



- Notes For Bedding Beneath Underground Structures:

1. Boxes And Structures Without Bottom Slabs (Open Base): 4" Minimum Thickness Of No. 3 Fine Gravel; ASTM C-33-03, #67.
2. Boxes And Structures With Bottom Slabs (Closed Base): 4" Minimum Thickness Of Clean, Well-Graded Granular Material With A Maximum Particle Size Of Three (3) Inches, And Less Than Three (3) Percent Passing The No. 200 Sieve Or Select Borrow.
3. Provide Select Granular Bedding Beneath Handholes Shall Be Placed In Relatively Uniform Lifts No Greater Than Eight (8) Inches In Loose Thickness, Moisture Conditioned To Optimum Moisture Content, And Uniformly Compacted To At Least Ninety (90) Percent Of The Maximum Dry Density (ASTM D1557-02). Contractor To Schedule With Owner's Geotechnical Inspector For Compaction And Bedding Installation.
Pulldoor/Handholes To Be Installed Flush With Walkway.

General Notes:

1. Contractor Shall Be Responsible To Arrange With The General Contractor To Identify The Locations Of Civil Site Utilities, Driveways, Etc. Prior To Electrical Contractors Layout Of Electric, Telephone, Street Light, Traffic Signal, And Catv Systems.
2. Provide 5' Minimum Clear Between Street Light Poles & Sewer Laterals.
3. Provide 3' Minimum Clear Between Pullboxes & Sewer Laterals.
4. Provide 6' Minimum Clear Between Transformer Pads & Sewer Laterals (do Not Straddle).
5. Provide 3' Minimum Clear Between Ductlines & Sewer Lines.
6. Contractor Shall Verify Sewer Lateral Locations With Civil Sheets.
7. Provide 3' Minimum Horizontal Clear & 6" Vertical Clear Between Water Lines & All Electrical Systems.
8. Provide 6" Minimum Vertical Clearance Between Ductlines & Drainlines.
9. Provide 12" Minimum Clearance Between Ductlines & Drainlines/drainage Structures.
10. Contractor Shall Contact Jon Okimoto At 768-8416 Prior To Start Of Work.

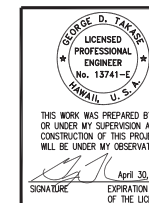
Equipment Schedule:

2' x 4' HE Handhole - 2' x 4' Precast Concrete Handhole with Precast Concrete Cover, Provided in Accordance with HE Standard Drawing 103782.

Abbreviations:

A	Amps
Brk	Breaker(s)
Ckt	Circuit
Comm	Communication
Conn	Connection/connected
Ctrl	Control/controlled
Det	Detail
Disc	Disconnect
E.A.	Each
Exst	Existing
Fut	Future
Fxt	Fixture
GFCl	Ground Fault Current Interrupting
Gnd	Ground
J-box	Junction Box
Loc	Location
Lt	Light
Mech	Mechanical
Mtd	Mounted/Mounting
Nom	Nominal
Pnl	Panel
PV	Photovoltaic
Recep	Receptacle
Req	Required
Schd	Schedule
Sht	Sheet
Sq	square
Surf	Surface
Sw	Switch
U.I.O.	Unless Indicated Otherwise
V	Volt
W/	With
WP	Weatherproof
Xfmr	Transformer

CONDUIT SCHEDULE	
3E	H.E. 1-3"C, Pvc Schd. 40, Concrete Encased
2S	Secondary Power 1-2"C, Schd. 40 Concrete Encased
1 1/2L	Light 1-1 1/2"C, Schd.40, Concrete Encased



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ISLAND MAP, NOTES, AND SYMBOL LIST

KAILUA ROAD INTERSECTION IMPROVEMENTS
Vicinity of Ulukou Street and Ulumunu Drive
Project No. 61D-01-23

Scale: As Noted Date: DEC, 2023

SHEET No. E-01 OF 10 SHEETS

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ORIGINAL PLAN	DATE
NOTED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	

Hawaiian Electric Company (HECo) Notes:
Rev. 08/04/21

1. Location of Hawaiian Electric Facilities

The Location of Hawaiian Electric's Overhead and Underground Facilities Shown on the Plans are from Existing Records with Varying Degrees of Accuracy and are Not Guaranteed as Shown. The Contractor Shall Verify in the Field the Locations of the Facilities and Shall Exercise Proper Care in Excavating and Working in the Area. Wherever Connections of New Utilities to Existing Utilities and Utility Crossings are Shown, the Contractor Shall Expose the Existing Lines at the Proposed Connections and Crossings to Verify the Depths Prior to Excavation for the New Lines. The Contractor Shall Be Responsible for Any Damages to Hawaiian Electric's Facilities Whether Shown or Not Shown on the Plans.

2. Compliance with Hawaii Occupational Safety and Health Laws

The Contractor Shall Comply with the State of Hawaii's Occupational Safety and Health Laws and Regulations, Including Without Limitation, Those Related to Working on or Near Exposed or Energized Electrical Lines and Equipment.

3. Excavation Clearance

The Contractor Shall Obtain an Excavation Clearance from Hawaiian Electric's Planning and Design Section of the Transmission & Distribution Engineering Department (543-5654) Located at 820 Ward Avenue, 4th Floor, a Minimum of Ten (10) Working Days Prior to Starting Construction.

4. Caution!!! Electrical Hazard!!!!

Existing Hawaiian Electric Overhead and Underground Lines are Energized and Will Remain Energized During Construction Unless Prior Special Arrangements Have Been Made with Hawaiian Electric. Only Hawaiian Electric Personnel are to Handle These Energized Lines and Erect Temporary Guards to Protect These Lines from Damage. The Contractor Shall Work Cautiously at All Times to Avoid Accidents and Damage to Existing Hawaiian Electric Facilities, Which Can Result in Electrocution.

5. Overhead Lines

State Law (OSHA) Requires that a Worker and the Longest Object He or She may Contact Cannot Come Closer Than a Specified Minimum Radial Clearance When Working Close to or Under Any Overhead Lines. It is the Contractor's Responsibility to be Informed of and Comply with the Law.

At Any Time Should the Contractor Anticipate that His Work will Result in the Need to Encroach within the Minimum Required Clearance as Stated in the Law, the Contractor Shall Notify Hawaiian Electric at Least Three (3) Months Prior to the Planned Encroachment so that, if Feasible, the Necessary Protections (E.G. Relocate or De-Energize Hawaiian Electric Lines) Can Be Investigated. Hawaiian Electric May Also Be Able to Blanket its Distribution (12KV and Below) Lines to Provide a Visual Aid in Preventing Accidental Contact. Hawaiian Electric's Cost of Safeguarding or Identifying its Lines will be Charged to the Contractor.

Contact Hawaiian Electric's Customer Relations at 543-7070 for Assistance in Identifying and Safeguarding Overhead Power Lines.

6. Pole Bracing

a. Contractor Shall Not Excavate within 10 Feet of Hawaiian Electric's Utility Poles or Any Anchor System Supporting the Utility Pole. If Contractor

Must Excavate an Area More than 12 Inches Deep by 12 Inches Wide, and Closer Than 10 Feet from a Utility Pole or its Anchor System, Except When Excavating for Risers in a Single Trench Not Wider Than 12 Inches and Not Deeper Than 3 Feet, Contractor Will Be Responsible for Protecting, Supporting, Securing and Taking All Precautions to Prevent Damage to or Leaning Of Existing Poles. Before Commencing Such Excavation, Contractor Must Notify Hawaiian Electric Which May Lead to Implementing Pole Bracing Requirements. Hawaiian Electric Requires A Minimum of Ten (10) Working Days to Conduct the Review of Contractor's Submittal. Contractor Shall Submit Its Bracing Calculations and Drawings, Prepared and Stamped By A Licensed Structural Engineer, to Hawaiian Electric's Customer Relations (543-7070) For Review. Contractor Shall Be Responsible For the Design, Installation, and Removal of the Temporary Pole Bracing System, As Well As All Costs Incurred By Hawaiian Electric To Review Contractor's Drawings And To Repair Or Straighten Poles Impacted By Contractor's Activities, Including Response and Restoration Costs Incurred By Hawaiian Electric Arising Out of or Related to Outages Caused By Contractor's Failure to Meet the Foregoing Requirements. Hawaiian Electric's Receipt of Pole Bracing Calculation or Drawing Submittals of Any Contractor, Including Work Procedure, Shall Not Relieve Contractor From Any Liability Resulting From Contractor's Excavation Near or Around Hawaiian Electric's Utility Poles.

b. Hawaiian Electric May Provide to the Customer Information Related to Pole Bracing, Including Calculations and Other Basic Engineering. However, Hawaiian Electric Provides this Information for Informational Purposes Only and Does Not Warrant Any of the Information Provided to Customer. Hawaiian Electric Heresy Disclaims Any Liability Associated with the Customer's Use of Information Provided to the Customer from Hawaiian Electric. It is the Customer's Duty to Obtain Engineering from Its Own Engineer or Contractor. In Order to Brace Poles and the Use of Hawaiian Electric's Information Does Not Excuse the Customer From Performing Its Own Evaluation of the Bracing Needs. Should the Customer Install Bracing at Any Pole Location, Customer Shall Defend, Indemnify and Hold Harmless Hawaiian Electric from Any Third Party Claims Associated with the Customer's Bracing of a Pole. Should the Work Customer Perform at or Near the Pole Location Compromise the Pole or Its Surroundings in Any Way, Customer Shall Restore or Replace the Pole so that it is No Longer Compromised.

7. Underground Lines

The Contractor Shall Exercise Extreme Caution Whenever Construction Crosses or is in Close Proximity of Underground Lines. Hawaiian Electric's Existing Electrical Cables are Energized and Will Remain Energized During Construction. Only Hawaiian Electric Personnel are to Break into Existing Hawaiian Electric Facilities, Handle These Cables, and Erect Temporary Guards to Protect These Cables from Damage. The Cost of Hawaiian Electric's Assistance in Providing Proper Support and Protection of its Underground Lines Will Be Charged to the Contractor. For Assistance/Coordination in Providing Proper Support and Protection of these Lines, the Contractor Shall Call Hawaiian Electric's Customer Relations at 543-7070 a Minimum of Ten (10) Working Days in Advance.

Special Precautions are Required When Excavating Near Hawaiian Electric's 138KV or 46KV Underground Lines (See Hawaiian Electric Instructions to Consultants/Contractors on "Excavation Near Hawaiian Electric's Underground 138KV and/or 46KV Lines" for Detailed Requirements).

For Verification of Underground Lines, the Contractor Shall Call the Hawaii One Call Center at 866-423-7287 Minimum of Five (5) Working Days in Advance.

8. Underground Fuel Pipelines

The Contractor Shall Exercise Extreme Caution Whenever Construction Crosses or is in Close Proximity of Hawaiian Electric's Underground Fuel Oil Pipelines. Special Precautions are Required When Excavating Near Hawaiian Electric's Underground Fuel Oil Pipelines (See Hawaiian Electric's Specific Fuel Pipeline "Guidelines" to Consultants/Contractors on Excavation Near Hawaiian Electric's Underground Fuel Pipelines for Detailed Requirements).

9. Excavations

When Trench Excavation is Adjacent to or Beneath Hawaiian Electric's Existing Structures or Facilities, the Contractor is Responsible for:

- Arranging for Hawaiian Electric Standby Personnel to Observe Work at Contractor's Cost.
- Sheeting, Bracing, or Otherwise Supporting the Excavation and Stabilizing the Existing Ground to Render it Safe and Secure and to Prevent Possible Slides, Cave-Ins, and Settlements.
- Properly Supporting Existing Structures or Facilities with Beams, Struts, Under-Pinnings, or Other Necessary Methods to Fully Protect it from Damage.
- Backfilling with Proper Backfill Material Including Special Thermal Backfill where Existing (Refer to Engineering Division for Thermal Backfill Specifications).

10. Relocation of Hawaiian Electric Facilities

Any Work Required to Relocate or Modify Hawaiian Electric Facilities Shall Be Done by Hawaiian Electric, or by the Contractor Under Hawaiian Electric's Supervision. The Contractor Shall Be Responsible for All Coordination, and Shall Provide Necessary Support for Hawaiian Electric's Work, Which May Include, but not be Limited to, Staking of Pole/Anchor Locations, Identifying Right of Way and Property Lines, Excavation and Backfill, Permits and Traffic Control, Barricading, and Restoration of Pavement, Sidewalks, and Other Facilities.

All Costs Associated with Any Relocation or Modification (Either Temporary or Permanent) for the Convenience of the Contractor, or to Enable the Contractor to Perform His Work in a Safe and Expeditious Manner in Fulfilling His Contract Obligations Shall Be Borne by the Contractor.

11. Conflicts

Any Redesign or Relocation of Hawaiian Electric's Facilities Not Shown on the Plans May Be Cause for Lengthy Delays. The Contractor Acknowledges that Hawaiian Electric is Not Responsible for Any Delay or Damage that May Arise as a Result of Any Conflicts Discovered or Identified with Respect to the Location or Construction of Hawaiian Electric's Electrical Facilities in the Field, Regardless of Whether the Contractor has Met the Requested Minimum Advance Notices. In Order to Minimize Any Delay or Impact Arising from Such Conflicts, Hawaiian Electric Should Be Notified Immediately Upon Discovery or Identification of Such Conflict.

12. Damage to Hawaiian Electric Facilities

The Contractor Shall Be Responsible for the Protection of All Hawaiian Electric Surface and Subsurface Utilities and Shall Be Responsible for Any Damages to Hawaiian Electric's Facilities as a Result of His Operations. The Contractor Shall Immediately Report Such Damages or Any Hazardous Conditions Related to Hawaiian Electric's Lines to Hawaiian Electric's Trouble Dispatcher at 548-7961. Repair Work Shall Be Done by Hawaiian Electric or by the Contractor Under Hawaiian Electric's Supervision. Costs for Damages to Hawaiian Electric's Facilities Shall Be Borne by the Contractor.

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In Case of Damage or Suspected Damage to Hawaiian Electric's Fuel Pipeline, The Contractor Shall Immediately Notify Hawaiian Electric's Security Command Center at 543-7685 (a 24-Hour Number) so Hawaiian Electric Personnel Can Secure the Damaged Section and Report any Oil Spills to the Proper Authorities. All Costs Associated with the Damage, Repair, and Oil Spill Cleanup Shall Be Borne by the Contractor.

13. Hawaiian Electric Stand-By Personnel

The Contractor May Request Hawaiian Electric to Provide an Inspector to Stand-By During Construction near Hawaiian Electric's Facilities. The Cost of Such Inspection Will Be Charged to the Contractor.

The Contractor Shall Call Hawaiian Electric's Customer Relations at 543-7070 a Minimum of Three (3) Months in Advance to Arrange for Hawaiian Electric Stand-By Personnel.


14. Clearances

The Following Clearances Shall Be Maintained Between Hawaiian Electric's Ductline and All Adjacent Structures (Charted and Uncharted) in the Trench: (See Table)

The Contractor Shall Notify the Construction Manager of Hawaiian Electric of Any Heat Sources (Power Cable Duct Bank, Steamline, Etc.) Encountered that are Not Properly Identified on the Drawing.

15. Indemnity

The Contractor Shall Indemnify, Defend and Hold Harmless Hawaiian Electric from and Against All Losses, Damages, Claims, and Actions, Including But Not Limited to Reasonable Attorney's Fees and Costs Based Upon or Arising Out of Damage to Property or Injuries to Persons, or Other Tortious Acts Caused or Contributed to by Contractor or Anyone Acting Under its Direction or Control or on its Behalf; Provided Contractor's Indemnity Shall Not Be Applicable to Any Liability Based Upon the Sole Negligence of Hawaiian Electric.

 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.</p> <p>April 30, 2024 EXPIRATION DATE OF THE LICENSE</p> <p>SIGNATURE</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><u>HE NOTES 1</u></p> <p><u>KAILUA ROAD INTERSECTION IMPROVEMENTS</u> <u>Vicinity of Ulukou Street and Uluamanu Drive</u> <u>Project No. 61D-01-2S</u></p> <p>Scale: As Noted Date: DEC, 2023</p>
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