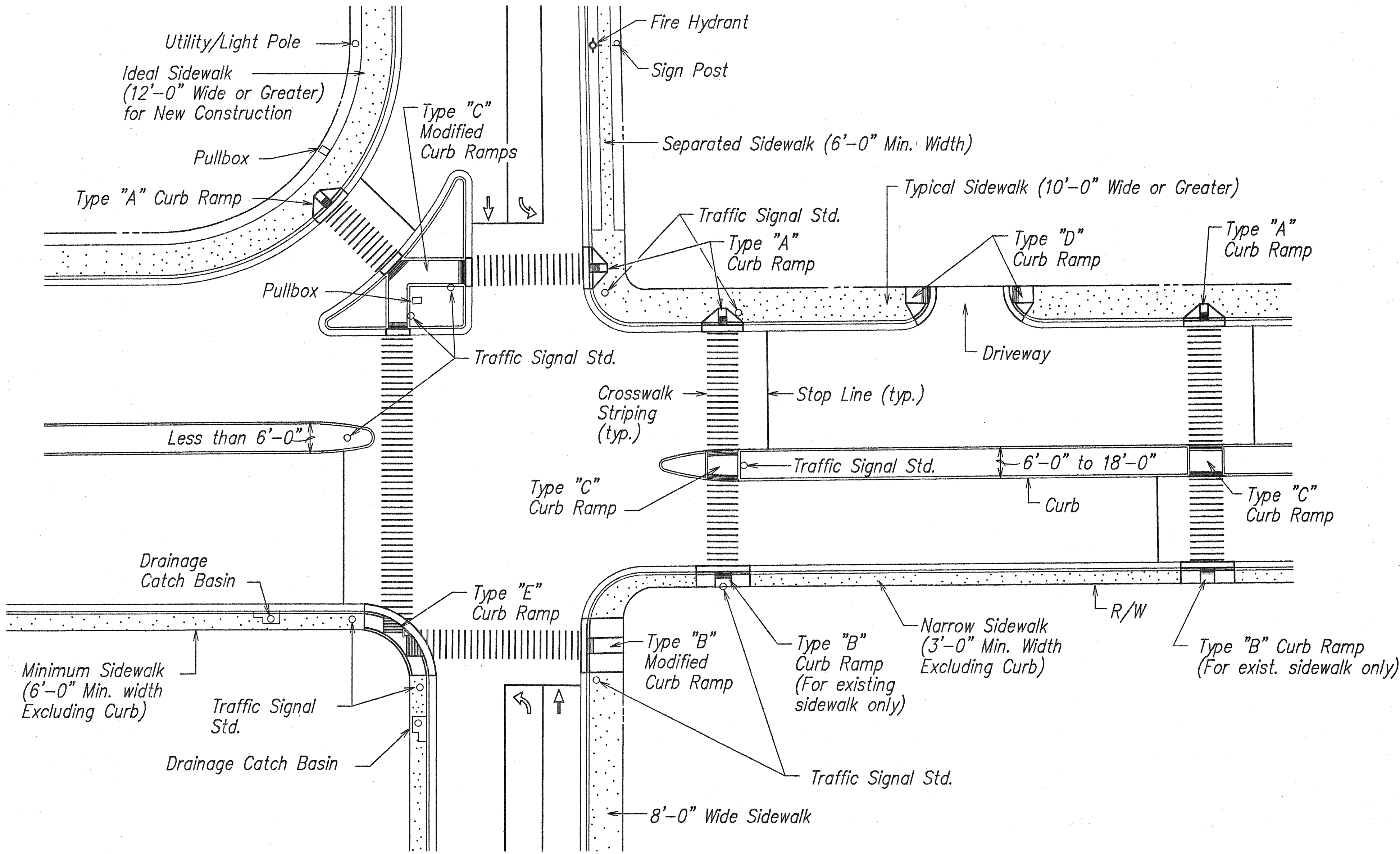
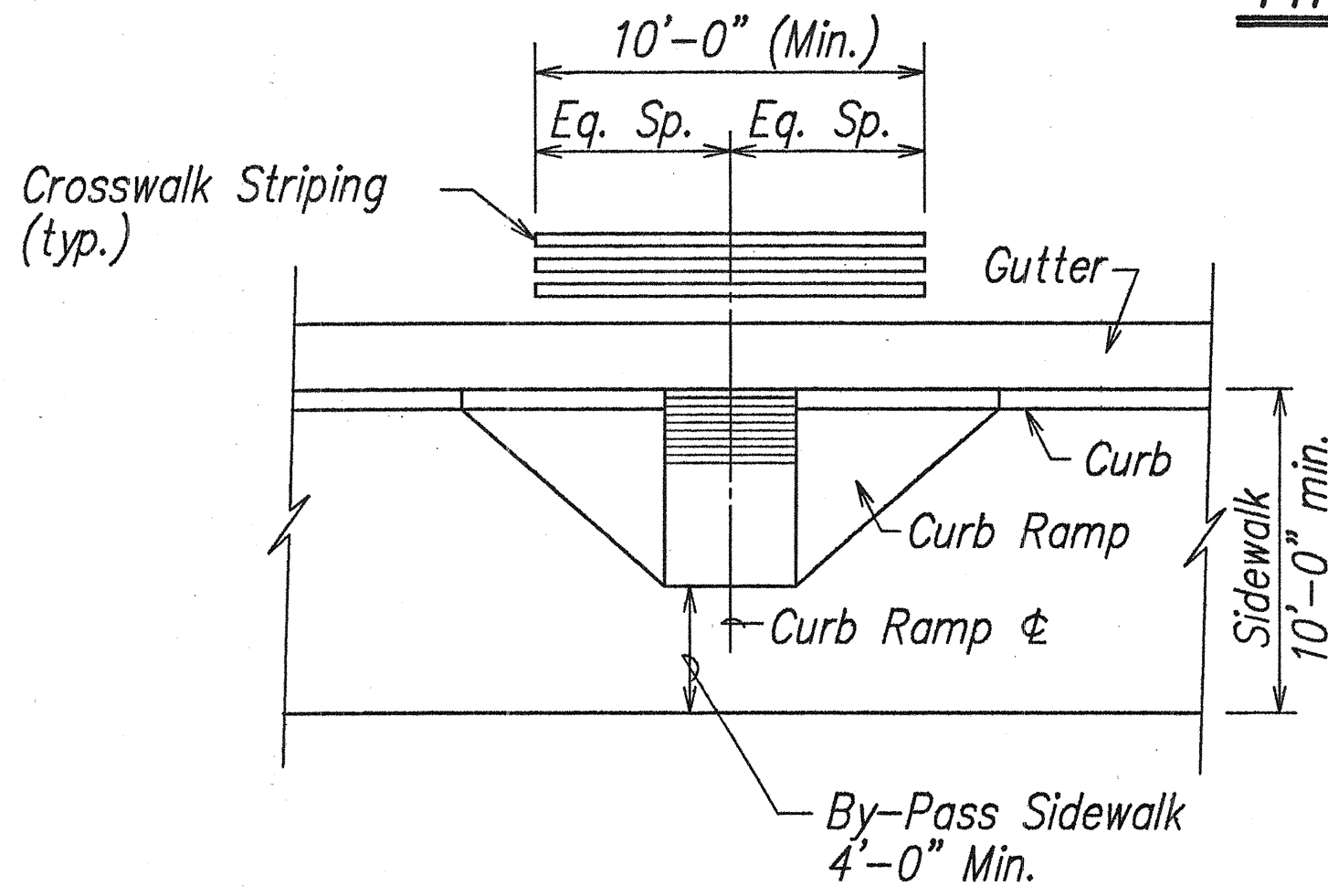


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	93	97



TYPICAL CURB RAMP
NO SCALE



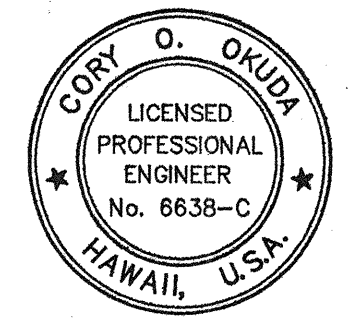
TYPICAL CROSSWALK STRIPING AT CURB RAMP
NO SCALE

GENERAL NOTES:

1. When necessitated by existing physical conditions, alternate Curb Ramps may be used subject to Engineer's approval.
2. Subject to field conditions, the Engineer shall determine final location of Curb Ramp.
3. 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.
4. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation.
5. Narrow Sidewalks (3'-0" min. width excluding curb) will prohibit the installation of any sign posts, utility poles, fire hydrants, traffic signals standards, light poles, etc. in the sidewalk, which will prevent a 3'-0" wide clear zone for pedestrian circulation. Also, Narrow Sidewalks shall require a minimum 6'-0" wide, excluding curbs, by 10'-0" long passing space at intervals not to exceed 200 feet.
6. For New Construction, the minimum sidewalk width shall be 6'-6", excluding curbs at signalized intersections and the cross slope shall not exceed 50:1. Sidewalk width may be decreased to 6'-0" excluding curbs at non-signalized intersections. For high pedestrian traffic the width shall be a minimum of 12'-0" and/or determined by the Engineer.
7. If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of way.
8. Single curb ramps serving two street crossing directions is prohibited in new construction.
9. New Curb Ramps shall be installed at 90° to the sidewalk or to the maximum extent feasible.
10. 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 (ADA) Accessibility Guidelines and will be subject to Engineer's approval.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
NO. _____	_____

R 5-1-98 7E-68 sh. 1 of 5



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Cory O. Okuda
Parks, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

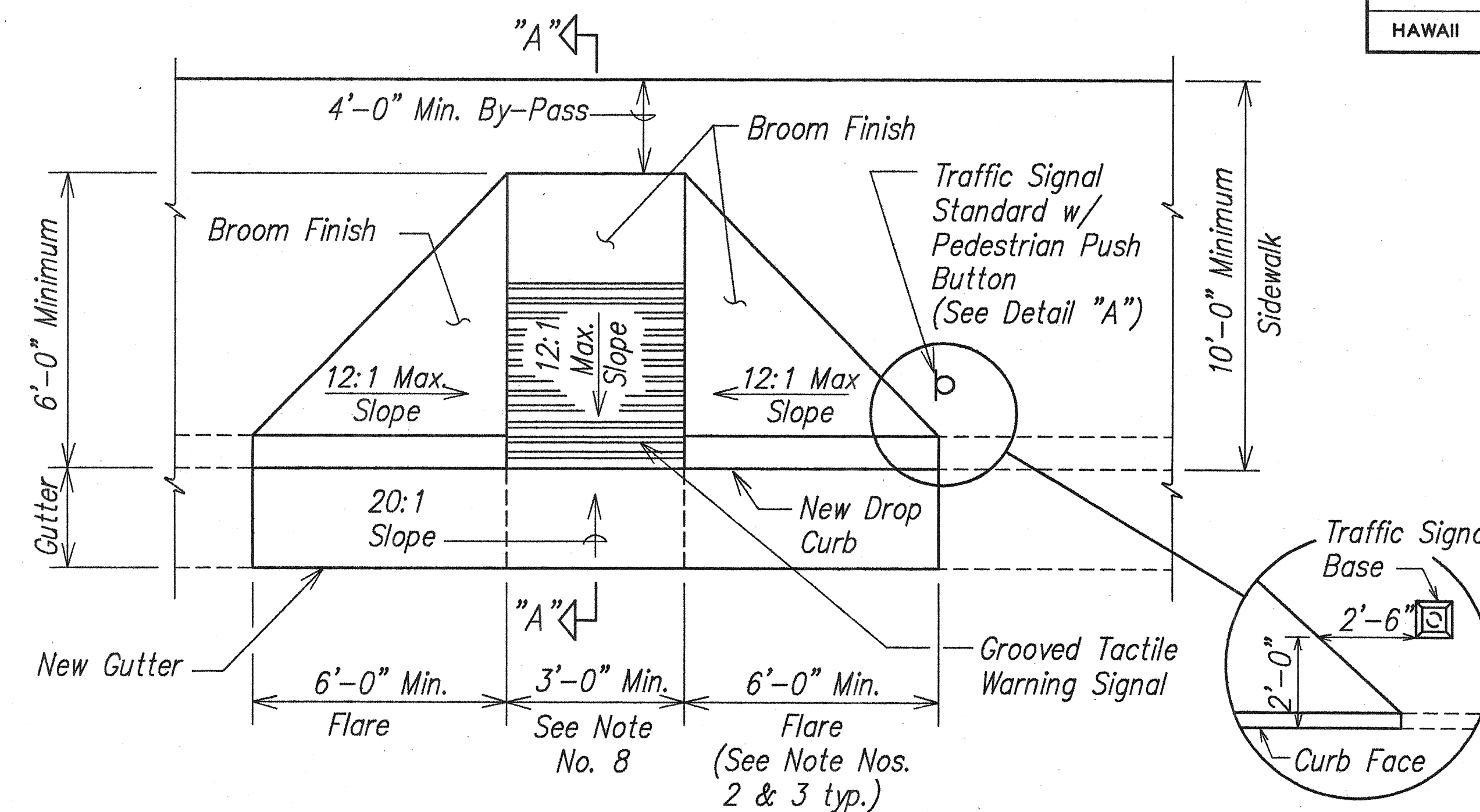
KUNIA ROAD WIDENING; AND
H-1, KUNIA I.C. RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

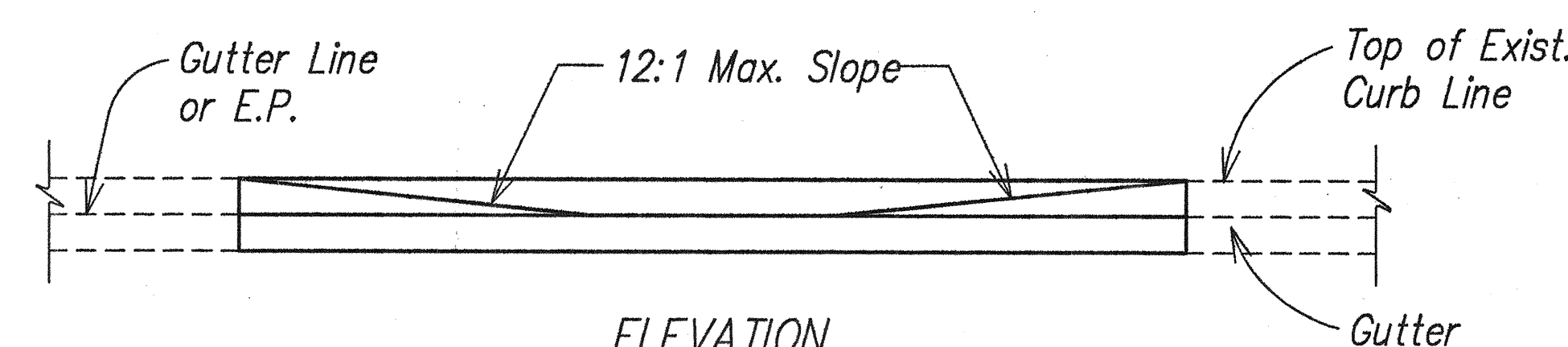
SHEET No. 1 OF 5 SHEETS

LIB: STATE\DOT\KUNIARD2\
RAMPO2 4/13/99 GKI

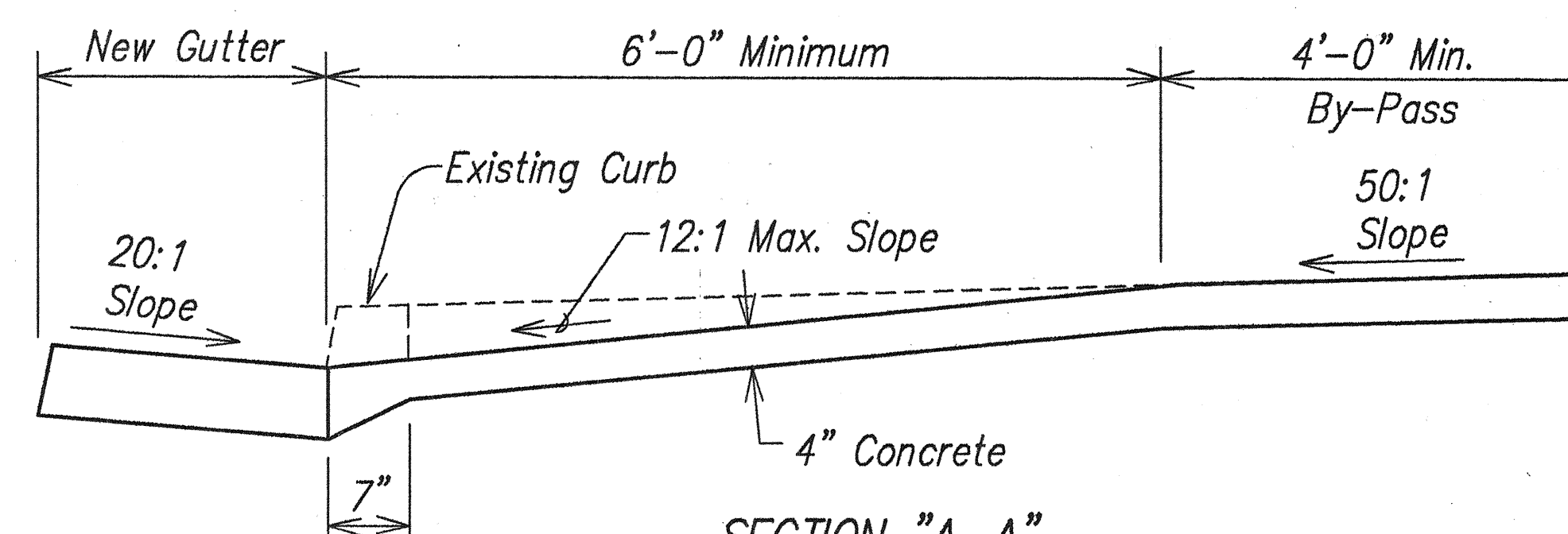
1. The New Gutter fronting the curb ramps shall not exceed a slope of 20:1. Area without a gutter shall be handled on a case by case basis in order to meet the 20:1 slope requirement.
2. The New Gutter fronting the 6'-0" minimum flares on both sides of the New Curb Ramps shall have a transition slope from 20:1 to the existing gutter slope.
3. When the curb exceeds the standard 6" height, the side flares and ramp may be greater than 6'-0" in order to meet the 12:1 maximum slope requirement.
4. Curb Ramps shall be reinforced if adjacent sidewalks are reinforced.
5. The Contractor shall use the Edge of Pavement (E.P.) fronting the new curb ramp or gutter as the control elevation when constructing the New Curb Ramp or Curb Ramp with gutter.
6. For Type "B" & Type "E" Curb Ramps, New Standard Curb shall be 12" wide when installing Type I Traffic Signal Standard (TSS) or Pedestrian Push Button Pedestal (PPB). Where Type II or Type III TSS or Highway Light Pole is utilized, the width of the New Standard Curb shall be determined by the Engineer. For sidewalk less than 4'-0" (excluding curb), an Engineer approved 3'-0" wide minimum curb ramp shall be installed.
7. The width of the curb ramp including curbs shall match the width of the sidewalk. When the sidewalk width is less than 4'-0", an Engineer approved, modified sidewalk with a minimum 3'-0" wide curb ramp excluding curbs shall be installed.
8. The width of the curb ramp run shall be increased to 10'-0" at areas with high pedestrian traffic and as directed by the Engineer or shown on the plans.
9. A minimum 3'-0" wide by 5'-0" long (excluding curbs) flat, stable paved surface with a cross slope of 50:1 shall be provided for a parallel approach to the pedestrian push button.
10. The pedestrian push button shall meet current American with Disabilities Act (ADA) Accessibility Guidelines and will be subject to Engineer's approval.
11. All Pullboxes shall be installed within the sidewalk/unpaved area or as directed by the Engineer. Pullboxes shall not be installed within the curb ramp (including flares).



PLAN



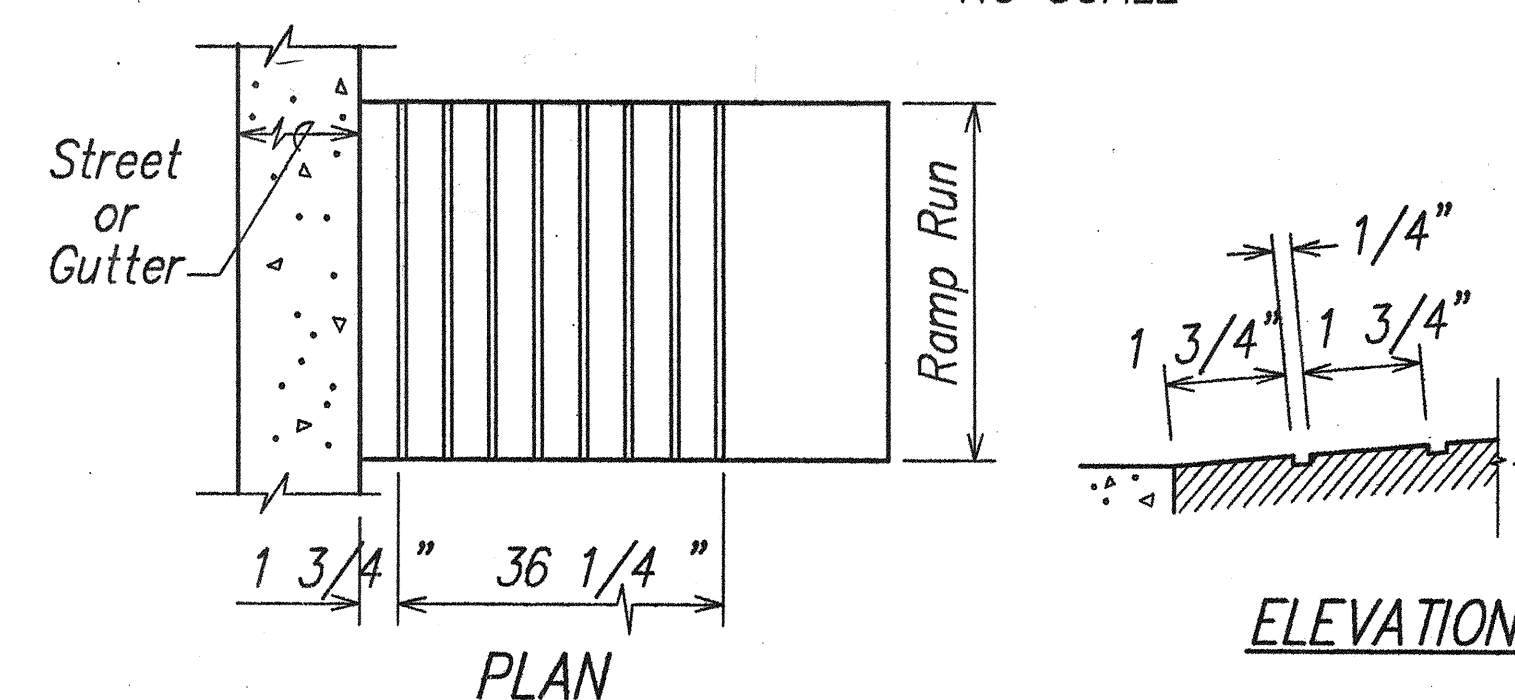
ELEVATION



SECTION "A-A"

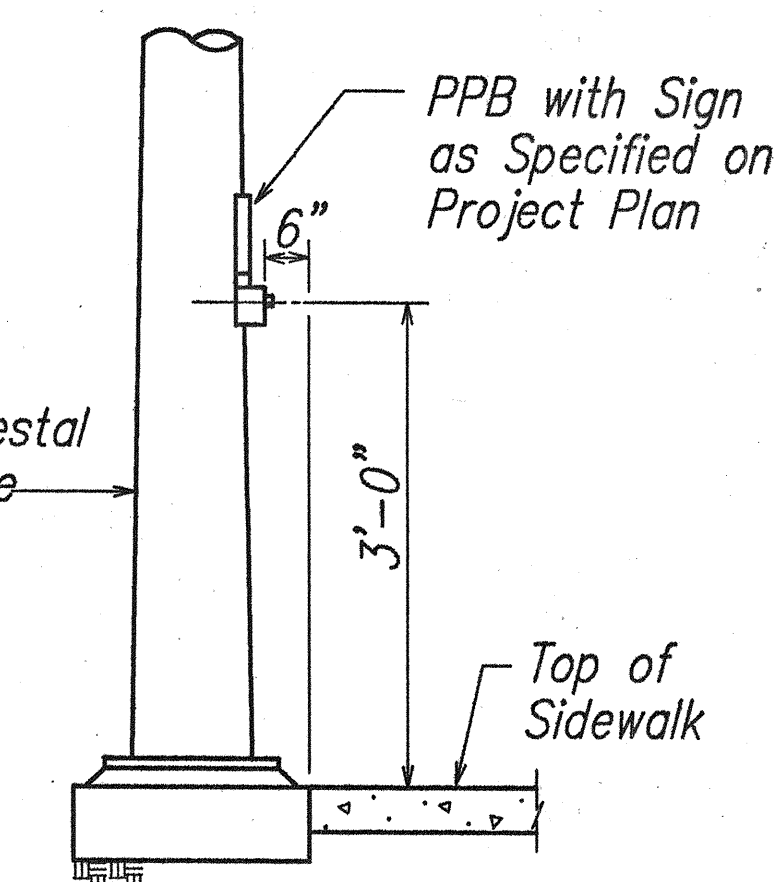
CURB RAMP - TYPE "A"

SIDEWALK WIDTH 10'-0" OR GREATER
NO SCALE

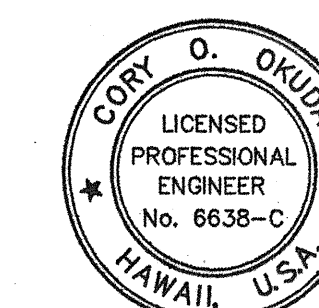


GROOVED TACTILE WARNING SIGNAL

NO SCALE



DETAIL "A"



THIS WORK WAS PREPARED
ME OR UNDER MY SUPERVISION

C. J. O'Connell
ParEn, Inc.
d/b/a PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

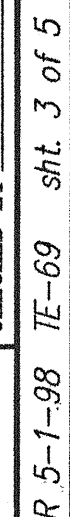
CURB RAMP DETAIL

KUNIA ROAD WIDENING: AND
H-1. KUNIA I.C.. RAMP KO WIDENING
E.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 2 OF 5 SHEETS

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



SIDEWALK WIDTH 4'-0" OR GREATER
BUT LESS THAN 7'-0" WIDTH
(FOR EXISTING SIDEWALK ONLY)
NO SCALE

PPB with Sign
as Specified on
Project Plan

6"

3'-0"

Curb Ramp

Curb

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

DETAIL "B"

PPB with Sign
as Specified on
Project Plan

6"

3'-0"

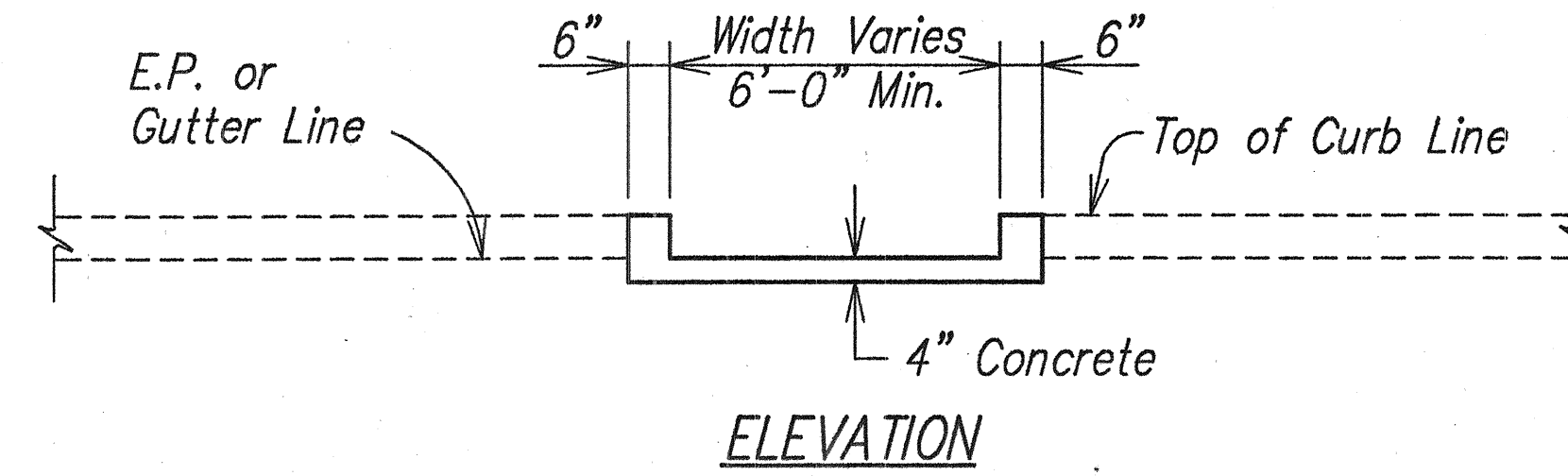
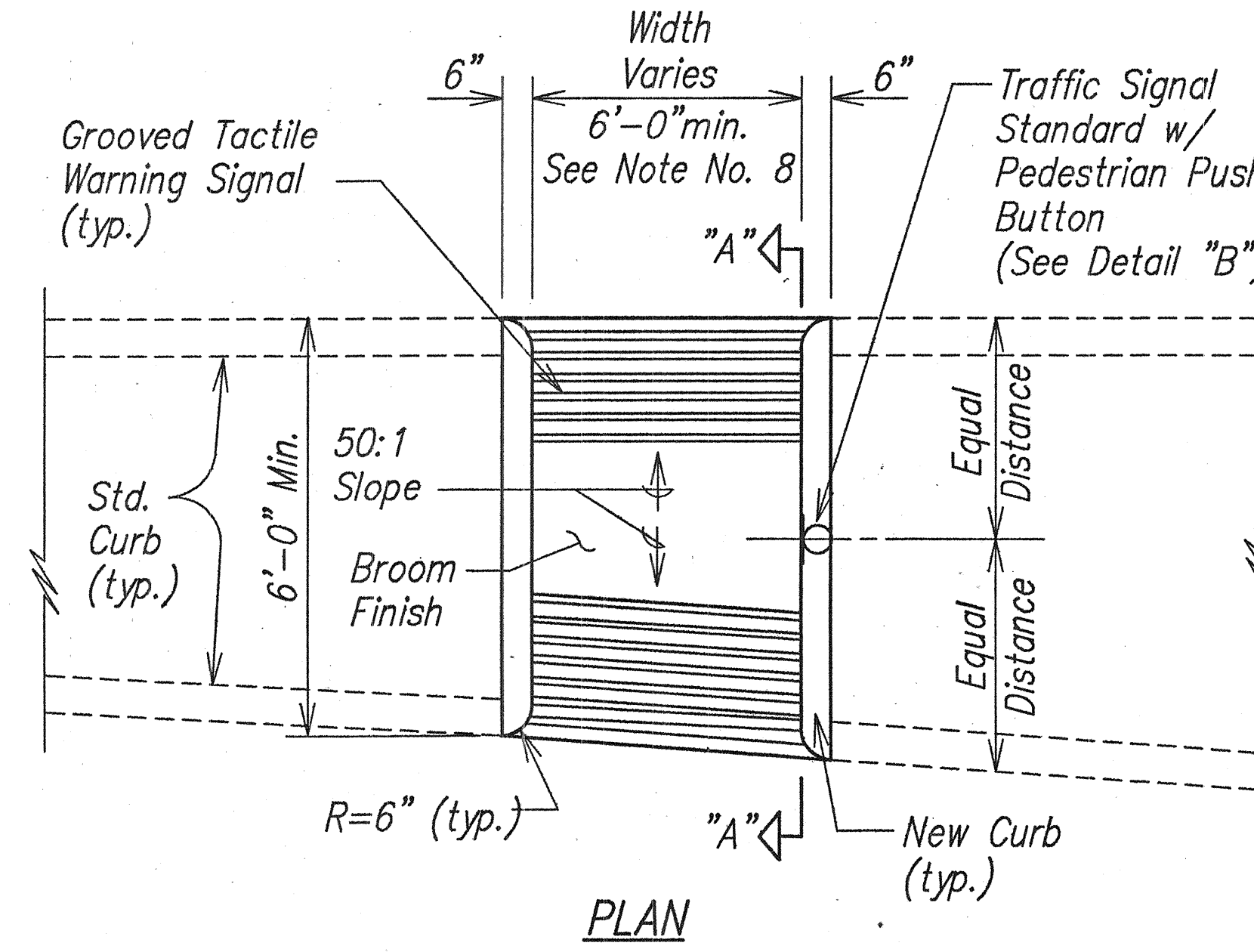
Type I, II, III
TSS, Push Button
Pedestal or
Hwy. Light Pole

Curb Ramp

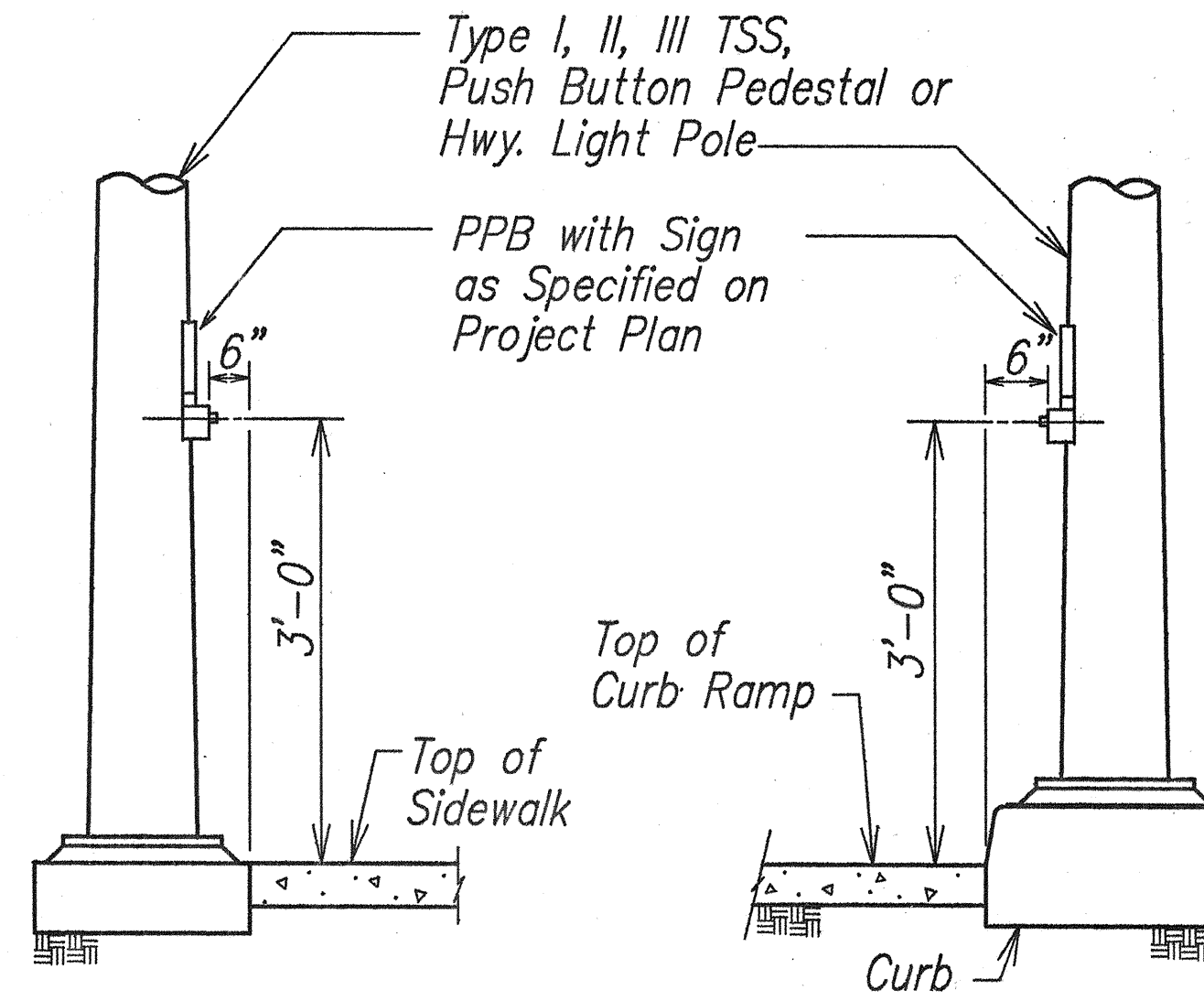
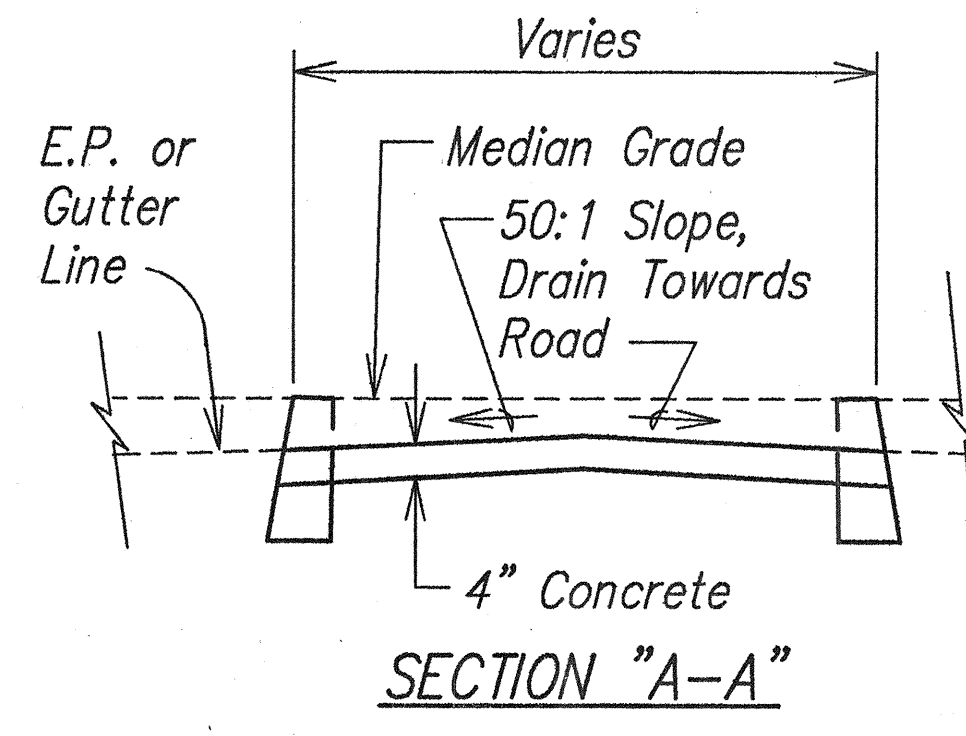
Curb Ramp Flare
(12:1 Max. Slope)

DETAIL "C"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	96	97

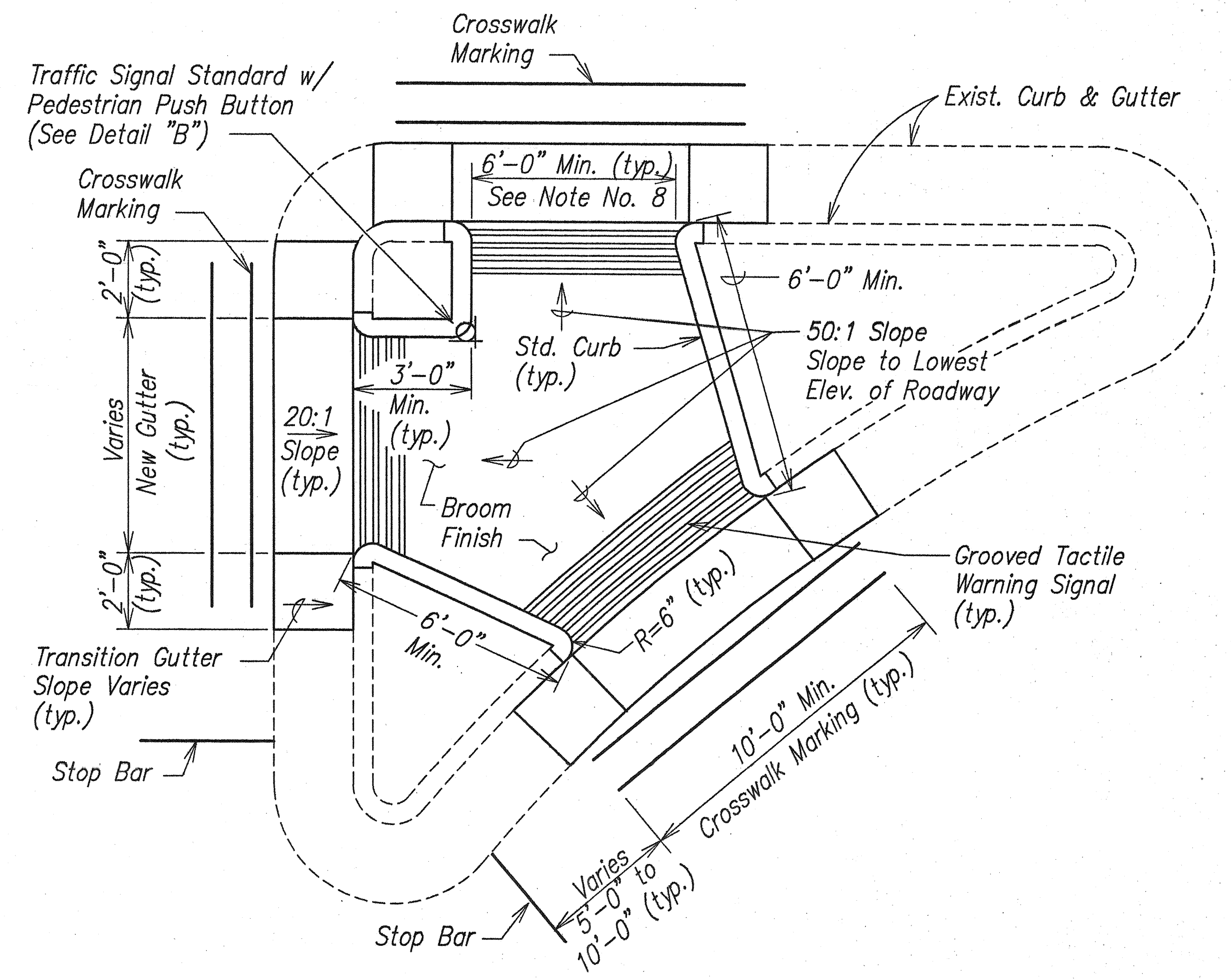


CURB RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS
NO SCALE

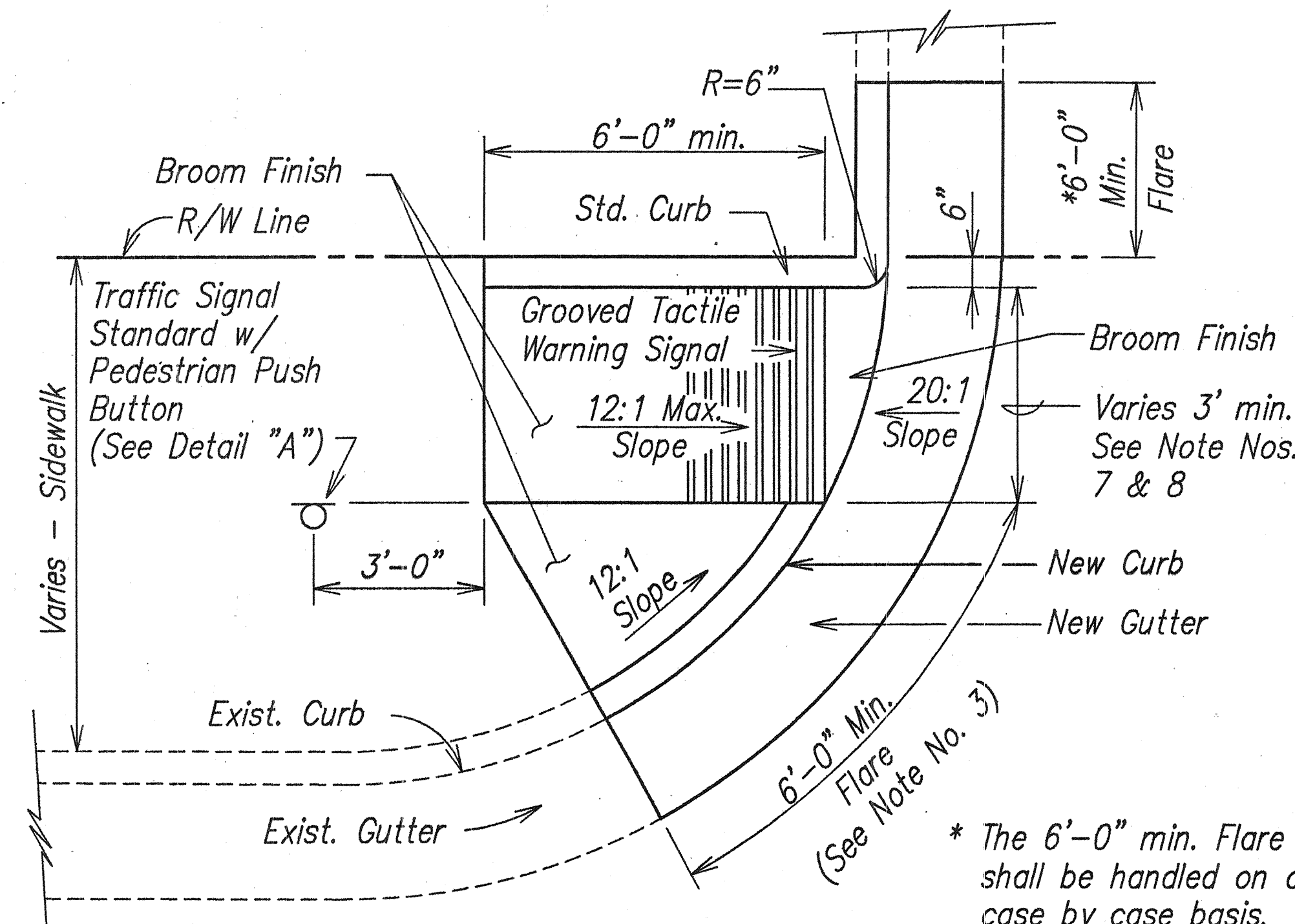


DETAIL "A"

DETAIL "B"

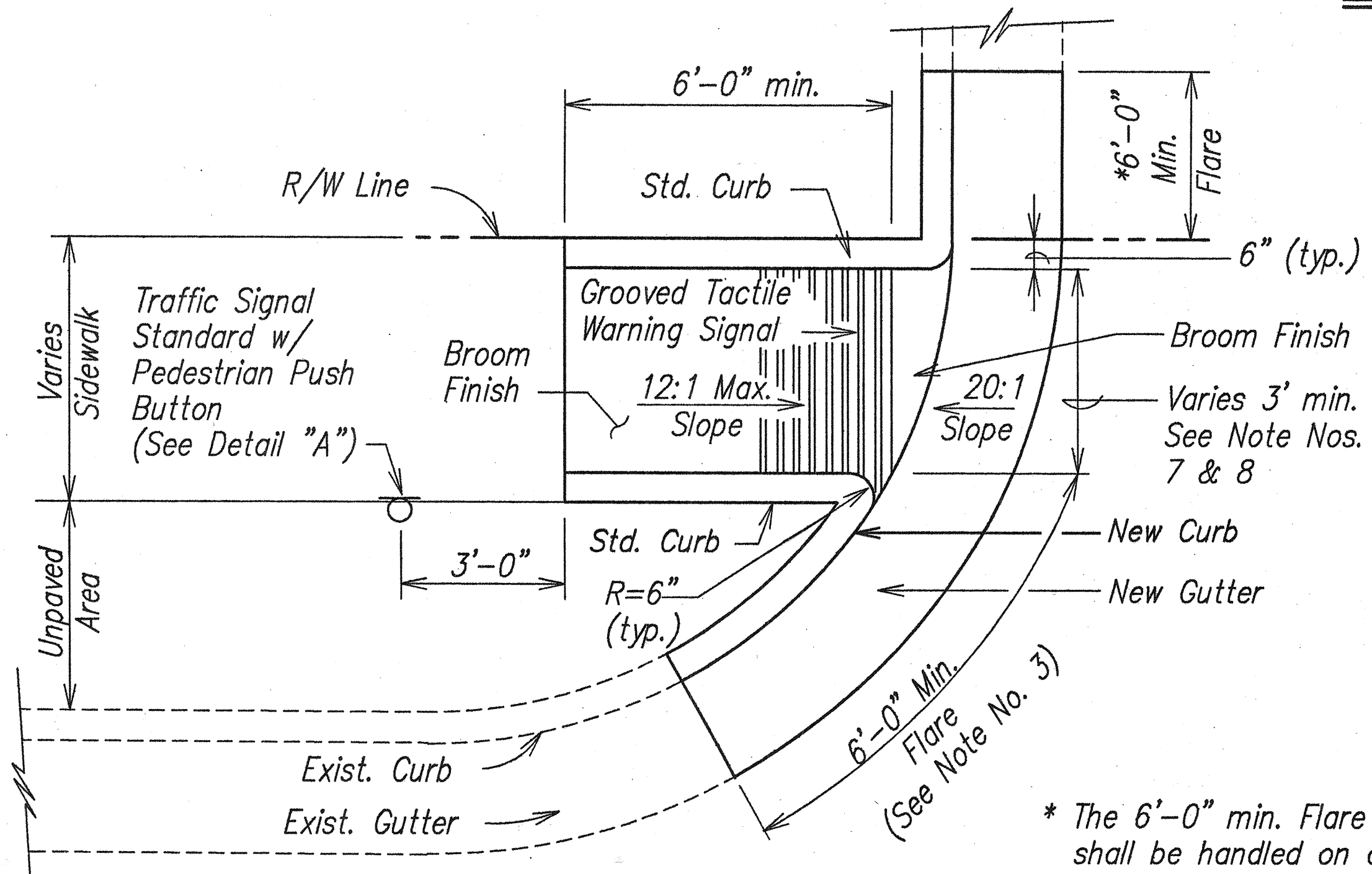


CURB RAMP - TYPE "C" MODIFIED
NO SCALE



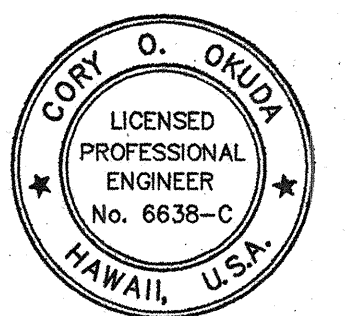
CURB RAMP - TYPE "D"
NO SCALE

* The 6'-0" min. Flare shall be handled on a case by case basis.



CURB RAMP - TYPE "D" MODIFIED
NO SCALE

* The 6'-0" min. Flare shall be handled on a case by case basis.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Cory O. Okuda
Cory O. Okuda, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

KUNIA ROAD WIDENING; AND
H-1, KUNIA I.C., RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

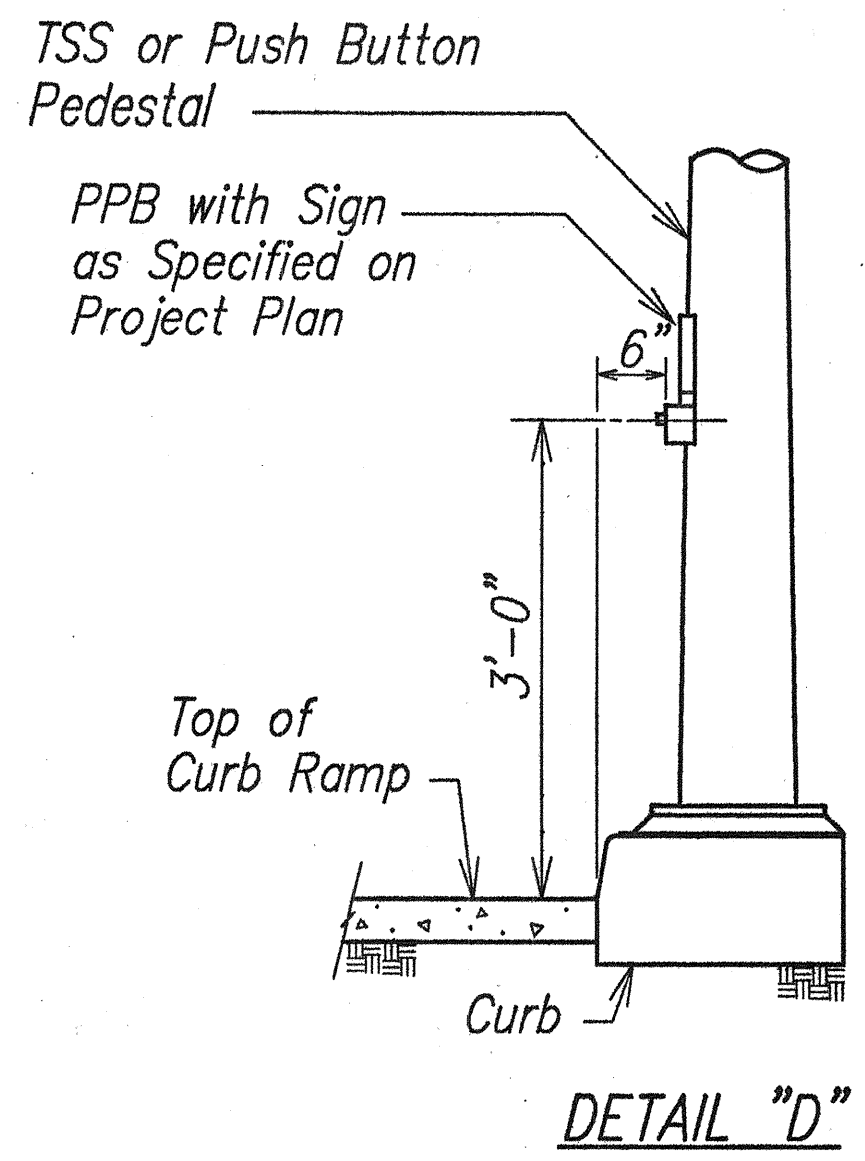
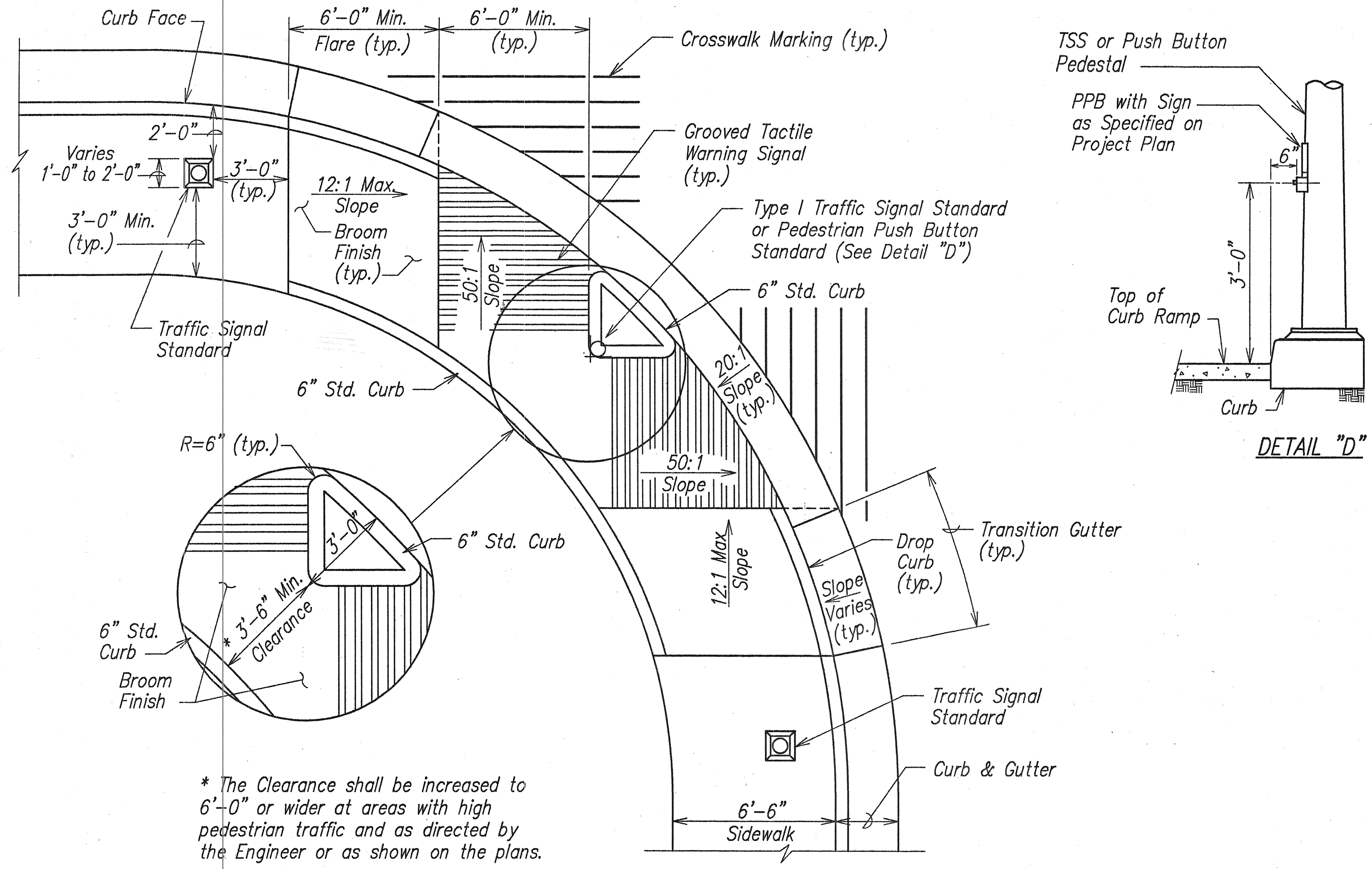
SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 4 OF 5 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

R 5-1-98 TE-69 sht. 4 of 5

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	97	97

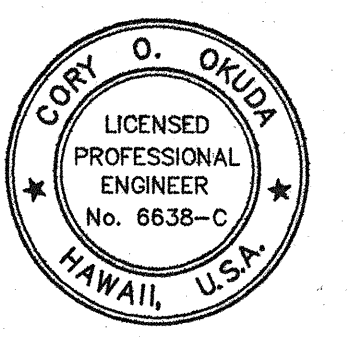


* The Clearance shall be increased to 6'-0" or wider at areas with high pedestrian traffic and as directed by the Engineer or as shown on the plans.

CURB RAMP - TYPE "E"
 SIDEWALK WIDTH 6'-6" OR GREATER
 EXCLUDING CURB
 (FOR EXISTING SIDEWALK ONLY)
 NO SCALE

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	

R 5-1-98 TE-69 sht. 5 of 5



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

C. O. O'Neil

Porter, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP DETAILS

KUNIA ROAD WIDENING; AND
 H-1 KUNIA I.C. RAMP KO WIDENING
 F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 5 OF 5 SHEETS