

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(52)	2008	7	64

Contact HECO's Customer Installations Department At 543-7846 For Assistance In Identifying And Safeguarding Overhead Power Lines.

## 6. POLE BRACING

## 9. EXCAVATIONS

A) *Sheeting And Bracing The Excavation And Stabilizing The Existing Ground To Render It Safe And Secure And To Prevent Possible Slides, Cave-ins, And Settlements.*

C) Backfilling With Proper Backfill Material Including Special Thermal Backfill Where Existing (refer To Engineering Department For Thermal Backfill Specifications).

## 10. RELOCATION OF HECO FACILITIES

*Any Work Required To Relocate Or Modify HECO Facilities Shall Be Done By HECO, Or By The Contractor Under HECO's Supervision. The Contractor Shall Be Responsible For All Coordination, And Shall Provide Necessary Support For HECO's Work, Which May Include, But Not Limited To, 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 Expedious Manner In Fulfilling His Contract Obligations Shall Be Borne By The Contractor.*

## 11. CONFLICTS

Any Redesign Or Relocation Of HECO's Facilities Not Shown On The Plans May Be Cause For Lengthy Delays. The Contractor Acknowledges That HECO 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 HECO'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, HECO Should Be Notified Immediately Upon Discovery Of Identification Of Such Conflict.

*For Verification Of Underground Lines, The Contractor Shall Call HECO's Underground Division At 543-7049 A Minimum Of 72 Hours In Advance.*

## 8. UNDERGROUND FUEL PIPELINES

DRAWING REVIEW


Reviewed for HECO's Facilities Only


Date 2/13/09 By Michael O'Neil

DWL II  
pf

Engineering Department  
Hawaiian Electric Company, Inc.

HECO's review of these drawings shall in no way relieve the Customer, its Consultant, its Contractor or anyone acting on the Customer's behalf from the responsibility for engineering, design, materials and any other liability associated with this project.



SIGNATURE 

APRIL 30, 2010

EXPIRATION DATE OF LICENSE

THIS WORK WAS PREPARED BY ME OR  
UNDER MY SUPERVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HECO NOTES I

KALANIANA'OLE HIGHWAY IMPROVEMENTS  
VICINITY OF HAWAII KAI DRIVE  
TO KEAHOLE STREET  
FEDERAL-AID PROJECT NO. NH-072-1(52)

DATE: January 2009

SHEET No. UE-1 OF 3 SHEETS

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HAWAIIAN ELECTRIC COMPANY NOTES (Continued)

*The Contractor Shall Be Responsible For The Protection Of All HECO Surface And Subsurface Utilities And Shall Be Responsible For Any Damages To HECO's Facilities As A Result Of His Operations. The Contractor Shall Immediately Report Such Damages To HECO's Trouble Dispatcher At 548-7961. Repair Work Shall Be Done By HECO Or By The Contractor Under HECO's Supervision. Cost For Damages To HECO's Facilities Shall Be Borne By The Contractor.*

*The Contractor May Request HECO To Provide An Inspector To Stand-by During Construction Near HECO's Facilities. The Cost Of Such Inspection Will Be Charged To The Contractor.*

*The Following Clearances Shall Be Maintained Between HECO's Ductline And All Adjacent Structures (charted And Uncharted) In The Trench:*

- A. *The Minimum Horizontal Clearances To Water Lines Parallel To Electrical Ductlines Should Be Increased To 60 Inches If The Water Line Is Greater Than Or Equal To 16 Inches In Diameter.*
- B. *The Minimum Vertical Clearances To Water Lines Crossing Electrical Ductlines Can Be Reduced To 6 Inches If The Electrical Ductline Structure Is Concrete Encased And Is Below The Water Line And The Water Line Is Less Than 16 Inches In Diameter.*

*The Following Clearance Shall Be Maintained Between HECO's Fuel Oil Pipelines And All Adjacent Structures: 24-inches, Parallel Or Crossing. The Minimum Clearance Can Be Reduced To 12 Inches (parallel And Below Only) If The Structure Is Jacketed In Concrete.*

The Contractor Shall Indemnify, Defend And Hold Harmless HECO 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 By 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 HECO.

*Contractor Shall Furnish His Construction Schedule 40 Working Days Prior To Starting Work On HECO Facilities. Contractor Shall Give HECO, In Writing, 40 Working Days Notice To Proceed With HECO's Portion Of Work.*

*All Construction, Restoration Work, And Inspection Shall Be Subject To  
Whichever Governmental Agency Has Authority Over The Work.*

*Construction Of HECO's Underground Facilities Shall Be Constructed In Accordance With The Latest Revisions Of HECO Specifications CS7001, CS7003, CS7202, CS9301, And CS9401 And Applicable HECO Standards.*

*Contractor Shall Furnish All Labor, Materials, Equipment, And Services To Properly Perform And Fully Complete All Work Shown On The Contract, Drawings, And Specifications. All Materials Shall Be New And Manufactured In The United States Of America. All Manhole, Handhole, And Ductline Installations Shall Be Inspected And Approved By HECO Prior To Excavation And Prior To Placing Concrete. Contractor Shall Notify HECO's Inspection Division At 543-4356 At Least 48 Hours Prior To Placing Concrete.*


*The Contractor Shall Arrange For Toneouts Of All Underground Facilities And Shall Stakeout All Proposed HECO Facilities Within The Project Area So As To Not Conflict With Any Utility (Existing Or Proposed) And Any Proposed Construction Or Improvement Work For Verification By HECO Before Proceeding With HECO Work.*

*All Ductline Installations Shall Be PVC Schedule 40 Encased In Concrete, Unless Otherwise Noted. All Completed Ductlines Shall Be Mandrel Tested By The Contractor In The Presence of HECO's Inspector Using HECO's Standard Practice. The Contractor Shall Install a 1/8" Polyolefin Pull Line In All Completed Ductlines After Mandrel Testing Is Complete.*

*The Last Joint Pole Occupant Off The Poles Shall Remove The Poles.*

*The Contractor Shall Provide HECO With Two Sets Of As-Built Reproducible Tracings Showing The Offsets, Stationing, Azimuth, Distance, Curve Data, And Vertical Elevation Of The Duct Line(s) Constructed.*

LAST SAVE: 02/11/09 @ 14:21:09 BY: BO PLOT SC 1'-0"=1'



2/17/09  
SIGNATURE \_\_\_\_\_  
APRIL 30, 2010  
EXPIRATION DATE OF LICENSE \_\_\_\_\_  
THIS WORK WAS PREPARED BY ME OR  
UNDER MY SUPERVISION \_\_\_\_\_

**SHEET No. UE-2 OF 3 SHEETS**