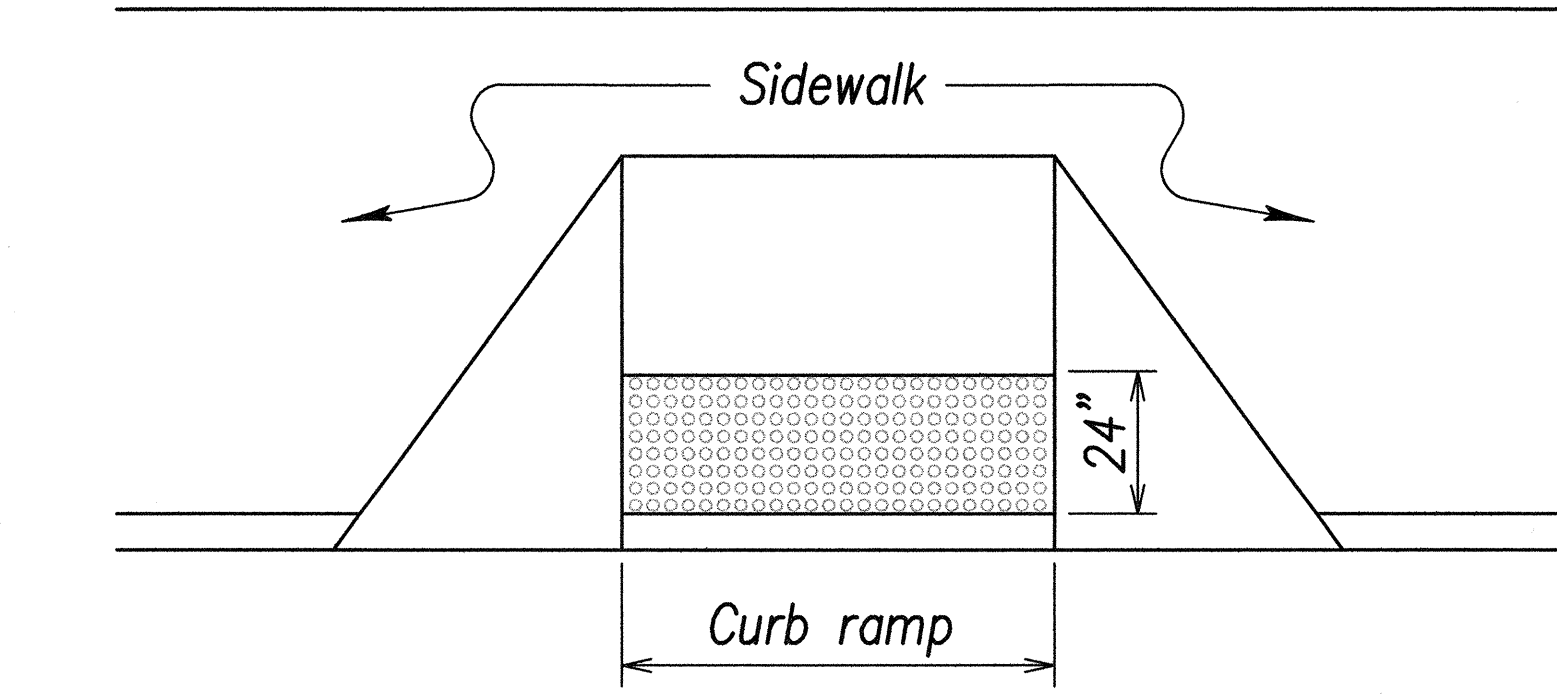
Federal - Aid Project No. CMAQ-0900(67)R

Scale: As Shown Date: August 2004

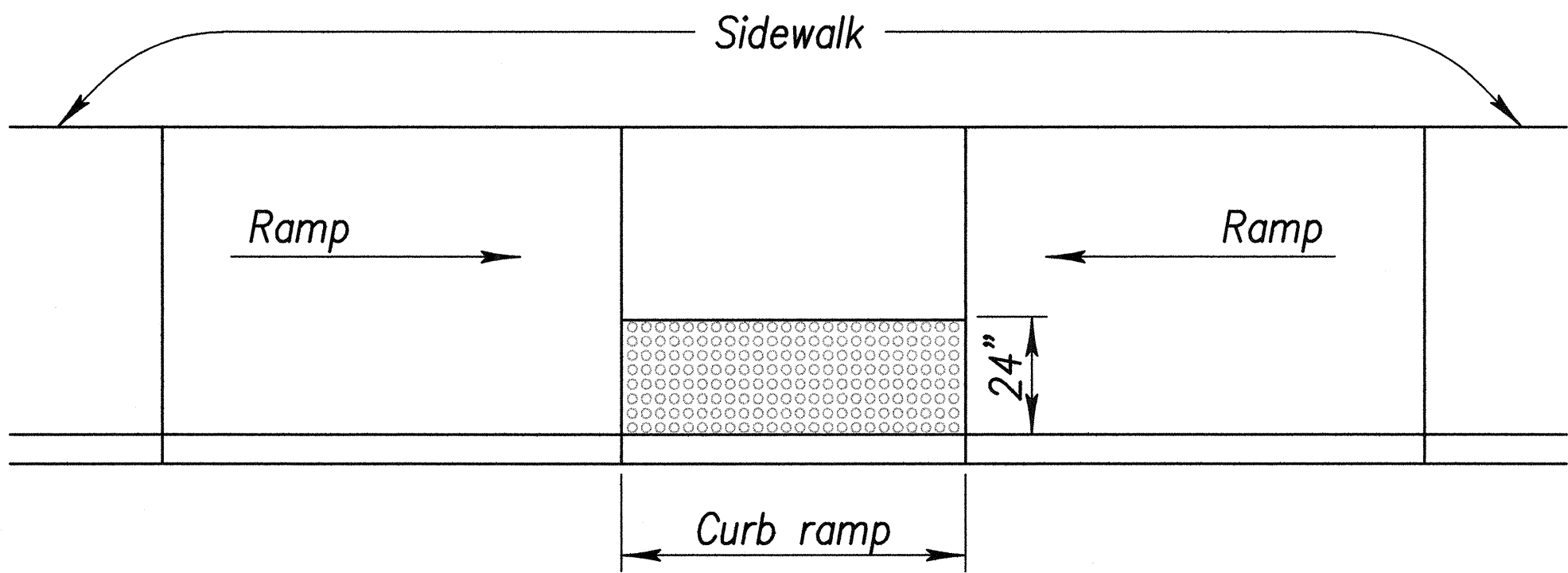
SHEET No. CB-8 OF 10 SHEETS

19

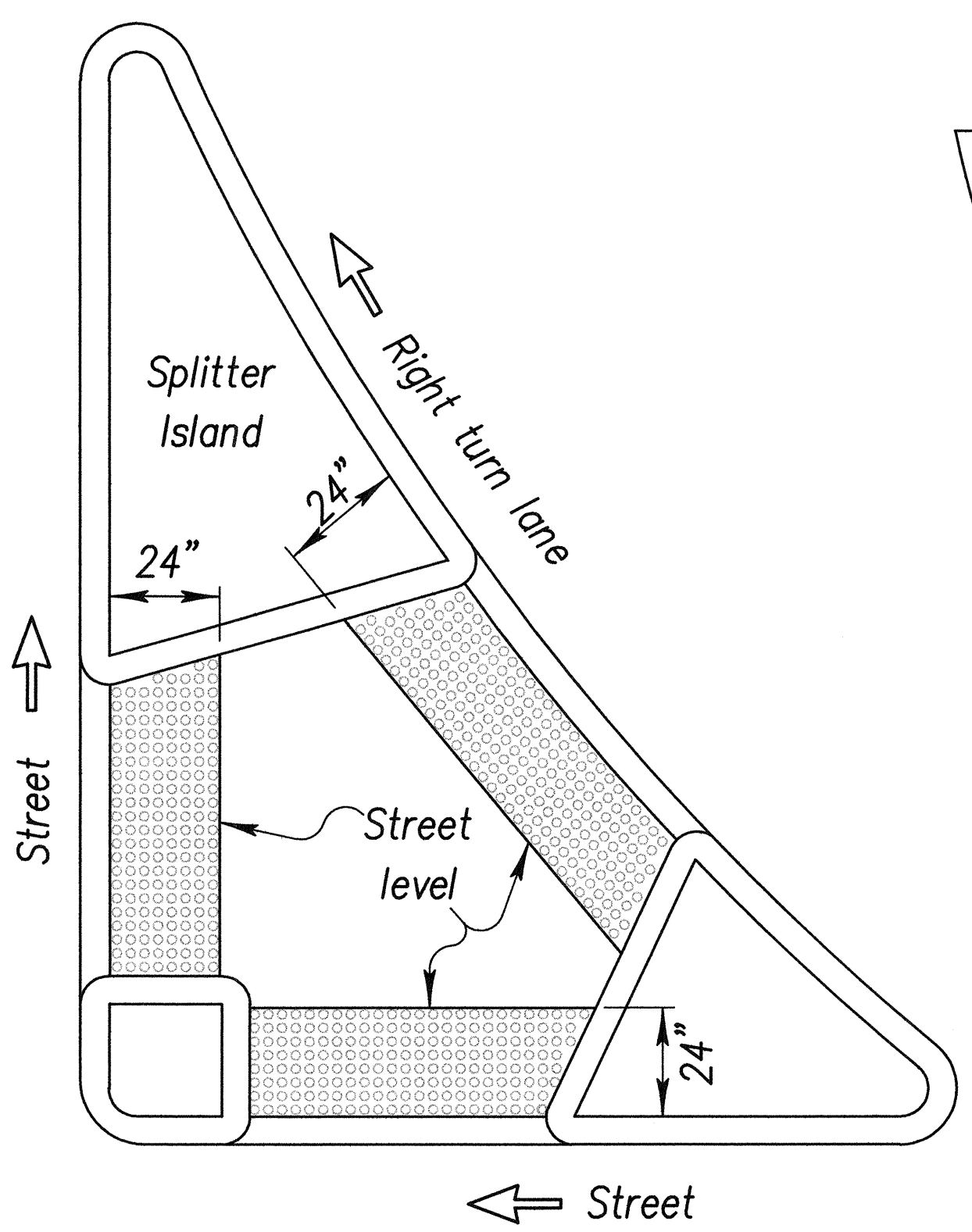
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	20	109



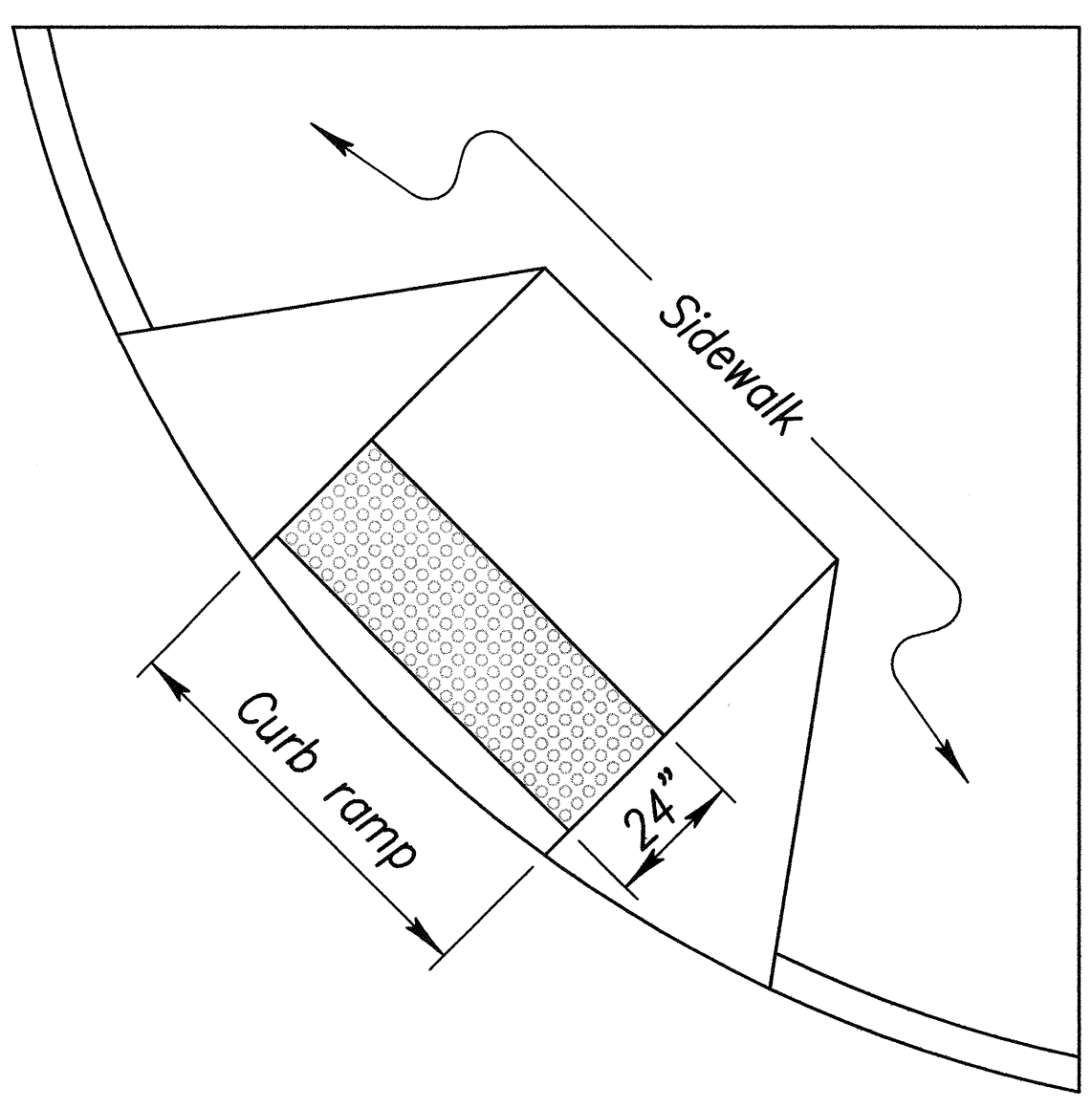
DETECTABLE WARNING AT CURB RAMP



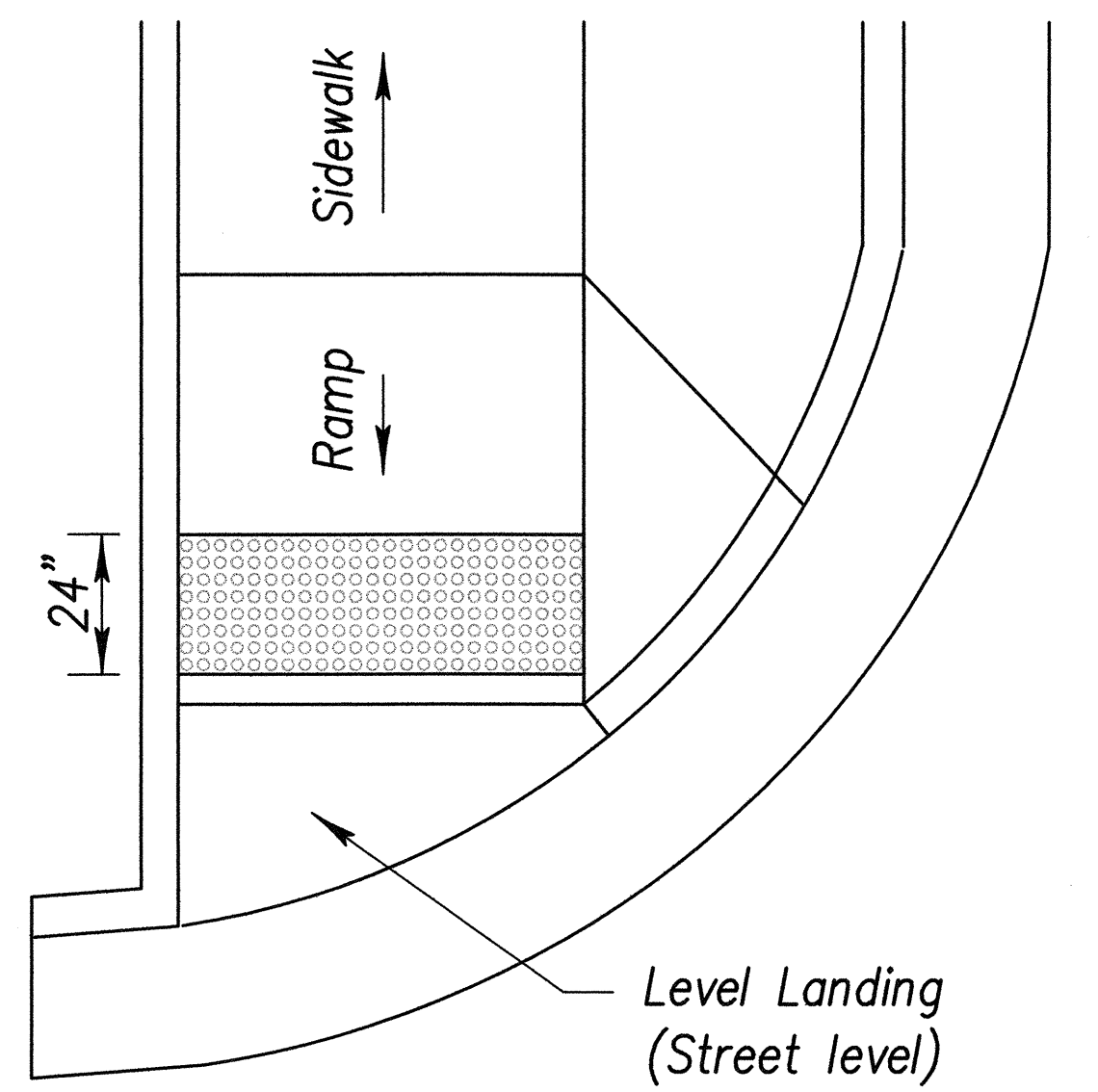
TRANSITION RAMP WITH DETECTABLE WARNING



REFUGE ISLAND WITH DETECTABLE WARNING



SHARED CURB RAMP WITH DETECTABLE WARNING



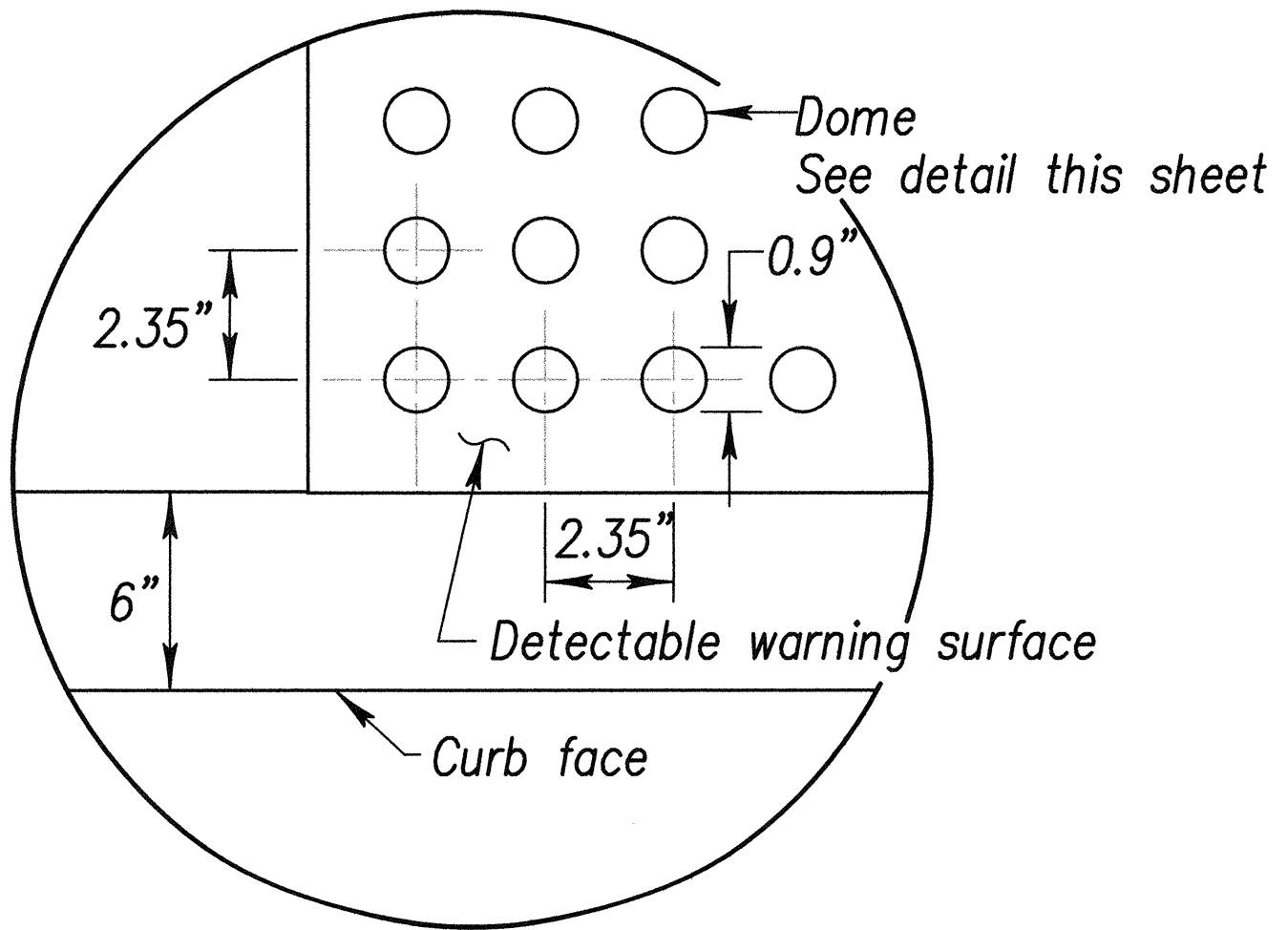
END OF SIDEWALK CURB RAMP WITH DETECTABLE WARNING

TYPICAL INSTALLATION OF DETECTABLE WARNINGS

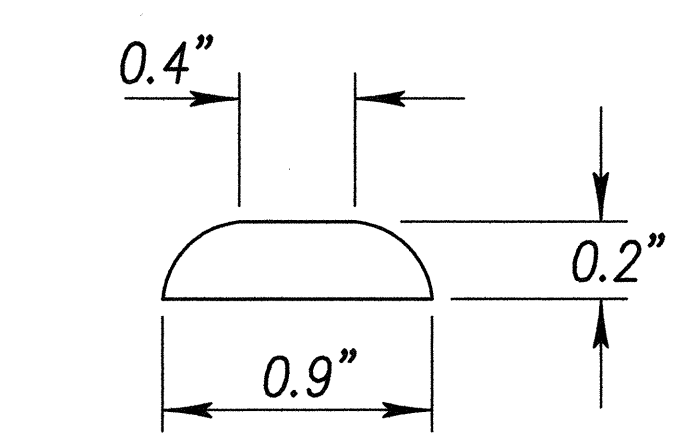
Not to Scale

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 inch at the bottom, a diameter of 0.4 inch at the top, a height of 0.2 inch and a center-to-center spacing of 2.35 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. 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



DOME SECTION

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

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04/30/06
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

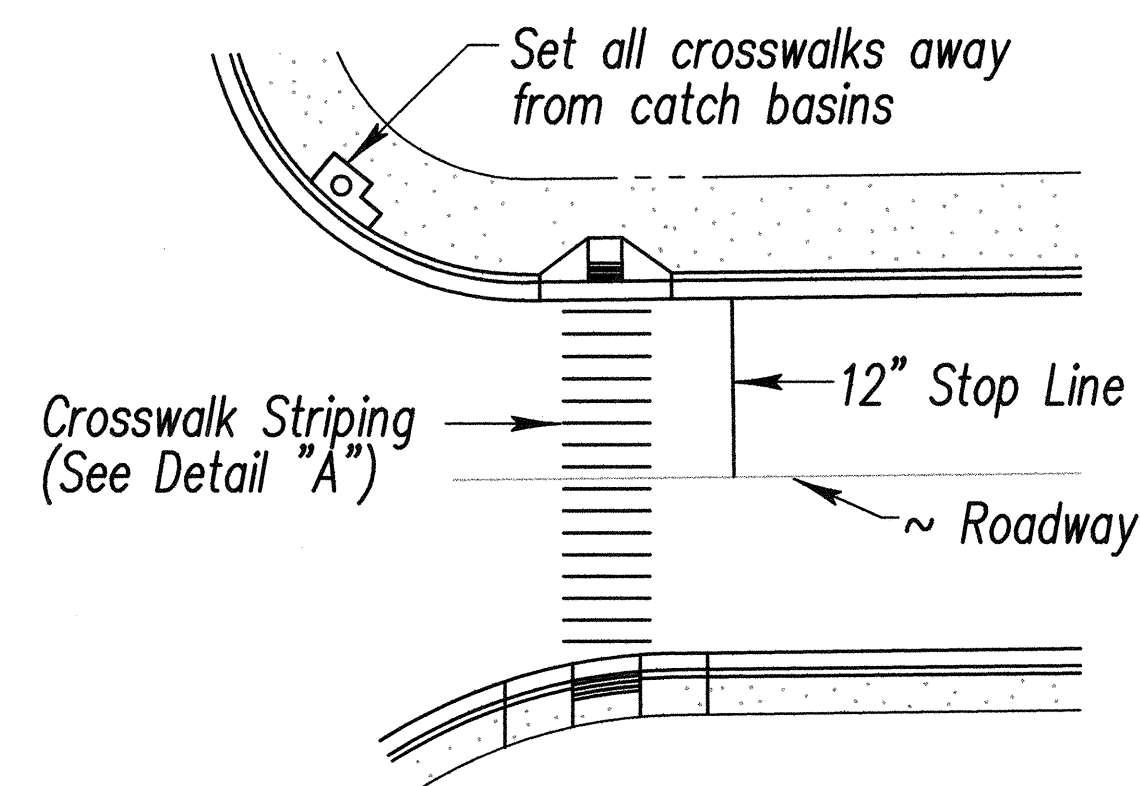
DETECTABLE WARNING DETAILS

PEDESTRIAN FACILITIES & ADA
COMPLIANCE AT VARIOUS
LOCATIONS ON MAUI

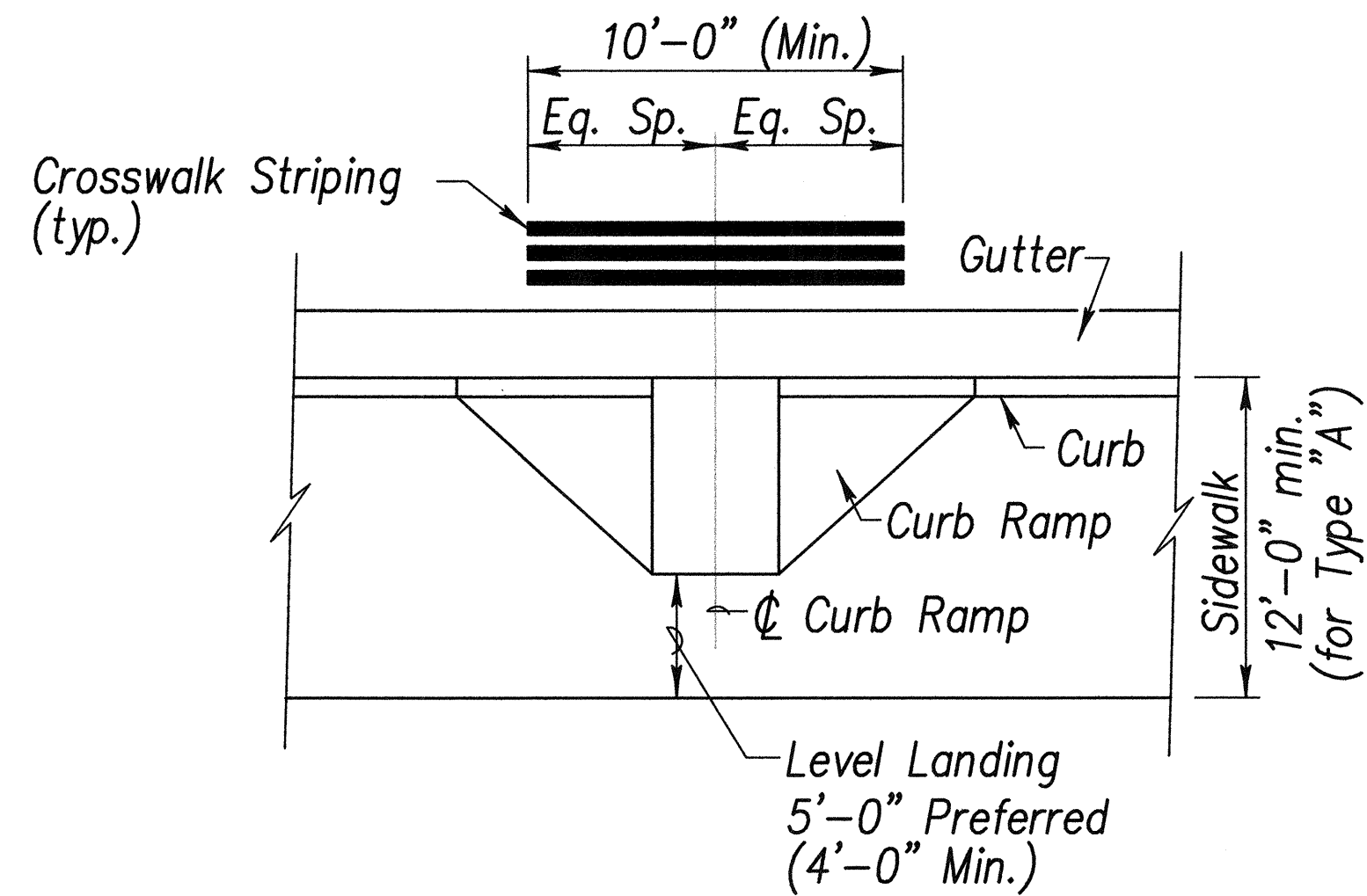
Federal - Aid Project No. CMAQ-0900(67)R
Scale: As Shown Date: August 2004

SHEET No. CB-9 OF 10 SHEETS

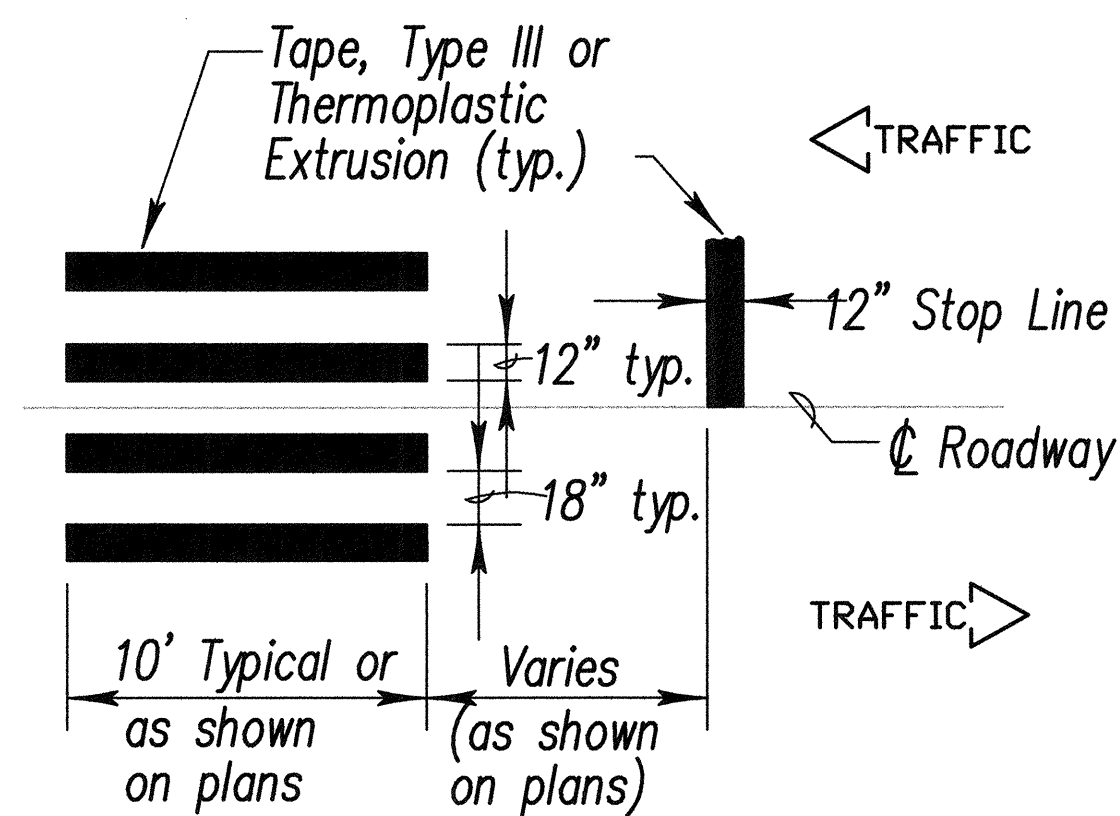
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0900(67)R	2004	21	109



PLAN



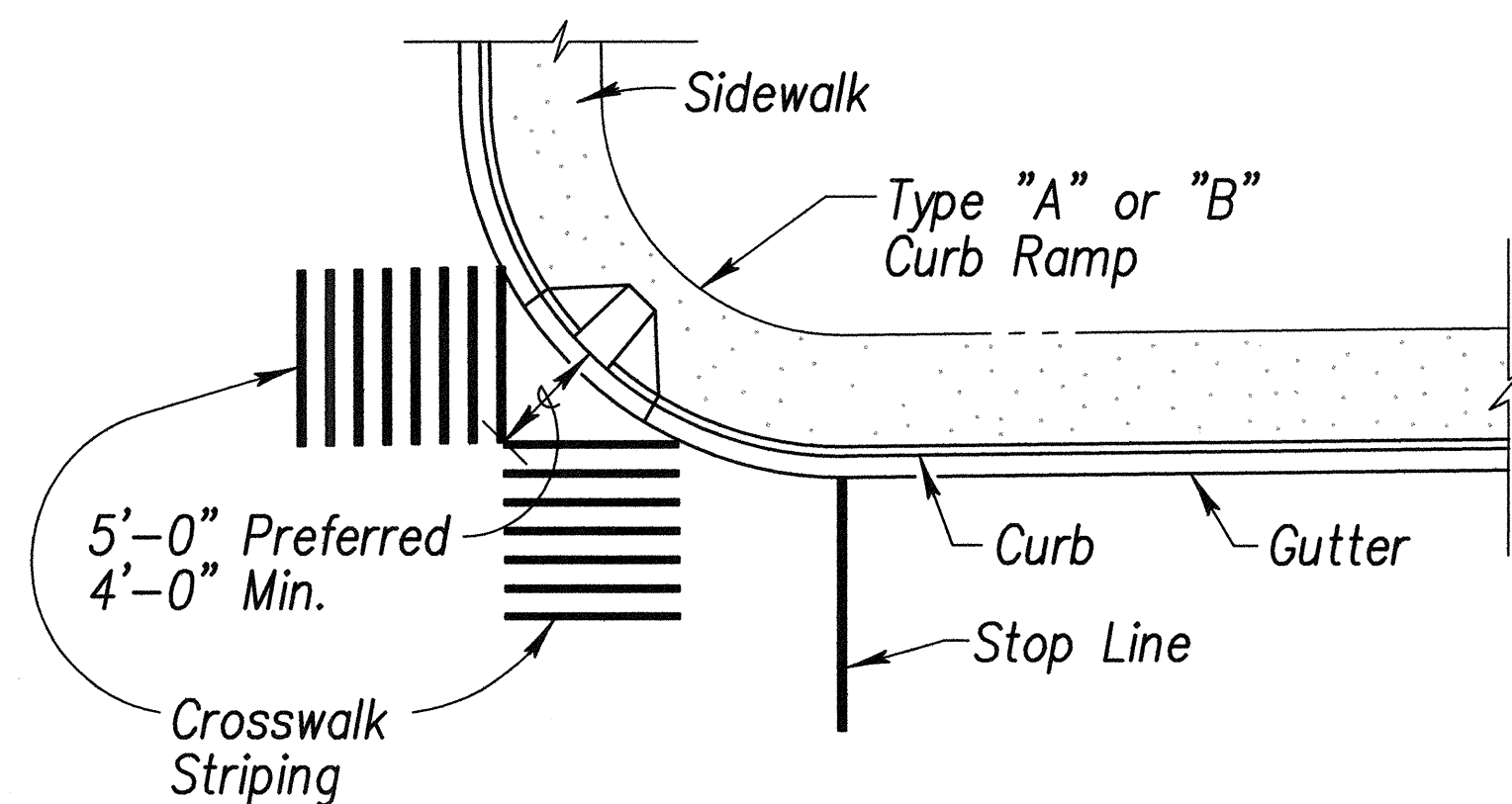
TYPICAL CROSSWALK STRIPING
AT CURB RAMP



DETAIL "A"

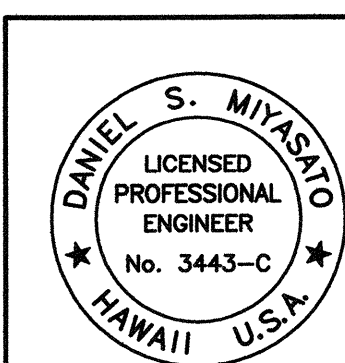
CROSSWALK STRIPING DETAIL

NOTE:
Longitudinal lines shall be parallel to traffic flow.



TYPICAL CROSSWALK STRIPING
AT DIAGONAL CURB RAMP

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
04/30/06
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRIPING DETAILS

PEDESTRIAN FACILITIES & ADA
COMPLIANCE AT VARIOUS
LOCATIONS ON MAUI

Federal - Aid Project No. CMAQ-0900(67)R
Scale: As Shown Date: August 2004

SHEET No. CB-10 OF 10 SHEETS