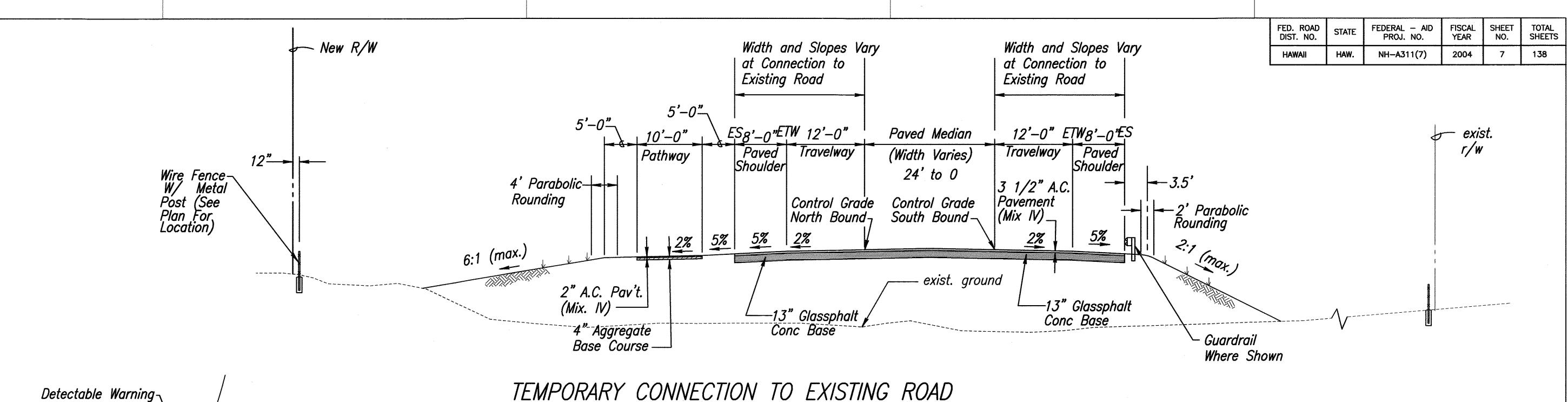
FED. ROAD DIST. NO. FEDERAL — AID PROJ. NO. FISCAL YEAR SHEET NO. SHEETS NH-A311(7) 2004 138 NOTE: See Superelevation Diagram for location of transitions and full super. New R/W exist. r/w or New R/W Varies-See Plan 100' **Varies** See Plan See Plan for Variations -4'-0" Paved ─ Shoulder Varies 0-20' Max ES\ETW ES 8' ETW 24'-0" Travelway ETW ES 16'-0" 24'-0" Travelway ETW 8' ES **Varies Varies** 10'-0" 16'-0" **Varies** Paved Shoulder Grassed, Median Paved Shoulder Grassed Strip Pathway 12"-12'-0" 12'-0" 12'-0" 12'-0" (See Plan) Wire Fence
W/ Metal
Post (See
Plan For
Location) Wire Fence-W/ Metal Post (See Plan For Location) 2' Parabolic Rounding 4' Parabolic -3 1/2" A.C. 3 1/2" A.C. Rounding **Pavement Pavement** 2'@-10% -4' Parabolic $(Mix\ IV)$ — $(Mix\ IV)_{\neg}$ Rounding See Sht. 8 for 2% 6:1 6:1 2% . 6:1 (max.)* 2% 5% 5% See Sht. 8 for 2% Typ. Swale Section Typ. Swale Section ⊆Control Grade– -Geotextile Prime Coat for— 8" Glassphalt Conc. Base Course _exist. ground 2" A.C. Pav't. Permeable -8" Glassphalt Conc. Untreated Permeable Separator (Mix. IV) Base Course € 6" Perforated— Base Course -3:1 for fill 3:1 for fill— -6" Untreated Permeable Underdrain (See 4" Aggregate Geotextile — -6" Untreated Permeable **□¢ 6" Perforated** unless otherwise unless otherwise Base Course -Base Course Base Course Grading & Drainage Permeable Underdrain (See noted.* noted. - 6" Aggregate Subbase Separator Grading & Drainage -6" Aggregate Subbase * See Grading Plans Plan) for Variation in Slopes. TYPICAL TANGENT SECTION-MOKULELE HIGHWAY Scale: 1/8" = 1'-0"exist. r/w or New R/W J-New R/W 100' **Varies** See Sheet 9 Varies 5'-0" Auxiliary ETW 8' ETW 24'-0" Travelway ETW Auxiliary for Condition Varies ETW 8' ES 16'-0" Varies Varies 24'-0" Travelway at Guard Rail 10'-0" 0-20' Max Paved Shoulder Paved Shoulder Grassed Strip Pathway 12" 12'-0" 12'-0" 12'-0" 12'-0" 0-12' 0-12' Wire Fence-W/ Metal Post (See Plan For Location) (See Plan) Wire Fence
W/ Metal Prime Coat for 2' Parabolic Rounding 4' Parabolic -Prime Coat for 3 1/2" A.C.
Untreated Permeable Pavement Paved Paved Post (See Plan For Location) Rounding -4' Parabolid Median Base Course-See Sht. 8 for Rounding 2% 2% Typ. Swale Section 5% (max.)* 2% See Sht. 8 for Typ. Swale Section -Control Grade-Geotextile → └Prime Coat for 2" A.C. Pav't. Untreated Permeable **Permeable** -8" Glassphalt Conc. Base Course (Mix. IV) — Separator Base Course €-6" Perforated ____3:1 for fill 3:1 for fill — 4" Aggregate Base Course— -6" Untreated Permeable 3 1/2" A.C. Underdrain (See unless otherwise unless otherwise Base Course -Pavement — exist. ground (Mix IV) Grading & Drainage noted.* noted. 6" Aggregate Subbase — Q 6" Perforated Plan) Underdrain (See Grading & Drainage North Bound South Bound Note: Extend section through intersection. TYPICAL TANGENT SECTION AT FULL PAVED SECTION—MOKULELE HIGHWAY STATE OF HAWAII Notes: **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION LICENSED PROFESSIONAL ENGINEER Scale: 1/8" = 1'-0"1. All shoulders and graded slopes shall be planted with grass and/or TYPICAL SECTIONS ground covering in accordance with the Landscape Plans. ★\ No. 3443-C /★ MOKULELE HIGHWAY WIDENING 4. See Grading and Drainage Plan For Variations in Shoulder Slopes. 2. Maximum change in slope between the travelway and outside Vicinity of Kolaloa Bridge shoulder shall be 7.0%. 5. See Sheet 57 For Typical Underdrains Sections. THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION Vicinity of Kealia Pond Driveway Existing Pavement Structure to be Demolished and Removed Federal – Aid Project No. NH–A311(7) Not Shown for Clarity. Scale: AS NOTED Date: August 2003 04/30/04 XPIRATION DATE OF THE LICENSE OF 3 SHEETS SHEET No. 1

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PROJ. NO.: MEED 1.00



B STA. 318+25± TO B STA. 323+13±

Scale: 1/8" = 1'-0"

PLAN PATHWAY CROSSINGS AT ROADWAYS

Not to Scale

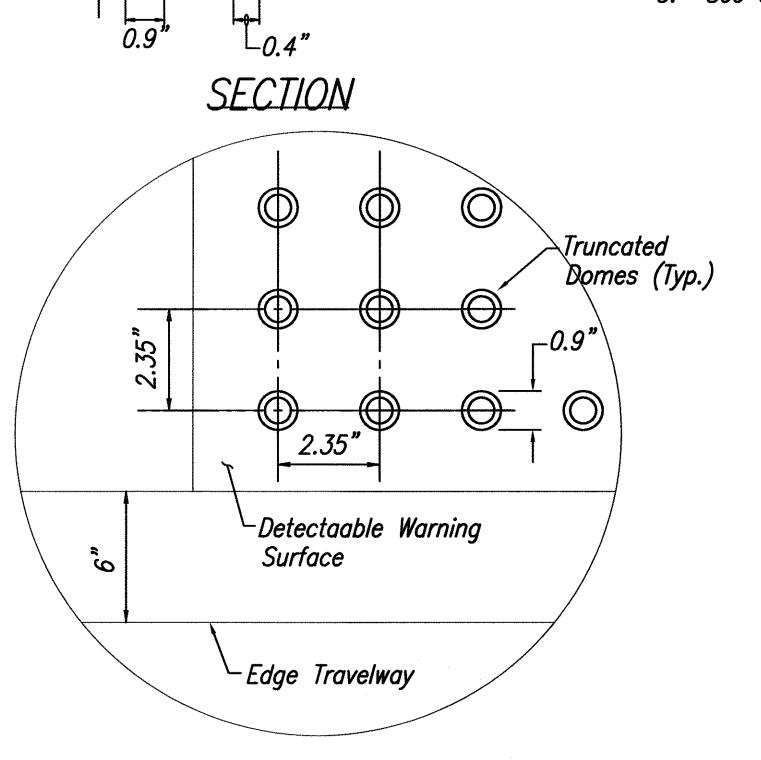
Detectable Warning Notes:

Pathway

- 1. Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the pathway.
- 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. 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 or other potential hazard, such as a reflecting pool edge or the edge of a transit platform.
- 7. Install detectable warnings at all new curb ramps. Payment for the detectable warnings shall not be paid seperately, but shall be considered incidental to the curb ramp items.
- 8. Detectable warning will not be paid for separately but will be considered incidental to the various contract items.

Notes:

- 1. All shoulders and graded slopes shall be planted with grass and/ or ground covering in accordance with the Landscape Plans.
- 2. Maximum change in slope between the travelway and outside shoulder shall be 7.0%.
- 3. Existing Pavement Structure to be Demolished and Removed Not Shown for Clarity.
- 4. See Grading and Drainage Plan For Variations in Shoulder Slopes.
- 5. See Sheet 57 For Typical Underdrains Sections.



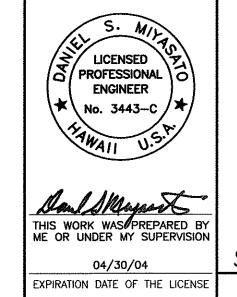
_Truncated

Domes (Typ.)

ENLARGEMENT

DETECTABLE WARINING DETAIL

Not to Scale



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TYPICAL SECTIONS

MOKULELE HIGHWAY WIDENING

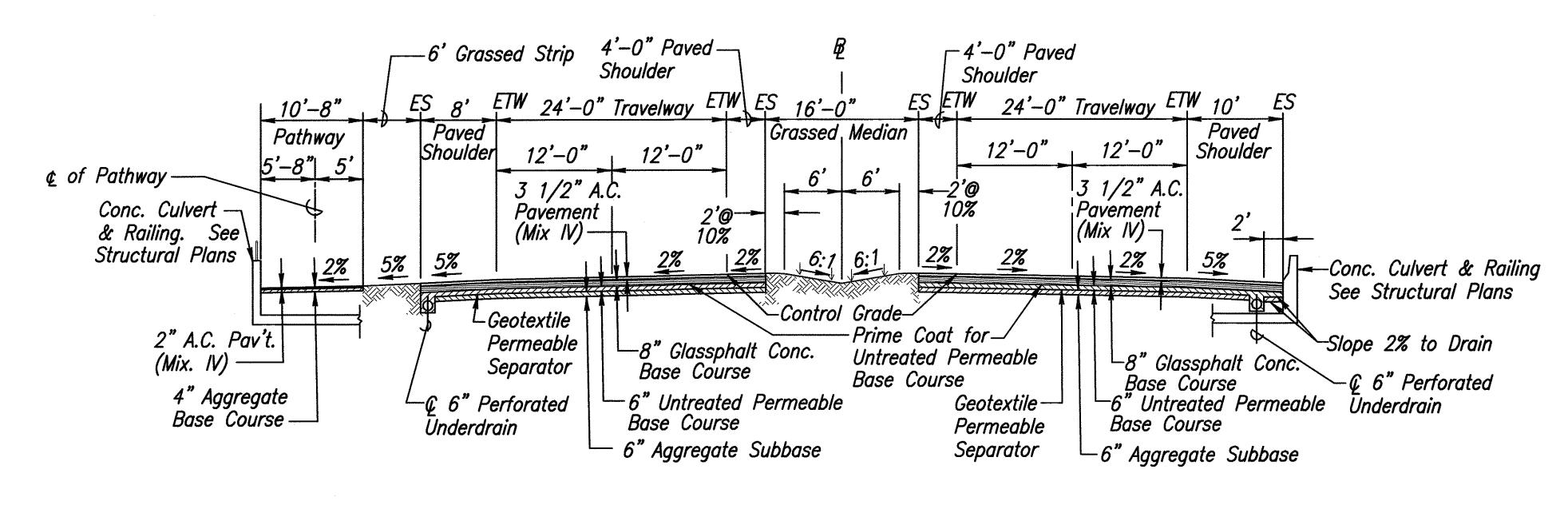
Vicinity of Kolaloa Bridge

Vicinity of Kealia Pond Driveway
Federal — Aid Project No. NH—A311(7)
Scale: AS NOTED Date: August 2003

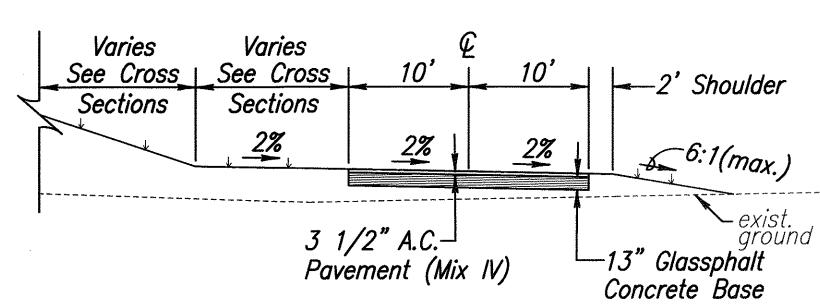
SHEET No. 2 OF 3 SHEETS

ORIGINAL SURVEY PLOTTED BY PLAN BY TRACED BY DESIGNED BY OUANTITIES BY CHECKED BY CHECKED BY

7

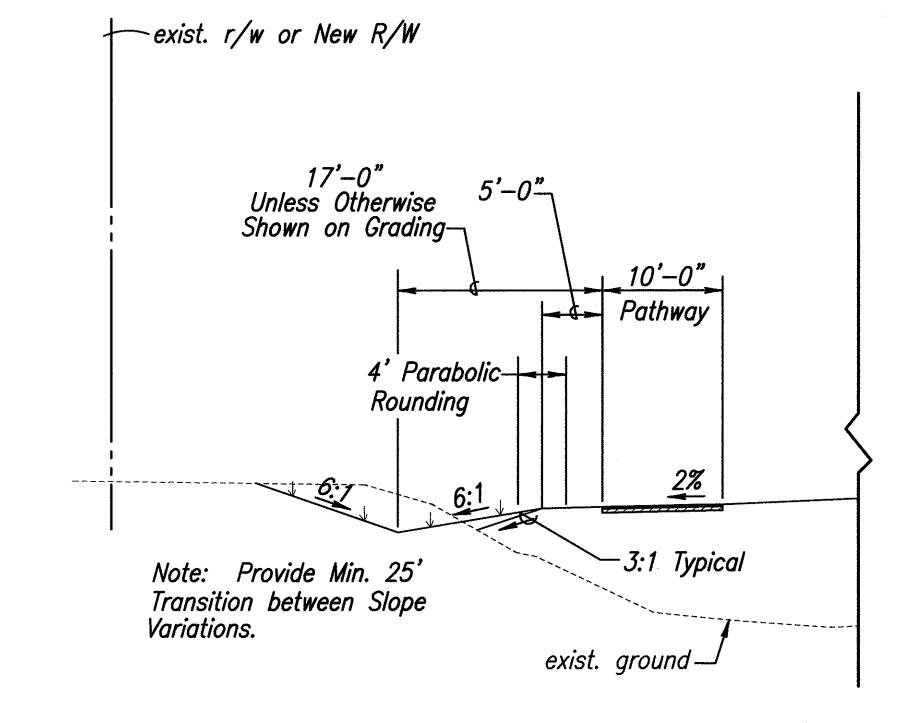


TYPICAL SECTION @ CULVERT Scale: 1/8" = 1'-0"



FRONTAGE ROAD

Scale: 1/8"=1'-0"



Shoulder Width Varies Width Varies Shoulder
Where Shown See Plan See Plan Where Shown
6:1(max.)

3 1/2" A.C.—
Pavement (Mix IV)

Shoulder Where Shown

6:1(max.)

6:1(max.)

6:1(max.)

6:1(max.)

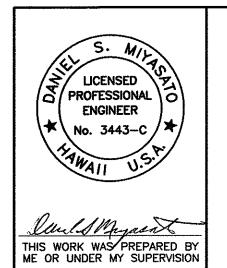
6:1(max.)

6:1(max.)

Note: See Sht. 28 for Kealia Pond Driveway Sections

<u>DRIVEWAYS</u>

Scale: 1/8"=1'-0"



04/30/04

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TYPICAL SECTIONS

MOKULELE HIGHWAY WIDENING

Vicinity of Kolaloa Bridge
To
Vicinity of Kealia Pond Driveway

Federal — Aid Project No. NH—A311(7)
Scale: AS NOTED Date: August 2003
SHEET No. 3 OF 3 SHEETS

TYPICAL SECTION AT SWALES

Scale: 1/8"=1'-0"

Note: See Grading Plans and Cross Sections for Location of Swales.

7/11/02

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