

GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(026)	2016	3	110

1. The scope of work for this project consists of cold planing; resurfacing; reconstruction of weakened pavement areas; utility adjustment; shoulder widening; regrading; upgrading of existing guardrail, end treatments, and bridge end post transitions; installation of modular rubber speed humps, guardrails, bridge pedestrian railing, milled centerline and shoulder rumble strips, safety edge, shoulder dressing, reflector markers, milepost reference markers, pavement markings, and striping; replacement of signage; stabilization and realignment of portion of existing road; and planting grass.

2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.

3. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.09 - Maintenance of Traffic; Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; and the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645 - Work Zone Traffic Control.

4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for the exact locations and depths of all underground utilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, installation of guardrail, stabilization of existing road, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for seperately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.

6. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the Standards and Specifications of the affected utility company at no cost to the State.

7. The Contractor shall verify the presence of existing aerial and underground utilities which may conflict with construction activities and shall coordinate with the utility company for temporary relocations, as necessary. All costs associated with temporary relocations shall be borne by the contractor.

8. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

9. The Contractor shall submit maintenance plans and schedules, including road or lane closures, lane switches, and the placement of temporary traffic control devices to the Engineer for acceptance prior to Construction.

10. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

11. The exact locations and limits of areas to be reconstructed and cold planed shall be determined in the field by the Engineer.

12. The Contractor shall notify the Department of Transportation Services, Public Transit Division at ph. #768-8396 and the Oahu Transit Services, Inc. Bus Operations (ph. #848-4578 or 852-6016) and Paratransit Operations (ph. #454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop, and duration of project at least two (2) weeks prior to starting construction operations.

13. The Contractor shall obtain all necessary permits prior to start of work at his own cost.

14. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Hot Mix Asphalt Pavement, Mix No. IV and will not be paid for separately.

15. All holes, depressions and wheel ruts shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V prior to resurfacing. This work shall be considered incidental to various contract items.

16. Tack coat shall be incidental to the various Asphalt Concrete Pavement items.

17. Dressing of shoulder and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.

18. The existing drainage system shall be kept functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.

19. Smooth riding connections shall be constructed at all limits of resurfacing including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.

20. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items.

21. The Contractor shall provide for vehicles and pedestrians access to and from all existing side streets and driveways at all times.

22. Removal and disposal of existing guardrail, end terminals, asphalt concrete pavement, and any debris shall be considered incidental to their respective bid items.

23. All saw cutting and safety edge work shall be considered incidental to the various contract items.

24. Prior to placement of new aggregate base course or HMA pavement, the existing subgrade or aggregate base course shall be proofrolled with a 10-ton or heavier roller for a minimum of 15 passes.

25. New aggregate base course shall be compacted to a relative compaction greater than or equal to 95% of its maximum dry density as determined by AASHTO T180.

26. The exact locations and limits of guardrail improvements shall be determined in the field by the Engineer.

27. No section where guardrails have been removed shall be left unshielded at the end of each work day. Open sections shall be shielded by portable physical barriers. Furnishing, installing and maintaining physical barriers shall be considered incidental to the various contract items.

28. Existing facilities and/or pavement to remain which has been damaged by the Contractor shall be restored to its original condition at no cost to the State.

29. All regraded areas and all grassed areas damaged by construction activites shall be planted in accordance with the plans and Special Provisions Section 619 - Planting.

30. The contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.

31. Contractor shall dispose or deliver any removed material at no cost to the State.

32. All work specified in the contract but not listed seperately in the proposal schedule shall be considered incidental to the other various contract items and shall not be paid for seperately.

33. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks, ADA access routes complying with 2010 ADAAG Section 206.1, side streets, cross streets, and beaches at all times. This work shall be considered incidental to various contract items and will not be paid for seperately.

34. Material and/or equipment shall be stockpiled or stored within the highway right-of-way only at the 2 locations designated in the plans (See Plan Sheets No. 32 & 40) and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Highways Right-of-Way Branch at ph. #692-7332.

35. Prior to resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone, and cable utilities to be adjusted to the new finished grade. This work shall be considered incidental to the various contract items.

36. After completion of resurfacing, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within resurfaced area). It shall be the responsibility of the Contractorto correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
GENERAL NOTES AND LEGEND
FARRINGTON HIGHWAY RESURFACING
Vicinity of Kili Drive to
Satellite Tracking Station Road
Federal Aid Project No. STP-093-1(026)
Date: April, 2016
SHEET No. 1 OF 3 SHEETS

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GENERAL NOTES (CONTINUED)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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37. The Contractor is to take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if a dust nuisance is created.
38. The Contractor shall probe to verify the exact location of any underground utilities within the project limits prior to installing guardrail posts. The Contractor shall adjust the location of guardrail posts accordingly to account for the actual locations of underground utilities. The Contractor may use nested W-Beam over obstacle when feasible (see details on Plan Sheet No. 27) and shall obtain approval from the Engineer prior to use. Any adjustments to the contract or underground utilities shall be considered incidental to various items of work. The Contractor shall be held liable for any damages incurred to existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at the Contractor's expense.
39. End treatment systems for this project shall be considered equivalent if combined guardrail with end treatment length, configuration, and functionality remains the same as shown on the project plans. Functionality of equivalent end treatment system must be verified and approved by the Engineer and quantities adjusted accordingly.
40. The Contractor shall forward the One Call Center form to the Department of the Army at 30th Signal Battalion/Network Enterprise Technology Command, 148 Curtis Loop, Wheeler Army Airfield, Building 600, Room 157, Schofield Barracks, Hawaii 96857-5020 for notification of commencement of work.
41. According to the Department of the Army, for toning of Joint Trunking System (JTS) cables (lead cables) / Signal Corps cables, one of the following vendors shall be utilized to do the work:
- Choy Enterprises Incorporated (ph. #479-4607)
Henkels and McCoy (ph. #455-1310)
Verizon Federal (ph. #484-7990)
42. The Contractor shall notify the following agencies of speed hump installations at least two (2) weeks prior to the installation of the speed humps:
- 1) Department of Transportation Services, Public Transit Division (ph. #768-8396)
2) Oahu Transit Services, Inc. Bus Operations (ph. #848-4578 or 852-6016)
3) Oahu Transit Services, Inc. Paratransit Operations (ph. #454-5041 or 454-5020)
4) Honolulu Police Department (ph. #723-3865)
5) Honolulu Fire Department - Chief Ronald Rico (ph. #723-7103) or Chief Socrates Bratakos (ph. #723-7105)
6) Emergency Medical Services (ph. #723-7800)
43. All work on bridges shall be done from the top of the bridge. No work shall be done in the stream, and no equipment shall be allowed in the stream. All scaffoldings and frameworks shall be supported from the top of the bridge.
44. Appropriate BMPs shall be installed to catch debris/concrete from falling into stream (including dry beds) or ocean.
45. The Contractor shall obtain dates of any religious ceremonies during the Makahiki season to be held within the area of the project limits before commencing work. The Contractor shall not perform any work during the days religious ceremonies are to be held. Refer to Special Provisions Section 212 - Archaeological Monitoring, Blessing Ceremony, and Coordination of Religious Ceremonies.

46. The Contractor shall hire a Kahu to conduct a blessing ceremony before commencing work. Refer to Special Provisions Section 212 - Archaeological Monitoring, Blessing Ceremony, and Coordination of Religious Ceremonies.
47. Archaeological Monitoring shall take place at all excavation activity specified in Special Provisions Section 212 - Archaeological Monitoring.
48. All traffic signs to be replaced. For details, see Traffic Plans.
49. The vertical riding surface drop-off between adjacent surfaces shall not exceed 3-inches. This shall include differences in height between adjacent pavement surfaces, cold planed surfaces, bridge decks and new concrete slabs. If a vertical riding surface drop-off exists at the end of each day's work, the Contractor shall provide temporary transition tapers with maximum slopes of 48:l for travel in the longitudinal direction and 6:l for transverse movements. This work shall be considered incidental to various contract items.
50. The Contractor shall not perform any construction work during periods of heavy rainfall or high surf.

PAVING AROUND MANHOLES

1. The Contractor shall first lower manholes more than cold planing thickness indicated on typical sections prior to cold planing. The work shall be considered incidental to the various paving contract items. Upon final paving, the manhole shall be raised and paid under the various contract items pertaining to manhole adjustments.
2. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.
3. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.
4. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot our the area if the fog is too heavy.

ENDANGERED SPECIES NOTES

1. The Contractor shall obtain a qualified biologist to conduct a visual survey of the project site just prior to commencement or daily resumption of construction activities to ensure that no sea turtles or Hawaiian monk seals are present. For further details, refer to Special Provisions Section 627 - Endangered Species.
2. Trees and shrubs taller than 15 feet shall not be trimmed or cleared between June 1 and September 15.

HAWAII ONE CALL CENTER

1. Before conducting any excavation in the public right of way or on private property, the Contractor shall call the Hawaii One Call Center at least five (5) working days before beginning excavation operations. Be sure to give them the address and location of the nearest cross street(s) near the planned excavation site.

Call 811 toll-free 24 hours a day. For more information, go to www.callbeforeyoudig.org

2. The Hawaii One Call Center will contact all utility companies to tone, mark, or identify the location of their underground utilities for free. Mark the area where you plan to excavate in White and label all of the other utilities as listed below.

RED	Electric power lines, cables, or conduits, and lighting cables.
YELLOW	Gas, oil steam, petroleum or other hazardous liquid or gaseous materials.
ORANGE	Communications, cable TV, alarm or signal lines, cables, or conduits.
BLUE	Water, irrigation, and slurry lines.
GREEN	Sewers, storm sewer facilities or other drain lines.
WHITE	Proposed excavation.
PINK	Temporary survey markings.
PURPLE	Reclaimed water, irrigation and slurry lines.

AT&T UTILITY ADJUSTMENT NOTES:

1. For adjustments to AT&T manhole beyond existing paved shoulder, grade adjustment of the manhole frame and lid (cover) of 3 inches and over shall be accomplished with precast concrete grade rings. Adjustments less than 3 inches shall be made with high strength non-shrink grout. The frame and lid shall be placed flush with the existing or proposed finish pavement grade to prevent a rough or uneven driving surface. Final pavement placement shall be flush with the top of the manhole frame. High strength non-shrink grout shall be "Rapid Set Cement All" as manufactured by CTS Cement Manufacturing Corp. (ph. #800-929-3030) or acceptable equal. Precast concrete grade rings shall be manufactured by the manhole manufacturer, or acceptable equal.
2. The Contractor shall contact AT&T Communications Technician, Alex Viray at ph. #226-6161 a minimum of 5 working days prior to commencement of work near AT&T facilities.

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
N. J. Lopez	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
GENERAL NOTES AND LEGEND
FARRINGTON HIGHWAY RESURFACING
Vicinity of Kili Drive to
Satellite Tracking Station Road
Federal Aid Project No. STP-093-1(026)
Date: April, 2016

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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HAWAIIAN TELCOM UTILITY ADJUSTMENT NOTES

1. Adjust existing manholes and pullboxes to the required elevations to match final roadway surface. All applicable construction work shall be in accordance with the "Hawaiian Telcom Standard Specifications for Placing Telephone Systems" dated January 2007, all subsequent amendments and additions, and all other pertinent standards for telecommunications construction. The Contractor shall familiarize his personnel by obtaining the applicable specifications.

LEGEND

	Reconstruction Areas		Existing Sewer Line
	Stabilization Area		Existing Sewer Manhole
	Paved Areas Beyond Shoulder		Existing Gas Valve Box
	Resurfacing Limits		Existing Monument
	Existing Guy Wire		Adjusted Monument
	Existing Guy Pole		Existing Culvert
	Existing Joint Pole		Existing Box Culvert
	Existing Power Pole		Existing Grated Drop Inlet
	Existing Riser Pole		Existing Traffic Sign
	Existing Electric Manhole		Existing Highway Lighting Standard
	Adjusted Elec. MH Frame/Cover		Existing Joint Trunking System
	Existing AT&T Manhole		Existing Trans Pacific Cable
	Adjusted AT&T MH Frame/Cover		Existing Wet Wash Cable
	Existing AT&T Fiberoptic Line		Existing Cotc Cable
	Existing Telephone Line		Existing Metal Guardrail
	Existing Telephone Pole		New Metal Guardrail
	Existing Telephone Manhole		Existing Reflector
	Adjusted Tele. MH Frame/Cover		Existing Gate Post
	Existing Telephone Pullbox		Existing HECO Handhole
	Adjusted Telephone Pullbox Frame/Cover		Existing 3" Transite Duct Line
	Existing Signal Corps Line		
	Existing Sandwich Isles Communication Manhole		
	Existing Sandwich Isles Communication Line		
	Existing 3" Water Line		
	Existing 4" Water Line		
	Existing 8" Water Line		
	Existing 12" Water Line		
	Existing Water Manhole		
	Adjusted Water MH Frame/Cover		
	Existing Water Air Valve		
	Adjusted Water Air Valve		
	Existing Water Valve Box		
	Adjusted Water Valve Box		
	Existing Water Meter		
	Existing Fire Hydrant		

2

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QUANTITIES BY	
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2

2/6/17

Added HECO symbols.

1

8/22/16

Added Hawaiian Telcom Utility Adjustment Notes.

DATE

REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
GENERAL NOTES AND LEGEND
FARRINGTON HIGHWAY RESURFACING
Vicinity of Kili Drive to Satellite Tracking Station Road Federal Aid Project No. STP-093-K(026)
Date: April, 2016
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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HAWAIIAN ELECTRIC COMPANY NOTES

1. LOCATION OF HECO FACILITIES

The location of HECO'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 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 clearance from HECO's Planning and Design Section of the Customer Installations 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 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) 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 HECO at least four (4) weeks prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de-energize HECO lines) can be investigated. HECO may also be able to blanket its distribution (12kV and below) lines to provide a visual aid in preventing accidental contact. HECO's cost of safeguarding or identifying 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.

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 Installations 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 these 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 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 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 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.

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 Security Command Center at 543-7685 (a 24-hour number) so HECO 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. HECO STAND-BY PERSONNEL

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 Contractor shall call HECO's Customer Installations Department at 543-7846 a minimum of five (5) working days in advance to arrange for HECO stand-by personnel.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
HECO UTILITY NOTES	
FARRINGTON HIGHWAY RESURFACING	
Vicinity of Kili Drive to Satellite Tracking Station Road	
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2/6/17

Added new sheet.

DATE

REVISION

HAWAIIAN ELECTRIC COMPANY NOTES (Continued)

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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 EXSITING 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"	5
Traffic Signal	12"	12"	12"	
Water DB	36"	36"	36"	1, 4
Water Service Laterals	12"	12"	12"	
Water (Concrete Jacketed)	36"	36"	36"	1, 4
Gas DB	12"	12"	12"	1
Gas (Concrete Jacketed)	12"	12"	12"	1
Sewer DB	36"	36"	36"	1, 2
Sewer (Concrete Jacketed)	36"	36"	36"	1, 2
Drain	12"	12"	12"	1
Fuel Pipelines				3
Notes: 1. Where space is available, parallel clearance to other utilities, or foreign structures other than communication or traffic signal shall be 36". 2. If 36" clearance cannot be met: - If clearance is less than 12", jacket sewer line with reinforced concrete (per HECO's std. 30-1030) for a distance of 5' plus pipe diameter. - If clearance is between 12" and 36", jacket sewer line with plain concrete. 3. All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it. 4. 5 feet clear to water mains 16" and larger. 5. For situations with 0" minimum separation, a 6" separation is recommended. 6. Clearances measured from outer edges or diameters of utilities.				

The Contractor shall notify the construction manager & HECO 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 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 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.

MINIMUM SEPARATION CLEARANCES TO EXSITING UNDERGROUND DUCTLINES VERTICAL (CROSSING)				
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"	5
Traffic Signal	12"	12"	6"	
Water Service Laterals	6"	6"	6"	
Water DB	6"	6"	6"	2
Water (Concrete Jacketed)	6"	6"	6"	2
Gas DB	12"	12"	12"	
Gas (Concrete Jacketed)	12"	12"	12"	
Sewer DB	24"	24"	24"	1
Sewer (Concrete Jacketed)	24"	24"	24"	1
Drain	12"	12"	6"	
Fuel Pipelines				3
Notes: 1. If clearance cannot be met: - If clearance is less than 12", jacket sewer line with reinforced concrete (per HECO's std. 30-1030) for a distance of 5' plus pipe diameter. - If clearance is between 12" and 24", jacket sewer line with plain concrete. 2. 12" vertical clearance for pipe diameters greater than 16". 3. All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it. 4. 5 feet clear to water mains 16" and larger. 5. For situations with 0" minimum separation, a 6" separation is recommended. 6. Clearances measured from outer edges or diameters of utilities.				

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	CHECKED BY	
IN CHARGE		



2/6/17

Added new sheet.

DATE

REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION HECO UTILITY NOTES FARRINGTON HIGHWAY RESURFACING Vicinity of Kili Drive to Satellite Tracking Station Road Federal Aid Project No. STP-093-1(026) Date: April, 2016 SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-K026	2016	C.O.5S-3	110

HAWAIIAN ELECTRIC COMPANY NOTES (Continued)

ADDITIONAL NOTES WHEN WORK INVOLVES CONSTRUCTION OF
HECO FACILITIES

16. SCHEDULE

Contractor shall furnish his construction schedule six (6) months prior to starting work on HECO facilities. 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 CS700I, CS7003, CS7202, CS930I, and CS940I and applicable HECO standards.

19. CONSTRUCTION

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 543-4329 at least five (5) working days prior to installing facilities or placing concrete.

Contractor to coordinate work to break into HECO's existing electrical facilities with HECO's Inspection Division at 543-4329 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 1800# Tensile Strength Muletape 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.

ORIGINAL PLAN	DESIGNED BY	DATE
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



2/6/17

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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION HECO UTILITY NOTES FARRINGTON HIGHWAY RESURFACING Vicinity of Kili Drive to Satellite Tracking Station Road Federal Aid Project No. STP-093-K026 Date: April, 2016
SHEET No. 3 OF 3 SHEETS

C.O. 5S-3