

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(023)	2015	18	111

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	DATE
NOTE BOOK	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
TRACED BY	
SURVEY PLOTTED BY	

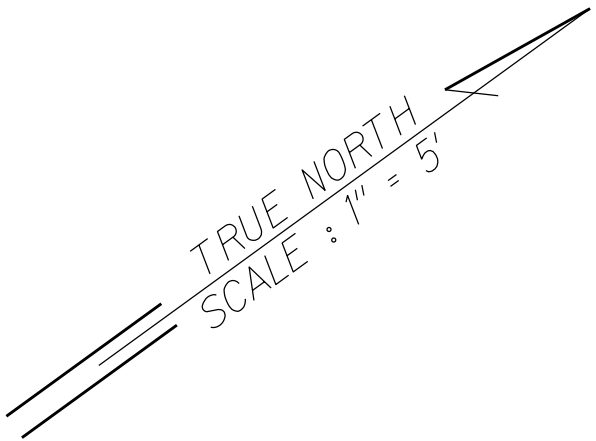
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R 12-06-06 TE-00 sht. 1 of 9

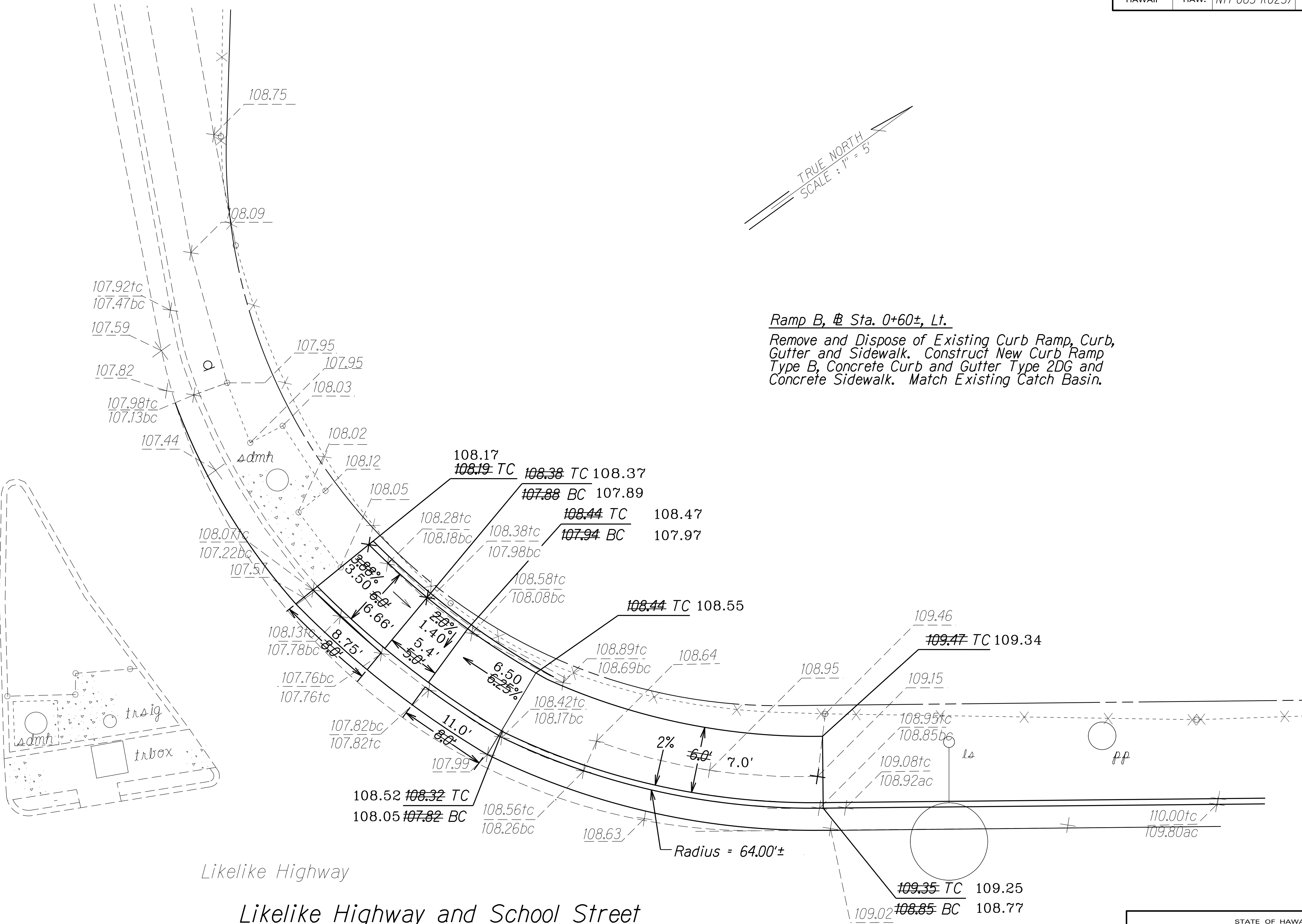
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>CURB RAMP AND SIDEWALK NOTES</u>
<u>LIKELIKE HIGHWAY RESURFACING</u> School Street to Emmeline Place Federal Aid Project No. NH-063-1(023) Date: Sept., 2015
SHEET No. 1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(023)	2015	19	111

School Street



Ramp B, ~~At~~ Sta. 0+60±, Lt.
Remove and Dispose of Existing Curb Ramp, Curb, Gutter and Sidewalk. Construct New Curb Ramp Type B, Concrete Curb and Gutter Type 2DG and Concrete Sidewalk. Match Existing Catch Basin.



Likelike Highway

Likelike Highway and School Street

Scale: 1.0"=5.0'

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	TRACED BY	
	DESIGNED BY	
	CHECKED BY	
NOTE BOOK		

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS
LIKELIKE HIGHWAY RESURFACING
School Street to Emmeline Place
Federal Aid Project No. NH-063-1(023)

Scale: 1.0" = 5.0' Date: Sept., 2015

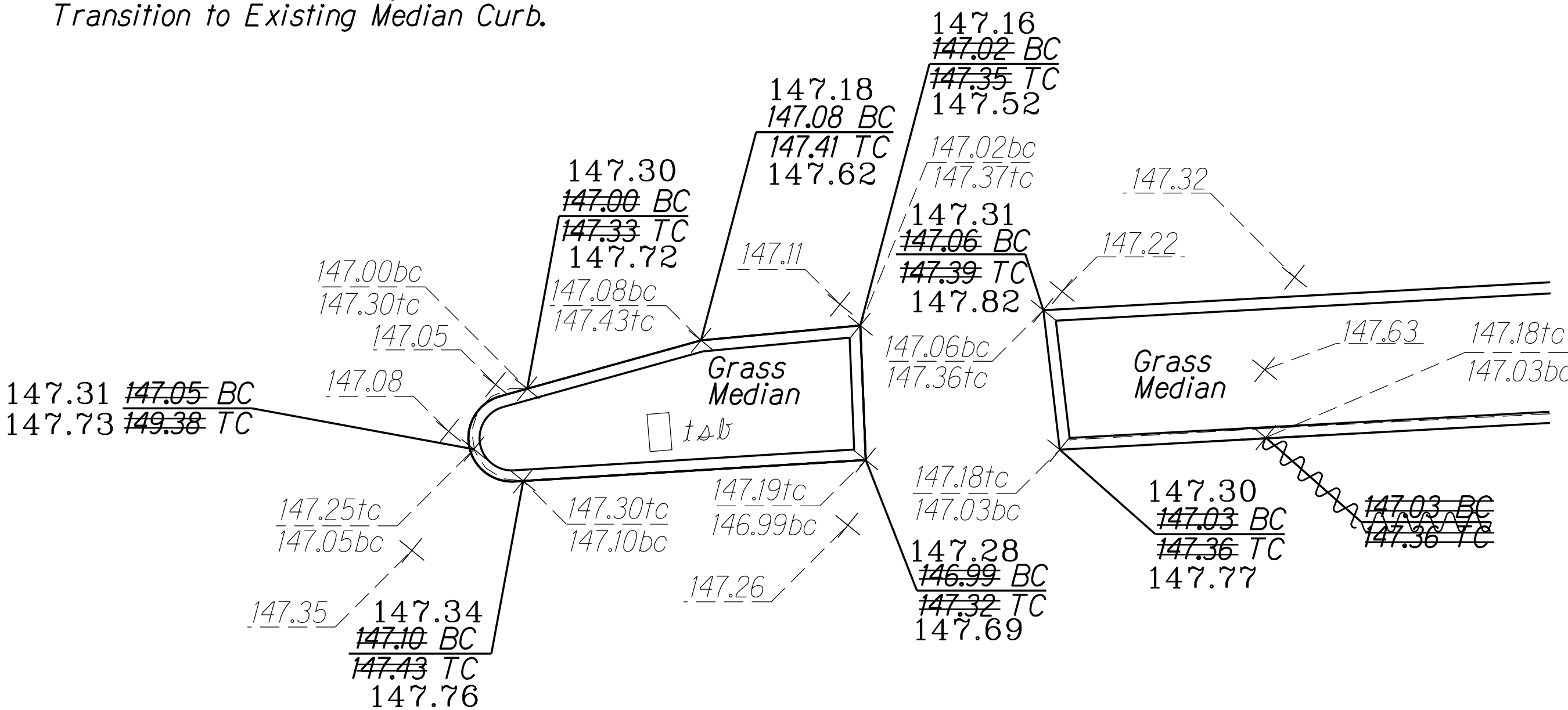
SHEET No. 1 OF 5 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(K023)	2015	21	111

Median Curb, @ Sta. 14+87± to @ Sta. 16+00±

Remove and Dispose of Existing Median Curb. Construct New 4" Concrete Curb, Type 2G at Grass Median. Transition to Existing Median Curb.

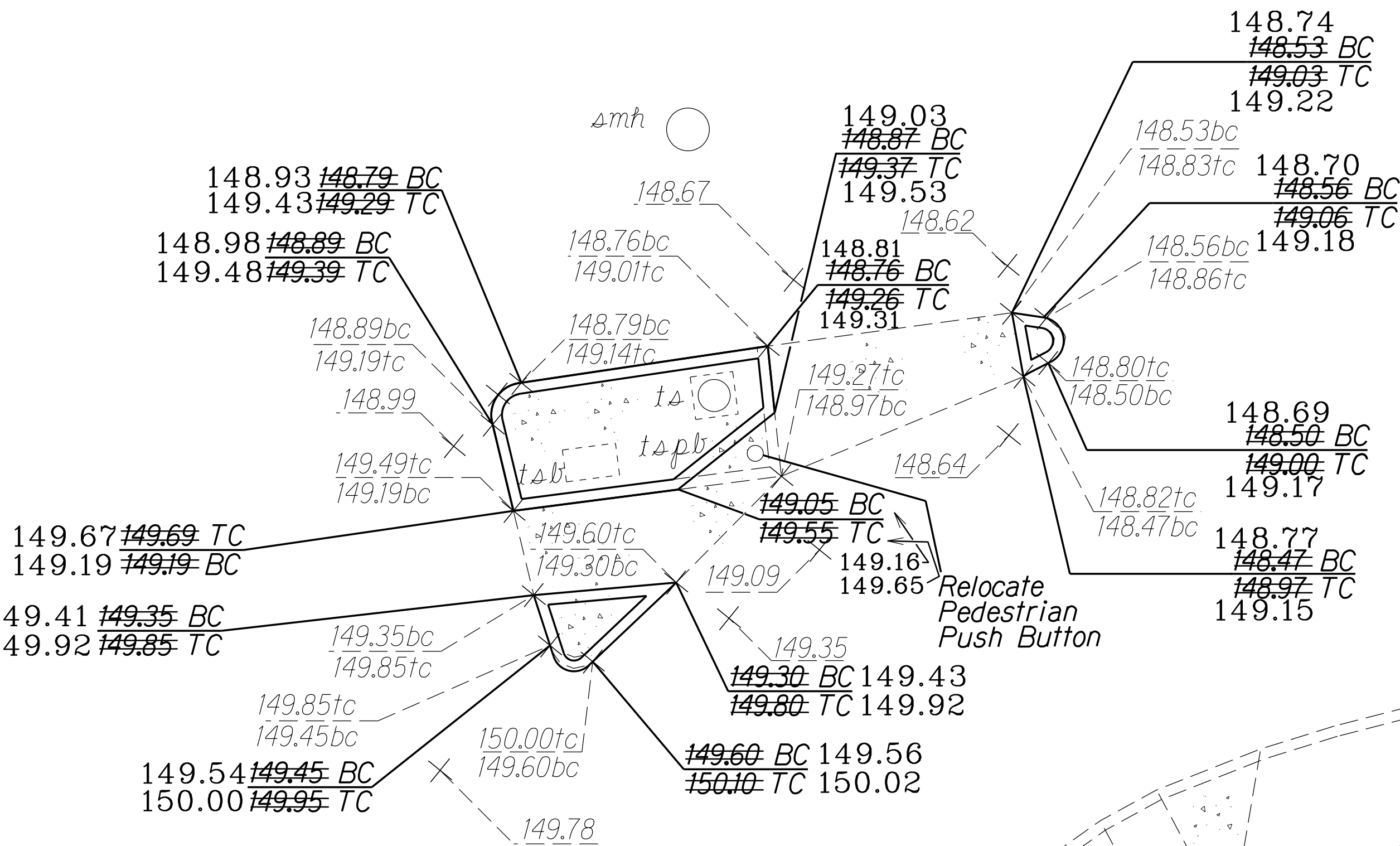
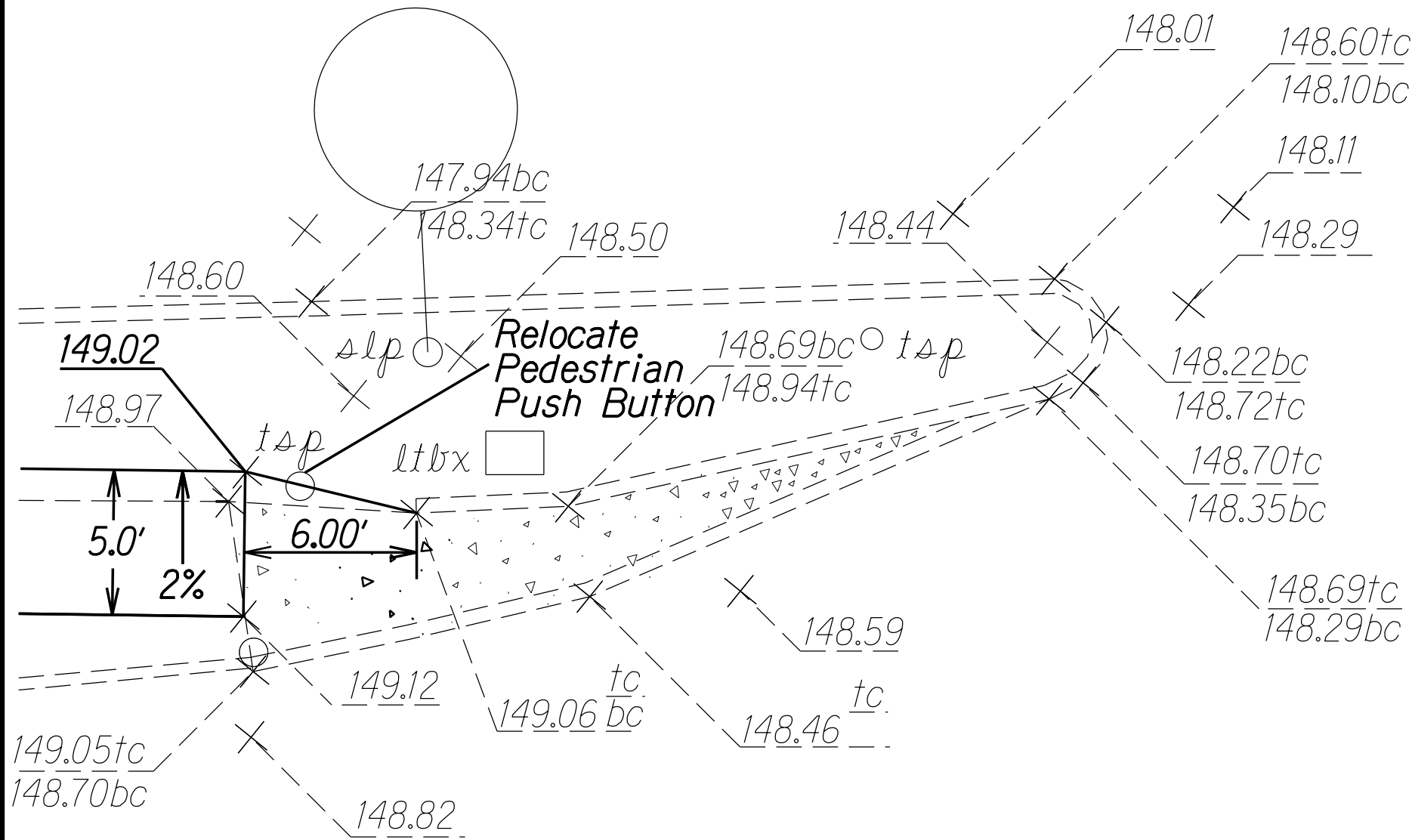


TRUE NORTH
SCALE : 1" = 5'

Likeline Highway

Ramp D, @ Sta. 13+84±, Rt.

Widen Existing Curb Ramp and Relocate Existing Pedestrian Push Button. Connect to New 5' Wide Concrete Sidewalk.



Ramp C Modified, @ Sta. 15+00±, Rt.

Remove and Dispose of Existing Curb Ramp. Construct New Curb Ramp, Type C Modified.

Likeline Highway and Kalihi Street

Scale: 1.0"=5.0'

LEGEND FOR AS-BUILT POSTINGS	
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

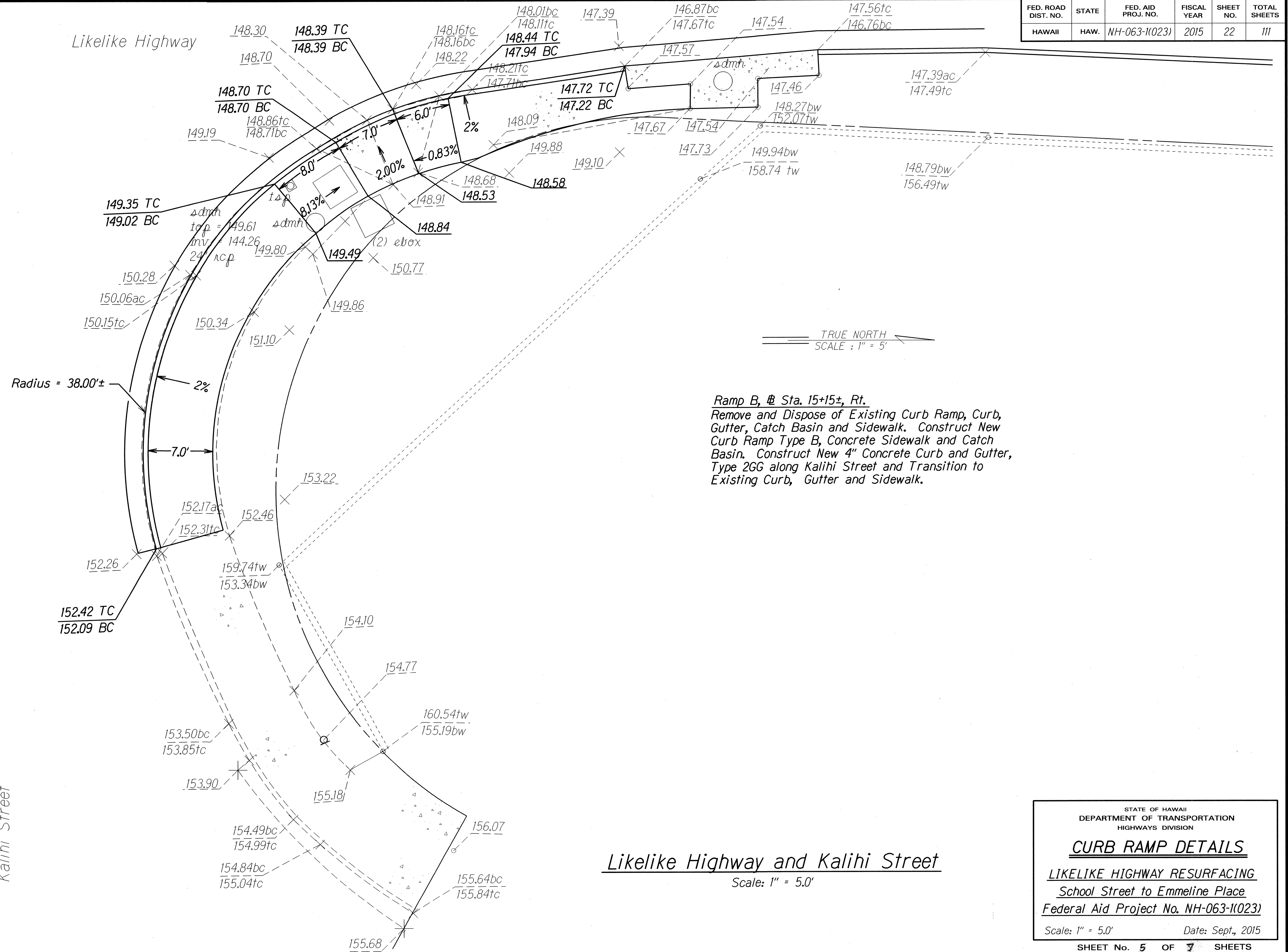
LIKELIKE HIGHWAY RESURFACING
School Street to Emmeline Place
Federal Aid Project No. NH-063-1(K023)

Scale: 1" = 5.0' Date: Sept., 2015

SHEET No. 3 OF 5 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(023)	2015	22	III



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

LIKELIKE HIGHWAY RESURFACING
School Street to Emmeline Place
Federal Aid Project No. NH-063-1(023)

Scale: 1" = 5.0'
Date: Sept., 2015

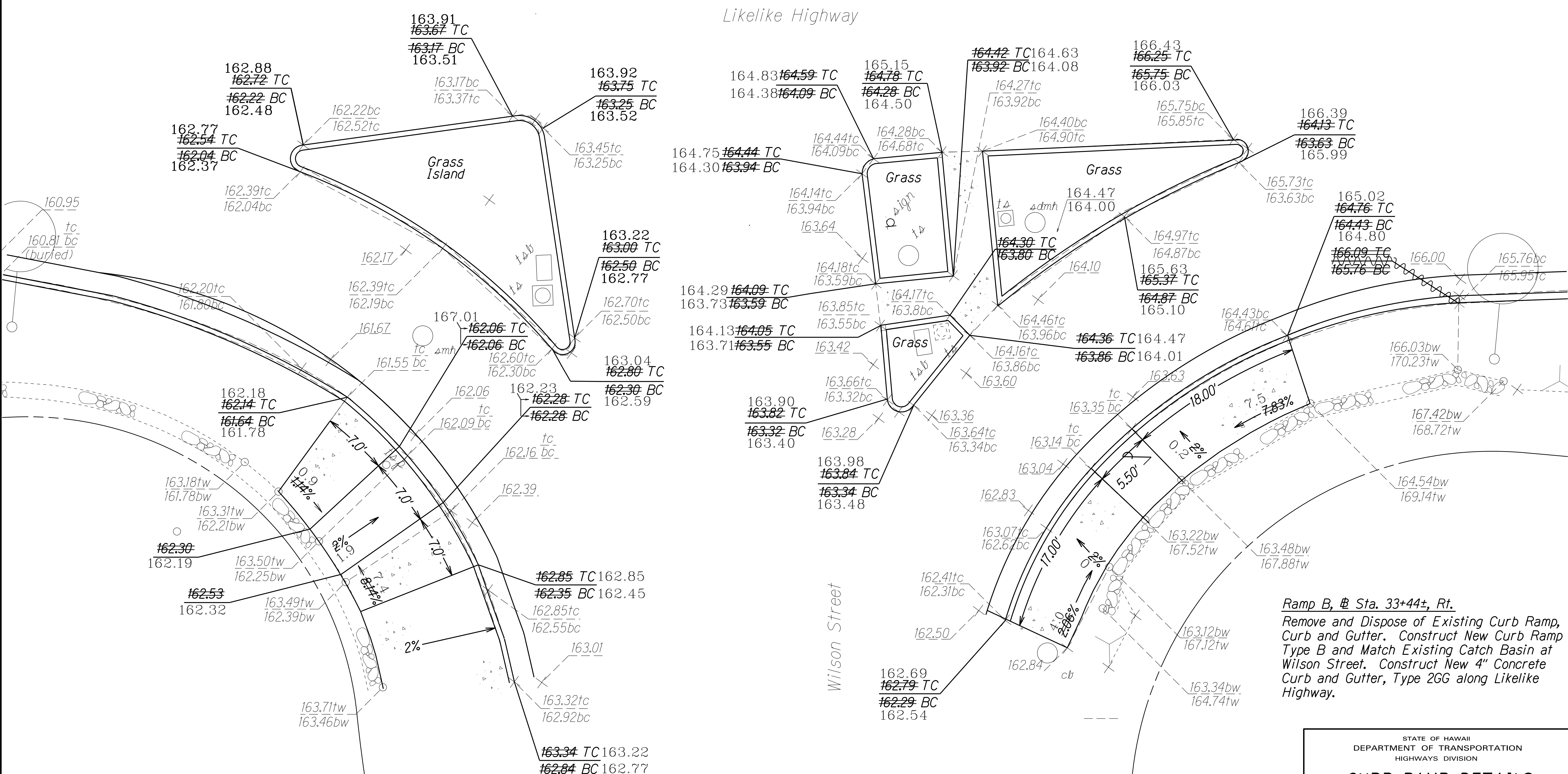
SHEET No. 5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(023)	2015	23	111

Traffic Island, @ Sta. 32+74±, Rt.
Remove and Dispose of Existing Curb. Construct
New Concrete Curb, Type 2D.



Ramp C Modified, @ Sta. 33+30±, Rt.
Remove and Dispose of Existing Curb Ramp.
Construct New Curb Ramp, Type C Modified.



Ramp B, @ Sta. 32+68±, Rt.
Remove and Dispose of Existing Curb Ramp, Curb,
Gutter and Sidewalk. Construct New Curb Ramp
Type B, Concrete Curb and Gutter Type 2DG and
Concrete Sidewalk. Transition to Existing Curb,
Gutter and Sidewalk at Wilson Street.

Likelike Highway and Wilson Street
Scale: 1" = 5.0'

Ramp B, @ Sta. 33+44±, Rt.
Remove and Dispose of Existing Curb Ramp,
Curb and Gutter. Construct New Curb Ramp
Type B and Match Existing Catch Basin at
Wilson Street. Construct New 4" Concrete
Curb and Gutter, Type 2GG along Likelike
Highway.

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CHECKED BY	
NOTE BOOK	
NO.	

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	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

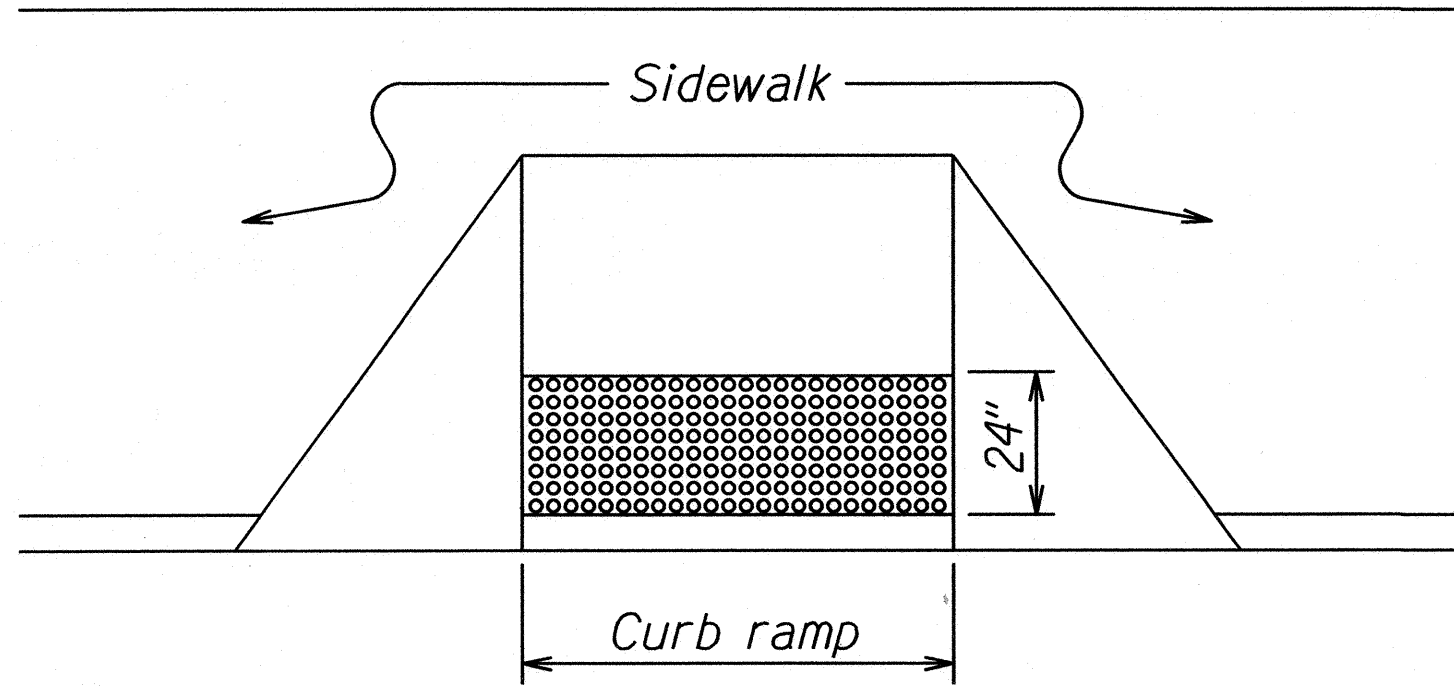
CURB RAMP DETAILS
LIKELIKE HIGHWAY RESURFACING
School Street to Emmeline Place
Federal Aid Project No. NH-063-1(023)

Scale: 1" = 5.0' Date: Sept., 2015

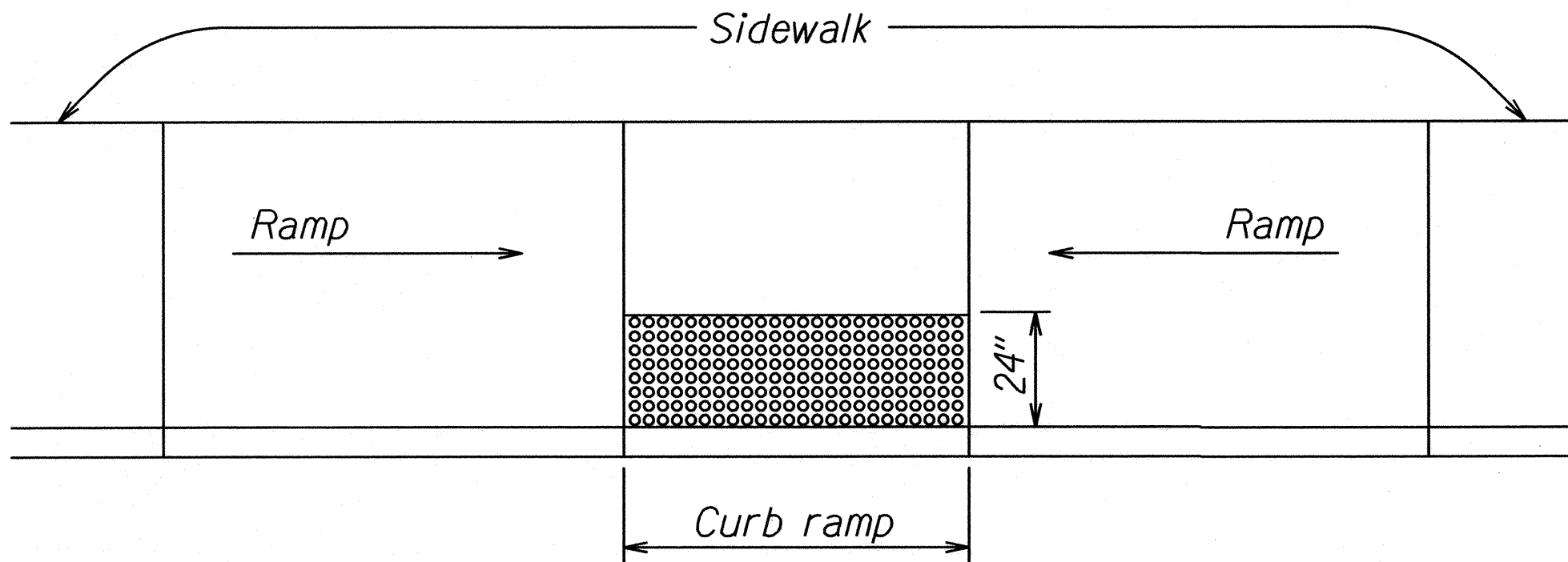
SHEET No. 5 OF 5 SHEETS

"AS-BUILT"

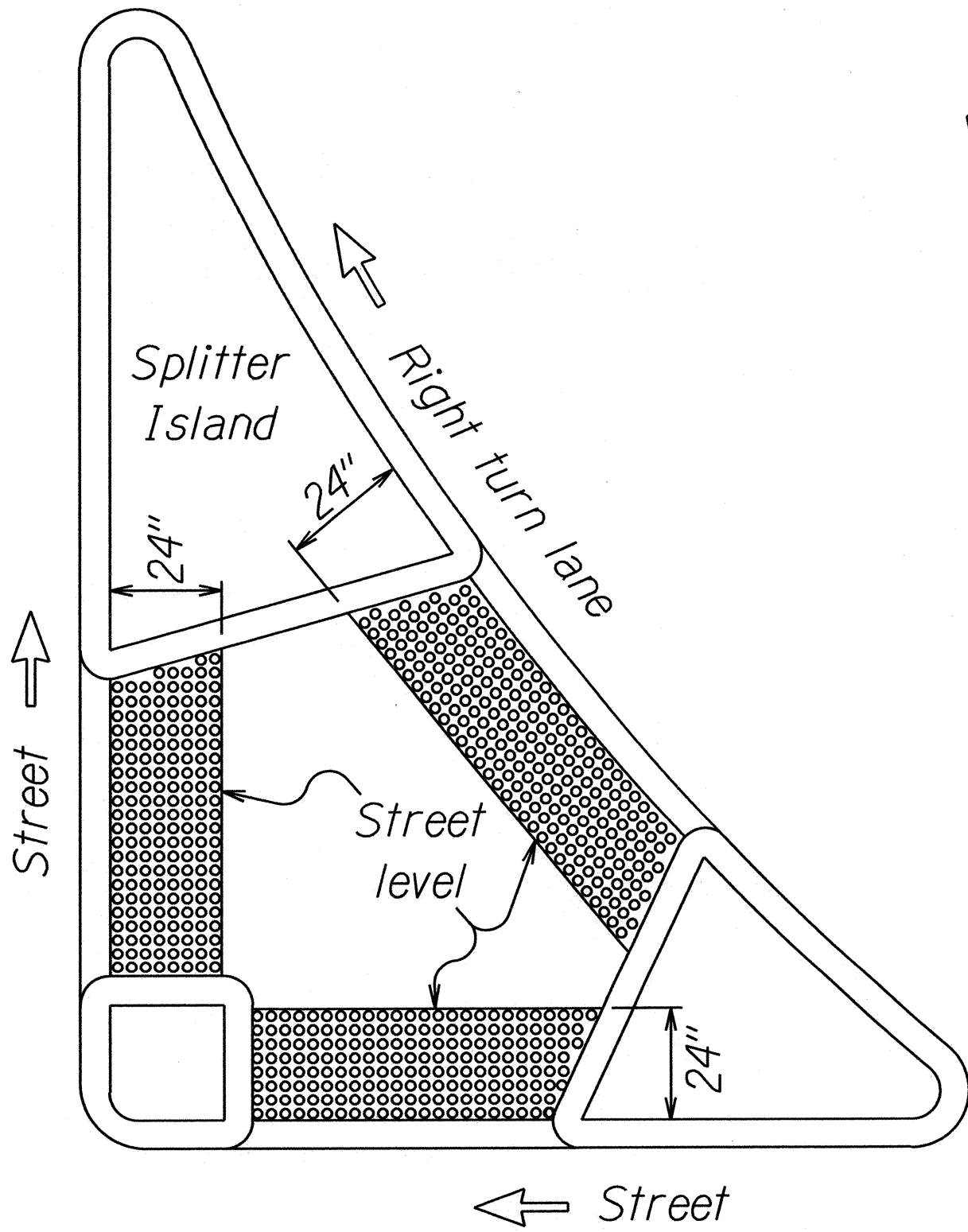
FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-063-1(023)	2015	24	111



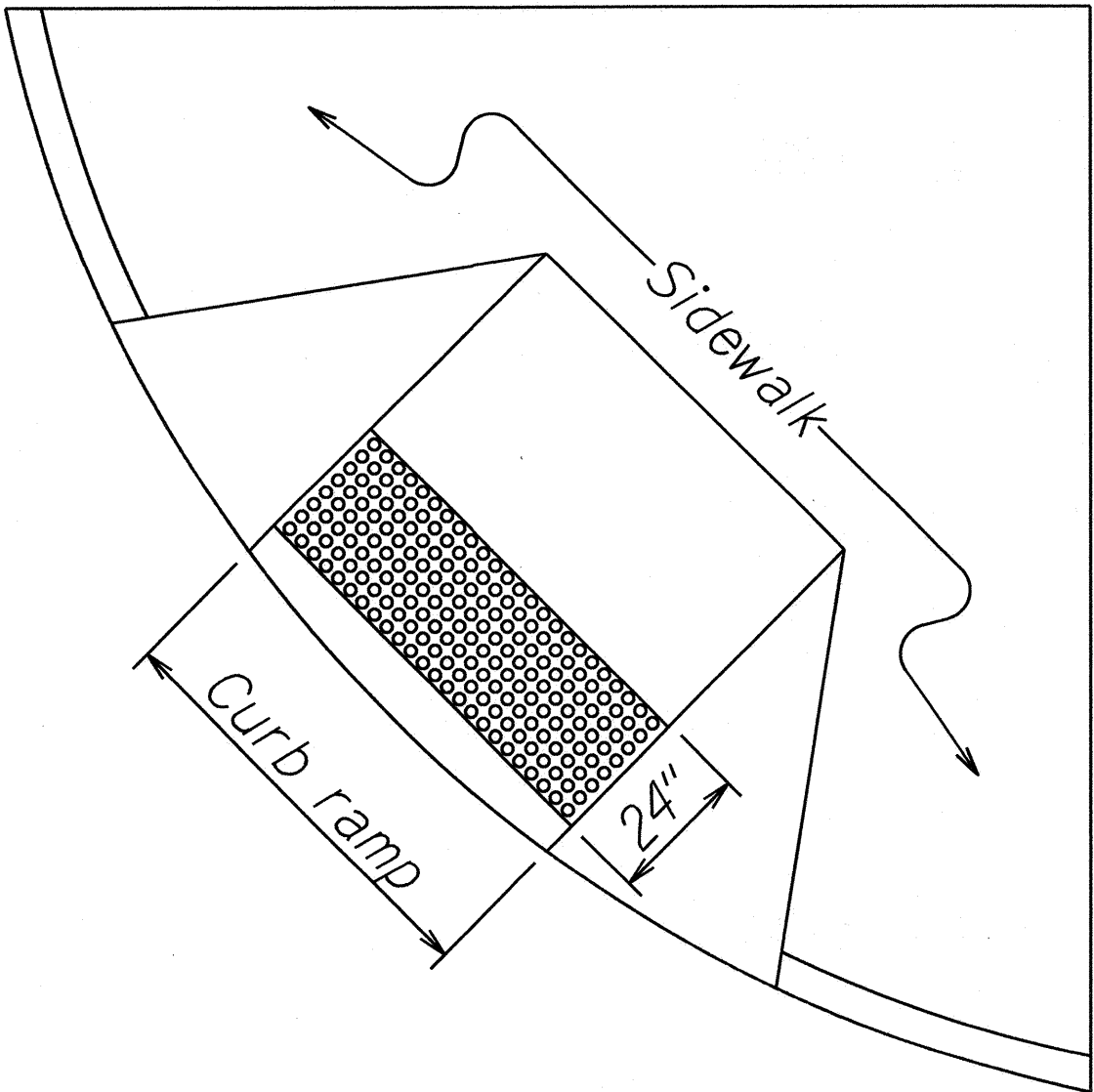
DETECTABLE WARNING AT CURB RAMP



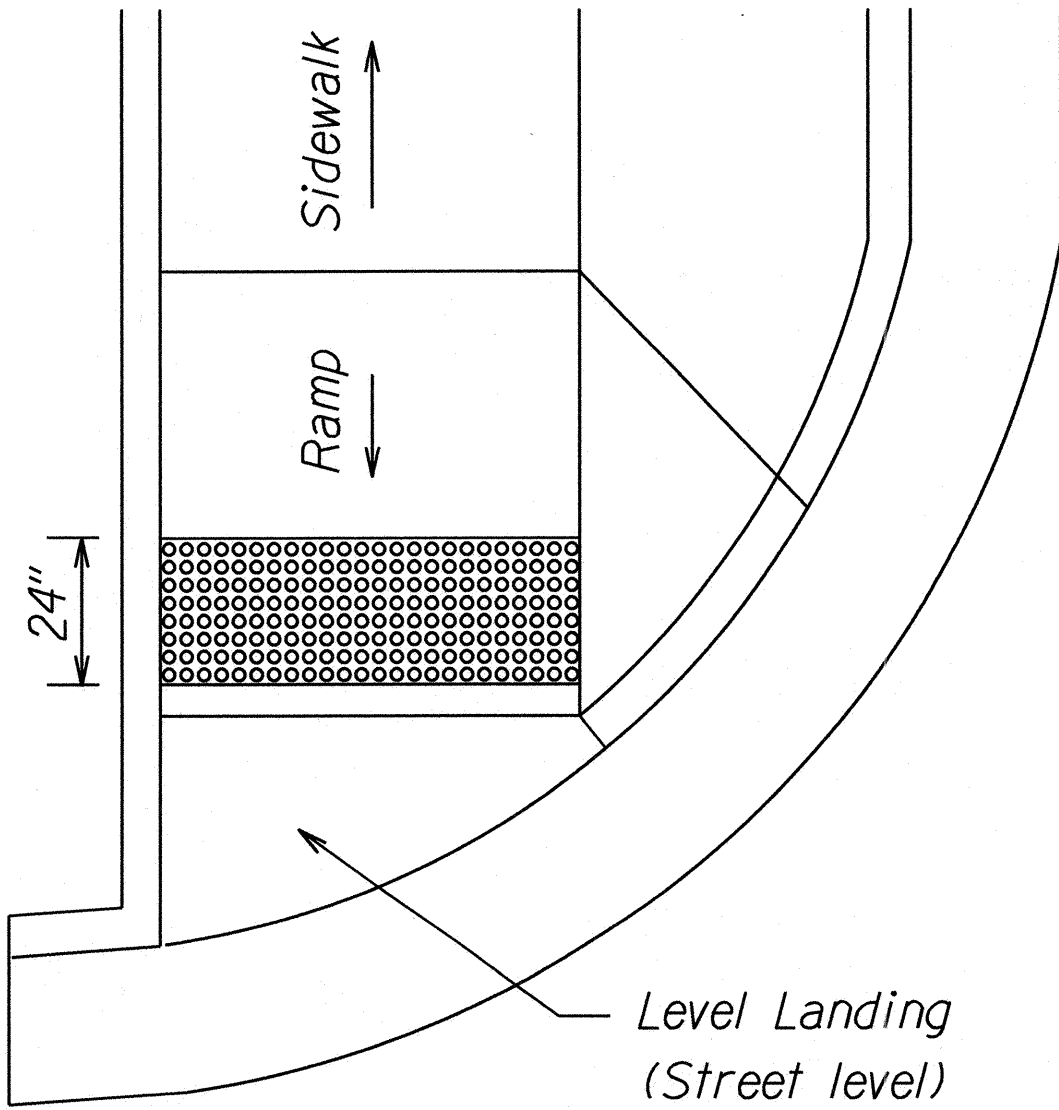
TRANSITION RAMP WITH DETECTABLE WARNING



REFUGE ISLAND WITH
DETECTABLE WARNING



SHARED CURB RAMP WITH
DETECTABLE WARNING



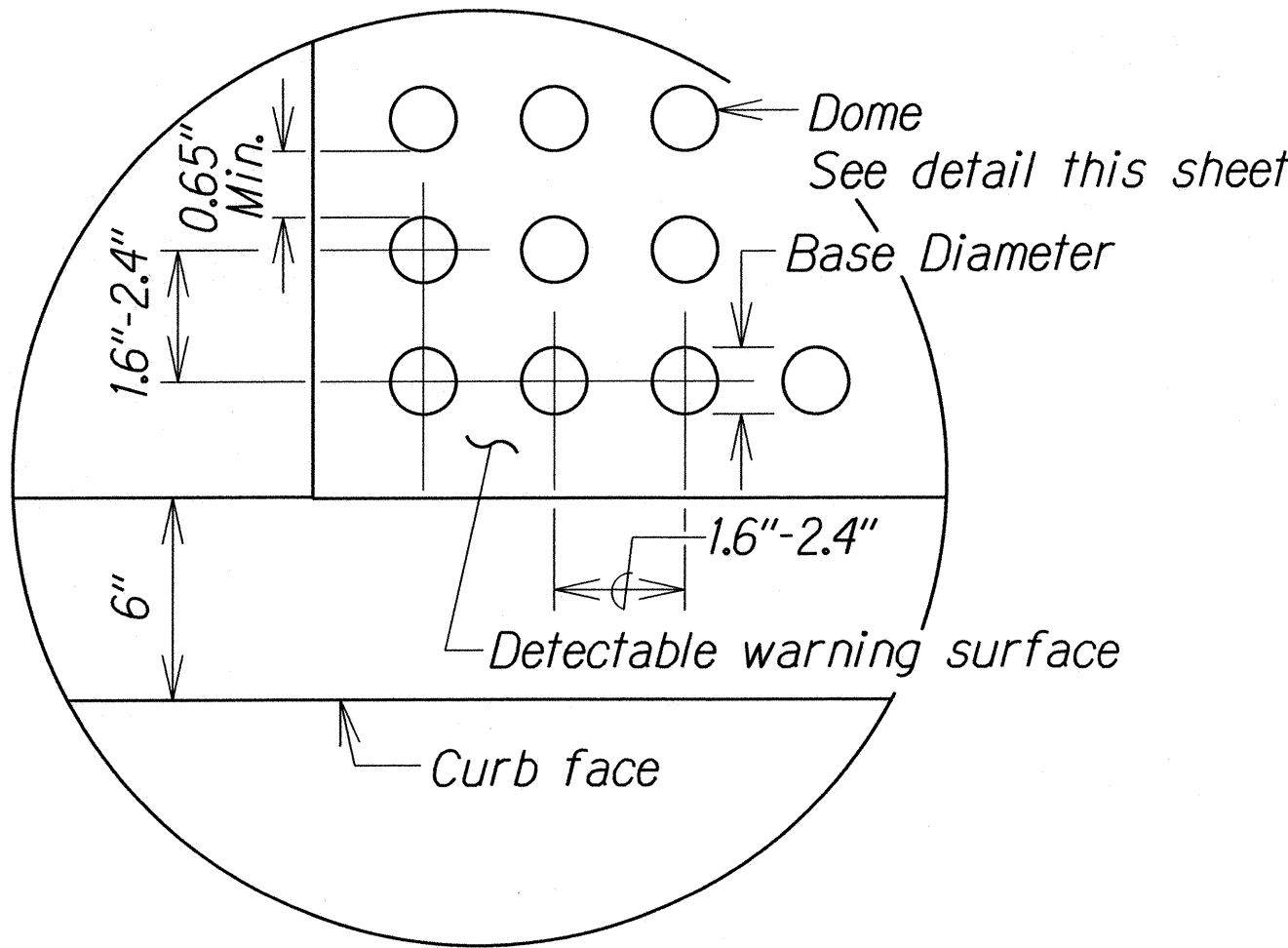
END OF SIDEWALK CURB RAMP WITH
DETECTABLE WARNING

TYPICAL INSTALLATION OF DETECTABLE WARNINGS

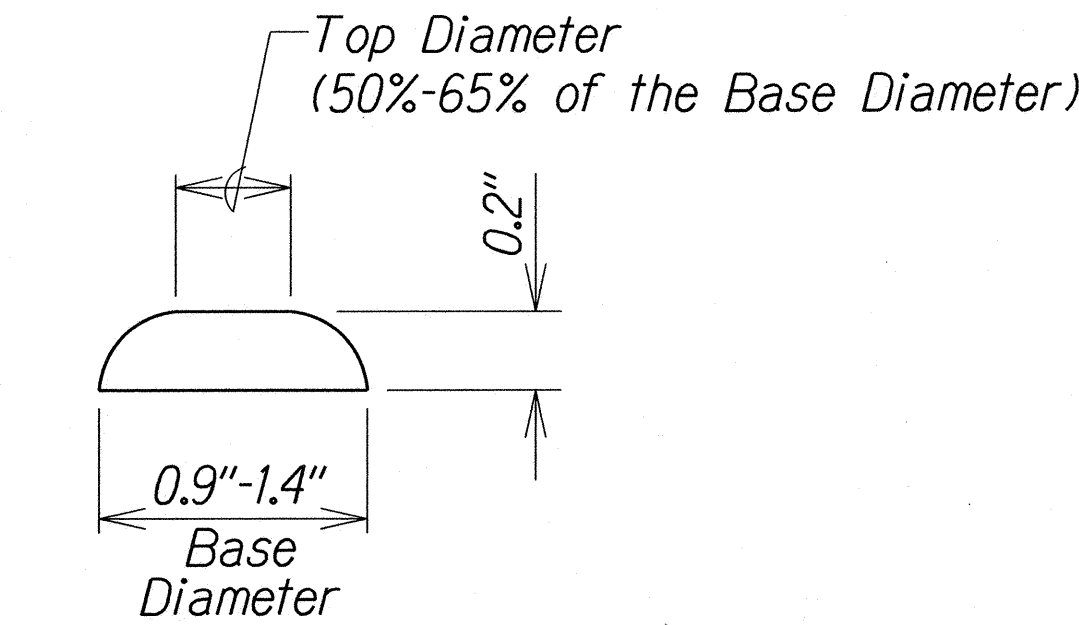
Not to Scale

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

LIKELIKE HIGHWAY RESURFACING

School Street to Emmeline Place

Federal Aid Project No. NH-063-1(023)

Scale: Not to Scale

Date: Sept., 2015

SHEET No. 7 OF 7 SHEETS