

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	11	39

CURB RAMP NOTES

- These typical details are intended as curb ramp guidelines for design and construction. These guidelines shall not replace site specific curb ramp plans.
- A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
- Subject to field conditions, the Engineer shall determine the final location of curb ramps.
- All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- 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.
- Transitions from ramps to gutters and roadways shall be flush.
- Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- The pedestrian push button shall meet operational and reach requirements of the American with Disabilities Act Accessibility Guidelines (ADAAG):
  - Forward Reach. The maximum height for forward reach shall be 48".
  - Side Reach. The maximum height for side reach shall be 48".
  - 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.
- 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.
- 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.
- Construction joints are required to join curb ramps with sidewalks.
- Unless otherwise noted, new gutters are required as shown.
- All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
- Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
- Bed course material is required for curb ramps, sidewalks, and gutters.
- 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.
- 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.
- If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.

- 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.
- 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 1/8 inch per 10 ft. (±0.2%). Remedial measures will not be accepted.

SIDEWALK NOTES

- All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum of 32-inch clear width is allowed for a distance of 24-inches.
- 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.
- 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 shall be a minimum 5' wide by 5' long as feasible.
- For new construction, the minimum sidewalk width shall be 6'-0" (excluding curb). The cross slope shall not exceed 2%.
- If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.
- 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.

REVIEW PLANNED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
FRONTMID/IDEN	
N.	


JAMES E. TURKICU

LICENSED PROFESSIONAL ENGINEER

No. 8189-C

HAWAII, USA

Signature



License Expiration Date: 4/30

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

CURB RAMP AND SIDEWALK NOTES

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Date: April 2009

SHEET No. 1 OF 1 SHEETS

11



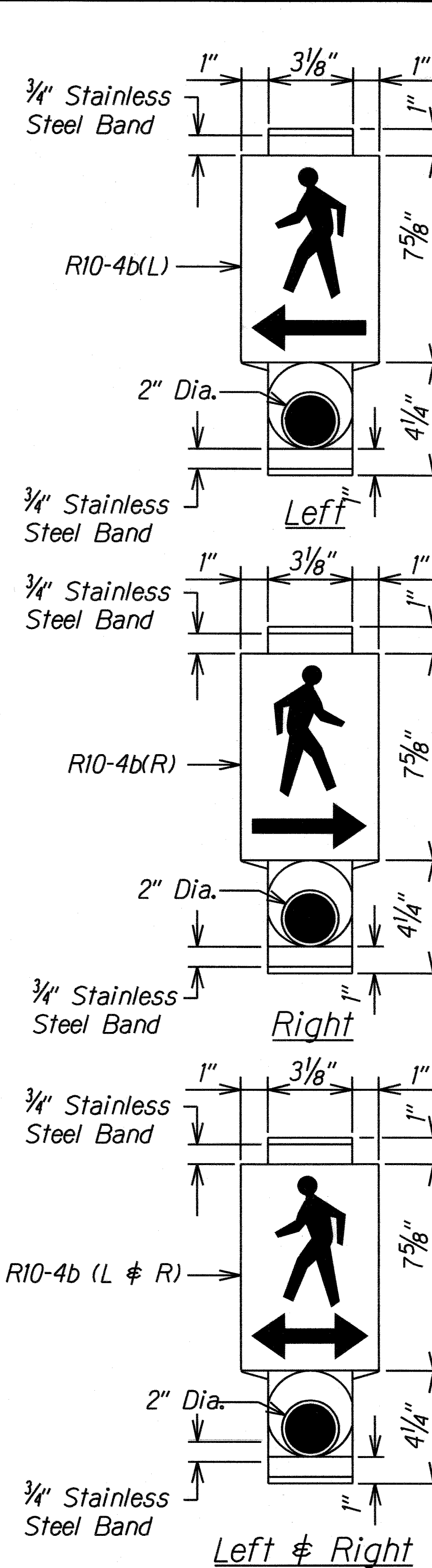




FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	13	39

#### NOTE:

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 inches 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.

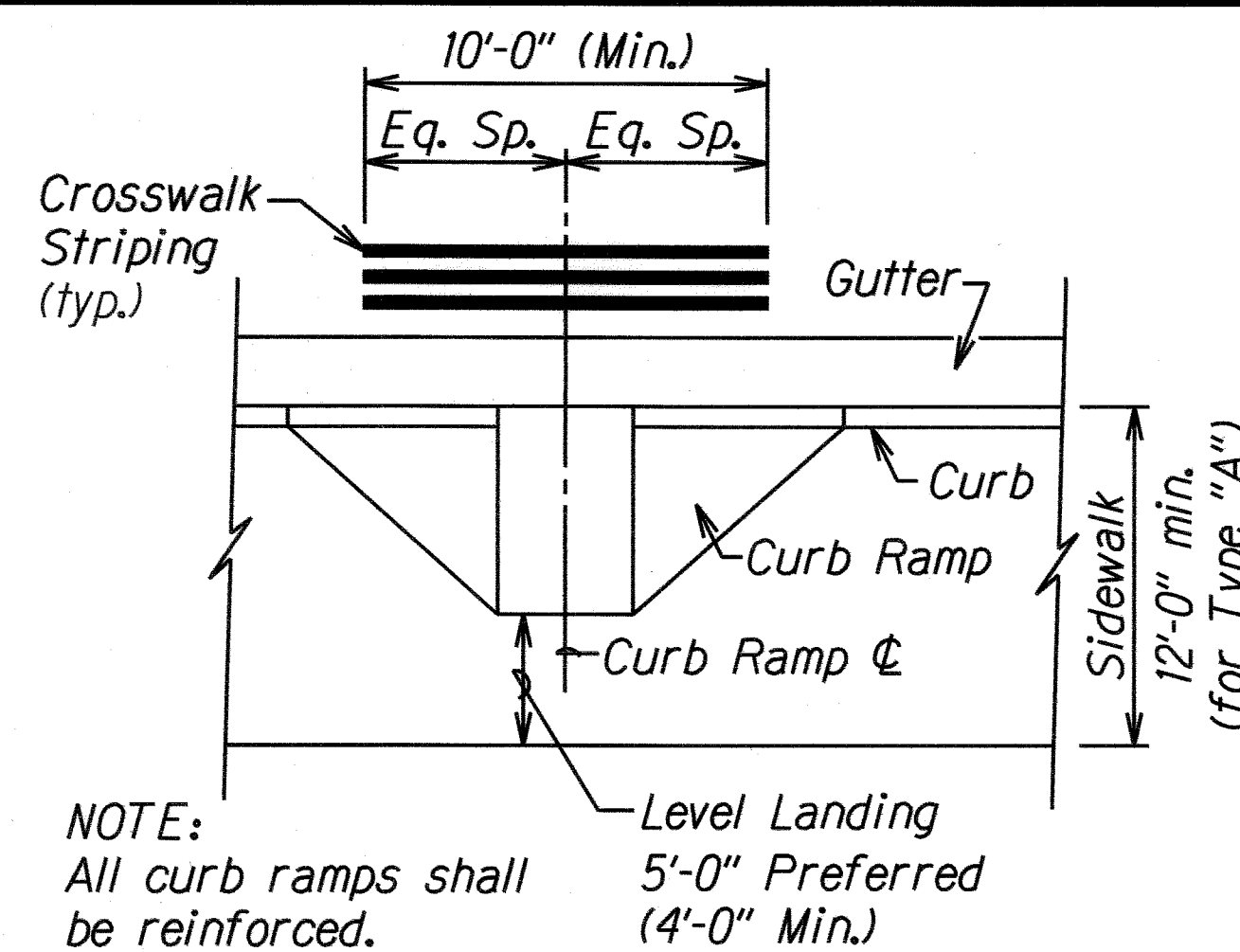


#### PEDESTRIAN PUSH BUTTON WITH SIGN

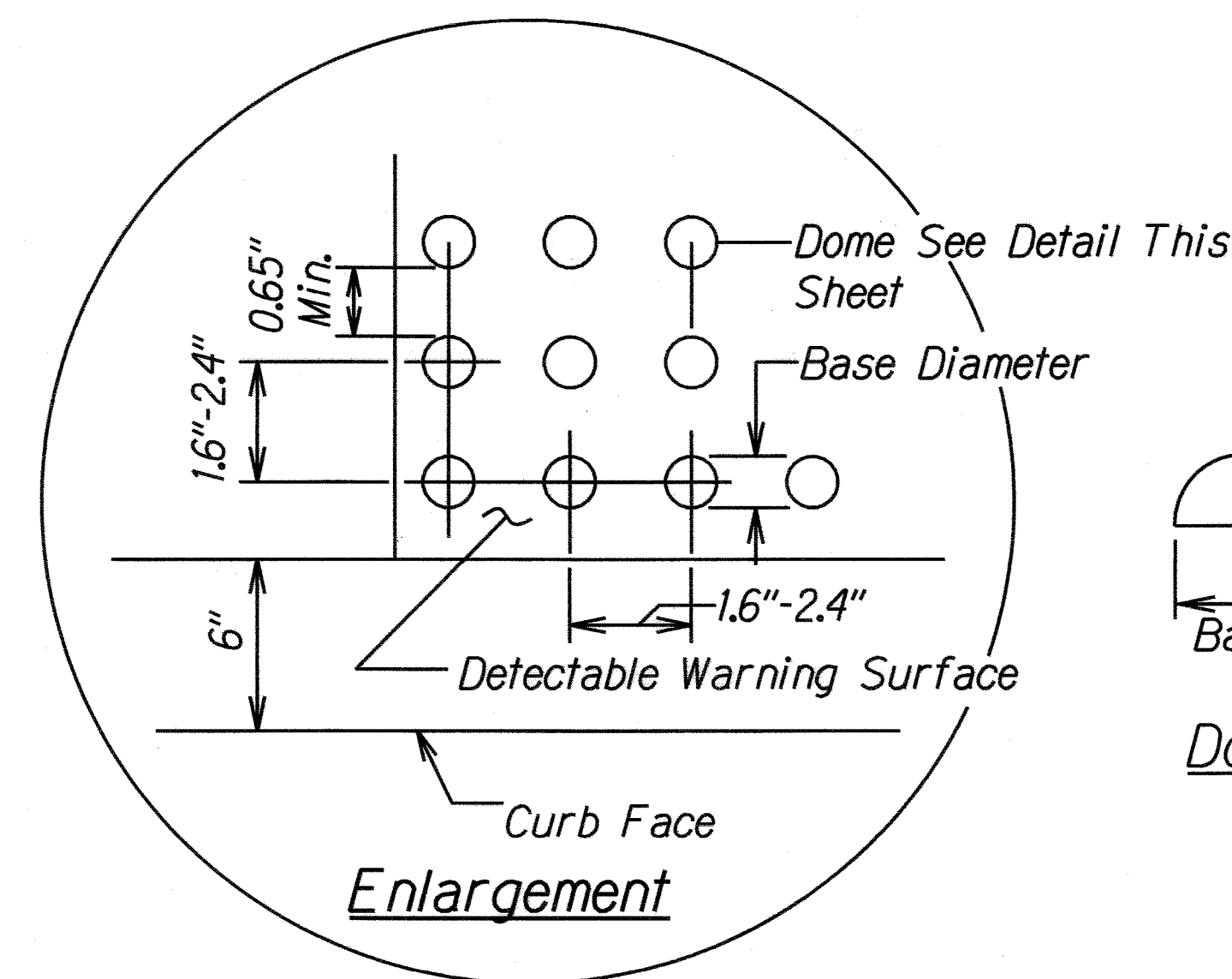
Man, Arrow & Push Button - White  
Background - Black

#### NOTE:

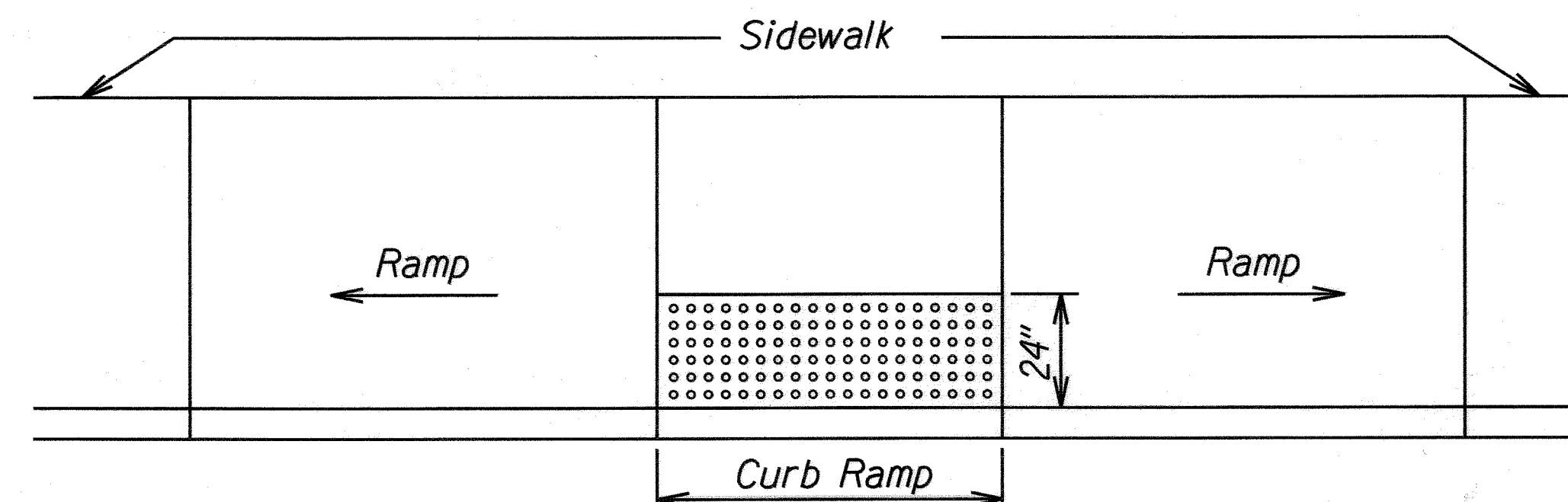
Arrowhead to be installed in proper direction.



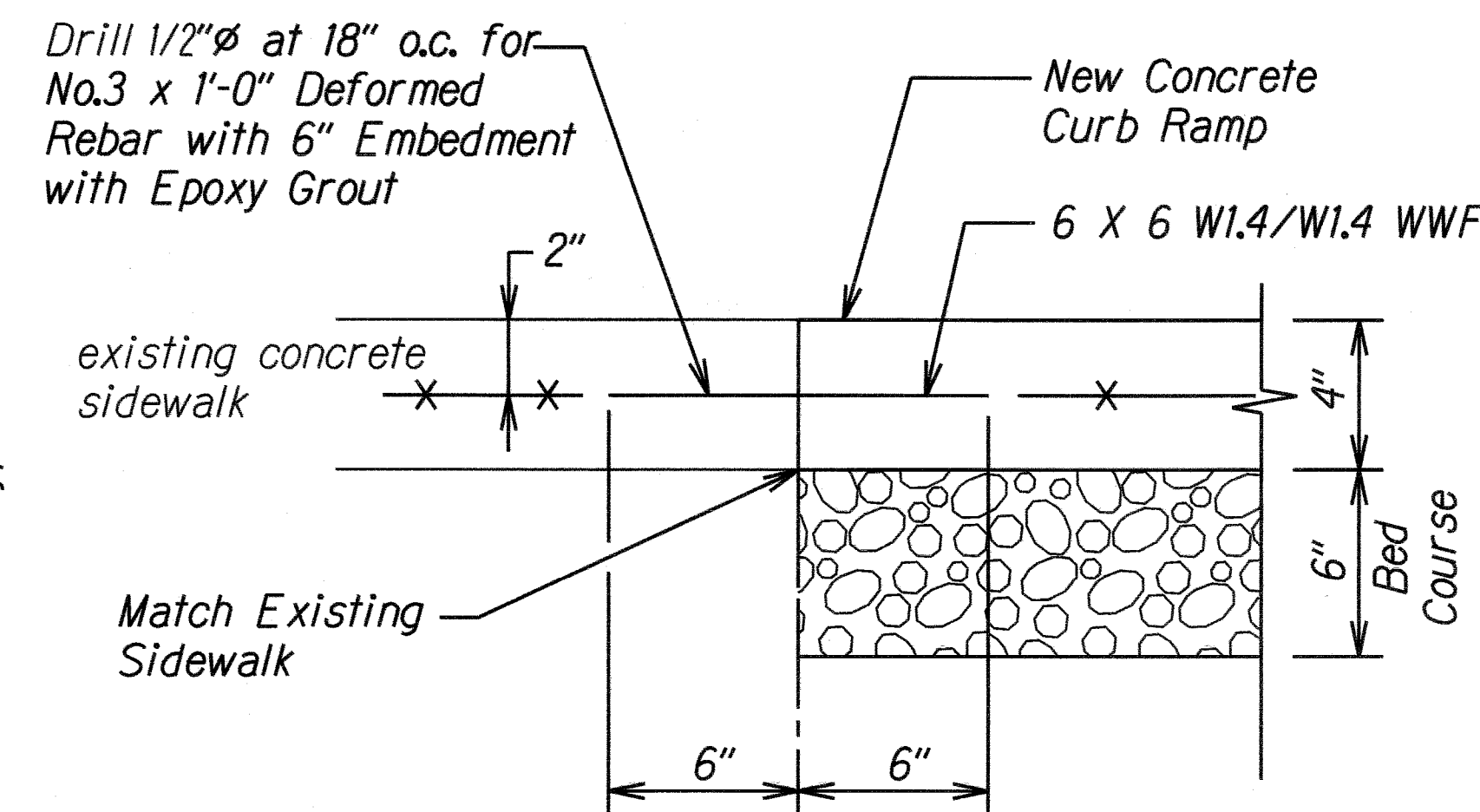
#### TYPICAL CROSSWALK STRIPING AT CURB RAMP



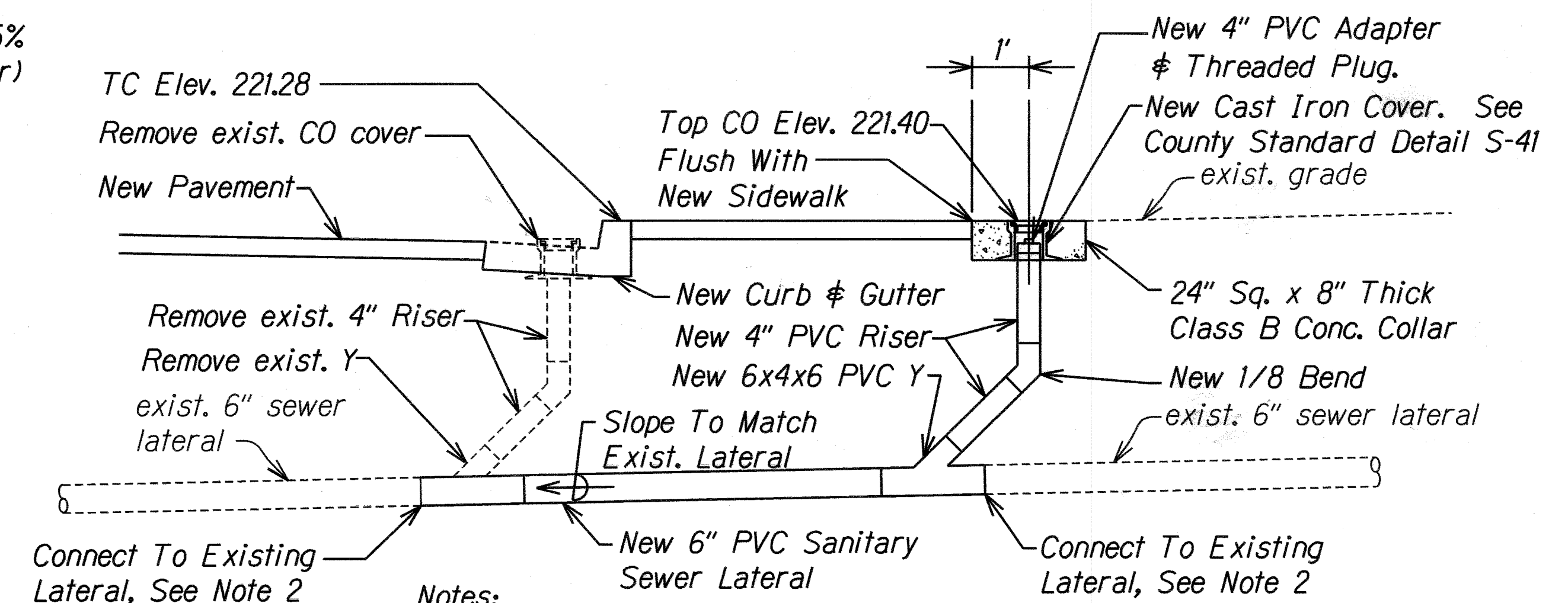
#### DETECTABLE WARNING DETAIL



#### TYP. TRANSITION RAMP WITH DETECTABLE WARNING



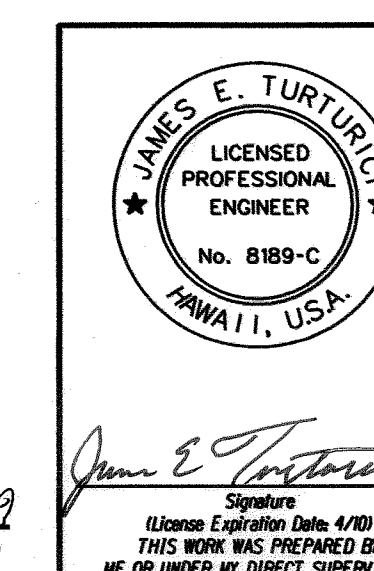
#### TYPICAL CONSTRUCTION JOINT AT EXISTING SIDEWALK



#### Notes:

1. Pipe size, depth & location are approximate only. Contractor shall field verify existing conditions and notify Engineer of all discrepancies.
2. Existing pipe material is unknown. Provide couplings and adapters as needed to make connections to existing pipe.
3. All work shown on this detail shall be paid for under Item 625.1000 - SEWER SYSTEM.

#### RELOCATE SANITARY SEWER CO DETAIL



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

#### MISCELLANEOUS DETAIL

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Scale: Not to Scale

Date: April 2009

SHEET No. 2 OF 2 SHEETS

#### APPROVED:

Chief, County of Kauai  
Division of Wastewater Management

4/17/2009  
Date

