

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(21)	2015	6	99

HECO CONSTRUCTION NOTES IN PUBLIC RIGHT-OF-WAY

1. LOCATION OF HECO FACILITIES

The Location of Hawaiian Electric Company's (HECo) 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 HECO'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 Permit From HECO's Technical Division 1-808-543-5654 Located at 820 Ward Avenue, 4th Floor, Two Weeks Prior to Starting Construction. Please Refer to Our Request Number at That Time.

4. CAUTION!!! ELECTRICAL HAZARD!!!

Existing HECO Overhead and Underground Lines are Energized and Will Remain Energized During Construction Unless Prior Special Arrangements Have Been Made With HECO. Only HECO 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 HECO Facilities, Which can Result in Electrocution.

5. OVERHEAD LINES

State Law (OSHA 1910.269(K)(2B)) Requires That a Worker and the Longest Object He or She May Contact Cannot Come Closer Than a Minimum Radial Clearance of 10 Feet When Working Close to or Under Any Overhead Lines Rated 50KV and Below. For Each Additional 10KV Above 50KV, an Additional 4 Inches Shall be Added to the 10-Foot Clearance Requirement. The Preceding Information on Line Clearance Requirements is Provided as a Convenience and it is the Contractor's Responsibility to be Informed of and Comply with any Revisions or Amendments to the Law.

Should the Contractor Anticipate That His Work Will Result in the Need to Encroach Within the Minimum Required Clearance at any Time, the Contractor Shall Notify HECO at Least Four (4) Weeks Prior to the Planned Encroachment So That, if Feasible, the Necessary Protections (e.g. Relocate or De-energize HECOo Lines) Can Be Investigated. HECO May Also be Able to Blanket its Distribution (12KVv and Below) Lines to Provide a Visual Aid in Preventing Accidental Contact. HECO's Cost of Safeguarding its Lines Will be Charged to the Contractor.

Contact HECO's Customer Installations Department at 543-7846 for Assistance in Identifying and Safeguarding Overhead Power Lines.

Please Note That Encroachment Within the Required Minimum Clearance for 46KV and 138KV Circuits May Require a Considerably Longer Time to Relocate or De-energize These Types of Circuits. the Contractor is Advised to Contact the HECO Project Manager Immediately to Determine Feasible Solutions.

6. POLE BRACING

A Minimum Clearance of 10 Feet Must be Maintained When Excavating Around Utility Poles and/or Their Anchor System to Prevent Weakening or Pole Support Failure. Should Work Require Excavating Within 10 Feet of a Pole and/or Its Anchor System, the Contractor Shall Protect, Support, Secure, and Take all Other Precautions to Prevent Damage to or Leaning of These Poles. The Contractor is Responsible for all Pole Bracing Designs and Structural Calculations, as Well as the Associated Costs to Brace, Repair, or Straighten Poles. All Means of Structural Support for the Pole and/or Anchor System Proposed by the Contractor Shall be Submitted to HECO's Customer Installation Department (543-7846) for Review a Minimum of Ten (10) Working Days Prior to Implementation. The Cost of HECO's Review/Assistance in Providing Proper Support and Protection of Its Poles will be Charged to the Contractor.

7. UNDERGROUND LINES

The Contractor Shall Exercise Extreme Caution Whenever Construction Crosses or is in Close Proximity of Underground Lines. HECO's Existing Electrical Cables are Energized and Will Remain Energized During Construction. Only HECO Personnel are to Break into Existing HECO Facilities, Handle These Cables, and Erect Temporary Guards to Protect These Cables From Damage. The Cost of HECO'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 the Lines, the Contractor Shall Call HECO's Customer Installations Department at 543-7846 a Minimum of Ten (10) Working Days in Advance.

Special Precautions are Required When Excavating Near HECO's 138KV Underground Lines (See HECO Instructions to Consultants/Contractors on "Excavation Near HECO's Underground 138KV Lines" For Detailed Requirements).

For Verification of Underground Lines, the Contractor Shall Call the Hawaii One Call Center at 1-866-423-7287 a 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 HECO's Underground Fuel Oil Pipelines. Special Precautions are Required When Excavating Near HECO's Underground Fuel Oil Pipelines (See HECO's Specific Fuel Pipeline "Guidelines" to Consultants/Contractors on Excavation Near HECO's Underground Fuel Pipelines For Detailed Requirements).

9. EXCAVATIONS

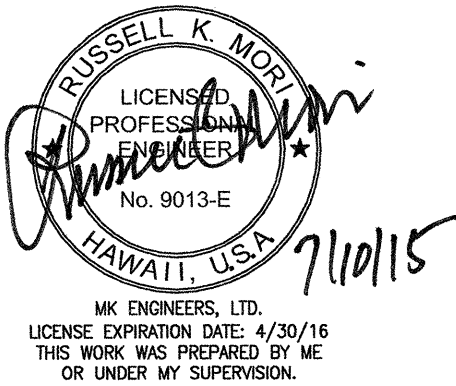
When Trench Excavation is Adjacent to or Beneath HECO's Existing Structures or Facilities, the Contractor is Responsible For:

- a) Arranging for HECO Standby Personnel to Observe Work at the Contractor's Cost.
- b) 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.
- c) Properly Supporting Existing Structures or Facilities With Beams, Struts, Under-Pinnings, or Other Necessary Methods to Fully Protect it From Damage.
- d) 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 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.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HECO NOTES  
FARRINGTON HIGHWAY  
Replacement of Maipalaoa Bridge  
Federal Aid Project No. BR-093-1(21)

Scale: AS NOTED      Date: JUNE 2015

SHEET No. 1 OF 3 SHEETS



HECO CONSTRUCTION NOTES IN PUBLIC RIGHT-OF-WAY (Cont.)

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 or Identification of Such Conflict.

12. DAMAGE TO HECo FACILITIES

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 or Any Hazardous Conditions Related to HECo's Lines to HECo's Trouble Dispatcher at 548-7961. Repair Work Shall be Done by HECo or by the Contractor Under HECo's Supervision. Costs for Damages to HECo's Facilities Shall be Borne by the Contractor.

In Case of Damage or Suspected Damage to HECo's Fuel Pipeline, the Contractor Shall Immediately Notify HECo's Honolulu Power Plant Shift Supervisor at 533-2102 (a 24-hour Number) so HECo Personnel can Secure the Damaged Section and Report Any Oil Spills to the Proper Authorities. In Case of Damage or Suspected Damage to the Wai'au or Kahe Fuel Pipelines, the Contractor Shall Also Notify Chevron at 682-2227. All Costs Associated with the Damage, Repair, and Oil Spill Cleanup Shall be Borne by the Contractor.

13. HECo STAND-BY PERSONNEL

The Contractor May Request HECo to Provide an Inspector to Standby During Construction Near HECo's Facilities. The Cost of Such Inspection Will be Charged to the Contractor.

The Contractor Shall Call HECo Customer Installations Department at 543-7846 a Minimum of Five (5) Working Days in Advance to Arrange for HECo Stand-by Personnel.

14. CLEARANCES

The Following Clearances Shall be Maintained Between HECo's Ductline and all Adjacent Structures (Charted and Uncharted) in the Trench:

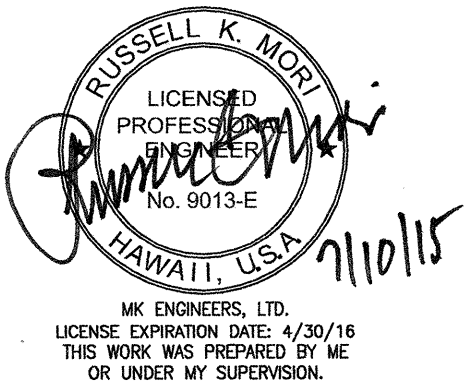
Minimum Separation Clearances to Existing Underground Ductlines Horizontal (Parallel)				
Utility Being Installed	Existing Direct Buried Cable	Existing Direct Buried in Conduit (No Concrete Encasement)	Existing 3" Concrete Encasement	Applicable Notes:
HECo DB Conduits	12"	3"	0"	
HECo 3" Encasement	0"	0"	0"	
Telephone/CATV DB	12"	12"	6"	
Telephone/CATV DB Ducts	12"	12"	6"	
Telephone/CATV 3" Encasement	0"	0"	0"	E
Traffic Signal	12"	12"	12"	
Water DB	36"	36"	36"	A ≠ D
Water Service Laterals	12"	12"	12"	
Water (Concrete Jacketed)	36"	36"	36"	A ≠ D
Gas DB	12"	12"	12"	A
Gas (Concrete Jacketed)	12"	12"	12"	A
Sewer DB		36"	36"	A ≠ B
Sewer (Concrete Jacketed)	36"	36"	36"	A ≠ B
Drain	12"	12"	12"	A
Fuel Pipelines	48"	48"	48"	C

15. INDEMNITY

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 Tortuous 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 HECo.

- A. Where Space is Available, Parallel Clearance to Other Utilities, or Foreign Structures Other Than Communication or Traffic Signal Shall be 36".
- B. If 36" Clearance Cannot be Met:  
- If Clearance is Less Than 12", Jacket Sewer Line With Reinforced Concrete (Per HECo's Standard 30-1030) For a Distance of 5'-0" Plus Pipe Diameter.  
- If Clearance is Between 12" and 36", Jacket Sewer Line With Plain Concrete.
- C. Electrical Conduit Crossings of Fuel Lines Should be Kept a Minimum of 48" Clear Below Fuel Line for the Full Easement Width. If the 48" Clearance Cannot be Met but There is a Minimum of 24", the Fuel Line Must be Encased with 6" of Concrete.
- D. 5 Feet Clear to Water Mains 16" and Larger.
- E. For Situations with 0" Minimum Separation, a 6" Separation is Recommended.
- F. Clearances Measured From Outer Edges or Diameters of Utilities.

MINIMUM SEPARATION CLEARANCES TO EXISTING UNDERGROUND DUCTLINES VERTICAL (CROSSINGS)				
Utility Being Installed	Existing Direct Buried Cable	Existing Direct Buried in Conduit (No Concrete Encasement)	Existing 3" Concrete Encasement	Applicable Notes:
HECo DB Conduits	6"	3"	0"	
HECo 3" Encasement	0"	0"	0"	
Telephone/CATV DB	12"	12"	6"	
Telephone/CATV DB Ducts	12"	12"	6"	
Telephone/CATV 3" Encasement	0"	0"	0"	D
Traffic Signal	12"	12"	6"	
Water DB	6"	6"	6"	B
Water Service Laterals	6"	6"	6"	
Water (Concrete Jacketed)	6"	6"	6"	B
Gas DB	12"	12"	12"	
Gas (Concrete Jacketed)	12"	12"	12"	
Sewer DB	24"	24"	24"	A
Sewer (Concrete Jacketed)	24"	24"	24"	A
Drain	12"	12"	6"	
Fuel Pipelines	48"	48"	48"	C



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HECo NOTES

FARRINGTON HIGHWAY

Replacement of Maipalaoa Bridge

Federal Aid Project No. BR-093-1(21)

Scale: AS NOTED      Date: JUNE 2015

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(21)	2015	8	99

HECO CONSTRUCTION NOTES IN PUBLIC RIGHT-OF-WAY (Cont.)

- A.

If Clearance Cannot be Met:

- If Clearance is Less Than 12", Jacket Sewer Line with Reinforced Concrete (Per HECO's Standard 30-1030) for a Distance of 5'-0" Plus Pipe Diameter.

- If Clearance is Between 12" and 24", Jacket Sewer Line with Plain Concrete.
- B.

12" Vertical Clearance for Pipe Diameters Greater Than 16".
- C.

Electrical Conduit Crossings of Fuel Lines Should be Kept a Minimum of 48" Clear Below Fuel Line for the Full Easement Width. If the 48" Clearance Cannot be Met but There is a Minimum of 24", the Fuel Line Must be Encased with 6" of Concrete.
- D.

For Situations with 0" Minimum Separation, a 6" Separation is Recommended.
- E.

Clearances Measured From Outer Edges or Diameters of Utilities.

The Contractor Shall Notify the Construction Manager and HECO of Any Heat Sources (Power Cable Duct Bank, Steamline, etc.) Encountered That are not Properly Identified on the Drawing.
16.

SCHEDULE

The Contractor Shall Furnish His Construction Schedule Six (6) Months Prior to Starting Work on HECO Facilities. The Contractor Shall Give HECO, in Writing, Three (3) Months Notice to Proceed With HECO's Portion of Work.
17.

AUTHORITY

All Construction, Restoration Work, and Inspection Shall be Subject to Whichever Governmental Agency Has Authority Over the Work.
18.

SPECIFICATIONS

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.
19.

CONSTRUCTION

The 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. The Contractor Shall Notify HECO's Inspection Division at 543-7520 at Least 48 Hours Prior to Placing Concrete.

The Contractor Shall Coordinate Work to Break Into HECO's Existing Electrical Facilities With HECO's Underground Division at 543-7520 at Least Ten (10) Working Days in Advance.

20.

STAKEOUT

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.

21.

DUCTLINES

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.
22.

JOINT POLE REMOVAL

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

23.

AS-BUILT PLANS

The Contractor Shall Provide HECO With Two Sets of As-built Reproducible Tracings Showing the Offsets, Stationing, and Vertical Elevation of the Duct Line(s) Constructed.
- 
- STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HECO NOTES

FARRINGTON HIGHWAY

Replacement of Maipalaoa Bridge

Federal Aid Project No. BR-093-1(21)

Scale: AS NOTED

Date: JUNE 2015

SHEET No. 3

OF 3 SHEETS
- 8



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(21)	2015	9	99

HAWAIIAN TELCOM CONSTRUCTION/DESIGN NOTES

1.

The Contractor Shall Procure and Pay for all Licenses and Permits and Shall Give all Notices Necessary and Incident to the Due and Lawful Prosecution of the Work.
2.

The Contractor Shall Obtain an Excavation Permit and Toning Request From Hawaiian Telcom's Excavation Permit Section. The Excavation Desk Has Drop-off/Pick-up Service Only. Counter Service is Not Available. Drop-off/Pick-up Location is 1177 Bishop Street, Security Department Located on Adams Lane. Drop-off/Pick-up Hours are 8:00 a.m. to 11:00 a.m. and 1:00 p.m. to 4:00 p.m. Monday Through Friday, Except Holidays. at Time of Drop-off, the Contractor Must:

A)

Provide a Copy of Your State, City & County or Military Trenching Permit Application Form (Note: If You are Excavating on Private Property, This Form is Not Required).

B)

Provide 3 Copies of Site Plans, Preferably Half-size (11" x 17"), and

C)

Completed and Signed Hawaiian Telcom Drop-off Form. This Form is Available at [www.hawaiiantel.com/customer-service\\_excavation.htm](http://www.hawaiiantel.com/customer-service_excavation.htm)

D)

Contractors Should Submit Drawings a Minimum of 2 Weeks Prior to the Start of Construction to Allow Adequate Time for Review of the Plans Provided.
3.

Prior to the Excavation of the Ductline, the Contractor Shall Request Hawaiian Telcom to Locate Existing Ductline Wherever Required. For Underground Cable Locating and Marking, Five (5) Working Days Advance Notice is Required for any Inspection by a Designated Representative.
4.

The Location of Existing Utilities are Approximate Only. The Contractor Shall Exercise Extreme Caution and Shall Maintain Proper Clearances Whenever Construction Crosses or is in Close Proximity of Hawaiian Telcom Facilities. The Contractor Shall Verify Their Locations and Shall be Liable for any Damages to Hawaiian Telcom Facilities. Any Damage Shall be Reported Immediately to Hawaiian Telcom's Repair Section at \*611 (24 Hours) or to the Excavation Permit Section at 546-7746 (Normal Working Hours, Monday Through Friday, Except Holidays). As a Result of His Operations, Adjustments to the New Ductline Alignment, if Required, Shall be Made to Provide the Required Clearances.
5.

The Contractor Shall Take Necessary Precaution Not to Damage Existing Cables or Ducts. A Hawaiian Telcom Inspector or Designated Representative is Required to be at Any Job Site Whenever There Will be a Breakage Into or Entry Into Any Structure That Contain Hawaiian Telcom Facilities. Temporary Cable and Duct Supports Shall be Provided Wherever Necessary.
6.

The Contractor Shall Notify Hawaiian Telcom's Inspector or Designated Representative a Minimum of 72 Hours Prior to Excavation, Bracing, or Backfilling of Hawaiian Telcom Structures or Facilities.
7.

All Applicable Construction Work Shall be Done in Accordance with the "Hawaiian Telcom Standard Specifications for Placing Underground Telephone Systems" Dated January 2007. All Subsequent Amendments and Additions, and all Other Pertinent Standards for Telephone Construction. Contractor Shall Familiarize His Personnel by Obtaining Applicable Specifications.
8.

When Excavation is Adjacent to or Beneath Hawaiian Telecom's Existing Structures of Facilities, the Contractor Shall:

A)

Sheet and/or Brace the Excavation to Prevent Slides, Cave-ins, or Settlements to Ensure No Movement to Hawaiian Telcom's Structures or Facilities.

B)

Protect Existing Structures and/or Facilities with Beams, Struts, or Underpinning While Excavating Beneath Them to Ensure no Movement to Hawaiian Telcom's Structures or Facilities.
9.

The Contractor Shall Brace All Poles or Light Standards Near the New Ductline, Manhole, or Handhole During His Operations.
10.

The Contractor Shall Saw-cut A.C. Pavement and Concrete Gutter Wherever New Manholes, Handholes, or Ductlines are to be Placed and Shall Restore to Existing Condition or Better.
11.

The Contractor Shall Comply With the Policy Adopted by the Department of Public Works City and County of Honolulu, Concerning the Replacement of Concrete Sidewalks After Excavation Work.
12.

The Underground Pipes, Cables, or Ductlines Known to Exist by the Engineer From His Search of Records are Indicated on the Plans. The Contractor Shall Verify the Locations and Depths of the Facilities and Exorcise Proper Care in Excavating in the Area. Wherever Connections of New Utilities to Existing Utilities are Shown on the Plans, the Contractor Shall Expose the Existing Lines at the Proposed Connections to Verify Locations and Depths Prior to Excavation for the New Lines.
13.

Whenever Connections to Existing Utilities are Shown on the Plans, the Contractor Shall Expose the Existing Lines Prior to Excavation of the Main Trenches to Verify Their Locations and Depths.
14.

The Contractor, at His Own Expense, Shall Keep the Project and Surrounding Area Free From Dust Nuisance. The Cost for Supplementary Measures, Which Will be Required by the City and County, Shall be Borne by the Contractor.
15.

The Contractor Shall Pump All Manholes Dry During Final Inspection.
16.

The Contractor Shall Notify the Hawaiian Telecom Inspector 24 Hours Prior to the Pouring of Concrete or Backfilling.
17.

When Connecting to Manhole Walls, All Existing Reinforcing Bars Shall be Left Intact. Ducts Shall be Adjusted in the Field in Order to Clear Reinforcing.
18.

The Contractor Shall be Responsible for Laying Out All Reinforced Lines and Grades and Shall Preserve All Bench Marks and Working Points Necessary to Lay Out the Work Correctly. The New Ductline Shall be Adjusted by the Contractor to Suit the Existing Conditions and the Details as Described in the Plans.
19.

Minimum Concrete Strength Shall be:

For Ductline

2500 PSI at 28 Days

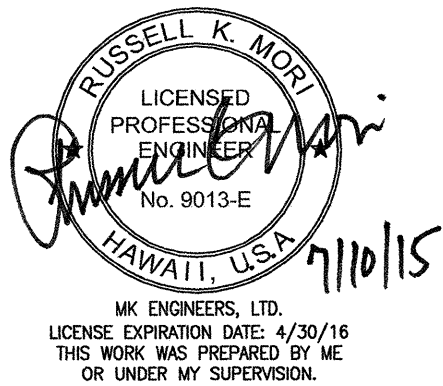
For Manhole

3000 PSI at 28 Days or as Specified in Design Notes
20.

Bends in the Duct Alignment, Due to Changes in Grade Shall Have a Minimum Radius of 25 Feet. All 90 Degree C-Bends at a Pole or at the Building Floor Slab Penetration, Shall Have a Bend Radius of Ten Times the Diameter of the Duct or Greater.
21.

After Ductline Has Been Completed, a Mandrel with a Square Front not Less Than 12" Long and Having a Diameter of 1/4" Less Than the Inside Diameter of the Duct, Shall be Pulled Through Each Duct After Which a Brush With Stiff Bristles Shall be Pulled Through to Made Certain That no Particles or Earth, Sand, or Gravel Have Been Left Inside. Ducts Shall be Completely Dry and Clean.
22.

All Ducts and Conduits Shall Have an 1800# Polyester Mule-Tape (NEPTCO, WP1800P, Hawaiian Telcom Material Code No. 571154) Installed Throughout its Entire Length. All Ducts Shall be Capped to Prevent Entry of Foreign Material During Construction and at the Completion of Installation.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HAWAIIAN TELCOM NOTES

FARRINGTON HIGHWAY  
Replacement of Maipalaoa Bridge  
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SHEET No. 1 OF 1 SHEETS

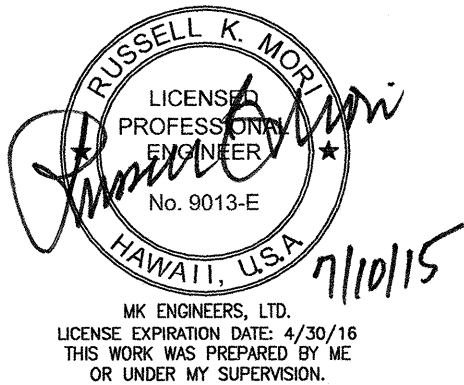


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OCEANIC CABLE NOTES

- The Locations of Existing Utilities are Approximate Only. the Contractor Shall Verify Their Locations and Shall be Responsible For Any Damages to These Utilities as a Result of His Operations. Adjustments to the New Ductline Alignment, if Required, Shall be Made to Provide the Required Clearances.
- The Underground Pipes, Cables, or Ductlines Known to Exist by the Engineer from His Search of Records are Indicated on the Plans. The Contractor Shall Verify the Locations and Depths of the Facilities and Exercise Proper Care in Excavating in the Areas. Wherever Connections of New Utilities to Existing Utilities are Shown on the Plans, the Contractor Shall Expose the Existing Lines at the Proposed Connections to Verify Their Locations and Depths Prior to Excavation for the New Lines.
- Prior to the Excavation of the Ductline, the Contractor Shall Request That Oceanic Cable Company to Locate Existing Ductline Wherever Required.
- The Contractor Shall Take Necessary Precaution Not to Damage Existing Cables or Ducts. Any Work Involving Existing Cables or Ducts Shall be Done in the Presence of the Oceanic Cable Company Inspector or His Representative.
- The Contractor Shall Notify the Oceanic Cable Company Inspector 48 Hours Prior to the Start of Work on CATV Infrastructure, Pouring of Concrete or Backfilling. Oceanic's Inspector, Moki Place, Can be Reached at 625-8378.
- Wherever Connections to Existing Utilities are Shown on the Plans, the Contractor Shall Expose the Existing Lines Prior to Excavation of the Main Trenches to Verify Their Locations and Depths.
- The Location of CATV Facilities Shown on Plans are From Existing Records with Varying Degrees of Accuracy as to its Actual Fixed Location. The Contractor Shall Use Extreme Caution When Working in Close Proximity of CATV Facilities.
- The Contractor Shall Obtain Excavation Permit Clearance From Oceanic's Engineering Section Located at 200 Akamainui St., Milliani Tech Park.
- For Any Field Assistance or Verification of CATV Facilities, the Contractor Shall Call the Technical Operations Center at 625-8378.
- Any Work Required to Relocate CATV Facilities Shall be Done by Oceanic Cable and the Contractor Shall be Responsible for all Coordination Requirements and Associated Costs.
- Any Damage to Oceanic's Facilities Shall be Reported to OCI's Repair Dispatch Department at 625-8437 or 625-8666.
- All Existing Improvements That are Disturbed During the Construction Phase Shall be Restored to its Original or Better Condition.
- The Contractor Shall Take All Necessary Precaution not to Damage the Existing Cables in the Pullbox. All Damages to Existing Cables Shall be Repaired by Oceanic Cable and Paid For by the Contractor.
- Coordinate All Penetration of Telephone Pullboxes with Hawaiian Telcom Inspector.
- Smooth Finish Inside Wall of Existing Pullboxes and Handholes to its Original Condition or Better. All Entrances Into the Pullbox Shall be Grouted Around Conduits.
- For 3" Conduits or Larger, the Contractor Shall Install NEPTCO WPI800 Muletape or Approved Equal in All Ductlines, Leave Muletape in Place for Future Use as a Pull or Fish Line, Unless Otherwise Noted. Reference Hawaiian Telcom Material Code No. 571154. All Ducts Shall be Capped to Prevent Entry of Foreign Material During Construction and at Completion of Installation. Endbells are Required for Conduits 2" and Larger.
- For Conduits Less Than 3", the Contractor Shall Place Polycord Through Out Project, and Secure in Manholes, Handholes, and Pullboxes.
- Penetration Into Pullboxes if Necessary to be From Factory Installed Opening or From Bricks Position. Penetration From Pullbox Walls is not Acceptable. All Conduits Shall Enter Through the End of the Pullbox at 90 Degrees.

- A Minimum of (2) Precast Sections Must be Used on All 2 x 4 or 2 x 6 Pullboxes.
- Two Minimum Layers of Bricks to be Used Shall Always be at Least One Layer Lower Than the Lowest Duct Entering the Pullbox. At No Time However, Shall There be Less Than Two Layers of Bricks on Each Installation.
- At No Time Shall Cement Mortar, Wood, or Any Other Material be Used Between Precast Sections. Leveling or Raising of Boxes to Grade Must be Done at Brickwork Section Using Cement Mortar. The Permanent Installation of Wooded Wedges to Accomplish This Purpose Will Not be Accepted.
- Concrete Precast Base May be Used as an Alternative to Bricks.
- Trenching to be by Hand Digging Near and Across Existing Utility Lines.
- Minimum Clearance Between Street Light Stand and Fire Hydrants Shall be Three Feet.
- Underground Utilities Shown Hereon is for Information Only. No Guarantee is Made on the Accuracy or Completeness of Said Installation.
- For Underground Cable Locating and Marking, Five Working Days Advance Notice is Required. Three Working Days Advance Notice is Required for Any Inspection by a Designated Representative. Contractor Shall Take Necessary Precaution Not to Damage Any Existing Cables or Ducts. Oceanic's Inspector or Designated Representative is Required to be at Any Job Site Whenever There Will be a Breakage Into or Entry Into Any Structure That Contain Oceanic's Facilities.
- Concrete Strength Shall be 3000 PSI in 28 Days.
- Bends in the Duct Alignment, Due to Changes in Grade Shall Have a Minimum Radius of 20-Feet. All 90-Degree C-Bends at a Pole or at the Building Floor Slab Penetration, Shall Have a Bend Radius of Ten Times the Diameter of the Duct or Greater.
- After Ductline has Been Completed, a Mandrel with a Square Front Not Less Than 12-Inch Long and Having a Diameter of 1/4-Inch Less Than the Inside Diameter of Duct, Shall be Pulled Through Each Duct After Which a Brush with Stiff Bristles Shall be Pulled Through to Make Certain That no Particles of Earth, Sand, or Gravel Have Been Left Inside. Ducts Shall be Completely Dry and Clean.
- All Construction Must be Inspected and Approved by Oceanic Prior to the Installation of any of its Facilities and the Energizing of its System.
- Contractor and/or Customer Shall Provide Oceanic with Sufficient Installation Time in Their Occupancy Time Table.
- Install 4-Mil Thick Orange Color Warning Tape 3-Inch Wide, Entire Length of Trench When Placing CATV Conduits. Tape Should Read "Caution Buried Cable Line Below". Manufactured by Harris Industries, Inc., Catalog Number UT-43 or Equivalent Tape. Tape to be Installed 12-Inches Below Grade.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**OCEANIC TIME WARNER**  
**CABLE NOTES**  
FARRINGTON HIGHWAY  
Replacement of Maipalaoa Bridge  
Federal Aid Project No. BR-093-1(21)  
Scale: AS NOTED      Date: JUNE 2015  
SHEET No. 1 OF 1 SHEETS