

General Construction Notes:

1.

Applicable Construction Work Shall Be Done in Accordance With the Standard Details for Public Works Construction of the Department of Public Works, City and County of Hilo.
2.

It Is Not the Intent of These Plans and Specifications to Imply that All Existing Utilities Are Shown on the Plans. Only Those Underground Pipes, Cables, Ductlines, Etc. Known to Exist by the Engineer from His Search of Records at the Time of Design Are Indicated on the Plans. The Contractor Shall Arrange with the Respective Utility Companies to Tone and Mark the Location and Depth of the Existing Facilities.
3.

The Contractor Shall Exercise Proper Care when Excavating in Areas with Existing Underground Facilities. The Contractor Shall be Responsible to Repair and/or Pay Any Damages to the Existing Facilities. Damages to Existing Facilities Shall Be Reported Immediately to The Utility Company Concerned.
4.

No Contractor Shall Perform Any Trenching Operation so as to Cause Falling Rocks, Soil or Debris in Any Form to Fall, Slide or Flow onto Adjoining Properties, Streets or Natural Watercourses. Should Such Violations Occur, the Costs Incurred for Any Remedial Action by the Chief Engineer Shall Be Payable by the Contractor.
5.

The Contractor Shall Keep All Bikeways, Walkways, Driveways, Parking Lots and Roadways Open for Pedestrian and/or Vehicular Traffic. Safety Barriers and Appropriate Warning Signs and Devices Shall Be Provided at All Times for the Safety of Pedestrians and/or Vehicles.
6.

The Contractor Shall, at His Own Expense, Keep the Project Area and the Surrounding Area Free from Dust Nuisances. The Work Shall Be in Conformance with the Air Pollution Control Standards and Regulations of the Department of Health, State of Hawaii.
7.

The Contractor Shall Be Responsible for Conformity with the Applicable Provisions of Chapter 54, Water Quality Standards and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.
8.

Excavated Material Shall Be Hauled and Disposed by the Contractor.
9.

Open Trenches Shall Be Prohibited During Non-Working Hours.

10.

The Contractor Shall Be Responsible to Investigate, Probe, Tone, Expose, Locate and Protect the Existing Underground Utilities Affected by This Project. Contractor Shall Be Required to Adjust the Installation of the New Light Poles to Clear Existing Underground Systems at No Additional Cost to the State. Contractor Shall Be Required to Repair All Damages to the Existing Systems Caused by His Negligence at No Additional Cost to the State. All Repair Work Shall Be Done in Accordance with the Standards of the Department of Design and Construction and the Various Utility Companies.
11.

The Contractor Shall Be Required to Restore the Existing Grass Areas Damaged to Construction. Topsoiling and Grassing Shall Be in Accordance with DPR Standard Specifications for Landscaping.
12.

The Contractor Shall Visit Site, Verify All Existing Dimensions, As Built Conditions, Structures, Site Improvements, Etc. Prior to Bidding.
13.

The Contractor Shall Coordinate His Operations with Those of Other Contractors Who May Be Employed on Adjacent or Related Projects of the City and Avoid Unnecessary Delay or Hindrance in the Performance of Their Respective Contracts.
14.

The Contractor Is to Protect Existing Landscape Structures. All Damages Shall Be Repaired/Replaced to the Satisfaction of the Officer-In-Charge at No Additional Cost to the State.
15.

The Contractor Shall Provide for Provision to the Officer-In-Charge to Revise Location of Light Poles, Fixtures & Ductlines $\pm 10'$. The Contractor Shall Re-Layout and Adjust at No Additional Cost to the State.
16.

Trim Tree Branches as Required for Installation of Street Lighting Standard Assembly.
17.

The Contractor Shall Provide Additional Wiring as Required to Maintain Operational Existing Pole Lights, Traffic Signal Lights, Etc. Indicated To Remain.

Electrical Symbols		
Exst	New	Description
		Street Light Standard on Utility Pole
		HELCO Meter
		Pullbox, SLD-1 Type
		Utility Pole
		Over Head Line

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	DESIGNED BY	
	QUANTITIES BY	
NOTE BOOK	CHECKED BY	
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LEGEND FOR

AS-BUILT POSTINGS

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Double line for as-built deletion

Roadway Text for as-built posting

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GENERAL CONSTRUCTION NOTES

ELECTRICAL SYMBOLS

KEAAU-PAHOA ROAD, SHOULDER

LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements

Fed. Aid Proj. No. STP-0130(33)

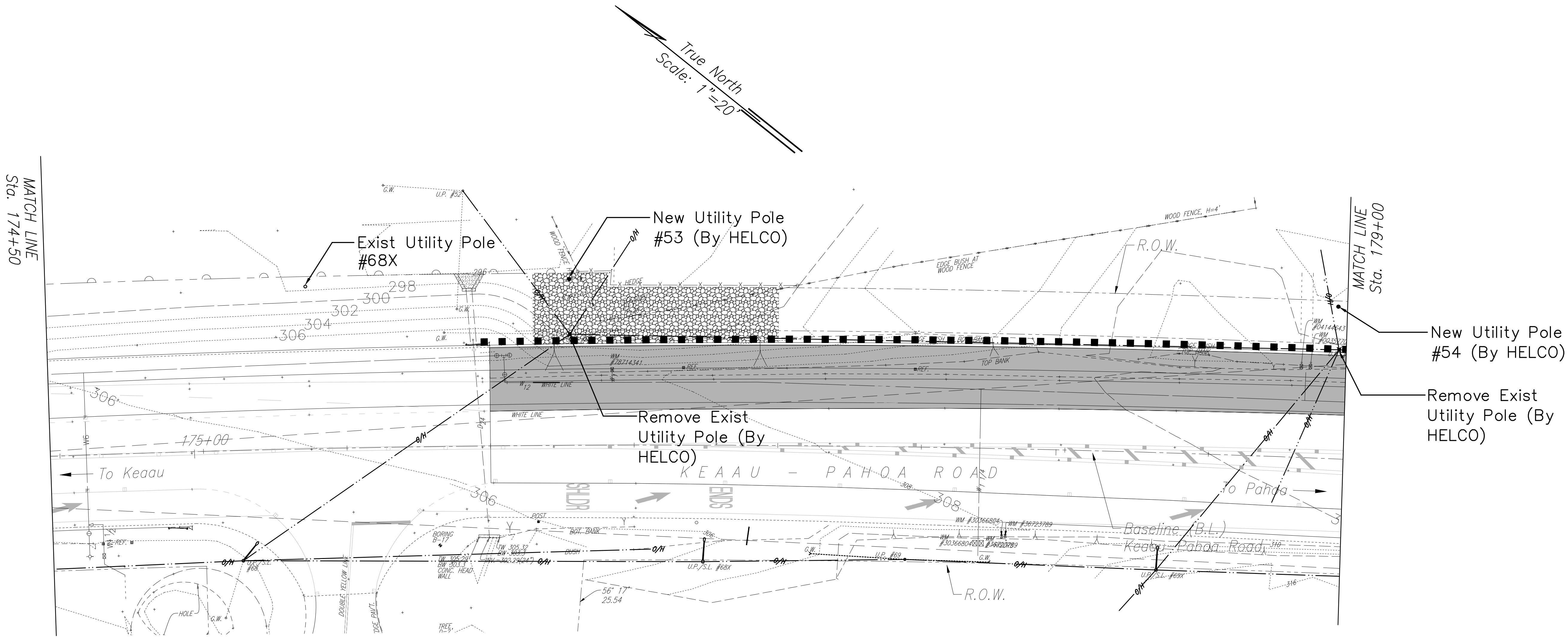
Scale:Not To Scale Date: March 2016

SHEET No. E-1 OF 5 SHEETS

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OR UNDER MY SUPERVISION.

APRIL 30, 2016
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(33)	2016	89	99



Note: Utility Poles to be Relocated Within 1' (Preferable) But Not More Than 5' From New ROW. Verify Location With Civil Engineers.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE ELECTRICAL PLAN

KEAAU-PAHOA ROAD, SHOULDER
LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements

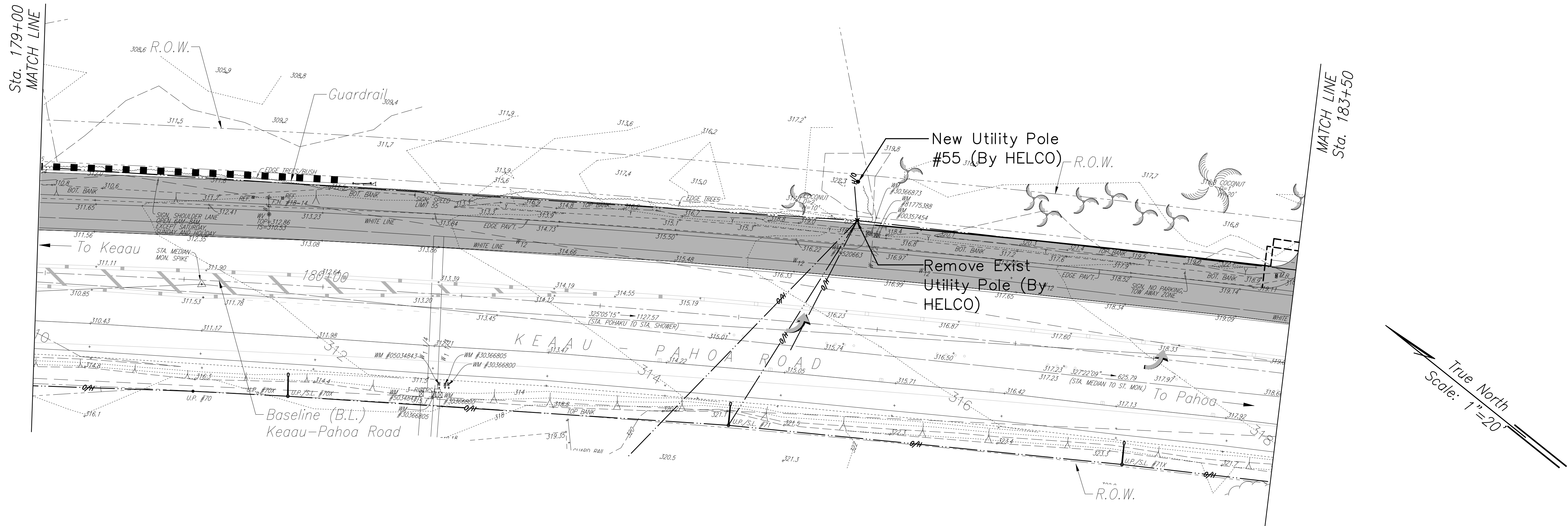
Fed. Aid Proj. No. STP-0130(33)

Scale: 1"=20' Date: March 2016

SHEET No. *E-2* OF 5 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(33)	2016	90	99



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LIC. EXP. DATE

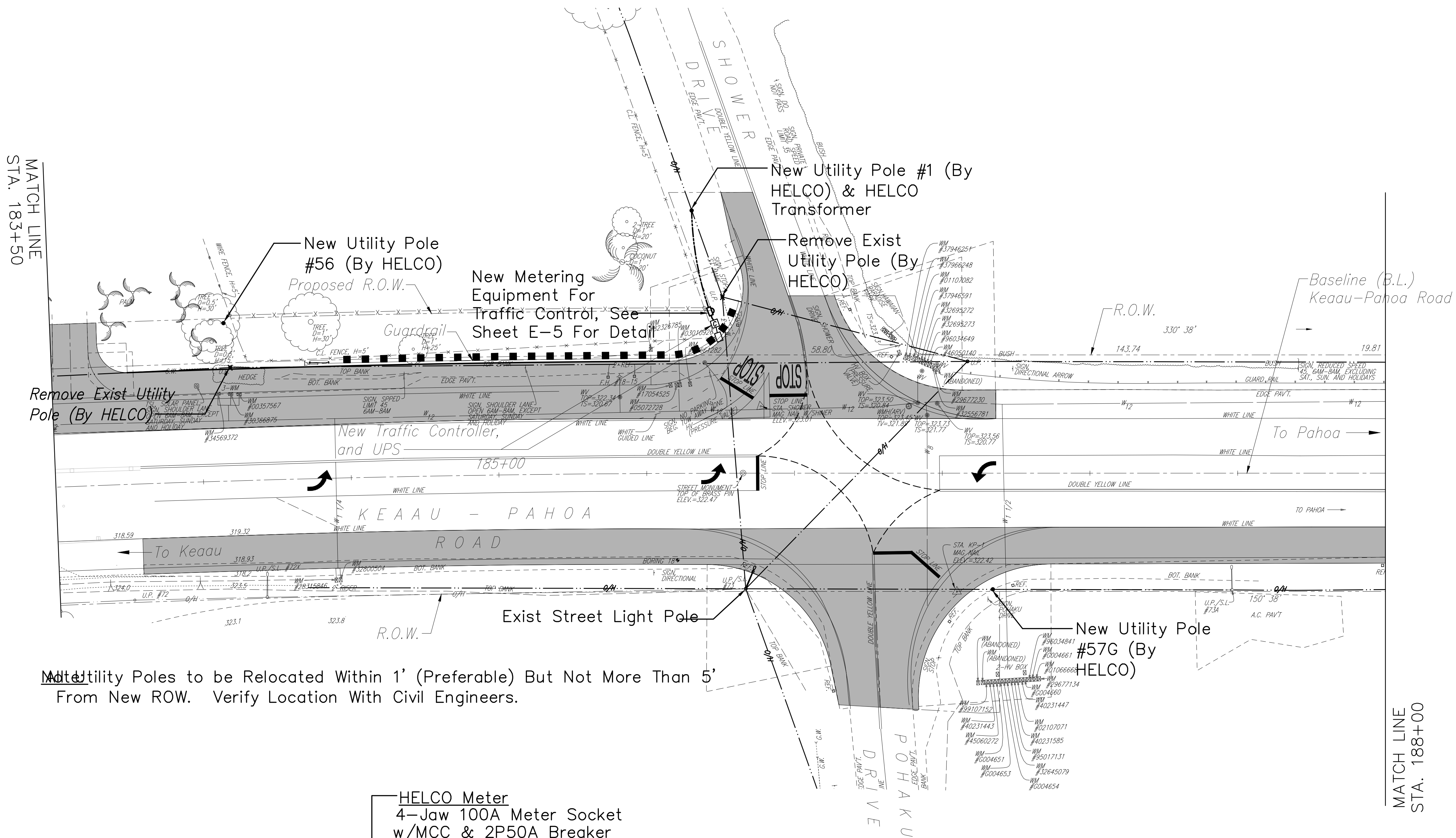
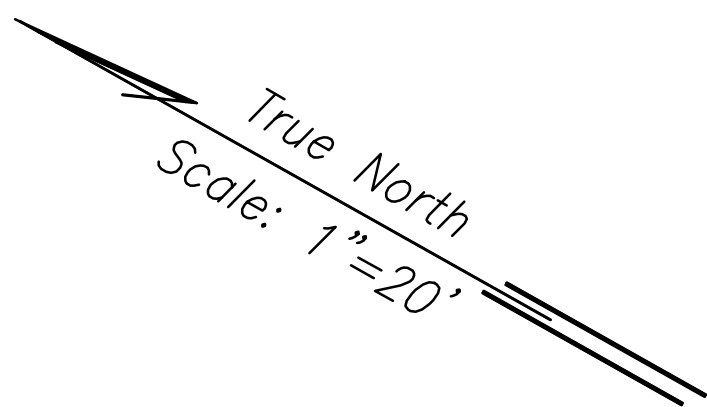
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

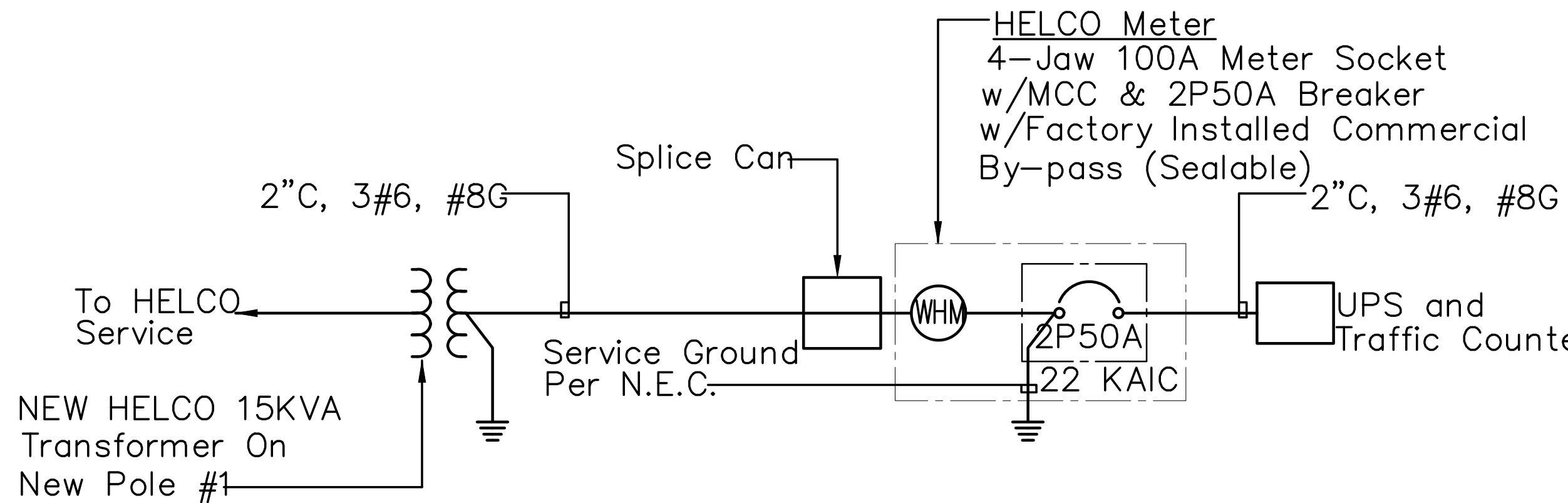
SITE ELECTRICAL PLAN

KEAAU-PAHOA ROAD, SHOULDER
LANE CONVERSION, PHASE 2
Shower Drive Intersection Improvements
Fed. Aid Proj. No. STP-0130(33)
Scale: 1"=20' Date: March 2016

SHEET No. E-3 OF 5 SHEETS



Note: Utility Poles to be Relocated Within 1' (Preferable) But Not More Than 5' From New ROW. Verify Location With Civil Engineers.



TRAFFIC SIGNAL ONE-LINE DIAGRAM
Scale: Not To Scale

- Service Data:
1. Service Voltage: 120/240V, 1 Phase, 3 W.
 2. Load Data: Connected: 5 KVA
Estimated Demand: 2 KVA
 3. Service Conductors: 3#6, 1#8 G.
 4. Metering: HELCO Meter Std. B-5;
Rate Schedule: "G".
 5. Type: Underground.
 6. Billing Information: County of Hawaii

LEGEND FOR AS-BUILT POSTINGS

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Roadway	Text for as-built posting

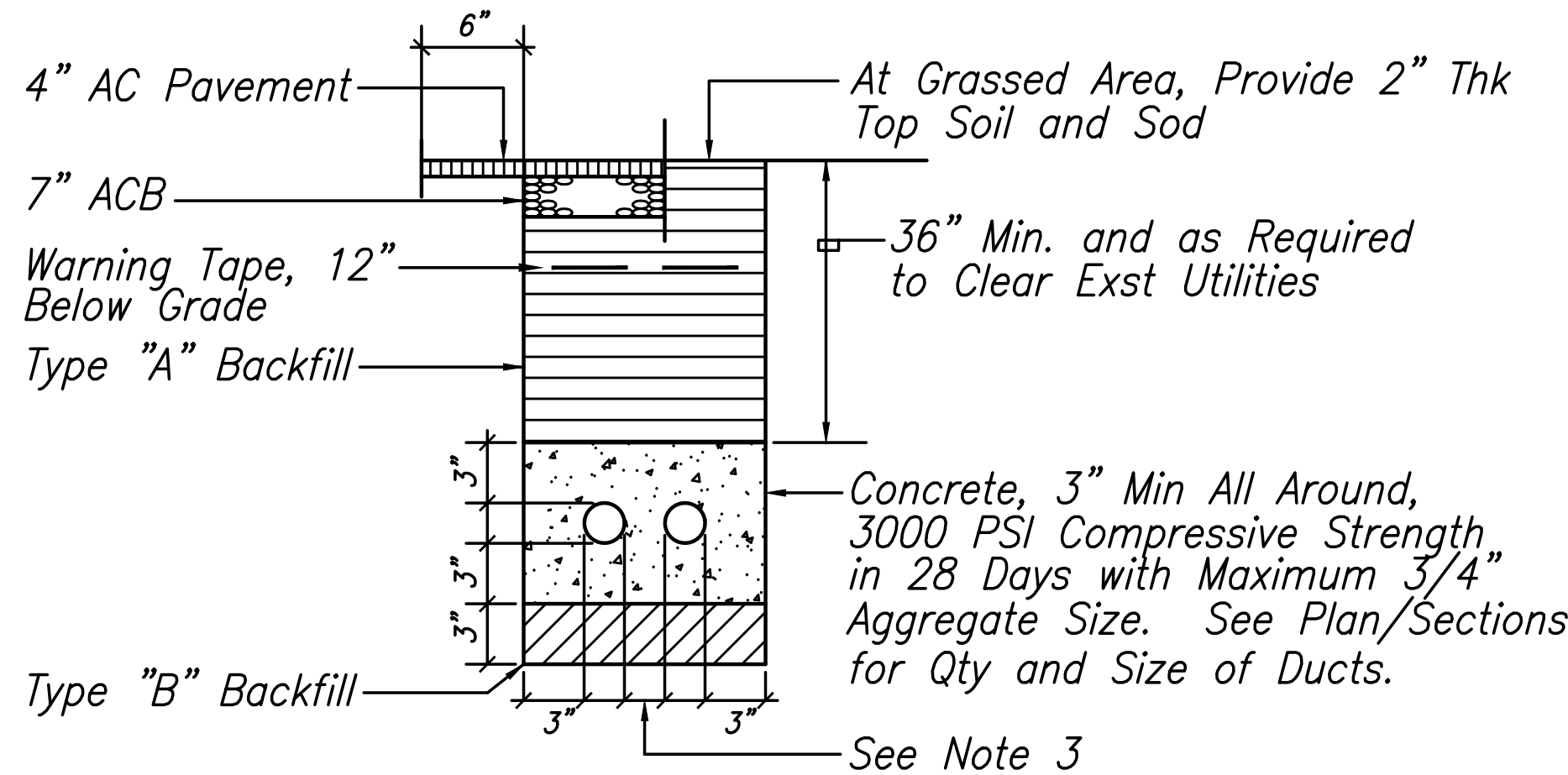
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE ELECTRICAL PLAN

KEAAU-PAHOA ROAD, SHOULDER
LANE CONVERSION, PHASE 2
Shower Drive Intersection Improvements
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Scale: 1"=20' Date: March 2016
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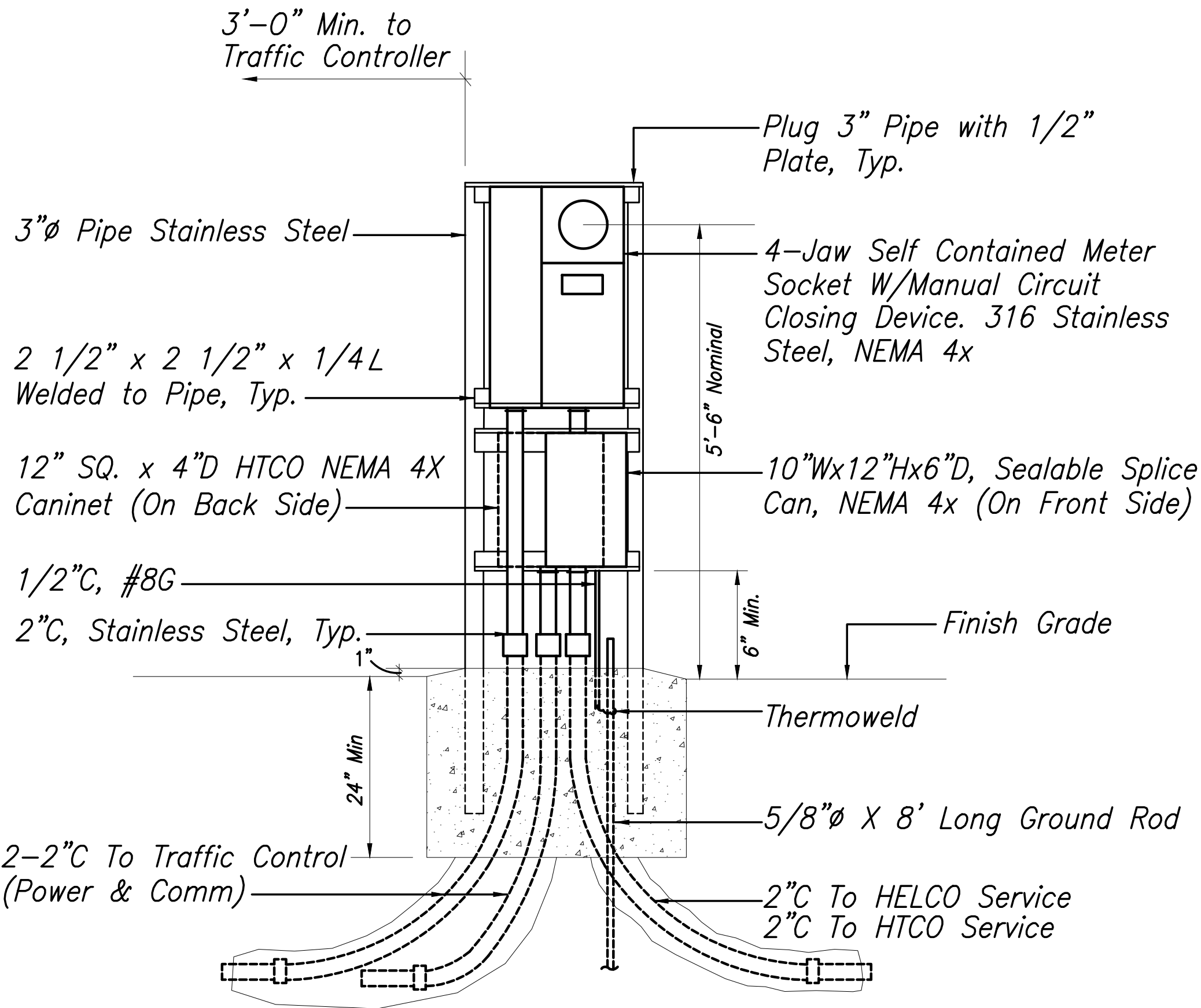
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TYPICAL DUCT SECTION DETAIL
Scale: Not To Scale

Duct Section Notes:

1. All Ducts Shall Be Schedule 40 PVC or Equivalent & Provided with a Polyolefin Pull Line.
2. Backfill Data:
Type "A" Backfill: Earth & Gravel, Maximum Rock Size Shall Be 1" and the Mixture Shall Contain Not More Than 50% by Volume of Rock Particles, 95% Compaction. Install Type "A" Backfill in Maximum 6" Layers Loose Thickness Prior to Compaction.
Type "B" Backfill: Earth & Gravel, Mixture Must Pass a 1/2" Mesh Screen & Contain not More Than 20% by Volume of Rock Particles, 95% Compaction. If Materials at Bottom of Trench Is Not Type "B", an Additional 3" Shall Be Excavated and Type "B" Backfill Provided.
3. Duct Separation Requirements:
Elec to Elec..... 2"
Elec to Signal/Comm..... 3"
Signal/Comm to Signal/Comm..... 2"
4. See Plans or Diagrams for Size & Number of Ducts. Flatten Duct Bank as Required to Pass Over or Under Existing and New Utilities.
5. Comply With HELCO, Hawaiian Telcom & Oceanic Time Warner Cable Utility Company Requirements. Perform a Mandrel Test After Ducts Are Installed.
6. Excess Excavated Material Shall Be Hauled and Disposed by the Contractor.
7. It Is Not the Intent of These Plans and Specifications to Imply That All Existing Utilities Are Shown on the Plans. Only Those Known to Exist by the Engineer from His Search of Records at the Time of Design Are Indicated on These Plans.
8. Investigate, Probe, and Tone Traverse of New Ductline. Expose, Locate and Protect the Existing Underground Utilities Including Irrigation, Drainage, Sewage, Electrical, Communication and System Lines Affected by This Project.
9. Operate the Existing Irrigation, Drainage, Sewage, Electrical, Communication and Water Systems to Help Determine the Location and Condition of the Various Systems Prior to Start of Construction.
10. Exercise Proper Care by Hand Trenching when Excavating in Areas Nearby Existing Underground Facilities. The Contractor to Be Responsible To Repair and/or Pay Any Damages to the Existing Facilities. Damages to the Existing Facilities to Be Reported Immediately to All Concerned Parties. All Repair Work Shall Be Done Within 36 Hours to Match Its Original Condition and In Accordance with the Standards of the Various Utility Companies and Agencies.
11. Pavement and/or Concrete Sidewalk Restoration Shall Be Equal or Better than Original in Quality and Thickness. Cut Pavement 6" Beyond Trench.
12. Grassed Areas and Plants Damaged During Construction Shall Be Restored to as Close as Their Original Condition as Practicable. Suitable Topsoil Shall Be Provided For Top 6" of Backfill.
13. Contractor Shall Use Heavy Machine Equipment to Excavate if Basalt and Large Rocks Are Encountered.
14. Contractor Shall Shore, Brace and Dewater Within the Excavated Trenches as Required.



SERVICE EQUIPMENT DETAIL
Scale: Not To Scale

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| Roadway | Text for as-built posting |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DUCT SECTION DETAIL
SERVICE EQUIPMENT DETAIL
KEAAU-PAHOA ROAD, SHOULDER
LANE CONVERSION, PHASE 2
Shower Drive Intersection Improvements
Fed. Aid Proj. No. STP-0130(33)
Scale: Not To Scale Date: March 2016
SHEET No. E-5 OF 5 SHEETS

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