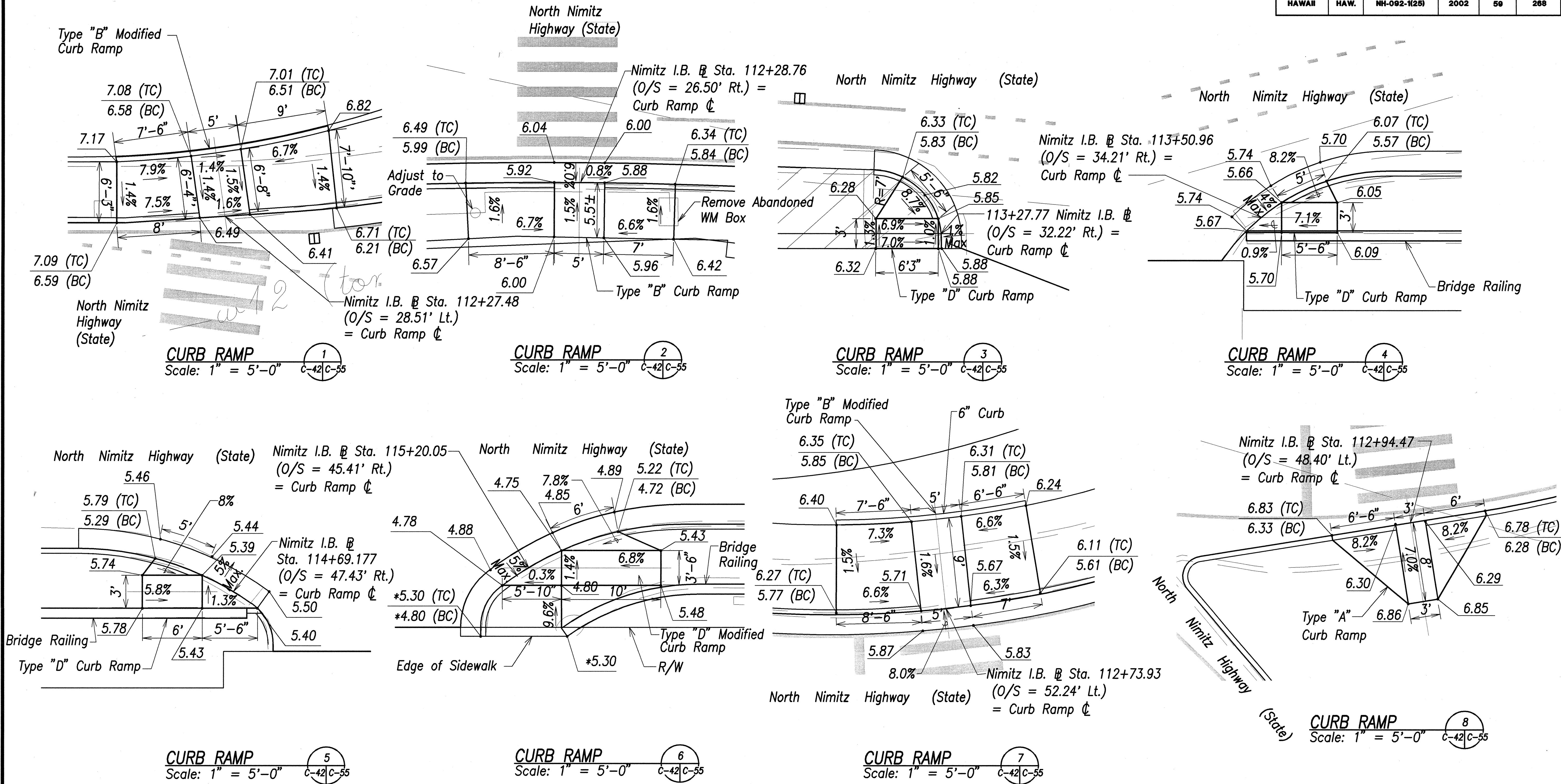


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	59	268



LEGEND:

TC = Top of curb
BC = Bottom of curb

NOTE:

All grades shown are finished grades. The contractor shall verify in the field that the grades shown with an asterisk (*) are consistent with the existing grade at the indicated location and make necessary adjustments to make a smooth connection between new and existing surfaces. All adjusted surfaces shall be in full compliance with the accessibility requirements.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

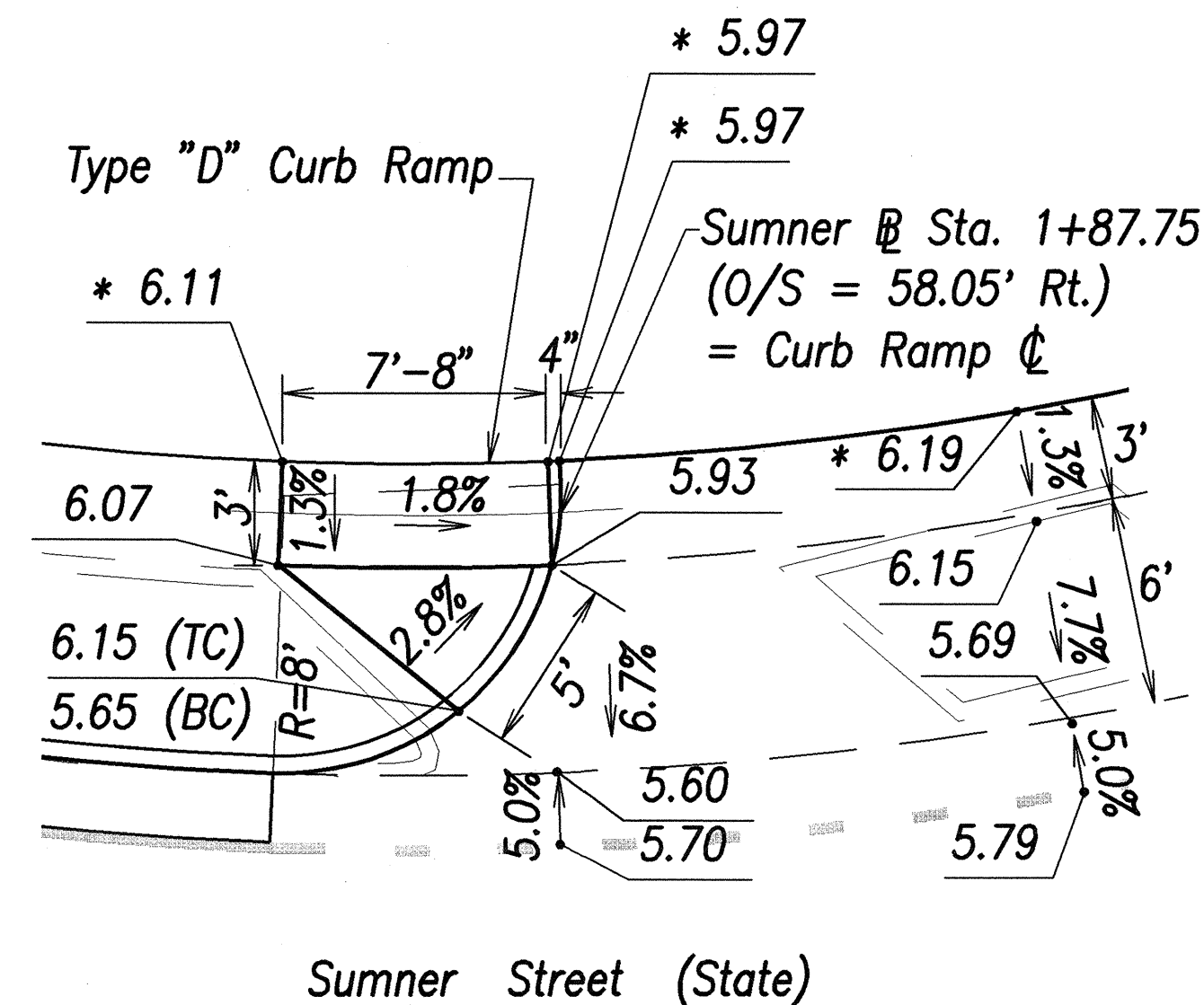
CURB RAMP GRADING PLAN-1

**NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)**

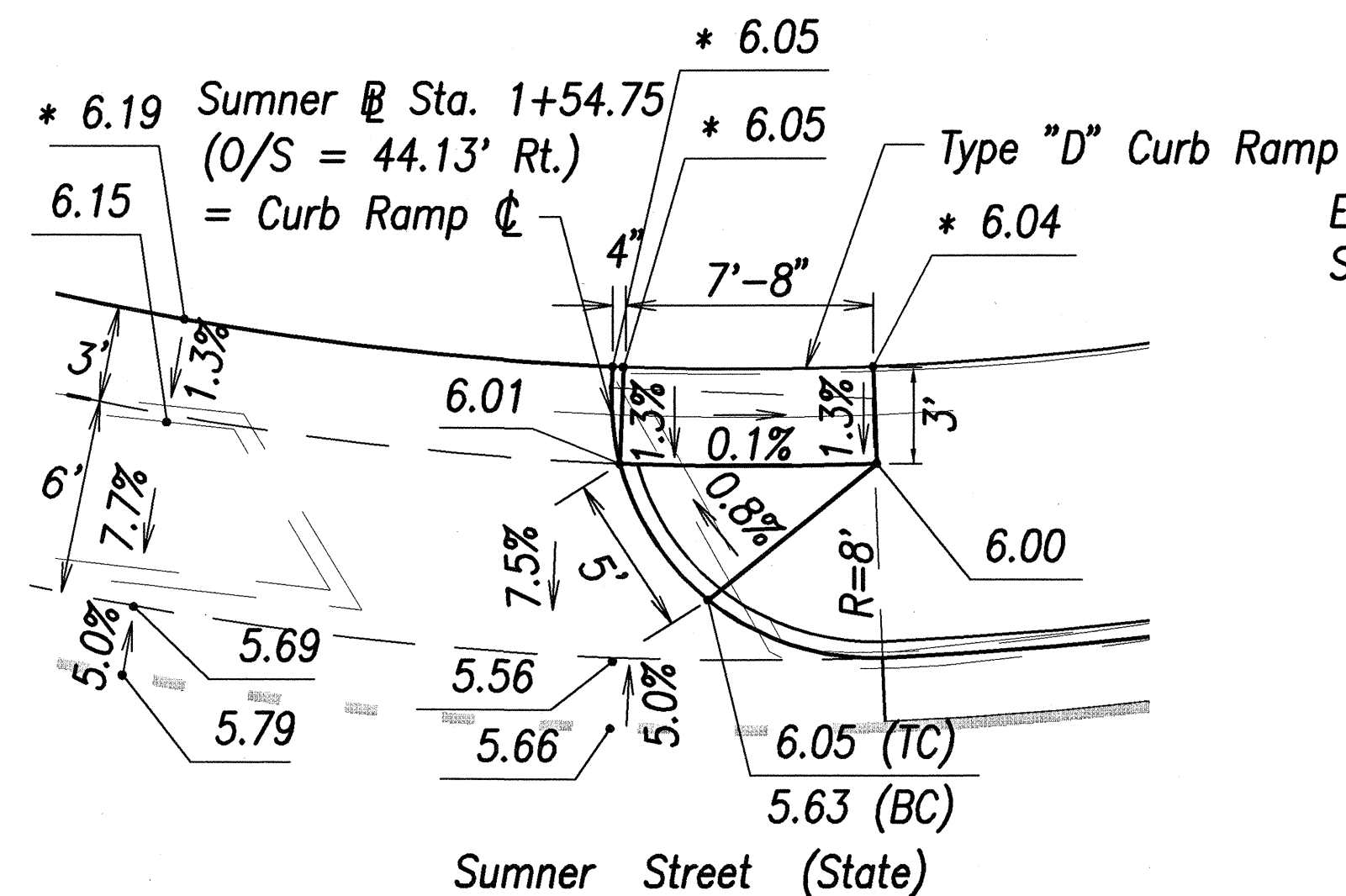
Scale: As shown Date: 10/19/01

SHEET No. C-55 OF 107 SHEETS

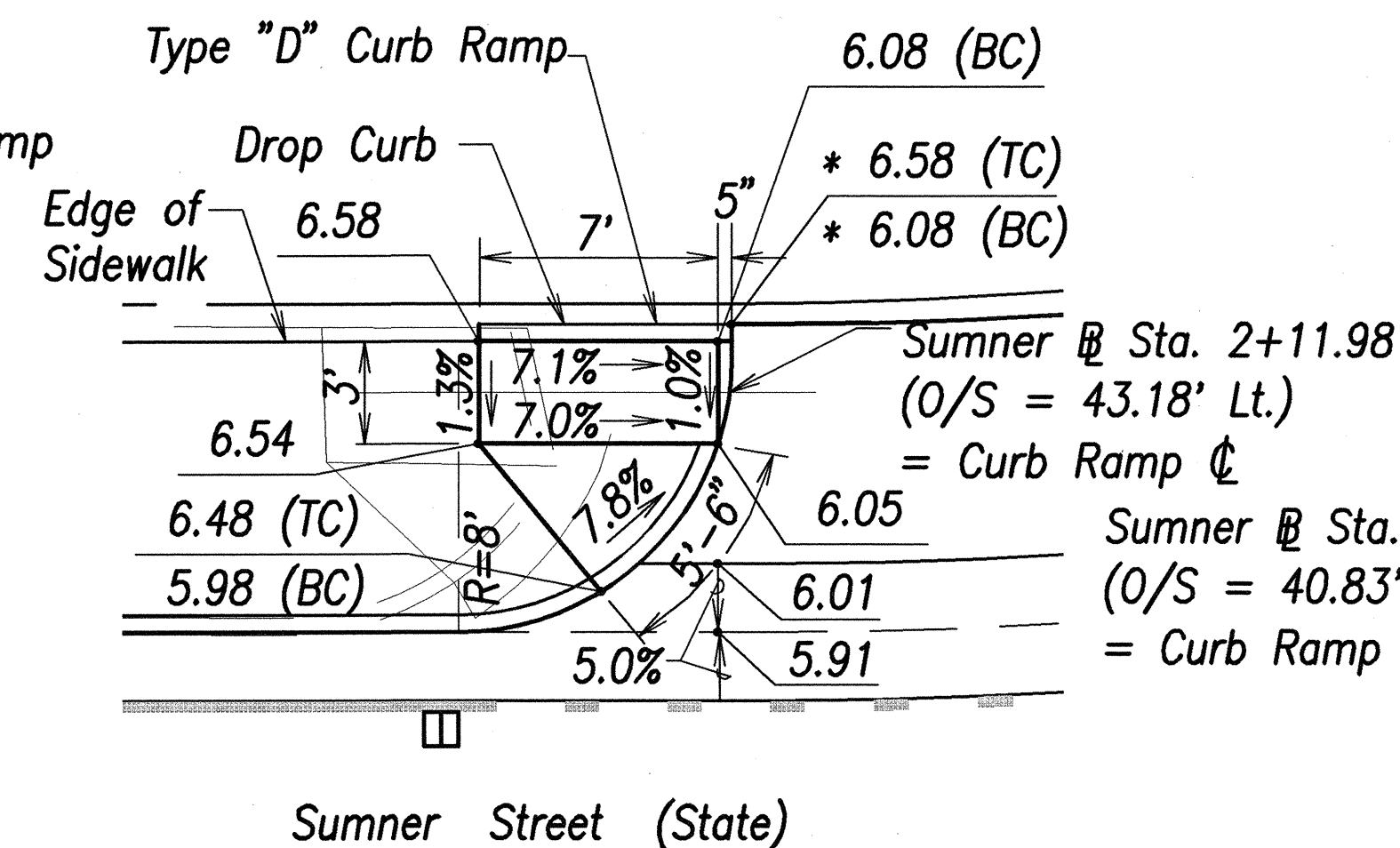
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	60	268



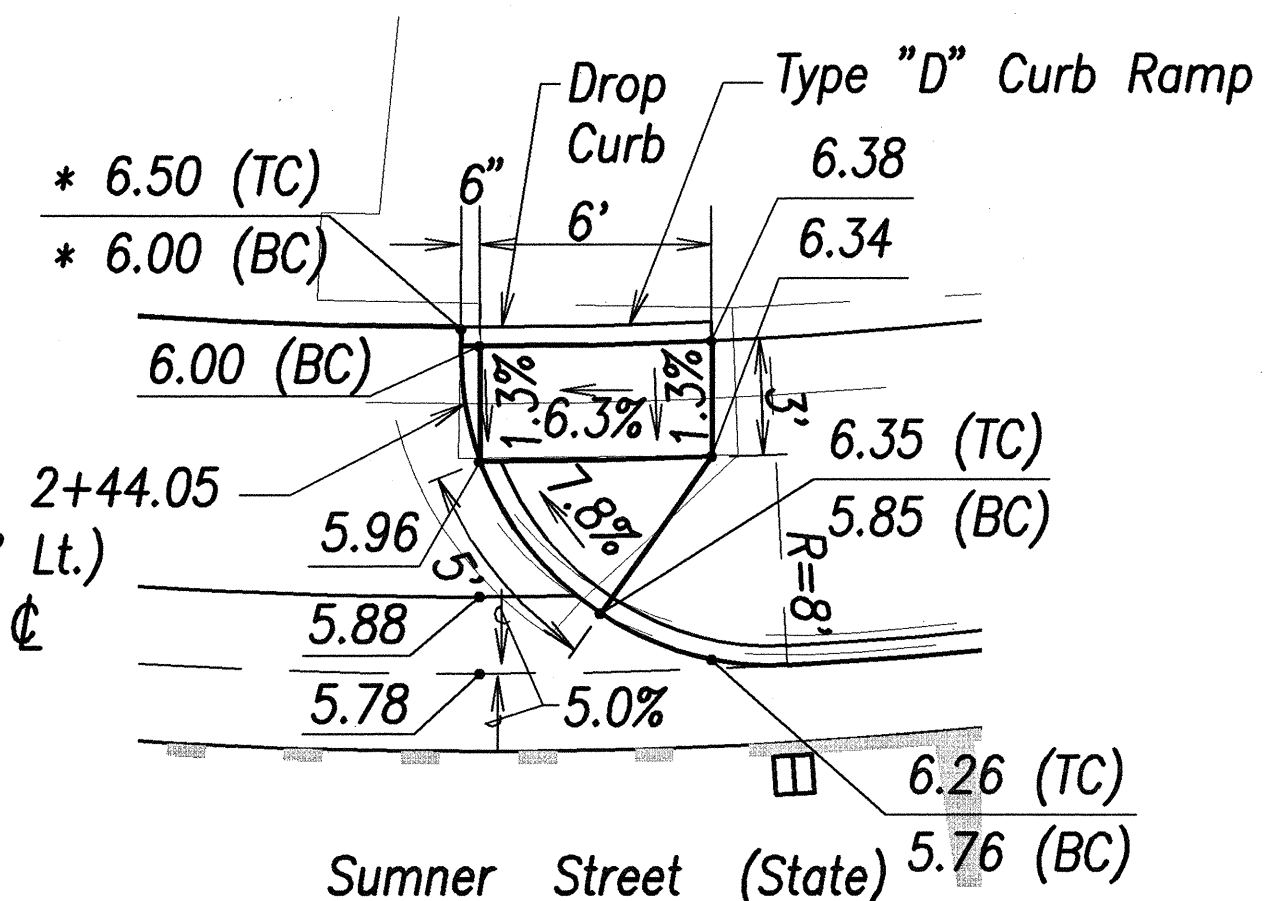
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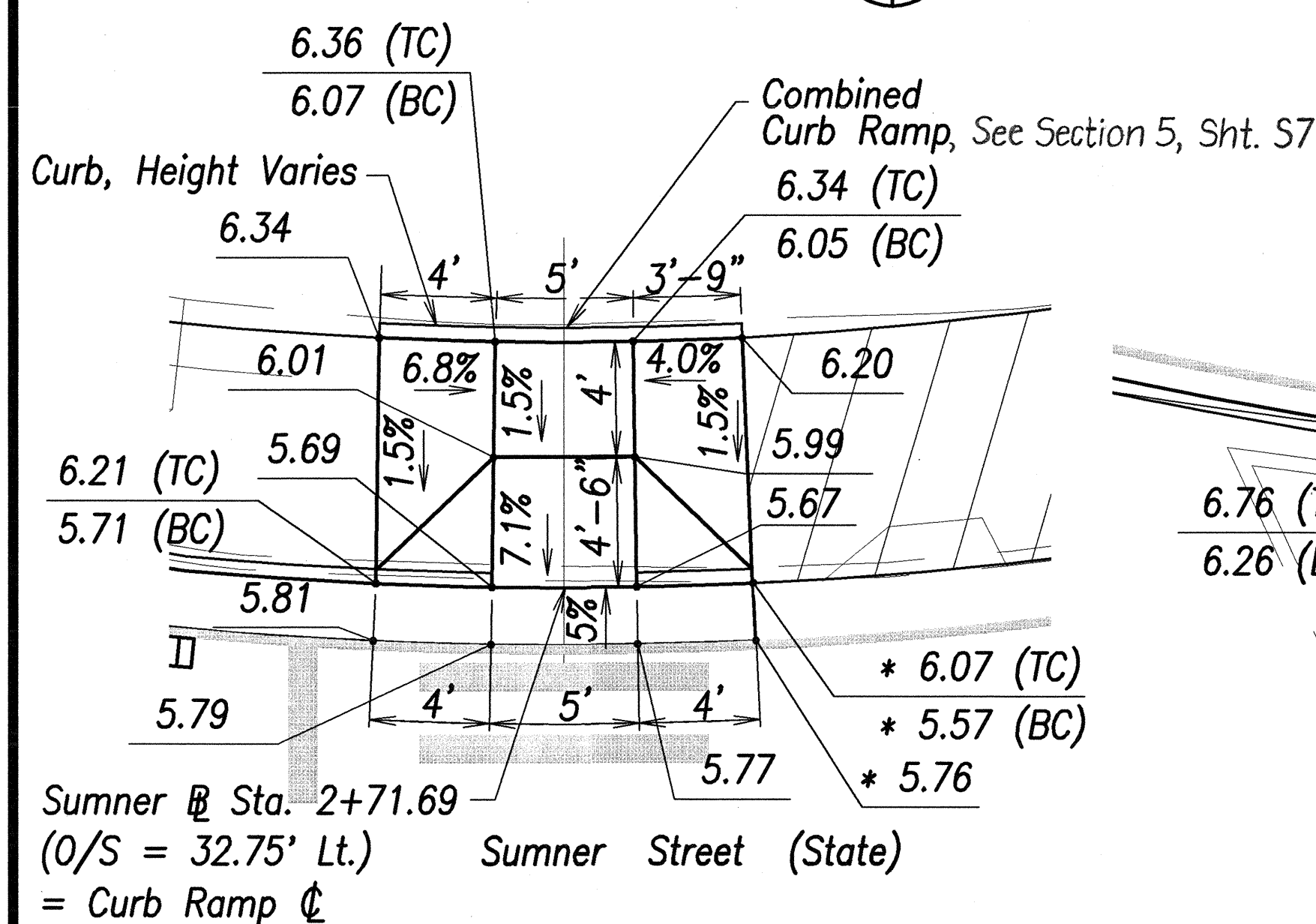
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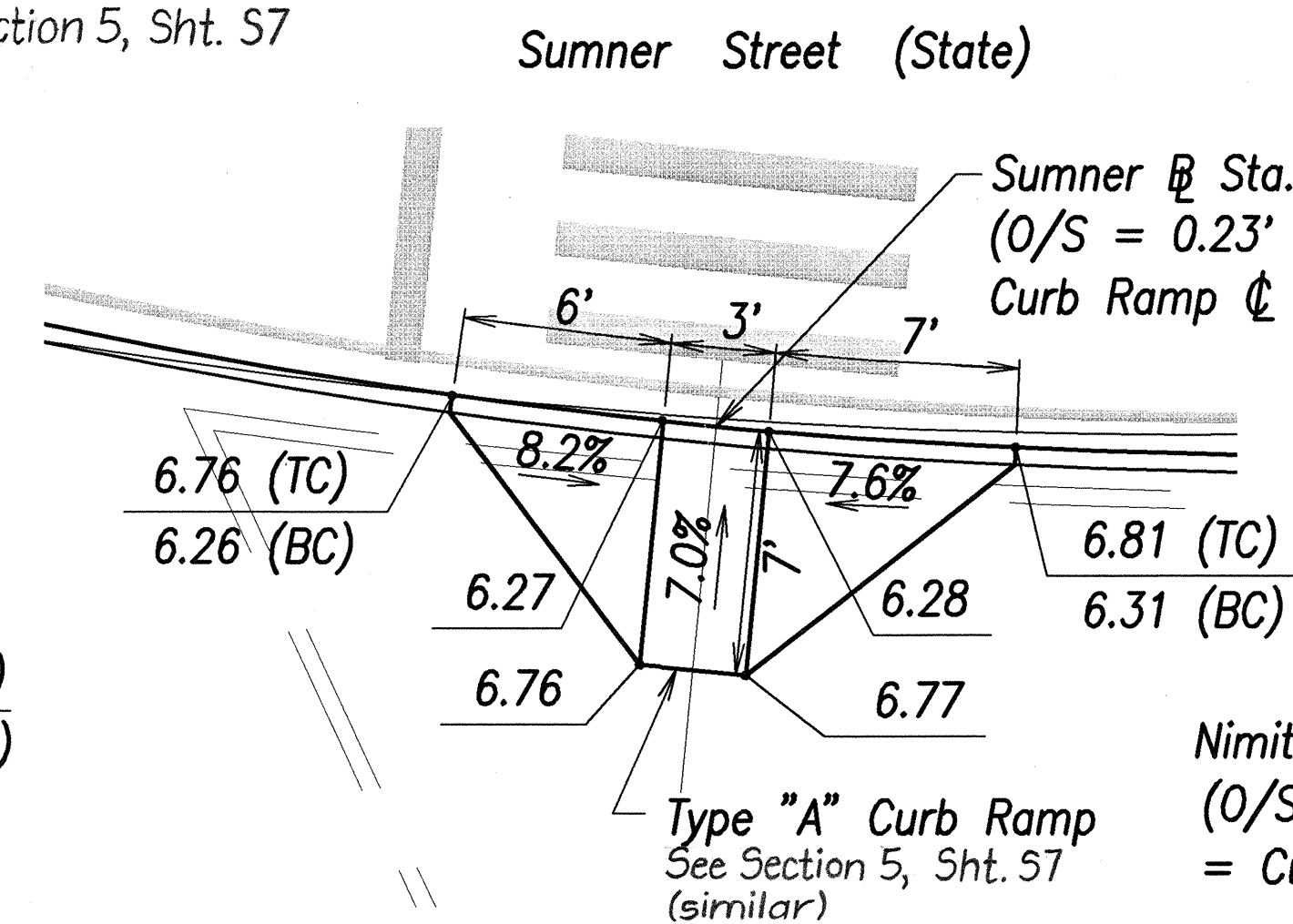
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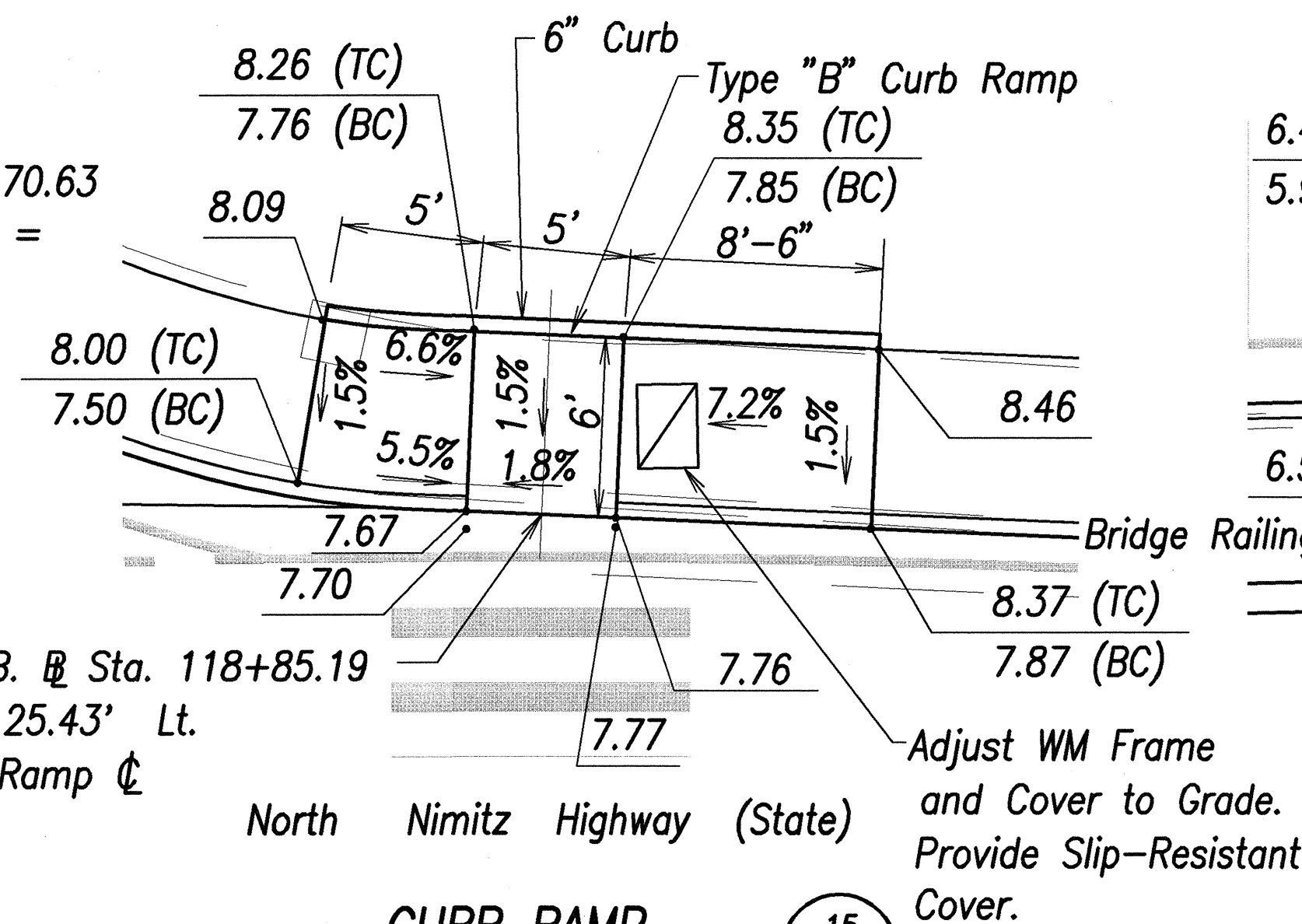
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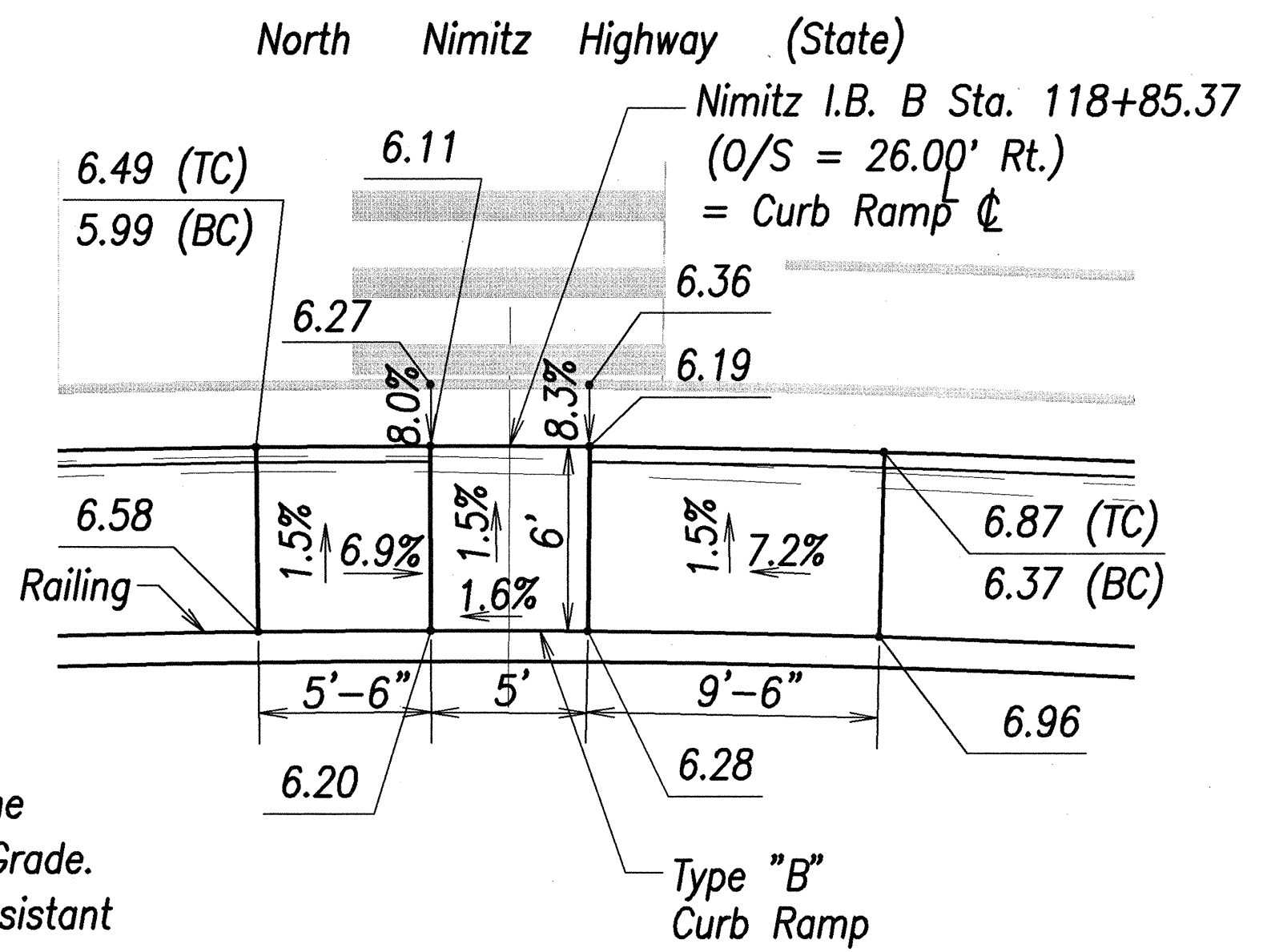
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Scale: 1" = 5'-0" C-42/C-56



CURB RAMP
Scale: 1" = 5'-0" C-42/C-56



CURB RAMP
Scale: 1" = 5'-0" C-43/C-56



CURB RAMP
Scale: 1" = 5'-0" C-43/C-56

LEGEND:
TC = Top of curb
BC = Bottom of curb

NOTE:
All grades shown are finished grades. The contractor shall verify in the field that the grades shown with an asterisk (*) are consistent with the existing grade at the indicated location and make necessary adjustments to make a smooth connection between new and existing surfaces. All adjusted surfaces shall be in full compliance with the accessibility requirements.

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

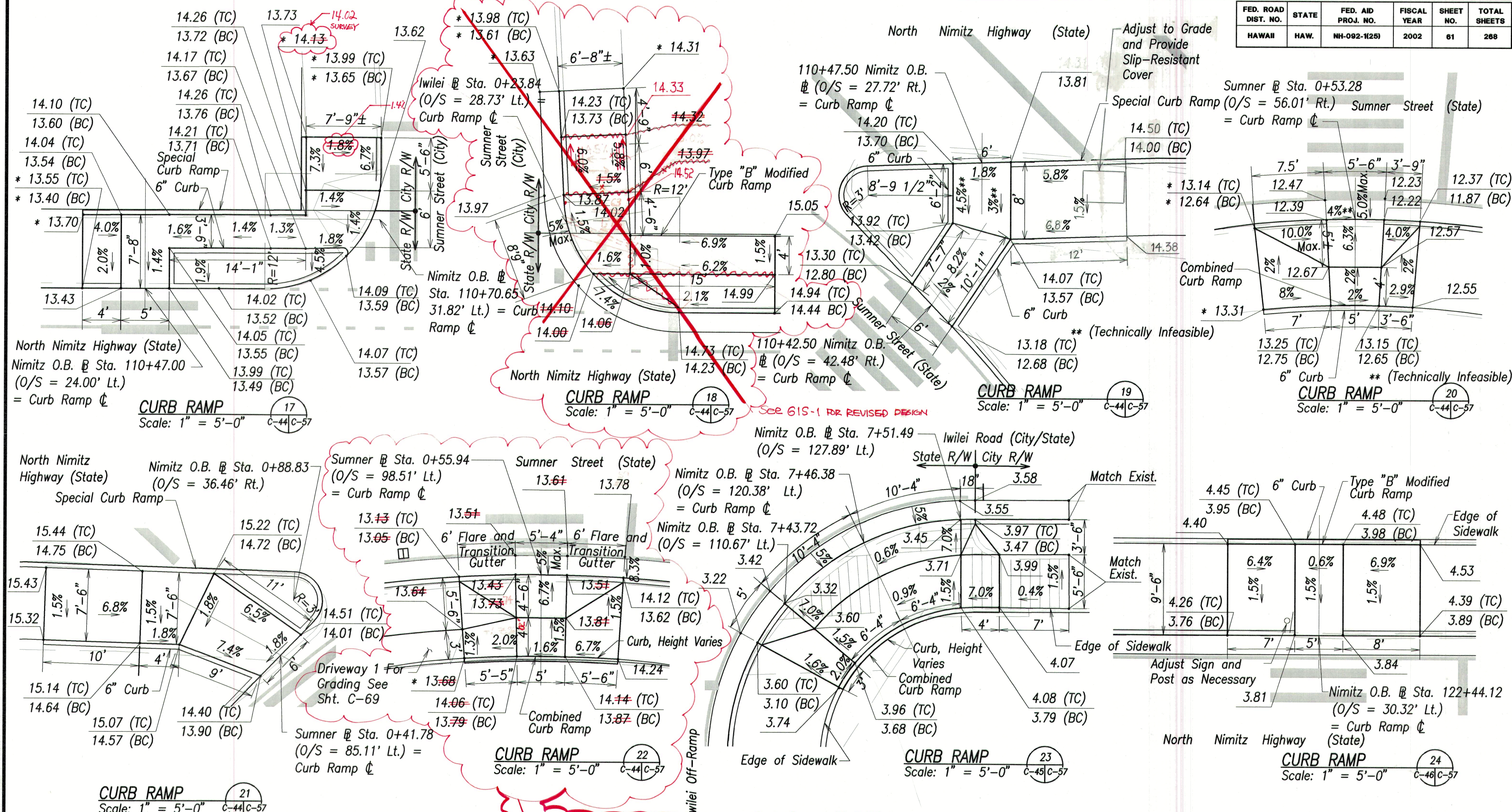


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DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP GRADING PLAN-2
NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)
Scale: As shown Date: 10/19/01
SHEET No. C-56 OF 107 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	61	268



LEGEND:
 TC = Top of curb
 BC = Bottom of curb

NOTE:
 All grades shown are finished grades. The contractor shall verify in the field that the grades shown with an asterisk (*) are consistent with the existing grade at the indicated location and make necessary adjustments to make a smooth connection between new and existing surfaces. All adjusted surfaces shall be in full compliance with the accessibility requirements.

SEE GIS-1 FOR REVISED DESIGN.
 Curb Ramps 18 & 22 :
 Data / Design superceded as shown attached.

APPROVED:
 M. [Signature]
 Chief, Civil Engineering Branch, DPP Date 11/2/01
 (For Work Within City ROW Only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 [Signature]
 DATE 11/16/01

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP GRADING PLAN-3

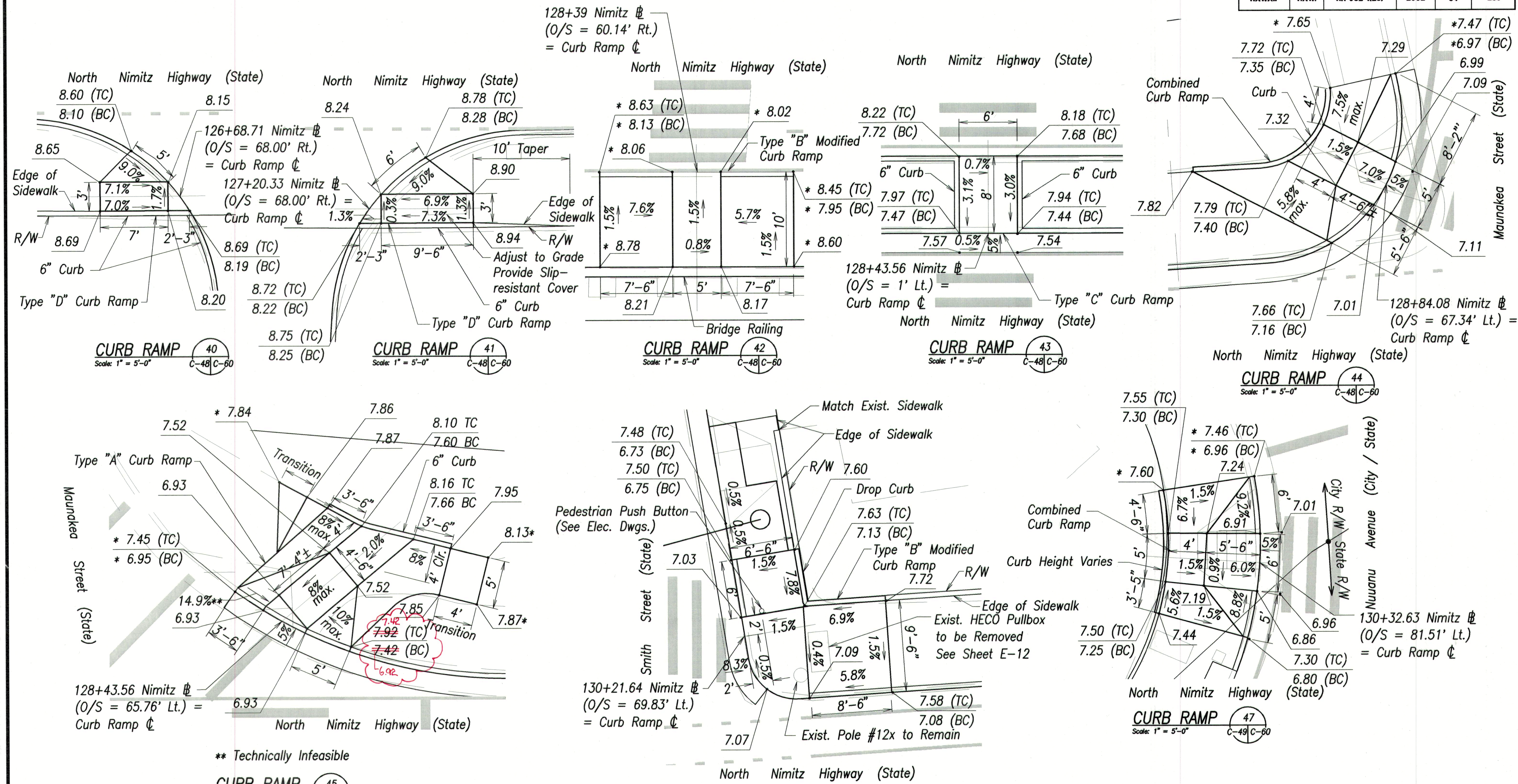
NIMITZ HIGHWAY REHABILITATION
 SUMNER STREET TO QUEEN STREET
 F.A.I. Proj. No. NH-092-1(25)

Scale: As Shown Date: 10/19/01

SHEET No. C-57 OF 107 SHEETS

"AS-BUILT"

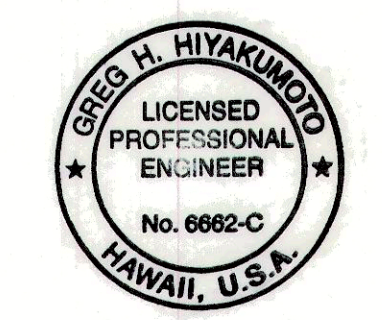
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	64	268



LEGEND:
 TC = Top of curb
 BC = Bottom of curb

NOTE:
 All grades shown are finished grades. The contractor shall verify in the field that the grades shown with an asterisk (*) are consistent with the existing grade at the indicated location and make necessary adjustments to make a smooth connection between new and existing surfaces. All adjusted surfaces shall be in full compliance with the accessibility requirements.

APPROVED:
 M. [Signature] 11/2/01
 Chief, Civil Engineering Branch, DPP Date
 (For Work Within City ROW Only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 [Signature] DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

CURB RAMP GRADING PLAN-6

NIMITZ HIGHWAY REHABILITATION

SUMNER STREET TO QUEEN STREET

F.A.I. Proj. No. NH-092-1(25)

Scale: As shown

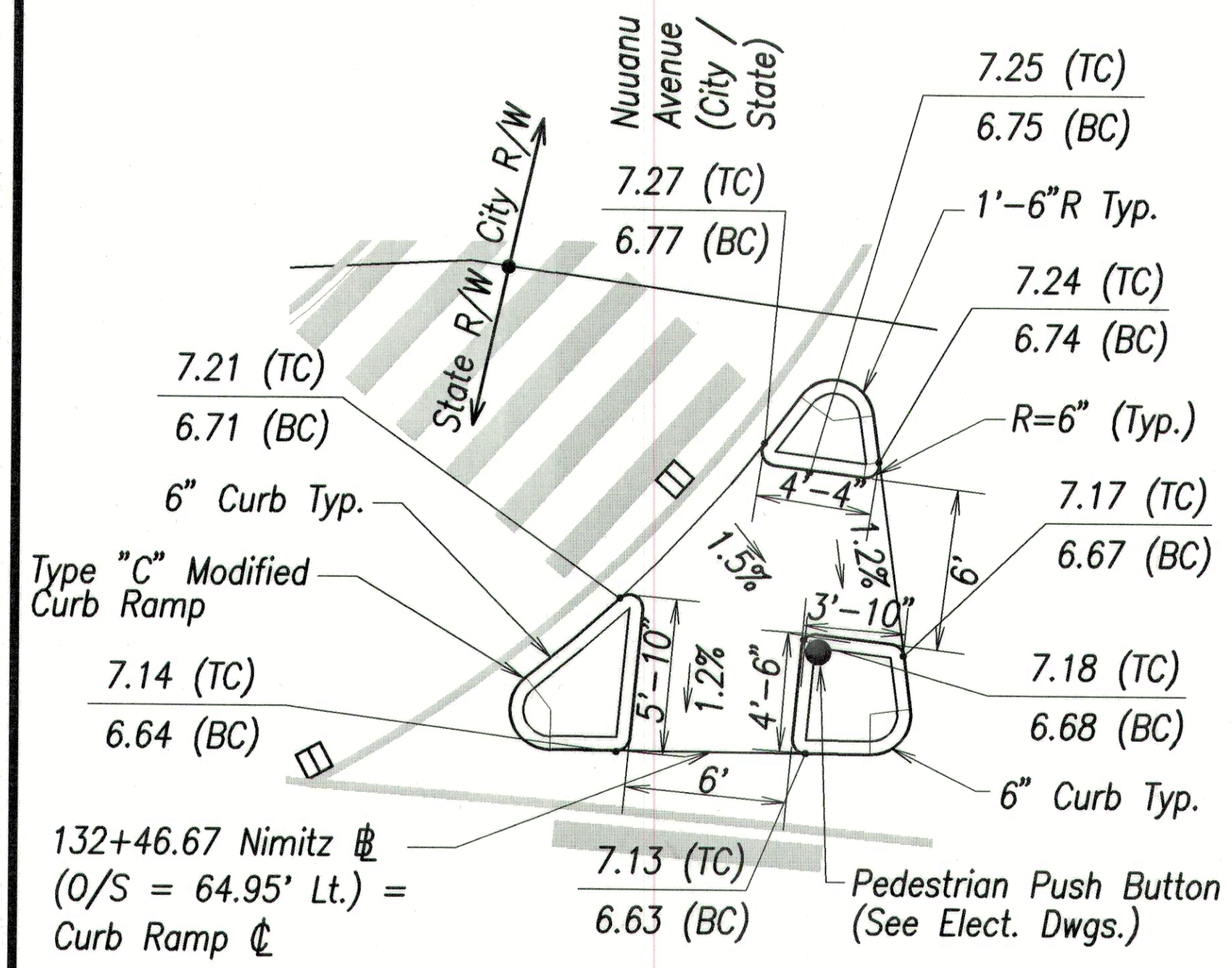
Date: 10/19/01

SHEET No. C-60 OF 107 SHEETS

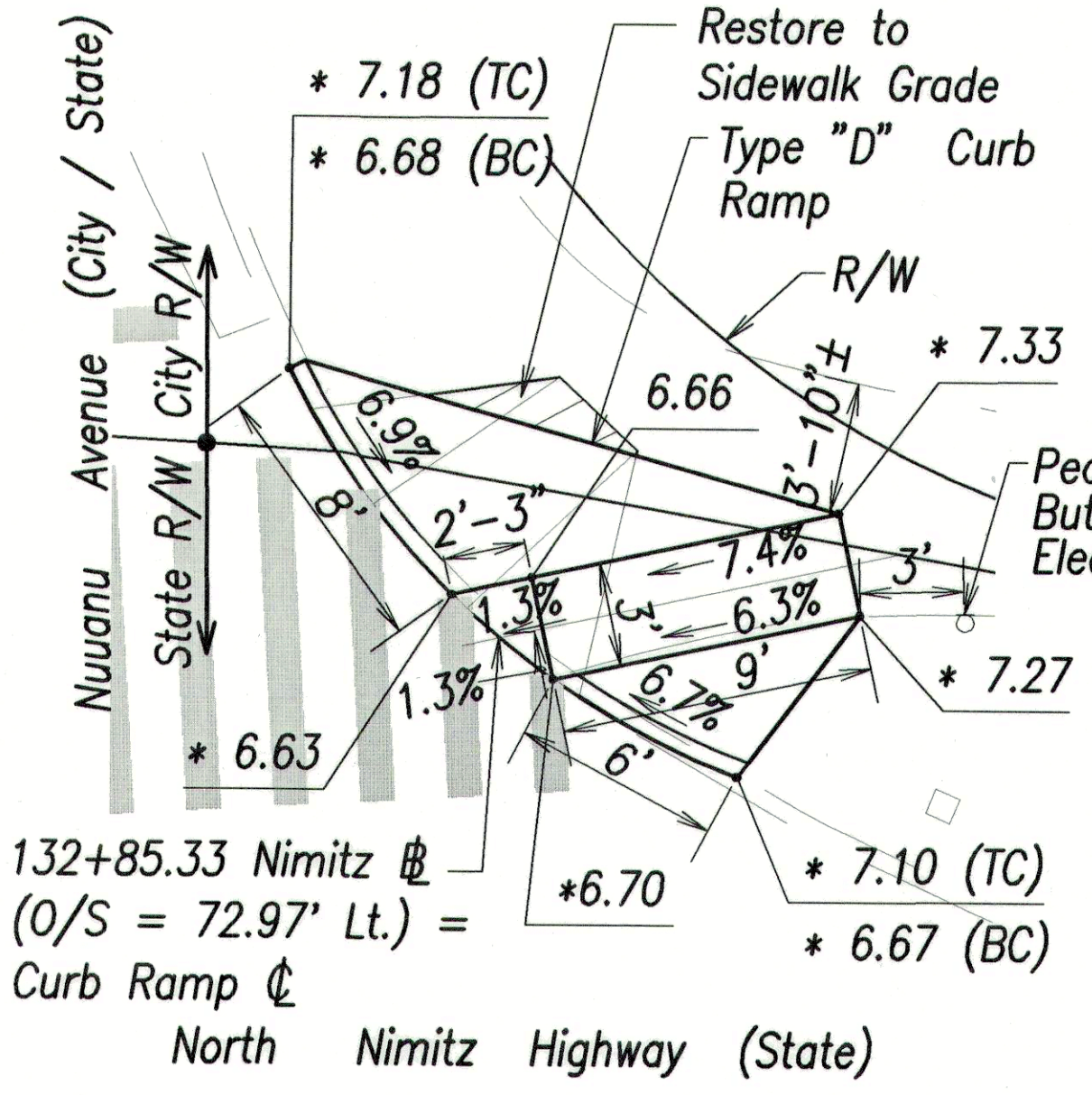
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SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

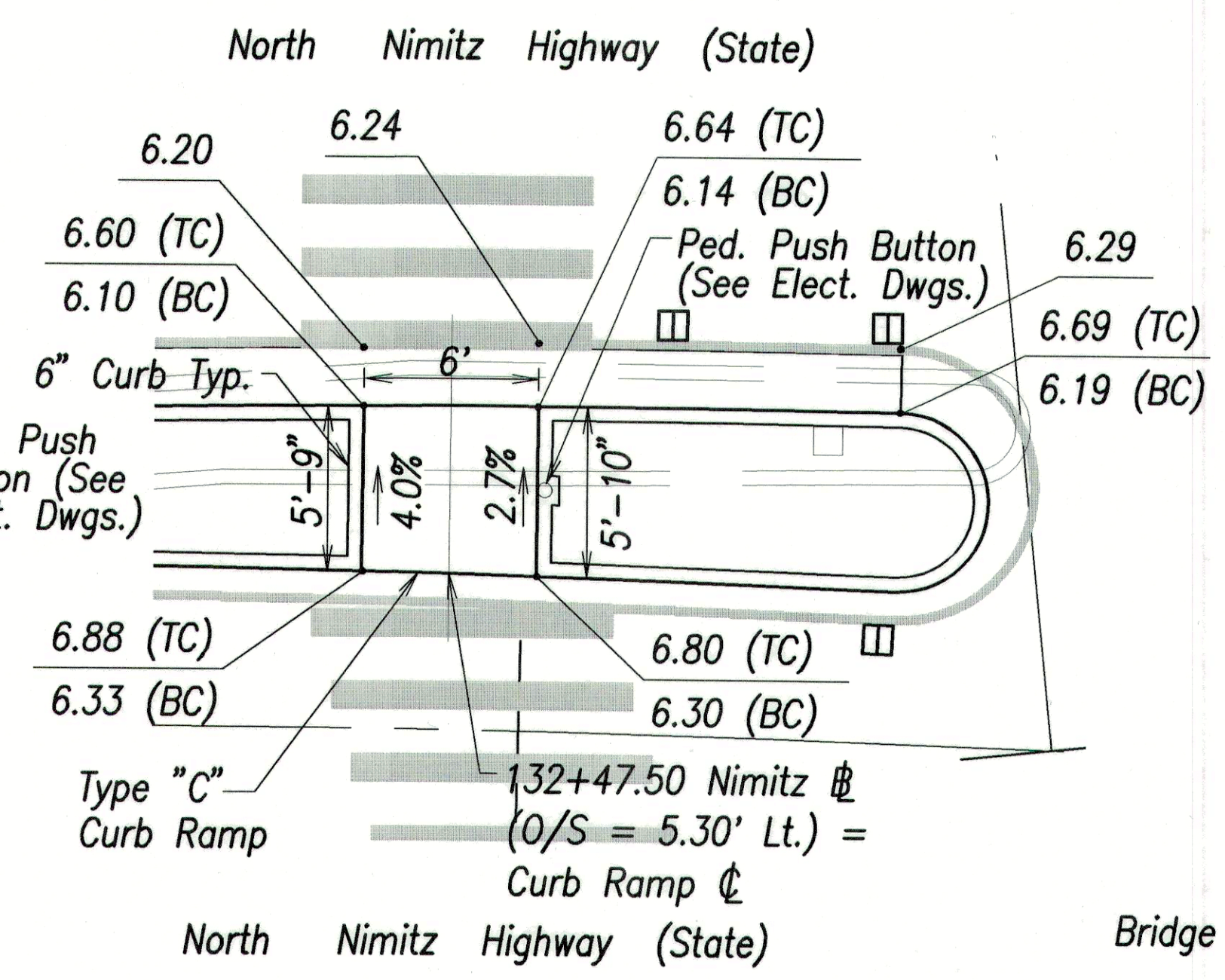
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	65	268



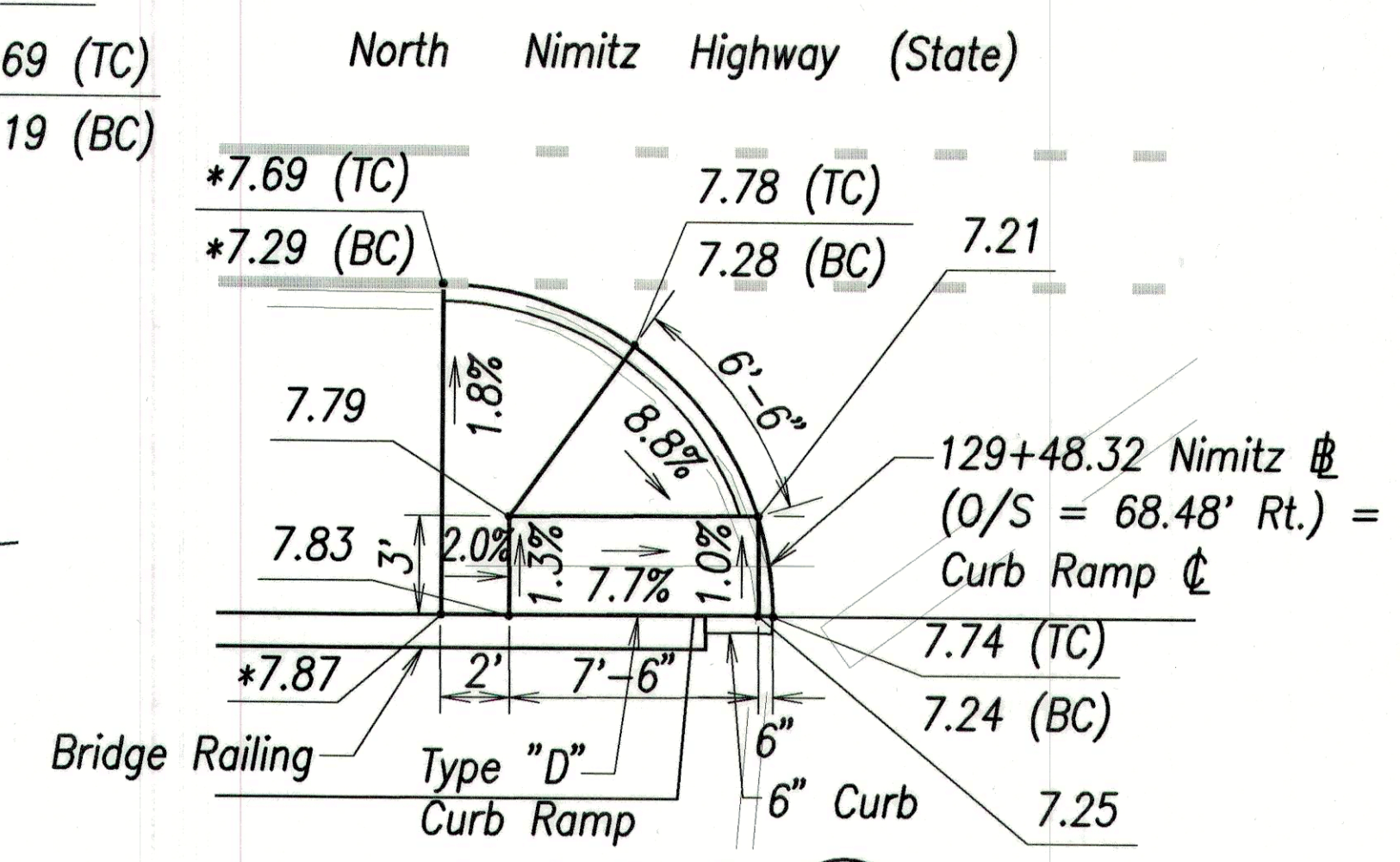
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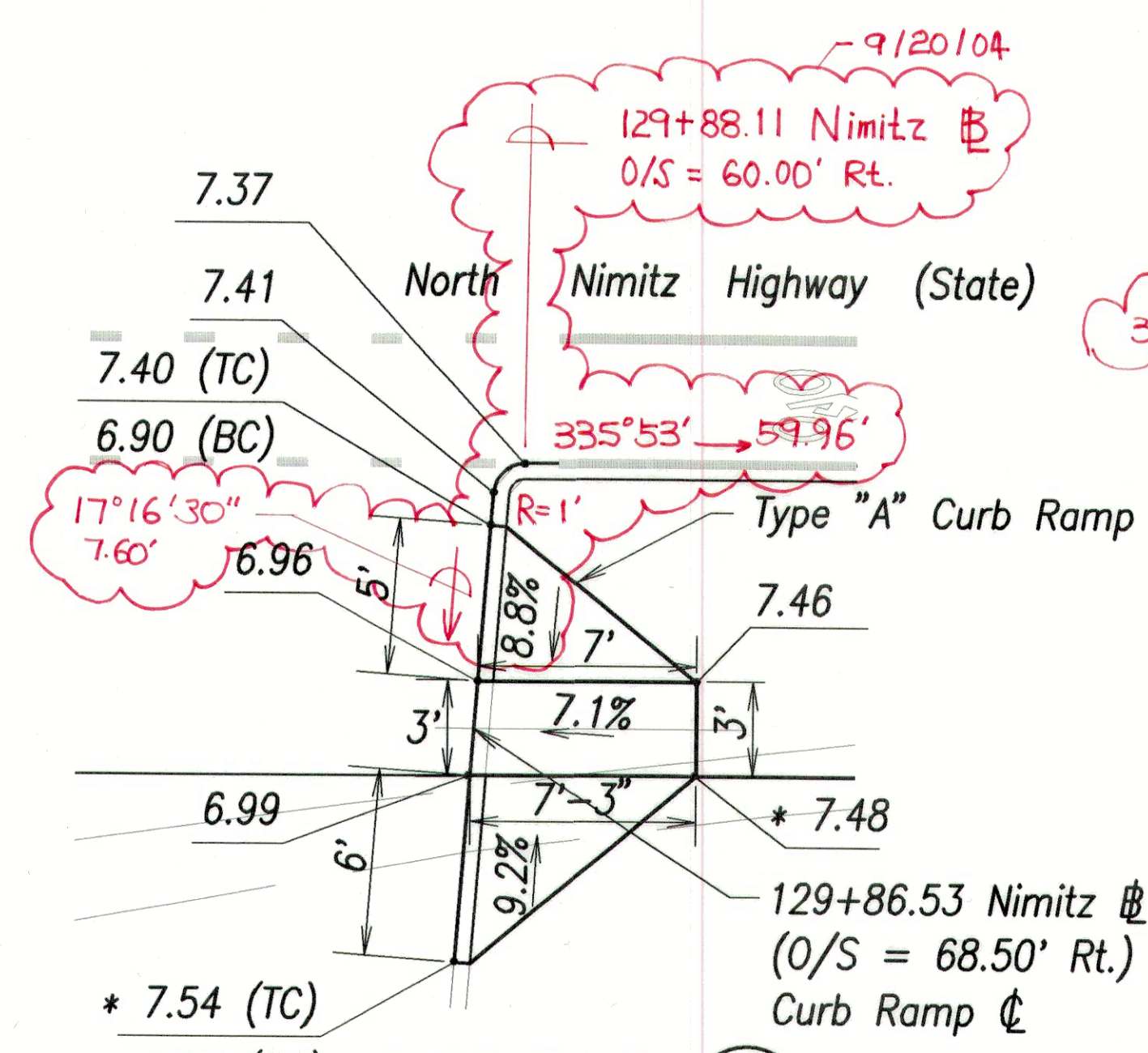
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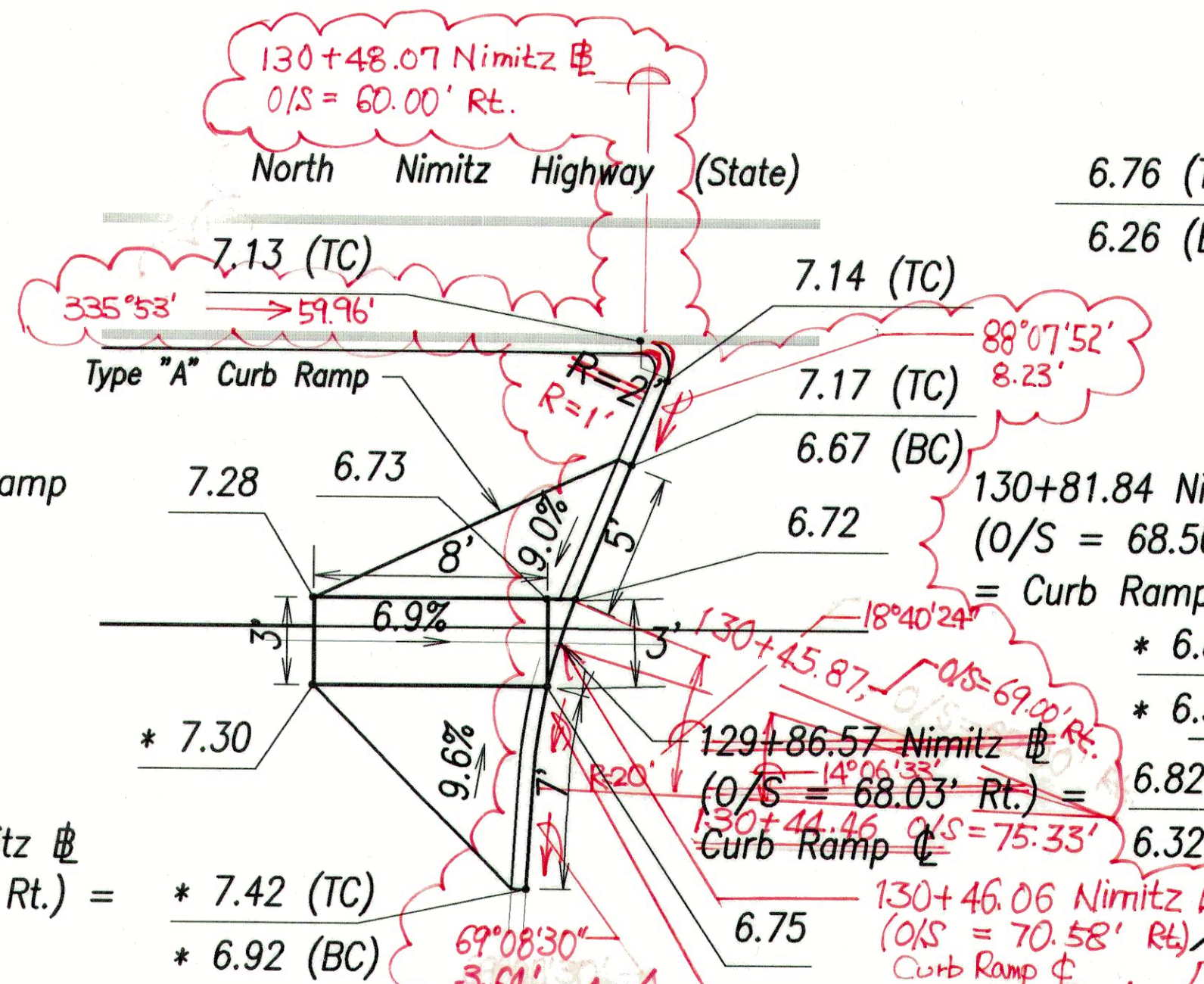
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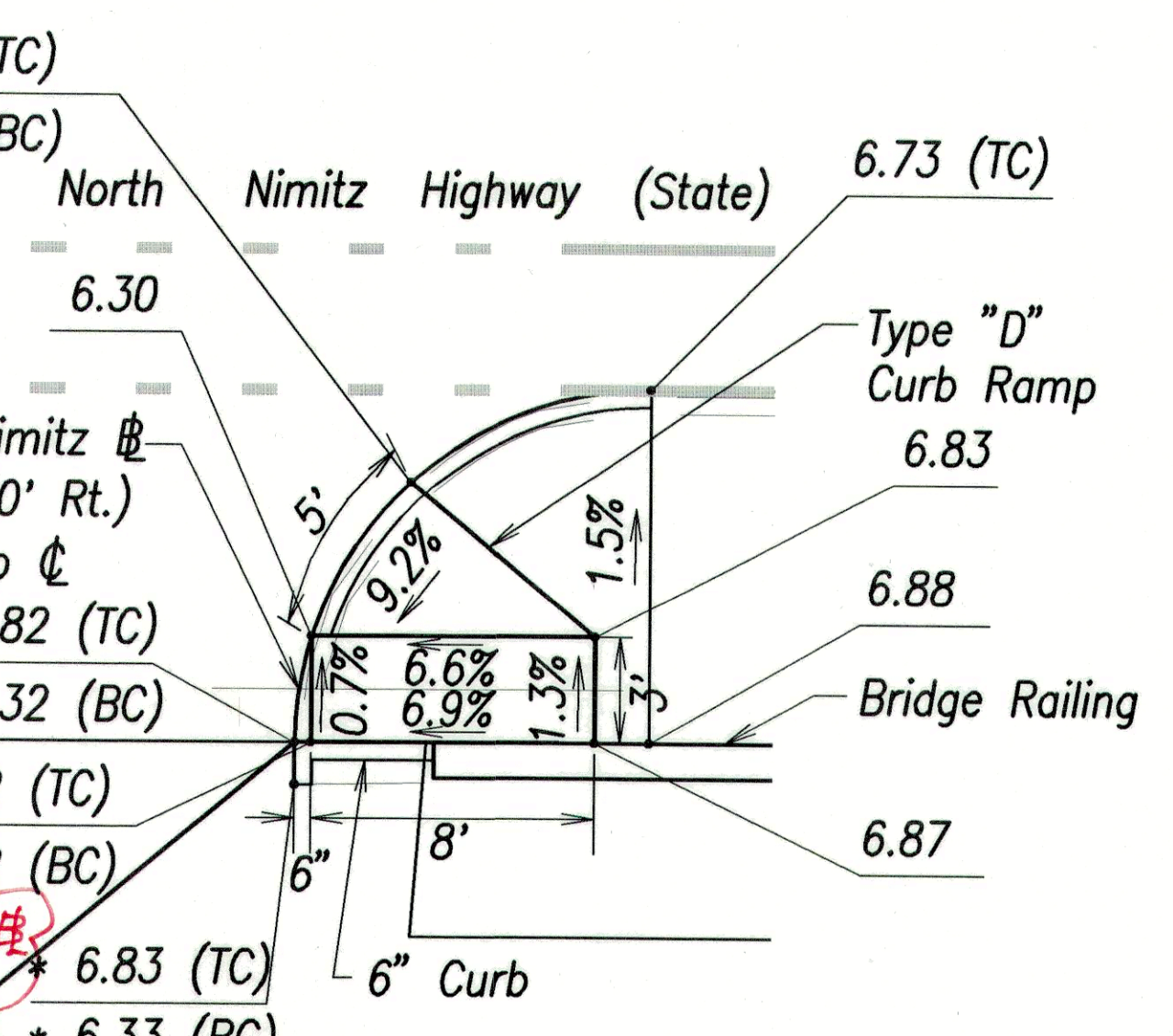
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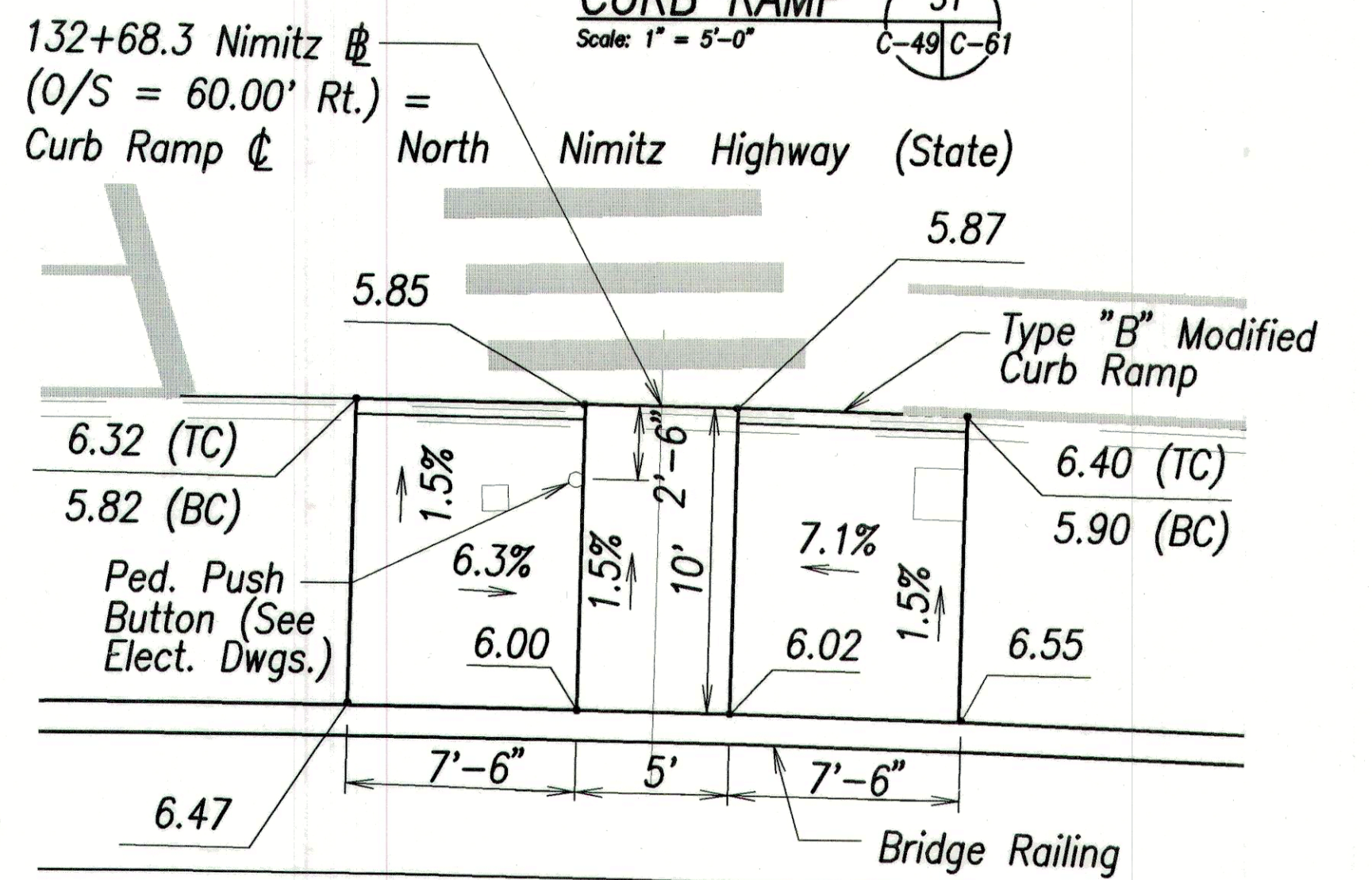
CURB RAMP 52
Scale: 1" = 5'-0" C-49/C-61



CURB RAMP 53
Scale: 1" = 5'-0" C-49/C-61



CURB RAMP 54
Scale: 1" = 5'-0" C-49/C-61



CURB RAMP 55
Scale: 1" = 5'-0" C-49/C-61

LEGEND:
TC = Top of curb
BC = Bottom of curb

NOTE:
All grades shown are finished grades. The contractor shall verify in the field that the grades shown with an asterisk (*) are consistent with the existing grade at the indicated location and make necessary adjustments to make a smooth connection between new and existing surfaces. All adjusted surfaces shall be in full compliance with the accessibility requirements.

As-Built: superseded as shown attached.
See sheet 65S-1

APPROVED:
[Signature] 11/2/01
Chief, Civil Engineering Branch, DPP^{MTC} Date
(For Work Within City ROW Only)



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[Signature]
SIGNATURE DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP GRADING PLAN-7

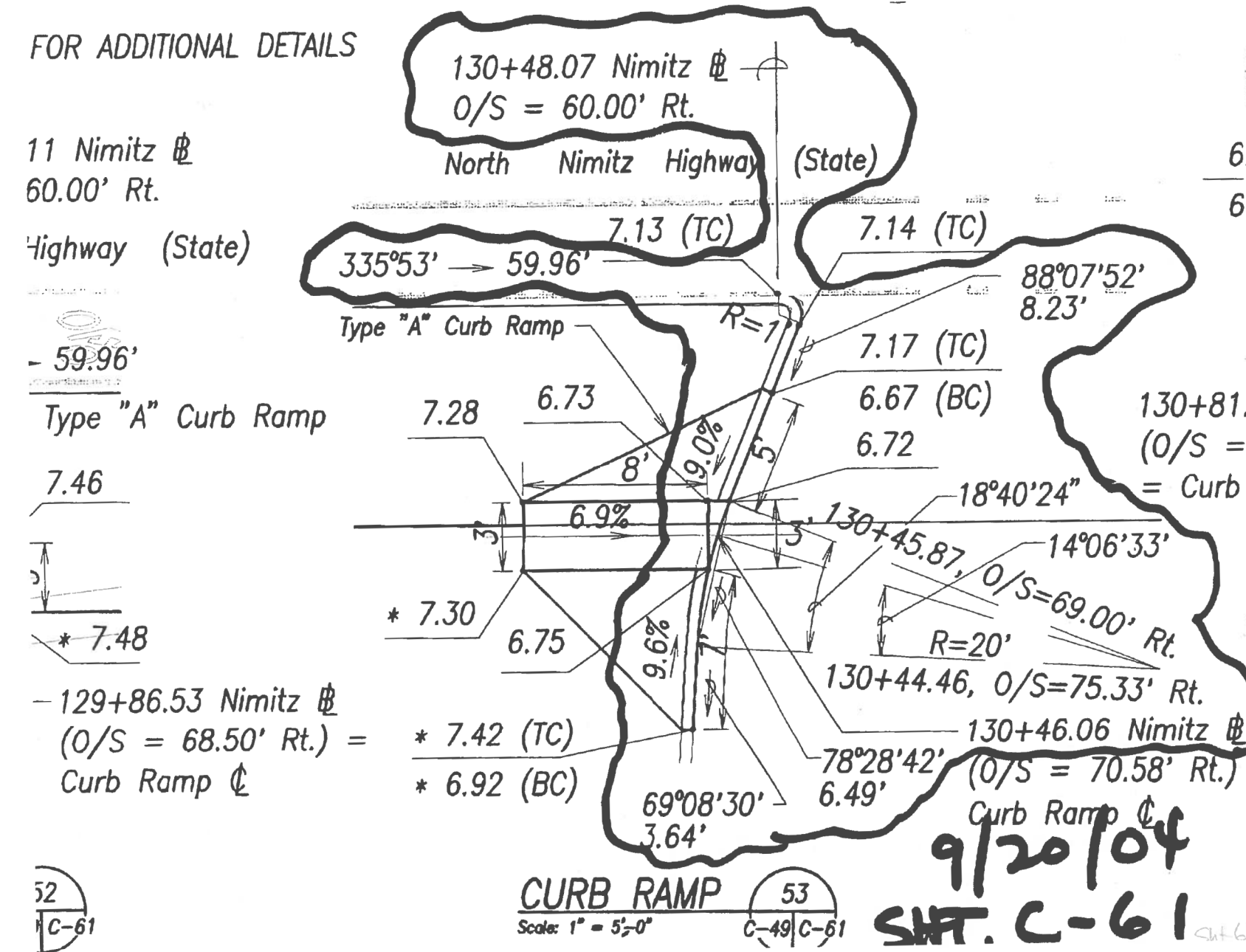
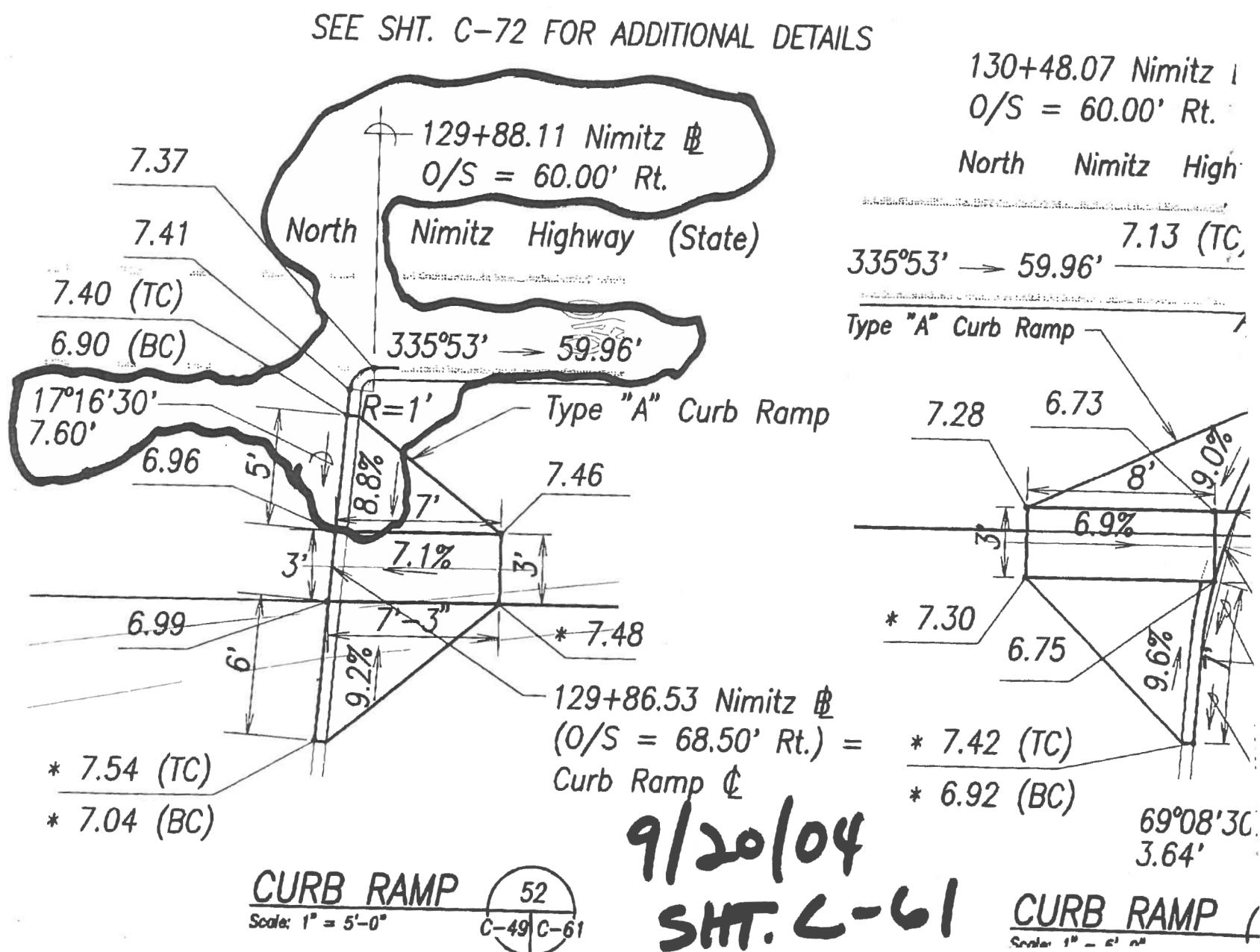
NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)

Scale: 1"=5' Date: 10/19/01

SHEET No. C-61 OF 107 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	65S-1	268



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP GRADING PLAN-7

**NIMITZ HIGHWAY REHABILITATION
SUMMER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)**

Scale: 1" = 5' Date: 10/19/01

SHEET No. C-61 OF 107 SHEETS

"AS-BUILT"

65S-1

CURB RAMP NOTES:

1. These details are intended as curb ramp guidelines for design and construction.
2. A site specific detail that meets American with Disabilities Act (ADA) requirements shall be shown on the plans.
3. To ensure constructability, spot elevations shall be used in the design. Benchmarks and horizontal ties shall be provided for construction stakeout.
4. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
5. Design slopes of flares and ramps shall be labeled.
6. Curb ramps shall be installed at 90° to the sidewalk or to the maximum extent feasible, in alterations.
7. At intersections for new construction, curb ramps for each crosswalk are preferred and shall be in line and into the crosswalk. However, for existing sites, a single curb ramp (diagonal curb ramp) serving two crosswalks can be approved if the design detail is acceptable by the State.
8. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
9. Prior to construction, if a curb ramp cannot be designed according to DOT, Highways Division curb ramp guidelines, either a "Technically Infeasible" form (for existing construction) or a "Structurally Impracticable" form (for new construction) shall be filled-out and submitted to the DOT, Highways Division for signature which will then be submitted to the Disability and Communication Access Board (DCAB).
10. The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A and D ramps and 8.33% for Type B, C, and E ramps. The counterslope may be exceeded when the change of grade does not exceed 13% (11% preferred) over a distance of 2 ft. Exceeding the 13% (11% preferred) change in grade will cause a person in a wheelchair to tip forward and/or fall backward.
11. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
12. 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.
13. Transitions from ramps to gutters and roadways shall be flush. If needed, a lip with a maximum vertical change in level of 1/4" is allowed.
14. Curb ramps and sidewalks shall be designed and constructed to eliminate ponding to the maximum extent feasible.
15. 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.
16. 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.

17. Construction joints are required to join curb ramps with sidewalks.
18. Unless otherwise noted, new gutters are required as shown.
19. All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
20. Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
21. Bed course material is required for curb ramps, sidewalks, and gutters.
22. Prior to construction, all plans and specifications shall be submitted (for review) to DCAB to ensure conformance with the ADAAG as well as any supplemental design specifications established or adopted by DCAB.
23. 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.
24. Additional information is available from:
 - a) American with Disabilities Act Accessibility Guidelines (ADAAG), September 1998, The Access Board.
 - b) Accessible Rights-of-Way: A Design Guide, November 1999, The Access Board.
 - c) Designing Sidewalks and Trails for Access, July 1999, FHWA.

SIDEWALK NOTES:

1. 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.
2. Narrow sidewalks (3'-0" min. width, excluding curb) may prohibit the installation of any sign posts, utility poles, fire hydrants, traffic signal standards, light poles, etc. in the sidewalk.
3. 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.
4. For new construction, the minimum sidewalk width shall be 6'-0" (excluding curb). The cross slope shall not exceed 2%.
5. If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.
6. 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.
7. All new wheelchair-accessible curb ramps and flares shall be no steeper than 12H:1V. Ramps and flares shall be lengthened as required to achieve this maximum slope.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	ADD. 67	268



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ME OR UNDER MY SUPERVISION
Greg H. Hiakumoto 1/10/02
SIGNATURE DATE

01/10/02	Deleted Detectable Warnings at Curb Ramps
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Date	Revision
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS 1

NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)

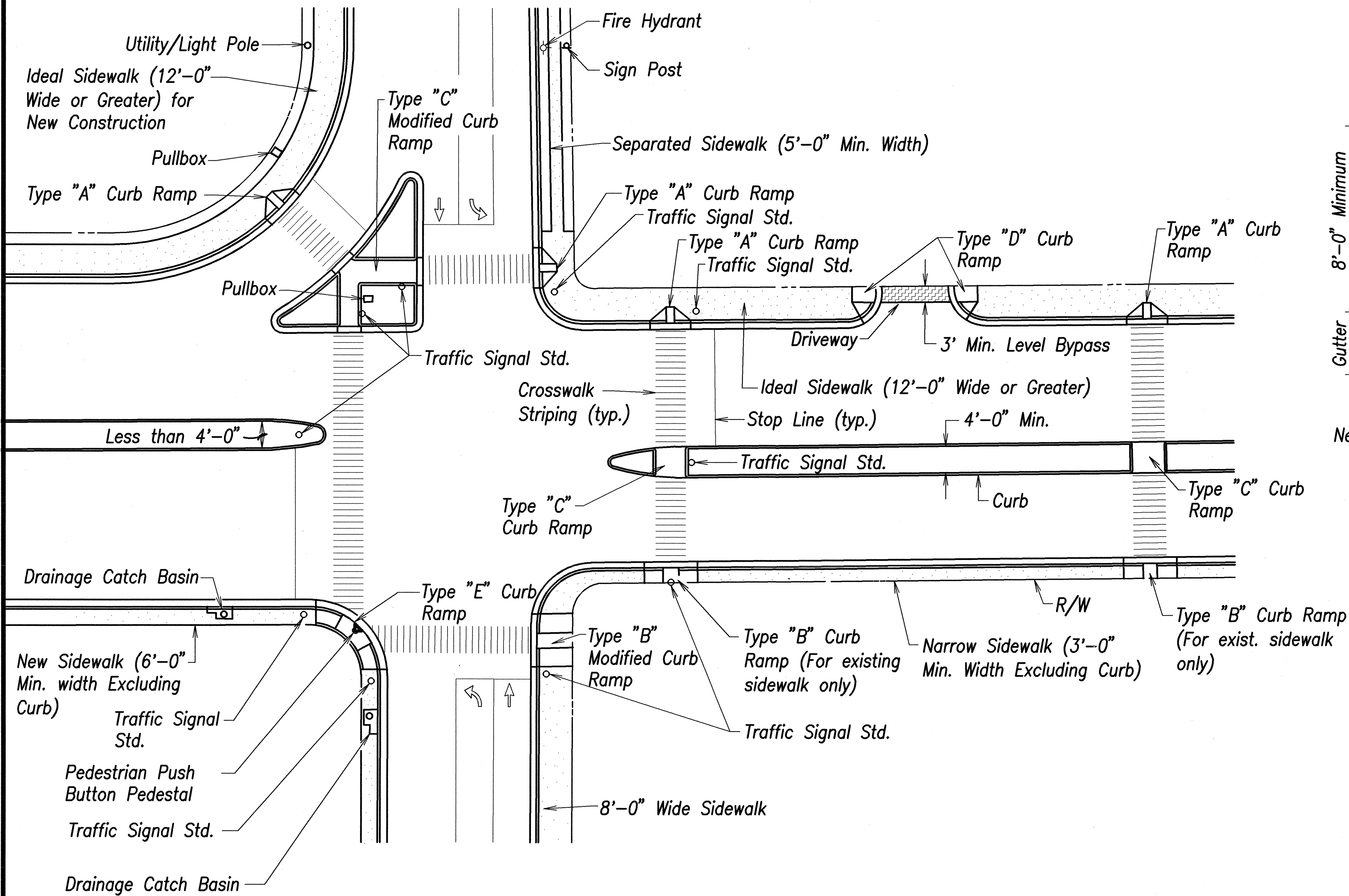
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SHEET No. C-63 OF 107 SHEETS

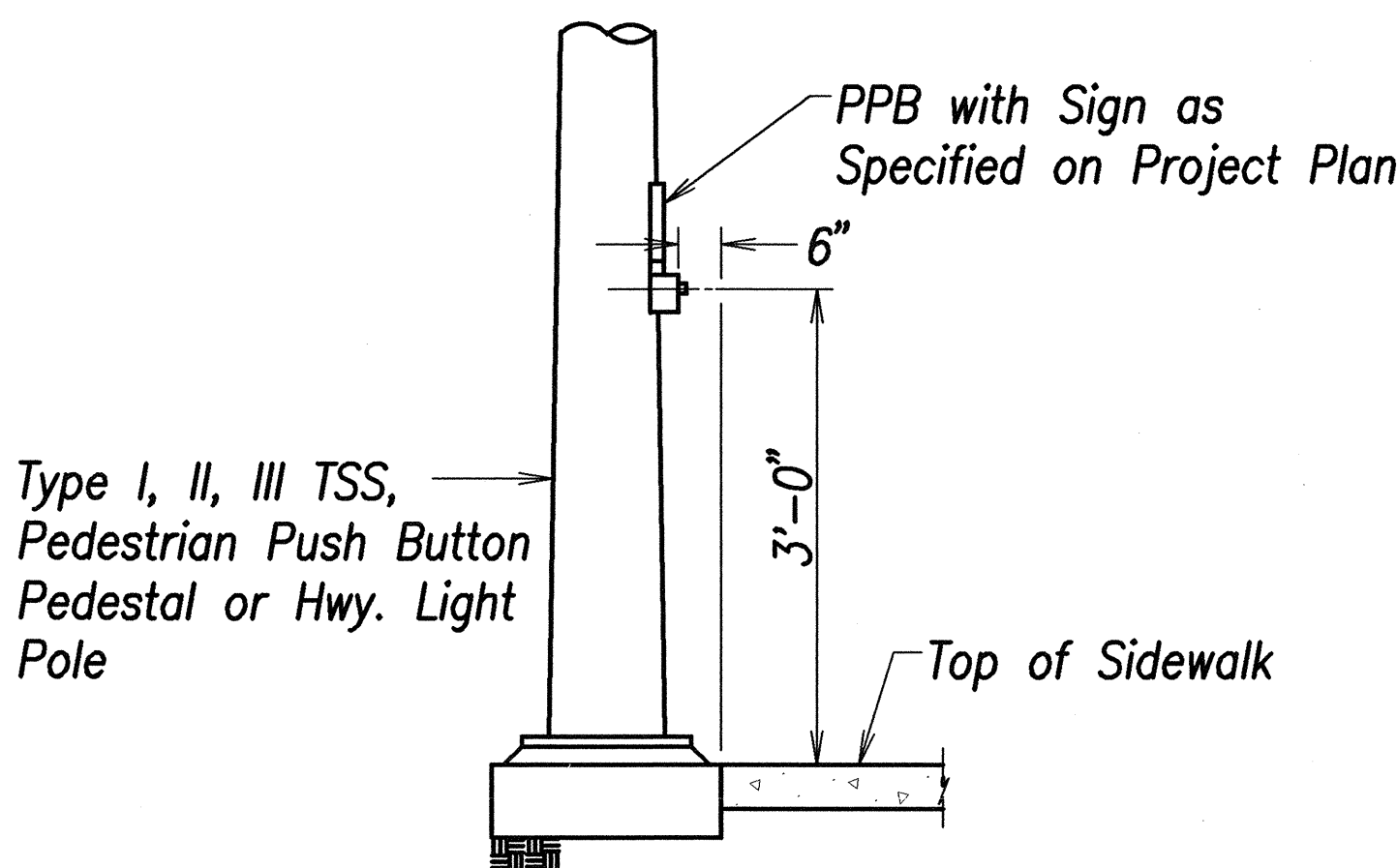
ADD.67

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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TRACED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
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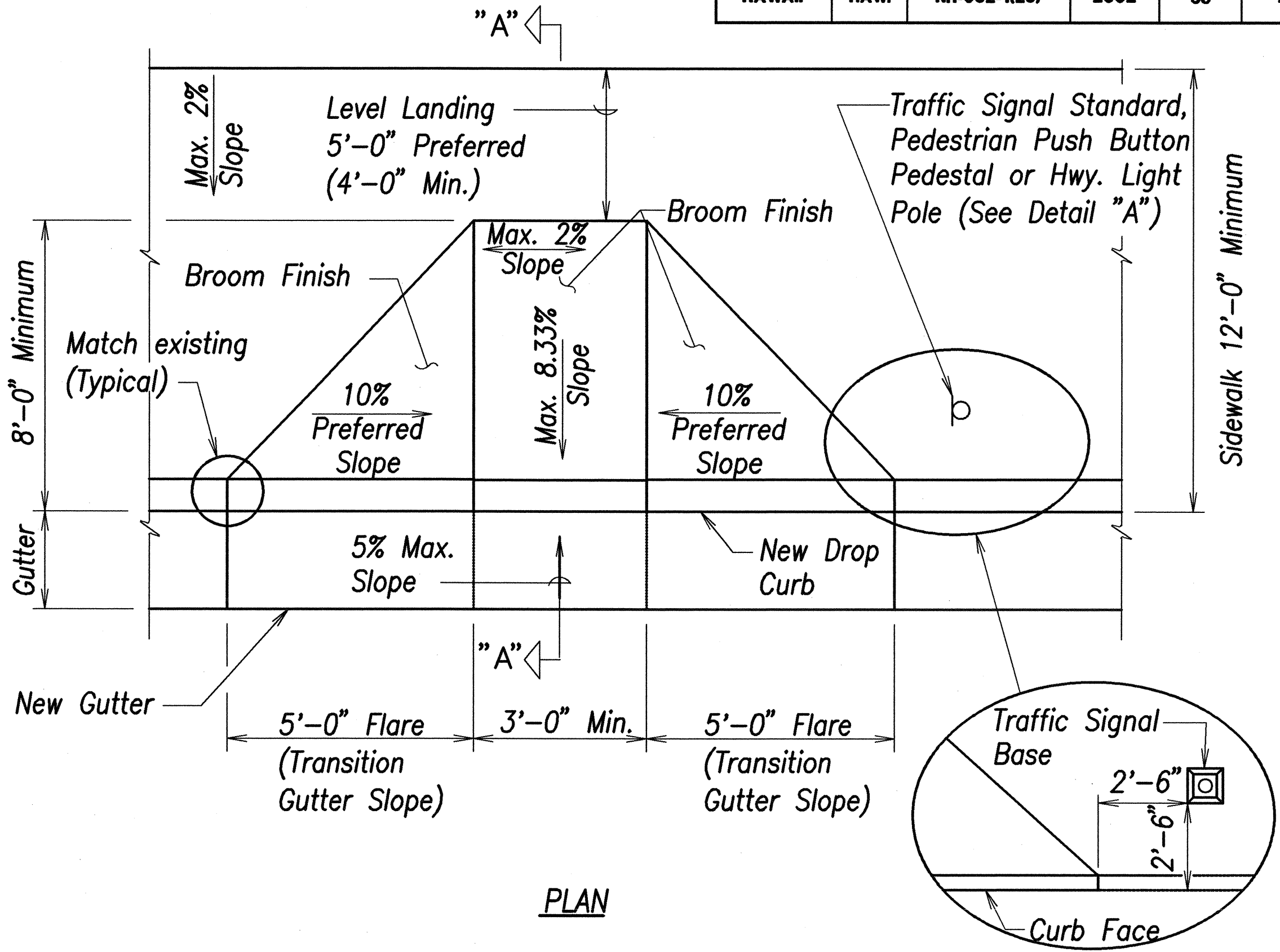
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	68	268



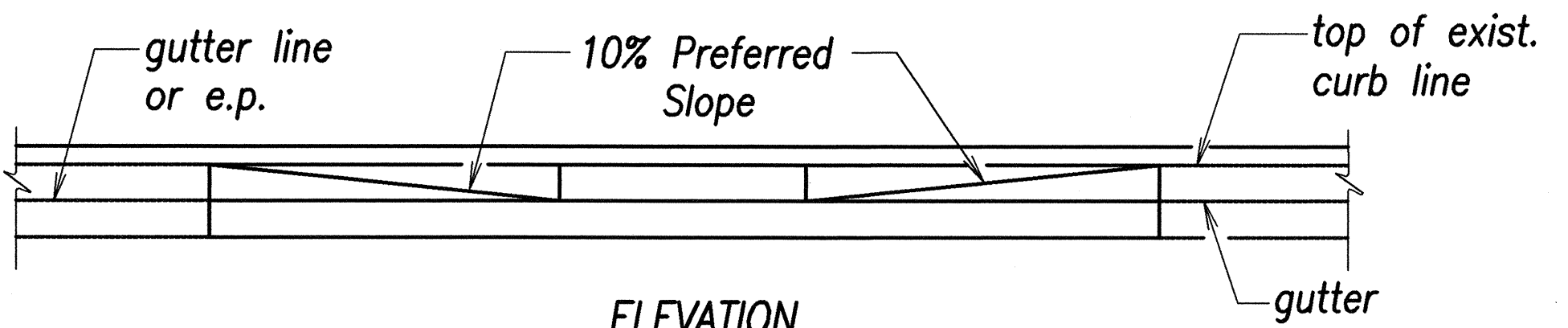
TYPICAL CURB RAMPS
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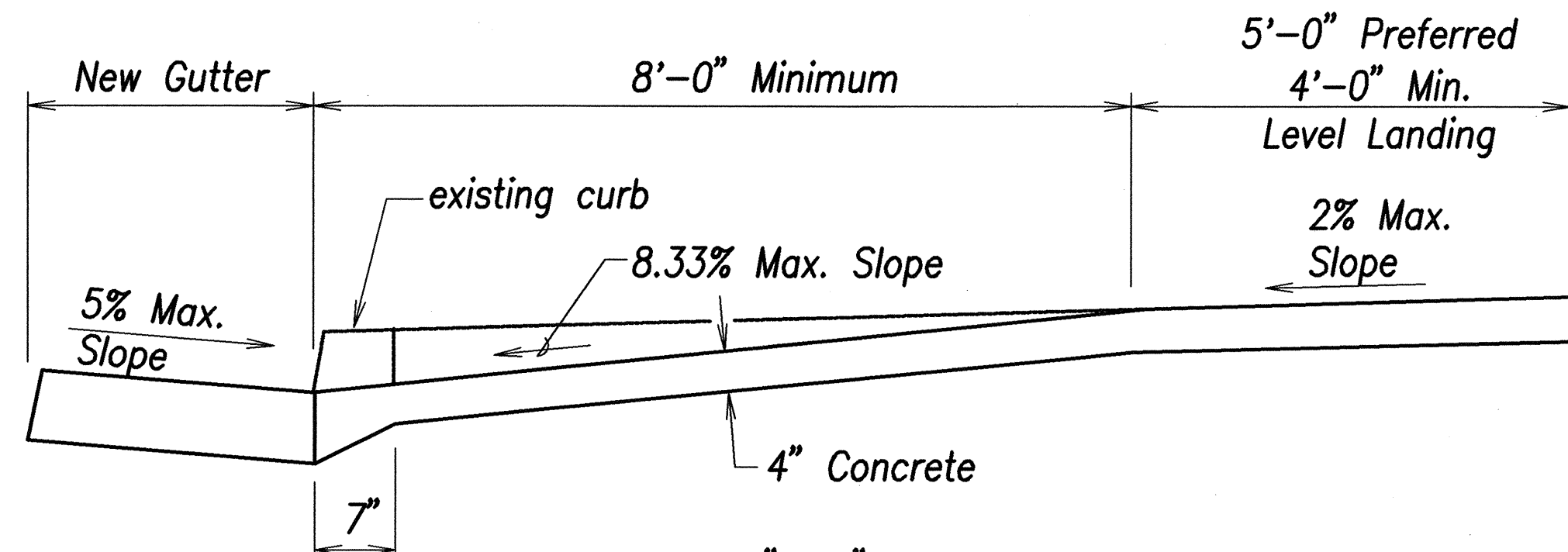
DETAIL "A"
Scale: Not to Scale



PLAN



ELEVATION



SECTION "A-A"

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

ORIGINAL PLAN	DATE
NO. 1	
NO. 2	
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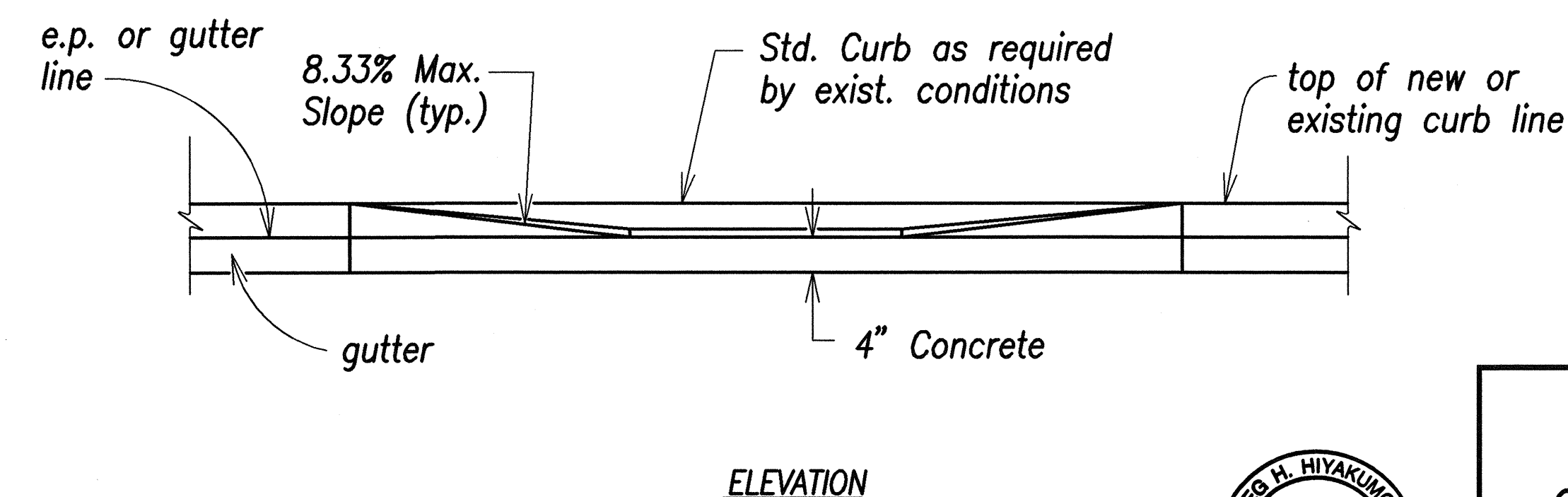
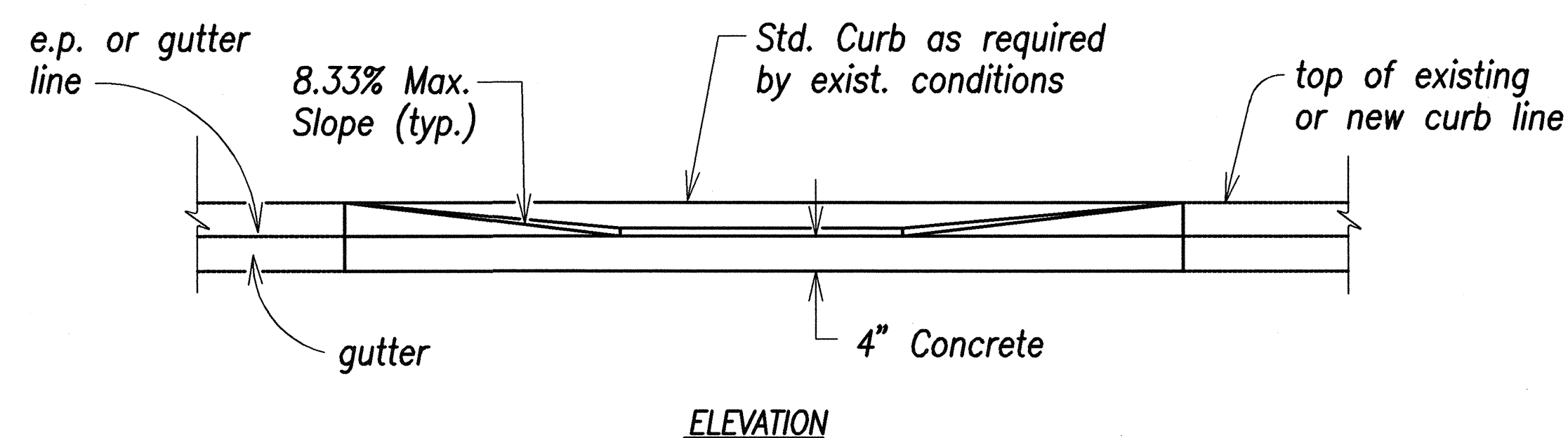
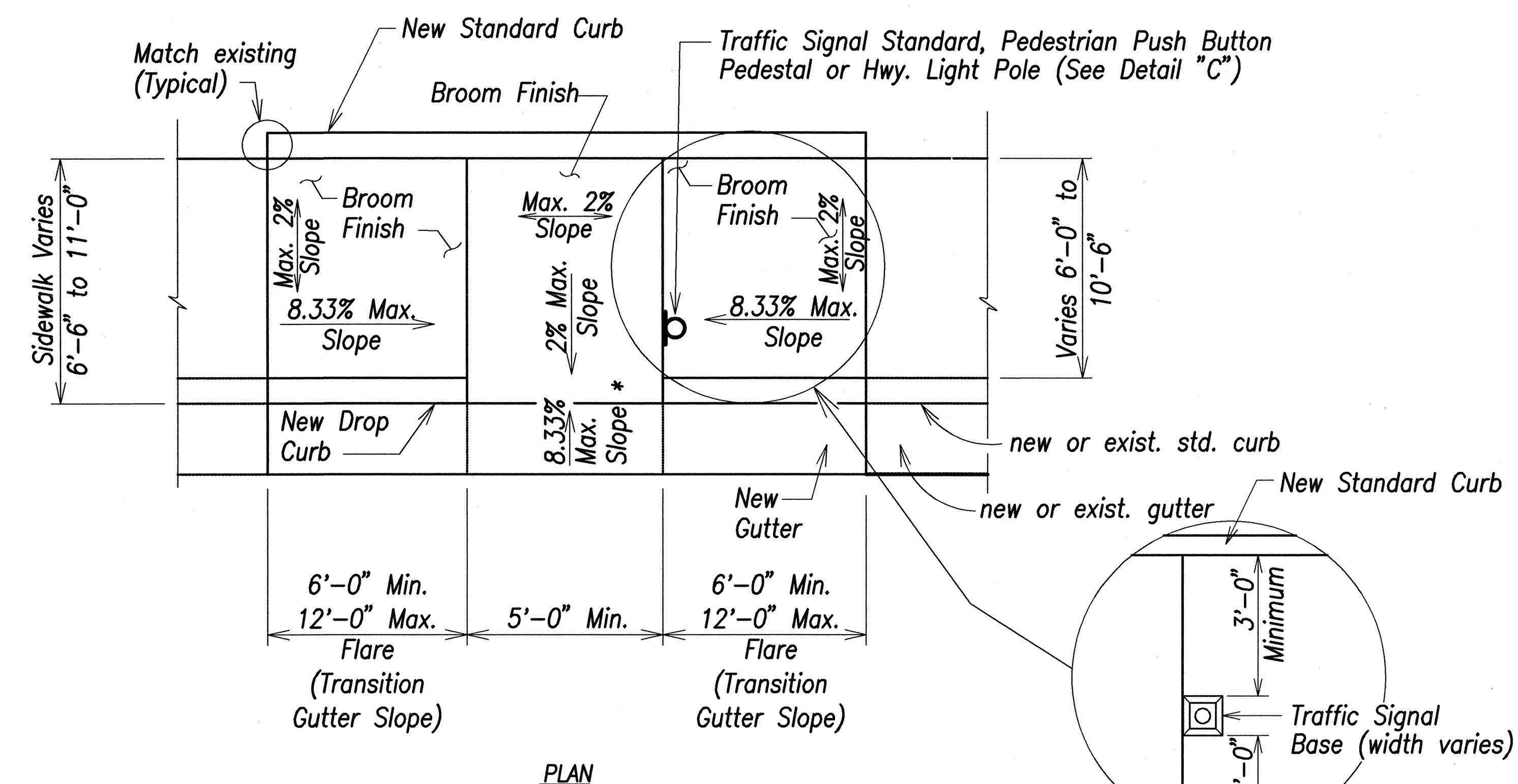
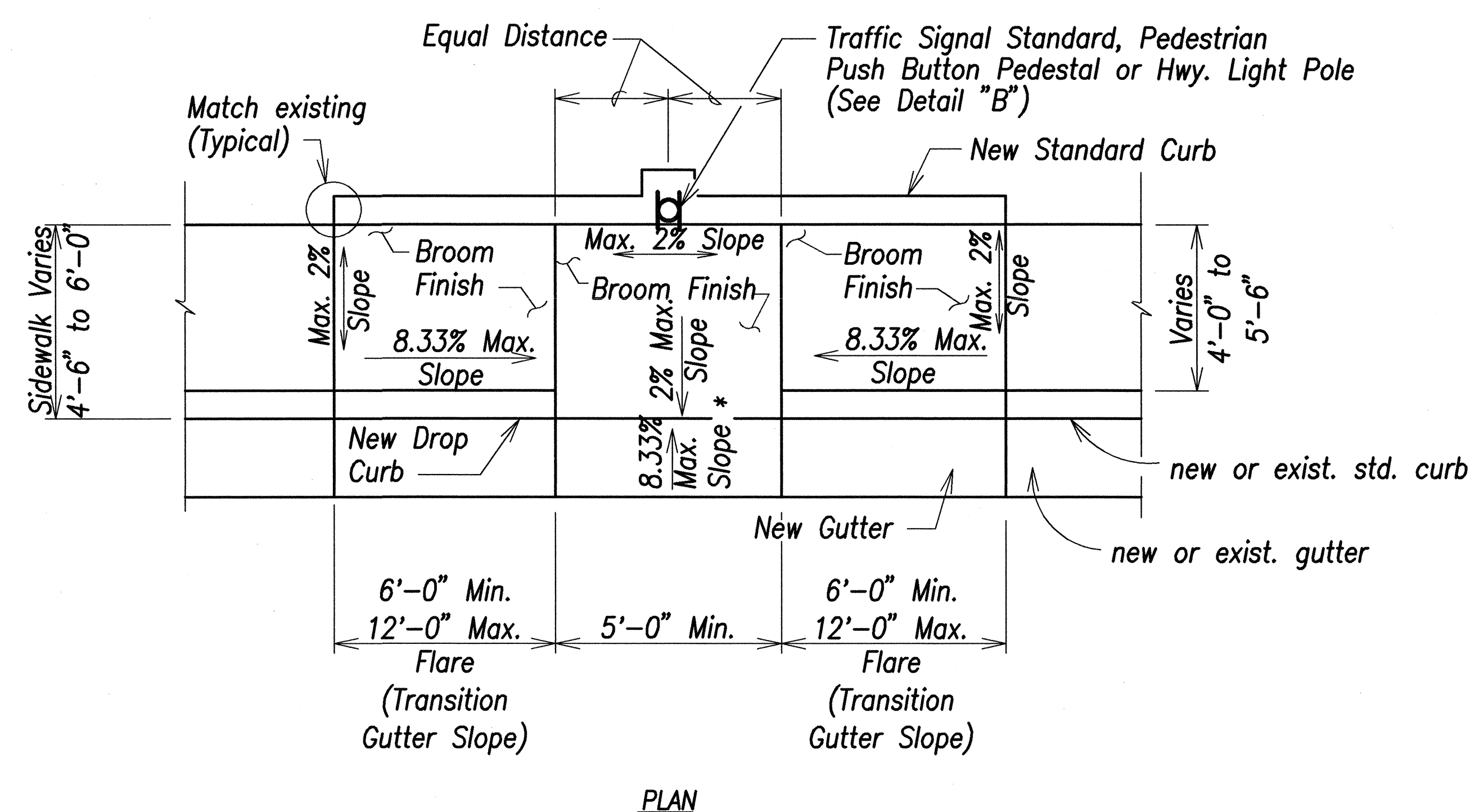
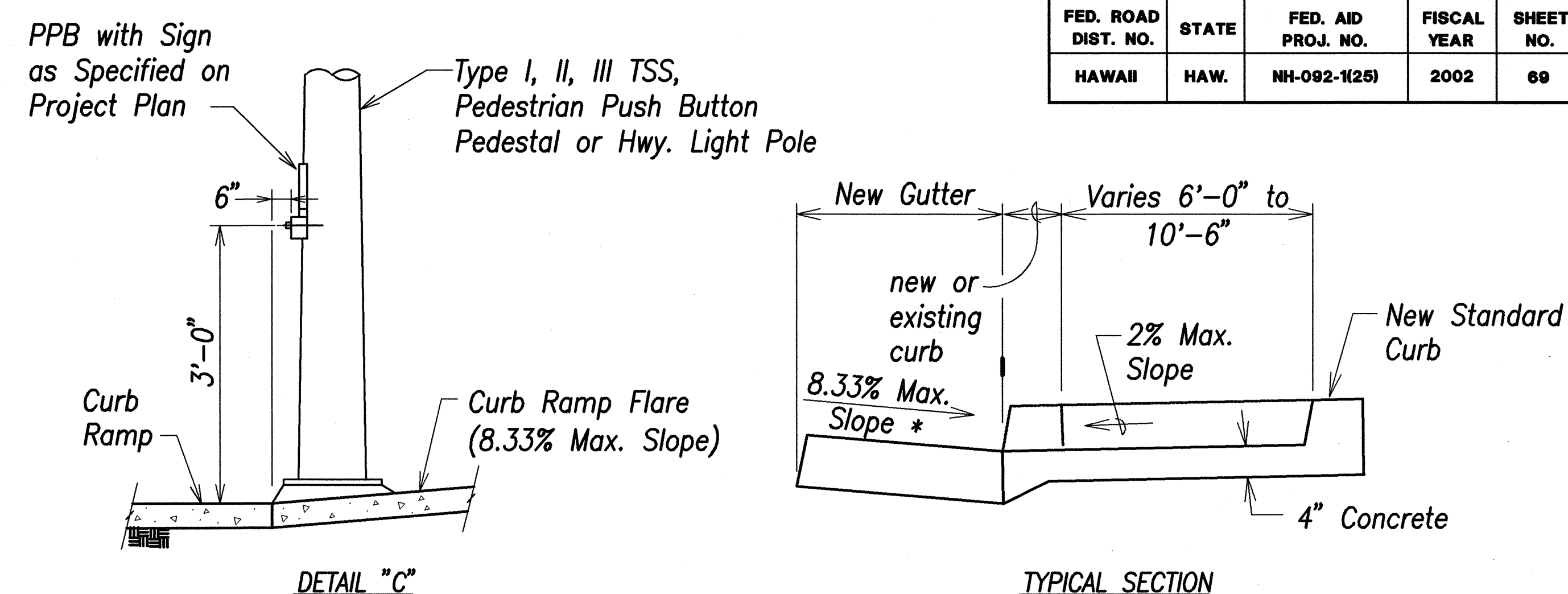
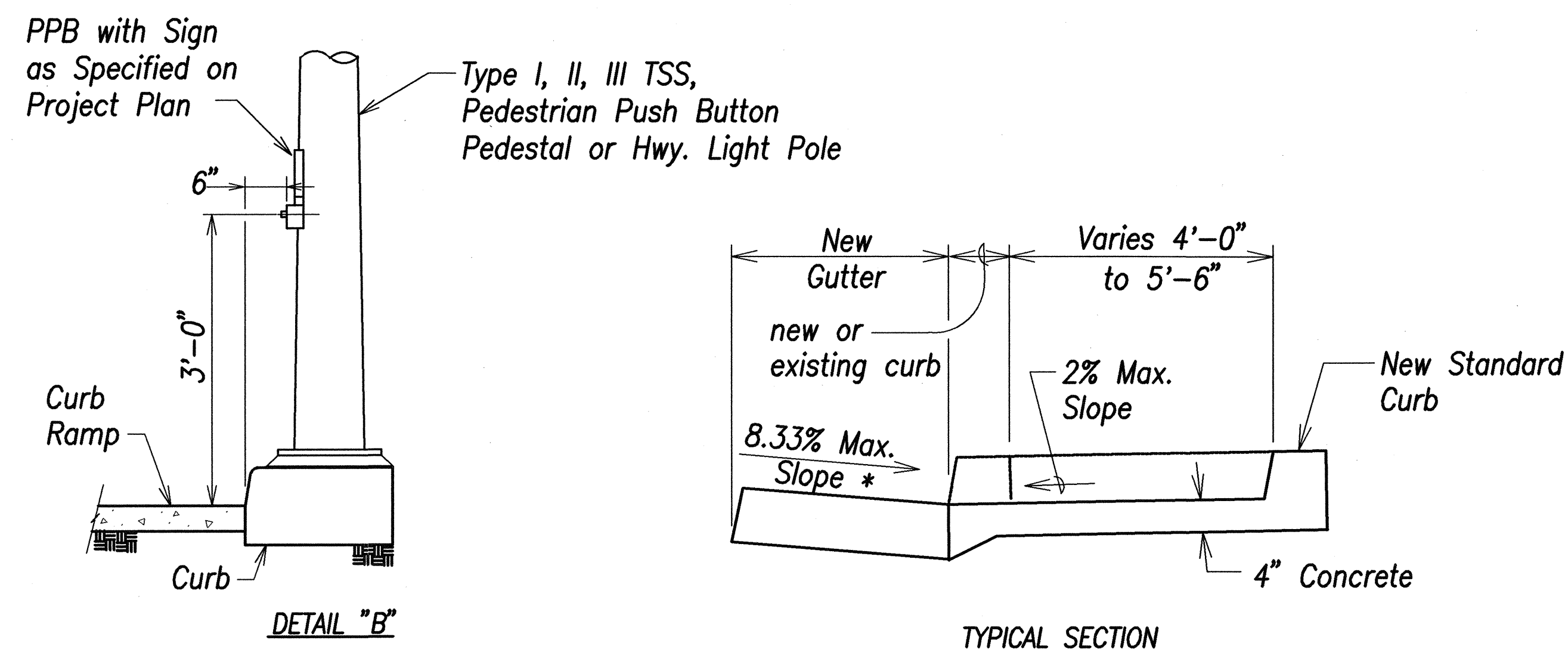


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
DATE 10/19/01
SIGNATURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS - 2
NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)
Scale: Not to Scale
Date: 10/19/01
SHEET No. C-64 OF 107 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	69	268



CURB RAMP – TYPE "B"
SIDEWALK WIDTH 5'-0" OR GREATER
BUT LESS THAN 7'-0" WIDTH

CURB RAMP TYPE "B" MODIFIED
SIDEWALK WIDTH 7'-0" OR GREATER
BUT LESS THAN 12'-0" WIDTH

*See Curb Ramp Note No. 10



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ME OR UNDER MY SUPERVISION

My. G. Wright 10/19/80
SIGNATURE DATE

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

CURB RAMP DETAILS - 3

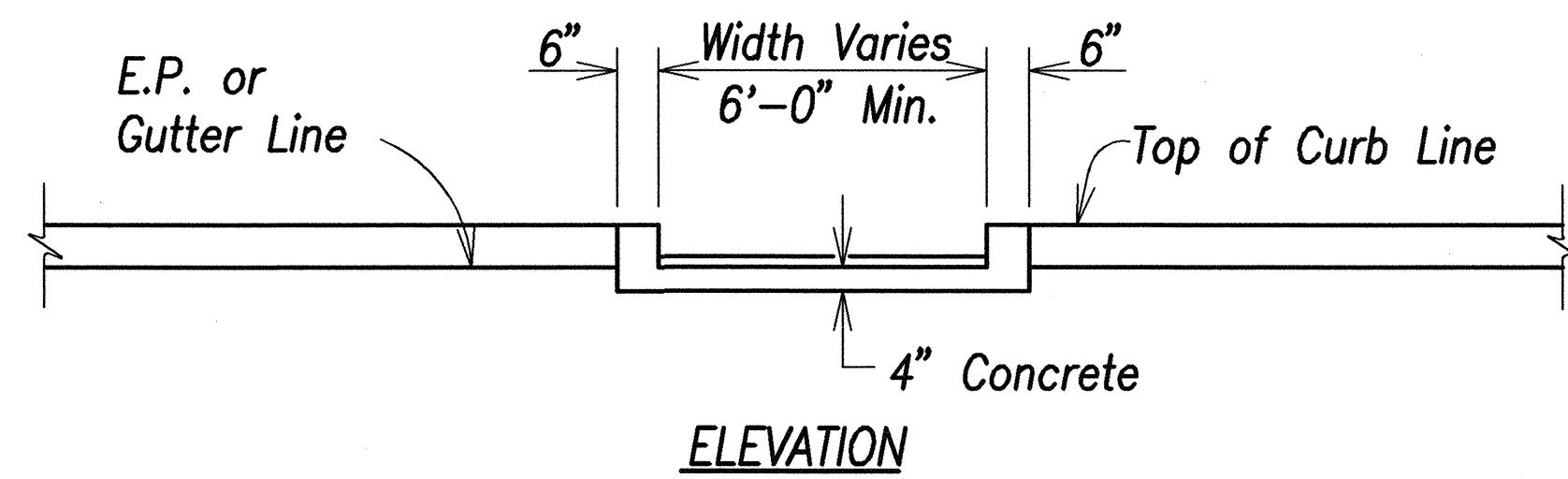
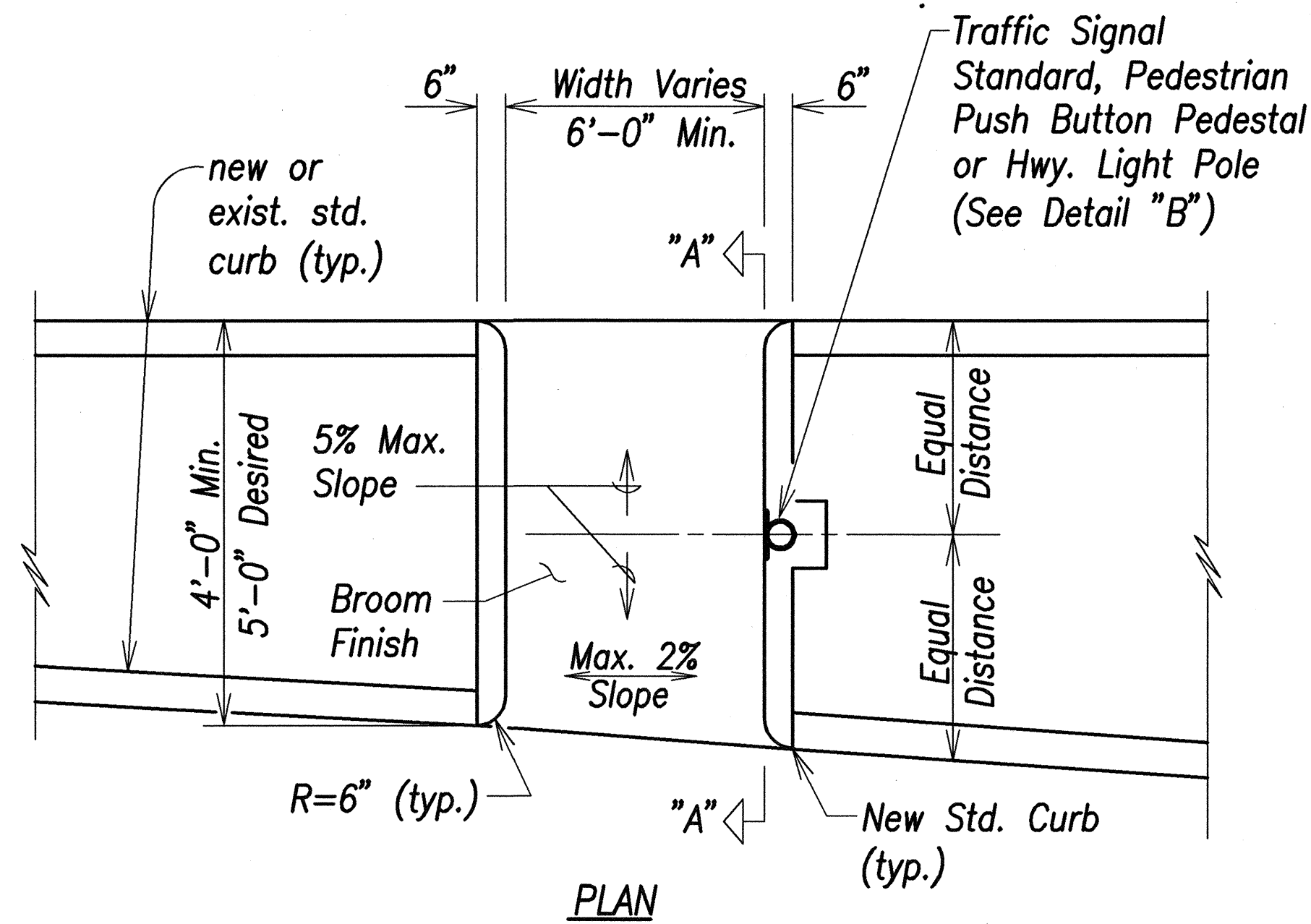
NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)

Scale: Not to Scale Date: 10/19/01

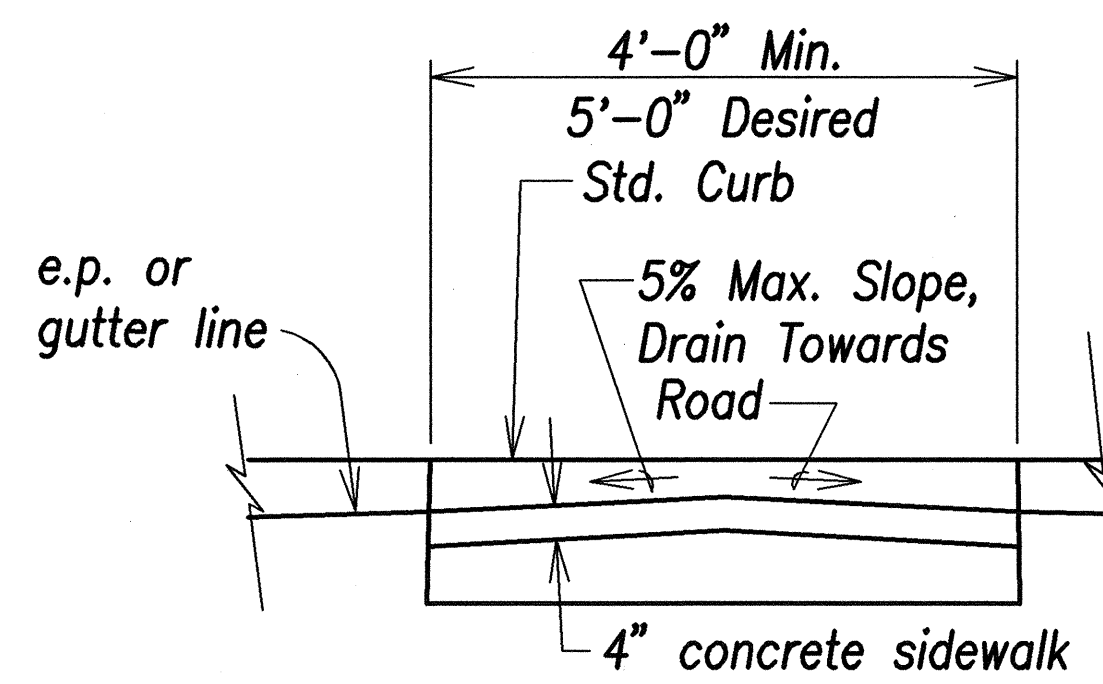
SHEET No. C-65 OF 107 SHEETS

RMTc JOB NO.: 1-18681-0E

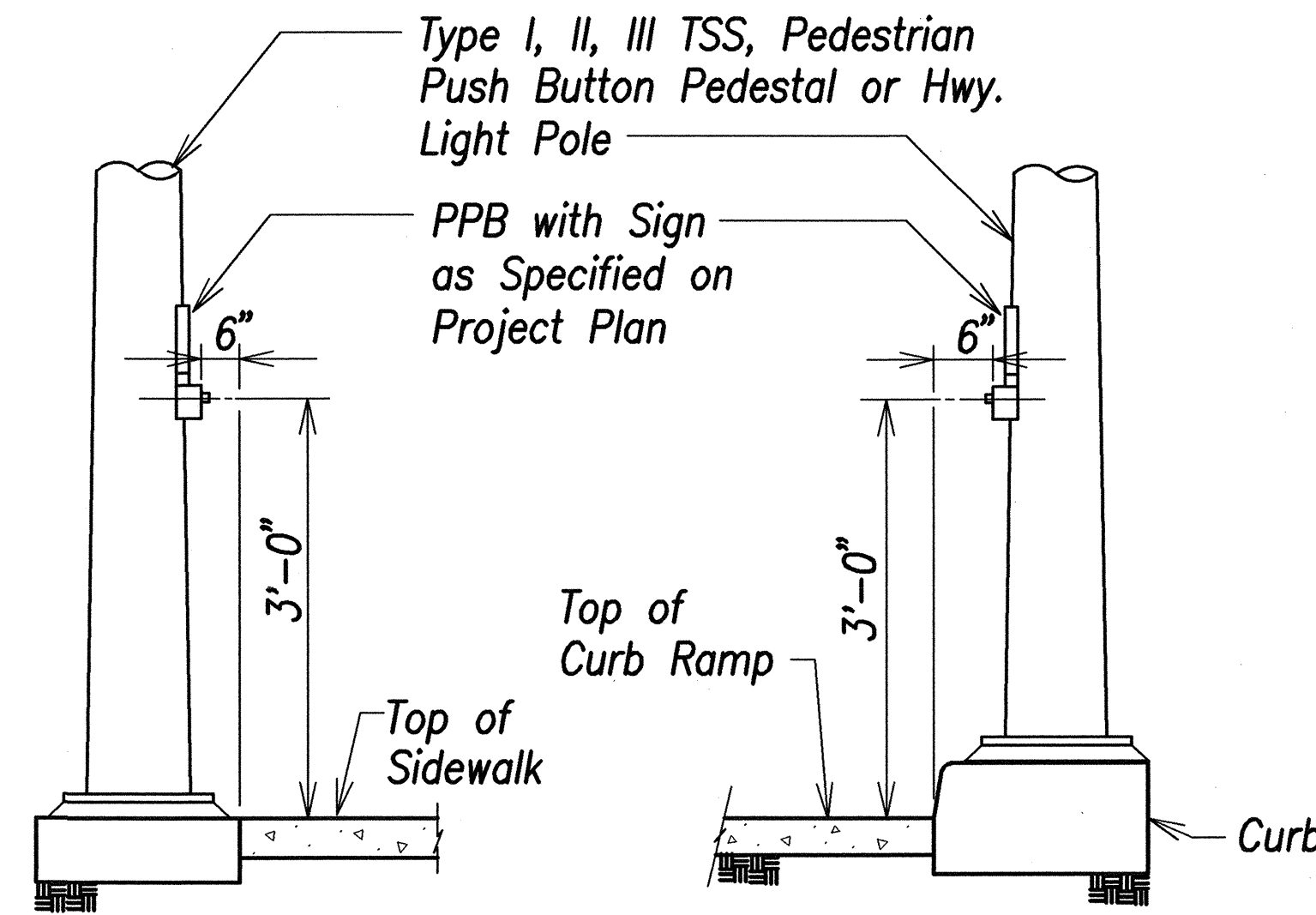
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	70	268



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

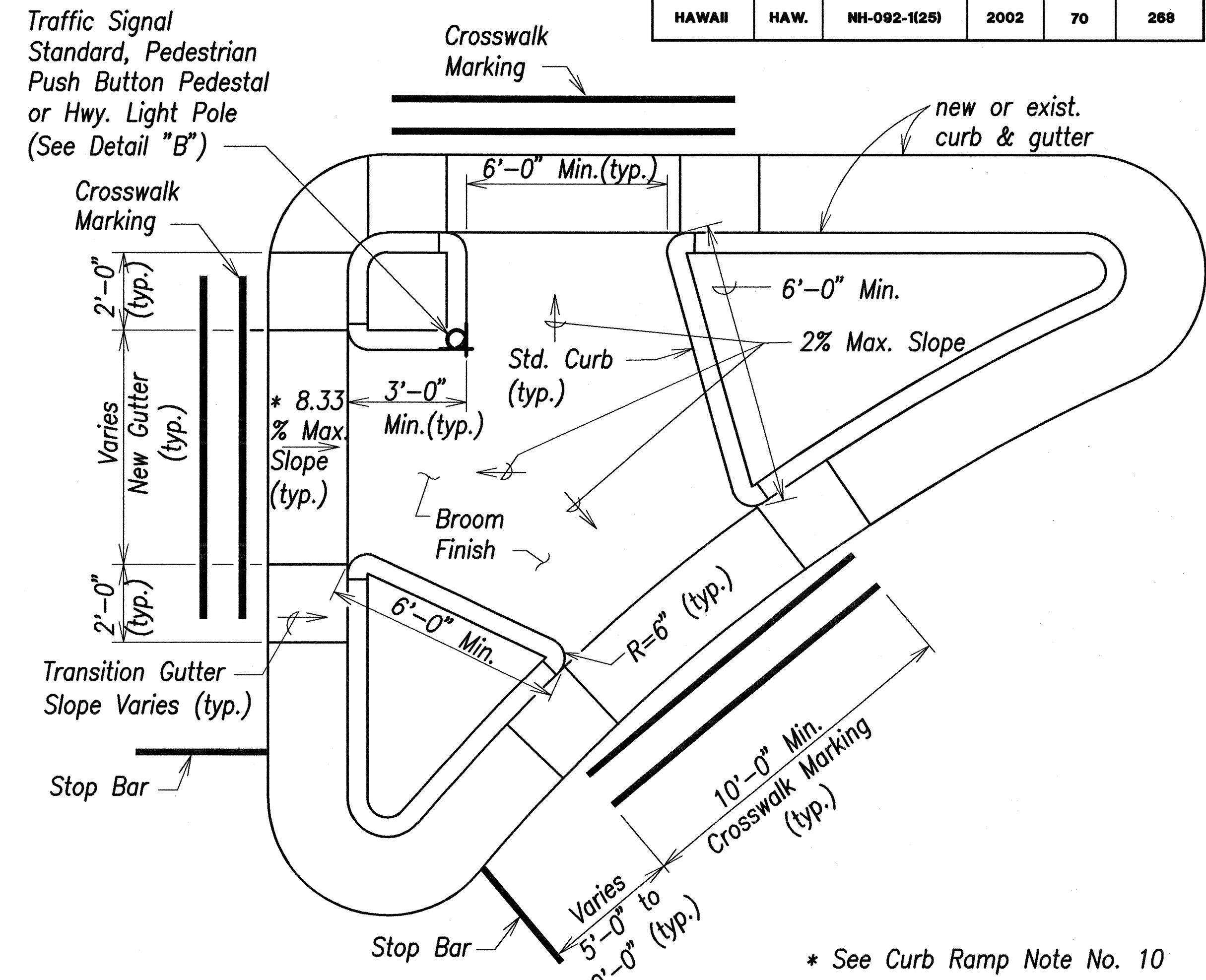


SECTION "A-A"



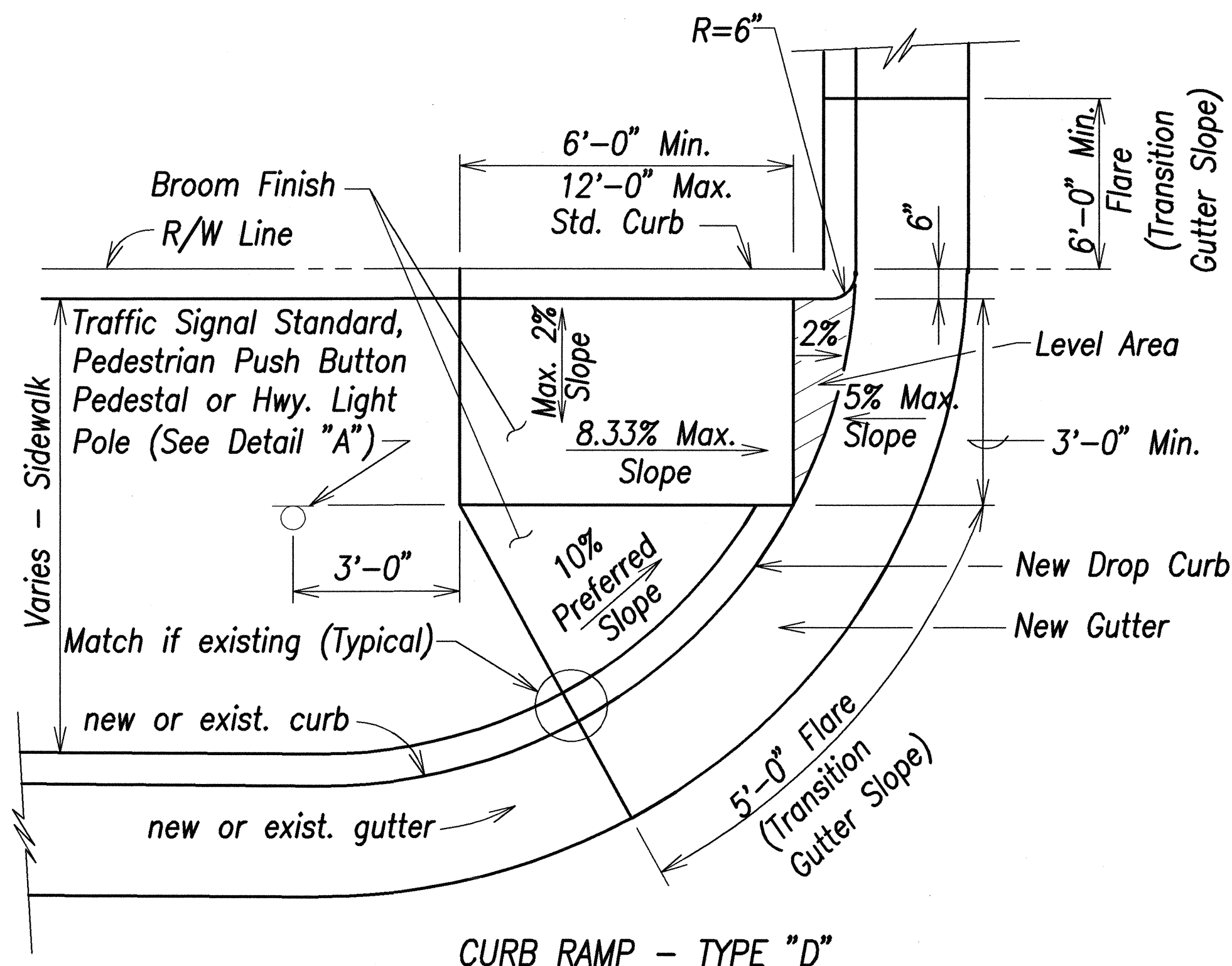
DETAIL "A"

DETAIL "B"

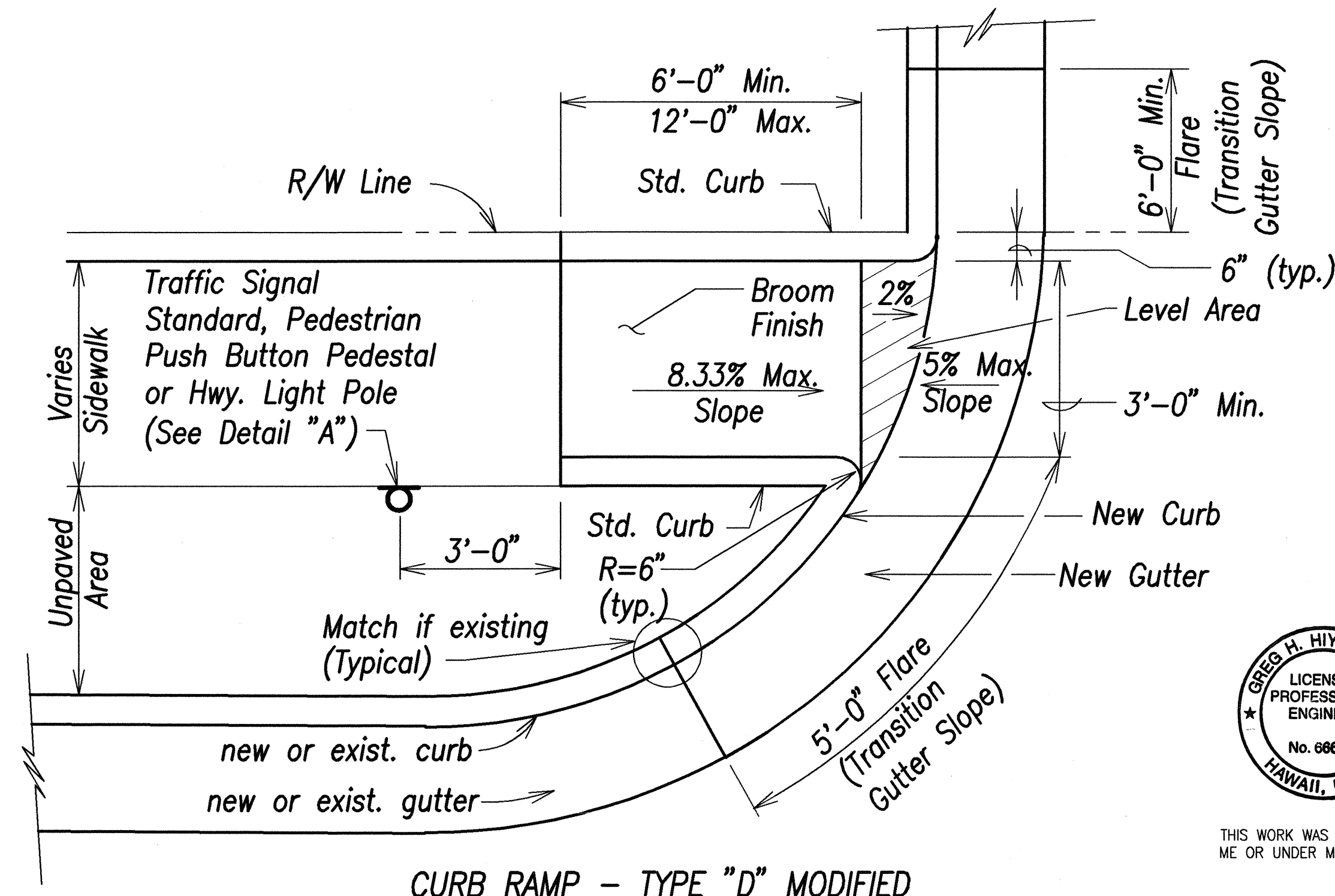


CURB RAMP - TYPE "C" MODIFIED

* See Curb Ramp Note No. 10



CURB RAMP - TYPE "D"



CURB RAMP - TYPE "D" MODIFIED



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

SIGNATURE DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

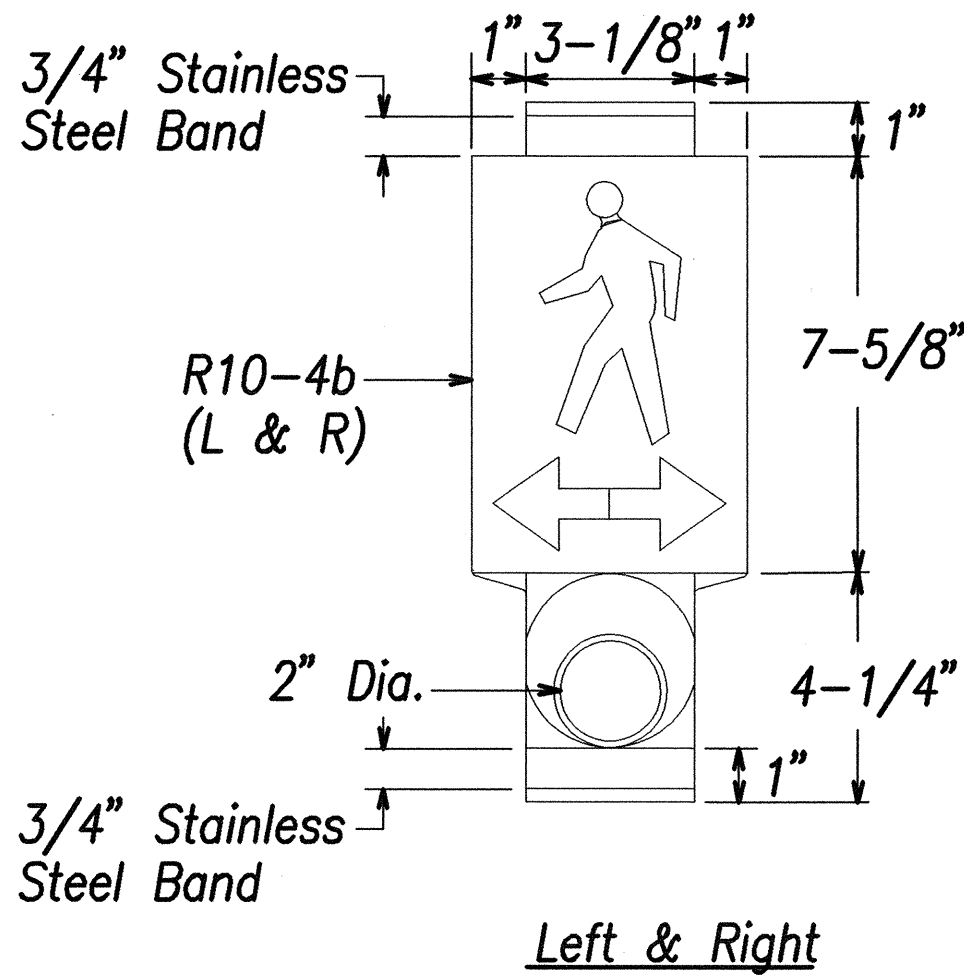
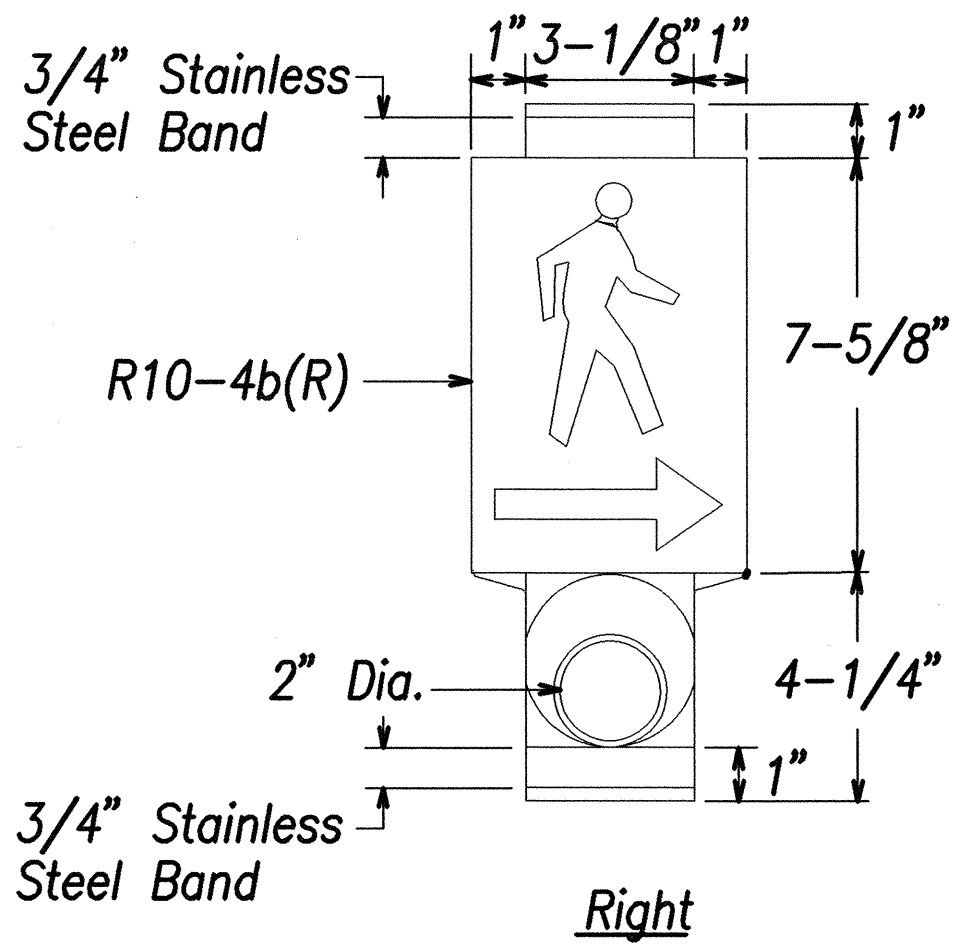
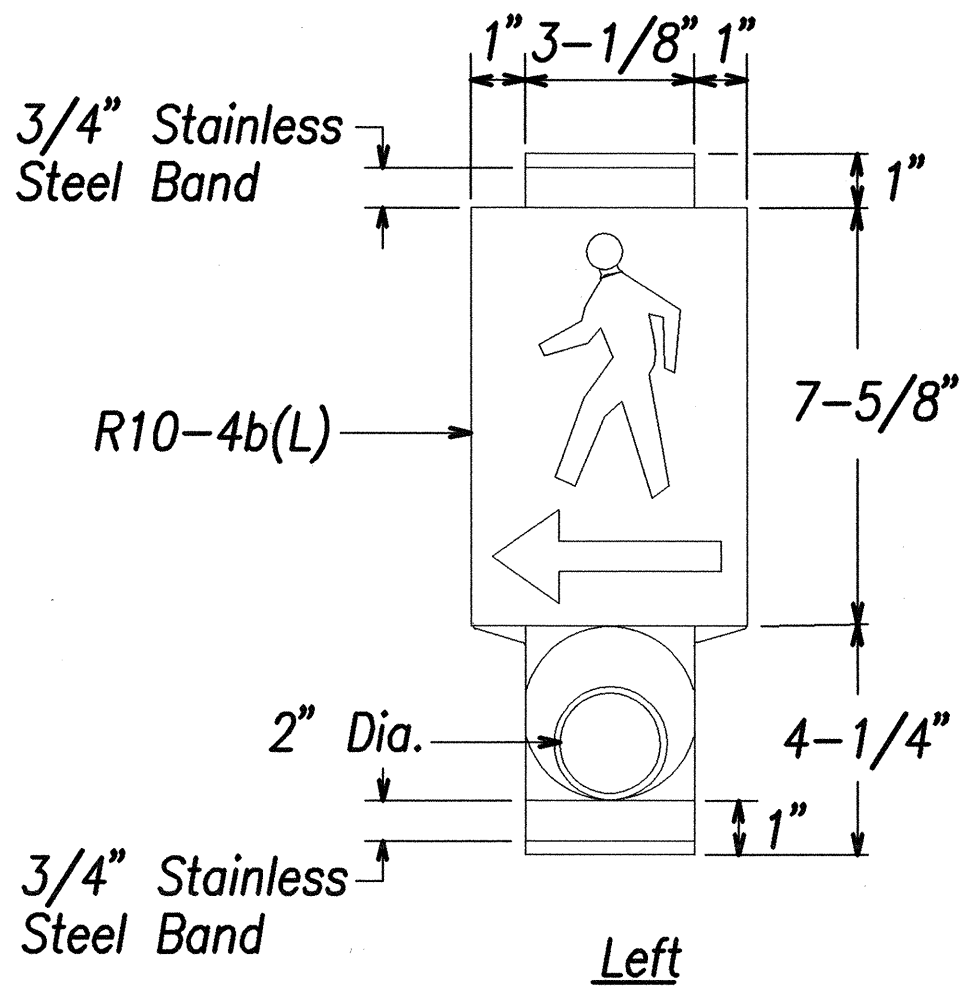
CURB RAMP DETAILS - 4

NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)

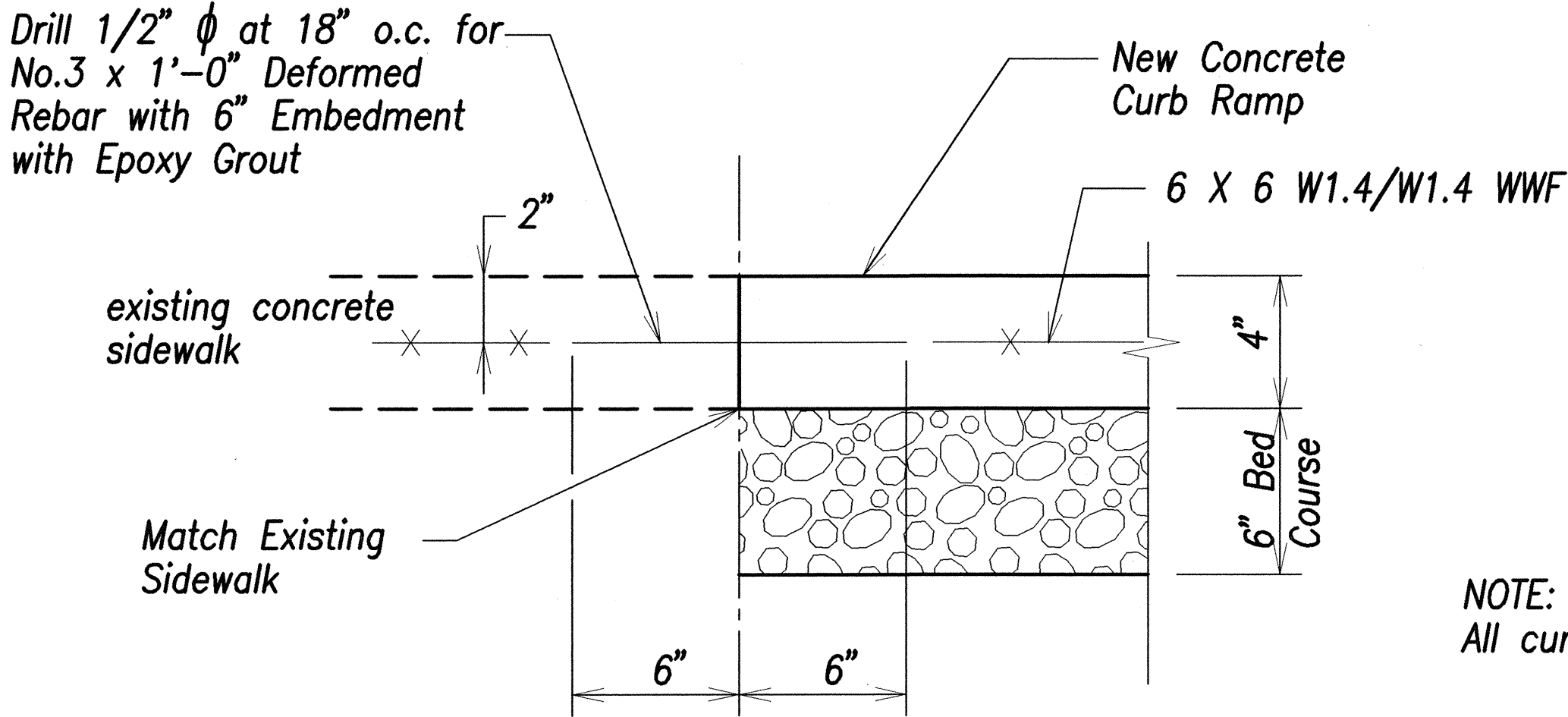
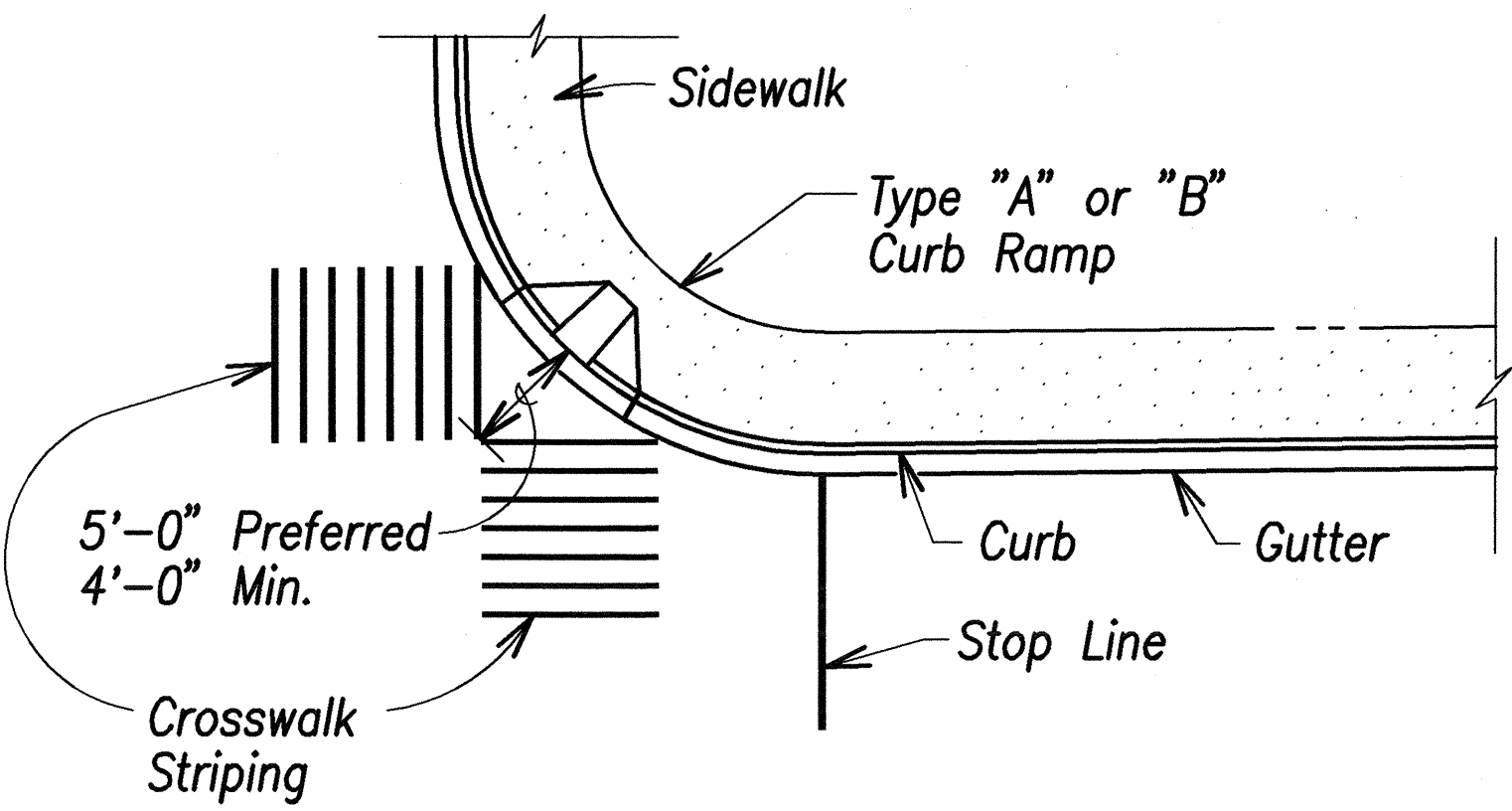
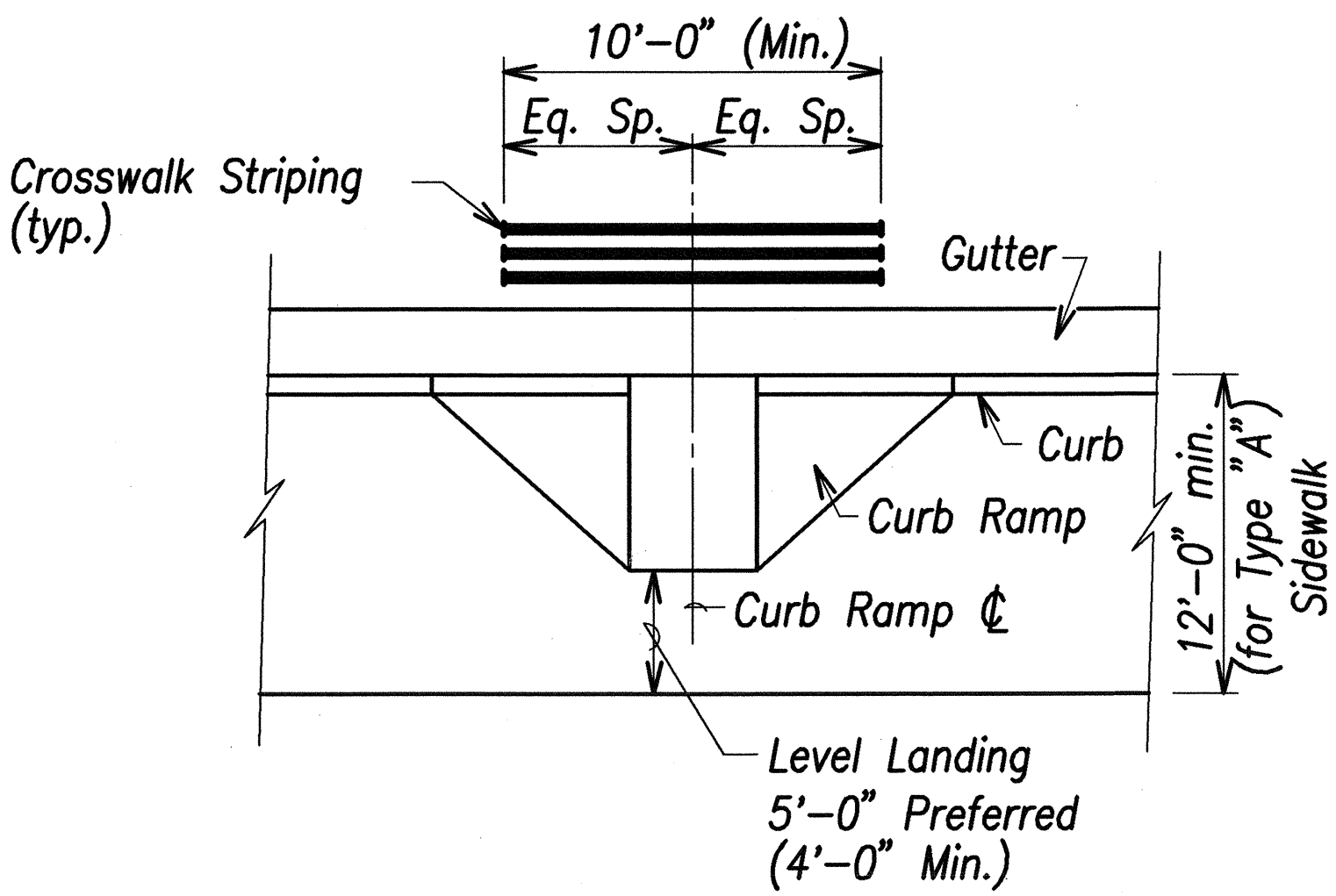
Scale: Not to Scale Date: 10/19/01

SHEET No. C-66 OF 107 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(25)	2002	72	268



PEDESTRIAN PUSH BUTTON WITH SIGN
Man, Arrow & Push Button - White
Background - Black



NOTE:
All curb ramps shall be reinforced.

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



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
DATE 10/19/01
SIGNATURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS - 6
NIMITZ HIGHWAY REHABILITATION
SUMNER STREET TO QUEEN STREET
F.A.I. Proj. No. NH-092-1(25)
Scale: Not to Scale
SHEET No. C-68 OF 107 SHEETS

Date: 10/19/01