

GENERAL NOTES

| FED. ROAD DIST. NO. | STATE | FEDERAL AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-RR-0901(017) | 2023 | 3 | 117 |

1. The scope of work for this project consists of upgrading of existing railroad crossing; associated roadway pavement, pavement markings, and striping; signs; shared-use path connection; roadway and shared-use path lighting; CCTV camera; traffic signal conduits.

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. 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, catch basins, traffic signal, widening, 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.

5. 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.

6. 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.

7. 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.

8. 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.

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. Construction of this project shall not affect transit operations. Bus routes and bus stops shall remain open and accessible at all times. Any work affecting bus operations, routes, or stops must be submitted to DTS-TMD for review no less than 30 days prior to the start date. Point of contact information (Notification is required to all phone numbers and emails):

DTS-TMD
(808) 768-8371
thebusstop@honolulu.gov & handivan@honolulu.gov

Oahu Transit Services - Bus Operations
(808) 768-9520 & (808) 768-9534
Sean-bennett.paio@thebus.org, Joshua.vaoalii@thebus.org, & Walter.oba@thebus.org

Oahu Transit Services - Paratransit Operations
(808) 768-9802, (808) 768-9851 & (808) 454-5021
Tracie.coelho@thebus.org & Richard.mole@thebus.org

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

14. 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.

15. 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.

16. 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.

17. 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 various contract items.

18. 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 various contract items.

19. 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 various contract items.

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

21. Dressing of shoulder 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.

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 various contract items.

24. The Contractor shall provide for vehicular and pedestrian access to and from all existing side streets and driveways at all times.

25. 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.

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

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

28. 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, and cross streets at all times. This work shall be considered incidental to various contract items and will not be paid for separately.

29. 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 Contractor to correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.

30. 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.

31. 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 48:1 for travel in the longitudinal direction and 6:1 for transverse movements.

32. The Contractor shall not perform any construction work during periods of heavy rainfall.

33. The Contractor shall use the Traffic Control setup included in the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645, and/or develop a site specific Traffic Control Plan where warranted.

34. The Contractor shall coordinate with the Honolulu Police Department Special Duty Section to hire police officers for traffic control operations and transporting of project equipment to ensure minimal delay due to lane closures.

ORIGINAL PLAN

SURVEY PLOTTED BY

DRAWN BY

DESIGNED BY

QUANTITIES BY

CHECKED BY

DATE

NOTE BOOK

No.

DARWIN N. CHINEN

LICENSED PROFESSIONAL ENGINEER

No. 7977-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

04/30/24

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD

RAILROAD CROSSING & LIGHTING IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

Federal-Aid Project No. HSIP-RR-0901(017)

Scale:

Date: June 2023

SHEET No. 1 OF 5 SHEETS

3

| | | | |
|------------------|-------------------------|-------------------|------------------|
| ORIGINAL PLAN | SURVEY PLOTTED BY _____ | | DATE _____ |
| | DRAWN BY _____ | DESIGNED BY _____ | CHECKED BY _____ |
| NOTE BOOK | QUANTITIES BY _____ | | _____ |
| | CHECKED BY _____ | | _____ |
| No. _____ | | _____ | |

GENERAL NOTES (Cont.)

35.

Any Survey Monuments that are disturbed shall be restored under the supervision of a licensed land surveyor registered in the State of Hawaii at no cost to the State. All survey data shall be certified by the surveyor and submitted to the Engineer.
36.

All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to the other various contract items and shall not be paid for separately.
37.

Material and/or equipment shall be stockpiled or stored within the highway right-of-way 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. (808)692-7332.
38.

For toning of US Army Cables, one of the following vendors shall be utilized to do the work:

1.

Verizon Federal/AT#T
Contact: Doug Ellenberg (Douglas.Ellenberg@verizon.com) or Nichole Nakamichi (Nichole.L.Nakamichi@verizon.com)

2.

Bering Sea (BSeT)
Contact: Shelton Choy (Shelton.Choi@beringseagroup.com)

Cables shall be toned prior to the start of the project.

ENDANGERED SPECIES CONSERVATION NOTES

1.

To avoid impacts to the Hawaiian hoary bat, no barbed wire shall be used, and woody plants greater than 15 feet tall shall not be disturbed, removed or trimmed during the bat birthing and pup rearing season (June 1 through September 15).
2.

If nighttime lighting is required, any lights used shall be fully shielded to minimize impacts to native seabirds.
3.

Soil or plant material shall not be moved from the project site to be used in other locations on the island due to the possible presence of pathogens.
4.

See Section 671 for more detail on all endangered species requirements for this project.

HAWAII ONE CALL CENTER

1.

The Contractor shall contact Hawaii One Call Center to have respective utility companies and agencies mark where their underground utilities are located. The Contractor shall comply with all requirements of Hawaii One Call Law. The Contractor shall be liable for any damages if Hawaii One Call requirements are not strictly adhered to. In accordance with Hawaii State Law Section 269E-7, the Hawaii One Call Center (HOCC) shall provide an inquiry identification number for each location request provided by the Contractor. The inquiry identification number and utility marks shall remain valid for not more than twenty-eight (28) calendar days from the date of issuance and after that date shall require the Contractor to submit a new request for HOCC revalidation. The Contractor shall provide all inquiry identification numbers for each location request to the Engineer and provide written notice of scheduled toning at least one week ahead of toning. If there is a potential conflict, contractor shall inform DOT within 24 hours of discovery. Contractor shall probe around area with hand tools and take precautions to not damage utilities. The Contractor shall independently verify the toned areas of excavation prior to excavation. This work shall be incidental to various contract items and shall not be paid for separately.
2.

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.
3.

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. |

ISLAND ENERGY SERVICES NOTES

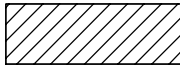
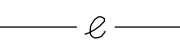




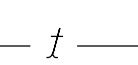
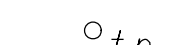
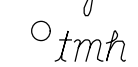

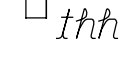

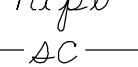




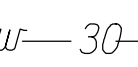
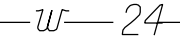
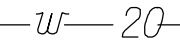
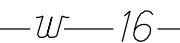
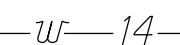
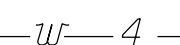
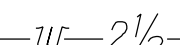
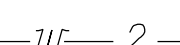



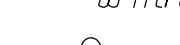
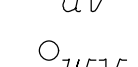
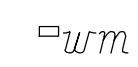

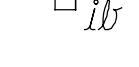


1.

The minimum clearance between the outside of the pipe and the extremity of another underground structure is 12 inches.
2.

Notify IES, (808)-445-7608, at least 3 weeks prior to construction in vicinity of IES lines.
3.

IES staff will be on-site to oversee construction activity in vicinity of IES lines.
4.

IES lines are petroleum pipelines and are labeled on the plans as "o8."

| | |
|---|--|
|  | Paving Limits |
|  | Existing Electrical Line |
|  | Existing Guy Pole |
|  | Existing Power Pole |
|  | Existing Hawaiian Electric Manhole |
|  | Existing Hawaiian Electric Hand Hole |
|  | Existing Hawaiian Electric Pullbox |
|  | Existing Underground Telephone Line |
|  | Existing Telephone Pole |
|  | Existing Telephone Manhole |
|  | Adjusted Telephone Manhole Frame/Cover |
|  | Existing Telephone Hand Hole |
|  | Existing Hawaiian Telcom Manhole |
|  | Existing Hawaiian Telcom Pullbox |
|  | Existing Signal Corps Line |
|  | Existing US Army Line |
|  | Existing US Navy Line |
|  | Existing TV Manhole |
|  | Existing TV Cable |
|  | Existing 30" Water Line |
|  | Existing 24" Water Line |
|  | Existing 20" Water Line |
|  | Existing 16" Water Line |
|  | Existing 14" Water Line |
|  | Existing 4" Water Line |
|  | Existing 2 1/2" Water Line |
|  | Existing 2" Water Line |
|  | Existing 1 1/2" Water Line |
|  | Existing 1" Water Line |
|  | Existing Water Manhole |
|  | Existing Water Air Valve |
|  | Existing Water Valve Box |
|  | Existing Water Meter |
|  | Existing Fire Hydrant |
|  | Existing Irrigation Box |

LEGEND

| FED. ROAD DIST. NO. | STATE | FEDERAL AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|--|-----------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-RR-0901(017) | 2023 | 4 | 117 |
| | | | | | |
| —Δ—42— | Existing 42" Sewer Line | | | | |
| —Δ—36— | Existing 36" Sewer Line | | | | |
| —Δ—30— | Existing 30" Sewer Line | | | | |
| —Δ—24— | Existing 24" Sewer Line | | | | |
| —Δ—21— | Existing 21" Sewer Line | | | | |
| ○Δmh | Existing Sewer Manhole | | | | |
| —σ 8— | Existing 8" Oil Line | | | | |
| —g—6— | Existing 6" Gas Line | | | | |
| —g—4— | Existing 4" Gas Line | | | | |
| —g—2— | Existing 2" Gas Line | | | | |
| —g—1— | Existing 1" Gas Line | | | | |
| —g—¾— | Existing ¾" Gas Line | | | | |
| ○gv | Existing Gas Valve Box | | | | |
| ○gmh | Existing Gas Manhole | | | | |
| ⊙mon | Existing Monument | | | | |
| ---d--24--- | Existing 24" Drain Line | | | | |
| ○Δdmh | Existing Storm Drain Manhole | | | | |
| □gdi | Existing Grated Drop Inlet | | | | |
| ⊠cb | Existing Catch Basin | | | | |
| ○sl | Existing Highway Lighting Standard | | | | |
| □Δlb | Existing Highway Lighting Standard Pullbox | | | | |
| ○tsp | Existing Traffic Signal Pole | | | | |
| □tsb | Existing Traffic Signal Pullbox | | | | |
| □ub | Existing Utility Pullbox | | | | |
| —42" rcp— | Existing 42" Reinforced Concrete Pipe | | | | |
| —30" rcp— | Existing 30" Reinforced Concrete Pipe | | | | |

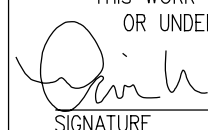
DARIN N. CHEN

LICENSED PROFESSIONAL ENGINEER

No. 7977-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

04/30/24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD

RAILROAD CROSSING & LIGHTING IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

Federal-Aid Project No. HSIP-RR-0901(017)

Scale: Date: June 2023

SHEET No. 2 OF 5 SHEETS

4

HAWAIIAN ELECTRIC COMPANY NOTES

| FED. ROAD DIST. NO. | STATE | FEDERAL AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-RR-0901(017) | 2023 | 5 | 117 |

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 Customer Installations division (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 installations division at 543-7070 for assistance in identifying and safeguarding overhead power lines.

6. Pole Bracing.

The Contractor shall not excavate within 10 feet from Hawaiian Electric's utility poles Or any anchor system supporting the utility pole. If the Contractor must excavate Closer than 10 feet from a utility pole or its anchor system, the 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, the Contractor must submit its bracing calculations and drawings, prepared and stamped by a licensed structural engineer, to Hawaiian Electric's Customer Installations Division (543-7070) for review. Hawaiian Electric requires a minimum of ten (10) working days to conduct the review of the Contractor's submittal. The 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 the Contractor's drawings and to repair or straighten poles impacted by the Contractor's activities, including response and restoration costs incurred by Hawaiian Electric arising out of or related to outages caused by the Contractor's failure to meet the foregoing requirements. Hawaiian Electric's review and approval of any Contractor submittals including its work procedure shall not relieve the Contractor from any liability resulting from the Contractor's excavation near or around Hawaiian Electric's utility poles.

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 installations division 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 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 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:
- a) Arranging for Hawaiian Electric standby personnel to observe work at Contractor's cost.
 - b) Sheet piling, 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 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.

DARWIN N. CHINEN

LICENSED PROFESSIONAL ENGINEER

No. 7977-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature

04/30/24

Expiration Date of the License

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD

RAILROAD CROSSING & LIGHTING IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

Federal-Aid Project No. HSIP-RR-0901(017)

Scale:

Date: June 2023

SHEET No. 3 OF 5 SHEETS

5

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| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | 06/29/99 |
| | DESIGNED BY | |
| | CHECKED BY | |
| NOTE BOOK | QUANTITIES BY | |
| N _o . | CHECKED BY | |

HAWAIIAN ELECTRIC COMPANY NOTES (Cont.)

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|---------------------|-------|-----------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FEDERAL AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | HSIP-RR-0901(017) | 2023 | 6 | 117 |

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.

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 installations division 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:

| GUIDELINES FOR MINIMUM HORIZONTAL (PARALLEL) CLEARANCES BETWEEN HAWAIIAN ELECTRIC AND OTHER UNDERGROUND UTILITIES | | | | |
|---|---------------------------------------|--|---|-------------------|
| UNDERGROUND UTILITY | HAWAIIAN ELECTRIC DIRECT BURIED CABLE | HAWAIIAN ELECTRIC DIRECT BURIED IN CONDUIT (no conc. encasement) | HAWAIIAN ELECTRIC 3" (MIN.) CONCRETE ENCASEMENT | APPLICABLE NOTES: |
| Hawaiian Electric DB Conduits | 12" | 3" | 0" | |
| Hawaiian Electric 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 (BWS Owned) | 36" | 36" | 36" | 1, 4 |
| Customer Owned Water Service Laterals | 12" | 12" | 12" | |
| Water (Concrete Jacketed) (BWS Owned) | 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:

- Where space is available, parallel clearance to other utilities, or foreign structures other than communication or traffic signal shall be 36".
- If 36" clearance cannot be met:
 - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric'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.
- All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
- 5 feet clear to water mains 16" and larger.
- For situations with 0" minimum separation, a 6" separation is recommended.
- Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.

| GUIDELINES FOR MINIMUM VERTICAL (CROSSINGS) CLEARANCES BETWEEN HAWAIIAN ELECTRIC AND OTHER UNDERGROUND UTILITIES | | | | |
|--|---------------------------------------|--|---|-------------------|
| UNDERGROUND UTILITY | HAWAIIAN ELECTRIC DIRECT BURIED CABLE | HAWAIIAN ELECTRIC DIRECT BURIED IN CONDUIT (no conc. encasement) | HAWAIIAN ELECTRIC 3" (MIN.) CONCRETE ENCASEMENT | APPLICABLE NOTES: |
| Hawaiian Electric DB Conduits | 6" | 3" | 0" | |
| Hawaiian Electric 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" | 3 |
| Traffic Signal | 12" | 12" | 6" | |
| Water DB (BWS Owned) | 12" | 12" | 12" | 5 |
| Customer Owned Water Service Laterals | 6" | 6" | 6" | |
| Water (Concrete Jacketed) (BWS Owned) | 12" | 12" | 12" | 5 |
| 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 | | | | 2 |

Notes:

- If clearance cannot be met:
 - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric'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.
- All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
- For situations with 0" minimum separation, a 6" separation is recommended.
- Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.
- 36" clearance is required for trenchless installation work.

The Contractor shall notify the construction manager & 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.

DARIN N. CHINEH
★
LICENSED PROFESSIONAL ENGINEER
No. 7977-C
★
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE
04/30/24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD
RAILROAD CROSSING & LIGHTING IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Federal-Aid Project No. HSIP-RR-0901(017)
Scale: Date: June 2023

SHEET No. 4 OF 5 SHEETS

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| SURVEY PLOTTED BY | DATE |
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| DESIGNED BY | |
| QUANTITIES BY | |
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| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

HAWAIIAN ELECTRIC COMPANY NOTES (Cont.)

ADDITIONAL NOTES WHEN WORK INVOLVES CONSTRUCTION OF HAWAIIAN ELECTRIC FACILITIES

16. Schedule.

The Contractor shall furnish his construction schedule six (6) months prior to starting work on Hawaiian Electric Facilities. The Contractor shall give Hawaiian Electric, in writing, three (3) months notice to proceed with Hawaiian Electric'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 Hawaiian Electric's underground facilities shall be constructed in accordance with the latest revisions of Hawaiian Electric Specifications CS7001, CS7003, CS7202, CS9301 and CS9401 and applicable Hawaiian Electric 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 Hawaiian Electric prior to excavation and prior to placing concrete. The Contractor shall notify Hawaiian Electric's Inspection Group at (808)543-4399 at least five (5) working days prior to installing facilities or placing concrete.

The Contractor to coordinate work to break into Hawaiian Electric's existing electrical facilities with Hawaiian Electric's Inspection Group at (808)543-4399 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 Hawaiian Electric 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 Hawaiian Electric before proceeding with Hawaiian Electric 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 Hawaiian Electric's Inspector using Hawaiian Electric'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 Hawaiian Electric with a set of electronic and hard copy plans of each sheet showing the offsets, stationing, and vertical elevation of the ductline(s) constructed.

WATER NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendments and additions.
2. No deviation to the Board of Water Supply 2002 Water System Standards shall be allowed without the Manager and Chief Engineer's approval.
3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply and/or if work is to be done on/or near the water system.
4. The existence and location of underground utilities and structures as shown on the plans are from the latest available data, but are not guaranteed as to their accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
5. The contractor shall be responsible for the protection of all waterlines during construction. The contractor shall be especially careful when excavating behind waterlines, tees, and bends wherever there is a possibility of waterline movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the waterlines, such as constructing special reaction blocks (with Board of Water Supply approval) and/or modifying his construction method.
6. Re-approval shall be required if this project is not under construction within a period of two (2) years.
7. Prior to any excavation, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.
8. Any adjustments to the existing water system required during construction, to meet the requirements of the BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.
9. When a utility (gas, sewer, electrical duct line, fiber optic, drainage, etc.) crosses below a Board of Water Supply water main, the designer of record and their construction engineer shall be responsible for determining the adequate water main structural support and submit the construction method and shop drawing, stamped by a licensed engineer and reviewed and accepted by the designer of record, to the Board of Water Supply for review and approval. All work shall be at no cost to the Board of Water Supply.
10. At utility crossings where proper compaction under a water main is difficult to achieve, CLSM shall be installed in place of backfill material and pipe cushion material. CLSM mixture to be furnished shall be in accordance with Division 200 Materials, Section 209.06 Controlled Low Strength Material (CLSM) of the Water System Standards as amended.

11. At the electrical/cable/signal ductline water crossings, adjust all electrical/cable/signal ductline elevations to maintain the required vertical clear separation from all water mains. Conformance to the Board of Water Supply 2002 Water System Standards as amended shall be at no cost and adhered to.
12. Maintain the required minimum horizontal clear separation between all water mains, and the nearest electrical/cable/signal ductlines paralleling the water system. Conformance to the Board of Water Supply 2002 Water System Standards as amended shall be at no cost and adhered to.
13. Maintain the required minimum horizontal clear separation between electrical/cable/signal appurtenances, (including any modular units) and the nearest water mains or water appurtenance. Contractor shall field verify for any conflicts at each electrical/cable/signal appurtenance location. Where conflicts occur, the contractor shall coordinate with the project engineer to revise the electrical/cable/signal appurtenance to provide the required clearances. Conformance to the Board of Water Supply 2002 Water System Standards as amended shall be at no cost and adhered to.
14. The Contractor shall notify Capital Projects Division, Construction Section in writing or call (808) 748-5730 and submit six (6) sets of 24" x 36" approved construction plans one week prior to commencing construction activities.
15. Maintain 3'-0" minimum cover for all existing waterlines from new finish grade.

Approved:

Manager and Chief Engineer, BWS
(For Work Affecting BWS Facilities in City/State Right-of-Way and BWS Easement only)

Date

DARIN N. CHINEN
★ LICENSED PROFESSIONAL ENGINEER
No. 7977-C
★ HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE

04/30/24
EXPIRATION DATE OF THE LICENSE

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FORT BARRETTE ROAD
RAILROAD CROSSING & LIGHTING IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Federal-Aid Project No. HSIP-RR-0901(017)
Scale: Date: June 2023

SHEET No. 5 OF 5 SHEETS

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| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| | DRAWN BY | |
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