STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

AIRPORTS

SPECIFICATIONS AND PROPOSAL

FOR

UST AND AST CLOSURE

KAWAIHAPAI AIRFIELD

WAIALUA, OAHU, HAWAII

PROJECT NO. AO2023-14

2026

NOTICE TO BIDDERS
Hawaii Revised Statutes (HRS),
Chapter 103D

The receiving of bids for **UST AND AST CLOSURE, KAWAIHAPAI AIRFIELD, WAIALUA, OAHU, HAWAII, STATE PROJECT NO. AO2023-14**, will begin as of the HIePRO Release Date. Bidders shall register and submit complete bids through HIePRO only. Refer to the following HIePRO link for important information on Vendor Registration: https://hiepro.ehawaii.gov/welcome.html.

The solicitation plans, specifications, proposal, and additional documents designated or incorporated by reference shall be available in HIePRO.

HIePRO OFFER DUE DATE AND TIME is **December 30, 2026**, at 2:00 p.m., Hawaii Standard Time (HST). **Bidders shall submit and upload the complete proposal to HIePRO prior to the offer due date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Bidders shall not include confidential and/or proprietary documents as part of their proposal. The record of each bidder and their respective proposal shall be open to public inspection. FAILURE TO UPLOAD THE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION.**

The scope of work consists of demolishing and removing existing Underground Storage Tank (UST) system, Aboveground Storage Tank (AST) system, underground piping, fuel dispensers, piping sump, appurtenances, backfilling and restoring pavements at Kawaihapai Airfield. The estimated cost of construction is between $200,000.00 and $300,000.00.

To be eligible for award, bidders shall possess a valid State of Hawaii General Engineering "A" license **at the time of bidding.**

The Hawaii Department of Transportation, Air and Water Transportation Facilities Division, 2016 GENERAL PROVISIONS FOR CONSTRUCTION PROJECTS, applicable to this project are available on the internet at: http://hidot.hawaii.gov/administration/con/.

A virtual pre-bid conference is scheduled for **November 30, 2026**, at 10:00 a.m., HST. Interested bidders shall contact Maritez Marquez, Project Manager, directly at maritez.a.marquez@hawaii.gov, no later than two working days prior to the scheduled pre-bid conference to receive the meeting invitation. All prospective bidders and/or their respective representatives are encouraged to attend, however, attendance is not mandatory. All information presented at the pre-bid conference shall be provided for clarification and information only. Any amendments to the solicitation shall be made by formal addendum and posted in HIePRO.

A site visit for Kawaihapai Airfield will be scheduled for **December 3, 2026**, at 9:00 a.m., HST. Prospective bidders must contact the airport representative to indicate they will be planning to attend the site visit and coordinate the meeting place. It is the responsibility of the Contractor to understand the required scope of work. The work shall be performed and documented in accordance with these specifications.

All Request for Information (RFI) questions and Substitution Requests shall be submitted in HIePRO **no later than December 11, 2026, at 2:00 p.m., HST**. RFI questions received after the stated deadline shall not be addressed. Substitution Requests received after the stated deadline shall not be considered. Verbal RFI(s) shall not receive a response. All responses to RFI questions shall be provided for clarification and information only and issued by formal addendum. Any amendments to the solicitation shall be made by formal addendum and posted in HIePRO.

If there is a conflict between the solicitation and information stated in the pre-bid conference, pre-bid site visit, the meeting minutes, and/or the responses to RFI questions, the solicitation shall govern and control, unless as amended by formal addendum.

Apprenticeship Preference. A five percent bid adjustment for bidders that are party to apprenticeship agreements pursuant to HRS § 103-55.6 is applicable to this project.

Employment of State Residents on Construction Procurement Contracts. Compliance with HRS § 103B-3 is a requirement for this project whereby a minimum of 80 percent of the bidder's work force on this project shall consist of Hawaii residents.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of HRS § 11-355 which states that campaign contributions are prohibited from specified State or County government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

Protests. Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with HRS § 103D-701 and Hawaii Administrative Rules § 3-126.

Bidders are hereby notified that the Department of Transportation shall affirmatively ensure that contracts entered into pursuant to this advertisement are awarded to the lowest responsible bidder without discrimination on the basis of race, color, national origin, sex, age, disability, or any other protected status recognized under applicable State and federal law.

For additional information, contact Maritez Marquez, State Project Manager, by phone at (808) 838-8808, or by email at maritez.a.marquez@hawaii.gov.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals in the best interest of the public.



CURT T. OTAGURO
Deputy Director of Transportation for Airports

HIePRO RELEASE DATE: November 19, 2026

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Labor and Material Payment Bond (Surety)

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"A" general engineering contractors and "B" general building contractors are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the general contractor to act as a specialty contractor in any area where the general contractor has no license. Although the "A" and "B" contractor may still bid on and act as the "prime" contractor on an "A" or "B" project *(See, HRS § 444-7 for the definitions of an "A" and "B" project.)*, respectively, the "A" and "B" contractor may only perform work in the areas in which they have the appropriate contractor's license *(An "A" or "B" contractor obtains "C" specialty contractor's licenses either on its own, or automatically under HAR § 16-77-32.)*. The remaining work must be performed by appropriately licensed entities. It is the sole responsibility of the contractor to review the requirements of this project and determine the appropriate licenses that are required to complete the project.

SPECIAL PROVISIONS

The following additional amendments to the General Provisions are applicable to this project:

1.3 DEFINITIONS is amended as follows:

The following definition shall be deleted in its entirety and replaced with the following:

"Subcontractor – An individual, partnership, firm, corporation, or joint venture, or other legal entity, as licensed or required to be licensed under Chapter 444, Hawaii Revised Statutes, as amended, which enters into an agreement with the Contractor to perform a portion of the work."

Add the following to 1.3 Definitions:

"HAWAII ePROCUREMENT SYSTEM (HIePRO) - The State of Hawaii eProcurement System for issuing solicitations, receiving proposals and responses, and issuing notices of award."

The definition for "Bid" is amended by deleting it and replacing it with the following:

"Bid - The offer of a Bidder, on the prescribed HDOT form, to perform the work and to furnish the labor and materials at the prices quoted."

2.7 REQUEST FOR SUBSTITUTION OF SPECIFIED MATERIALS AND EQUIPMENT BEFORE BID OPENING is amended as follows:

The last sentence in the first paragraph (line 147 to 152) shall be replaced with the following:

"Where a bidder intends to use a material or equipment of an unspecified brand, make, or model, the bidder must submit a request to the Department for review and approval at the earliest date possible. As specified in the Notice to Bidders, all requests shall be posted as a question in HIePRO under the "Question and Answer" tab. Supporting documents for specific request shall be emailed to the Project Manager specified in the Notice to Bidders. Request must be posted in HIePRO and supporting documents received by the Project Manager via email no later than the RFI deadline in the Notice to Bidders."

The first sentence in the second paragraph (line 154 to 156) shall be replaced with the following:

"It shall be the responsibility of the bidder to submit sufficient evidence based upon which a determination can be made by the Department that the alternate brand is a qualified equivalent."

2.8 PREPARATION AND DELIVERY OF BID is amended as follows:

Last Paragraph (line 189 to 192) shall be replaced with the following:

"**Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection.** Original (wet ink, hard copy) proposal documents are not required to be submitted. **Contract award shall be based on evaluation of**

proposals submitted and uploaded to HIePRO.
FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.

If there is a conflict between the specification document and the HIePRO solicitation, the specifications shall govern and control, unless otherwise specified."

2.11 BID SECURITY is amended by deleting (a) and replacing it with:
"(a) Unless directed otherwise in the invitation for bids, each bid shall be accompanied by bid security which is intended to protect the Department against the failure or refusal of a bidder to execute the contract for the work bid or to supply the required performance and payment bonds. Bid security shall be in an amount equal to at least five percent of the base bid and additive alternates. Bid security shall be in one of the following forms:

(1) A deposit of legal tender;
(2) A valid surety bid bond, underwritten by a company licensed to issue bonds in the State of Hawaii, in the form and composed, substantially, with the same language as provided herewith and signed by both parties; or
(3) A certificate of deposit; credit union share certificate; or cashier's, treasurer's, teller's, or official check drawn by or a certified check accepted by a bank, savings institution, or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA) and payable at sight or unconditionally assigned to the Department. These instruments may be utilized only to a maximum of one hundred thousand dollars ($100,000.00). If the required amount totals over one hundred thousand dollars ($100,000.00), more than one instrument not exceeding one hundred thousand dollars ($100,000.00) each and issued by different financial institutions shall be accepted.

If bidder elects options (1) or (3) above for its bid security, said bid security shall be in its original form and shall be submitted before the bid deadline to the Contract Office, Department of Transportation, Aliiaimoku Hale, 869 Punchbowl Street, Room 103 Honolulu, Hawaii 96813. Original surety bid bonds do not need to be submitted to the Contracts Office. Bidders are reminded that a copy of its surety bid bond shall be included with its bid submitted and uploaded to HIePRO."

2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS is amended as follows:

Delete 2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS in its entirety and replace with the following:

"2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS. Bids may be modified or withdrawn prior to the bid opening date and time. Withdrawal or revision of proposal shall be completed and submitted and uploaded to HIePRO prior to the bid opening date and time."

2.14 PUBLIC OPENING OF BIDS is amended by deleting 2.14 PUBLIC OPENING OF BIDS in its entirety.

4.12 UTILITIES AND SERVICES is amended as follows:

Add the following after the last paragraph:

"(e)Repairs and Outages.

(1) The Contractor shall have available on 24-hour call sufficient specialty contractors, such as electrical and plumbing contractors, to repair any damage to existing facilities that might occur as a result of construction operations regardless of when the damage might occur.

(2) Outage: Written requests for power outage, communication changes, and water and sewer connection outages shall be submitted to the Engineer at least fourteen (14) days in advance or as specified in other sections of these specifications. Outages will be restricted to non-peak operational hours between midnight and 6:00 a.m."

5.16 SUBCONTRACTING is amended as follows:

Add the following after the last paragraph:

"(e) The Specialty Items of work for this project are as follows:
Electrical
Excavating, grading, and trenching contractor
Fuel Dispensing"

7.21 PUBLIC CONVENIENCE AND SAFETY - is hereby added to the General Provisions:

"It shall be especially noted by the Contractor that the area directly adjacent to the existing in use runways and taxiways, is an extremely hazardous area and that very strict controls will apply throughout the entire period required to complete all work within 500 feet from the edge of an in use runway and 180 feet from the edge of an in use taxiway.

The Contractor shall familiarize himself with the Airport Certification Manual available for review at the Airport Manager's Office and shall comply with its requirements.

The Contractor is responsible for the security of access points to the Airport Operational Area that are located within the limits of construction and will be fined $1,000 per incident for any breach of security at these locations. All gates leading into the AOA shall be kept locked and if required to be open, the Contractor shall provide professional security guards to attend gates. The guards must be approved by the Director and shall be required to attend a training session conducted by the Airport Manager prior to gate assignment."

8.20 OPERATION OF CONTRACTOR'S MOTOR VEHICLE AND PERSONNEL IN RESTRICTED AIR OPERATIONS AND MOVEMENT AREAS is hereby added to the General Provisions:

"The Contractor shall conform with the all sections of the "State of Hawaii, Department of Transportation, Airports Division, Contractor's Training Guide" pertaining to access and operation in the Airport Operation Area (AOA) hereinafter described as follows:

A. Motor Vehicle Access Permit

Each motor vehicle operated in the AOA is required to:

1. Meet all State licensing registration and safety requirements and be specifically licensed for operation in the AOA.

2. Meet all insurance requirements.

3. Be restricted to operation by those persons qualified to drive the vehicle and in possession of a current Ramp Driver's License and applicable Motor Vehicle Operator's License.

B. The operators of motor vehicles in the AOA shall be responsible for meeting the following insurance requirements.

1. Licensed Vehicles

As a condition for authorization to enter the AOA, the Contractor shall provide evidence of vehicle liability insurance in the form of a Certificate of Insurance issued by an authorized insurance carrier. Automobile Liability and general Liability (combined single limit, Bodily Injury and Property Damage, per occurrence) shall be required in the applicable minimum limits specified below:

a. Daniel K. Inouye International Airport

(1) Standard AOA clearance.... $5,000,000

(2) Limited AOA clearance $1,000,000
Limited AOA clearance is defined as operations restricted to Diamond head and Ewa Concourses second level roadways and connecting third level main terminal roadway only, with entry and exit via Security Access Point "C" (Primary) and Access Point "A" (Secondary)

b. Other Airports

Standard AOA clearance $1,000,000

Standard AOA clearance is defined as any portion of a public Airport from which the public is restricted by fences or appropriate signs and not leased or demised to anyone for exclusive use and shall include runways, taxiways, all ramp and apron areas, aircraft parking and storage areas, fuel storage areas, maintenance areas, and any other area of a public Airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft or used for embarkation or debarkation of passengers.

2. Unlicensed Vehicles

Airport Liability (or General Liability) shall be required in the applicable

minimum limits specified below:

a. Daniel K. Inouye International Airport, Kahului Airport and Ellison Onizuka Kona International Airport at Keahole

AOA clearance $5,000,000

b. All other Airports

AOA clearance $1,000,000

3. Specifically name the State of Hawaii as additionally insured.

4. Indicate that the Airport Engineer will be provided with a 30-day written prior notice of policy cancellation or material change in coverage or conditions.

C. Operator's Permit

1. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Airport Motor Vehicle operator's permit issued by the State of Hawaii, Department of Transportation, Airports Division.

2. Operator's permits will only be issued to persons who apply through the Airport District Security Office and pass a written exam covering those portions of the Airport Rules and Regulation relating to the operation of vehicles in Airport Operations Areas.

D. Authorized Vehicles

1. Only vehicles considered operationally safe and necessary for the performance of this contract may be allowed to operate in the AOA.

2. All motor vehicles must be painted in such a manner so as to be easily identifiable and must carry the Contractor's name on each side. These signs may be of a temporary nature applied to the side windows or doors. The lettering shall be in bold characters of a minimum of four (4) inches in height and one and one-half (1-1/2) inches in widths, the height of logos should be a minimum of six (6) inches.

3. The Contractor's operations on, over, across, and/or immediately adjacent to any runway and/or taxiway at a towered airport shall require the use of two-way radio communication. The Contractor shall obtain the necessary equipment at his own expense.

4. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Motor Vehicle Operator's Permit issued by the Airport Manager.

a. The Motor Vehicle Operator's Permit will be issued only to persons who apply through the Airport Security Section and pass a written exam covering those portions of the Airport Rules and Regulations relating to the operation of vehicles in the AOA.

b. Permits issued may be suspended or revoked for cause at any time by

the Airports Division.

E. Airport Operation Area Construction Pass

1. Issuance of Airport Operation Area (AOA)Construction Passes shall be limited to contractors, subcontractors, companies, organizations, individuals engaged in authorized and approved construction activity which requires a continuing need for entry into the AOA or Airfield Movement Areas. Request letters for such passes must be made to the Airport District Manager's Office in accordance with the Contractors Training Guide or applicable District requirements.

2. As a condition for security area clearance, applicants must comply with Transportation Security Regulation 1542 which requires a ten-year background Criminal History Records Check for those individuals employed under this contract.

F. Gate Guards Furnished by Contractors

1. If a contractor is permitted by the airport to maintain operational control of an AOA Access Gate, entry through such gate shall be controlled by the posting of a gate guard.

   a. Written instruction will be provided, outlining the guard's duties to enforce those requirements and provisions prescribed by the airport's security program to include all personnel and vehicle entry and access requirements.

   b. Procedures will be established to identify the actions which will be undertaken by the guard in calling for assistance.

   c. An approved emergency communications procedure will be established.

G. Compliance

1. The contractor shall comply with all regulations and rules governing the Air Operations Areas during construction, as specified in the following or later versions:

   a. Hawaii Revised Statutes, Title 19, Administrative Rules for Public Airports.

   b. Federal Aviation Administration Advisory Circular AC 150/5340-1M, standards for Airport Markings; AC 150/5370-2G, Operational Safety on Airports During Constructions.

H. Enforcement Authorization

Act 21, Section 1, Section 261-17(a), HRS; Federal Aviation Administration Regulations, Part 139, Part 107.

I. Right of Rejection or Revocation

The State of Hawaii, Department of Transportation, Airports, reserves

the right to withhold, deny or revoke any airport security clearance, licenses or permits to any individual or organization who fails to meet the prescribed or required access area clearance criteria to include background investigation information, or fails to observe or comply with established rules, regulations, and directives.

It should be clearly understood that such denial or revocation is based solely on airport security or safety considerations and does not in any way constitute a determination by the State with regard to private employment by any individual or organization."

- END OF SECTION-

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HONOLULU, HAWAII

SPECIFICATIONS

PART I

GENERAL PROVISIONS

The Hawaii Department of Transportation AIR and WATER Transportation Facilities Division General Provisions for Construction Projects dated 2016 is not physically included in these specifications. The General Provisions are available at

http://hidot.hawaii.gov/administration/con/

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

AIRPORTS

SPECIFICATIONS

PART II

TECHNICAL PROVISIONS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01010 - DESCRIPTION OF WORK

PART I - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified this Section.

1.02 SUMMARY

A. Section Includes:

1. Location of the work
2. Hours of work
3. Safety
4. Operation of airport facilities during construction
5. Disposal of excess soil materials
6. Construction stakes, lines and grades
7. Special project requirements

1.03 VEHICLE PARKING (Not Used)

1.04 PROVISIONS FOR FIELD OFFICE/STORAGE SPACE (Not Used)

Pending the availability of space on airport property, the State will issue Revocable Permit(s) to the Contractor for the use of the space, assessed at a monthly fee of $25 for each Revocable Permit issued. The Contractor shall be responsible for paying for any associated County fees, inclusive of property taxes, and must notify the State Property Management Office at least 30 days in advance before vacating the premises. The space(s) may be used for a field office, staging of materials and equipment, vehicle parking or other uses subject to the approval of the State. All spaces shall be subject to the requirements of Section 01561 - CONSTRUCTION SITE POLLUTION CONTROLS.

Since space on airport property is extremely limited, the State does not guarantee that space(s) provided to the Contractor will be in close proximity to the project site. The State will make every effort to provide the Contractor with space on airport property, however, should the State determine that no space is available for such use(s), the responsibility shall then be on the Contractor to find space outside of airport property."

1.05 LOCATION OF THE WORK

A. The work to be performed under this contract is located at the North Shore Aviation Hangar, Kawaihapai Airfield, Waialua, Hawaii

B. Conditions:

1. The North Shore Aviation Hangar, parking lot and airport roadways shall remain operational at all times. Any damages to existing areas caused by the Contractor shall be repaired by the Contractor at no cost to the State.

2. Upon execution of the contract, the Contractor, at their cost, shall obtain all permits required for this project.

1.06 HOURS OF WORK

A. Work can be performed at the construction site from 8:00 a.m. 3:30 p.m. without considerable disruption to airport operations or other adjacent tenants. Submit a proposed construction schedule to Engineer for review and approval no later than 30 calendar days after execution of contract. The Contractor shall coordinate their schedule with the Engineer if rescheduling of work or intermittent work is required, such work shall be performed at no extra cost to the State. If the Contractor elects to work overtime, compensation for State employees and for construction management consultant as authorized by the State shall be the Contractor's obligation to pay in accordance with Section 7.6 – "Overtime and Night Payment for State Inspection Services" of the General Provisions of Construction Projects (2016).

B. Contractor shall clean work areas at the end of each working shift. Rubbish, loose materials, etc. shall be disposed of daily. **Tools and equipment shall not be left unattended during work hours.** This includes tools left in unlocked vehicles, in the bed of pickup trucks, or in unlocked job sites. TSA citations may result in fines in excess of $13,000 per violation and the confiscation of AOA badges. Materials shall be safely secured and stored in an area designated by the Airport Manager.

C. Dependent on the type and location of nighttime work activity, the Contractor may be required to either alter the work hours and work activities, or suspend work during the Seabird Fallout Season, roughly September 15 – December 15, annually. Schedule adjustments during the Seabird Fallout Season dates shall not incur additional costs to the State of Hawaii.

1.07 SAFETY

A. The Contractor shall take the necessary precautions to protect his workers and other personnel from injuries. The rules and regulations promulgated by the Occupational Safety and Health Acts are applicable and made a part of these specifications.

B. Barricades and warning signs shall be erected by the Contractor in the work area to properly protect all personnel in the area.

C. During the progress of the work debris, empty crates, waste, material drippings, etc., shall be removed by the Contractor at the end of each workday, and the work area shall be left clean and orderly.

D. Based on the impacts of the project to airport operations, participation and attendance at meetings with various airport stakeholders may be required to fulfill the project's adherence to Safety Management System (SMS) requirements.

1.08 OPERATION OF AIRPORT FACILITIES DURING CONSTRUCTION

A. The Contractor shall coordinate the phases of work under this contract with the Engineer to permit the continuing operation of existing Airport facilities and to minimize disruption to pedestrian and vehicular traffic.

B. Utility Maintenance: During the construction of this contract, existing utility services serving occupied or used facilities shall not be disrupted except where authorized in writing by authorities having jurisdiction. Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to the Engineer. Damages to the existing utility facilities by the Contractor will be repaired at the Contractors expense.

C. Outages for water, power, communications, air conditioning or any other utility, if necessary, shall be kept to a minimum and scheduled for off-peak hours, generally from 12:00 a.m. to 6:00 a.m. The Contractor shall submit written requests to the Engineer for such outages no later than fourteen (14) calendar days in advance. The request shall include a description of work and the duration of the outage. The Contractor shall not proceed with such outages until written approval is received from the State.

1.09 CONSTRUCTION STAKES, LINES AND GRADES

A. The Contractor shall perform all construction layout and reference staking necessary for the proper control and satisfactory completion of all structures, grading, paving, drainage, sewer, water, and all other appurtenances required for the completion of the work.

B. Existing horizontal and vertical survey control points for the project are shown on the plans. The Contractor shall verify the location of all control points prior to the start of construction.

C. The Department will not be responsible for delays in setting stakes and marks.

D. All control points and stakes or marks which the Engineer may set shall be preserved by the Contractor. If such control points, stakes or marks are destroyed or disturbed by the Contractor, the cost of replacing such stakes or marks will be charged against the Contractor and deducted from payments due the Contractor.

E. The Contractor shall be responsible for the placement and preservation of adequate ties to all control points whether established by the Contractor or by the Engineer.

F. All original, additional or replacement stakes, marks, references and batter-boards which

may be required for the construction operations, shall be furnished, set and properly referenced by the Contractor. The Contractor shall be solely and completely responsible for the accuracy of the line and grade of all features of the work. Any errors or apparent discrepancies found in previous surveys, the plans and specifications shall be called to the Engineer's attention by the Contractor for correction or interpretation prior to proceeding with the work.

G. Before construction is started on any structure which is referenced to an existing structure or topographical feature, the Contractor shall check the pertinent locations and grades of the existing structures or topographical features to determine whether the locations and grades shown on the plans are correct.

H. All construction staking shall be performed by qualified personnel under the direct supervision of a person with an engineering background who is experienced in the direction of such work and is acceptable to the Engineer.

I. All stakes and markers used for control staking shall be of the same quality as used by the Department for this purpose. For slope limits, pavement edges, gutter lines, et cetera, where so called "working" stakes are commonly used, stakes of different quality may be acceptable.

J. The Department may check the Contractor's control of the work at any times as the work progresses. The Contractor will be informed of the results of these checks, but the Department by doing so will in no way relieve the Contractor of his responsibility for the accuracy of the layout work. The Contractor shall at his expense correct or replace any deficient or inaccurate layout and construction work. If, as a result of these deficiencies or inaccuracies, the Department is required to make further studies, redesign, or both, all expenses incurred by the Department due to such deficiencies or inaccuracies, will be deducted from any payments due the Contractor.

K. The Contractor shall furnish all necessary personnel, engineering equipment and supplies, materials, and transportation incidental to the accurate and satisfactory completion of this work.

Unless otherwise provided, all requirements imposed by this section and performed by the Contractor shall be considered incidental to the various contract items and not separate or additional payment will be made thereof.

1.10 SPECIAL PROJECT REQUIREMENTS

A. Upon receipt of the Contract, the Contractor shall process and return the Contract to the State' Contract Office within five (5) calendar days.

B. The State intends to issue the Notice to Proceed for the Project to the Contractor within 35 calendar days after bid opening. The Contractor shall be able to commence work on this date.

C. Downed seabirds. Downed seabirds found within the project site shall be reported to a local wildlife center according to protocols established by the Department of Land and Natural Resources, Division of Forestry and Wildlife:

https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

A. No measurement shall be made for the items in this Section.

4.02 BASIS OF PAYMENT

A. All work specified in this section shall be paid for at the contract lump sum price for Construction Work. The contract price paid shall be full compensation for all labor, tools, equipment, and all other incidental necessary to complete the work. Payment will be made under:

Item No.	Item	Unit
01010.1	Construction Work Basis of bid shall be the entire SITE CONSTRUCTION, CONCRETE, and portions of the GENERAL REQUIREMENTS (Archaeological Monitoring Coordination, Construction Waste Management, Temporary Facilities, Special Requirements for Contractors on the AOA Lead Containing Paint Control Measures, etc…) scope of work completed in accordance with the specification.	Lump Sum

B. Payment for all work associated with contaminated soil including release reporting, additional testing, excavation, stockpiling, transportation, and disposal of contaminated soil shall be paid from the Line Item No. 01532.1 Management of Contaminated Media, Soil Disposal and Soil Reuse.

END OF SECTION

SECTION 01100 – ARCHAEOLOGICAL MONITORING COORDINATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

A. An Archaeological Monitoring and Post-Review Discoveries Plan has been prepared for the project areas that will be impacted during construction work as indicated in the referenced report titled "Archaeological Monitoring and Post-Review Discoveries Plan for the Removal of the Honolulu Soaring Hangar Underground Fuel Storage Tank and Associated Infrastructure, Dillingham Military Reservation, Kaʻena Ahupuaʻa, Waialua District, Island of Oʻahu, Hawaiʻi, TMK (1) 6-8-014:001, Project # CRS-23-198".

B. U.S. Army Cultural Resource Investigation Permit shall be provided by the Contractor. The Contractor shall review and comply with the approved Archaeological Monitoring & Post-Review Discoveries Plan, U.S. Army Cultural Resource Investigation Permit, and Native American Graves Protection and Repatriation Act (NAGPRA) Comprehensive Agreement (CA) for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation. See appendices for blank U.S. Army Garrison Hawaii Cultural Resources Investigation permit form, approved Archaeological Monitoring & Post-Review Discoveries Plan and NAGPRA CA for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation.

C. The report indicates human burials and/or cultural materials may be encountered during ground disturbing activities below the existing base course. The Contractor shall engage the services of a Qualified Archaeologist to ensure that all construction activities are performed in accordance with the referenced AMP and applicable State regulations. The Contractor shall be responsible for the necessary procedures and equipment required for full compliance with all requirements of these provisions for archaeological monitoring.

D. The Contractor shall engage the services of a Qualified Archaeologist to ensure that all construction activities are performed in accordance with the Cultural Resources Investigation permit, Archaeological Monitoring and Post-Review Discoveries Plan, and applicable State regulations. The Contractor shall be responsible for the necessary procedures and equipment required for full compliance with all requirements of the provisions for archaeological monitoring.

E. The contractor shall notify the State Project Manager minimum 14 days prior to the start of excavation.

1.03 QUALIFIED ARCHAEOLOGIST REQUIREMENTS

A. The Contractor shall engage the services of a Qualified Archaeologist prior to Notice-to Proceed. A Qualified Archaeologist shall be approved by U.S. Army Garrison Hawaii, meet the Secretary of Interior Professional Qualification Standards (48 Federal Register 44716) as an archaeologist. Other field personnel conducting survey, recording, monitoring, testing, excavation or National Register evaluation of potential historic properties shall meet standards established by Office of Personnel Management for their respective disciplines in accordance with Section 112 of the National Historic Preservation Act (54 USC §306131).

B. An individual listed on the permit who meets the Secretary of Interior Professional Qualification Standards relevant to the nature of the project must be present on-site during active operations to directly oversee the work of less qualified field technicians.

a. The archaeological monitor must also have a minimum of 2 years of archaeology field experience in Hawai‘i.

1.04 MONITORING, REPORTS, PLANS, ARTIFACTS, RECORDS AND CURATION

The Qualified Archaeologist shall comply with the following archaeological provisions listed in the Archaeological Monitoring and Post-Review Discoveries Plan and U.S. Army Cultural Resource Investigation Permit. Any departure from specified monitoring requirements shall only follow consultation with, and written concurrence from, U.S. Army Garrison Hawaii.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Contingency allowances.

1.02 SUBMITTALS

Submittals shall be in accordance with SECTION 01300 – SUBMITTALS.

A. Submit proposals for purchases of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials and equipment delivered to the site for use in fulfillment of each allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portion of the Work.

1.03 CONTINGENCY ALLOWANCES

A. Use the contingency allowance for unforeseen conditions and only as directed by RPR for State's purposes and only by Change orders that indicate amounts to be charged to the allowance.

1. Contractor's overhead, profit, and related costs for products, equipment, and services ordered by State under the contingency allowances are included in the contingency allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

2. At Project closeout, credit unused amounts remaining in the contingency allowance will be credited back to State.

1.04 UNUSED MATERIALS

A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to the State, after installation has been completed and accepted.

1. If requested by the Contracting Officer, prepare unused material for storage by State when it is not economically practical to return the material for credit. If directed by the Contracting Officer, deliver unused material to State's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION

Examine services and products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.02 PREPARATION

Coordinate services, materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

END SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 PROJECT DOCUMENTATION

The contract will not be considered complete until required submittals have been received and accepted by the State.

At the discretion of the Project Manager, the number of copies to be submitted may differ from that specified in this Section.

1.03 DETAILED CONSTRUCTION SCHEDULE

A. The Contractor shall submit a detailed construction schedule to the Engineer for review, no later than 30 calendar days after execution of the contract. The detailed construction schedule shall be based on a detailed critical path analysis of construction activities and sequence of operations needed for the orderly performance and completion of any separable parts of any work and all work in accordance with the contract. The schedule shall be Critical Path Method (CPM) type in the form of an arrow diagram and activity listing or comprehensive bar graph. The network diagram shall show in detail and in orderly sequence all activities on a time scale, their descriptions, durations and dependencies, necessary and required to complete all work and any separable parts thereof. The schedule shall show in detail the following information for each activity:

1. Identification by code numbers and description;

2. Duration;

3. Craft and Equipment;

4. Earliest start and finish dates;

5. Latest start and finish dates;

6. Total and free float time; and

7. Highlighted Critical Path

B. The construction schedule shall be complete in all respects, covering in addition to activities at the site of work, off-site activities such as design, fabrication, and procurement of equipment; the scheduled delivery dates of such equipment; submittal and approval of shop drawings and samples; ordering and delivery of materials; inspections; and testing. The schedule shall also include a manpower forecast by crafts. The detailed construction schedule shall be supplemented by a three-week schedule prepared by the Contractor and submitted to the Engineer on a weekly basis. The Contractor shall promptly inform the Engineer of any proposed change in the schedule and shall furnish the Engineer with a revised schedule and cash flow diagram within 15 calendar days after approval of such change.

The schedule shall be kept up to date, taking into account the actual progress of work and shall be updated, if necessary, every 30 calendar days. The updated schedule shall, as determined by the Engineer, be sufficient to meet the requirements for the completion of the separable parts of work and the entire projects as set forth in the contract.

Upon commencing work, the Contractor shall submit at the start of each week to the Engineer for review, a detailed three (3) week construction schedule.

C. If at any time during the progress of the Work, the Contractor's actual progress appears to the Engineer to be inadequate to meet the requirements of the contract, the Engineer will notify the Contractor of such imminent or actual noncompliance with the contract. The Contractor shall thereupon take such steps as may be necessary to improve his progress and the Engineer may require an increase in the labor force, the number of shifts, and/or overtime operations, days of work and/or the amount of construction plants all without additional cost to the State. Neither such notice by the Engineer nor the Engineer's failure to issue such notice shall relieve the Contractor from his obligation to achieve the quality of work and rate of progress required by the contract. Failure of the Contractor to comply with instructions of the Engineer under these provisions may be grounds for determination by the State that the Contractor is not prosecuting work with such diligence as will assure completion within the times specified. Upon such determination, the State may employ labor and equipment and charge the Contractor for the cost thereof, including depreciation for plant and equipment or may terminate the Contractor's right to proceed with the performance of the contract, or any separable part thereof, in accordance with the applicable provisions of the contract.

D. The Contractor shall submit to the Engineer one (1) reproducible and three (3) prints of the detailed construction schedule and of each revised schedule submitted thereafter.

1.04 SCHEDULE OF VALUES

A. The Contractor shall submit the Schedule of Values to the Engineer for review, no later than 30 calendar days after execution of the Contract.

B. Format and Content: Use Proposal Schedule and/or the Project Specifications table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section. Provide a breakdown of the contract sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principle work or subcontract amounts down into several smaller identifiable items of work.

C. Identification: Include the following Project identification on the schedule of values:

1. Project name and location

2. Project number

3. Contractor's name and address

4. Contract No.

5. Date of submittal

D. Arrange the Schedule of Values in tabular form with separate columns to indicate the following items listed:

1. Related Specification Section or Division

2. Description of work

3. Dollar value and percent complete

E. Correlate line items in the Schedule of Values with other required administrative schedules and forms including;

1. Construction Schedule

2. Application for Payment forms including continuation sheets

3. List of Subcontractors

4. List of principle suppliers and fabricators

5. Schedule of submittals

F. Round amount to nearest whole dollar; the total shall equal the contract sum.

G. Provide a separate line item in the Schedule of Values for each part of the work where Applications for Payment may include materials or equipment, purchased, fabricated or stored, but not yet installed.

H. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment or when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.05 OTHER SUBMITTALS REQUIRED BEFORE CONSTRUCTION

The Contractor shall submit the following items prior to or at the pre-construction meeting or unless otherwise noted:

A. Name, residence phone number, addresses and scope of authority for the following persons:

1. Contractor Manager

2. Contractor's authorized representative to sign documents

3. Two (2) additional persons who can be contacted during non-working hours for emergencies.

4. Field Office location and phone numbers (cellular, pager, fax, etc.)

B. Name of Safety Officer

C. Notice of Materials to be furnished

D. Three (3) copies each of Certificates of Insurance. The State of Hawaii shall be named as additionally insured. The project number and project title shall be referenced in the Description of Operations/Locations/Vehicles. If canceled, 30 days written notice to the State of Hawaii must be given. If certificates are not correct, work cannot proceed.

E. Three (3) copies each Insurance and Tax Rates.

F. List of apprentices who will be working on the project supported with the Statement of Apprenticeship or copy of the Apprenticeship Agreements registered with the State Board, for each apprentice.

G. List of equipment to be used on the job.

H. Three (3) copies of an expenditure (cash flow) plan consisting of an anticipated work completion graph plotting contract time and gross payment anticipated.

1.06 SHOP DRAWINGS, SAMPLES, CATALOG CUTS, AND CERTIFICATES

A. Submittal Schedule: Prior to the submission of any shop drawings or submittals, the Contractor shall submit to the Engineer for review, a submittal schedule. The schedule shall identify the subject matter of each submittal, the corresponding specification section number and the proposed date of submission. During the progress of work, the Contractor shall revise and resubmit the submittal schedule as directed by the Engineer.

B. The Contractor shall submit for review to the Engineer, or to a representative designated by the Engineer, Six (6) copies of all shop drawings, samples, catalog cuts and certificates.

i. Items are to be reviewed and approved by the Engineer prior to commencing fabrication or delivery of material to the job site.

C. Each copy of the drawings, certificates, catalog cuts, and lists reviewed by the Engineer will be stamped "REVIEW ACTION" with the appropriate action noted therein. The review of the Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Acceptance of such drawings will not relieve the Contractor the responsibility of conforming to the contract drawings and specifications or for any error or omission which may exist as the Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work. Each shop drawing submitted for review shall have, in the lower right-hand corner just above title, a white space 4" x 4" in which the Engineer can place the stamp and indicate action taken. The Contractor shall also inform their subcontractors to provide this space in their preparation of shop drawings.

1.07 MAINTENANCE DATA AND OPERATING INSTRUCTIONS

Six (6) copies of maintenance data and operating instructions shall be submitted by the Contractor at the conclusion of the leak monitoring system replacement. The manuals shall be assembled in one or more binders, each with a title page, typed table of contents, and heavy section dividers with numbered plastic index tabs. The binders shall be a minimum of 2 inches thick, three ring, "D slant" with hard covers. All data shall be punched for binding and composition and printing shall be arranged so that punching does not obliterate any data. The project number, project title, and Airport shall be inserted in the front and backbone binder cover.

The Contractor shall submit a draft to the Engineer for review prior to the submission of the final copies.

The manual shall include separate sections describing each leak monitoring system, its appurtenances, and each associated fuel tanks. Provide a general description of the equipment, instructions for operation, maintenance, recommended inspection points and periods for inspection, testing, adjustments, calibration procedures with illustrations, wiring diagrams, trouble shooting situations and solutions, and repair methods in a practical, complete, and comprehensive manner.

For each equipment, include information on detailed parts listings (part numbers and costs) with the manufacturer's name, address, contact person, e-mail address and phone/fax numbers. Provide the contact name, address, e-mail address and phone/fax numbers of the distributor in the State of Hawaii for each equipment.

Include a separate section on warranty information on all products and equipment. Provide this information in a tabular format with a listing on all products and equipments with warranty start and completion dates for each item.

Include separate sections on all approved submittals, test reports, certifications, etc.

All information shall be arranged in a logical, orderly sequence. Manuals submitted by the manufacturer will not be accepted.

1.08 TEST REPORTS

Six copies of test reports for any material used in this Contract shall be submitted when specified or required by the Engineer.

1.09 SUBMITTAL IDENTIFICATION

A. To avoid rejection and to clarify each submittal, the General Contractor shall have a rubber stamp made up in the following format:

_____

General Contractor's Name

PROJECT TITLE: _____
AIRPORT: _____
STATE PROJECT NO: _____
AIP PROJECT NO: _____
THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR AND IS CERTIFIED CORRECT AND IN COMPLIANCE

WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

ITEM NO. _____

SUBMITTAL NUMBER _____
DATE RECEIVED _____
SPECIFICATION SECTION # _____
SPECIFICATION PARAGRAPH # _____
DRAWING NUMBER _____
SUBCONTRACTOR NAME _____
SUPPLIER NAME _____
MANUFACTURER NAME _____

CERTIFIED BY _____ (Contractor's Signature, Date)
(Contractor's Name and Title)

B. This stamp "filled in" should appear on each reproducible shop drawing, on the cover sheet of copies of test and mill reports, certificates of compliance, catalog cuts, brochures, etc. The stamp should be placed on a heavy stock paper merchandise (approximately 3" x 6") and one tag tied to each sample submitted for approval. The tag on the samples should state what the sample is, so that if the tag is accidentally separated from the sample, they can be matched up again. The back of this tag will be used by the Engineer for receipt, approval, and log stamp for any comments that relates to the sample.

C. Submission Number: Each submission is to be sequentially numbered in the space provided in the Contractor's stamp. Correspondence and transmittal will refer to this number.

D. The Contractor shall ensure that all submittals, including shop drawings, are complete and in conformance to the requirements of the Contract specifications prior to submission to the State for review and acceptance. Incomplete submittals will not be processed by the State and returned to the Contractor for correction. Any cost impacts and delays in the Project schedule as a result of incomplete submittals shall be the responsibility of the Contractor.

1.10 AS-BUILT DRAWINGS

As-built drawings shall conform to the requirements of Section 5.8 - "Coordination Between the Contractor and the State" of the General Provisions for Construction Projects (2016), and the following requirements:

The Contractor shall maintain on the job site a set of full-size contract drawings, marking them in red to show all variations between the construction actually provided and that indicated or specified in the contract documents, including buried or concealed

construction. (Section 5.8 (a) Drawings and Special Provisions of the General Provisions for Construction Projects.)

Where a choice of material or method is permitted herein or where variations in scope of character of work from that of the original contract or authorized, the drawings shall be marked to define the construction actually provided. Where equipment installation is involved, the size, manufacturer's name, model number, power input or output characteristics as applicable shall be shown on the as-built drawings.

The representation of such changes shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as necessary to clearly portray the as-built construction.

The drawings shall be maintained and updated on a daily basis. The Contractor shall stamp, sign, and date each sheet with the following stamp:

AS-BUILT DRAWINGS/SPECIFICATIONS

This certifies that the dimensions and details shown on this sheet reflect the dimensions and details, and specifications as constructed in the field.

_____
CONTRACTOR'S NAME

_____
Signature Date

Monthly and final payments to the Contractor shall be subject to prior approval of the drawings. On completion of the work, both sets of marked-up drawings shall be delivered to the Engineer and shall be subject to approval before acceptance.

1.11 GUARANTEES

Guarantee periods shall start at time of acceptance in writing by the State.

All guarantees and warranties shall be made out to the "State of Hawaii." Supplier and subcontractor guarantees shall be co-signed by the Contractor.

The Contractor is solely responsible for coincidence or non-coincidence of factory warranties or equipment guarantees, and the Contractor's own warranties and guarantees as required by the contract. The Contractor is solely responsible for scheduling and coordinating the installation of equipment and materials so as to take maximum advantage of factory warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

SECTION 01400 - CONTRACTOR QUALITY CONTROL PROGRAM

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 CONTRACTOR QUALITY CONTROL PROGRAM

A. GENERAL

The Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed replacements required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

1. Adequately provide for the production of acceptable quality materials.

2. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.

3. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the pre-construction conference, his/her understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by the Engineer and State Project Manager. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed and approved by the Engineer and State Project Manager.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the

responsibility of the Engineer. All inspection and test reports shall be stamped and signed by a licensed professional engineer.

B. DESCRIPTION OF PROGRAM

1. General Description. The Contractor shall establish a Quality Control Program to perform inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.

2. Quality Control Program**.** The Contractor shall describe the Quality Control Program in a written document which shall be reviewed and approved by the Engineer and State Project Manager prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review no later than thirty (30) calendar days after execution of the Contract.

3. The Quality Control Program shall be organized to address, as a minimum, the following items:

   a. Quality control organization;
   b. Submittals schedule;
   c. Inspection requirements;
   d. Quality control testing plan;
   e. Documentation of quality control activities; and
   f. Requirements for corrective action when quality control and/or acceptance criteria are not met.
   g. A listing of the definable features of work for the project.

   The Contractor is encouraged to add any additional elements to the Quality Control Program that he/she deems necessary to adequately control all production and/or construction processes required by this contract.

C. QUALITY CONTROL ORGANIZATION

The Contractor's Quality Control Program shall be implemented by the establishment of a separate quality control organization that is not a part of the

production organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel. The organizational chart shall identify all quality control staff by name and function and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. At the top of the chart, an overall Contractor Quality Control System Manager, CQCSM, shall be named and his/her subordinates shall follow thereafter.

The quality control organization shall consist of the following minimum personnel:

1. Contractor Quality Control System Manager. The CQCSM shall be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCSM shall have a minimum of 5 years of experience in system replacements and shall have had prior quality control experience on a project of comparable size and scope as the contract. The CQCSM shall be on the project full time and shall have no production duties. The CQCSM shall NOT be the point of contact for the production organization.

   The CQCSM shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications including authority to independently stop any work not in compliance with the contract. The CQCSM shall report directly to a responsible officer of the construction firm, such officer not being the project superintendent or foreman. The CQCSM may supervise the Quality Control Program on more than one project provided that person can be at the job site within 2 hours after being notified of a problem and a Quality Control Technician is present on the job site full time.

2. Quality Control Technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate fields and shall have a minimum of 2 years of experience in their area of expertise.

   The quality control technicians shall report directly to the CQCSM and shall perform the following functions:

   a. Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by Section 1.02E.

b. Performance of all quality control tests as required by the technical specifications and Section 1.02F.

3. Staffing. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

All personnel shown on the organizational chart shall have, in resume form, all information regarding their education, any licenses, their present position, previous work experience, etc. included in the Quality Control Program written documentation. These resumes shall be verified by the CQCSM.

D. SUBMITTALS SCHEDULE

The Contractor shall submit a detailed listing of all submittals (e.g., mix designs, material certifications, color samples) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

1. Specification item number:

2. Item description;

3. Description of submittal;

4. Specification paragraph requiring submittal; and

5. Scheduled date of submittal.

E. INSPECTION REQUIREMENTS

Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work.

Before any definable feature of work is started, the CQCSM shall notify the Engineer and State Project Manager of such work at least 48 hours in advance. Upon notification, the Engineer or State Project Manager shall determine if a meeting shall be held to discuss the condition of the work area, material and

equipment status, what is to be expected and any questions or possible problems. No definable feature work shall commence without the consent of the Engineer and State Project Manager.

F. QUALITY CONTROL TESTING PLAN

As a part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, a minimum, include the following:

1. Specification item number;

2. Item description (e.g., concrete cylinder test);

3. Test type (e.g., concrete compressive strength);

4. Test standard (e.g., ASTM or AASHTO test number, as applicable);

5. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated);

6. Responsibility (e.g., plant technician, independent lab); and

7. Control requirements (e.g., target, permissible deviations).

The testing plan shall contain a statistically based procedure of random sampling for acquiring test samples in accordance with ASTM D 3665. The Engineer and State Project Manager shall be provided the opportunity to witness quality control sampling and testing. The CQCSM shall make every effort to inform the Engineer and State Project Manager at least 24 hours, or more if stated in the specifications, before such testing occurs.

All quality control test results shall be documented by the Contractor as required by Section 1.02G.

G. DOCUMENTATION

The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the

required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer and State Project Manager daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCSM.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

1. Daily Inspection Reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and Subcontractor operations on a form acceptable to the Engineer and State Project Manager. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:

    a. Technical specification item number and description and location of work performed;
    b. A comprehensive breakdown of the work force including the number of workers and total hours for each trade.
    c. Compliance with approved submittals;
    d. Proper storage of materials and equipment;

    e. Proper operation of all equipment;
    f. Adherence to plans and technical specifications;
    g. Review of quality control tests; and
    h. Safety inspection.

    The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

    The daily inspection reports shall be signed by the responsible quality control technician and the CQCSM. The Engineer and State Project Manager shall be provided at least one copy of each daily inspection report on the workday following the day of record.

2. Daily Test Reports. The Contractor shall be responsible for establishing a system which will record all quality control test results. Daily test reports

shall document the following information:

a. Technical specification item number and description;
b. Test designation;
c. Location;
d. Date of test;
e. Control requirements;
f. Test results;
g. Causes for rejection;
h. Recommended remedial actions; and
i. Retests.

Test results from each day's work period shall be submitted to the Engineer and State Project Manager prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the CQCSM.

H. CORRECTIVE ACTION REQUIREMENTS

The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and utilize statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

I. SURVEILLANCE BY THE ENGINEER AND STATE PROJECT MANAGER

All items of material and equipment shall be subject to surveillance by the Engineer or State Project Manager at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed herein and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to

surveillance by the Engineer or State Project Manager at the site for the same purpose.

Surveillance by the Engineer or State Project Manager does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

J. NONCOMPLIANCE

1. The Engineer or State Project Manager will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or State Project Manager or his/her authorized representative to the Contractor or his/her authorized representative at the site of the work, shall be considered sufficient notice.

2. In cases where quality control activities do not comply with either the Contractor's Quality Control Program or the Contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer or State Project Manager, the Engineer or State Project Manager may:

   a. Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors in accordance with Section 8.4 – "Character and Proficiency of Workers" of the General Provisions for Construction Projects (2016).
   b. Order the Contractor to stop operations in accordance with Section 8.10 – "Suspension of Work" of the General Provisions for Construction Projects (2016).
   c. Determine work performed by the Contractor during periods of noncompliance to be unacceptable and subject to inspection, removal or non-payment in accordance with Section 5.12 – "Removal of Non-Conforming and Unauthorized Work: Performance of Corrective or Remedial Work" of the General Provisions for Construction Projects (2016).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be

considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

1.03 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 PERFORMANCE REQUIREMENTS

A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Demolition Waste:

    a. Asphaltic concrete paving
    b. Concrete
    c. Equipment
    d. Wiring

2. Construction Waste:

    a. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:

        1) Paper.
        2) Cardboard.
        3) Boxes.
        4) Plastic sheet and film.
        5) Polystyrene packaging.
        6) Wood crates.
        7) Plastic pails.
        8) Conductors.

1.05 ACTION SUBMITTALS

Waste Management Plan: Submit plan within fourteen (14) days of date established for the Notice to Proceed.

1.06 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons.
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices. The Honolulu Program of Waste Energy Recovery (H-POWER) by the City and County of Honolulu is the only acceptable incinerator in Oahu.

G. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.07 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Waste Management Conference: Conduct conference at Project site to comply with requirements. Review methods and procedures related to waste management including, but not limited to, the following:

1. Review requirements for documenting quantities of each type of waste and its disposition.
2. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
3. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
4. Review waste management requirements for each trade.

1.08 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis.

B. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

3.02 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale: Not permitted on Project site.

C. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

3.03 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

    a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.04 RECYCLING DEMOLITION WASTE

A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility or crush asphaltic concrete paving and screen.

B. Concrete: Break up and transport paving to concrete recycling facility or crush concrete and screen.

C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

E. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

F. Metals: Separate metals by type.

    1. Structural Steel: Stack members according to size, type of member, and length.
    2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

G. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

H. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

I. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

J. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

K. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

L. Carpet Tile: Remove debris, trash, and adhesive.

1. Stack tile on pallet and store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

M. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

N. Conduit: Reduce conduit to straight lengths and store by type and size.

3.05 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

3.06 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction. The Honolulu Program of Waste

Energy Recovery (H-POWER) by the City and County of Honolulu is the only acceptable incinerator.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. H-POWER will take the architectural canopy fabric made of mostly vinyl. Contractor can contact Scale House at 808-682-0261. H-POWER requires an account with Contractor.

B. Burning: Do not burn waste materials in Airport ground.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

PART 4 - METHOD OF MEASUREMENT AND BASIS OF PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

SECTION 01533 - BARRICADES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 BARRICADES

A. The Contractor shall take precaution to protect people and property from injury and damage. He shall erect barricades to delineate his work areas and provide the appropriate signing, hazard lights, and temporary paint striping per the safety plan as approved by the Engineer, to aid public and airport pedestrian and vehicular traffic around his work areas. Barricades shall be traffic cones, delineators, blinker barricades, caution tape, sawhorses, plywood barricades or other barriers as approved by the Engineer to effectively provide proper protection.

B. The Contractor shall be responsible for his own security and protection of his property, including mobilization yard barricades.

C. Barricades, in general, shall be neat and in good condition, as required for protection. In areas frequented by the general public, the barricades shall be visually presentable and plywood partitions shall be painted. Where dust is a problem, the Contractor shall erect floor to ceiling dust proof partitions

D. The Contractor shall coordinate and sequence this work with the Engineer to permit the continuing operation of the existing Airport facility. Barricades shall be removed upon the completion and acceptance of work and the premises left clean and operational.

E. The Contractor shall be responsible for securing access into and out of the barricaded areas.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

A. Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

SECTION 01560 – GENERAL ENVIRONMENTAL, HEALTH, & SAFETY CONTROLS

PART I – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

This section addresses the prevention of environmental pollution as the result of construction operations under this contract. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, adversely affect other species of importance, or degrade the utilization of the environment for aesthetic and recreational purposes.

1.03 REFERENCES

All work shall conform to the most recent edition of the following Federal, State, and Local regulations, unless otherwise noted or specified on the drawings or in these specifications. Where conflicts among the requirements or with these specifications exists, the most stringent requirements shall apply.

A. DOTA Construction Site Runoff Control Program
http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program

1. DOTA Construction Activities Best Management Practices (BMP) Field Manual.

B. Department of Health (DOH) Hazard Evaluation & Emergency Response (DOH HEER) https://health.hawaii.gov/heer/

C. State of Hawaii Administrative Rules, Title 11, Department of Health (DOH)

1. Chapter 46, Community Noise Control.

2. Chapter 59, Ambient Air Quality.

3. Chapter 60.1, Air Pollution Control.

4. Chapters 260.1, 261.1, 262.1, 263.1, 264.1, 265.1, 266.1, 268.1, 270.1, 271.1, 273.1, and 279.1, Hazardous Waste Management.

5. Chapter 451, State Contingency Plan.

6. Chapter 501, Asbestos Requirements.

D. CFR Title 40, Protection of the Environment, Chapter I, Environmental Protection Agency.

E. CFR Title 42, Public Health, Chapter I, Public Health Service, Department of Health and Human Services.

1.04 SUBMITTALS

A. The Contractor shall submit the following items as required:

1. Individual Wastewater System (IWS) Final Report: For projects involving the construction of an individual wastewater system, an IWS Final Report is required to be submitted to the DOTA Engineering Branch, Environmental Section (AIR-EE) for approval, prior to submitting to DOH Wastewater Branch and prior to project closeout.

2. Underground Injection Control (UIC) Well Final Report: For new drainage well construction and existing drainage well modification, a UIC Well Final Report is required to be submitted to AIR-EE for review and approval, prior to submitting to DOH Safe Drinking Water Branch (SDWB), and prior to project closeout. The Final Report shall also be submitted within the deadline specified on the UIC Approval to Construct. If a project involves abandoning an existing drainage well, written instructions shall be obtained from DOH SDWB and a copy provided to AIR-EE prior to backfilling the demolished well. All supporting documentation requested by DOH post demolition work shall be completed and provided to AIR-EE for review prior to submitting to DOH SDWB.

3. AST (Flammable/Combustible Liquid) Tank Installation: Provide signed record of Final Inspection issued by County Fire Department.

4. Waste Manifests: If a project will generate hazardous waste, the Contractor shall prepare waste manifests in accordance with HAR 11-262 and provide records to AIR-EE.

B. The Contractor shall comply with all applicable regulations and maintain records of permits, licenses, certificates, and other environmental regulatory requirement correspondence. Submit copies of permits, licenses, certifications, inspection reports, releases, notices, receipts for fee payments, correspondence, records, and similar documents, established for compliance with environmental regulations bearing on performance of the work.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

A. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made, as determined by the Engineer.

B. Dust: The Contractor, for the duration of the contract, shall maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, graded areas, staging and storage areas, and all other work areas within or outside the project limits free from dust that would cause a hazard or nuisance to the work or operations of other Contractors, or to persons or property. Industry-accepted methods, that meet requirements of DOTA Construction BMP Field Manual as noted in Specification 01561 and that meet stabilization suitable for the area or materials involved.

C. Burning on Airport property shall not be permitted.

3.02 SPILL CONTROL

A. The Contractor shall follow the DOTA Construction Site Runoff Program and relevant documents, such as the Construction BMP Field Manual to implement BMPs to prevent spills and leaks and report and cleanup spills and leaks immediately, as required.

3.03 DISPOSAL

A. All unusable debris and waste material shall be hauled away to an appropriate local landfill. Contractor shall control dust during loading operations.

B. Contractor shall consult with the landfill and conduct any required waste characterization to ensure that waste meets the landfill's requirements for size, type, etc.

C. No burying of debris or waste materials, except for materials that are specifically indicated elsewhere in these specifications as suitable for backfill, shall be permitted on the project site.

D. Contractor shall manage all construction materials, debris, and waste in a manner that prevents Foreign Object Debris (FOD) from reaching the airfield, where it could be an aircraft safety hazard.

3.04 HAZARDOUS MATERIALS CONTROL

Hazardous materials shall be properly stored and handled. The use of prohibited hazardous materials, e.g., asbestos, lead paint, and polychlorinated biphenyls (PCBs), in the construction of this project shall be strictly prohibited. Any corrective action to remove and replace hazardous material and contaminated work areas shall be at the sole expense of the Contractor.

3.05 OCCUPATIONAL HEALTH AND SAFETY

The Contractor shall at all times comply with all State of Hawaii and Federal rules and regulations related to occupational health and safety and develop and follow a Health and Safety Plan describing measures the Contractor will employ to protect the health and safety of their employees. Include measures required to protect the public from dangers associated with their work.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

All work specified in this Section shall not be measured nor paid for separately but shall be considered incidental to item 01561.1, Construction Site Pollution Controls.

END OF SECTION

SECTION 01561 – CONSTRUCTION SITE POLLUTION CONTROLS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

A. This Section describes procedures for the proper application of management and engineering controls at State of Hawaii, Department of Transportation, Airports (DOTA) construction sites so that pollutants do not impact any storm drainage system, State water, soil, or groundwater.

B. The Contractor shall supply all labor, materials, and equipment necessary for the management of stormwater during construction and to carry out the work in accordance with these specifications, and all applicable Federal, State, and local regulations and latest amendments.

C. This Section also applies to construction support activities including concrete or asphalt batch plants, rock crushing plants, equipment staging yards/areas, material storage areas, excavated material disposal areas, borrow areas, waste management facilities, sanitary facilities, material storage areas, and temporary equipment fueling locations, regardless of their proximity to the Airport Property and State Right-of-Way. For areas serving multiple construction projects or operating beyond the completion of the construction project in which it supports, the Contractor shall be responsible for securing the necessary permits, clearances, and documents, and following the conditions of the permits and clearances, at no cost to the State.

D. The Contractor shall be responsible for all subcontractors, suppliers, and vendors, and shall ensure that the means and methods of construction activities of subcontractors, suppliers, and vendors are in full compliance with this Section.

E. The Contractor shall examine and be familiar with documents related to stormwater management at the airports and shall comply with related requirements for construction stormwater control. Should a requirement not be clearly described within the construction plans, specifications, permits and other applicable bid documents, notify the Engineer immediately for interpretation.

1.03 REFERENCES

All work shall conform to the most recent edition of the following, unless otherwise noted or specified on the drawings or in these specifications. Where conflicts among the requirements or with these specifications exists, the most stringent requirements shall apply.

A. DOTA Construction Site Runoff Control Program
http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program

1. DOTA Construction Activities Best Management Practices (BMP) Field Manual.

2. DOTA Environmental Requirements for Construction Projects Standard Operating Procedures.

3. DOTA Stormwater Management Plans (SWMPs) for the Daniel K. Inouye International Airport (HNL) and Kahului Airport (OGG), as applicable.

4. DOTA Industrial Stormwater Pollution Prevention Plans (SWPPPs) for the HNL, OGG, and Lihue Airport (LIH), as applicable.

B. State of Hawaii Administrative Rules, Title 11, Department of Health (DOH)
https://health.hawaii.gov/opppd/department-of-health-administrative-rules-title-11/

1. Chapter 54, Water Quality Standards

2. Chapter 55, Water Pollution Control

3. Chapter 451, State Contingency Plan

C. United States (U.S.) Code of Federal Regulations (CFR), Title 40, Chapter I: Environmental Protection Agency.

D. Hawaii Revised Statutes (HRS), Part I, Chapter 128D, “Environmental Response Law”.

PART 2 – PRODUCTS

2.01 MATERIALS

Comply with applicable materials described in the current DOTA Construction Activities BMP Field Manual. Refer to FAA Advisory Circulars and DOTA District Office, including Wildlife Hazard Management Plan, for additional guidance and conditions. In addition, materials shall comply with the following:

A. Grass: The FAA and USDA recommend the following grass species when requiring grass: “No-Mow” bermudagrass (“Green Velvet”) (Cynodon dactylon) or Seashore paspalum (Paspalum vaginatum). These species possess higher than average drought resistance, saline soil tolerances, and most importantly, do not produce seed heads attractive to the majority of hazardous avian species. Use stolons, sprigs, or plugs to avoid providing hazardous species with a readily available food source. The use of seeds is generally not allowed.

Alternative grass species shall only be applied with the approval by the Engineer

after consultation with United States Department of Agriculture (USDA) airport representative. This includes, but is not limited to, sodding, cuttings, and planting. Grass shall be a quick-growing species. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover.

B. Irrigation: Any required irrigation shall be done after dark to reduce instances of water becoming a hazardous wildlife attractant.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION REQUIREMENTS

Do not begin construction activities until all submittals detailed in this Subsection are completed, submitted to the Engineer, and accepted in writing by AIR-EE.

A. Water Pollution, Dust, Sediment, and Erosion Control Meeting: Schedule a water pollution, dust, sediment, and erosion control meeting with the Engineer after all documents required by AIR-EE are submitted to the Engineer and accepted in writing by AIR-EE. The meeting shall be scheduled a minimum of 14 calendar days prior to the Start Work Date. At a minimum, the meeting shall be attended by the Contractor, subcontractors whose work may provide an impact to stormwater or site environmental conditions, Engineer, AIR-EE, and any authorized representatives of the designated attendees. The meeting will discuss the sequence of work and plans and proposals for water pollution, dust, sediment, and erosion controls.

B. Land Disturbance Calculations: The Contractor is responsible for calculating the total land disturbance for the life of the project and complying with all environmental requirements associated with the total land disturbance calculated. Disturbance of land is defined by Hawaii Department of Health as “the penetration, turning, or moving of soil or resurfacing of pavement with exposure of the base course or the exposure of bare soil or ground surface, including the land surface exposed by construction roads, baseyards, staging areas, demolition, headquarters, and parking areas. It does not include grass or weed cutting, bush or tree trimming or felling that leaves soil or ground intact. It includes ‘grubbing’ in its normal meaning of the use of equipment to knock down and push vegetation out of the way, typically uprooting vegetation and disturbing the ground surface.”

Land disturbing activities that shall be included in the disturbance area calculation shall follow the guidance provided in the Environmental Requirements for Construction Projects Standard Operating Procedures.

C. Site-Specific BMP (SSBMP) Plan or SWPPP: The Contractor shall submit a SSBMP Plan (for projects disturbing less than one acre) or SWPPP (for projects disturbing one acre or more) using the latest DOTA template for acceptance by AIR-EE. If a SSBMP Plan or SWPPP was prepared by the Designer, the Contractor shall revise the plan using the latest template to include additional

information required of the Contractor and any changes the Contractor proposes. The SSBMP Plan or SWPPP shall include site-specific temporary BMPs following requirements and practices outlined in DOTA's "Construction Activities BMP Field Manual." All AIR-EE comments shall be resolved and the SSBMP Plan or SWPPP approved prior to the start of land-disturbing activities, including those activities that are needed for the implementation of the BMPs. Submission of the complete and acceptable SSBMP Plan or SWPPP is the sole responsibility of the Contractor, and additional contract time will not be issued for delays due to incompleteness.

D. SSBMP Plan/SWPPP Modifications: Modify, as necessary, and resubmit amended SSBMP Plan or SWPPP and construction schedules to the Engineer for acceptance by AIR-EE. Amendments to the SSBMP Plan or SWPPP shall be made under the following circumstances at a minimum:

1. Conditions that develop during construction that were unforeseen during the design and pre-construction stages that could impact stormwater, soil, or groundwater.

2. Changes to the Contractor's Means and Methods of Construction that could impact stormwater, soil, or groundwater.

3. Omitted conditions that should have been allowed for in the accepted documents.

4. A SSBMP Plan measure that replaces an accepted SSBMP Plan measure that was not satisfactorily performing.

5. Revised dates of installation and/or removal of SSBMP Plan measures.

SSBMP Plan/SWPPP modifications shall be submitted to the Engineer and accepted in writing by AIR-EE before implementing the revised site-specific BMPs in the field. Amendments to the SSBMP Plan or SWPPP shall be included with the original SSBMP Plan or SWPPP and documented in the Amendment Log.

E. Documentation: A copy of the accepted original or amended SSBMP Plan or SWPPP, with the signed certification by the authorized representative filed with DOH for SWPPPs, shall be kept on site or at an accessible location so that it can be made available at the time of an on-site inspection, or upon request by the Engineer, AIR-EE, DOTA's designated authorized representative, and/or DOH/EPA Representative.

F. NPDES Construction Permit: If the total land disturbance for the life of the project, including all construction support activity areas, is one acre or more, coverage under an NPDES Permit Authorizing Discharges of Storm Water Associated with Construction Activity (NPDES Construction Permit) authorizing stormwater discharges associated with construction activity is required from the Department of Health, Clean Water Branch (CWB).

1. Do not begin land-disturbing activities until the CWB has issued an Individual NPDES Permit or NGPC. Conduct land-disturbing activities in accordance with the conditions of the NPDES Permit and/or NGPC.

2. The Contractor shall submit a Notification of Start to CWB a minimum of seven calendar days before the start of construction and provide AIR-EE with a record of submittal.

3. Before construction begins, the Contractor shall assign one of their personnel as the Duly Authorized Representative, in accordance with Section 15 of Appendix A, Chapter 1155. The Duly Authorized Representative is responsible for compliance with the NPDES Construction Permit (i.e., operations of the construction project) and shall certify, sign, and date various documents, including the SWPPP and SWPPP inspection documents.

G. Solid Waste Disclosure: Submit the Solid Waste Disclosure Form for Construction Sites, if applicable, to the DOH Solid Waste Branch as specified on the form within 7 calendar days before the start of construction activities and provide a copy to the Engineer. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer. This shall also include documentation from any intermediary facility where solid waste is stored, handled or processed.

H. NPDES Hydrotesting Permit: If hydrotesting activities require effluent discharge into State waters or drainage systems, coverage under an NPDES Hydrotesting Waters Permit authorizing discharges associated with hydrotesting is required from the CWB. Do not begin hydrotesting activities until the CWB has issued an Individual NPDES Permit or NGPC for hydrotesting. Conduct Hydrotesting operations in accordance with the conditions of the NPDES Permit and/or NGPC.

I. NPDES Dewatering Permit: If dewatering activities require effluent discharge into State waters or drainage systems, coverage under an NPDES Dewatering Permit authorizing discharges associated with dewatering is required from the CWB. Do not begin dewatering activities until the CWB has issued an Individual NPDES Permit or NGPC for dewatering. Conduct dewatering operations in accordance with the conditions of the permit or NGPC.

J. Construction BMP Training: All Contractor’s and subcontractor’s employees on the project shall complete the DOTA Construction BMP Training prior to entering the construction site and every calendar year thereafter. All Contractor and subcontractor personnel involved with construction project responsibilities shall also be trained on the site-specific BMPs that are utilized during construction and spill response. Records of completion and/or training roster sign-in sheet shall be up to date and included in the SWPPP or SSBMP Plan. Additional training required by AIR-EE shall be at no additional time or cost to the project. There are two training options:

1. All Contractor and subcontractor employees involved with construction project responsibilities watch the DOTA Construction BMP Training Video located on the DOTA Construction Site Runoff Control Program webpage and complete the DOTA Construction BMP Training Survey with a passing score, or

2. The Contractor and subcontractor supervisors/managers watch the DOTA Construction BMP Training Video located on the DOTA Construction Site Runoff Control Program webpage, complete the DOTA Construction BMP Training Survey with a passing score, then train all employees involved with construction project responsibilities and submit a sign-in roster documenting all employees trained at the bottom of the DOTA Construction BMP Training Survey.

   DOTA Construction BMP Training Survey:
   https://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-bmp-training-survey/

K. Construction Connection, Discharge, and Surface Runoff Permit: The Contractor shall complete the Contractor's section of the Construction Connection, Discharge, and Surface Runoff Permit and submit to AIR-EE for review. All AIR-EE comments shall be resolved prior to the start of land-disturbing activities.

3.02 CONSTRUCTION REQUIREMENTS

A. Construction Start: Do not expose or disturb surface area of earth material or initiate any land-disturbing activities until submittals detailed in Subsection 01561.3.01 – Pre-construction Requirements are completed, submitted to the Engineer and accepted in writing by AIR-EE. Once installation of BMPs is allowed, a Pre-construction BMP Inspection is conducted, and all deficiencies that are noted during the inspection shall be corrected prior to any other ground disturbance.

B. BMP Installation and Maintenance: Provide, install, maintain, monitor, repair and replace BMPs as needed to maintain efficacy. Address all inspection comments received from the Engineer, AIR-EE, and/or DOTA's designated authorized representative.

C. Protect temporarily or permanently disturbed soil surface from rainfall impact, runoff, and wind before the end of each work day. Coordinate and schedule the work to the maximum extent possible to minimize the amount of exposed or disturbed surface area of earth material.

D. Install and maintain stabilized construction entrances/exits, including any wheel washes, to minimize tracking of dirt and mud onto roadways, sidewalks, and other paved areas. Restrict traffic to stabilized construction entrance areas only. Clean dirt, mud, or other material tracked onto the road, sidewalk, or other paved area by the end of the same day in which the track-out occurs. If tracking is excessive or sediment is being transported farther along the pavement or

sidewalk by other vehicles traveling outside of the construction site, conduct cleaning and sweeping immediately. Modify stabilized construction entrances/exits, as needed, to prevent mud from being tracked onto road. Stabilize entire access roads if necessary.

E. Maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas within the project limits free from dust that would cause a hazard to the work, airport operations, operations of other contractors, or to persons or property. If chemicals are used as soil stabilizers for erosion and dust control, submit the manufacturer's product data sheets of the chemicals to the Project Manager for acceptance by AIR-EE. Oil treating shall not be used. Dust screens and fabrics are not allowed to be mounted on, or to inhibit the view of, the TSA and AOA Security Fences.

F. Cover exposed surfaces of materials completely with tarpaulin or a similar device when transporting aggregate, soil, excavated material, or other materials that may be a source of fugitive dust.

G. Protect ditches, channels, and other drainageways leading away from cuts and fills at all times by:

1. Hydromulching cuts and fills that may erode.

2. Installing check dams or other silt control devices.

3. Other methods acceptable to AIR-EE.

H. Clean up and remove any pollutant that is attributed to the Contractor. Care shall be taken to ensure that no petroleum/chemical products, bituminous materials, or other deleterious substances, including debris, are allowed to fall, flow, leach, or otherwise enter the sewage systems or storm drains. Deposition of solid waste or the discharge of liquid waste, such as fuels, lubricants, bituminous waste, untreated sewage and other pollutants that may contaminate stormwater, surface waters, soil, or groundwater shall not be permitted.

I. Disturbed Area Stabilization: Immediately initiate stabilization of exposed soil areas upon completion of land-disturbing activities for areas where disturbance has permanently or temporarily ceased on any portion of the site. Land-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Land-disturbing activities have temporarily ceased when clearing, grading, or excavation within any area of the site will not resume for a period of 14 or more calendar days, but such activities will resume in the future. The term "immediately" is used in this Section to define the deadline for initiating stabilization measures. "Immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the land-disturbing activities have temporarily or permanently ceased.

1. After the initiation of stabilization, stabilization activities shall be completed according to the following timeline:

    a. For projects with an NPDES Construction Permit:

        - For construction areas discharging into waters not impaired for nutrients or sediments, complete installation of stabilization measures within 14 calendar days after the temporary or permanent cessation of land-disturbing activities.

        - For construction areas discharging into nutrient or sediment impaired waters, complete installation of stabilization measures within 7 calendar days after the temporary or permanent cessation of land-disturbing activities.

    b. For projects without an NPDES Construction Permit, complete stabilization within 14 calendar days after the temporary or permanent cessation of land-disturbing activities.

J. Notice of Cessation: For projects with an NPDES Construction Permit, the Contractor shall submit a Notice of Cessation to CWB within seven calendar days after the end of the month that the project was completed and provide AIR-EE with a record of submittal.

K. Changes to Land-disturbing Activities: The Contractor shall be responsible to prepare a new SWPPP or SSBMP Plans or amend existing SWPPP or SSBMP Plans if changes to the project or to the Contractor's activities result in land-disturbing activities additional to those previously approved:

1. Land-disturbing activity outside of the approved limits is NOT allowed until approval and proper permits are received. Revised documents, including an updated SWPPP or SSBMP Plan, shall be submitted to and approved by AIR-EE prior to conducting additional land-disturbing activities.

2. If coverage under an NPDES Construction Permit is needed, no activity in the additional area may occur until the additional permit coverage is granted:

    a. If the project was already granted coverage under an NPDES Construction Permit, additional coverage shall be obtained from CWB for the additional area, either by adding the area to existing project documents, and applying for NPDES Construction Permit coverage for the entire project OR by creating new documents and obtaining separate NPDES Construction Permit coverage for the additional area.

    b. If the new disturbed area will result in the total disturbed area

equaling one (1.0) acre or more for a project without existing NPDES Construction Permit coverage, NPDES Construction Permit coverage shall be obtained from CWB that will cover all land-disturbing activities anticipated for the life of the project.

3.03 INSPECTIONS

Refer to the DOTA Construction Site Runoff Program for information pertaining to AIR-EE BMP inspections (pre-construction, routine, and final). Contractor self-inspections shall occur based on the frequency outlined in the SSBMP Plan and, if applicable, NPDES Permit (HAR 11-55) and SWPPP requirements.

A. Corrective Actions: The Contractor shall be responsible for the correction of all deficiencies identified during any of the above inspections.

1. If the Contractor fails to satisfactorily address inspection deficiencies, the DOTA reserves the right to employ outside assistance or use the State's own labor forces to provide necessary corrective measures. The Contractor will be fully responsible for all related cost and time. The State will charge the Contractor such incurred costs plus any associated project engineering costs and will make appropriate deductions from the Contractor's progress payment. Additionally, DOTA can issue liquidated damages for deficiencies not resolved to DOTA's satisfaction and for illicit discharges or contaminant discharges to soil, groundwater, surface water, or State waters (see Appendix A).

2. Failure to install or maintain site-specific BMP measures may result in the assessment of liquidated damages (Appendix A). Depending on the severity of the deficiencies, additional enforcement actions, such as suspension of work and/or termination of the contract (with the Contractor's Surety being fully responsible for all additional costs incurred by the State), can be conducted and assessed against the Contractor.

3. For all citations or fines received by the DOTA for non-compliance, including non-compliance with NPDES Permit conditions, the Contractor shall reimburse the State within 30 calendar days for the full amount of outstanding cost that the State has incurred. The State may deduct incurred costs from the Contractor's progress payments; however, the Contractor shall be responsible for reimbursing the State if the costs exceed remaining payments owed to the Contractor.

4. The Contractor shall be responsible for all citations, fines and penalties levied by DOH or EPA against the State due to the Contractor's failure to satisfactorily address site-specific BMP deficiencies and/or any Contractor's illicit discharges. The State may make the appropriate deductions from the Contractor's progress payment; however, the Contractor shall be responsible for reimbursing the State if the costs of correction exceed remaining payments owed to the Contractor.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

The work specified in this Section will be paid for at the contract lump sum price. Payment will be full compensation for work prescribed in this Section and contract documents, including but not limited to, all labor, materials, tools, equipment, and all incidentals necessary to install, maintain, monitor, repair, replace, modify, and remove site-specific BMP measures.

Item No.	Item	Unit
01561.1	Construction Site Pollution Controls	Lump Sum

Partial payments shall be paid in the Monthly Progress Payment as follows:

A. 20% of the line item price shall be paid upon the satisfactory completion of the Pre-construction BMP Inspection and associated corrective actions accepted by AIR-EE or their designated authorized representative, as described in Section 01561.3.03(A), above.

B. 70% of the line item price shall be paid in equal monthly payments over the duration of the contract. Failure to satisfactorily apply, maintain, or modify BMP measures and devices, and/or submittals shall result in the withholding of monthly progress payments for this line item.

For projects that will disturb one acre or more of land, or will be part of a larger common plan of development that will disturb one acre or more of land, payments shall be made only after Routine BMP Inspections described in Section 01561.3.03 above have been satisfactorily completed, and associated corrective actions accepted by AIR-EE or their designated authorized representative.

C. The remaining 10% of the line item price shall be paid after all temporary BMP measures have been satisfactorily removed.

Payment will be made only after the satisfactory completion of the Final BMP Inspection and associated corrective actions accepted by AIR-EE or their designated authorized representative, and acceptance of the Post-construction BMPs by AIR-EE or their designated authorized representative.

Liquidated Damages, up to $25,000 per day (Appendix A), shall be assessed for each non-compliance of the BMP requirements described in this Section. The Contractor shall not be entitled to recover any Liquidated Damages assessed, even after the deficiencies have been corrected.

The Liquidated Damages cited in Appendix A are in excess of reimbursement for any citations, fines, or penalties levied by any regulatory agency against the State due to the Contractor's violations of clean water regulations or standards.

Appendix A. Liquidated Damages Schedule for Non-Compliances

Non-Compliance	Amount
Failure to obtain coverage under an NPDES Construction Permit for construction activities associated with a project that will disturb one acre or more of land, or will be part of a larger common plan of development that will disturb one acre or more of land, as defined by DOH.	$1,000 per calendar day per violation.
Failure to obtain coverage under an NPDES Hydrotesting Permit for hydrotesting activities that will require effluent discharge into State waters or drainage systems.	$1,000 per calendar day per violation.
Failure to obtain coverage under an NPDES Dewatering Permit for dewatering activities that will require effluent discharge into State waters or drainage systems.	$1,000 per calendar day per violation.
Failure to comply with the conditions specified in an NPDES Permit, or any other applicable permit.	$1,000 per calendar day per violation.
Failure to schedule a Pre-construction BMP Inspection and receive acceptance of all associated corrective actions prior to conducting land-disturbing activities.	$1,000 per calendar day per violation.
Failure to provide corrective actions accepted by AIR-EE or their designated authorized representative by the deadlines identified in the BMP inspection report.	$1,000 per calendar day per violation.
Failure to have the accepted SSBMP Plan and amendments or the accepted SWPPP and amendments available at a project construction site.	$1,000 per calendar day per violation.
Failure to properly install or maintain a BMP specified by the SSBMP Plan, SWPPP, contract drawings and documents, or permit.	$2,000 per calendar day per violation.

Non-Compliance	Amount
Failure to have an accepted amendment to the SSBMP Plan or an accepted amendment to the SWPPP prior to implementing changes to previously accepted BMPs. Note: Advance review and acceptance can be provided to satisfy this non-compliance. However, for projects with an NGPC or NPDES permit, the written amendment shall still be formally submitted for certification and signature by the authorized representative identified in the NGPC or NDPES Permit.	$2,000 per calendar day per violation.
Failure to conduct required inspections.	$1,000 for each of the first ten violations, $2,500 for each of the next ten violations, $5,000 for each subsequent violation.
Failure to maintain required records such as BMP inspection reports, rain gauge data logs, etc.	$500 per calendar day for the first ten days of each violation, $1,000 per calendar day for the next ten days of each violation, $2,500 per calendar day for each subsequent day of violation.
Any violation resulting in a polluted discharge.	Up to $25,000 per calendar day per violation.
Note: Liquidated Damages shown in the Table shall be assessed at the discretion of the DOTA.	

Assessment of Liquidated Damages for Non-Compliance:

The Contractor may be assessed liquidated damages by issuance of an Enforcement Letter. The Enforcement Letter shall indicate the amount of liquidated damages that are assessed for the non-compliances which shall be deducted from the Contractor's next progress payment. The Enforcement Letter will be sent electronically via e-mail and a hard copy to the Contractor's designated representative(s), identified in Section 01561.3.01(2)(d), responsible for the Contractor's Construction Site Runoff Control Program. An Enforcement Letter may be issued with or without previous verbal notifications, written warnings, or official enforcement letters (i.e. Warning Letter or Notice of Violation (NOV).

Liquidated Damages may be assessed for the following:

- Non-compliances listed in the Table, herein, included in Appendix A.
- Non-compliances have not been corrected in the timeframes noted.
- Corrective actions are not completed after a verbal notification, written warning (email or formal letter), or NOV is issued.
- Contractors are non-responsive to DOTA's directives.
- Repeated non-compliance.
- A polluted discharge has occurred.

The number of days used for the liquidated damages calculations shall start on the day that the non-compliance was required to be corrected and shall end on the day that the non-compliance is corrected and accepted. If DOTA's personnel are not able to go out in the field to verify that the BMP deficiencies are corrected in the timeframe specified, the Contractor can send photographs showing the corrected deficiency via e-mail to the DOTA Engineer and AIR-EE along with documentation on how the deficiency was corrected. The DOTA Engineer and AIR-EE may visit the site to verify the corrective actions are acceptable. If the corrective actions are acceptable, then the clock stops on the day that the documentation was received.

The Contractor shall not be entitled for compensation for any liquidated damages or penalty, fine, or citations assessed and deducted from the Contractor's progress payments, even after corrective actions have been taken.

END OF SECTION

SECTION 01562 – MANAGEMENT OF CONTAMINATED MEDIA, SOIL DISPOSAL, AND SOIL REUSE

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

A. This Section describes procedures for the management of known and/or unknown contaminated media (e.g., soil, sediment, groundwater, soil vapor, and building materials) and disposal and on-site reuse of either contaminated or uncontaminated soil/sediment (referred to herein as “soil”), that may be disturbed or generated during excavation or demolition activities, or other construction activities associated with this project.

B. All soil shall be treated as potentially contaminated until it is determined otherwise.

C. The Contractor shall supply all labor, materials, and equipment necessary for the removal, temporary storage, testing, handling, backfilling and management of soil and contaminated media to carry out the work in accordance with these specifications, and all applicable Federal, State, and local regulations and latest amendments.

D. The Contractor shall follow the State of Hawaii, Department of Transportation, Airports (DOTA) Programmatic Environmental Hazard Evaluation and Environmental Hazard Management Plan (DOTA EHE-EHMP). References to the Site-specific Construction-Environmental Hazard Management Plan (C-EHMP) and C-EHMP Addendum do not apply, unless contamination is identified during construction that warrants additional plans, if directed by DOH.

E. Qualified Environmental Professional: The Contractor shall employ a Qualified Environmental Professional (QEP) who possesses a minimum of five (5) years of experience providing environmental oversight for the management of contaminated media during construction activities, who shall assist with sampling, testing, and creating plans including the preparation of the Contractor’s C-EHMP (Site-Specific or Addendum). The QEP shall be identified in the applicable C-EHMP document.

F. The Contractor and their QEP shall review any site-specific investigation reports (e.g., Phase II Environmental Site Assessment [ESA]) or construction management plans, etc.) to understand the conditions that may affect work performance.

G. Should the Contractor deviate from the DOTA EHE-EHMP, C-EHMP Addendum, or Site-Specific EHMP, the Contractor shall be responsible to prepare or modify any existing Hawaii Department of Health (DOH) required C-EHMP (Site-specific or Addendum). Any deviation from construction EHMPs will require approval by DOH and the DOTA Engineering Branch, Environmental Section (AIR-EE) prior to implementation. The Contractor shall detail deviations from standard practices and explain how those deviations will be protective of human health and the environment.

H. The primary contaminant-related hazards addressed by the DOTA EHE-EHMP or a C-EHMP include, but are not limited to, the following Contaminants of Potential Concern (COPCs):

1. Petroleum-related Hydrocarbons, e.g., TPH-g, TPH-d, TPH-o, BTEX, and PAHs
2. Constituents of light distillate fuels and/or Chlorinated Solvents (together considered volatile organic compounds or VOCs)
3. Polychlorinated Biphenyls (PCBs)
4. Pesticides, e.g., Chlordane, Dieldrin
5. Metals, e.g., Arsenic, Barium, Cadmium, Total Chromium, Lead, Mercury, Selenium, and Silver
6. Per- and Polyfluoroalkyl Substances (PFAS)

In addition, free petroleum product (e.g., gasoline, aviation gasoline, diesel fuel, jet fuel, motor oils, lubricating oils) may be encountered in soil or groundwater in areas of previous petroleum releases.

Soil vapor may be present from volatile COPCs present in subsurface soil or groundwater.

Should changes in site conditions or additional site information identify contaminants or risks to human health and/or the environment not addressed by the DOTA EHE-EHMP or C-EHMP (Site-Specific or Addendum), the Contractor shall be responsible to revise, update, and finalize a C-EHMP (Site-Specific or Addendum), to be reviewed and approved by AIR-EE and the DOH Hazard Evaluation and Emergency Response (HEER) Office.

The Contractor shall coordinate with AIR-EE, as well as have any C-EHMP (Site-Specific or Addendum) approved by the HEER Office, prior to the start or continuation (in the case of an Addendum) of any related ground disturbing activities.

1.03 REFERENCES

All work shall conform to the latest edition of the following, unless otherwise noted or specified on the drawings or in these specifications. Where conflicts among the requirements or with these specifications exists, the most stringent requirements shall

apply.

A. DOTA Construction Site Runoff Control Program https://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program/

1. DOTA EHE-EHMP

2. DOTA Construction Best Management Practices (BMP) Manual

B. Department of Health (DOH) Hazard Evaluation & Emergency Response (DOH HEER) https://health.hawaii.gov/heer/

1. Technical Guidance Manual (TGM) for Implementation of the State Contingency Plan (including updates).

2. Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material.

3. HEER Office Screening for Environmental Hazards at Sites with Contaminated Soil and Groundwater.

4. HEER Office Construction EHMP and EHMP Addendum Template.

C. State of Hawaii Administrative Rules, Title 11, DOH https://health.hawaii.gov/opppd/department-of-health-administrative-rules-title-11/

1. Chapter 54 Water Quality Standards

2. Chapter 58.1 Solid Waste Management Control

3. Chapter 59 Ambient Air Quality Standards

4. Chapter 11-260.1-279.1 Hazardous Waste Management: General Provisions

5. Chapter 280.1 Underground Storage Tanks

6. Chapter 451 State Contingency Plan

D. The Hawaii Environmental Response Law (Hawaii Revised Statutes [HRS] Chapter 128D) and the State Contingency Plan (Hawaii Administrative Rules [HAR] Title 11, Chapters 451-1–451-24).

E. American Petroleum Institute (API) RP 2219 https://www.api.org/oil-and-natural-gas/health-and-safety/refinery-and-plant-safety/occupational-safety/rp-2219

F. United States Code of Federal Regulations (CFR), Title 29: Labor

https://www.ecfr.gov/current/title-29

G. CFR, Title 40: Protection of the Environment
https://www.ecfr.gov/current/title-40

1. Part 50, “National Primary and Secondary Ambient Air Quality Standards A”.

2. Part 122, “EPA Administered Permit Program: The National Pollutant Discharge Elimination System”.

3. Part 261, “Identification and Listing of Hazardous Waste”.

4. Part 263, “Standards Applicable to Transporters of Hazardous Waste”.

5. Part 302, “Designation, Reportable Quantities, and Notification”.

H. CFR, Title 49: Transportation
https://www.ecfr.gov/current/title-49

1. Part 171, “General Information, Regulations, and Definitions”.

2. Part 172, “Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans”.

I. U.S. EPA Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA), Section 107(1), exemption for cleanup of legally applied pesticide products.
https://www.epa.gov/enforcement/superfund-enforcement-authorities

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 GENERAL WORK PROCEDURES

A. Prior to beginning work, the Contractor, the Contractor’s QEP, and the Engineer or their representative shall review and discuss all available information pertaining to contamination or potential contamination at the work site.

B. It should be noted that, in some cases, the contamination (e.g., soil or groundwater contaminated with metals, PCBs, pesticides, PFAS, etc.) may not be identifiable through visual and/or olfactory observation, and contaminant-specific field screening techniques may need to be implemented.

C. Potential or suspected contaminated media from separate locations or sources shall not be mixed or placed together without the approval of the Qualified Environmental Professional and AIR-EE.

D. The removal, transfer, or handling of explosive or flammable media shall be conducted using explosion-proof pumps and equipment. If a vacuum truck is used for removal of liquids or residues, the area of operation for the vacuum truck shall be vapor free. Discharge the vacuum pump exhaust gases through a hose of adequate size and length downwind of the truck and tank area. Vacuum truck operating and safety practices shall conform to API RP 2219. Collect tank residues in drums, tanks, or tank trucks labeled according to 49 CFR 171 and 49 CFR 172 and dispose of as required by regulation.

E. Contractor shall follow decontamination regulations and procedures as necessary.

F. Soil excavation, grading, and any disturbance of contaminated soil may cause a potential exposure to Contractor's employees and the public from the release of vapors or fugitive dust. The routes of exposure to dusts are by inhalation, ingestion, and dermal contact. The Contractor shall use engineering controls such as a cover, water spraying, and/or wind barriers to control fugitive dust to mitigate the release of and exposure to soil vapors.

G. The Contractor's QEP shall test excavated soil for the presence of COPCs and oversee excavated soil management in accordance with this Section and relevant guidance and regulations.

H. Contractor shall report construction activities in areas with contaminated soil or groundwater in accordance with an applicable C-EHMP or the DOTA EHE-EHMP. Contractor shall coordinate with the DOH HEER Office, the Engineer, and AIR-EE.

I. All Contractor correspondence with DOH and other regulatory agencies shall include the Engineer and AIR-EE.

3.02 PRECONSTRUCTION REQUIREMENTS

A. Submit the following a minimum of 30 calendar days prior to beginning any ground disturbing activities, for approval by AIR-EE.

1. The Contractor's revisions to the C-EHMP Addendum or Site-Specific C-EHMP completed in the design phase, or creation of a C-EHMP addendum if deviating from the DOTA EHE-EHMP, that includes, but is not limited to:

a. Procedures, engineering controls, and methods the Contractor will use during the excavation, soil stockpiling and segregation, temporary storage, testing, handling, treatment, backfilling, and disposal of contaminated media, work area isolation, construction barriers, dust control, decontamination, and emergency management.

b. Names of the Contractor's and their subcontractor's qualified personnel who will be supervising or managing contaminated materials at the site. Include the personnel's phone number and qualifications.

c. Name(s) of the Contractor's Qualified Environmental Professional, including their qualifications.

d. Proposed schedule of work.

e. Location map of temporary contaminated stockpiles and other contaminated media storage, including infrastructure such as pipes and appurtenances, if applicable.

f. All documents required as part of the appendices to the DOTA EHE-EHMP (e.g., health and safety plan and completing the management plans in the appendices) or C-EHMP (Site-Specific or Addendum) applicable appendices (e.g., health and safety plan, construction material documents, etc.).

3.03 CONSTRUCTION REQUIREMENTS

A. Soil Excavation and Stockpiling:

1. Notify the DOH HEER Office at least 90 calendar days prior to disturbing contaminated soil at "HEER Sites" utilizing the HI DOH e-Permitting System - Notification of Construction Activities (HEER Office). Version 1.6 (hawaii.gov) or most recent version available. Obtain AIR-EE's review and concurrence prior to submittal to DOH.

2. The disturbance of contaminated media shall be performed in accordance with the DOTA EHE-EHMP or the Contractor's approved C-EHMP (Site-Specific or Addendum), where applicable. The HEER Office and AIR-EE shall be immediately notified if contaminated media not previously known or anticipated is encountered. The HEER Office will determine whether additional sampling is required. The Contractor shall provide a location map with Global Positioning System (GPS) coordinates and approximate depth below ground surface at which contaminated media were encountered to the Engineer and AIR-EE.

3. Soil stockpiles shall be created and managed in accordance with project plans, the approved project-specific C-EHMP (if applicable), and the DOH Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material. If deviating from a DOH-approved C-EHMP, approval from DOTA and DOH is required. Contractor shall secure approval of new or revised stockpile characterization plans from DOTA prior to implementation. Soils placed in watertight containers shall be covered with plastic sheeting or positioned under a roof when not in active use. Soil stockpiles and containers shall be located at least 50 feet

from drainage features, surface waters, and stormwater drainage paths.

4. Any liquid-phase oil or free product associated with the contaminated soil shall be drained prior to stockpiling. If feasible, the free product shall be separated from the soil, properly stored, profiled, and disposed of at an approved recycling or disposal facility.

B. Soil Testing and Disposal:

The Contractor shall test all soil generated during excavation, demolition, or other construction activities. Sampling and testing of stockpiles shall be, at a minimum, in accordance with the latest edition of the DOH's Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material. The Contractor's QEP shall direct the soil sample collection and testing methods in accordance with the most current guidelines. All soil intended for disposal or reuse shall be tested for the presence of applicable COPCs as established by the QEP and as approved by AIR-EE.

Stockpiles shall be tested using multi-increment (MI) sampling methodology in accordance with the TGM. Alternative sampling approaches, and appropriate decision unit (DU) volumes for large volume soil stockpiles, should be discussed with AIR-EE and may be utilized on a case-by-case basis when approved by the HEER Office.

No soil from airport property shall be reused at private-owner off-site properties, even if the soil appears acceptable for unrestricted use based on testing conducted. Exceptions to this policy may only occur with the written approval of the Engineer and AIR-EE. Disposal or reuse of soil at a residential property or where there are sensitive receptors (i.e. schools, recreational areas, etc.) will not be allowed under any circumstance.

For the purposes of this Section "off-site" is defined as any location outside of the established project construction boundary from which excavated soil was generated. There are two off-site soil disposal/reuse categories applicable to this Section: (1) Off-site within the Airport Boundary, and (2) Off-site and outside of the DOTA Airport Property. "On-site" refers to within the construction project boundary from which excavated soil was generated.

1. For off-site soil reuse <u>within the airport boundary</u>:

   a. The Contractor shall secure approval from the Engineer and AIR-EE for transport to the reuse location(s) prior to moving the soil.

   b. Soil shall not be categorized as or contain a regulated hazardous waste.

   c. Soil shall not exceed the DOH Tier 1 Environmental Action Levels (EALs) for unrestricted use.

2. For off-site soil disposal/reuse outside the airport property boundary:

   a. The Contractor shall confirm and comply with the disposal/receiving facility's testing requirements, as well as their standards for disposal/reuse.

   b. Soil that is a regulated hazardous waste shall be disposed at an approved United States Environmental Protection Agency (EPA) regulated facility.

   c. Soil that is above the DOH Tier 1 EALs for commercial/industrial use but not a regulated hazardous waste shall be disposed of at a DOH or EPA permitted disposal facility (i.e., landfill).

   d. Soil that is below the Hawaii Department of Health (DOH) Tier 1 Environmental Action Levels (EAL) for unrestricted use may be reused at an appropriate location as approved by the Engineer and AIR-EE.

   e. For any contaminated media removed from Airport property to an approved facility, the Contractor shall be responsible for its legal transport and disposal. Contractor shall provide to the Engineer copies of any soil disposal receipts.

3. For on-site soil reuse:

   a. The Contractor shall representatively test all soils designated for on-site reuse. Testing can occur either *in situ* prior to excavation or after excavation. Soil that does not exceed applicable DOH Tier 1 Environmental Action Levels (EAL) for unrestricted use may be reused on-site (within construction site boundaries) with AIR-EE approval.

   b. Soil with contaminants that exceed DOH Tier 1 EALs may be approved for on-site (within construction site boundaries) reuse with written approval from AIR-EE and when the following conditions are met:

      i. Contaminated soil is reused within other contaminated areas in the proximity of its original location and for which a long term EHE-EHMP has been established and (if necessary) can be readily modified to accommodate that change in site conditions.

      ii. Contaminated soil is reused no less than 150 meters from the nearest surface water or surface water inlet.

iii. Contaminated soil is reused at an elevation above the tidally influenced high water table, and at least one foot below the finish surface grade, with the most contaminated soil placed at the bottom of the excavation and cleanest soil toward the ground surface. A minimum of one foot of clean soil shall comprise the final, top backfill layer and, unless waived by DOTA and DOH, an impervious layer shall cap this top layer.

iv. Contaminated soil is not reused within or beneath the footprint of a permanent building structure.

v. Contaminated soil to be reused cannot contain free oil, oil sheens, oil stains, or total petroleum hydrocarbons (TPH) concentrations exceeding 5,000 milligrams per kilogram (mg/kg).

C. Groundwater Management: Groundwater may be contaminated by petroleum hydrocarbons, dissolved metals, PFAS, VOCs, and/or pesticides, and may be encountered during soil excavation or dewatering activities.

1. If contaminated groundwater is discovered at a previously unknown source or site on the project, the Contractor shall immediately notify the Engineer, AIR-EE, and HEER Office. Provide a location map with GPS coordinates and approximate mean sea level depth of the groundwater at which the contamination was encountered.

2. The disturbance of contaminated groundwater shall be performed in accordance with the DOTA EHE-EHMP, or C-EHMP (Site-Specific or Addendum), where applicable. The HEER Office will determine whether additional sampling is required.

3. If free product is present in the extracted groundwater, it shall be separated from the groundwater, profiled, and disposed of at an DOH-approved recycling/disposal facility. Free product shall not be moved from one excavation to another. Engineering measures shall be taken to prevent the transfer of the free product during dewatering. Water contaminated with free product shall not be discharged from a dewatering pit.

4. Releases of contaminated groundwater to surface water bodies or areas beyond the work area is prohibited.

5. Groundwater shall only be re-infiltrated in the ground with the prior approval of AIR-EE and the HEER Office. Under circumstances where contaminated groundwater cannot be re-infiltrated, proper disposal at a licensed facility shall be conducted. Notification to the appropriate agencies and other pertinent information related to the discharge shall be conducted by copying the Engineer and AIR-EE on all correspondence

and copies of correspondence provided upon request.

6. The Contractor is responsible for the legal disposal or discharge of groundwater that is not re-infiltrated and shall provide AIR-EE with copies of waste manifests.

7. For groundwater containerized and removed from Airport property, the Contractor shall have representative samples taken and tested in accordance with DOH guidelines, standards, and regulations. A copy of the groundwater test results shall be submitted to AIR-EE. The groundwater shall not be disposed off-site without the approval of the Engineer and a written approval from the DOH-permitted facility receiving the groundwater indicating that they acknowledge the groundwater test results and providing their approval to dispose the groundwater at their facility. Transport off-site shall occur in DOT-approved containers or mobile tanks. Documentation for the removal of containerized groundwater is required in the Close-Out Report detailed in Section 3.04.

8. With approval from AIR-EE and oversight from the QEP, small volumes of groundwater may be disposed via evaporation from a constructed (lined) pond or basin, with solid residuals properly tested and disposed in accordance with this specification.

9. Release Reporting: Encountering previously unknown contaminated soil or groundwater during subsurface construction activities is considered a release and shall be reported to the HEER Office. Copies of the DOH Release Report, DOH-issued Release Number, and email correspondence (if applicable), shall be furnished to the Engineer and AIR-EE. The Contractor shall be responsible for release reporting and AIR-EE shall be included on all correspondence with the HEER office.

10. Report all leaks and spills immediately to AIR-EE, DOTA personnel, and regulatory agencies in accordance with the airport-specific DOTA Spill Reporting Fact Sheet available via the DOTA Construction Site Runoff Control Program Webpage at https://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program/.

    Releases that occur during construction activities or releases due to unforeseen events (spills) shall be reported immediately.

D. Underground Storage Tanks (USTs) and Utility Pipes:

1. For any UST or pipeline, whether unexpectedly discovered or a planned removal, the nature of the UST or pipeline and whether they are inactive shall be determined prior to removal. Immediately notify the Engineer, AIR-EE and HEER Office of any unexpected encounter with a UST or buried piping.

2. The Contractor shall record field observations of the UST and pipelines. These observations shall include, but are not limited to, the following:

   a. Location relative to fixed landmarks, including GPS coordinates. Provide a location map that shows the UST and pipelines that were encountered. The map shall include a North arrow and a scale.

   b. Depth, diameter, length, and type of piping. Describe the condition of the pipe.

   c. Volume and type of fuel or product, including analytical laboratory reports for the product recovered.

   d. Beginning and ending fluid levels, if applicable.

   e. Flow rates, if applicable.

   f. Direction of flow.

   g. Detailed photographs.

   h. Detailed description of actions taken following the discovery, such as cutting, product removal, and disposal.

3. Provide records of the field observations to the Engineer, AIR-EE, and HEER Office.

4. The removal of all USTs must comply with HAR § 11-280.1, and all correspondence related to identification, removal, and documentation shall be provided to the Engineer and AIR-EE. Only personnel knowledgeable and trained in pipeline and UST removal shall cut, drain, and remove USTs and pipelines. Hazardous conditions, particularly those created by explosive vapors and releases of product to the environment, shall be mitigated prior to removal activities. If any waste pipe or UST components are to be stored on-site prior to disposal, the area shall be lined with polyethylene plastic sheeting, 20 mil or thicker, and bermed to contain any free product. Provisions shall be in place to contain viscous products that may liquify after exposure to atmospheric heating. The waste pipe segments shall be drained of any residual product and stored on appropriate dunnage with the ends of the pipe sealed or covered to protect the interior of the pipe from contact with rainwater and wind.

5. All removed pipelines and USTs shall be properly disposed or recycled.

6. The Contractor shall prepare and submit a UST Removal Report, including the results of all sampling activities required under HAR § 11-280.1, to the Engineer, AIR-EE, and the DOH SHWB (UST

Program).

3.04 POST-CONSTRUCTION REQUIREMENTS

A. Submit a Project Close-out Report within 30 calendar days after work is completed. The Close-out Report shall contain the following applicable contents:

1. A signed letter certifying that the removal and disposal of all contaminated materials were completed in accordance with the DOTA EHE-EHMP or Contractor's approved C-EHMP (Site-Specific or Addendum), and all applicable Federal, State, and local rules and regulations.

2. All approved DOTA EHE-EHMP deviation request forms. (Reference DOTA EHE-EHMP.)

3. Any Site-Specific EHMP(s) or Long-term EHMP(s). For locations at an airport for which DOTA has already established a Site-Specific EHMP from previous projects, the DOTA's Site-Specific EHMP shall remain applicable. Contractor shall assist DOTA by providing requested project data and records necessary to draft any required amendments resulting from a change in site conditions due to construction.

4. All testing and laboratory results, including chain of custody, for any soil/sediment, groundwater, soil vapor, or other media sampling and analysis.

5. Any results from air monitoring.

6. Record of Field Observations, including location map with GPS coordinates, limits, and depths of any contaminated media (soil, groundwater, etc.) that were encountered at previously unknown source or sites on the project. Include a copy of the completed Hawaii Hazardous Substance Written Follow-up Notification form that was submitted to DOH and all other associated documents.

7. If contaminated soil was disposed off-site (off Airport Property), include the following:

a. A copy of the signed agreement from the receiving facility acknowledging the sample test results and indicating acceptance of the soil.

b. Documentation of the quantity of soil received by the facility.

c. Copies of the test results of the soil sampling.

d. All certifications, disposal forms, waste manifests, and summary logs.

8. If any soil was approved for reuse on-site (within the construction site boundaries) or off-site within Airport Property, at a minimum, include the following:

    a. Copies of the test results of the soil sampling.

    b. The quantity of soil that was re-used.

    c. Location map of the re-used soil. Include GPS coordinates of its emplaced limits.

    d. A brief description of the purpose of the reused soil (e.g., general fill, utility trench backfill material, etc.). Include the depth and thickness of its placement.

    e. Photos of the site after placement of the re-used soil has been completed.

9. Record of Field Observation of any unanticipated UST or pipeline discovered during construction activities, including a copy of the completed DOH Notice of Intent to Close Underground Storage Tanks form, UST Closure Report, and all other associated documents.

10. The Close-out Report may be distinct to each contaminated media type/source. For sites with multiple contaminated media types/sources, Close-out Reports for each contaminated media type can be submitted separately or combined into a project-wide compilation of reports.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work specified in this Section will be paid at the unit price measurement noted below.

Item No.	Item	Unit
01562.1	Management of Contaminated Media, Soil Disposal, and Soil Reuse	Allowance

Payment shall be full compensation for work prescribed in this Section and contract documents and stipulated below.

For ALLOWANCE items in the Proposal Schedule, the allowance is an estimate and the amount shall not exceed the maximum amount shown in the Proposal Schedule. Payment shall be the actual cost as invoiced by the Contractor and approved by the DOTA Engineer. The Contractor shall be allowed to include overhead, profit, insurance and/or other mark-ups, as stipulated in Section 9.5 of the 2016 General Provisions for Construction Projects, Air and Water Transportation Facilities Divisions.

Should the DOTA receive reports of any illegal dumping of material, and if illegal dumping is confirmed to have occurred, the DOTA will assess a Liquated Damages amount of $5,000 per truck per day, until the illegally dumped material has been cleaned up or the incident has been remedied to the satisfaction of the Engineer with the DOH's concurrence. The Contractor shall not be entitled to recover any Liquidated Damages assessed, even after the non-compliance has been corrected.

The Contractor shall be responsible for reimbursing DOTA for all citations, fines, and penalties levied by DOH, EPA, Department of Labor and Industrial Relations, or any other regulatory agency against the State due to the Contractor's failure to properly manage contaminated medias, including non-compliance with the DOTA EHE-EHMP, DOTA Site-Specific EHMP, or and Site-specific C-EHMP or C-EHMP Addendum. The Contractor shall reimburse the State within 30 calendar days for the full amount of any outstanding cost that the State has incurred. The State may deduct all incurred costs from the Contractor's monthly progress payments; however, the Contractor shall be responsible for reimbursing the State if the costs of correction exceed remaining payments owed to the Contractor.

If the Contractor fails to satisfactorily address the non-compliance item, DOTA reserves the right to employ outside assistance or use the State's own labor forces to provide necessary corrective measures. The Contractor shall be fully responsible for all cost and time. The State shall charge the Contractor such incurred costs plus any associated project engineering costs and shall make appropriate deductions from the Contractor's monthly progress payment.

END OF SECTION

SECTION 01580 - TEMPORARY FACILITIES AND UTILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 DESCRIPTION

This item shall consist of arranging and maintaining all utilities including, but not limited to, water, electricity, sewage disposal and telephone communications in the work area which the Contractor and Engineer deems necessary to meet the requirements of the work under the contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 TEMPORARY UTILITIES DURING CONSTRUCTION

A. Water and Sanitation: The Contractor shall provide temporary drinking water and sanitary facilities for the field personnel. The facilities shall be in accordance with the applicable health regulations and shall be maintained clean and operable until the conclusion of the construction work.

B. Telephone: The Contractor shall a have a telephone available for the State's use for communications with field personnel. Cellular telephones are acceptable. The Contractor shall install the telephone immediately upon starting work and maintain service until the project is completed. All costs associated with obtaining and maintaining telephone service shall be borne by the Contractor.

C. Electricity: Contractor shall obtain or provide temporary electric power and shall pay for all connections and energy charges incurred during construction.

D. Metering: Water and electrical services shall be metered and payment for meters and services shall be borne by the Contractor. Temporary connections for water shall include installation of a meter and backflow preventer at the point of connection according to State standards at the Contractor's cost. The Contractor shall submit requests for temporary

connections in writing to the Engineer 14 calendar days prior to the connection and shall include a description of work and a sketch of the proposed installation.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

SECTION 01715 - EXISTING CONDITIONS - HAZARDOUS MATERIALS SURVEY

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the Owner's Hazardous Materials Survey for the project, which is provided for the Contractor's information.

B. Related Sections include the following:

1. SECTION 01300 – SUBMITTALS

1.02 RELATED DOCUMENT

This section includes the results of the State's survey for asbestos materials and lead paint and is provided for the Contractor's information.

1.03 ASBESTOS-CONTAINING MATERIAL

A. The structures to be renovated or modified under this contract were surveyed for the presence of ACM. A copy of the survey report is included in this Section. Copy of the relevant Hazardous Materials Review Forms are included in this Appendices.

1. The forms when included, even when no ACM was found, are for the Contractor's information only. Review the attached forms for the basis on which a negative ACM finding was made. Contractor may perform further survey at its own expense, if ACM not shown in the report is suspected in the areas of the building in which work will be performed. If ACM is found, notify the Engineer immediately. The State will reimburse the Contractor or the testing cost if ACM is found.

2. If there is ACM outside of the areas in which work will be performed, this ACM shall not be disturbed in any way.

B. If applicable, notify employees, Subcontractors and all other persons engaged in the project of the presence of asbestos in the existing building in accordance with the requirement of Chapter 110, Article 12-110-2 (f)(1)(B) of the Occupational Safety and Health Standards, State of Hawaii.

C. In the event that work is required in any building or buildings on the site other than the one designated within the project scope, request copies of the asbestos survey report(s) for such building(s) from the Engineer. Based on the information contained in the additional survey(s), notify affected personnel per paragraph 1.03B.

1.04 LEAD CONTAINING PAINT

A. If applicable, inform employees, Subcontractors and all other persons engaged in the project that lead-based paint (LBP) and lead-containing paint (LCP) may be present in the existing building and at the job site. If work outside of the original scope is conducted or suspected lead painted material not provided in the survey is identified, stop work and inform the Engineer. No reimbursements for Contractor conduction additional testing will be allowed. Follow the

requirements of all applicable HDOH, OSHA Requirements, and with 29 CFR 1926.62

B. Review the attached lead testing data (in the Appendices) which identify locations if LCP was found. Lead testing was for design purposes only and the results do not satisfy any requirements of OSHA 29 CFR 1926.62

C. Contractor may conduct additional lead testing of existing painted surface at his/her own expense if previously unforeseen lead paints are discovered.

D. Comply with applicable rules and regulations pertaining to the handling, removal, and disposal of lead paint.

1.05 METALS AND OTHER CONTAMINANTS IN PAINT

A. Paint coatings were analyzed for lead only during design and may contain additional heavy metals and other chemical substance.

B. Anticipate hazards and implement appropriate engineering controls, and personal protective equipment shall be utilized as additional protection.

C. All appropriate hazard controls shall be implemented to prevent any exposures to the site workers, airport personnel, the public, and the environment.

1.06 POLYCHLORINATED BIPHENYLS (PCBs) and MERCURY-CONTAINING MATERIAL

A. PCB-containing light ballasts and mercury-containing materials were not surveyed in the work area.

B. Notify employees, Subcontractors and all other persons engaged in the project that PCB and mercury-containing material may be present in the existing building and at the job site. Conduct work in accordance with the requirements of 29 CFR 1910.1000 and 40 CFR 261.

PART 2 - PRODUCTS

(NOT APPLICABLE TO THIS SECTION)

PART 3 - EXECUTION

3.01 SURVEY

A. Letter Report - Limited Asbestos and Lead Paint Survey for the ARFF No. 2 Underground Fuel Piping Replacement, at the Daniel K. Inouye International Airport, Honolulu, Hawaii, dated January 5, 2024, prepared by Environmental Science International, Inc.

B. Review existing survey report(s) and verify and understand the locations and volumes of hazardous materials.

PART 4 - PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 01716 – LEAD-CONTAINING PAINT CONTROL MEASURES

PART 1 – GENERAL

1.01 SUMMARY

A. This Section specifies the Contractor's requirements and responsibilities for lead-containing paint disturbance activities. This specification does not address replacement of lead-containing paint.

B. A lead paint survey was conducted for design purposes and the report is included in Appendices as a reference. Lead testing was for design purposes only and may not satisfy the requirements of OSHA 29 CFR 1926.62

C. Lead-Containing Paint may be encountered during demolition and construction.

D. The Contractor must implement all appropriate controls and safety measures to prevent workers, users of the building, and the public from being exposed to lead as a result of demolition and construction activities.

1.02 SUBMITTALS

A. Lead Compliance Plan: Not fewer than 10 working days before commencement of lead disturbance work, submit a written Lead Compliance Plan. The plan shall include at a minimum the following: description of each activity in which lead is emitted, a description of the specific means that will be employed to achieve OSHA compliance, name and contact number for Competent Person, engineering controls (as needed), air monitoring data (as needed), and identification of required PPE.

1.03 REFERENCES

A. Applicable and potentially applicable references, regulations, guidance, and documents.

1. 29 CFR 1910.1200, Hazard Communication, OSHA.

2. 29 CFR 1926.62, Lead, OSHA.

B. The Contractor shall comply with all applicable Federal and State regulations. Where conflict or any inconsistency among requirements with this specification exists, the more stringent requirements shall apply. Ignorance of the above requirements or of any applicable

Federal and State regulations resulting in additional cost to the Contractor shall not be paid by the State.

C. All regulations shall govern these specifications, except that any more stringent specification or any specification providing greater protection against lead exposure, injury, loss, or liability shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specifications and/or regulations should be referred to the Engineer.

1.04 PERSONAL PROTECTIVE EQUIPMENT

A. The Contractor acknowledges that it is their responsibility for implementing personal protection requirements and that these specifications provide only a minimum acceptable standard.

B. As necessary, provide workers with personally-issued and marked respiratory equipment approved by NIOSH and accepted by OSHA and HIOSH.

C. No visitors shall be allowed in work areas, except as authorized by the Engineer.

D. Additional safety equipment (e.g., hardhats meeting the requirements of ANSI Z89.1-1981, eye protection meeting the requirements of ANSI Z87.1-1979, safety shoe covering meeting the requirements of ANSI Z41.1-1967, disposable PVC gloves), shall be provided to all workers as needed.

PART 2 – EXECUTION

2.01 WORK AREA PREPARATION

A. Step 1: Ensure that:

1. Pre-construction submissions, notifications, postings, and permits have been provided and are satisfactory to the Engineer.

2. All equipment for lead disturbance work, clean-up, and disposal are onsite.

3. All worker training and certification is completed and the competent person for the lead disturbance work is designated. No work shall be performed unless the designated competent person is onsite.

4. Notify the Engineer and obtain approval from the Engineer prior to proceeding with lead disturbance work. Work shall not start until the Contractor received written permission from the Engineer to commence lead disturbance work.

B. Step 2: Existing domestic water service to the work area may be used during work.

C. Step 3: Perform lead exposure assessment as needed.

2.02 LEAD DISTURBANCE WORK

A. Workers performing removal and repair work shall wear appropriate personal protective equipment in accordance with Federal and State requirements.

B. The Contractor shall at all times use "wet methods" when performing lead disturbance work to maintain a wet condition and to minimize lead containing dust.

C. Dispose of the lead-containing waste in accordance with Federal and State regulations.

D. Control of Water Runoff: Water used to control emissions of dust from the renovation activities shall not be allowed to flow uncontrolled from a lead control area, to any adjacent area or to enter the sanitary or storm water sewer system. All water runoff from lead control areas shall pass through a filter berm to remove particulate matter prior to discharge to water sewer system. The Contractor shall use only sufficient water to adequately control dust. Under no conditions shall wastewater be disposed of in storm drains or dumped on the ground.

2.03 DISPOSAL

A. All disposal-related documentation should be provided to the Engineer for review and comment before any regulated waste materials leave the project site.

B. As the work progresses and waste is generated, the Contractor shall transport to the authorized disposal site all waste generated each day, unless specifically approved by the Engineer to delay a disposal operation for one day. The Contractor shall transport all waste to the pre-designated disposal site in accordance with EPA regulations.

C. Waste disposal shipment records shall be properly completed to assure custody and disposal of all lead containing waste at approved disposal sites.

D. All expenses for waste disposal shall be the complete responsibility of the Contractor. The Contractor shall schedule waste disposal with the waste disposal facility at least 24 hours prior to waste disposal delivery.

2.03 CLEANING OF THE WORK AREA

A. Remove work signage.

B. Completely remove all protective covering used to protect the work area.

C. All contaminated equipment and tools used for removal and repair work shall be wrapped in two layers of 6-mil polyethylene sheets prior to removal from the work area. No washing of contaminated equipment and tools will be allowed at the project site.

PART 3 – TESTING/AIR MONITORING

3.01 AIR MONITORING

A. Perform air monitoring as necessary in accordance with OSHA regulations.

3.02 PROTECTION

A. No unauthorized individual shall be allowed to enter the regulated area.

B. A Visitor's Log shall be maintained.

C. The Contractor shall be solely responsible for security of the work area and in proximity of Contractor's equipment and materials.

D. As a minimum, follow the requirements of EPA, HDOH, HIOSH, OSHA, and NIOSH. Take all cautions necessary to ensure there is no lead contamination of areas not included in the work area.

E. The Contractor shall provide and install protective covering on an "as required" or "upon request" by the Engineer basis. Protective covering shall be clean plastic sheeting.

F. The Contractor shall take whatever steps may necessary to safeguard their work and also the property of the HDOT and other individuals in the vicinity of their work area during the execution of this Contract.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 01800 – SPECIAL REQUIREMENTS FOR CONTRACTORS ON THE AOA

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The General Provision of the Contract, including the General and Special Provisions and General Requirements of the Specifications shall apply to the work specified in this section.

1.02 DESCRIPTION OF WORK

A. Provide all materials, labor, equipment, and tools necessary to complete the Special Requirements for Contractors on the Air Operations Area (AOA).

B. The requirements of the Section are essential for ensuring public and worker safety on this project; hence, the Contractor shall comply with all requirements of this section when performing work on the AOA. Should the Contractor fail to comply with any requirement of this section; work may be delayed or temporarily suspended without contract time extensions. Liquidated damages or fines may result. All liquidated damages or fines resulting from violations due to improper activity, inattention, or failure to comply with required airport procedures; shall be borne by the Contractor.

1.03 PROJECT LIMITATIONS

A. The project normal working hours shall refer to SECTION 01010 – DESCRIPTION OF WORK. The Contractor shall work continuously during the project duration. No work shall be performed during State Holidays or when weather conditions restrict construction from occurring.

1.04 AOA SECURITY REQUIREMENTS

A. AOA Access Points: The Contractor will be assigned only one access point for each work phase, and shall ensure that all of their personnel, vehicles, and equipment enter and exit the AOA only through the assigned access point.

All vehicles entering the AOA through any of the Airport Access Check Points may be subject to search. The Contractor shall allow extra time for these inspections and be able to provide personnel, as required, to assist Airport security personnel during the inspection.

If the State deems an emergency situation has rendered the assigned access point unusable the Contractor will be assigned a temporary access point for the remaining workday. Should the original assigned access point remain unusable for a prolonged period, the Contractor will be assigned a new access point the following day and shall be responsible for all requirements at the

new assigned access point.

B. The Contractor shall comply with all existing and proposed airport security initiative requirements. Contractor may be subject to civil penalties up to $35,000.00 for each security violation.

C. The Contractor shall protect work areas from theft, vandalism and unauthorized entry. Ensure that proper methods are undertaken to secure tools, materials and equipment from the public.

D. AOA Access Gates: Should the Contractor's assigned AOA access point be through an unguarded gate, the Contractor shall be responsible for the following:
    1. Obtain the AOA access gate key(s) from the Airport Security Office (a $500.00 deposit is required per key).
    2. Provide all gate guards required. Each gate guard shall possess the following expertise:
        a. Familiarity with all of the AOA security access clearance requirements.
        b. Knowledge related to AOA access badge, AOA vehicle decal, and airport vehicle operator requirements.
        c. A communication device and specific instructions to call for assistance whenever problems occur.
    3. Proper control of the AOA access gate in accordance with all required airport security procedures.
    4. Close the AOA access gate during prolonged periods of inactivity; and close and lock whenever the AOA access gate is not in use, or is unattended.

1.05 AOA OPERATIONAL SAFETY REQUIREMENTS

A. It is the explicit intent of this contract that the safety of aircraft, and all of the personnel and equipment under the Contractor's jurisdiction, be the highest priority; hence, the Contractor shall carefully plan the operations of all personnel and equipment under their jurisdiction to provide for the free and unobstructed movement of all aircraft on the AOA, and to provide for the uninterrupted operation of visual and electronic signals used to guide aircraft while all personnel and equipment under their jurisdiction traverses the AOA.

B. With the exception of actual construction methods, the Federal Aviation Administration (FAA), Airport Traffic Control Tower (ATCT) will have full authority to control the Contractor's movements within the existing movement area. If the FAA, ATCT notifies the Contractor to temporarily halt operations, the Contractor shall effectively notify all personnel and equipment under its jurisdiction, without using lighted flares, to cease all work and move all equipment and themselves away from hazardous areas.

C. The Contractor is responsible for all of their movements on the AOA. Should the State deem that an escort, flagman, or driver fails to perform their duties, that escort, flagman, or driver may be terminated, or suspended and required to undergo additional training

1.06 AOA COMMUNICATION DEVICES: The contractor shall have at least two (2) people on the AOA possessing and continously monitoring the following fully charged communication devices:

A. A two-way radio capable of communicating on frequencies 118.90 (Tower) and 121.90 (Ground); with a spare charged battery and

B. A cellular telephone, with a listing of all required emergency contact numbers.

1.07 AOA TRAVEL ROUTE: The contractor will be assigned only one (1) travel route per work phase, and shall ensure that all of their personnel, vehicles, and equipment traverses the AOA only along the assigned travel route.

Should the state deem that an emergency situation has caused the assigned travel route to become unusable the contractor will be assigned a temporary travel route for the duration needed and shall be responsible for all requirements associated with the new assigned travel route.

1.08 AOA AUTHORIZED VEHICLES: Only vehicles considered safe, and required to complete the contracted work will be allowed to operate on the AOA. Each vehicle operating on the AOA shall be authorized, possessing:

A. An AOA vehicle decal obtained from the Airport Security Office and displayed on the driver's side front bumper (use of an AOA temporary vehicle permit is not allowed).

B. Insurance coverage as required by Article 7.1 of the General Provisions, and further amended by the Special Provisions.

1.09 VEHICLE AND EQUIPMENT REQUIREMENTS ON THE AOA: Each vehicle and driven piece of equipment shall possess the following when operating or staging on the AOA.

A. Operations occurring at night, or during periods of poor visibility, shall require a Flashing Amber Beacon mounted atop each vehicle/equipment's highest point.

B. Daylight operations with clear visibility, shall require a Checkered Orange and White Flag attached to a staff that is mounted to each vehicle and/or equipment in lieu of a Flashing Amber Beacon. The flag shall be at least a three-foot square with a checker pattern of international orange and white squares that are at least one-foot on each side.

C. Two placards shall be on both sides of each vehicle or equipment at all times to identify the vehicle or equipment owner. Placards shall contain the company name in letters at least four-inches (4") tall, or six-inch (6") minimum-sized company logo.

D. All additional equipment marking, lighting and positioning that may be required by the FAA.

1.10 AOA DRIVERS: All people operating a vehicle or any driven piece of equipment on the AOA shall possess the following license, permit and expertise:

A. Current and valid Hawaii State Driver's License.

B. Current and valid Airport Vehicle Operator's Permit.

C. Complete Airport Familiarization.

D. An understanding and ability to identify the following:
   1. All RSA's (Runway Safety Area), TWSA's (Taxiway Safety Area).
   2. All AOA Markings, Lighting, and Signing.
   3. The Need for Control of DOD (Foreign Object Debris).
   4. All AOA Equipment for Aircraft.
   5. All AOA Critical Areas.
   6. All AOA Travel Routes for the Various Work Places.

E. An understanding and ability to follow all ground vehicle operation and communication requirements while operating on the AOA.

F. Successful completion of all AOA driver training require by the Airport Operations Manager.

1.11 AIRPORT VEHICLE OPERATOR'S PERMIT: Airport vehicle operator's permit shall only be issued to people that apply through the Airport Security Office, and pass a written exam covering portions of the Airport Rules and Regulations related to vehicle operations on the AOA.

1.12 AOA ESCORTS: While operating on the AOA, the contractor shall provide at least one escort for every five (5) vehicles and/or equipment under their jurisdiction. The airport operations manager shall approve all escorts prior to any work commencing; hence, each escort shall possess:

A. All AOA Driver Requirements.

B. Both AOA Communications Devices previously specified.

C. Knowledge about the assigned access points and travel routes for the project.

D. Successful completion of all AOA driver training required by the Airport Operations Manager. Each escort shall pass an exam given by the Airport Operations Manager, which demonstrates they possess an understanding and ability to follow all ground vehicle operation and communication requirements while operating on the AOA.

1.13 AOA TRAFFIC CONTROL: The Contractor shall furnish and provide the following traffic control devices to block off entrances of working area.

A. Runway Lighted X's: Wherever working within an RSA.

B. Low-Profile Barricades: Low-profile barricades shall be any one of the following: however, if option a or b is selected, the Contractor shall be responsible for water filling and emptying these types of barricades as part of their contracted work.
   1. Neubert Aero Corporation's reusable Airport Low-Profile Barricade Model No. NAC-PC 2410 with at least one battery-powered red barricade light, or
   2. Multi-Barrier Safety Barricade Model No. AR-10x96 with at least one Multi- Barrier 360 degree solar-powered light, or
   3. Constructed barricades as indicated on plans.
   4. All Low-profile barricades shall be spaced fifteen (15) feet on center, and used as follows:
      a. Restrict aircraft from taxiing into work areas: Barricades shall extend across the full TWY/RWY width, with one (1) barricade places on the TWY/RWY centerline.
      b. Channel aircraft around work areas: Barricades shall be placed ten (10) feet away from active RSAs/TWSAs.

C. Reflective Cones: Reflective cones shall be used to demarcate AOA travel routes and locations where vehicles shall yield to aircraft.

1.14 AOA FOD CONTROL: The Contractor shall keep all work areas, AOA Travel Routes, and all adjacent areas clean at all times. Unless otherwise stated in this contract, or otherwise directed by the Airport Manager, the Contractor shall properly haul and dispose all removed pavement materials and collected debris to a site off the Airport. The State will require remedial cleaning from the Contractor whenever their FOD Control Operations are unsatisfactory. Upon receipt of notification, the Contractor shall be ready to start remedial cleaning at the jobsite within one-hour. Notification by telephone will be deemed as official.

1.15 AOA FLAG PERSONS: Should the plans require flag persons along the AOA Travel Route, each flag-person shall possess:

A. AOA Driver as stated in Sections 1.05.E.3, 1.05.E.4, and 1.05.E.6.

B. Both AOA Communication Devices previously specified in Section 105.A.

C. A traffic directing LED (Light-Emitting Diode) Light Baton.

D. A broom and dustpan to assist in AOA FOD Control.

1.16 AIRPORT STAGING AREAS: The Contractor shall only stage its vehicles and equipment at State approved areas. No vehicle or equipment shall park within four (4) feet of a security fence. Demarcation of the staging area shall be as follows:

A. Weighted Lighted Barricades shall be placed around the staging area perimeter at a maximum of twenty feet (20') on center.

B. Yellow Barrier Tape with the words "CAUTION DO NOT ENTER" continuously printed on the tape shall be used with barricades to demarcate the staging area perimeter.

1.17 COORDINATION OF CONSTRUCTION ON THE AOA

A. Work on the AOA requires RWY and TWY closures that demand proper notification to numerous agencies responsible for public safety; thus, the Engineer shall receive the following sufficiently accurate information from the Contractor.

B. Maximum height equipment: Equipment height shall be submitted to the State at least thirty-five (35) consecutive calendar days prior to construction. Construction shall not commence until the State receives confirmation from the FAA. All reported heights shall be the maximum heights among all vehicles or equipment used to compete the contracted work, and includes proper notification to the State whenever the reported maximum heights are to be exceeded.

C. Detailed work schedule: See SECTION 01300 – SUBMITTALS.

D. Cancellations: The Contractor shall only cancel work through the Engineer, Airport Operations Manager, or Airport Duty Manager. Whenever a cancellation is not made and the Contractor is not at the assigned AOA Access Point within thirty (30) minutes of the start time; all Contractor closures for the remaining workweek will be cancelled. The Contractor shall reimburse the State six hundred dollars ($600.00) for every work cancellation the State deems unjustified. This reimbursement is to compensate the State for all unnecessary costs related to cancelling existing and coordinating new closures.

1.18 CONSTRUCTION LIGHTING REQUIREMENTS

A. Should any part of the work area lack sufficient sunlight; the Contractor shall provide sufficient artificial lighting to permit the work and inspection to be carried out efficiently, thoroughly, safely, and satisfactorily. Work and inspections shall not be performed with only flashlight and/or vehicle/equipment headlights. All lights shall be positioned so they do not blind aircraft pilots, or FAA-ATCT controllers. All wiring for electrical lights and power shall be properly installed, maintained, securely fastened and kept as far as possible from telephone and signal wires. The Contractor shall submit a lighting plan to the Engineer for all work phases that shall be subject to approval.

1.19 ENVIRONMETAL AND HEALTH REQUIREMENTS

A. The Contractor shall perform the following in accordance with all applicable federal, state, local, and airport rules and regulations related to environmental pollution control, abatement, and fire code.

B. Airport water: Airport water shall not be drawn from a top lacking a reverse pressure principal backflow prevention device. Water valves shall be opened and closed so that water hammers are not produced.

C. Waste Disposal: Waste disposal shall be performed properly. Materials shall not be burned, and construction wastes shall not be disposed into Airport storm water or sewer systems.

D. Restoration: Completely restore, to an acceptable condition; staging area, work area, AOA travel routes, and areas adjacent to the aforementioned.

E. When the Contractor damages and existing Airport perimeter fence, the Contractor shall perform immediate repairs on the fence to prevent inadvertent entry and maintain Airport Security.

F. Vehicle/equipment leaks and material spills: Shall be handled by the following five-step process, and pertains to all fluids other than potable water:
   1. All leaked or spilled fluids shall immediately be kept from entering the Airport storm water and sewer systems.
   2. All fluid leaks or spills shall be respectively fixed or stopped, immediately after ensuring that the fluids are kept out of the Airport storm water and sewer systems.
   3. All areas containing the leaks or spills shall be properly cleaned and restored.
   4. Dispose all wastes per Section 1.08.B.
   5. Submit proper documentation to the State showing that all leaks or spills were properly cleaned and disposed.

G. Erosion control: The Contractor shall provide any essential temporary drainage, dikes, and similar facilities to prevent erosion damage to the site. Run-off shall be controlled to prevent damage to the surrounding areas.

H. Dust control: The Contractor shall positive measures to ensure that dust is properly controlled without chemicals and/or oil treatments.

I. Noise control: Noise control shall be within the levels that comply with all applicable regulations.

1.20 OTHER REQUIREMENTS

A. The Contractor shall also comply with the following requirements should they arise:

B. Any new TSA (Transportation Security Administration) security requirements.

C. Any additional operational safety requirement generated by the FAA.

D. Provide additional lights along AOA travel routes should the Engineer deem additional safety enhancements are needed.

E. Any new environmental and health requirements generated by the EPA (Environmental Protection Agency) or DOH (Department of Health).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

A. All work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project

END OF SECTION

SECTION 02220 - SITE DEMOLITION

PART 1-GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the contract, including General and Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 GENERAL PROVISIONS

The General Instructions to Bidders, the General Conditions of Construction Contracts, and Special Provisions preceding these specifications shall govern this section of the work.

1.03 SUMMARY

Section includes demolition of designated structures and pavement, and removal of debris from site.

1.04 REFERENCES

A. American National Standards Institute:

1. ANSI Al 0.6 - American National Standard for Demolition Operations - Safety Requirements.

B. International Conference of Building Officials:

1. UBC-97 - Uniform Building Code

C. State of Hawaii, Division of Occupational Safety and Health:

1. HIOSH - Chapter 131.1 Demolition.

1.05 DEFINITIONS

A. Remove and Salvage: Items indicated to be removed and salvaged remain property of City.

B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in locations indicated.

C. Preserve Existing: Protect construction indicated to remain against damage and soiling during demolition.

1.06 MATERIAL OWNERSHIP

Demolish Materials: Except for items or material indicated to be reused, salvaged, or otherwise indicated to remain property of City, demolished materials shall become the property of Contractor and shall be removed from the site and legally disposed of.

1.07 SUBMITTALS (None required)

A. ANSI Al0.6 and HIOSH, Chapter 131.1; for demolition and safety requirements.

B. UBC, Section 3303; for protection of pedestrians.

C. Maintain a copy of each document on site.

1.08 REGULATORY REQUIREMENTS

A. Conform to applicable code for demolition of structures, safety of adjacent structures, dust control and disposal.

B. Obtain required permits from authorities.

C. Notify affected utility companies before starting work and comply with their requirements.

D. Do not close or obstruct roadways, sidewalks and hydrants without permits.

E. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.

1.09 PROJECT CONDITIONS

A. Disconnecting Services : Notify authorities owning or controlling affected services before starting operations. Refer to General Conditions and other Specifications sections for additional requirements.

B. Damage to Existing Work due to Demolition Work: Be solely responsible for damage resulting from inadequate, improper, or careless construction procedures, or inadequate shoring, bracing, support or protection.

C. Differing Conditions: Should materials, systems, or conditions be encountered that differ from those indicated, immediately notify Officer-in-Charge, and do not proceed without instructions.

PART 2- PRODUCTS (Not Used)

PART 3- EXECUTION

3.01 EXAMINATION

A. Examine together with Officer-in-Charge existing site at beginning of demolition work to determine extent and nature of work and means, methods , techniques, sequences and procedures to be used.

B. Record existing conditions and possible damages to existing structures affected by this work.

3.02 PREPARATION

A. Provide, erect, and maintain temporary barriers and security devices.

B. Protect existing appurtenances and structures which are not to be demolished.

C. Prevent movement or settlement of adjacent structures.

D. Sawcut pavement prior to demolition.

E. Mark location of utilities.

3.03 HAZARDOUS AND CONTAMINATED MATERIAL

Refer to General Conditions of Construction Contract, Item 4.14.

3.04 DEMOLITION REQUIREMENTS

A. Conduct demolition to minimize interference with adjacent properties and structures.

B. Cease operations immediately if adjacent structures appear to be in danger. Notify authority having jurisdiction. Do not resume operations until directed.

C. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.

D. Obtain written permission from adjacent property owners when demolition equipment will traverse, infringe upon or limit access to their property.

E. Sprinkle Work with water to minimize dust. Provide hoses and water connections for this purpose.

3.05 DEMOLITION

A. Remove designated structures and pavement as required by project condition.

B. Remove structures to a minimum of two (2) feet below finished grade, unless noted otherwise.

3.06 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workers skilled in trades involved. Repair items to be relocated which are damaged or replace damaged items with new undamaged items as approved by Officer-in-Charge.

3.07 DISPOSITION OF MATERIALS

A. Remove demolished materials and debris from site.

B. Do not bum or bury materials on site. Leave site in clean condition.

C. Storage or sale of removed items or materials on-site will not be permitted.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02223 - AGGREGATE BASE COURSE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions, Supplemental Special Provisions, Airports Division Supplement to Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.02 GENERAL REQUIREMENTS

This work shall consist of furnishing, spreading and compacting untreated aggregate base course on the prepared subgrade, or on existing improved surfaces as shown in construction documents and in accordance with the requirements of these specifications.

1.03 STANDARD CODES AND SPECIFICATIONS

"Hawaii Standard Specifications for Road, and Bridge Construction", dated 2005, State of Hawaii, Department of Transportation, Highways Division, and "Standard Plans", dated 2008, State of Hawaii, Department of Transportation, Highways Division. (Paragraphs concerning Measurement and Payment are not applicable to the Project.)

1.04 SUBMITTALS

Submit under provisions of Section 01300 - SUBMITTALS.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Asbestos Prohibition: No asbestos containing materials or equipment shall be used under this section. The Contractor shall ensure that all materials and equipment incorporated in the project are asbestos free.
B. The aggregate base course shall consist of crushed basalt aggregates. Base course consisting of crushed coral aggregates will not be accepted.
C. Materials shall be in accordance with Section 304 Aggregate Base Course of the "Hawaii Standard Specifications", except as amended in the drawings and specifications herewith.
D. Aggregate Base Course: Section 304
E. Aggregate Subbase Course: Section 305
F. Brooming Off: Section 310
G. Permeable Separator: Section 313

PART 3 - EXECUTION

3.01 FOUNDATION PREPARATION

The new compacted subgrade upon which the aggregate base is to be placed shall be prepared as specified under Section 203 - Excavation and Embankment - Subgrade of the referenced Standard Specifications.

3.02 PLACING AND COMPACTING

A Spreading: The base material shall be delivered to the site and spread on the approved prepared foundation by means of vehicles equipped with spreading devices . The material when spread shall be uniform in gradation and free from large pockets of segregated particles. Segregated material shall be remixed until uniform.

B. Material shall not be stockpiled nor dumped in piles but shall be spread longitudinally and only in such quantity to obtain the required thickness. After watering and compacting, the completed base shall conform to the required grade and cross section within the tolerances specified herein below.

C. Lift Thickness: When the specified thickness of the base is 6 inches, the base shall be constructed in one lift. When the specified thickness is greater than 6 inches, the base shall be constructed in two or more equal lifts. The maximum thickness of each lift shall not exceed 6 inches.

D. Compacting: The base course shall be compacted until it does not creep or weave in front of the roller or compacting vehicle. When tested, the base course shall have a minimum density of 95% of its maximum dry density.

E. Filler Material: Wherever necessary, filler material shall be added to the surface. It shall be spread in one or more uniform thin layers. Each layer shall be rolled dry until additional filler cannot be forced into the voids. The surface shall then be sprinkled with water and again thoroughly rolled. All excess filler shall be removed. The sprinkling and rolling shall be continued to secure a thoroughly bonded surface.

F. Multiple Lifts: Where the aggregate base course is constructed in more than one layer, each layer shall be constructed as specified above except that sprinkling will be required only in the top layer. Each layer shall be compacted to a minimum of 95% of its maximum dry density.

3.03 ROLLING

A Shaping: After spreading and blading, the aggregate base course shall be rolled lightly to obtain initial compaction to bring out any irregularities. The surface of the base shall then be carefully shaped and all high and low spots eliminated. When smooth and true, the material shall be rolled until it does not creep or move under the weight of the roller.

B. Rolling Direction: All rolling shall be longitudinal and shall commence at the outer edges. Rolling shall progress from each site toward the center of the road with an overlap of at least one-half of the rear wheel tracks on successive trips. Under no circumstances shall the center of the road be rolled first.

3.04 TOLERANCES

A. The finished surface shall be checked for accuracy with a 10-foot straightedge. If the surface at any point varies more than 1/4 inch from the lower edge of the straight edge laid in any direction, it shall again be shaped and re-rolled. This process shall be repeated until the surface meets the required tolerance.

B. The finished subgrade upon which the final wearing surface is placed shall not vary more than 0.05 foot above or below the theoretical grade.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02301 - EARTHWORK

PART 1 -GENERAL

1.01 RELATED DOCUMENTS

The General Provisions,Special Provisions,and General Requirements of the Specifications apply to the work specified in this section.

1.02 SCOPE OF WORK

This Section describes procedures for the backfilling of existing pits as indicated on the plans.

1.03 REFERENCES

A. The "Standard Specifications for Public Works Construction", September 1986, of the Department of Public Works, as applicable to the City and County of Honolulu, hereafter referred to as the "DPW Standard Specifications", or as herein specified. Paragraphs concerning Measurements and Payments are not applicable to this project.

B. The "Hawaii Standard Specifications for Road and Bridge Construction" (hereafter referred to as the "State DOT Standard Specifications"), date 2005. Paragraphs concerning Measurements and Payments in the Sections are not applicable to this project.

1.04 QUALITY ASSURANCE

A. The Contractor shall retain and pay for the services of a Geotechnical Engineer to perform testing during the backfilling and compaction operations. The Geotechnical Engineer shall be a licensed civil engineer licensed in the state of Hawaii and specializing in geotechnical engineering with at least ten (10) years of licensed experience, of which at least eight (8) years shall have been in direct control or personal supervision of geotechnical engineering work.

B. Source Quality Control: Test import and on-site materials proposed for use to demonstrate that the materials conform to the specified requirements. Tests shall be performed by a qualified independent testing laboratory and paid for by the Contractor.

1.05 SUBMITTALS

A. Submit in accordance with Section 01300 - SUBMITTALS.

1. Test Reports: Submit test reports as directed by the State Project Manager. Contractor shall verify all requirements prior to the start of earthwork operations.

2. Certification of Compaction: An independent geotechnical testing laboratory working under the supervision of a licensed civil engineer licensed in Hawaii shall test and certify all compaction work. Certifications and test results shall be submitted to the State Project Manager within three (3) days of the test.

3. Field Dry Density and Moisture Content Tests: Submit field test data sufficiently in advance of construction so as not to delay work. Furnish a drawing showing test locations, test numbers, and elevations. Submit test results within 3 days of test date.

4. Manufacturer's product literature: Submit manufacturer's product literature including description of material and physical properties and laboratory test data for bedding material, select granular fill, select structural fill, and woven and non-woven fabric, etc. to the State Project Manager for approval at least 15 calendar days prior to construction.

5. Dewatering plan: Describe methods for removing collected water from open trenches and excavations, and diverting surface water or piped flow away from work area and excavations. Describe equipment and procedures for installing and operating the dewatering system.

1.06 CONTRACTOR'S RESPONSIBILITIES

A. It is the responsibility of the Contractor to assess the soil and ground water conditions presented in the plans and specifications and to employ suitable measures to permit construction to proceed.

B. The Licensed Geotechnical Engineer shall promptly notify both the Contractor and the State Project Manager verbally of any failing compaction tests and the results of such tests to the extent the tests show a lack of compliance with specifications. These items shall also be documented by the Licensed Geotechnical Engineer.

C. If field density tests indicate inadequate compaction or moisture content, the Contractor shall moisture condition and recompact and retest until adequate compaction and adequate moisture content is achieved.

D. Relative compaction in these Specifications is defined as the dry density of the compacted material expressed as a percentage of the maximum dry density of the same material based on ASTM D1557 test method.

E. During construction, drainage shall be provided to minimize ponding of water adjacent to or on pavement areas. Ponded areas shall be drained immediately. Any subgrade soil that has become soft due to ponding shall be removed to firm material and replaced with properly compacted structural fill at no additional cost to the State.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

A. General: provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487 or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at the time of compaction.

D. Crushed Rock Fill: In accordance with "State DOT Standard Specifications" 703.04(A) - Coarse Aggregate.

E. Structural Backfill: Structural backfill shall be a granular, generally well-graded material with particles ranging from coarse to fine and classified as GW, GW-GM, GP-GM, SW, SW-SM, or SP-SM according to the USCS. It shall be free of organic matter, vegetation, debris, clayey soils, and particles larger than 3 inches in maximum dimension. It shall be non-expansive with less than 15 percent of fines passing a U.S. No. 200 standard sieve. It shall have a California Bearing Ratio (CBR) value of at least 30, a CBR swell of less than one percent after 4 days of soaking, a liquid limit of 25 percent or less, and a plasticity index of 10 or less.

F. Onsite Fill: Onsite fill maybe used as backfill material if the requirements for satisfactory soil are met. Onsite fill shall be tested in accordance with Section 01562 - Management of Contaminated Media.

PART 3 - EXECUTION

3.01 PREPARATION

A. Protect structures, utilities, pavements, and other facilities from damage caused by earthwork operations.

B. Protect and maintain erosion and sediment controls during earthwork operations.

3.02 SUBGRADE TREATMENT

Prior to the placement of backfill for filling voids resulting from utility or structure removal, the bottom of the excavation shall be compacted to a firm consistency. Any soft

or yielding materials at the bottom of the excavation shall be excavated to firm material and replaced with structural fill material. All excavations shall be backfilled as soon as practical and tested to reduce exposure to weather elements. Contractor shall take advantage of periods of low tides for excavating and dewatering works.

3.03 GRADING

A. Backfill shall be placed in not more than 8-inch thick horizontal loose lifts, moisture conditioned to between optimum and 2 percent wet of optimum moisture content for the material being placed, and compacted to a relative compaction of at least 90 percent.

B. Finish subgrades to required elevations within plus or minus ½ inch.

C. Existing pits to be abandoned shall be backfilled to match the surrounding ground elevation.

3.04 DISPOSAL OF SURPLUS AND WASTE MATERIALS

Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off-site at an approved disposal site.

PART 4 - BASIS OF PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02320 - TRENCHING, BACKFILLING AND COMPACTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions,SpecialProvisions,and General Requirements of the Specifications apply to the work specified in this section.

1.02 SCOPE OF WORK

A. This Section describes procedures for the trenching, backfilling and compaction for installation or removal of utilities.

B. The Contractor shall supply all labor, materials, and equipment necessary for the trenching, backfilling, and compaction for proposed utility installation and utility removal as indicated on the plans and in accordance with these specifications, and all applicable Federal, State, and local regulations and latest amendments.

1.03 REFERENCES

A. The "Hawaii Standard Specifications for Road and Bridge Construction", 2005, hereafter referred to as the "DOT Standard Specifications", or as herein specified. Paragraphs concerning Measurements and Payments in the Sections are not applicable to this project.

B. The "Standard Specifications for Public Works Construction", September 1986, of the Department of Public Works, as applicable to the City and County of Honolulu, hereafter referred to as the "DPW Standard Specifications", or as herein specified. Paragraphs concerning Measurements and Payments are not applicable to this project.

1.04 QUALITY ASSURANCE

A. The Contractor shall retain and pay for the services of a Geotechnical Engineer to perform testing during the backfilling and compaction operations. The Geotechnical Engineer shall be a licensed civil engineer licensed in the state of Hawaii and specializing in geotechnical engineering with at least ten (10) years of licensed experience, of which at least eight (8) years shall have been in direct control or personal supervision of geotechnical engineering work.

B. Source Quality Control: Test import and on-site materials proposed for use to demonstrate that the materials conform to the specified requirements. Tests shall be performed by a qualified independent testing laboratory and paid for by the Contractor.

1.05 SUBMITTALS

A. Submit in accordance with Section 01300 - SUBMITTALS.

1. Test Reports: Submit test reports as directed by the DOTA-Engineer. Contractor shall verify all requirements prior to the start of earthwork operations.

2. Certification of Compaction: An independent geotechnical testing laboratory working under the supervision of a licensed civil engineer licensed in Hawaii shall test and certify all compaction work. Certifications and test results shall be submitted to the DOTA-Engineer within three (3) days of the test.

3. Field Dry Density and Moisture Content Tests: Submit field test data sufficiently in advance of construction so as not to delay work. Furnish a drawing showing test locations, test numbers, and elevations. Submit test results within 3 days of test date.

4. Manufacturer's product literature: Submit manufacturer's product literature including description of material and physical properties and laboratory test data for bedding material, select granular fill, select structural fill, and woven and non-woven fabric, etc. to the DOTA-Engineer for approval at least 15 calendar days prior to construction.

5. Dewatering plan: Describe methods for removing collected water from open trenches and excavations, and diverting surface water or piped flow away from work area and excavations. Describe equipment and procedures for installing and operating the dewatering system.

1.06 PERMITS

A. Obtain necessary permits required from applicable agencies. All permit fees will be considered incidental to the work and a separate payment shall not be made.

1.07 CONTRACTOR'S RESPONSIBIITIES

A. It is the responsibility of the Contractor to assess the soil and ground water conditions presented in the plans and specifications and to employ suitable measures to permit construction to proceed.

B. The Licensed Geotechnical Engineer shall promptly notify both the Contractor and the DOTA-Engineer verbally of any failing compaction tests and the results of such tests to the extent the tests show a lack of compliance with specifications. These items shall also be documented by the Licensed Geotechnical Engineer.

C. If field density tests indicate inadequate compaction or moisture content, the Contractor shall moisture condition and recompact and retest until adequate compaction and adequate moisture content is achieved.

D. Relative compaction in these Specifications is defined as the dry density of the compacted material expressed as a percentage of the maximum dry density of the same material based on ASTM D1557 test method.

E. During construction, drainage shall be provided to minimize ponding of water adjacent to or on pavement areas. Ponded areas shall be drained immediately. Any subgrade soil that has become soft due to ponding shall be removed to firm material and replaced with properly compacted structural fill at no additional cost to the State.

F. Contractor shall provide an archeological monitor and comply with the requirements of the archaeological monitoring, if required by the State Historic Preservation Division (SHPD)

G. During excavation, if any archaeological significant items, such as artifacts, shell, bone, or charcoal deposits are found, stop work and notify the Engineer. The Owner shall pay for any investigation.

H. The Contractor shall serve proper notices and consult with the Engineer regarding any temporary disconnections of electrical or other utility lines in the area which may interfere with the removal work, and all such lines where necessary shall be properly disconnected before commencing with the work.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Bedding Material

1. Crushed rock bedding material shall consist of a clean granular basaltic gravel conforming to ASTM D448 No. 67 (#3B Fine) size aggregate as specified in the DPW Standard Specifications. Bedding material shall be free from debris, refuse, organic material, or other material which, in the opinion of the DOTA-Engineer, is unsuitable. All material to be used as bedding material shall be approved by the DOTA-Engineer.

B. General Backfill and Fill Material

1. Backfill and fill material shall be in accordance with Section 02301 - EARTHWORK. The Contractor shall obtain the approval of the DOTA-Engineer for all backfill material.

PART 3 - EXECUTION

3.01 GENERAL

A. All trenching shall be performed and supported in accordance with applicable state, federal, and local safety regulations, including current OSHA excavation and trench safety standards. The contractor shall retain qualified structural and geotechnical engineers and registered in the State of Hawaii to design the excavation support and dewatering systems, if required.

B. The contractor shall comply with all applicable safety codes and regulations to protect their workers and surrounding properties where necessary. The contractor's excavation shoring and sheeting shall be designed to protect against excavation instability , boiling, blowout, and/or heave of the excavation bottoms.

C. Provide for the collection and disposal of surface water encountered during construction. Surface water shall be directed away from excavations and construction areas to prevent erosion and undermining of foundations and softening of subgrade. Completely drain construction site during periods of construction to keep soil materials sufficiently dry.

D. Excavate to dimensions and depths indicated on the plans. Notify the DOTA-Engineer immediately in writing in the event that it becomes necessary to remove material to a depth greater than indicated. Refill excavations cut below the depths indicated with structural fill and compact as specified herein. Excavate soil disturbed or weakened by construction operations or soils softened from exposure to weather at no additional cost to the State. Refill with structural fill and compact as specified herein.

E. Unauthorized excavations carried below specified levels shall be filled with structural fill to the proper level as directed by the DOTA-Engineer at the Contractor's expense.

F. The trench width shall be kept to a minimum to reduce the potential for ground settlements. The trench payment width shall be as specified on the Plans.

3.02 SURPLUS MATERIAL

Unless otherwise specified in the Plans or these Specifications, or ordered by the DOTA-Engineer, surplus excavated material shall become the Contractor's property and shall be removed from the work site and disposed of at no additional cost to the State.

3.03 SITE PREPARATION

A. Prior to trenching within previously developed areas, the areas along the trenching limits shall be prepared by saw-cutting and removing the existing pavements, curbs, and gutters. All old pavements, curbs, and gutters shall be demolished and removed off-site by the Contractor at his own expense in compliance with all regulatory agency requirements.

B. The Contractor shall verify the location and elevation of any existing utilities indicated prior to starting construction. The Contractor shall scan the project site with electromagnetic and sonic equipment and mark the surface of the ground where existing underground utilities are discovered.

C. Any existing underground utilities and structures that may interfere with new installations shall be immediately brought to the attention of the DOTA-Engineer. At the discretion of the DOTA-Engineer, the Contractor shall remove and/or relocate existing utilities, if still in use. The remaining portions of any lines to be abandoned and left in-place shall be properly cut and plugged.

3.04 SUBGRADE TREATMENT

Prior to the placement of bedding for new utilities or prior to placement of backfill for removed utilities, the bottom of the utility trenches shall be compacted to a firm consistency. Any soft or yielding materials at the bottom of the trenches shall be excavated to firm material and replaced with additional bedding material. All trenches shall be backfilled as soon as practical after the utility lines have been properly installed and tested to reduce exposure of the trench to weather elements. Contractor shall take advantage of periods of low tides for trenching and dewatering works.

3.05 BACKFILL, PLACEMENT AND COMPACTION

A. For new utility installations:

1. Place bedding material around the pipe to the required thicknesses as indicated on the Plans.

2. Pipe bedding material shall be placed and tamped , supplemented by hand shoveling , to provide full contact with the entire periphery of the pipes. The bedding material shall be placed in not more than 8-inch thick loose lifts and compacted with vibratory equipment to a dense consistency as evidenced by little to no settlement of the gravel under repeated passes with the compaction equipment with the vibrator turned on, but not less than 6 passes per lift. Care shall be taken to protect the pipes from damage during the backfilling operations.

3. All bedding material for utilities shall be completely wrapped in a non-woven geotextile filter fabric. The fabric shall be overlapped at least 12 inches as shown in the Plans.

4. Jetting of the bedding and trenching backfill shall not be allowed.

5. The trench backfill above the bedding material shall be placed in not more than 10- inch thick loose lifts , moisture conditioned to between optimum moisture content and 3 percent wet of the optimum moisture content, and compacted to a relative compaction of at least 90 percent.

6. The top at least 24 inches of the trench backfill below pavements shall consist of base course and structural backfill. Trench backfill placed within 24 inches of the pavements shall be compacted to a relative compaction of at least 95 percent for structural backfill, base course , and subbase.

B. For utility and structure removal:

1. Backfill material shall be placed in no more than 10-inch thick loose lifts, moisture conditioned to between optimum moisture content, and compacted to a relative compaction of at least 90 percent.

2. The top 6 inches of the backfill shall consist of crushed rock fill material m accordance with Section 02301 - EARTHWORK.

3.06 FIELD QUALITY CONTROL

A. Trenches shall not be backfilled until approved by the DOTA-Engineer.

B. Where compaction and minimum relative compaction are indicated, test trench backfill for moisture-density relations in accordance with ASTM D 1557. Perform at least one moisture-density relations test for each material used and provide additional tests for each change of source. Perform one field density and moisture content test in accordance with ASTM D 1556 or ASTM D 6938 per 150 feet or fraction thereof of trench backfill in each lift but not less than one test per lift. Furnish a plan showing test location, test number, elevation, and test results to the DOTA-Engineer within 3 days of the test date. If field density tests indicate inadequate compaction, the Contractor shall re-compact and retest until adequate compaction is achieved. Verify that test results conform to the specified requirements, and that sufficient tests are performed.

C. Any work determined to be not in compliance shall be removed and properly replaced at no additional cost to the State.

PART 4-BASIS OF PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02410 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the contract, including General and Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 DESCRIPTION OF WORK

A Extent of selective demolition work is indicated on the drawings. Selective demolition work includes, but is not limited to, selective demolition, removal, and subsequent disposal of all materials indicated or required to be removed.

B. It shall be the responsibility of the Contractor to examine the project site and determine for himself the existing conditions.

C. Execute all work in an orderly and careful manner with due consideration for all items of work to remain.

D. Obvious conditions which exist on the site shall be accepted as part of the work, even though they may not be clearly indicated on the Drawings and/or described herein, or may vary therefrom.

E. All debris of any kind accumulated from the work of this section shall be disposed off the site.

F. Protect all building interior at all times from damage during construction work. Coordinate with exterior work to provide temporary cover, weather protection, waterproofing, etc. as required over unfinished work area at the end of each day and during rain to prevent damage.

G. Schedule construction work in sections or phases to be able to protect exposed area from rain damage.

H. Protect all existing conditions surrounding the work area, including, but not limited to, walkways, parking, landscaping, etc. at all times from damage.

I. Any damage as a result of demolition work and any neglect to provide protection shall be fixed new at Contractors own expense.

J. Demolish and remove materials as indicated on the drawings and as required to perform work under this project.

K. Remove/relocate existing furniture, equipment, pictures, signage, blinds, etc. as required to perform demolition work. Return all items to its original location, unless otherwise indicated or directed by the State Project Manager, after completion of work.

L. Permits, Notice, Etc.:

1. The Contractor shall procure and pay for all necessary permits or certificates that may be required in connection with this work.

2. The Contractor shall serve proper notice and consult with the State Project Manager regarding any temporary disconnections of electrical or other utility lines in the area which may interfere with the removal work, and all such lines where necessary shall be properly disconnected or relocated before commencing with the work.

1.03 SUBMITTALS

A. Submit in accordance with Section 01300 - SUBMITTALS.

B. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work for review prior to commencement of work. Include coordination for temporary shut-off and continuation of utility services as required, together with details for dust and noise control protection.

1.04 JOB CONDITIONS

A. Condition of Structure: The State assumes no responsibility for actual condition of items or portions of structure to be demolished.

B. Existing Conditions: Conditions existing at time of commencement of contract will be maintained by the State insofar as practicable.

C. Occupied Spaces: Do not interfere with use of adjacent occupied spaces. Maintain free and safe passage to and from occupied spaces.

D. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor, may be removed from structure as work progresses. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.

E. Explosives: Use of explosives will not be permitted.

F. Utility Services: The existence of exposed and concealed utility lines other than those shown on the drawings is not definitely known. Should any other utility lines be encountered, the Contractor shall immediately notify the State Project Manager and follow his direction as to procedure. Maintain existing utilities indicated to remain, keep

in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied building or facilities, except when authorized in writing by the State Project Manager. Outages and interruptions must be accepted in advance by the State Project Manager. Submit written notice of outages and interruptions not less than fourteen days in advance of intended outage. Report damage, however slight, immediately. Do not repair or reconstruct any pipe, conduit, or installation without authorization, except perform emergency repairs immediately.

G. Dust Control:

1. Keep dust within acceptable levels at all times, including nonworking hours, weekends and holidays, in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 60.1, Air Pollution Control, latest edition as amended.

2. Mechanical dry sweeping not permitted. Vacuuming, wet mopping, approved limited dry hand, wet or damp sweeping is acceptable.

3. During loading operations, water down debris and waste materials to allay dust.

4. The method of dust control and all costs incurred thereof shall be the responsibility of the Contractor.

H. Noise Control:

1. Noise shall be kept within acceptable levels at all times in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 46 - Community Noise Control, latest edition as amended. The Contractor shall obtain and pay for community noise permit from the State Department of Health when the construction equipment or other devices emit noise at level exceeding the allowable limits.

2. All internal combustion engine powered equipment shall have mufflers to minimize noise and shall be properly maintained to reduce noise to acceptable levels.

3. Conform to noise control related to events at the project site or adjoining facilities as directed by the State Project Manager.

I. Other Controls:

1. Wherever trucks and/or vehicles leave the site and enter surrounding paved streets, the Contractor shall prevent any material from being carried onto the pavement. Waste water shall not be discharged into existing streams, waterways, or drainage systems such as gutter and catch basins unless treated to comply with Department of Health pollution regulations.

2. Trucks hauling materials shall be covered as required by PUC regulation. Trucks hauling fine materials shall be covered.

J. Existing Conditions: The Contractor shall be responsible for protection of existing conditions for the entire duration of the project. Damage to the existing conditions as a result of the work of this section shall be corrected at Contractor's own expense.

PART 2-PRODUCTS (Not Used)

PART 3-EXECUTION

3.01 INSPECTION

Prior to commencement of selective demolition work, inspect areas in which work will be performed. Inventory existing conditions of structure surfaces, equipment or surrounding properties which could be misconstrued as damage resulting from selective demolition work; photograph, video or otherwise document and file with the State Project Manager prior to starting work.

3.02 SELECTIVE DEMOLITION

A. Perform selective demolition work, including all improvements indicated on the drawings, in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations.

B. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the State Project Manager in written, accurate detail. Pending receipt of directive from the State Project Manager rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.03 PROTECTIONS

A. Provide temporary barricades, temporary walkways with ADA ramps, railings, etc., and other forms of protection as required to protect the general public from injury due to selective demolition work.

1. Erect temporary barricades as required, to prevent people from entering into project area to the extent as accepted by the State Project Manager. The extent of barricade may be adjusted as necessary with the acceptance of the State Project Manager. This work shall be accomplished at Contractor's own expense.

2. When necessary, the Contractor shall provide, erect and maintain lights, barriers, etc., as required by traffic and safety regulations with special attention to protection oflife.

3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or elements to be removed, and adjacent facilities or work to remain.

4. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

5. Life safety procedures and provisions shall be in conformance with all applicable Federal, State, and City and County regulations, including OSHA.

6. Remove protections at completion.of work.

3.04 DAMAGES

Promptly repair damages caused to adjacent facilities by demolition work at Contractor's own expense.

3.05 TRAFFIC

A. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from the State Project Manager. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations, as directed by the State Project Manager.

B. Buildings and facilities which are essential for public use for the construction period shall be provided with safe pedestrian passageways around the construction site as per ADAAG 201.3, 206, and ADAAG Chapter 4.

3.06 DISPOSAL OF DEMOLISHED MATERIALS

Remove debris, rubbish, and other materials resulting from demolition operations from building site daily. Transport and legally dispose of materials off site. Burning of removed materials is not permitted on project site.

3.07 HAZARDOUS MATERIALS

If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

3.08 CLEAN-UP AND REPAIR

A Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.

B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

C. Where exposed existing surfaces and/or materials are damaged or left unfinished by the removal work, the resultant exposed unfinished surfaces shall be repaired, patched, filled or finished to match the adjoining existing surfaces. Where the method of repair work is not indicated or specified, the Contractor shall perform the repair work in accordance with the best recognized workmanlike procedure.

PART 4-MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02513 - ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions, Supplemental Special Provisions, Airports Division Supplement to Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.02 SCOPE OF WORK

Furnish all materials, equipment, tools, labor and any incidental work necessary to install the asphaltic concrete paving for roads and other paved areas to the lines and grades as indicated on the Plans and specified herein in place and complete.

1.02 REFERENCE SPECIFICATIONS

"Hawaii Standard Specifications for Road, and Bridge Construction", dated 2005, State of Hawaii, Department of Transportation, Highways Division, and "Standard Plans", dated 2008, State of Hawaii, Department of Transportation, Highways Division. (Paragraphs concerning Measurement and Payment are not applicable to the Project.)

1.03 SUBMITTALS

A. Submit in accordance with Section 01300 - SUBMITTALS.

B. Product Data: Submit manufacturer's technical product data substantiating that the products comply with requirements.

PART 2 - PRODUCTS

2.01 MATERIALS

Materials for asphalt concrete paving shall meet the requirements specified in the following sections of the "Hawaii Standard Specifications" as amended.

1. Section 401 - Hot Mix Asphalt Pavement

2. Section 407 -Tack Coat

PART 3 -EXECUTION

3.01 INSTALLATION

A. All work shall be done as shown on the Plans.

B. Subgrade shall be shaped to drain and be compacted to a minimum 95% compaction as determined by ASTM D1557-91 for a minimum depth of 6 inches or as indicated on the Plans.

C. Base Course shall be shaped to drain and be compacted to a minimum 95% compaction determined by ASTM Dl 557-91 for a minimum depth of 6 inches or as indicated on the Plans.

D. Asphalt Concrete shall be Mix IV. Refer to the "Hawaii Standard Specifications" Section 401. Pavement shall be sloped to prevent ponding.

E. All work shall be done conforming to Standard Specifications, in conformance with the applicable sections and noted hereinbefore.

3.02 REPAIR OF EXISTING ASPHALT CONCRETE PAVEMENT

Any existing asphalt concrete pavements that have been damaged by construction activities shall be repaired to the original condition and to the satisfaction of the State Project Manager.

PART 4- MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02570 - ASPHALTIC CONCRETE PAVEMENT RESTORATION

PART I - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the Contract, including General and Special Provisions and General Provisions of the Specifications apply to the work specified in this Section.

1.02 SCOPE OF WORK

This section includes work required for the restoration of disturbed asphalt concrete pavement.

1.03 REFERENCES

All work shall be in accordance with the "Hawaii Standard Specifications for Road and Bridge Construction" (hereafter referred to as the "State DOT Standard Specifications"). date 2005. Paragraphs concerning Measurements and Payments in the Sections are not applicable to this project.

1.04 SUBMITTALS

Submit in accordance with Section 01300 - SUBMITTALS.

1. Submit eight (8) copies of the job-mix formula, affidavits from the manufacturers or suppliers of all materials proposed to be furnished and installed under this section. certify that such material delivered to the project conforms to the requirements of these specifications and provide the Material Product Data and Material Safety Data for the materials proposed for use for the State Project Manager's approval.

2. Test Reports: Submit test reports as directed by the State Project Manager. Contractor shall verify all requirements prior to the start of earthwork operations.

3. Certification of Compaction: An independent geotechnical testing laboratory working under the supervision of a licensed civil engineer licensed in Hawaii shall test and certify all compaction work. Certifications and test results shall be submitted to the State Project Manager within three (3) days of the test.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Hot Mix Asphalt Pavement shall use State Mix IV and be in accordance with Section 401 of the "State DOT Standard Specifications".

B. Tack Coat shall conform to AASHTO M 140, Type SS-1, SS-lh, CSS-1, or CSS-lh, emulsified asphalt.

PART 3 - EXECUTION

3.01 INSTALLATION

A. The Contractor shall restore all damaged asphaltic concrete pavements to match or exceed the existing pavement in thickness and quality.

B. The Contractor shall stake out the areas to be paved, using grade stakes on which the final finish elevations, base course and suhgrade elevations are clearly marked.

C. For trench restoration, backfill trenches in accordance with Section 02320 - "Trenching, Backfilling and Compaction".

D. After placement and compaction of backfill, place base course in horizontal lifts not to exceed 6 inches in loose thickness. The base course shall be compacted to a minimum 95 percent compaction as determined by ASTM D 1557.

E. Place asphalt pavement in accordance with Section 401 of the "State DOT Standard Specifications".

F. Where new asphalt pavement abuts existing asphalt pavement, provide smooth riding connection as indicated on the Plans.

3.02 TESTING

A. Compaction testing of base course shall be performed by an independent testing agency retained by the Contractor and all test results submitted to the State Project Manager for approval.

B. All costs for testing shall be borne by the Contractor. Testing shall be made throughout the area for each compacted layer. All test results shall be approved before the Contractor can proceed with placing of base course or hot mix asphalt. Testing shall be in accordance with ASTM 01557.

C. Compaction tests shall be performed for each base course layer. One (1) compaction test shall be taken per lift per 3,500 square feet or fraction thereof at each location where pavement is to be installed. The locations of testing shall be determined by the State Project Manager.

D. Obtaining and testing of pavement samples shall be done m accordance with Section 401 of the "State DOT Standard Specifications".

3.03 FINAL INSPECTION

A. At the time of final inspection or the work performed under the Contract, the work covered by this section shall be complete in every respect and operating as designed. All surplus materials of every character, resulting from the work of this section, shall have been removed. Any defects discovered in the work, subsequent to this inspection, shall be corrected prior to final acceptance.

B. Any existing asphaltic concrete pavements or surrounding surfaces that have been damaged by construction activities shall be repaired to the original condition and to the satisfaction of the Engineer at no cost to the State.

PART 4- BASIS OF PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

SECTION 02650 – UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK CLOSURE

PART I – GENERAL

1.01 SUMMARY

The work consists of closure in place of one empty 12,000-gallon capacity double-walled fiberglass reinforced plastic underground storage tank (UST), associated fuel piping, and ancillary equipment. It also includes the demolition and removal of one empty 300-gallon capacity Jet A above ground storage tank (AST) associated fuel piping, and ancillary equipment.

1.02 RELATED DOCUMENTS

The GENERAL PROVISIONS of the Contract, including SPECIAL PROVISIONS and General Requirements of the Specifications, apply to the work specified in this section.

1.03 REFERENCES

A. All work shall be performed in accordance with applicable federal, state, and county regulations, standards, and guidance including but not limited to the following. It is the Contractor's responsibility to ensure that all work is conducted in accordance with applicable federal, state, and county regulations, standards, and guidance.

B. Hawaii Administrative Rules (HAR)

1. HAR 11-280.1, USTs.

2. HAR 12, Subtitle 8, Hawaii Occupational Safety and Health.

C. State of Hawaii Department of Health (DOH)

1. DOH Solid and Hazardous Waste Branch UST Release Response Guidance.

2. DOH Hazard Evaluation and Emergency Response (HEER) Office Technical Guidance Manual (TGM) for the Implementation of the Hawaii State Contingency Plan, Interim Final-November 12, 2008.

3. DOH HEER Office Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material, October 2017.

D. National Fire Protection Association (NFPA)

1. NFPA 30, Flammable and Combustible Liquids Code.

2. NFPA 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair.

E. Code of Federal Regulations (CFR)

1. 29 CFR 1926, Safety and Health Regulations for Construction.

F. American Petroleum Institute (API)

1. API Closure of Underground Petroleum Storage Tanks, API Recommended Practice 1604, Fourth Edition.

2. API Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks, API Standard 2015, Eight Edition.

1.04 QUALIFICATIONS AND DOCUMENTATION

A. Contractor shall have at least five years of experience removing and closing USTs in accordance with HAR 11-280.1.

B. Contractor shall obtain the services of a Qualified Environmental Professional (QEP). The QEP shall have at least five years of experience performing UST closure assessments in accordance with HAR 11-280.1.

1.05 SUBMITTALS

A. Preconstruction Submittals: Before start of work, submit to Engineer the following documents for review and acceptance. Do not begin work until these submittals are returned with the Engineer's approval indicating that the information contained in the submittal is concurred by the Engineer.

1. DOH UST Closure Notifications: The Contractor shall submit a completed DOH Notice of Intent (NOI) to Close UST form to the Engineer for approval prior to submittal to the DOH. The Contractor is required to submit the NOI to the DOH 30 days prior to the scheduled UST closure date, as described in HAR 11-280.1. The Contractor shall verbally confirm the UST closure date with the DOH seven days prior to the scheduled closure date.

2. Hawaii Department, County of Hawaii (HFD) UST Closure Notification: The Contractor shall submit the HFD Closure Notification to the Engineer for approval prior to submittal to the HFD. The Contractor is required to submit the HFD UST Closure Notification to the HFD 30 days prior to the scheduled UST closure date.

3. Work Plan and Sampling/Analysis Plan (WP/SAP): The Contractor's QEP shall prepare a WP/SAP. The WP/SAP shall be submitted to the Engineer within 15 days of Notice to Proceed. At a minimum the Work Plan and Sampling/Analysis Plan shall include the following:

    a. Site description.

    b. Physical settings (including regional site geology and hydrology).

    c. Contractor name, contact information, and qualifications.

    d. QEP name, contact information, and qualifications.

    e. Project organization and contact list.

    f. Laboratory name and contact information.

    g. Project schedule.

    h. Description of UST system.

    i. Approvals and notifications.

    j. UST system removal procedures.

    k. Excavation and material handling plan.

    l. Stockpiling procedures and requirements.

    m. UST system cleaning procedures.

    n. Field screening procedures.

    o. Tank contents, soil, and stockpile sampling and analysis plan
    .
    p. Project action levels.

q. Data quality assurance and quality control plan.

r. Decontamination procedures.

s. Waste management plan.

t. Field documentation and reporting procedures.

u. Site layout map.

4. Site-Specific Health and Safety Plan (SSHP): The SSHP shall be submitted to the Engineer within 15 days of Notice to Proceed. Incorporate the requirements of 29 CFR 1926. At a minimum, the SSHP shall include the following:

a. Health and safety organization, including discussions of distribution of functions and responsibilities.

b. Organization and components of the SSHP.

c. Physical and chemical site hazard identification.

d. Basic toxicology and toxicity information.

e. Discission of the exclusion and contamination reduction zone.

f. Personal protective equipment.

g. Air quality monitoring.

h. Personnel exposure guidelines.

i. Decontamination procedures.

j. Basic first aid review.

k. Emergency contact list, response, and contingency plan.

l. Site entry and exit procedures.

B. Closeout Submittals

1. UST Closure Assessment Report: The Contractor's QEP shall prepare a UST Closure Assessment Report. The report shall be submitted to the Engineer for approval prior to submittal to the

DOH. The Contractor is required to submit the DOH UST Closure Assessment Report to the DOH within 45 days of the UST removal. At a minimum, the UST Closure Assessment Report shall include the following:

a. Executive summary.

b. Site description.

c. Physical settings (including regional site geology and hydrology).

d. Description of UST system.

e. Description of any deviations from the WP/SAP and rationale.

f. Description of UST system excavation.

g. Description of UST cleaning and disposal.

h. Field measurements.

i. Sampling procedures and analytical results.

j. Summary table of analytical results compared to project action levels.

k. Data quality assurance and quality control evaluation.

l. Description and documentation of waste disposal.

m. Conclusions and Recommendations.

n. Maps (including site location, site layout, sample location map, cross-section of UST excavation).

o. Photographs of UST removal and closure activities.

p. Laboratory reports and chain-of-custody forms.

q. Waste disposal manifests.

PART 2 – PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. The Contractor shall provide the materials and equipment required to perform this work.

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

A. The QEP or a representative of the QEP shall be onsite at all times during UST and AST system closure and removal work.

B. Submit UST closure notification to Engineer, DOH, and HFD.

C. Clean and vent interior of UST.

D. Demolish and remove existing UST. Remove existing containment sump, hand holes, covers, all exposed fuel supply, return and tank vent piping, and all tank monitory system sensors and appurtenances.

E. Demolish and remove existing AST system. Remove existing tank vent piping, and all tank monitory system sensors and appurtenances.

F. Demolish and remove existing underground fuel supply, return and vent piping.

G. Backfill with Controlled Low Strength Material (CLSM).

H. Perform UST vapor closure assessment, collect soil vapor samples, and analyze soil samples in accordance with DOH UST closure requirements, standards, and TGM.

I. Dispose of UST tank cleaning rinsate, piping, and ancillary equipment in accordance with applicable federal, state, and county regulations.

J. Dispose of excavated spoils (e.g., excavated pea gravel and soil).

K. Excavated spoils that will be disposed of shall be characterized and disposed of in accordance with applicable federal, state, county, and disposal facility regulations, standards, and guidelines.

L. Prepare a UST closure assessment report in accordance with DOH regulations.

M. Should a suspected release or confirmed release be identified from the UST and AST system, the Engineer shall be notified within 24 hours of the discovery.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

DIVISION 3 - CONCRETE

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART I - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the Contract, including General and Special Provisions and General Provisions of the Specifications apply to the work specified in this Section.

1.02 SCOPE OF WORK

Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

1.03 DEFINITIONS

Cementitious Materials: Portland cement with fly ash.

1.04 SUBMITTALS

A. Submit in accordance with Section 01300 - SUBMITTALS.

B. Product Data:

1. Reinforcing steel - Certified mill test results or laboratory test results. Indicate bar size, yield strength, ultimate tensile strength, elongation and bend test. Provide chemical composition for rebars.

C. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mix water to be withheld for later addition at Project site.

D. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:

I. Form-release agents.

2. Steel reinforcement and reinforcement accessories.

3. Curing materials.

4. Joint-filler strips.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

B. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field- Testing Technician, Grade 1, according to ACI CP- 1 or an equivalent certification program.

C. ACI Publications: Comply with the following, unless more stringent provisions are indicated.

1. ACI 30 I, "Specification for Structural Concrete."

2. ACI 347R, "Guide to Formwork for Concrete"

1.06 DELIVERY, STORAGE. AND HANDLING

Deliver and store materials in a cool, dry area to protect from damage.

PART 2 - PRODUCTS

2.01 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Comply with ACT 347R. Provide new or good finish form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Plywood, metal, or other ACI 347R approved panel materials.

2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS l, and as follows:

3. High-density overlay, Class I, or better.

4. Medium-density overlay, Class l, or better, mill-release agent treated, and edge sealed.

5. Structural I, B-B, or better, mill oiled, and edge sealed.

6. B-B (Concrete Form), Class I, or better, mill oiled, and edge sealed.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces. Form oils or waxes shall not be used for concrete surfaces intended to be painted.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

D. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of the exposed concrete surface.

2. Furnish ties that, when removed, will leave holes not larger than l-1/2 inches in diameter in concrete surface.

2.02 STEEL REINFORCEMENT

Reinforcing Mesh: Smooth wire with size and spacing as indicated on the Plans.

2.03 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place that will not puncture the vapor retarder. Use plastic straps or brightly colored tie wires to secure reinforcing. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire. Plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:

l. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class l plastic protected or CRSI Class 2 stainless-steel bar supports. Refer to paragraph 3.06 for chair support spacing.

B. Joint Dowel Bars: Plain-steel bars, ASTM A 615/ A 6 l 5M, Grade 60. Cut bars true to length with ends square and free of burrs.

2.04 CONCRETE MATERIALS

A. Portland Cement: ASTM C I 50, Type I or Type II.

B. Pozzolans

1. Fly Ash: ASTM C 6 I 8, Class C or F.

C. Normal-Weight Aggregate: ASTM C 33, uniformly graded, and as follows:

1. Class: Moderate weathering region, but not less than 3M.

2. Aggregate Size: No. 67 (3/4 inch to No. 4).

D. Size of Coarse Aggregate: Except when otherwise specified or permitted, maximum size of coarse aggregate shall not exceed three-fourths of the minimum clear spacing between reinforcing bars (or bundled bars), one-fifth of the narrowest dimension between the sides of forms. or one-third of the thickness of slabs or toppings.

E. Water: Potable and complying with ASTM C 94.

2.05 ADMIXTURES

A. General: Admixtures certified by manufacturers to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.

B. Water-Reducing Admixture: ASTM C 494, Type A.

C. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.

D. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.

E. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.06 CURING MATERIAL

Clear, Solvent-Borne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

2.07 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D 175 l, asphalt-saturated cellulosic fiber.

B. Epoxy Joint Filler: Two-component, semirigid, 100 percent solids epoxy resm with a Shore A hardness of 80 per ASTM D 2240.

2.08 CONCRETE MIXES

A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test data bases, as follows:

1. Proportion normal-weight concrete according to ACI 21 1.1 and ACI 30 I.

B. Slab-on-Grade: Proportion normal-weight concrete mix as follows:

1. Compressive Strength (28 Days): 4,000 psi.

C. Concrete Sidewalk, Curbs, and Gutters: Proportions normal-weight concrete mix as follows:

l. Compressive Strength (28 Days): 3,000 psi.

D. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:

I. Fly Ash: 25 percent.

E. Maximum Water-Cementitious Materials Ratio: 0.45.

F. Do not add air entrainment to concrete. Do not allow entrapped air content to exceed 3 percent.

G. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.

2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use water-reducing admixture in pumped concrete and concrete with a water-cementitious materials ratio below 0.50.

2.09 FABRICATING REINFORCEMENT

Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.10 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and ASTM C 1116 and furnish batch ticket information. Batch ticket information shall include design mix reference, water that can be added at the jobsite, and admixtures. For transit mixing, complete not less than 70 revolutions of the drum at the manufacturers rated mixing speed. Discharge concrete into its final position within 90 minutes after

introduction of batch water to the cement. lf a retarder admixture is use d, the discharge time limit of 90 minutes may be increased by the time specified for retardation by the admixture manufacturer or the concrete supplier. Mix concrete a minimum of one minute at mixing speed immediately prior to discharge.

B. Project-Site Mixing: Measure, batch, and mix concrete materials according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or less, continue mixing at least one and one-half minutes , but not more than five minutes after all ingredients are in m ixe r, before any part of batch is released.

2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional l cu. ycl. (0.76 cu. m.)

3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of concrete placement in structure.

4. Hand mixed concrete will not be allowed, unless otherwise approved.

PART 3- EXECUTION

3.01 FORMWORK

A. Design , erect, shore, brace , and maintain formwork, according to ACI 301, to support vertical , lateral, static, and dynamic loads, and construction loads that might be applied until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:

1. Class A, l/8 inch.

D. Construct forms to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces . Provide crush or wrecking plates where stripping may damage cast concrete surfaces.

I. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces.

G. Do not chamfer exterior corners and edges of permanently exposed concrete.

H. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust. Dirt and other debris just before placing concrete.

I. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

J. Coat contact surfaces of forms with form release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 EMBEDDED ITEMS

Locate electrical conduits and fittings so that the strength of the concrete member is not impaired. "Conduits" include pipes, ducts, and electrical conduits.

3.03 REMOVING AND REUSING FORMS

A. General: Formwork that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operation s are maintained. The 24-hour period may be reduced to 12 hours in compliance with ACI 347R with prior approval from the State Project Manager.

B. Leave formwork that supports weight of concrete in place until concrete has achieved the following:

1. 28-day design compressive strength.

3.04 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, and other foreign materials. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

C. Dowel Joints: Install dowel sleeves and dowels or dowel bar and support assemblies at joints where indicated.

l. Use dowel sleeves or lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.05 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork and reinforcement is complete and that required inspections have been performed. Provide one day notification to the State Project Manager for each scheduled pour. State Project Manager may reject concrete pour if insufficient notification is given.

B. Do not acid water to concrete during delivery, at Project site, or during placement, unless approved by State Project Manager.

C. Convey concrete from mixer to the place of final deposit rapidly by methods that prevent segregation or loss of ingredients and will ensure the required quality of concrete. Use conveying equipment, conveyors, hoppers, baffles, chutes, pumps that are sized and designed to prevent cold joints from occurring and prevent segregation in discharged concrete. Clean conveying equipment before each placement.

D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.

E. Deposit concrete in forms in horizontal layers with proper consolidation into previous layers and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.

1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.

2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator. Place vibrators to rapidly penetrate placed l aye r and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing constituents to segregate.

F. Deposit and consolidate concrete for slabs in a continuous operation.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.

2. Maintain reinforcement in position on chairs during conc re te placement.

3. Screed slab surfaces with a straightedge and strike off to correct elevations.

4. Begin initial floating us in g bull floats or darbies to form a uniform and open textured surface plane, free of humps or hollows, before excess moisture or bleed-water appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.06 CONCRETE SLABS ON GRADE

For exterior areas, unless specified elsewhere, place concrete slabs directly over compacted fill. Finish concrete true to grade and round edges to 1/8" radius.

3.07 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective are as repaired and patch ed. Remove fins and other projections exceeding ACI 347R limit s for class of surface specified.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of scams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch in height.

1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, damp proofing, veneer plaster, or painting.

2. Do not apply rubbed finish to smooth-formed finish.

3.08 FINISHING SLABS

A. General: Comply with recommendations in ACI 302.1 R for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture.

C. Trowel Finish: After applying float finish, apply first trowel finish and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.

3.09 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive hot temperatures. Comply with recommendations in ACI 305R for hot-weather protection during curing.

B. Begin curing immediately after finishing concrete. Cure unformed surfaces, including slabs by:

1. Curing Compound: Apply uniformly in continuous operation by spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas. Remove and replace concrete that cannot he repaired and patched to the State Project Manager's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal , cut out honeycombs , rock pockets, and voids more than ½ inch in any dimension in solid concrete but not less than I inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.

2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.

3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by the State Project Manager.

D. Repair materials and installation not specified above may be used, subject to the State Project Manager's approval.

3.11 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Specification.

B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each clay's pour of each concrete mix.

2. Slump: ASTM C 143; one test at point of placement for each composite sample.

3. Concrete Temperature: ASTM C 1064; one test for each composite sample.

4. Compression Test Specimens: ASTM C 31/C 31 M; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.

5. Compressive-Strength Tests: ASTM C 39; test two laboratory-cured specimens at 7 days and two at 28 days.

a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.

C. Strength of each concrete mix will be satisfactory if every average of any three-consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

D. Test results shall be reported in writing to the State Project Manager, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive devices may be permitted by the State Project Manager but will not be used as sole basis for approval or rejection of concrete.

F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, compressive strengths, or other requirements have not been met, as directed by the State Project Manager. Testing and inspecting agency

may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by the State Project Manager.

PART 4 - BASIS OF PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the prices bid for the various items of work in this project.

END OF SECTION

Requirements of Chapter 104, HRS
Wages and Hours of Employees on Public Works Law

Chapter 104, HRS, applies to every public works construction project over $2,000, regardless of the method of procurement or financing (purchase order, voucher, bid, contract, lease arrangement, warranty, SPRB).

Rate of Wages for Laborers and Mechanics

- Minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the Director of Labor and Industrial Relations and published in wage rate schedules, shall be paid to the various classes of laborers and mechanics working on the job site. [§104-2(a), (b), Hawaii Revised Statutes (HRS)]

- If the Director of Labor determines that prevailing wages have increased during the performance of a public works contract, the rate of pay of laborers and mechanics shall be raised accordingly. [§104-2(a) and (b), HRS; §12-22-3(d) Hawaii Administrative Rules (HAR)]

Overtime

- Laborers and mechanics working on a Saturday, Sunday, or a legal holiday of the State or more than eight hours a day on any other day shall be paid overtime compensation at not less than one and one-half times the basic hourly rate plus the cost of fringe benefits for all hours worked. If the Director of Labor determines that a prevailing wage is defined by a collective bargaining agreement, the overtime compensation shall be at the rates set by the applicable collective bargaining agreement [§§104-1, 104-2(c), HRS; §12-22-4.1, HAR]

Weekly Pay

- Laborers and mechanics employed on the job site shall be paid their full wages at least once a week, without deduction or rebate, except for legal deductions, within five working days after the cutoff date. [§104-2(d), HRS]

Posting of Wage Rate Schedules

- Wage rate schedules with the notes for prevailing wages and special overtime rates, shall be posted by the contractor in a prominent and easily accessible place at the job site. A copy of the entire wage rate schedule shall be given to each laborer and mechanic employed under the contract, except when the employee is covered by a collective bargaining agreement. [§104-2(d), HRS]

Withholding of Accrued Payments

- If necessary, the contracting agency may withhold accrued payments to the contractor to pay to laborers and mechanics employed by the contractor or subcontractor on the job site any difference between the wages required by the public works contract or specifications and the wages received. [§104-2(e), HRS]

Certified Weekly Payrolls and Payroll Records

- A certified copy of all payrolls shall be submitted weekly to the contracting agency. [§104-3(a), HRS; §12-22-10, HAR]

- The contractor is responsible for the submission of certified copies of the payrolls of all subcontractors. The certification shall affirm that the payrolls are correct and complete, that the wage rates listed are not less than the applicable rates contained in the applicable wage rate schedule, and that the classifications for each laborer or mechanic conform with the work the laborer or mechanic performed. [§104-3(a), HRS; §12-22-10, HAR]

- Payroll records shall be maintained by the contractor and subcontractors for three years after completion of construction. The records shall contain: [§104-3(b), HRS; §12-22-10, HAR]
  - the name and home address of each employee
  - the last four digits of social security number
  - a copy of the apprentice's registration with DLIR
  - the employee's correct classification
  - rate of pay (basic hourly rate + fringe benefits)
  - itemized list of fringe benefits paid
  - daily and weekly hours worked
  - weekly straight time and overtime earnings
  - amount and type of deductions
  - total net wages paid
  - date of payment

- Records shall be made available for examination by the contracting agency, the Department of Labor and Industrial Relations (DLIR), or any of its authorized representatives, who may also interview employees during working hours on the job. [§§104-3(c), 104-22(a), HRS; §12-22-10, HAR]

Termination of Work on Failure to Pay Wages

- If the contracting agency finds that any laborer or mechanic employed on the job site by the contractor or any subcontractor has not been paid prevailing wages or overtime, the contracting agency may, by written notice to the contractor, terminate the contractor's or subcontractor's right to proceed with the work or with the part of the work in which the required wages or overtime compensation have not been paid. The contracting agency may complete this work by contract or otherwise, and the contractor or contractor's sureties shall be liable to the contracting agency for any excess costs incurred. [§104-4, HRS]

Apprentices

- Apprentice wage rates apply to contractors who are a party to a bona fide apprenticeship program which has been registered with the DLIR. In order to be paid apprentice rates, apprentices must be parties to an agreement either registered with or recognized as a USDOL nationally approved apprenticeship program by the DLIR, Workforce Development Division, (808) 586-8877, and the apprentice must be individually registered by name with the DLIR. [§12-22-6(1) and (2), HAR]

- The number of apprentices on any public work in relation to the number of journeyworkers in the same craft classification as the apprentices employed by the same employer on the same public work may not exceed the ratio allowed under the apprenticeship standards registered with or recognized by the DLIR. A registered or recognized apprentice receiving the journeyworker rate will not be considered a journeyworker for the purpose of meeting the ratio requirement. [§12-22-6(3), HAR]

Enforcement

- To ensure compliance with the law, DLIR and the contracting agency will conduct investigations of contractors and subcontractors. If a contractor or subcontractor violates the law, the penalties are: [§104-24, HRS]

  - First Violation — Equal to 25% of back wages found due or $250 per offense up to $2,500, whichever is greater.
  - Second Violation — Equal to amount of back wages found due or $500 for each offense up to $5,000, whichever is greater.
  - Third Violation — Equal to two times the amount of back wages found due or $1,000 for each offense up to $10,000, whichever is greater; and
    Suspension from doing any new work on any public work of a governmental contracting agency for three years.

  ▪ A violation would be deemed a second violation if it occurs within two years of the **first notification of violation**, and a third violation if it occurs within three years of **the second notification of violation**. [§104-24, HRS; §12-22-25(b), HAR]

  ▪ **Suspension**: For a first or second violation, the department shall immediately suspend a contractor who fails to pay wages or penalties until all wages and penalties are paid in full. For a third violation, the department shall penalize and suspend the contractor as described above, **except that if the contractor continues to violate the law, then the department shall immediately suspend the contractor for a mandatory three years. The contractor shall remain suspended until all wages and penalties are paid in full.** [§§104-24, 104-25, HRS]

- **Suspension**: Any contractor who fails to make payroll records accessible or provide requested information within 10 days, or fails to keep or falsifies any required record, shall be assessed a penalty including suspension as provided in Section 104-22(b) and 104-25(a)(3), HRS. [§104-3(c), HRS; §12-22-26, HAR]

- If any contractor interferes with or delays any investigation, the contracting agency shall withhold further payments until the delay has ceased. Interference or delay includes failure to provide requested records or information within ten days, failure to allow employees to be interviewed during working hours on the job, and falsification of payroll records. The department shall assess a penalty of $10,000 per project, and $1,000 per day thereafter, for interference or delay. [§104-22(b), HRS; §12-22-26, HAR]

- Failure by the contracting agency to include in the provisions of the contract or specifications the requirements of Chapter 104, HRS, relating to coverage and the payment of prevailing wages and overtime, is not a defense of the contractor or subcontractor for noncompliance with the requirements of this chapter. [§104-2(f), HRS]

For additional information, visit the department's website at *http://labor.hawaii.gov/wsd*
or contact any of the following DLIR offices:

Oahu (Wage Standards Division) .....(808) 586-8777
Hawaii Island.....(808) 974-6464
Maui and Kauai .....(808) 243-5322

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

AIRPORTS

PROPOSAL

PROPOSAL TO THE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

PROJECT:	**UST AND AST CLOSURE KAWAIHAPAI AIRFIELD WAIALUA, OAHU, HAWAII**
PROJECT NO.:	**AO2023-14**
CONTRACT TIME:	**All work under this Contract shall be completed within three hundred and sixty-five (365) CALENDAR DAYS from the date indicated in the Notice to Proceed from the State.**
LIQUIDATED DAMAGES:	**FOUR HUNDRED FIFTY DOLLARS ($450.00) for every calendar day for failure to complete the project in the time stated above.**
DESIGN PROJECT MANAGER:	**Maritez a. Marquez Department of Transportation, Airports 400 Rodgers Boulevard, Suite 700 Honolulu, HI 96819-1880 (808) 838-8808 maritez.a.marquez@hawaii.gov**
ELECTRONIC SUBMITTAL:	**Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. See SPECIAL PROVISIONS 2.8 PREPARATION AND DELIVERY OF BID for complete details. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.**

Director of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned Bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.

2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.

3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned Bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.

2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.

3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.

5. Agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.

6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.

7. The undersigned Bidder further agrees to the following: Pursuant to HRS §103D-405(d), any contractor (including consultants) paid for services to develop or prepare specifications or work statements shall be precluded from submitting an offer or receiving a contract for that particular solicitation. This includes the preparation of reports relied upon by HDOT in the development of the project scope.

The Bidder acknowledges receipt of and certifies that it has completely examined the following listed items: the Hawaii Department of Transportation, Air and Water Transportation Facilities Division General Provisions for Construction Projects dated 2016, the Notice to Bidders, the Special Provisions, if any, the Technical Provisions, the Proposal, the Contract and Bond Forms, and the Project Plans.

In accordance with Section 103D-323, Hawaii Revised Statutes, this proposal is accompanied with a bid security in the amount of 5% of the total amount bid, in the form checked below. (Check applicable bid security submitted with bid.)

_____ Surety Bid Bond (Use standard form),

_____ Cash,

_____ Cashier's Check,

_____ Certified Check, or

_____ _____.
(Fill in other acceptable security.)

The undersigned Bidder acknowledges receipt of any addendum issued by the Department by recording in the space below the date of receipt.

Addendum No. 1 _____ Addendum No. 3 _____

Addendum No. 2 _____ Addendum No. 4 _____

In accordance with Section 103D-302, Hawaii Revised Statutes, the undersigned as Bidder, has listed the name of each person or firm, who will be engaged by the Bidder on the project as a Subcontractor or Joint Contractor and the nature of work to be done by each. **The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Subcontractor or Joint Contractor.** For each listed firm, the Bidder declares the respective firm is a Subcontractor or Joint Contractor and is subject to evaluation as a Subcontractor or Joint Contractor. It is understood that failure to comply with the aforementioned requirements may be cause for rejection of the bid submitted.

Name of Subcontractor	Nature and Scope of Work
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

Name of Joint Contractor	Nature and Scope of Work
1.	
2.	
3.	

NOTES:

"None" or if left blank indicates no Subcontractor or Joint Contractor.

If more space is needed, attach additional sheets.

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct and final.

This declaration is made with the understanding that the undersigned is subject to the penalty of perjury under the laws of the United States and is in violation of the Hawaii Penal Code, Section 710-1063, unsworn falsification to authorities, of the Hawaii Revised Statutes, for knowingly rendering a false declaration.

_____
Bidder (Company Name)

By_____
Authorized Signature

_____
Print Name and Title

_____

_____
Business Address

_____
Business Telephone

_____
Date

_____
Contact Person (If different from above)

Phone:_____ Email:_____

NOTE:

If Bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts for the corporation. Please attach to this page current (not more than six months old) evidence of the authority of the officer(s) to sign for the corporation.

If Bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above, with the signature(s) of the general partner(s). Please attach to this page current (not more than six months old) evidence of the authority of the partner authorized to sign for the partnership.

If Bidder is an INDIVIDUAL, the bidder's signature shall be placed above.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department before opening bids or submitted with the bid. Otherwise, the Department may reject the bid as irregular and unauthorized.

PREFERENCES

Bidders acknowledge that while preferences are considered in the evaluation of bids, the award of the contract will be in the amount of the bid offered exclusive of any preferences.

A. HAWAII BIDDER PREFERENCE

In accordance with HRS §103D-302, the Hawaii bidder preference is applicable to this solicitation for evaluation purposes only. Bidders desiring to qualify for the five per cent (5%) preference shall submit with their bid a completed *Hawaii Bidder/Offeror Preference Certification Form* (Form SPO-081) at or before the time set for receipt of bids. Certifications submitted for previous or other solicitations will not be accepted.

( ) Yes, the Bidder elects to receive the Hawaii Bidder Preference and has included the Form SPO-081 with the bid.

B. APPRENTICESHIP AGREEMENT PREFERENCE

In accordance with HRS §103-55.6, the estimated value of this public works contract is $250,000 or more and the apprenticeship agreement preference is applicable to this solicitation for evaluation purposes only. Bidders desiring to qualify for the five per cent (5%) preference shall submit with their bid a complete, valid CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Certification Form 1) ***for each apprenticeable trade*** the Bidder will employ on the project.

( ) Yes, the Bidder elects to receive the Apprenticeship Agreement Preference and has attached Certification Form(s) 1 for each apprenticeable trade the Bidder will employ for this project (excluding subcontractors).

By submission of this offer, the Bidder certifies that it has indicated **all apprenticeable trades that Bidder will employ** for this project (excluding subcontractors) by listing the applicable trades below:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

(Attach additional sheet if necessary.)

Form 1 Required. Failure to submit a valid Form 1 with the bid for every apprenticeable trade that Bidder will employ on the project will result in the preference being denied, regardless of whether the trade is listed above. If a Form 1 is submitted for a trade that is not listed above, the Form 1 will take

precedence over the listing and may be used to qualify Bidder for the preference.

Form 2 Required. If awarded the contract with the Apprenticeship Agreement Preference applied, then for the duration of the contract, the Bidder **shall** certify each month that work is being conducted on the project that the Contractor continues to be a participant in the relevant apprenticeship program for each trade it employs. Monthly certification shall be made on the Certification Form 2 and submitted to the HDOT.

Failure to comply with the requirements of the Apprenticeship Agreement Preference program will subject the Contractor to sanctions pursuant to HRS §103-55.6.

C. HAWAII PRODUCTS PREFERENCE

Hawaii Products Preference shall not apply to this solicitation.

D. RECYCLED PRODUCT PREFERENCE

Recycled Product Preference shall not apply to this solicitation.

STATE OF HAWAII
Hawaii Bidder/Offeror
Preference Certification Form
(As Defined in HRS103D-1001)

I, _____, _____ of
(Authorized Officer's Name) (Office or Position Held)

_____, certify the following:
(Name of Bidder/Offeror)

(1) That the Bidder/Offeror holds a valid commercial place of business located in the State of Hawaii at the following address:

_____

_____,

and that the above-named office was opened on the following date: _____,

and has been staffed by the Bidder/Offeror or an employee of the Bidder/Offeror for not less than two (2) consecutive years immediately preceding the time and date set for the opening of bids or receipt of proposals;

(2) That the bid or proposal in response to IFB/RFP No. _____, is submitted under the name under which the Bidder/Offeror is authorized to do business in the State;

(3) That not less than fifty-one percent (51%) of the total direct labor hours required for performance of the contract will be performed within the State; and

(4) If the Bidder/Offeror is a joint venture, the Bidder/Offeror is composed entirely of parties meeting the requirements of paragraphs (1), (2), and (3).

I certify under penalty of perjury that the above statements are true. I agree to maintain the above qualifications throughout contract performance; any changes in eligibility shall be reported to the Contract Administrator or purchasing agency's contact person identified in the RFP/IFB. I acknowledge that failure to maintain the above qualifications triggers a price adjustment equal to the value of the preference applied and may constitute cause for debarment under HRS §103D-702.

_____
Signature of Authorized Officer

_____
Print Name and Title

_____
Date

PROPOSAL SCHEDULE

UST AND AST CLOSURE
KAWAIHAPAI AIRFIELD
PROJECT NO. AO2023-14

Item No.	Description	Approx. Qty	Unit Price	Total
01010.1	Construction Work Basis of bid shall be the entire SITE CONSTRUCTION, CONCRETE, and portions of the GENERAL REQUIREMENTS (Construction Waste Management, Temporary Facilities, etc…) scope of work completed in accordance with the specification	LS	LS	$_____
01561.1	Construction Site Pollution Controls	LS	LS	$_____
01562.1	Management of Contaminated Media, Soil Disposal and Soil Reuse	ALLOW	ALLOW	$ 75,000.00

TOTAL AMOUNT FOR COMPARISON OF BIDS $_____

Notes: The bid prices herein shall include all labor, materials, equipment, and incidentals necessary to construct all items in place, including installation and testing of equipment, complete and ready for operation, all in accordance with the plans and specifications.

Note 1: Bid shall include all Federal, State, County and other applicable taxes and fees.

Note 2: The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest responsible bidder.

Note 3: Bidders shall complete all unit prices and amounts. Failure to do so shall be grounds for rejection of bid.

Note 4: State reserves the right to reject any or all Bids and to waive any defects in said

Bids in the best interest of the State.

Note 5: Submission of a Bid is a warranty that the bidder has made an examination of the project site and is fully aware of all conditions to be encountered in performing the work and the requirements of the plans and specifications.

Note 6: The bidder's attention is directed to Section 2.11 – BID SECURITY of the "General Provisions", as amended by the Special Provisions.

Note 7: Bidders shall be paid for actual work performed as directed by the Engineer for allowance items. Bidders shall not be paid overhead and profit for unused allowance funds.

Note 8: If the TOTAL AMOUNT FOR COMPARISON OF BIDS exceeds the funds available for the project, then the State reserves the right to negotiate with the lowest, responsive, responsible bidder as permitted under Section 103D-302, Hawaii Revised Statutes (HRS), to further reduce the scope of work and award a contract thereafter.

Note 9: **Bidders shall submit and upload the complete proposal to HIePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HIePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection.** Original (wet ink, hard copy) proposal documents are not required to be submitted. **Contract award shall be based on evaluation of proposals submitted and uploaded to HIePRO. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HIePRO SHALL BE GROUNDS FOR REJECTION OF THE BID. If there is a conflict between the specification document and the HIePRO solicitation, the specifications shall govern and control, unless otherwise specified**

SURETY BID BOND

Bond No. _____

KNOW TO ALL BY THESE PRESENTS:

That we, _____
(full name or legal title of offeror)
as Offeror, hereinafter called the Principal, and

_____
(name of bonding company)
as Surety, hereinafter called Surety, a corporation authorized to transact business as a Surety in the State of Hawaii, are held and firmly bound unto

_____
(State/county entity)
as Owner, hereinafter called Owner, in the penal sum of

_____
(required amount of bid security)
Dollars($_____),lawful money of the United States of America, for the payment of which sum well and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS:

The Principal has submitted an offer for

_____
(project by number and brief description)

NOW, THEREFORE:

The condition of this obligation is such that if the Owner shall reject said offer, or in the alternate, accept the offer of the Principal and the Principal shall enter into a contract with the Owner in accordance with the terms of such offer, and give such bond or bonds as may be specified in the solicitation or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof as specified in the solicitation then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed this _____ day of _____, _____

_____
Name of Principal (Offeror) (Seal)

_____
Signature

_____
Print Name and Title

_____
Name of Surety (Seal)

_____
Signature

_____
Print Name and Title

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

AIRPORTS

FORMS

CONTRACT

THIS AGREEMENT, made this day of _____, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE", and «CONTRACTOR», «STATE_OF_INCORPORATON», whose business/post office address is «ADDRESS», hereinafter referred to as CONTRACTOR";

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for "«PROJECT_NAME_AND_NO»", or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of «BASIC»----DOLLARS ($«BASIC_NUMERIC») as follows:

SAMPLE

TOTAL AMOUNT FOR COMPARISON OF BIDS……$«BASIC_NUMERIC»

which sum shall be provided from State funds, all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans for «PROJECT_NO_ONLY», and any supplements thereto, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within «WORKING_DAYS» from the date indicated in the Notice to Proceed from the State subject, however, to such extensions as may be provided for in writing under the specifications.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of «BASIC»---DOLLARS ($«BASIC_NUMERIC») in lawful money, but not more than such part of the same as is actually earned according to the STATE's determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract.

An additional sum of «EXTRAS»-----DOLLARS ($«EXTRA_NUMERIC») is hereby provided for extra work.

SAMPLE

All words used herein in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

_____
Director of Transportation

«CONTRACTOR» (Seal)

_____
Signature

_____
Print name

_____
Print Title

_____
Date

SAMPLE

PERFORMANCE BOND

KNOW TO ALL BY THESE PRESENTS:

That we,_____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

_____
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

_____DOLLARS ($_____),
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

☐ **Legal Tender**;

☐ **Share Certificate** unconditionally assigned to or made payable at sight to _____
Description:_____
_____;

☐ **Certificate of Deposit**, No. _____, dated _____ issued by _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Cashier's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Teller's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Treasurer's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Official Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Certified Check** No. _____, dated _____accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to_____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project:_____
_____
_____
hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The Condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligee, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed and sealed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

_____
Signature*

_____
Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

PERFORMANCE BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

_____
(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of _____

_____
DOLLARS ($_____), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-bound Principal has signed a Contract with Obligee on _____, for the following project:_____
_____
_____
_____
_____
_____
hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in strict accordance with the terms of the Contract as said Contract may be modified or amended from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Obligee to the Surety and the Principal and subject to the limitation of the penal sum of this bond, Surety shall remedy the Default, or take over the work to be performed under the Contract and complete such work, or pay moneys to the Obligee in satisfaction of the surety's performance obligation on this bond.

Signed this _____ day of _____, _____.

(Seal) _____
Name of Principal (Contractor)

* _____
Signature

_____
Title

(Seal) _____
Name of Surety

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND

KNOW TO ALL BY THESE PRESENTS:

That we, _____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto _____
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

_____DOLLARS ($_____),
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

☐ **Legal Tender**;

☐ **Share Certificate** unconditionally assigned to or made payable at sight to_____
_____
Description:_____
_____

☐ **Certificate of Deposit**, No. _____, dated _____ issued by _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Cashier's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Teller's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Treasurer's Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Official Check** No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

☐ **Certified Check** No. _____, dated _____ accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project:_____
_____

_____ hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

AND IT IS HEREBY STIPULATED AND AGREED that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payments of mechanics' liens which may be filed of record against the Project, whether or not claim for the amount of such lien be presented under and against this bond..

Signed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

_____
Signature*

_____
Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

_____,
(Name and Street Address of Bonding Company)
as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of _____

_____
_____ Dollars ($_____), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-bound Principal has signed Contract with the Obligee on _____ for the following project:_____
_____
_____
_____
_____
hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to any Claimant, as hereinafter defined, for all labor and materials supplied to the Principal for use in the performance of the Contract, then this obligation shall be void; otherwise to remain in full force and effect.

1. Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

2. A "Claimant" shall be defined herein as any person who has furnished labor or materials to the Principal for the work provided in the Contract.

Every Claimant who has not been paid amounts due for labor and materials furnished for work provided in the Contract may institute an action against the Principal and its Surety on this bond at the time and in the manner prescribed in Section 103D-324, Hawaii Revised Statutes, and have the rights and claims adjudicated in the action, and judgment rendered thereon; subject to the Obligee's priority on this bond. If the full amount of the liability of the Surety on this bond is insufficient to pay the full amount of the claims, then after paying the full amount due the Obligee, the remainder shall be distributed pro rata among the claimants.

Signed this _____ day of _____, _____.

(Seal) _____
Name of Principal (Contractor)

* _____
Signature

_____
Title

(Seal) _____
Name of Surety

* _____
Signature

_____
Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

CHAPTER 104, HRS COMPLIANCE CERTIFICATE

The undersigned bidder does hereby certify to the following:

1. Individuals engaged in the performance of the contract on the job site shall be paid:
   A. Not less than the wages that the director of labor and industrial relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects; and
   B. Overtime compensation at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or a legal holiday of the State or in excess of eight hours on any other day.

2. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

SIGNED and DATED at _____ this _____ day of _____, 2025.
(City, State)

NOTARY ACKNOWLEDGEMENT

Subscribed and sworn before me this

_____day of_____, 20_____

Notary signature_____

Notary public, State of _____

My Commission Expires: _____

(Affix Notary Seal)

_____
Name of Corporation, Partnership, or Individual

_____
Authorized Signature

_____
Print Name and Title of Signer

NOTARY CERTIFICATION (Required)

Document Date: _____ Pages: _____

Notary Print Name: _____ _____Circuit

Document Description: _____

_____ _____

Notary Signature Date

(Affix Notary Seal)

CERTIFICATION OF COMPLIANCE
FOR
EMPLOYMENT OF STATE RESIDENTS
HRS CHAPTER 103B, AS AMENDED BY ACT 192, SLH 2011

Project Title: _____

Agency Project No: _____

Contract No.: _____

As required by Hawai'i Revised Statutes Chapter103B, as amended by Act 192, Session Laws of Hawaii 2011–Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of _____ and
(Name of Contractor or Subcontractor Company)
for the Project Contract indicated above, _____ was in
(Name of Contractor or Subcontractor Company)
compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawai'i residents, as calculated according to the formula in the solicitation, to perform this Contract.

☐ I am an officer of the **Contractor** for this contract.

☐ I am an officer of a **Subcontractor** for this contract.

CORPORATE SEAL

_____
(Name of Company)

_____
(Signature)

_____
(Print Name)

_____
(Print Title)

Subscribed and sworn to me before this
_____ day of _____, 2011.

_____
Notary Public, 1st Circuit, State of Hawai'i
My commission expires: _____

Doc. Date: _____ # of Pages_____ 1st Circuit
Notary Name: _____
Doc. Description: _____
_____
_____

_____
Notary Signature Date
NOTARY CERTIFICATION

EXHIBIT 2

PROVISIONS TO BE INCLUDED IN CONSTRUCTION PROCUREMENT SOLICITATIONS

1. Definitions for terms used in HRS Chapter 103B as amended by Act 192, SLH 2011:

   a. "Contract" means contracts for construction under 103D, HRS.

   b. "Contractor" has the same meaning as in Section 103D-104, HRS, provided that "contractor" includes a subcontractor where applicable.

   c. "Construction" has the same meaning as in Section 103D-104, HRS.

   d. "General Contractor" means any person having a construction contract with a governmental body.

   e. "Procurement Officer" has the same meaning as in Section 103D-104, HRS.

   f. "Resident" means a person who is physically present in the State of Hawai'i at the time the person claims to have established the person's domicile in the State of Hawai'i and shows the person's intent is to make Hawai'i the person's primary residence.

   g. "Shortage trade" means a construction trade in which there is a shortage of Hawai'i residents qualified to work in the trade as determined by the Department of Labor and Industrial Relations.

2. HRS Chapter 103B as amended by Act 192, SLH 2011–Employment of State Residents Requirements:

   a. A Contractor awarded a contract shall ensure that Hawai'i residents comprise not less than 80% of the workforce employed to perform the contract work on the project. The 80% requirement shall be determined by dividing the total number of hours worked on the contract by Hawai'i residents, by the total number of hours worked on the contract by all employees of the Contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

EXHIBIT 1

b. Prior to award of a contract, an Offeror/Bidder may withdraw an offer/bid without penalty if the Offeror/Bidder finds that it is unable to comply with HRS Chapter 103B as amended by Act 192, SLH 2011.

c. Prior to starting any construction work, the Contractor shall submit the subcontract dollar amount for each of its Subcontractors.

d. The requirements of this section shall apply to any subcontract of $50,000 or more in connection with the Contractor; that is, such Subcontractors must also ensure that Hawai'i residents comprise not less than 80% of the Subcontractor's workforce used to perform the subcontract.

e. The Contractor and any Subcontractor whose subcontract is $50,000 or more shall comply with the requirements of HRS Chapter 103B as amended by Act 192, SLH 2011.

1) Certification of compliance shall be made in writing under oath by an officer of the General Contractor and applicable Subcontractors and submitted with the final payment request.

2) The certification of compliance shall be made under oath by an officer of the company by completing a "Certification of Compliance for Employment of State Residents" form and executing the Certificate before a licensed notary public.

3) In addition to the certification of compliance as indicated above, the Contractor and Subcontractors shall maintain records such as certified payrolls for laborers and mechanics who performed work at the site and time sheets for all other employees who performed work on the project. These records shall include the names, addresses and number of hours worked on the project by all employees of the Contractor and Subcontractor who performed work on the project to validate compliance with HRS Chapter 103B as amended by Act 192, SLH 2011. The Contractor and Subcontractors shall retain these records and provide access to the State for a minimum period of four (4) years after the final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four-year period, the Contractor and Subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four-year period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any Subcontractor.

f. A General Contractor or applicable Subcontractor who fails to comply with this section shall be subject to any of the following sanctions:

1) With respect to the General Contractor, withholding of payment on the contract until the Contractor or its Subcontractor complies with HRS Chapter 103B as amended by Act 192, SLH 2011.

2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawai'i Revised Statues §103D-702.

3. Conflict with Federal Law: This section shall not apply if the application of this section is in conflict with any federal law, or if the application of this section will disqualify the State from receiving Federal funds or aid.

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

AIRPORTS DIVISION

APPENDICES

State of Hawaii Department of Transportation – Airports Division
Contaminated Soil and Groundwater Review

Request No.: ESI 098

State of Hawaii Department of Transportation – Airports Division
Contaminated Soil and Groundwater Review Form

Instructions:

1. Requestor (e.g., Designer) will complete Section 1 of the Contaminated Soil and Groundwater Review Form and submit to DOTA Environmental Section (AIR-EE). AIR-EE will then forward to Environmental Consultant at Environmental@esciencei.com.
2. Environmental Consultant will review the HDOT-AIR Environmental Database and complete Section 2 of the Contaminated Soil and Groundwater Review Form and provide information back to DOTA Environmental Section and the Requestor.

If you have any questions, contact the Environmental Consultant by email: Environmental@esciencei.com, or Phone: (808) 261-0740 and request HDOT-AIR Environmental Consultant.

SECTION 1. To Be Completed By Requestor

Requestor: Robert Chong Date: 7/19/2023

Project Engineer: Benton Ho

Email: benton.ho@hawaii.gov Phone: (808) 838-8804

Department: AIR-EM

Title:

Project No: N/A

Project Name: Removal of UST Fueling System at Kawaihapai Airfield

Brief Description of Project and Location (provide coordinates, address, or attach site plans):

Removal of UST system at Kawaihapai Airfield. Attached are the drawings for the tank installation.

SECTION 2. To Be Completed By Environmental Consultant

ESI Reviewer: Doug Heard Date: 7/26/23

Email: dheard@esciencei.com Phone: 808-359-8332

Contaminated Soil or Groundwater Documented in Project Area (Yes/No): No

Comments:

Based on available information, there is no confirmed subsurface contamination in the proposed Project Area. Please note however, that an absence of past environmental investigations and/or subsurface analytical data in the project area does not necessarily indicate contaminants will not be encountered.

The Project involves removal of a dual compartment 12,000-gallon Avgas UST system, which was installed in February of 1989 (DOH, 1992). Since installation of this UST there were citations regarding lack of proper UST system monitoring and an insufficient leak detection system. In 2004 there was a former employee complaint stating leaks had occurred over the years and that the UST had been patched. No confirmed leak was found during a follow-up inspection (DOH, 2004). Also associated with this UST system are piping, dispensers and a nearby dry well which receives water from a

Attached Documents:

DOH, 1992, UST Notification Forms, 1992 to 1993
DOH, 2004, UST Inspection Records, 2004 to 2013
ESI, 2021, Phase I Environmental Site Assessment, February 25, 2021
https://download.veoci.com/jdus1KJ0DEPEV4Na/117019-36_HDH_Phase%20I%20Report_3.22.21_FINAL%20%28reduced%20size%29signed.pdf

Airports Division

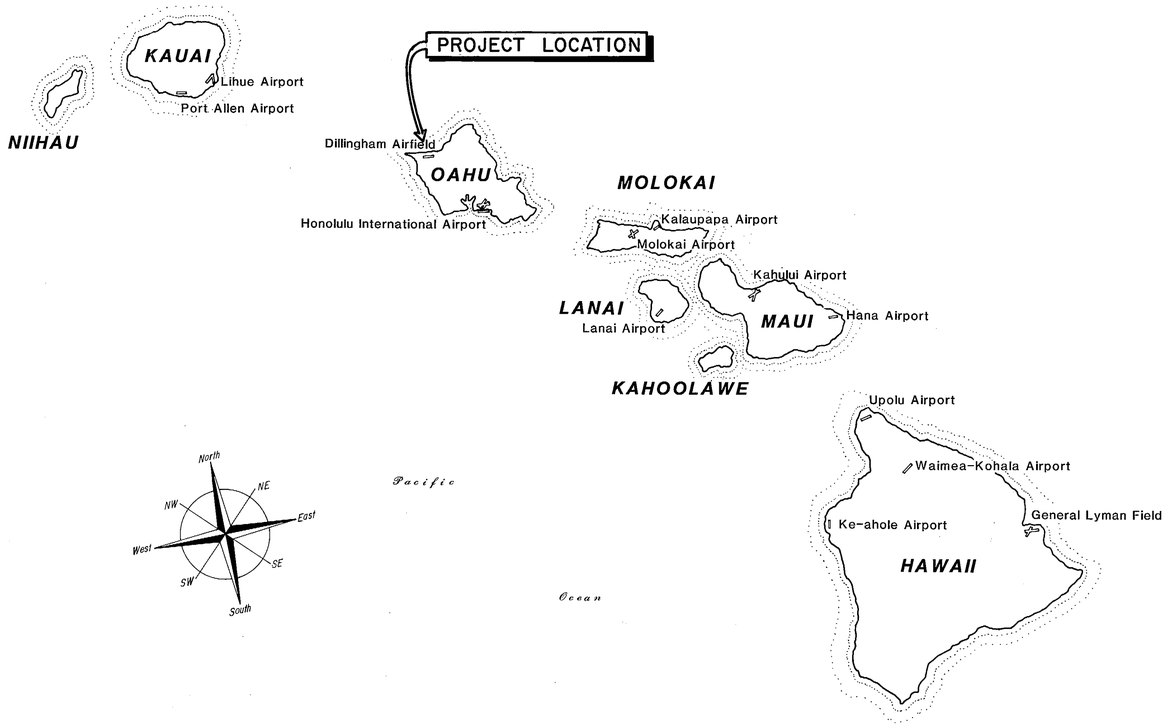
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PLANS FOR

REPLACEMENT OF FUELING SYSTEM

AT

DILLINGHAM AIRFIELD
OAHU
PROJECT NO. A02023-11



DEPARTMENT OF HEALTH STATE OF HAWAII	
APPROVED: James K. Mead	12-14-87
CHIEF, ENVIRONMENTAL PROTECTION & HEALTH SERVICES DIVISION	DATE

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED: Owen Miyamoto	2/16/88
for DIR. OF TRANSPORTATION	DATE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

1. SEE SHEET C-1 FOR INDEX TO DRAWINGS.

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

SHEET TITLE :

TITLE SHEET

DATE :

DWG. NO. : T-1

GRADING NOTES

1. All grading work shall be done in accordance to Chapter 23, Grading, Soil Erosion and Sediment Control, of the Revised Ordinances of Honolulu, 1978, as amended (Ordinance No. 81-13).

2. The Contractor shall remove all silt and debris resulting from his work deposited in the project area, drainage facilities, roadways, and other areas. The costs incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.

3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.

4. All grading operations shall be performed in conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.

5. The limits of grading areas shall be flagged before the commencement of grading.

6. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area, within which work has been interrupted or delayed, shall be planted.

7. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Chief Engineer.

TEMPORARY EROSION CONTROL

1. The Contractor shall minimize the amount of land to be exposed at any one time.

2. Grading operations shall proceed from the higher ground area first, where excavation operations are necessary. The existing vegetation on the lower area shall be left in place as long as feasible to serve as a filtering medium.

3. If the excavated material from the higher area is needed to fill the lower areas described in note #2 above, filling operations shall be done in phases in order that erosion and sedimentation problems can be minor.

4. Grassing common bermuda grass or stargrass cuttings at the rate of 50 bushels per acre or an average of 2 springs per square foot of all areas graded shall be done immediately after final grades are established.

5. Graded areas that are not at final grade and are expected to be exposed for more than 30 days, shall be mulched (at a rate of 45 cu.ft. per 1,000 sq.ft.) in order to prevent erosion and silt runoff.

6. When installing the drainage system for the project, filtering material (jute strips or equal) at the inlets to the system shall be provided to prevent silt from entering the system.

7. The above procedure for erosion and sediment control may be revised by the Contractor to conform to his grading operation procedures. Any revision to the above, however, shall be submitted to the Department of Public Works, Division of Engineering for approval, by the Contractor.

GENERAL NOTES

1. The existing utilities shown on the plans are approximate only. The Contractor shall make an independent check on the ground and with the various utility companies and government agencies to ascertain their exact location.

2. All existing utilities, whether or not shown on the plans, shall be protected at all times during construction, unless noted otherwise. Any damage to them shall be repaired and paid for by the Contractor.

INDEX TO DRAWINGS

SHEET	DESCRIPTION
T-1	TITLE SHEET
C-1	GENERAL NOTES, INDEX
C-2	GENERAL PLAN
C-3	DETAIL PLAN & PROFILE
C-4	CROSS SECTIONS, TYPICAL SECTIONS
C-5	MISCELLANEOUS DETAILS
S-1 TO S-3	STRUCTURAL DETAILS
M-1	MECHANICAL SITE PLAN, NOTES
M-2	NEW FUELING SYSTEM PLAN
M-3 TO M-4	SECTIONS
M-5	PIPING DIAGRAM
M-6	LEAK DETECTOR DIAGRAM
M-7	CONTROL DIAGRAM
M-8	DETAILS
E-1	ELECTRICAL SITE PLAN
E-2	SINGLE LINE DIAGRAM
E-3	GROUNDING PLAN AND DETAILS

TOTAL NUMBER OF SHEETS = 20

APPROVED:

DEC 2 1991

FIRE DEPARTMENT, C & C OF HONOLULU DATE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO. DATE REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

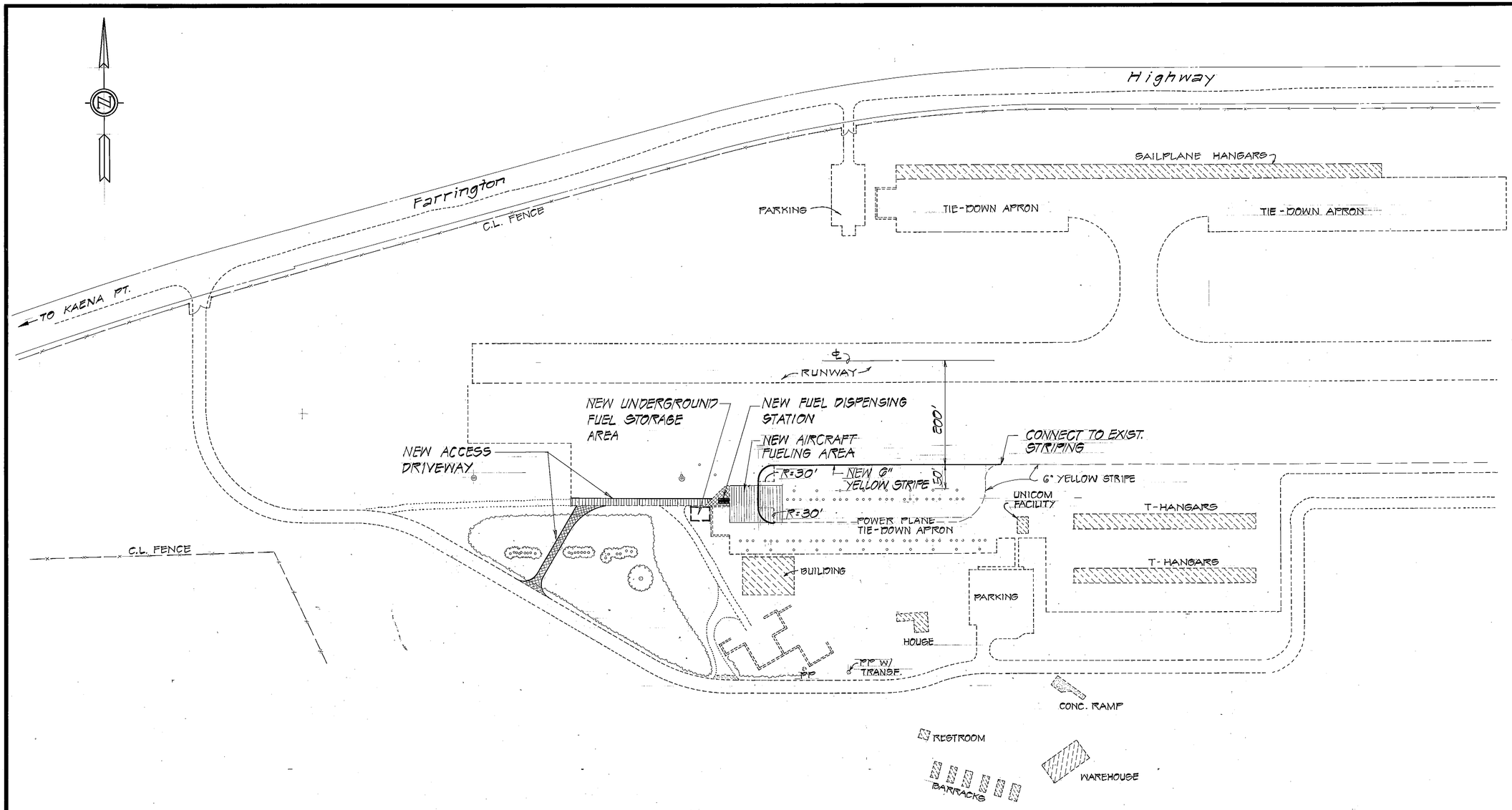
A02023-11

SHEET TITLE :

GENERAL NOTES INDEX

DATE :

DWG. NO. : C-1



GENERAL PLAN

Scale : 1" = 100'

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII U.S.A.

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DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

SHEET TITLE :

GENERAL PLAN

DATE :

DWG. NO. : C-2

North
Scale: 1"=20'

DANGER
ACTIVE RUNWAY
DO NOT CROSS

NO UNAUTHORIZED VEHICLES ON RUNWAYS OR TAXIWAYS

NEW SIGN SEE B C-3|C-5

GRAVEL

GRAVEL DRIVEWAY

GRAVEL

EDGE OF SHRUBS

LIMIT OF GRADING

NEW A.C. PAV'T. w/ BASE COURSE

SHRUBS

IRONWOOD TREES

STOP

NEW R1-1 (30"x30")

NEW EDGE OF SHOULDER

℄ NEW ACCESS DWY.

NEW EDGE OF SHOULDER

NEW CHAIN BARRIER. SEE A C-3|C-4 / A C-3|C-5

STA. 0+09 ± NEW ACCESS DRIVEWAY

EDGE OF PAV'T.

℄ 4" YELLOW STRIPE

EDGE OF PAV'T.

GRASS

EDGE OF SHRUBS

MAKE SMOOTH RIDING CONNECTION TO EXIST. PAV'T.

EDGE OF PAV'T.

A.C. PAV'T.

B.M. ELEV. 11.37. SPIKE IN PAV'T.

NEW DRAIN PIT TOP=10.00 SEE C-3|S-1

NEW SEAL COAT ON EXIST. A.C. PAV'T.

270° 30' — (ASSUMED) (SPIKE TO SPIKE)

℄ NEW ACCESS DRIVEWAY

7'

5'

VARIES 7' TO 11'

P.T. STA. 2+34.72

NEW SWALE

EDGE OF SHRUBS

INV. = 11.0

MAKE SMOOTH RIDING CONN. TO EXIST. PAV'T.

B C-3|C-4

R = 100.00

P.C. STA. 1+60.00

LIMIT OF GRADING

SHRUBS

IRONWOOD TREES

IRONWOOD TREES

A C-3|C-4

DO NOT ENTER
AUTHORIZED VEHICLES ONLY

NEW SIGN SEE B C-3|C-5

PLUM TREE

SHRUBS

GRAVEL

EDGE OF SHRUBS

℄ CURVE DATA
Δ = 60°00'
4/2 = 30°00'
R = 100.00
T = 57.74
Lc = 104.72
Ch = 100.00

DRAIN INLET

4" C.I. DRAIN

B.M. ELEV. 11.08. SPIKE IN PAV'T. STA. 4+36.72 (5' O/S, LEFT)

LIMIT OF GRADING

MAKE SMOOTH RIDING CONN. TO EXIST. PAV'T.

NEW CONC. PAVEMENT. SEE SHT. S-3.

A C-3|S-3

EDGE OF PAV'T.

A.C. PAV'T.

GRAVEL

NEW A.C. PAV'T. w/ BASE COURSE

SEE SHT. C-2 FOR CONTINUATION.

NEW SEAL COAT ON EXIST. PAV'T.

STA. 4+94.72

EDGE OF PAV'T.

TIE-DOWN ANCHORS

TRANSIENT

30'

TRANSIENT

TRANSIENT

NEW FUEL DISPENSING STATION. SEE M C-3|S-1

REMOVE PAVEMENT LETTERS

CONC. CURB

DRAIN

HB

55'

NEW 6" YELLOW STRIPE

45'

6" YELLOW PAV'T. STRIPE

BEGIN NEW PAV'T. STRIPE.

A.C. PAV'T.

CONC. CURB

2" WATER

HB

TIE-DOWN ANCHORS

EDGE OF PAV'T.

CONC. DWY.

BUILDING

Note: All structures and topographical features are existing and are to remain unless noted otherwise.

DETAIL SITE PLAN
Scale: 1" = 20'

MAKE SMOOTH RIDING CONNECTION TO EXIST. PAV'T.

12.4 ±

FINISH GR. @ ℄ NEW ACCESS DRIVEWAY

11.2 ±

MEET EXIST. GR.

EXIST. GR. @ ℄ NEW ACCESS DWY.

(-) 0.62%

MEET EXIST. GR.

20

10

0+00 1+00 2+00 3+00 4+00 5+00

PROFILE
Horiz. Scale: 1"=20'
Vert. Scale: 1"=4'

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

DSGN.	DRWN.	CHK'D.	APP'D.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DETAIL SITE PLAN & PROFILE

DATE :

DWG. NO. : C-3

SUMMARY OF EARTHWORK:

TOTAL EXCAVATION = 282 CY

TOTAL EMBANKMENT = 0 CY

AREA TO BE GRADED = 0.5 ACRE

EXC. = 55 CY
EMB. = 0 CY

15
10 C = 30 SF
F = 0 SF

EXC. = 55 CY
EMB. = 0 CY

2+00

15
10 C = 30 SF
F = 0 SF

EXC. = 62 CY
EMB. = 0 CY

1+50

15
10 C = 35 SF
F = 0 SF

EXC. = 56 CY
EMB. = 0 CY

1+00

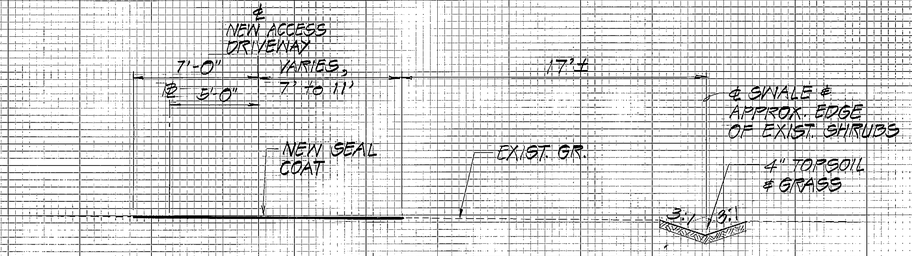
15
10 C = 25 SF
F = 0 SF

EXC. = 54 CY
EMB. = 0 CY

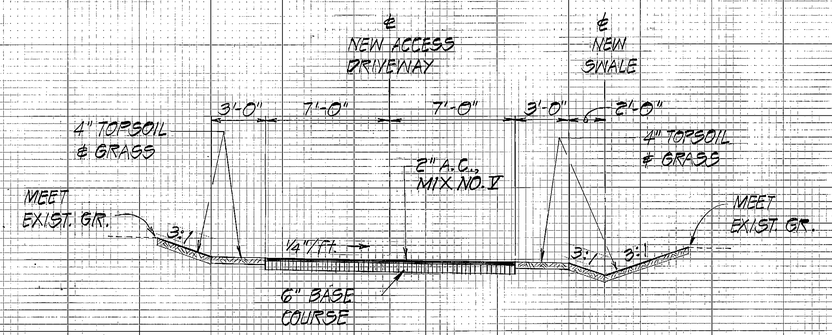
0+50

℄ ACCESS DRIVEWAY

HORIZ. SCALE: 1"=10', VERT. SCALE: 1"=5'



SECTION B
SCALE: 1/4"=1'-0"
C-3 | C-4



TYPICAL DWY. SECTION A
Scale: 1/4"=1'-0"
C-3 | C-4

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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HAWAII, U.S.A.

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DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

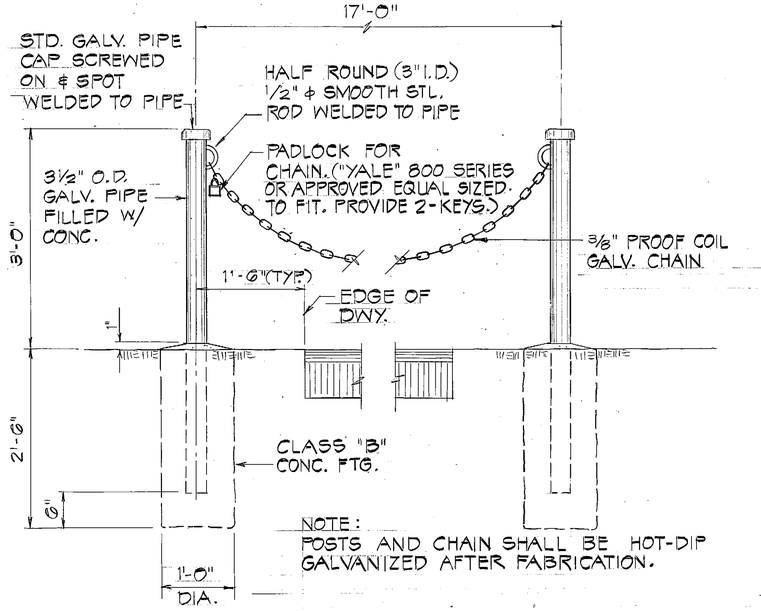
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
CROSS SECTIONS

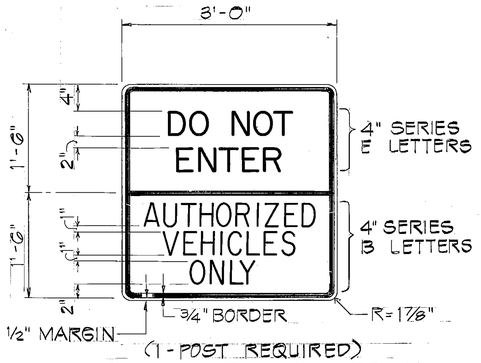
DATE :

DWG. NO. :
C-4



CHAIN BARRIER DETAIL (A) C-3 | C-5

NO SCALE



(1-POST REQUIRED)

BLACK LETTERS & BORDER ON WHITE BACKGROUND

NOTES:

1. ALL SIGNS SHALL BE REFLECTORIZED.
2. ALL SIGNS SHALL HAVE 3/8" ϕ BOLT HOLES DRILLED AT APPROPRIATE LOCATIONS.

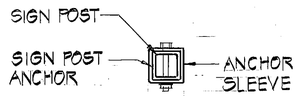


(3-POSTS REQUIRED)

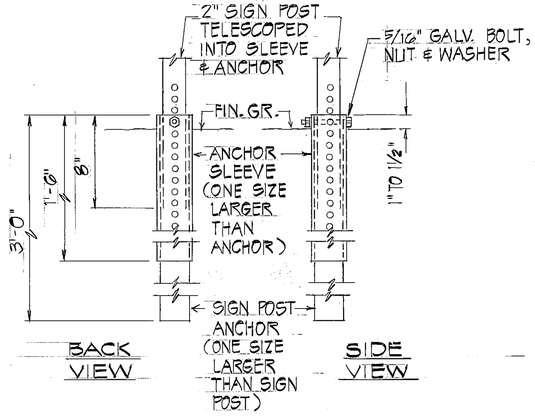
RED LETTERS & BORDER ON WHITE BACKGROUND

SIGN DETAILS (B) C-3 | C-5

NO SCALE



TOP VIEW

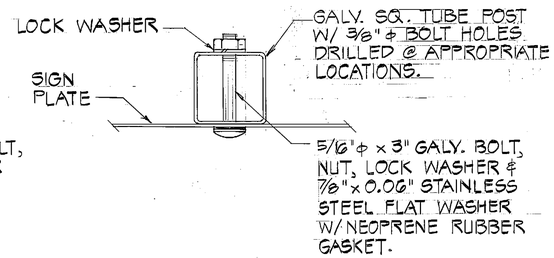


BACK VIEW

SIDE VIEW

SIGN POST DETAIL (D) C-5 | C-5

NO SCALE



SIGN INSTALLATION DETAIL (E) C-5 | C-5

NO SCALE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Paul T. Taniguchi

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

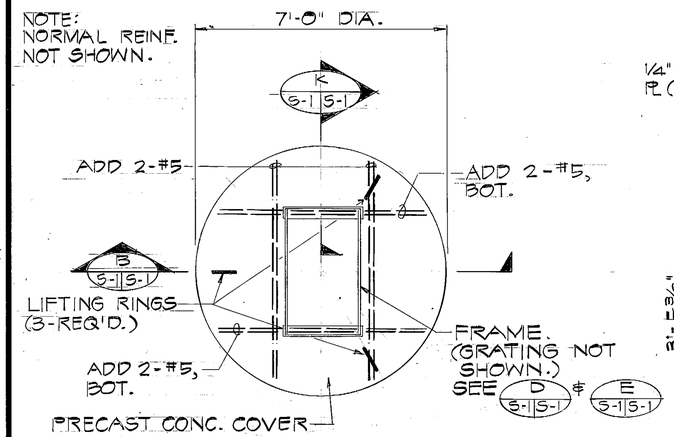
SHEET TITLE :

MISCELLANEOUS DETAILS

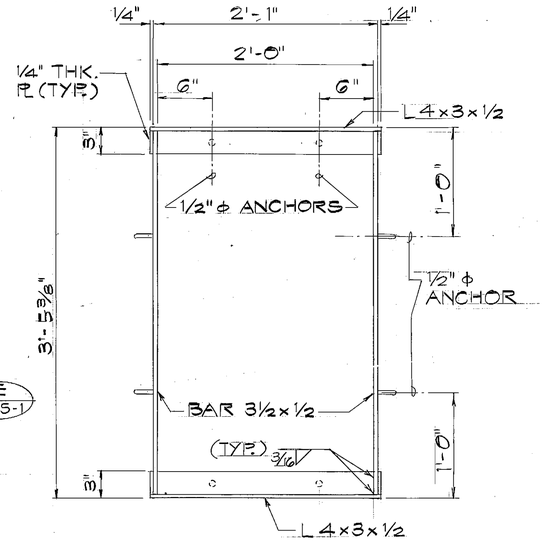
DATE :

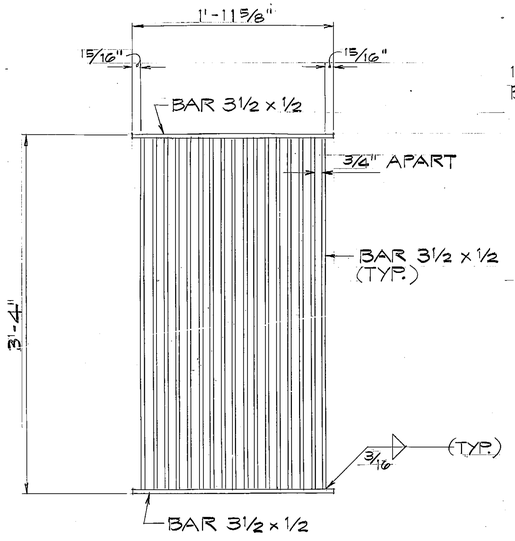
DWG. NO. : C-5

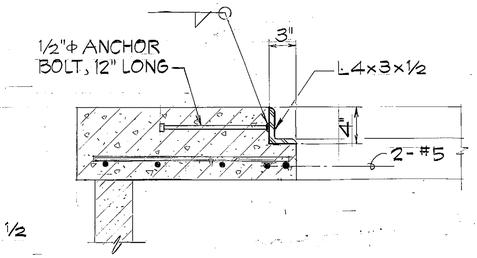
NOTE:
NORMAL REINF. NOT SHOWN.



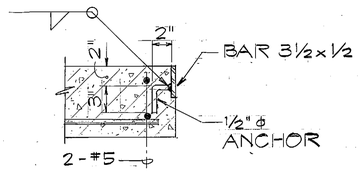
PLAN OF DRAIN PIT A
SCALE: 1½" = 1'-0"
C-3 | S-1



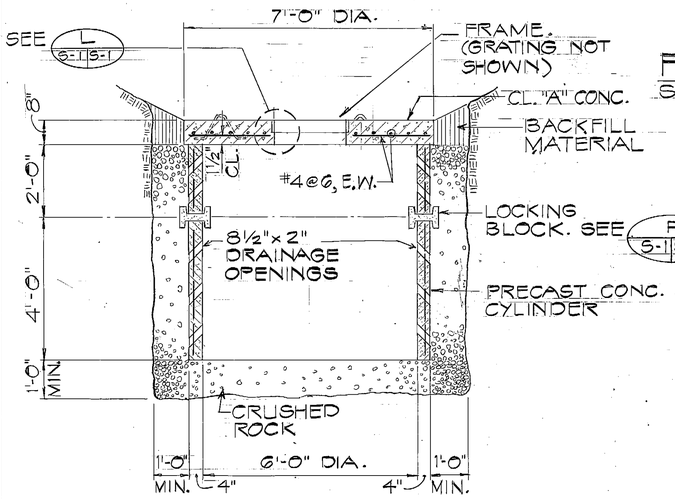




SECTION K
SCALE: 1½" = 1'-0"
S-1 | S-1

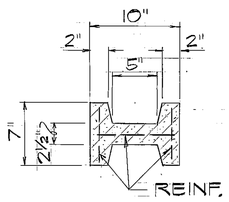


DETAIL L
SCALE: 1½" = 1'-0"
S-1 | S-1



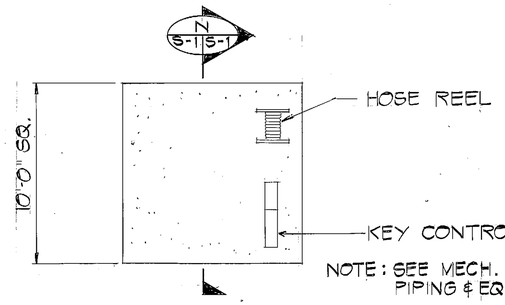
SECTION B
SCALE: ½" = 1'-0"
S-1 | S-1

FRAME DETAIL D
SCALE: 1½" = 1'-0"
S-1 | S-1

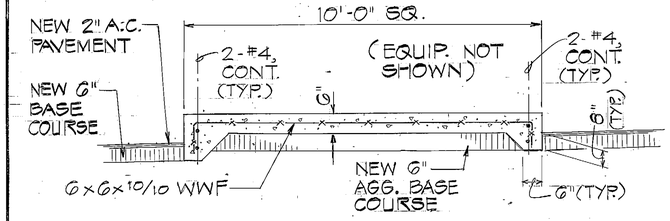


LOCKING BLOCK DETAIL F
SCALE: 1½" = 1'-0"
S-1 | S-1

GRATING DETAIL E
SCALE: 1½" = 1'-0"
S-1 | S-1



CONCRETE PAD FOR FUEL DISPENSING STATION M
SCALE: 1/4" = 1'-0"
C-3 | S-1



SECTION N
SCALE: 1½" = 1'-0"
S-1 | S-1

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
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HAWAII, U.S.A.

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PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

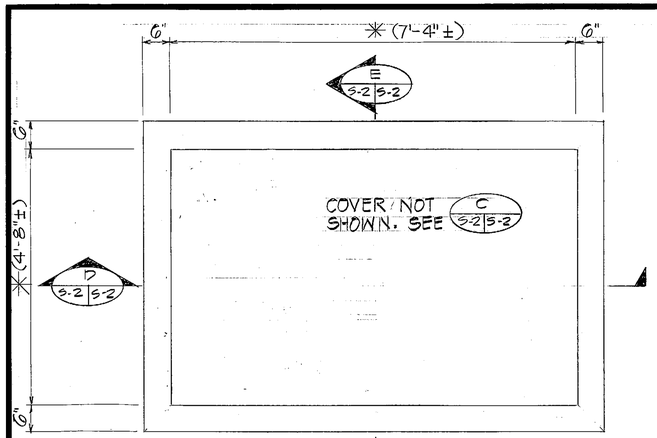
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DRAIN PIT DETAILS, CONCRETE PAD

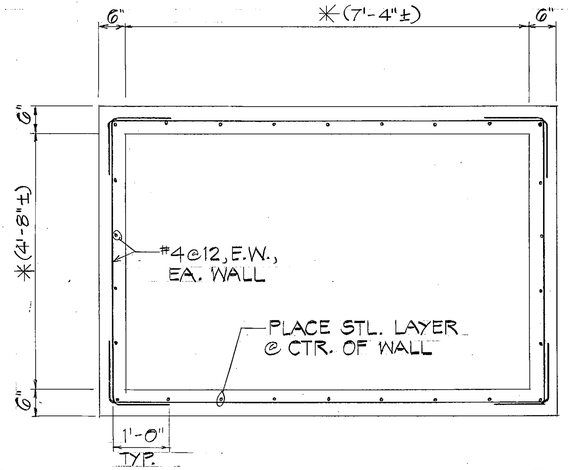
DATE :

DWG. NO. : S-1



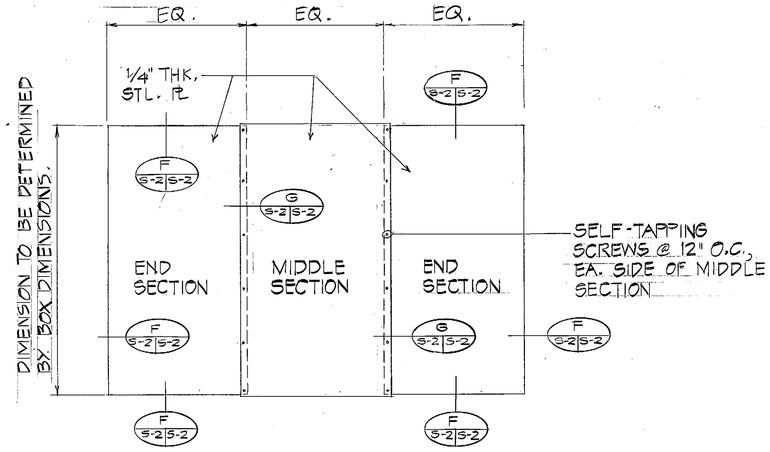
PLAN OF FILTER VESSEL BOX A S-2 S-2

SCALE: 3/4" = 1'-0"



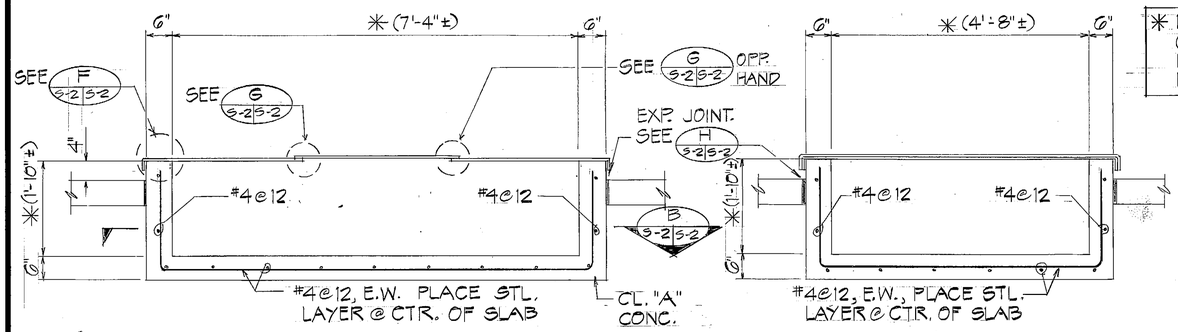
PLAN-SECTION B S-2 S-2

SCALE: 3/4" = 1'-0"



PLAN OF COVER C S-2 S-2

NO SCALE.



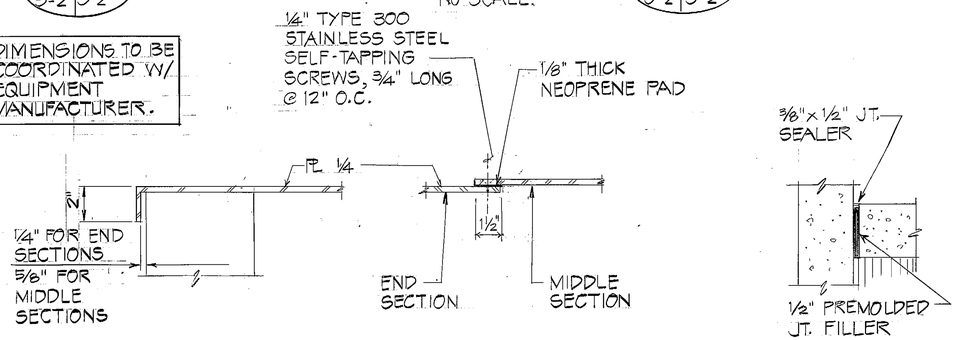
SECTION D S-2 S-2

SCALE: 3/4" = 1'-0"

SECTION E S-2 S-2

SCALE: 3/4" = 1'-0"

✳ DIMENSIONS TO BE COORDINATED W/ EQUIPMENT MANUFACTURER.



DETAIL F

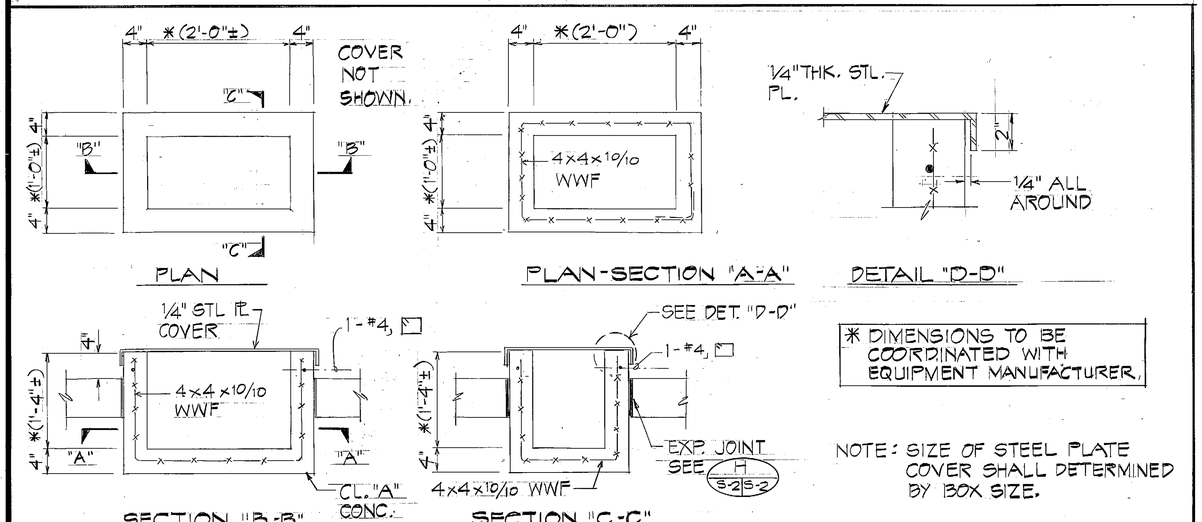
SCALE: 3" = 1'-0"

DETAIL G S-2 S-2

SCALE: 3" = 1'-0"

DETAIL H S-2 S-2

NO SCALE



✳ DIMENSIONS TO BE COORDINATED WITH EQUIPMENT MANUFACTURER.

NOTE: SIZE OF STEEL PLATE COVER SHALL DETERMINED BY BOX SIZE.

HAND PUMP PIT DETAILS I S-2 S-2

NO SCALE

STATE OF HAWAII 1959

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

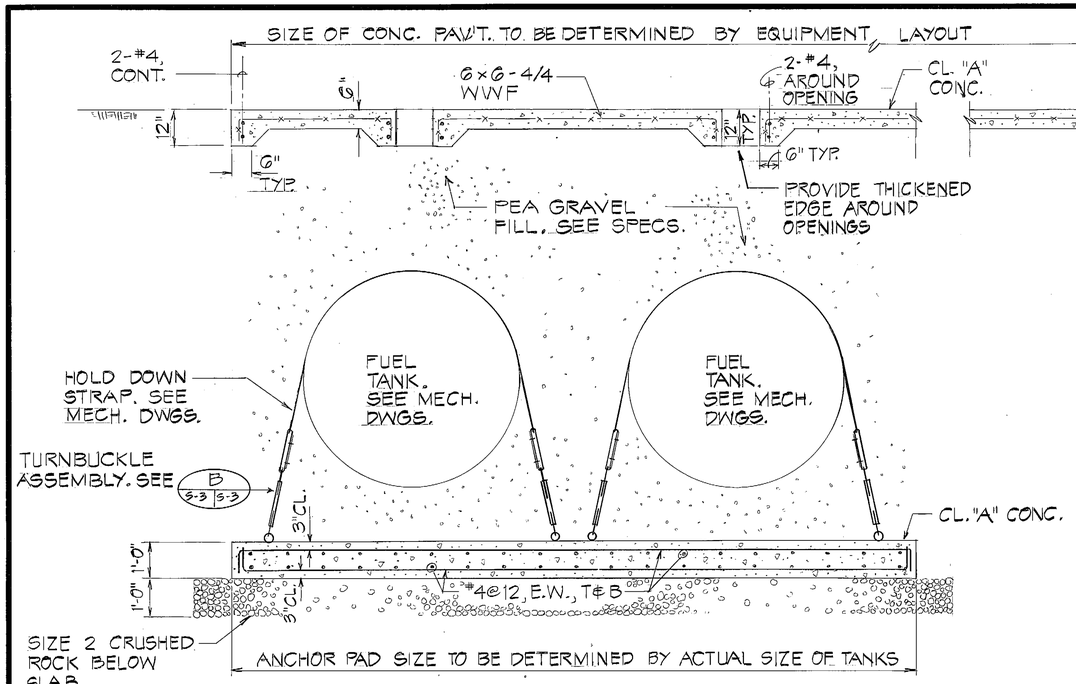
A02023-11

SHEET TITLE :

FILTER VESSEL BOX HAND PUMP PIT

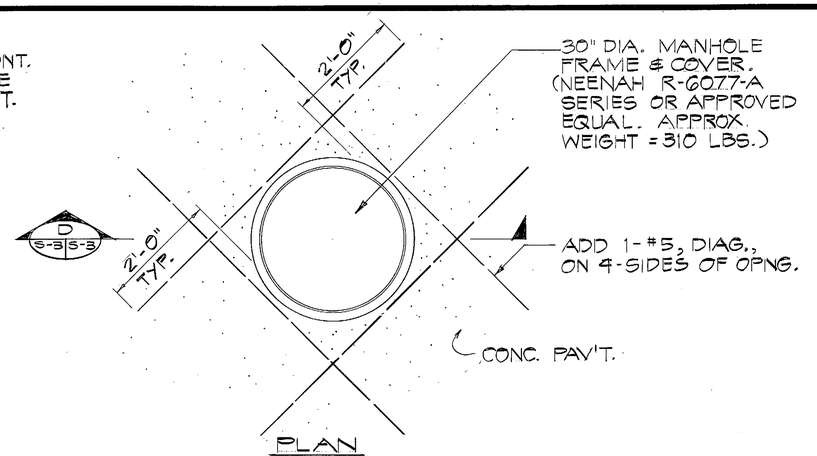
DATE :

DWG. NO. : S-2



SECTION THRU FUEL STORAGE AREA (A C-3 | S-3)

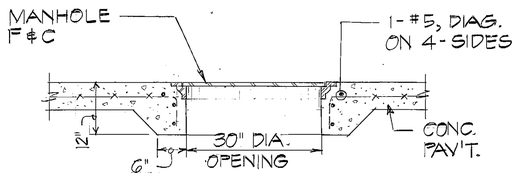
SCALE: 1/2" = 1'-0"



PLAN

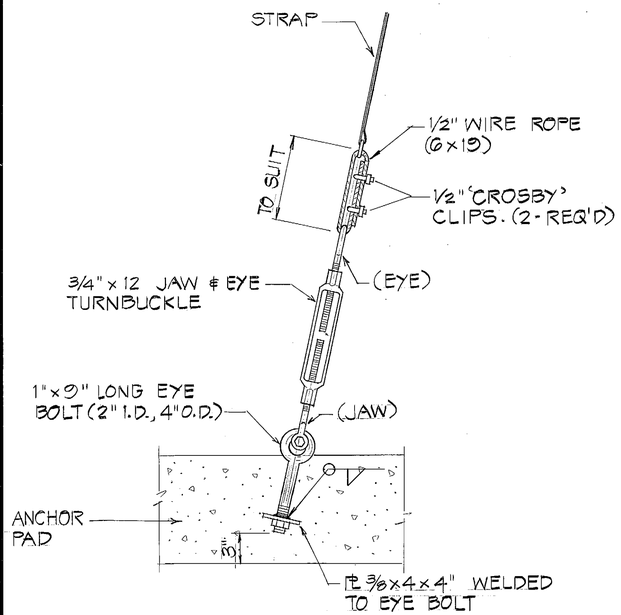
MANHOLE AT PIPING SUMP (C S-3 | S-3)

SCALE: 3/4" = 1'-0"



SECTION (D S-3 | S-3)

SCALE: 3/4" = 1'-0"



TURNBUCKLE ASSEMBLY (B S-3 | S-3)

SCALE: 1 1/2" = 1'-0"

Airports Division
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KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

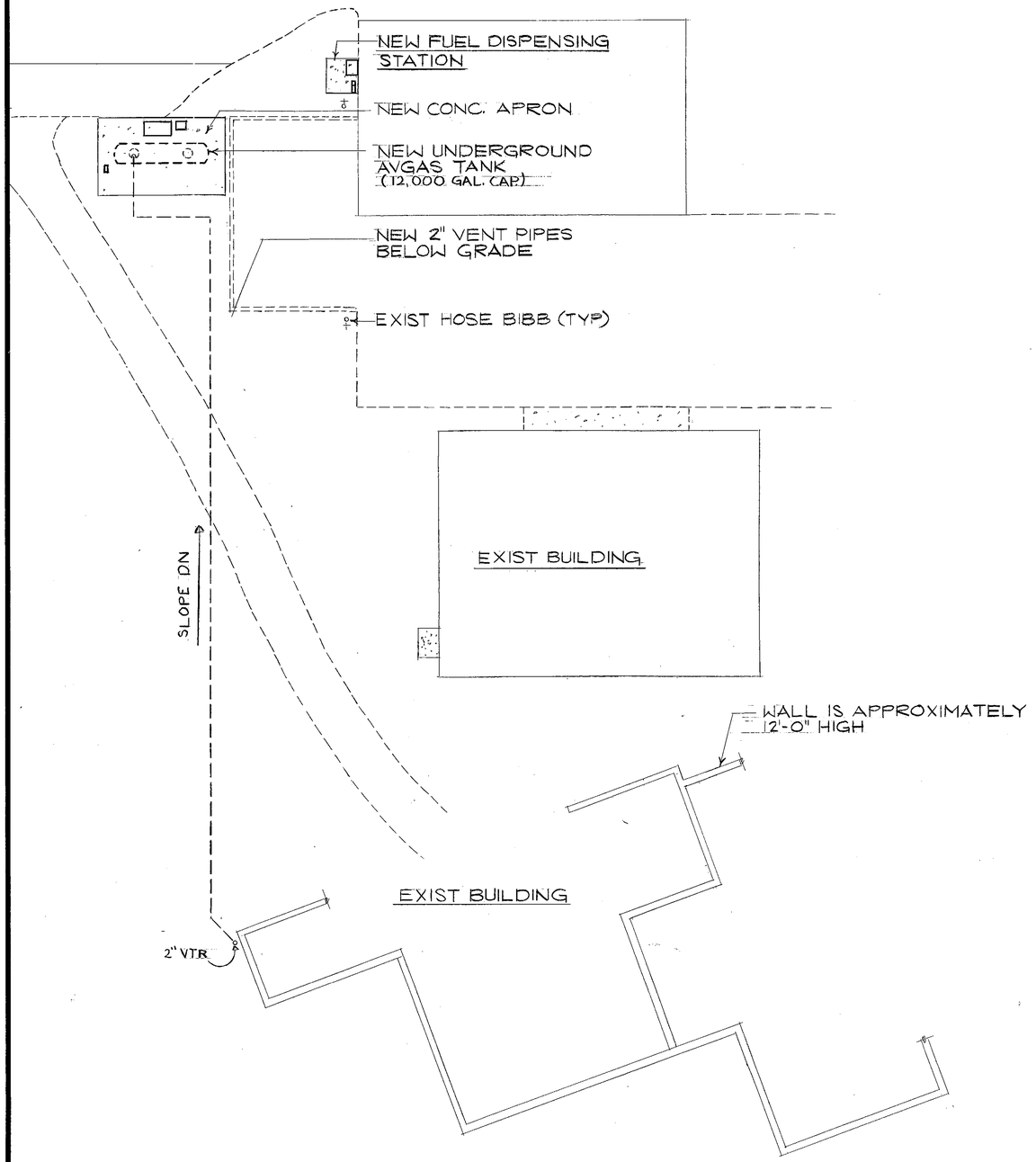
A02023-11

SHEET TITLE :

ANCHOR PAD, CONC. PAVEMENT

DATE :

DWG. NO. : S-3



SITE PLAN
1" = 20'

MECHANICAL GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY FIELD CONDITIONS, DIMENSIONS, OBSTRUCTIONS AND SIZES PRIOR TO START OF WORK.
2. PROVIDE EXPLOSION PROOF SEAL FITTINGS WHERE REQUIRED BY THE ELECTRICAL CODE.
3. PROVIDE ELECTRICAL GROUNDING OF FILTER VESSELS, FILTER CARTRIDGES, FUEL PUMPS, VALVES, AND OTHER METALLIC COMPONENTS IN THE AVGAS PIPING SYSTEM. SEE ELECTRICAL DRAWINGS FOR DETAILS.
4. PANEL SUPPORT LEGS, BASES, AND HOSE REEL CABINET FRAMING SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

LEGEND & ABBREVIATION

SYMBOL	ABBREV.	DESCRIPTION
	CONC.	CONCRETE
	DN	DOWN
	EXIST	EXISTING
	FRP	FIBERGLASS REINFORCED PLASTIC
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	TDH	TOTAL DYNAMIC HEADS
	THK	THICK
	TYP	TYPICAL
		DOUBLE WALL PIPING

Airports Division
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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

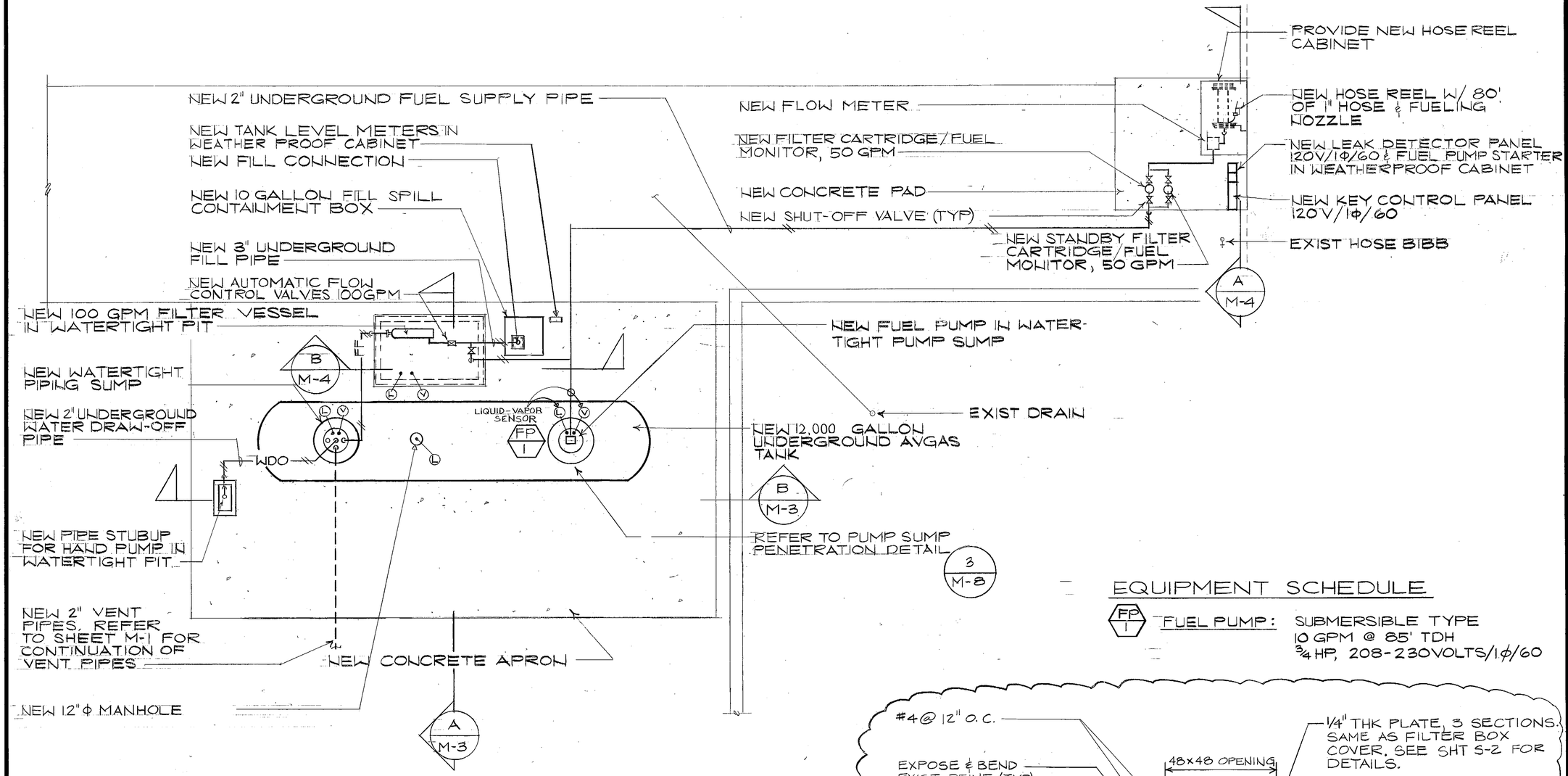
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-II

SHEET TITLE :
SITE PLAN
MECH GENERAL NOTES
LEGEND & ABBREVIATION

DATE :

DWG. NO. : M-1

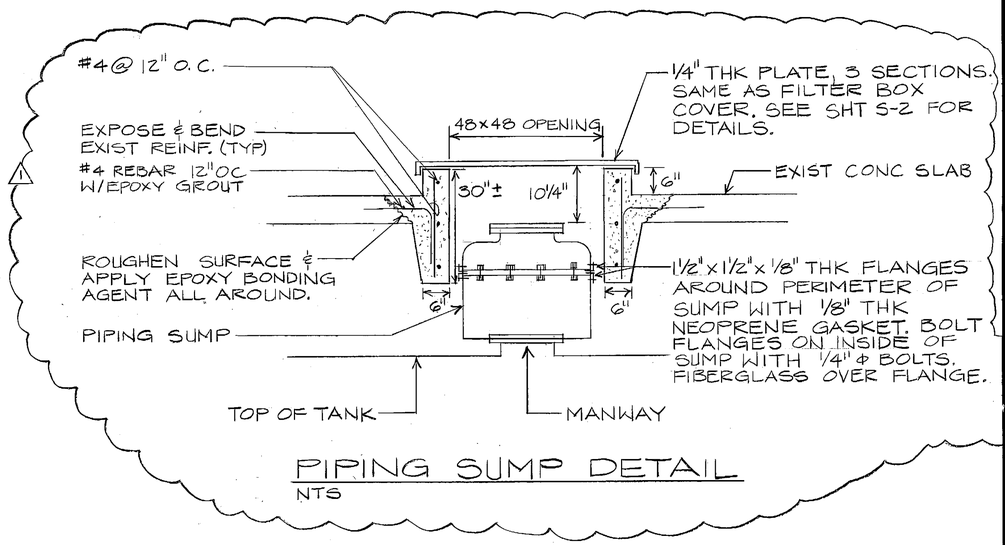


NEW FUELING SYSTEM PLAN

NOT TO SCALE

EQUIPMENT SCHEDULE

FP 1 — FUEL PUMP: SUBMERSIBLE TYPE
10 GPM @ 85' TDH
¾ HP, 208-230VOLTS/1ϕ/60



PIPING SUMP DETAIL

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED PIPING SUMP FLANGES

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

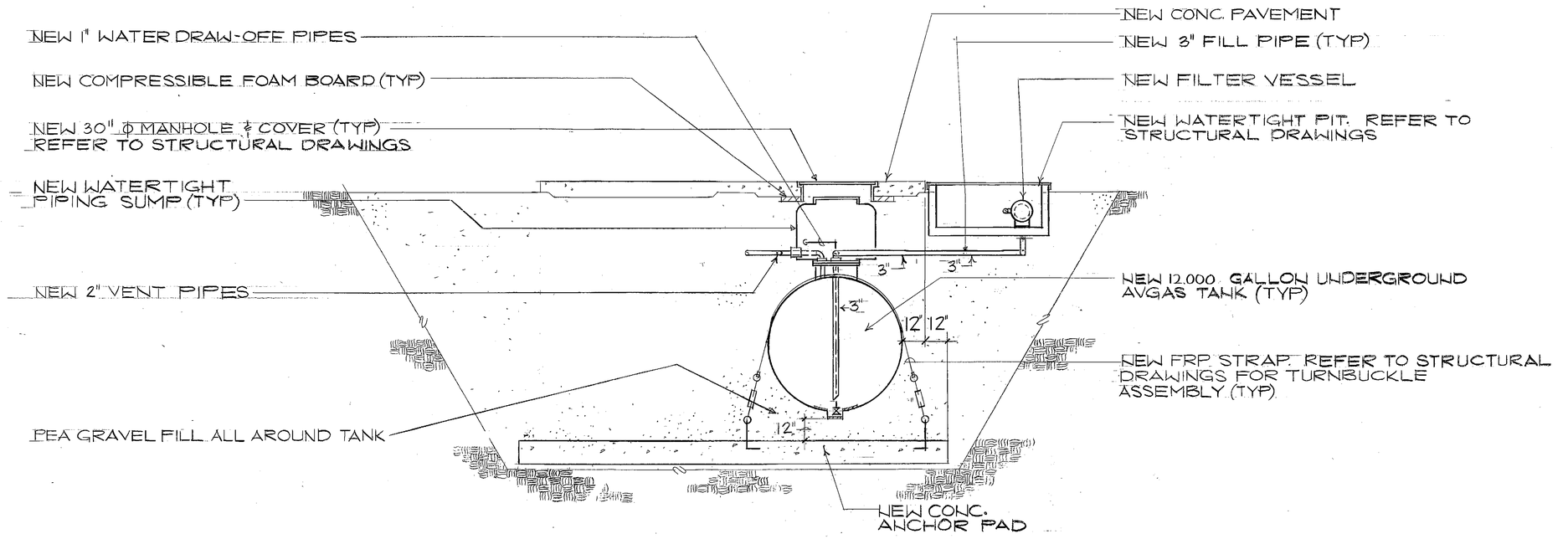
A02023-11

SHEET TITLE :

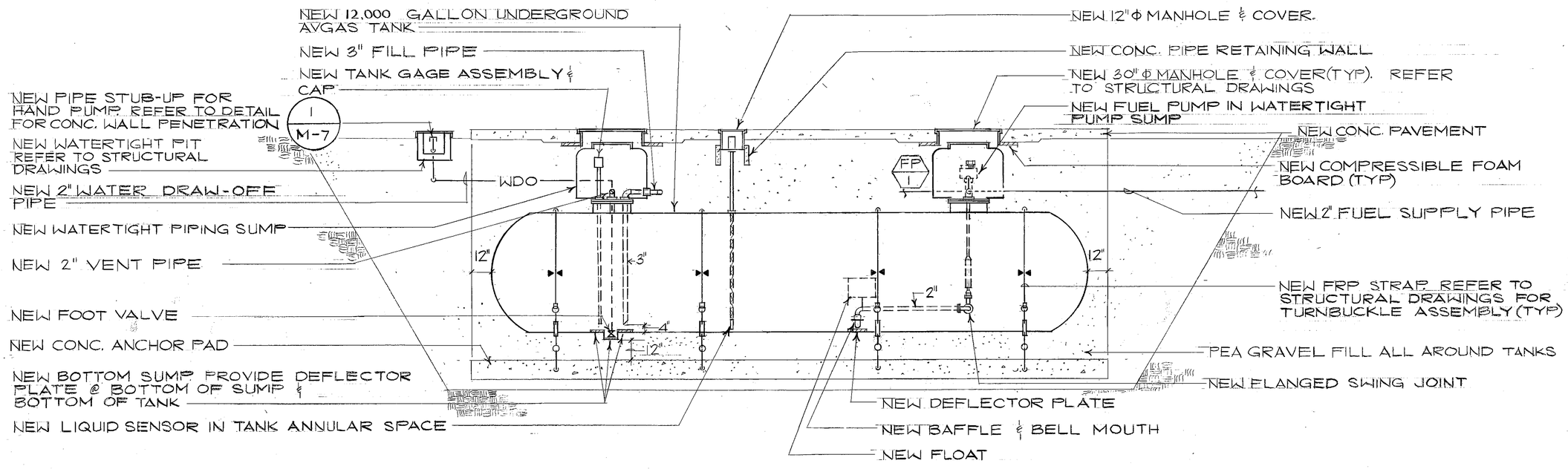
NEW FUELING SYSTEM PLAN, EQUIPMENT SCHEDULE, PIPING SUMP DETAIL

DATE :

DWG. NO. : M-2



A / M-3 SECTION
NOT TO SCALE



B / M-3 SECTION
NOT TO SCALE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

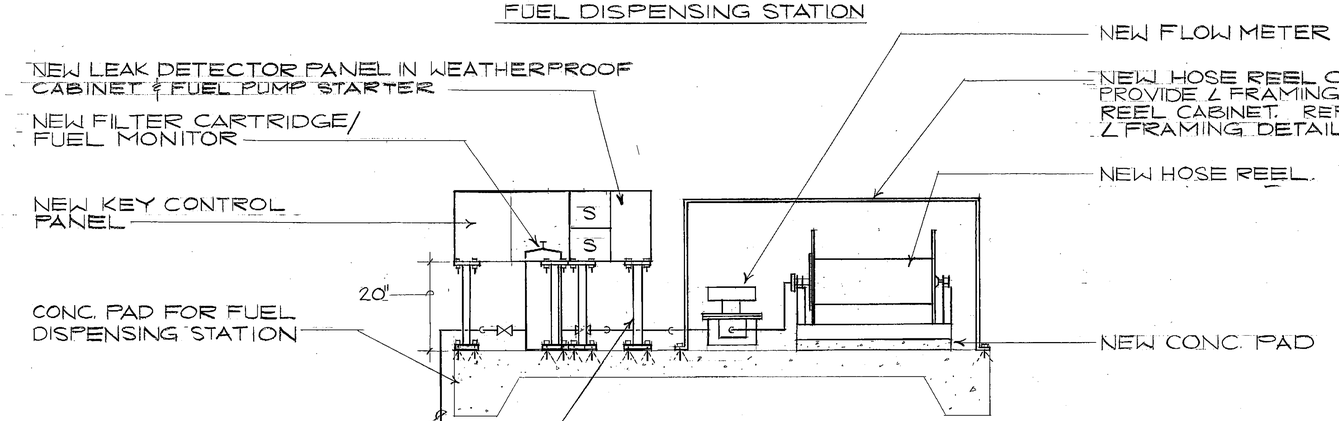
PROJECT NO. :
A02023-11

SHEET TITLE :
SECTIONS

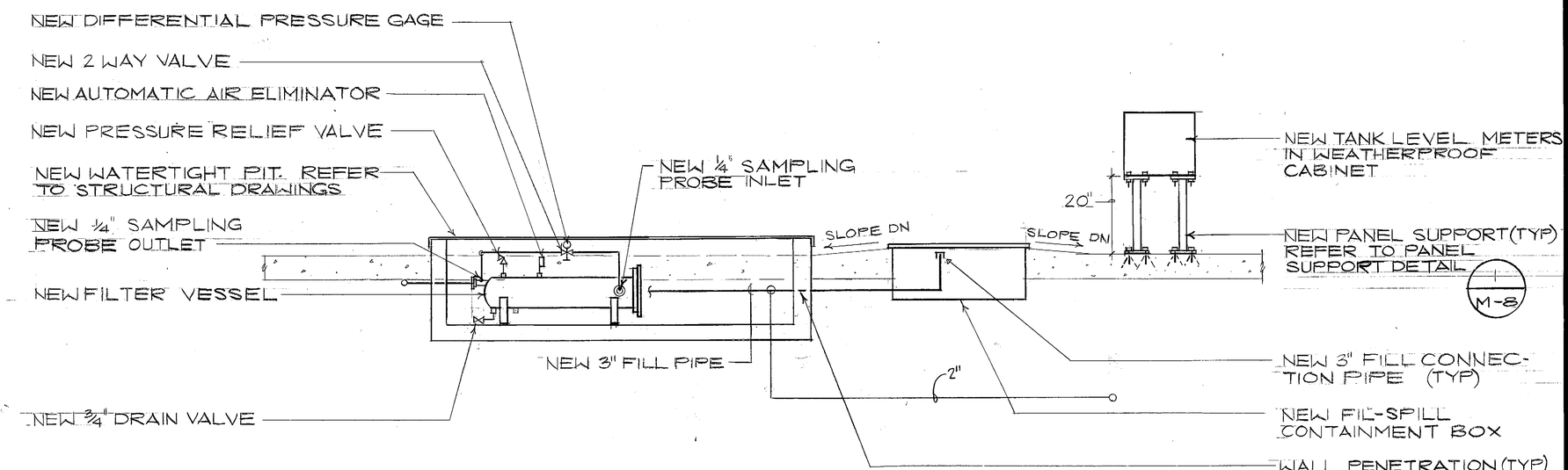
DATE :

DWG. NO. : M-3

FUEL DISPENSING STATION



A / M-4 SECTION
SCALE: 3/4"=1'-0"



B / M-4 SECTION
SCALE: 3/4"=1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

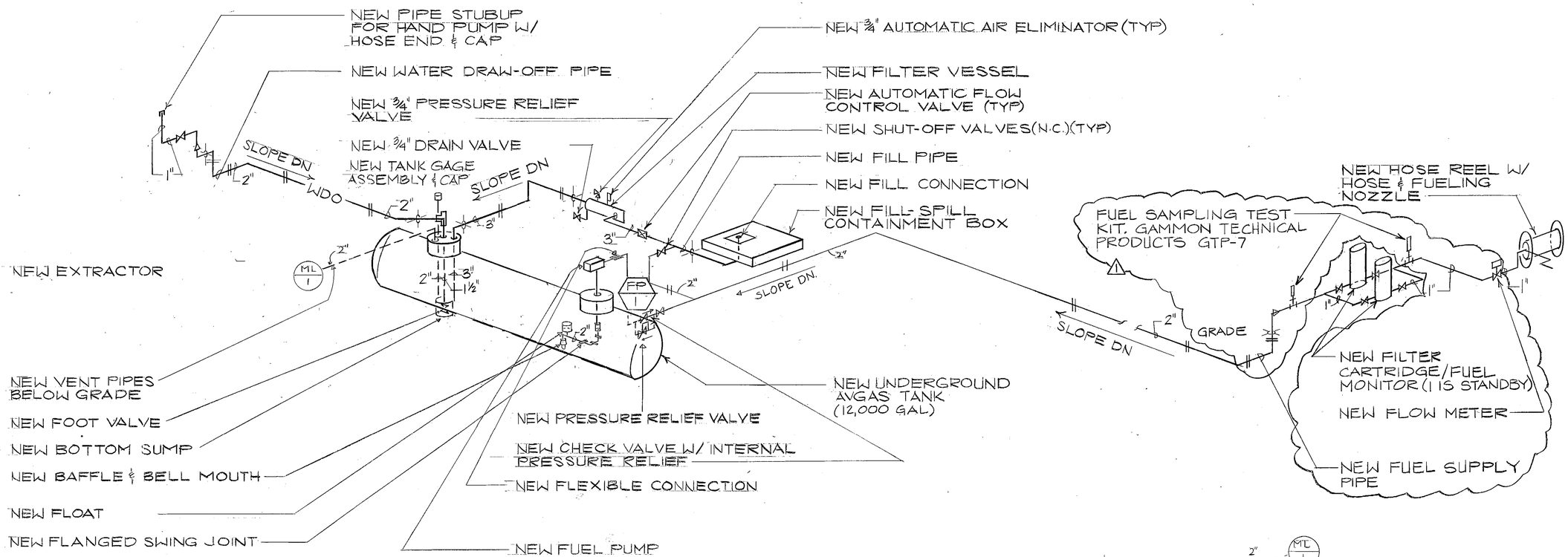
A02023-11

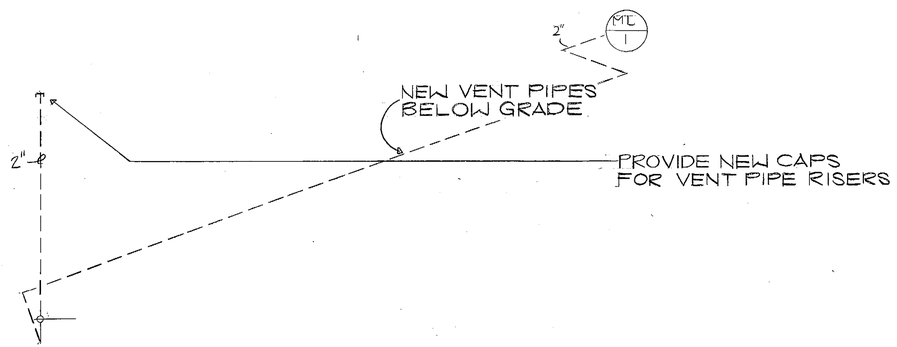
SHEET TITLE :

SECTIONS

DATE :

DWG. NO. : M-4





NEW FUELING SYSTEM PIPING DIAGRAM

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED FUEL SAMPLING TEST KIT

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

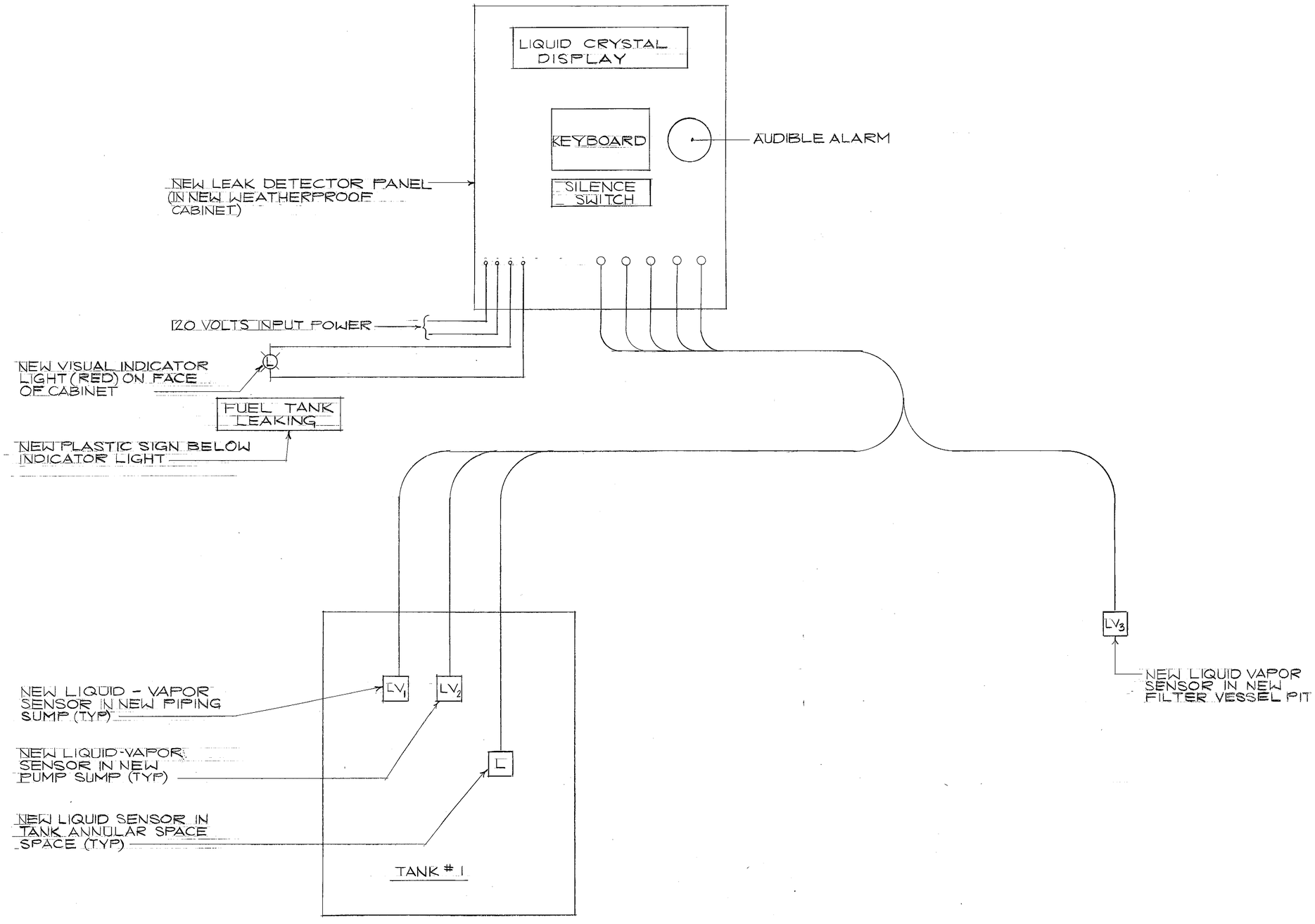
A02023-11

SHEET TITLE :

NEW FUELING SYSTEM PIPING DIAGRAM

DATE :

DWG. NO. : M-5



FUEL LEAK DETECTOR DIAGRAM

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

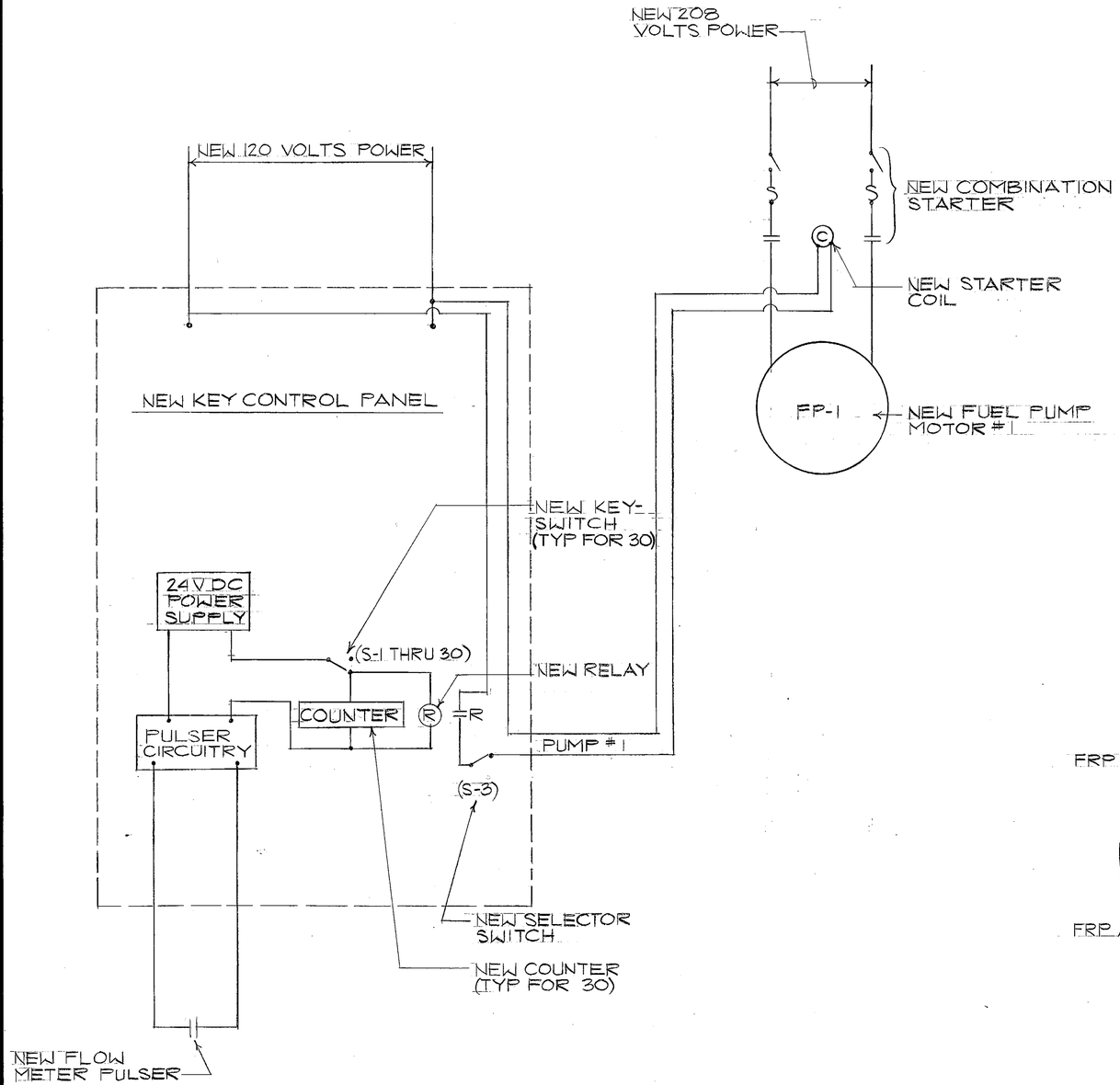
SHEET TITLE :

FUEL TANK LEAK DETECTOR DIAG.

DATE :

DWG. NO. :

M-6



FUEL SYSTEM CONTROL DIAGRAM

NTS

FUEL SYSTEM OPERATION

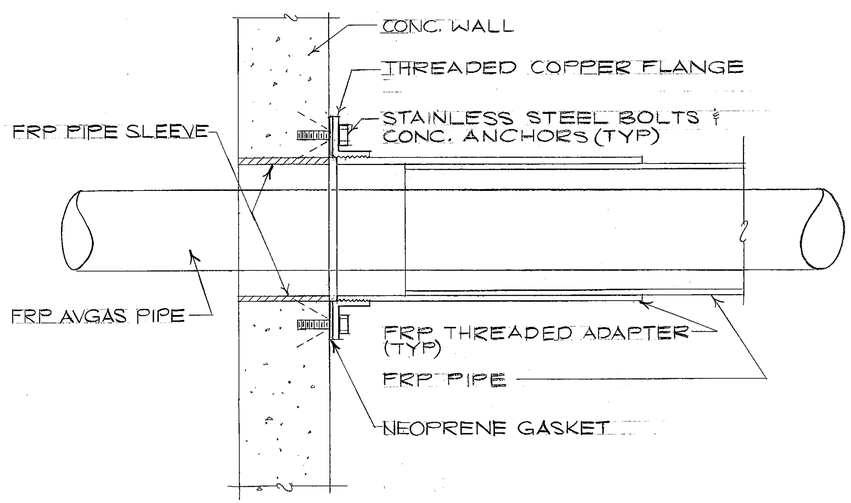
1. KEYSWITCHES (S-1 THRU S-30) CONTROL THE OPERATION OF THE FUEL PUMPS AND INDIVIDUAL COUNTERS. ONLY 1 FUEL PUMP OPERATES AT ANY TIME. SWITCH (S-3) SELECTS THE PUMP WHICH WILL BE ALLOWED TO RUN.

2. FLOW METER PULSER ACTIVATE THE APPLICABLE COUNTER.

3. SECURED AUTO-MANUAL SWITCH (NOT SHOWN) PERMITS AUTHORIZED PERSONNEL TO SWITCH OFF THE KEY CONTROL SYSTEM FOR TESTING AND SYSTEM BYPASS.

4. TIME DELAY RELAY (NOT SHOWN) PREVENTS A FALSE COUNT DURING STARTUP.

5. LOCKOUT SWITCHES (NOT SHOWN) ALLOW AUTHORIZED PERSONNEL TO LOCKOUT INDIVIDUAL KEYSWITCHES.



1 / M-7 CONCRETE WALL PENETRATION DETAIL

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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Signature

DSGN.	DRWN.	CHK'D.	APP'D.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

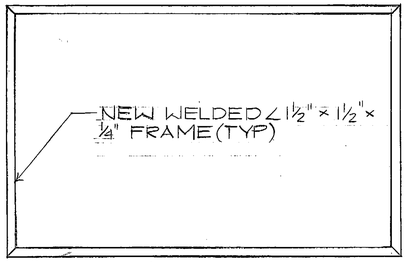
A02023-11

SHEET TITLE :

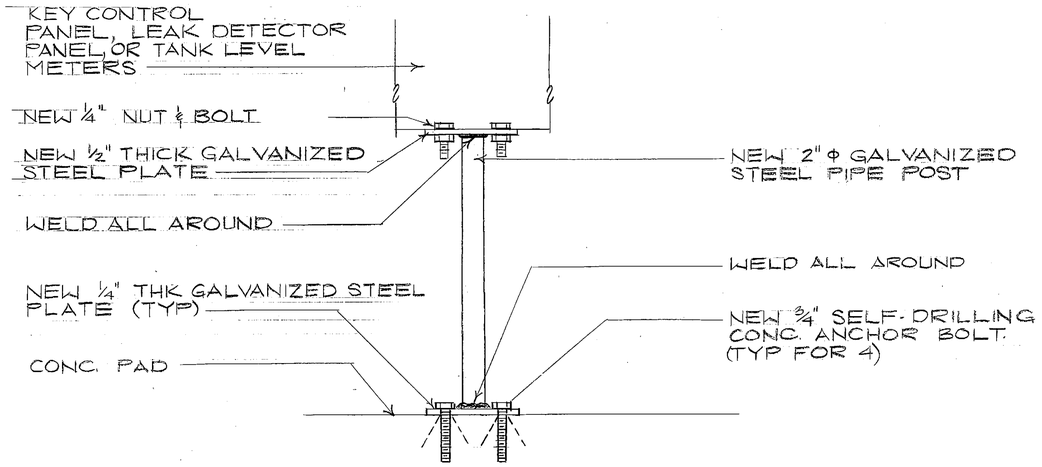
FUEL SYSTEM CONTROL DIAGRAM & OPERATION, DETAIL

DATE :

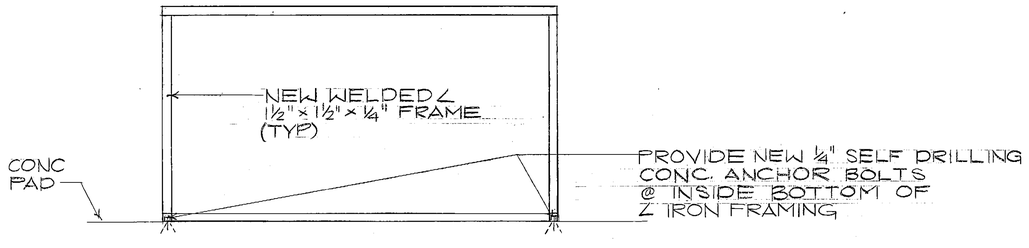
DWG. NO. : M - 7



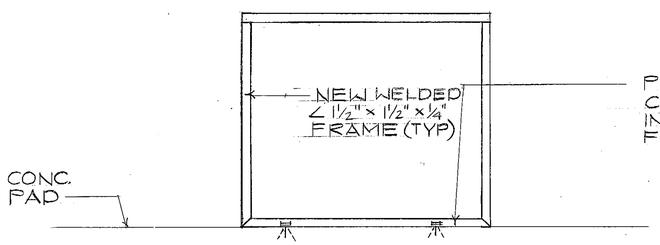
TOP VIEW



2 / M-8 PANEL SUPPORT DETAIL
NTS



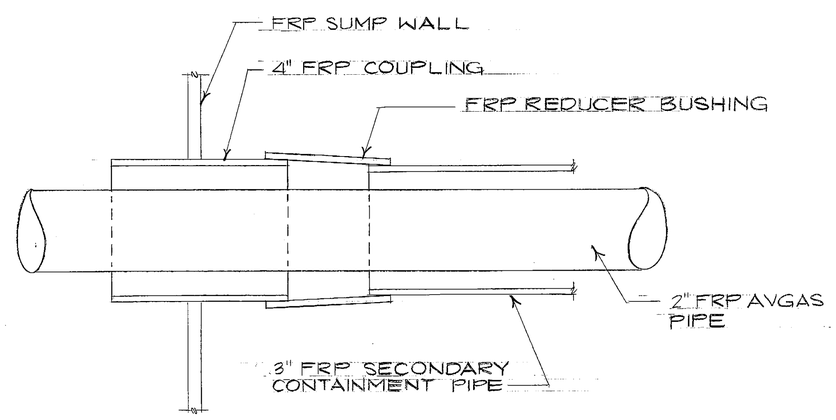
FRONT VIEW



SIDE VIEW

NOTE:
PROVIDE HOSE REEL CABINET FRAMING W/ 18 GAUGE STAINLESS STEEL SHEETS @ TOP, SIDES, & BACK. BOLT SHEETS TO ∠ FRAMING.

1 / M-8 HOSE REEL CABINET FRAMING DETAIL
SCALE: 1" = 1'-0"



3 / M-8 PUMP SUMP PENETRATION DETAIL
NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

ALLEN S. KUWANOE
REGISTERED PROFESSIONAL ENGINEER
No. 2981-H
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Allen S. Kuwanoe
Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

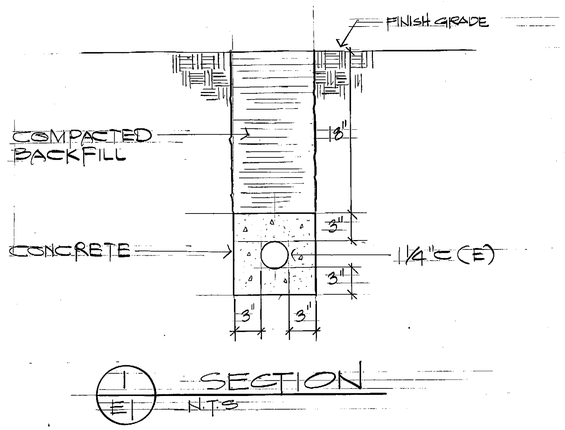
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DETAILS

DATE :

DWG. NO. :
M-8



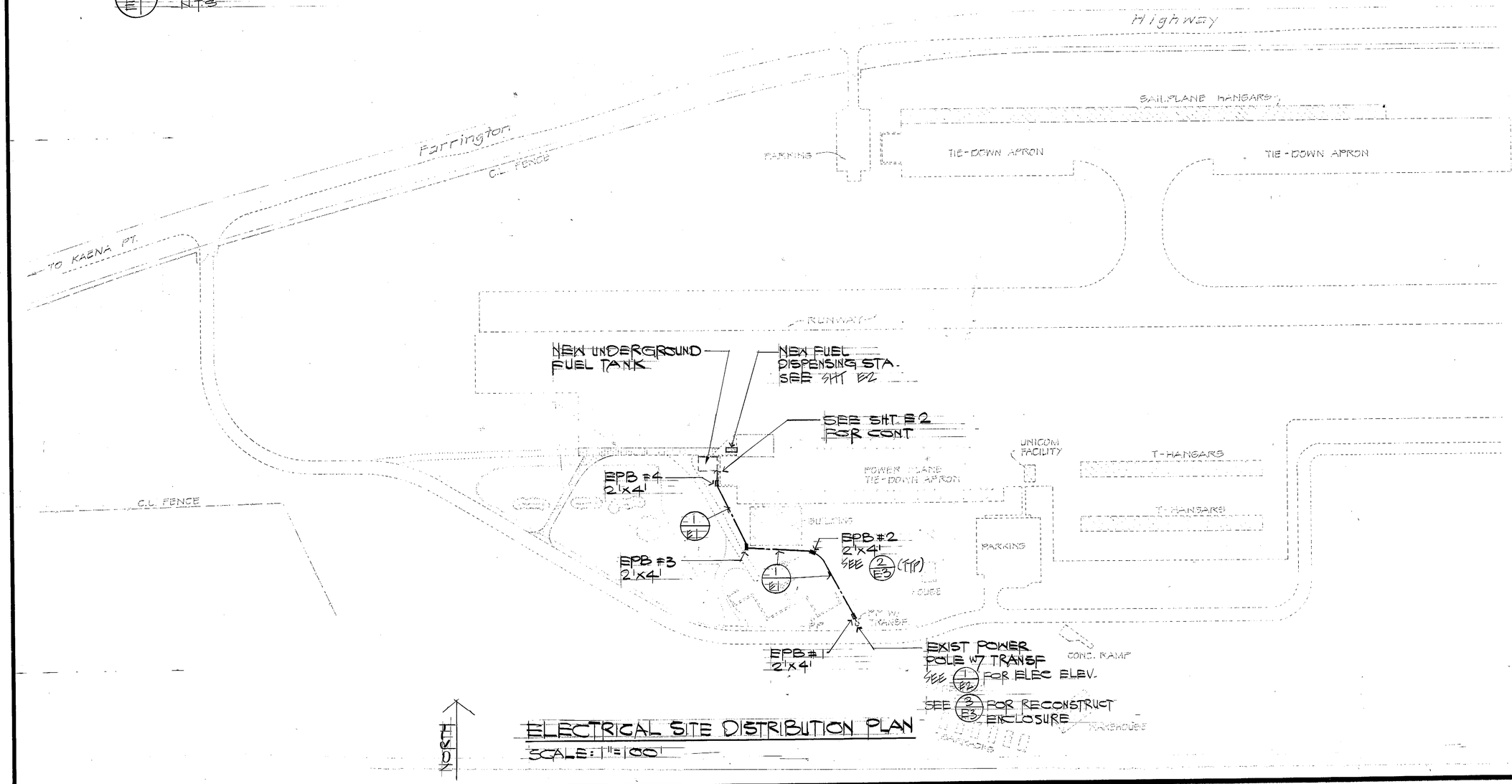
E1 SECTION N.T.S

ELECTRICAL SYMBOLS

○	EXISTING UTILITY POLE
■	ELECTRIC PULL BOX
▬	PANELBOARD
(E)	EQUIPMENT CONNECTION
⊙	GROUND TERNIMAL
EP	EXPLOSION PROOF
——·——	WIRING IN RACEWAY CONCEALED IN RACEWAY BELOW GRADE
—×—	EXPLOSION PROOF SEAL FITTING
—FS—	UNDERGROUND FUEL SUPPLY LINE, SEE (E2)

NOTES: ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUIT WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS —//— , 3 WIRES, —///— , 4 WIRES, ETC.

—⊂— INDICATES GROUNDING CONDUCTOR SIZED PER NATIONAL ELECTRICAL CODE ARTICLE 250



NORTH

ELECTRICAL SITE DISTRIBUTION PLAN

SCALE: 1"=100'

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

REGISTERED PROFESSIONAL ENGINEER
No. 10004
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

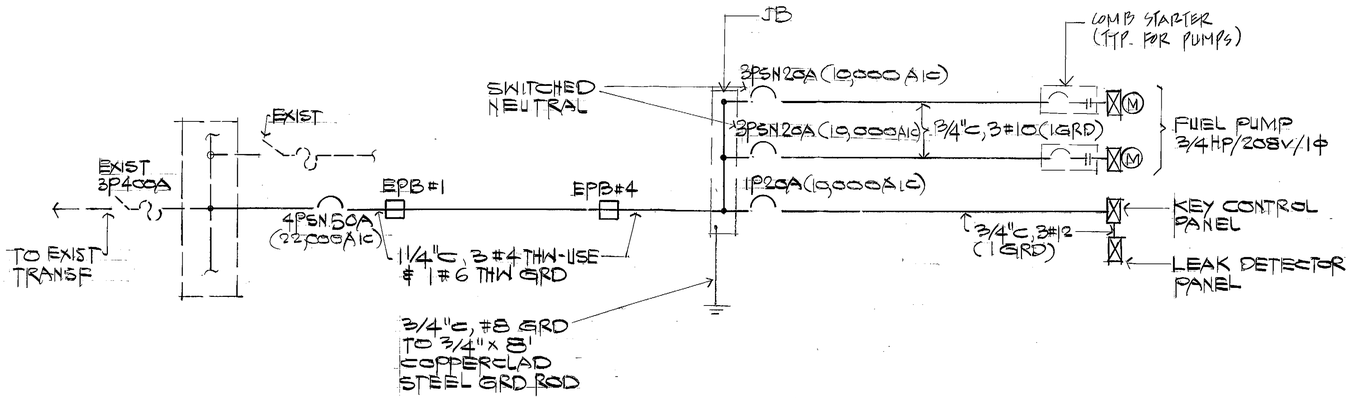
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REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

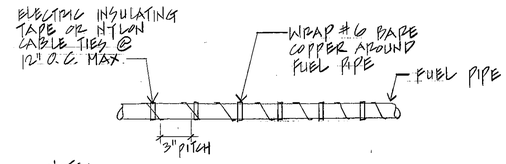
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ELECTRICAL SITE DISTRIBUTION PLAN, SYMBOLS

DATE :

DWG. NO. : E-1

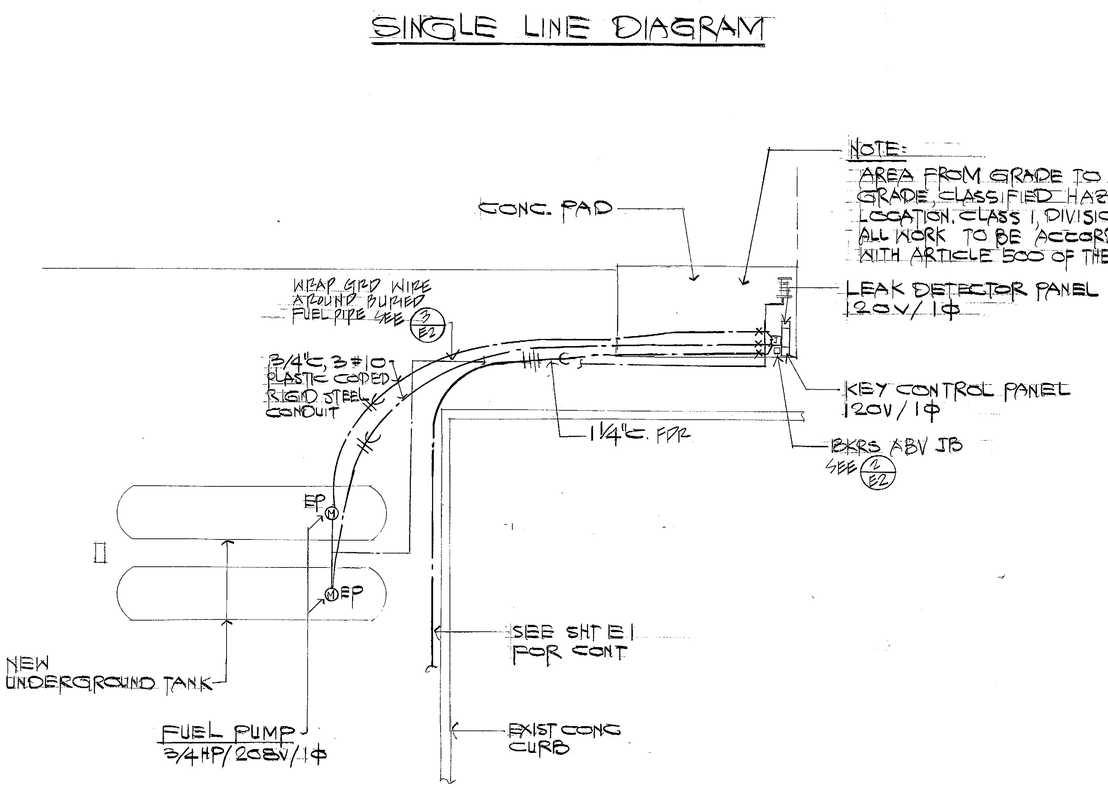


SINGLE LINE DIAGRAM

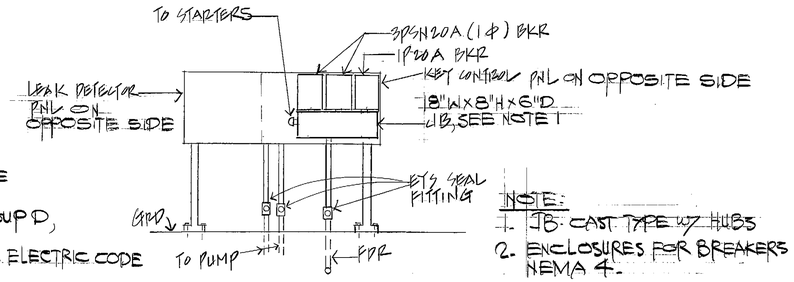


NOTES:
1. BOND & GROUND STATIC GROUND WIRES WRAPPED ON PIPES.
2. BOND & GROUND ALL VALVES, PIPE FITTINGS, BOXES & ALL METAL PARTS OF FUELING SYSTEM.
3. GROUND TO COPPER CLAD STEEL GROUND RODS

3/E2 DETAIL
N.T.S.

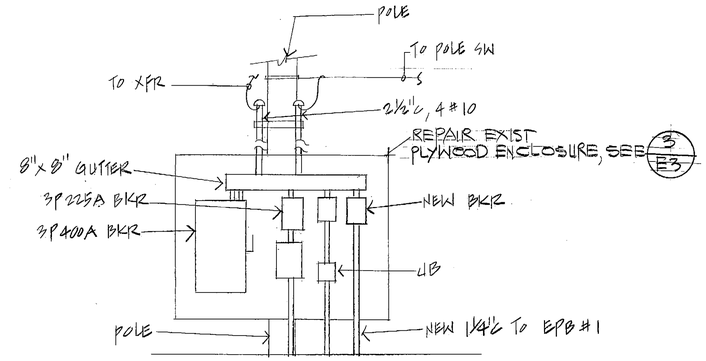


ELECTRICAL SITE PLAN
SCALE: 1/8"=1'-0"



NOTE:
1. JB: CAST TYPE W/ HUBS
2. ENCLOSURES FOR BREAKERS NEMA 4.

2/E2 ELEVATION
SCALE: 3/4"=1'-0"



NOTE: ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED.

1/E2 ELEVATION
SCALE: 3/8"=1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

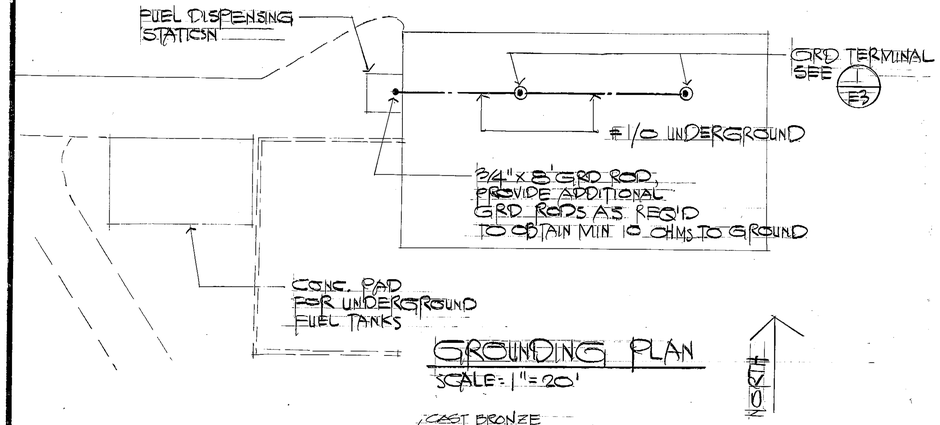
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

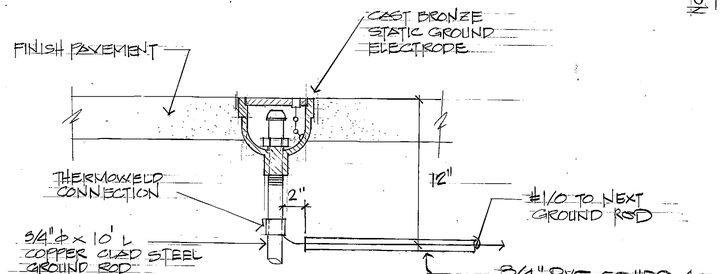
PROJECT NO. :
A02023-11

SHEET TITLE :
ELECTRICAL SITE PLAN, SINGLE-LINE DIAGRAM

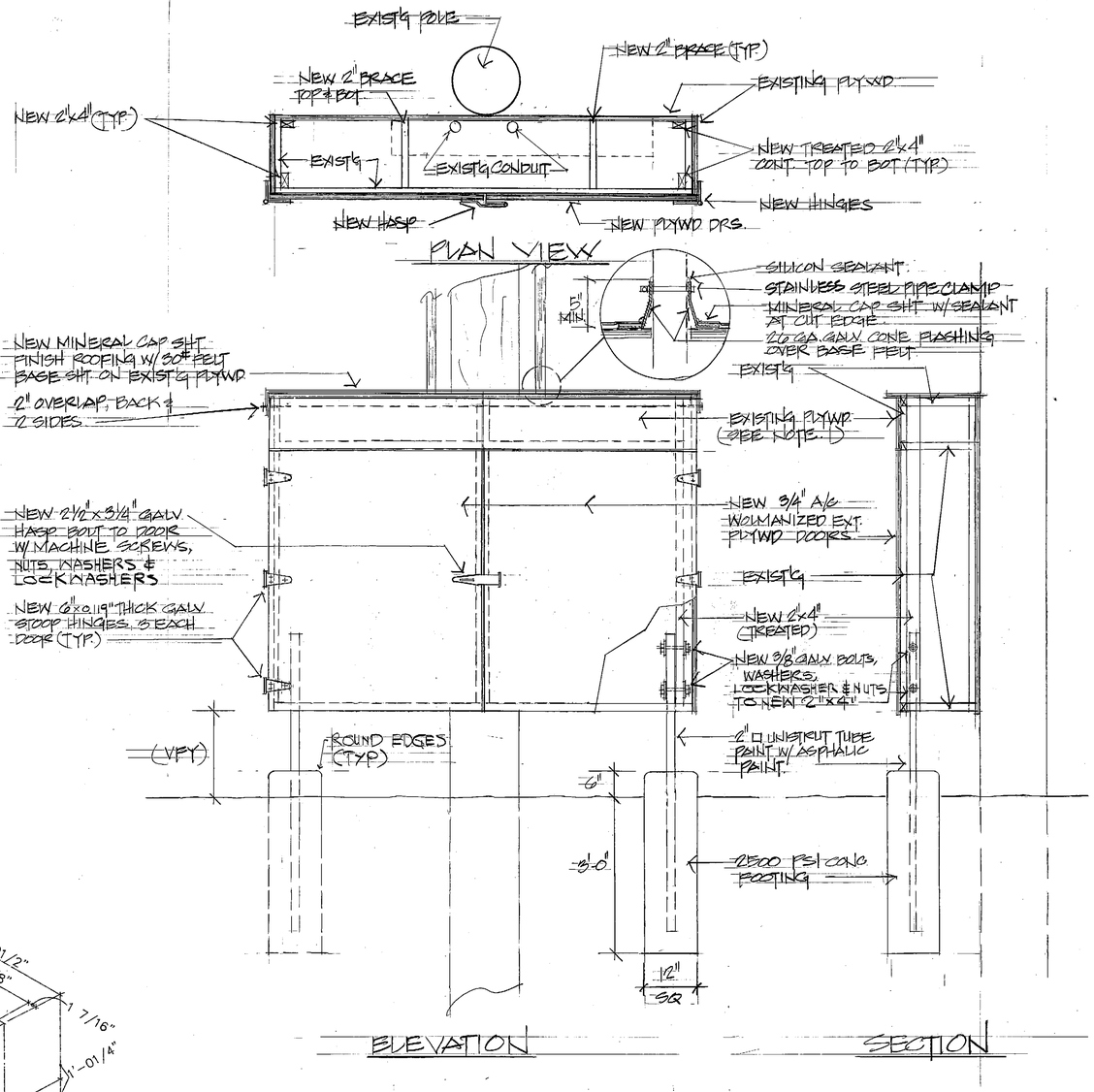
DATE :

DWG. NO. :
E-2





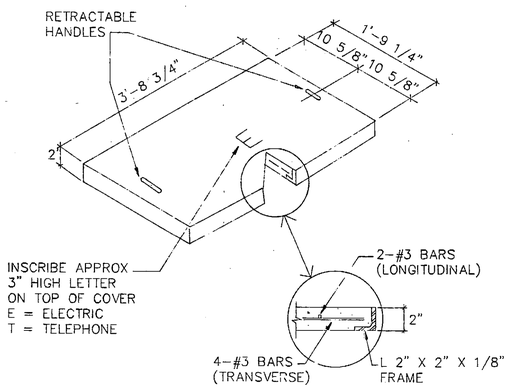
1/E6 GROUNDING DETAIL
N.T.S.



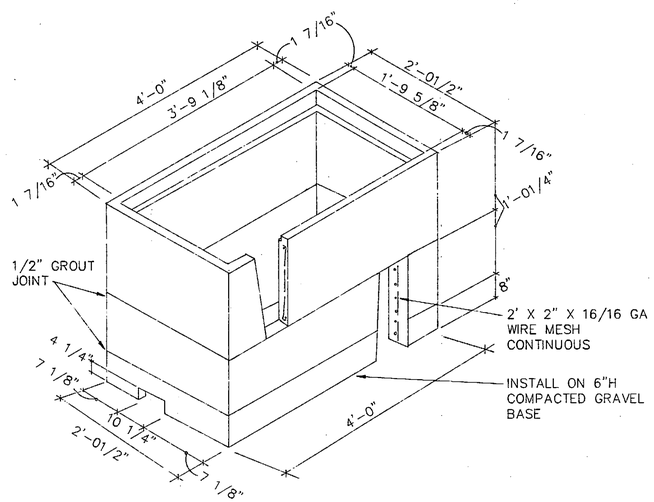
3/E3 DETAIL
SCALE: 3/4"=1'-0"

NOTES:

1. SQUARE UP EXISTING WOOD EQUIPMENT ENCLOSURE AND PROVIDE ADDITIONAL POST SUPPORTS, NAILS AND BRACING AS REQUIRED
2. PROVIDE NEW DOORS WITH NEW HINGES AND HASP. BOLT NEW HINGES TO NEW DOORS AND EXISTING PLYWD SIDING WITH #10 GALV. STEEL MACHINE SCREWS, WASHERS, LOCKWASHERS AND NUTS.
3. SAND ENTIRE EXTERIOR SURFACES INCLUDING BOTH SIDES OF NEW DRS. PRIME ENCLOSURE WITH 1 COAT OF OIL BASE PRIMER AND FINISH WITH 2 HEAVY COATS OF ACRYLIC LATEX PAINT, MEDIUM GREEN BY DEVOE #58177-01 #285 OR APPROVED EQUAL.
4. ALL EQUIPMENT AND MATERIALS EXIST'G UNLESS OTHERWISE INDICATED NEW.
5. ALL HARDWARE TO BE HEAVY HOT DIPPED GALVANIZED OR EQUAL.



CONCRETE COVER DETAIL



2/E3 2' X 4' PULL BOX DETAIL
N.T.S.

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
GROUNDING PLAN AND DETAILS

DATE :

DWG. NO. : E-3

HDH Abandoned Jet A Tank T-Hangers - EID 15011

DOT 2-061
(AIR-E 10/00)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

FIELD ORDER

	TO: Weston Solutions (Wilson) DATE: December 30, 2019 PROJECT NO: BS1928-23 FIELD ORDER NO: 01 PROJECT TITLE: Inspect & Maintenanace of AST, UST, Waste Disposal AIRPORT: JRF THIS IS YOUR AUTHORIZATION TO PROCEED AS FOLLOWS:
1. DESCRIPTION OF WORK TO PERFORMED OR DELETED	Permanently Close the AST at HDH by the end of January 2020 at the latest Permanently closed means any container or facility for which (1) All liquid and sludge has been removed from each container and connecting line; and (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.
2. NECESSITY	Cost not to exceed $10,000.00
3. REMARKS	
4. CONDITIONS & TERMS	A. [x] Contractor's detailed quotation of direct cost for the above described work in addition or deletions, in accordance with Sections 4.2, 9.3, and/or 9.5 of the Contract General Provisions, shall be submitted within 4 days from the date hereof. B. [ ] The above work is to be performed under the Force Account Provisions of Sections 4.3 and 9.4 of the Contract General Provisions. C. [ ] The above work is considered to be required under the terms and conditions of the contract and is to be performed at no additional cost to the State of Hawaii. Since the above described work is being performed for the State of Hawaii, any agreement herein and any increase or decrease in costs resulting herefrom are subject to approval of the Director; and subsequent to negotiations, a formal Contract Change Order will be prepared for execution.
5. CONTRACTOR'S ACKNOWLEDGMENT	Reviewed and Accepted: Name of Contractor By: Name & Title of Authorized Representative Signature Date Prepared by: DOT-Airports EE Engineer Name & Title of Authorized Representative Date Approved By: Departement ot Transportation, Airports Division 12/30/2019 Paul M Nakasone Project Manager Date

Weston Solutions, Inc.
841 Bishop Street, Suite 2301
Honolulu, Hawaii 96813
(808) 585-0448 • Fax (808) 585-7378

30 December 2019

Paul Nakasone
State of Hawaii Department of Transportation
Airports Division

Re: Proposal for FO#01 Remove from Service of Abandoned Jet AST at HDH - T-Hangars

Dear Mr. Nakasone:

Weston Solutions, Inc. has prepared this proposal to permanently close the 300 gallon abandoned Jet A aboveground storage tank (EID 15011) at HDH Dillingham Airfield, Waialua, Hawaii.

Scope of Work

- Mobilization/Demobilization
- Cleaning of AST
- Transport and disposal of residual and rinsate
- Capping pipe and nozzles
- Disposal of demolished components
- Signage, site documentation and reporting

Assumptions

The below assumptions have been made in developing a cost proposal for the above described tasks. These are:

1. Unrestricted access to the tank
2. Rinsate/fuel removal and disposal will be limited to 100 gallons
3. Contractor to store rinsate onsite until picked up for disposal
4. Laydown area next to t-hangars or at the adjacent baseyard for vehicles and equipment

WESTON proposes completing the scope of work for an estimated cost of $8,228.00. Scope details and a cost estimate for this project are provided in the table below.

Task Name	Amount
Mobilization, Cleaning, Sampling, Sample Management, and Disposal	$5,022.00
Capping Nozzles	$1,029.00
Documentation and Reporting	$1645.00
HI GET	$532.00
Total	$8,228.00

Please do not hesitate to contact me if you have any questions or require clarifications at wilson.liang@westonsolutions.com or by telephone at (808) 275-2905.



Wilson Liang
Project Manager
Weston Solutions, Inc.

Weston Solutions, Inc.
841 Bishop Street, Suite 2301
Honolulu, HI 96813
Phone: 808.275.2900
Fax: 808.585.7378

PHOTO LOG

Project No./Contract No.	Project Title / Location	Day of Report	Report No.
BS1928-23 Field Order #1	Remove Tank From Service HDH Abandoned Jet A Tank T-Hangers - EID 15011	10-Jan-20	

PHOTO LOG

Photo 1



Overview of abandoned Jet A fuel tank.

Photo 2



Tank appurtenances removed.

Photo 3



Continue to remove tank appurtenances prior to emptying tank residuals and cleaning of tank.

Photo 4



Tank has been washed clean and is empty of all residuals. Contractor performing checks and procedures.

PHOTO LOG

Project No./Contract No.	Project Title / Location	Day of Report	Report No.
BS1928-23 Field Order #1	Remove Tank From Service HDH Abandoned Jet A Tank T-Hangers - EID 15011	10-Jan-20	

PHOTO LOG

Photo 5



Top view of tank. Appurtenances removed and threaded caps installed on ports after removal of tank residual and internal tank cleaning performed.

Photo 6



Existing fuel dispenser demolished and removed off site.

Photo 7



Application of "not in service" labels posted on tank, inclusive of date.

Photo 8



Overall view of abandoned Jet A tank, now removed from service.

OCEANIC COMPANIES, INC.
P.O. Box 700669
Kapolei, HI 96709
(808) 682-0113 ♦ FAX (808) 682-0662
Contractors Lic: ABC 19545

Certificate of Tank Cleaning

I, Project Manager, Geoffrey Chu, hereby certify that the privately owned, abandoned Jet A - 1000 gallon above ground storage tank located at the Dillingham Airfield – 69-415 Farrington Highway – Waialua, HI 96819 has been washed clean and is empty of all residuals.

G Chu
Name/Signature

1/10/2020
Date

Limited Asbestos and Lead Paint Survey

Environmental Science International
354 Uluniu Street, Suite 304, Kailua, Hawaii 96734
(808) 261-0740 phone

120037:DO-38

August 7, 2023

State of Hawaii Department of Transportation, Airports
Engineering Maintenance
400 Rodgers Blvd. Suite 700
Honolulu, Hawaii 96819

Attention: Mr. Benton Ho

Subject: Letter Report – Limited Asbestos and Lead Paint Survey, Kawaihapai Airport, Fuel Pumping Station, Honolulu, Hawaii.

This letter report documents the limited asbestos and lead paint survey performed by Environmental Science International on behalf of the State of Hawaii Department of Transportation, Airports. The survey was conducted in association with the Underground Storage Tank Leak Removal Project. The survey only included visually and physically accessible materials in the areas that could be disturbed as part of the UST Removal at the Fuel Pumping Station located North of Hanger 91A.

A Hazardous Materials Review Form was submitted to the HDOTA Asbestos Manager. No asbestos information was found in the HDOTA asbestos database. The Hazardous Material Review Form is included in Appendix D.

Asbestos Sampling and Analysis

ESI personnel (Tiana Rey and Brandon Yoza) inspected the areas around the Fuel Pumping Station associated with the UST for ACM. Suspect ACM included concrete and roofing materials. Following the inspection,15 samples of suspect ACM were collected. The sample area is shown in Figure 1a. A description of the materials sampled and photographs of the materials are provided in Appendix A.

The samples were collected in accordance with Hawaii Administrative Rules Title 11, Chapter 501, Section 7. Following sample collection, the samples were placed into transparent polyethylene Loctop sample bags and transported to Hawaii Analytical Laboratory for analysis. Chain-of-custody forms were used to track the samples from collection to final disposition at the

laboratory. HAL is a current participant in the National Voluntary Laboratory Accreditation Program.

The samples were analyzed for asbestos by polarized light microscopy using EPA Method 600/R-93-116. Asbestos was not detected in any of the samples. A summary of the laboratory results is included in Appendix A. The laboratory report and chain-of-custody forms are included in Appendix C.

Lead Sampling and Analysis

ESI personnel (Tiana Rey and Brandon Yoza) inspected the materials associated with the Fuel Pumping Station, that could be disturbed as part of the UST Removal for lead paint. A total of 16 paint chip samples were collected. The sample locations are shown in Figure 1b. A description of the paint and photographs are provided in Appendix B.

The samples were collected using a hammer and a chisel. Each sample consisted of approximately 0.25 grams of paint. The samples were placed into laboratory-supplied polyethylene Loctop sample bags and transported to HAL for analysis. A Chain-of-custody form was used to track the samples from collection to final disposition at the laboratory. HAL is a current participant in the National Lead Laboratory Accreditation Program. The tools used to collect the samples were wiped clean between sample locations to avoid cross-contamination.

The samples were analyzed for lead using the NIOSH Method 7082m. Lead-based and lead -containing paint was identified. A summary of the laboratory results is included in Appendix B. The laboratory report and chain-of-custody form are included in Appendix C.

Summary, Recommendations, and Conclusions

ESI collected 15 samples of suspect ACM and 16 samples of suspect lead paint. Asbestos was not detected in any of the samples. Lead-based and lead-containing paint was identified on all the sampled surfaces except for the paint outside the enclosed structure. Please refer to the OSHA Lead in Construction standard (29 CFR 1926.62) involving paints that contain lead.

Asbestos and lead may be present in materials and paint that were not sampled during the survey. Should suspect ACM or suspect lead paint other than those identified in Appendices A and B be encountered, ESI recommends that representative samples of the suspect materials be collected and analyzed in accordance with applicable federal and state requirements.

ESI appreciates this opportunity to assist you with this project. Should you have any questions regarding this letter report or require further assistance, please contact us at (808) 261-0740.

Sincerely,



Tiana Rey
Environmental Scientist
Environmental Science International, Inc.
State of Hawaii Asbestos Certification No. HIASB-5120
State of Hawaii Lead Risk Assessor Certification No. PB-1275

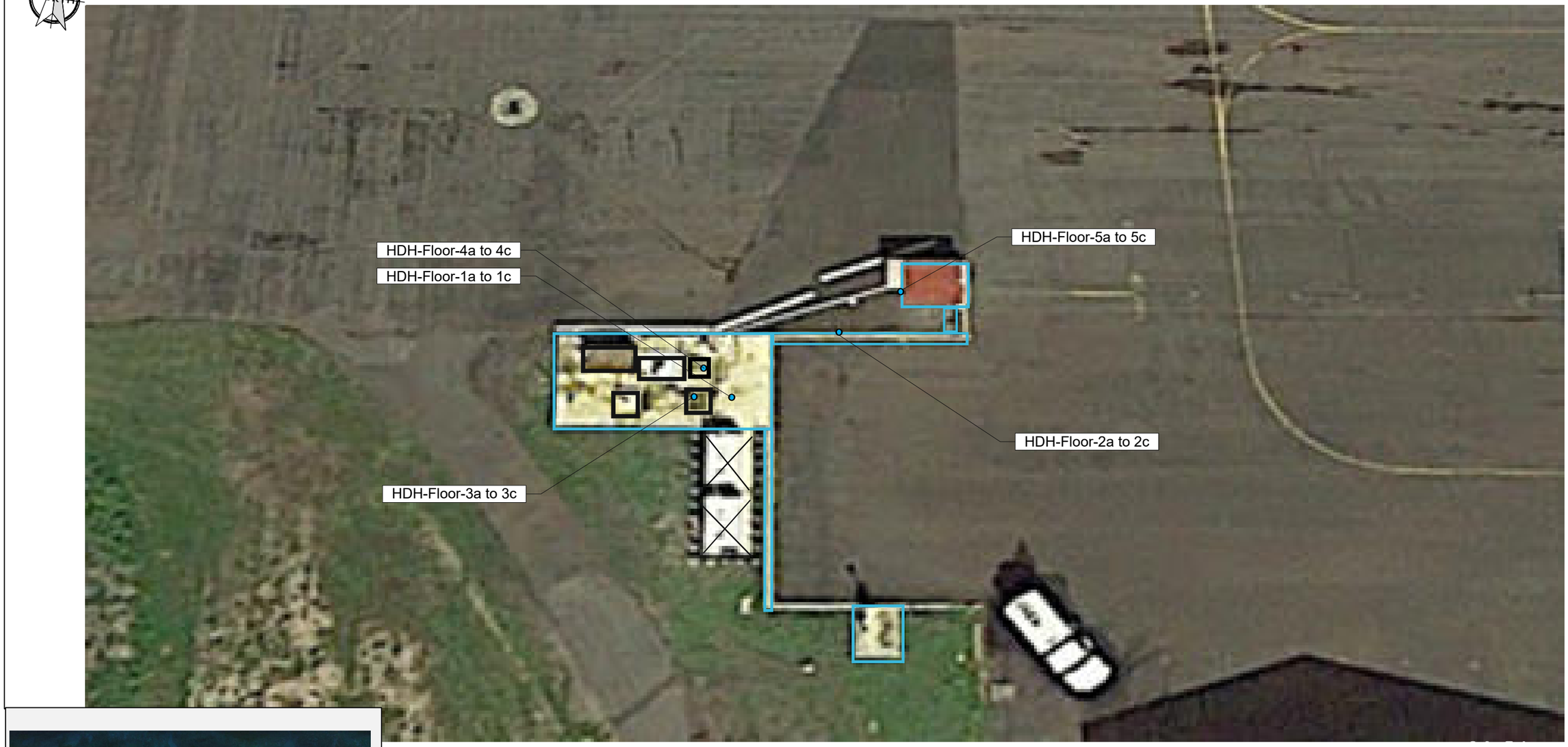
Brandon A. Yoza

Brandon Yoza
Environmental Scientist
Environmental Science International, Inc.
State of Hawaii Asbestos Certification No. HIASB-4996
State of Hawaii Lead Risk Assessor Certification No. PB-1207

Attachments: Figures - Sample Location Maps
Appendix A - Summary of Asbestos Results
Appendix B - Summary of Lead Results
Appendix C - Laboratory Report and Chain-of-Custody
Appendix D - Acronyms
Appendix E - Hazardous Materials Review Form

Figures

Sample Location Maps



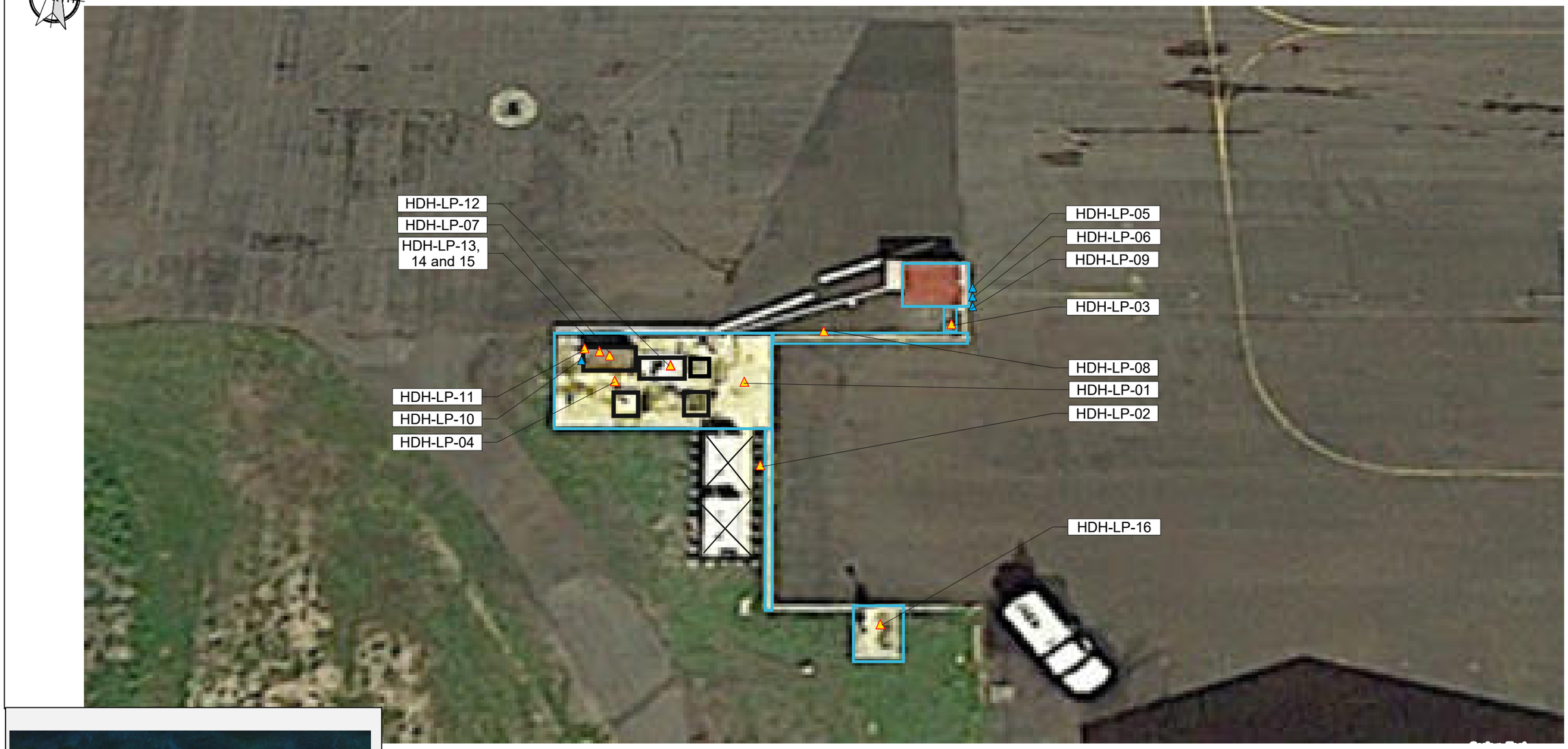


LEGEND	NOTES	SOURCES
MAP INSET NEGATIVE ASBESTOS SAMPLES	The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.	Google Earth Pro. August 8, 2023.

FIGURE 1
ASBESTOS SAMPLE LOCATION MAP

LIMITED ASBESTOS AND LEAD PAINT SURVEY
KAWAIHAPAI AIRPORT
69-415 Farrington Hwy, Waialua, HI 96791
State of Hawaii Department of Transportation
Airports Division

ENVIRONMENTAL SCIENCE INTERNATIONAL





LEGEND	NOTES	SOURCES
MAP INSET LEAD BASED AND CONTAINING PAINT PAINT WITHOUT LEAD	The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.	Google Earth Pro. August 8, 2023.

FIGURE 1

LEAD SAMPLE LOCATION MAP

LIMITED ASBESTOS AND LEAD PAINT SURVEY
KAWAIHAPAI AIRPORT
69-415 Farrington Hwy, Waialua, HI 96791
State of Hawaii Department of Transportation
Airports Division

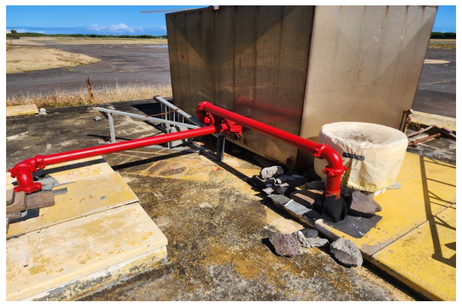
ENVIRONMENTAL SCIENCE INTERNATIONAL

Appendix A

Summary of Asbestos Results

Appendix A

Summary of Asbestos Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building Number and Floor	Functional Space	Material Description	Sample Photos	Laboratory Description	Sample Name	Sample Results	Date Sampled	Friability (NF/F)	Condition (SD, D, G)
HDH Fuel Pumping Station	UST Concrete Slab	Yellow Painted Concrete Slab Above UST		Gray and Black Concrete, Yellow Paint	HDH-Floor-1a to 1c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	Fuel Pumping Station	Yellow Painted Concrete Curbs		Gray Concrete and Yellow Paint	HDH-Floor-2a to 2c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	UST Concrete Slab	Gray Painted Roofing Material on UST Covers		Black Roofing	HDH-Floor-3a to 3c	Not Detected	07.24.23	NF	G

Appendix A

Summary of Asbestos Results, Kawaihapai Airpor
Fuel Pumping Station
July 24, 2023

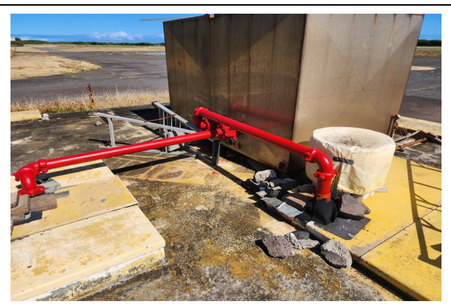
Building Number and Floor	Functional Space	Material Description	Sample Photos	Laboratory Description	Sample Name	Sample Results	Date Sampled	Friability (NF/F)	Condition (SD, D, G)
HDH Fuel Pumping Station	UST Concrete Slab	White Painted Roofing Material on UST Covers		Black Roofing and White Roof Coat	HDH-Floor-4a to 4c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	UST Concrete Slab	Yellow Painted Concrete Slab BelowOutdoor Structure		Black Roofing and White Roof Coat	HDH-Floor-5a to 5c	Not Detected	07.24.23	NF	G

Appendix B

Summary of Lead Results

Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Concrete Slab Over UST	Yellow	Concrete/ Metal	Good	HDH-LP-01	**3,900 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Bollards	Yellow	Metal	Good	HDH-LP-02	**190 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Piping Outside of Enclosed Structure	Red	Metal	Good	HDH-LP-03	**32,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Piping Outside of Dispenser Housing	Red	Metal	Good	HDH-LP-04	**430 mg/kg**	07.24.23

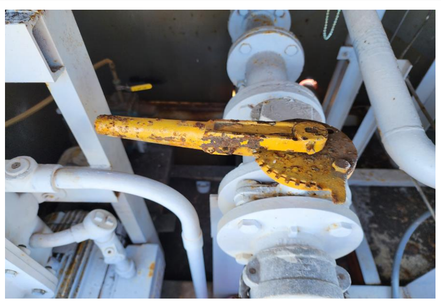
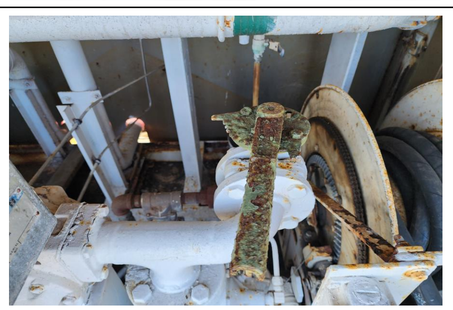
Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Outside of Enclosed Sturcture	Blue	Wood	Good	HDH-LP-05	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Outside of Enclosed Structure	Gray Over Red Paint	Metal	Good	HDH-LP-06	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Pipes Inside Dispenser Housing	White	Metal	Good	HDH-LP-07	**1,300 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Conduit Piping	Red	Metal	Good	HDH-LP-08	**10,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Outside of Enclosed Structure	White over red paint	Wood	Good	HDH-LP-09	<40 mg/kg	07.24.23

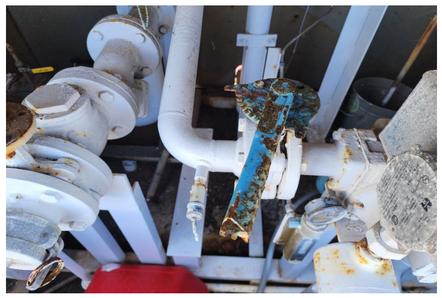
Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Key Control Panel on Dispenser Housing	Yellow	Metal	Good	HDH-LP-10	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Dispenser Housing and Pipe	Red	Metal	Good	HDH-LP-11	**2,600 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Tank Covers	Yellow	Metal	Good	HDH-LP-12	**8,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Valves inside Dispenser Housing	Yellow	Metal	Good	HDH-LP-13	**17,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Valves inside Dispenser Housing	Green	Metal	Good	HDH-LP-14	**610 mg/kg**	07.24.23

Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Pipes inside Dispenser Housing	Blue	Metal	Good	HDH-LP-15	**440 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Pump Controller Boxes and Mounting Panel	Yellow	Metal/Wood	Good	HDH-LP-16	**34,000 mg/kg**	07.24.23

Appendix C

Laboratory Report and Chain-of-Custody

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Wednesday, August 2, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350755	**HDH-Floor-1A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350756	**HDH-Floor-1B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350757	**HDH-Floor-1C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350758	**HDH-Floor-2A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete / yellow paint							
Comments								
202350759	**HDH-Floor-2B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete							
Comments								
202350760	**HDH-Floor-2C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete / yellow paint							
Comments								

Hawaii Analytical Laboratory is a NIST NVLAP accredited laboratory (NVLAP Lab Code 200655-0) and is accredited in accordance with the recognized ISO/ IEC 17025:2017. Controlled doc.: Asbestos Report, rev. 3 – 20200630

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350761	**HDH-Floor-3A**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350762	**HDH-Floor-3B**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350763	**HDH-Floor-3C**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350764	**HDH-Floor-4A**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350764	**HDH-Floor-4A**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350765	**HDH-Floor-4B**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350765	**HDH-Floor-4B**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350766	**HDH-Floor-4C**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350766	**HDH-Floor-4C**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350783	**HDH-Floor-5A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350784	**HDH-Floor-5B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350785	**HDH-Floor-5C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

General Comments
The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Governement. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy.



Eva Skogsberg
Laboratory Supervisor

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Wednesday, August 2, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202350767	**HDH-LP-1**	3900	mg/kg	7/31/2023
Comments				
202350768	**HDH-LP-2**	190	mg/kg	7/31/2023
Comments				
202350769	**HDH-LP-3**	32000	mg/kg	7/31/2023
Comments				
202350770	**HDH-LP-4**	430	mg/kg	7/31/2023
Comments				
202350771	**HDH-LP-5**	< 40	mg/kg	7/31/2023
Comments				
202350772	**HDH-LP-6**	< 40	mg/kg	7/31/2023
Comments				
202350773	**HDH-LP-7**	1300	mg/kg	7/31/2023
Comments				
202350774	**HDH-LP-8**	10000	mg/kg	7/31/2023
Comments				

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202350775	**HDH-LP-9**	< 40	mg/kg	7/31/2023
Comments				
202350776	**HDH-LP-10**	< 40	mg/kg	7/31/2023
Comments				
202350778	**HDH-LP-12**	8000	mg/kg	7/31/2023
Comments				
202350779	**HDH-LP-13**	17000	mg/kg	7/31/2023
Comments				
202350780	**HDH-LP-14**	610	mg/kg	7/31/2023
Comments				
202350781	**HDH-LP-15**	440	mg/kg	7/31/2023
Comments				
202350782	**HDH-LP-16**	34000	mg/kg	7/31/2023
Comments				

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.



Eva Skogsberg
Laboratory Supervisor

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, August 1, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307162
Date Submitted: 7/26/2023
Your Project: 120037; DO38, Dillingham Airfield, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202350754	**HDH-LP-11**	2600	mg/kg	7/31/2023
Comments				

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Jennifer Hsu Liao
Laboratory Manager

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
www.analyzehawaii.com

☐ New client?

Report To*	Brandon Yoza, Tiana Rey, Aimee Taniguchi
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 428-3386
Report results to	
Email / Fax	byoza@esciencel.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
Email Invoice To	accounting@esciencei.com

Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: **District Hazmat Program**

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maxmium of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-floor-1a	7/24/23	bulk	x	PLM	EPA 600	202350755
2	HDH-floor-1b	"	"	"	"	"	202350756
3	HDH-floor-1c	"	"	"	"	"	202350757
4	HDH-floor-2a	"	"	"	"	"	202350758
5	HDH-floor-2b	"	"	"	"	"	202350759
6	HDH-floor-2c	"	"	"	"	"	202350760
7	HDH-floor-3a	"	"	"	"	"	202350761
8	HDH-floor-3b	"	"	"	"	"	202350762
9	HDH-floor-3c	"	"	"	"	"	202350763
10	HDH-floor-4a	"	"	"	"	"	202350764
11	HDH-floor-4b	"	"	"	"	"	202350765
12	HDH-floor-4c	"	"	"	"	"	202350766

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
B. Yoza	7-18-23	Trinidad Shutt	07-26-23 A10:33 RCVD
		Trinidad Shutt	

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☐ via HAC ☐ via USPS ☒ via drop box ☐ via FedEx

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
www.analyzehawaii.com

☐ New client?

Report To*	Brandon Yoza, Tiana Rey, Aimee Taniguchi
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 428-3386
Report results to	
Email / Fax	byoza@esciencei.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
Email Invoice To	accounting@esciencei.com

Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: **District Hazmat Program**

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maxmium of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-LP-1	7/24/2023	paint chip	-	Lead	NIOSH 7082	202350767
2	HDH-LP-2						202350768
3	HDH-LP-3						202350769
4	HDH-LP-4						202350770
5	HDH-LP-5						202350771
6	HDH-LP-6						202350772
7	HDH-LP-7						202350773
8	HDH-LP-8						202350774
9	HDH-LP-9						202350775
10	HDH-LP-10						202350776
11	~~HDH-LP-11~~ BY						~~202350777~~
12	HDH-LP-12						202350778

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
B. Yoza	7.25.23	Trinidad Shutt	07-26-23A10:33 RCVD
		Trinidad Shutt	

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a **FOREIGN SOIL SAMPLE** (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☐ via HAC ☐ via USPS ☑ via drop box ☐ via FedEx

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Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
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Report results to	
Email / Fax	byoza@esciencei.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
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Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: **District Hazmat Program**

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maxmium of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-LP-13	7/24/2023	paint chip	-	Lead	NIOSH 7082	202350779
2	HDH-LP-14	↓	↓	↓	↓	↓	202350780
3	HDH-LP-15	↓	↓	↓	↓	↓	202350781
4	HDH-LP-16	↓	↓	↓	↓	↓	202350782
5	HDH-Floor-Sa	↓	BULK		PLM	EPA 600	202350783
6	HDH-Floor-Sb	↓	↓		↓		202350784
7	HDH-Floor-Sc	↓	↓		↓		202350785
8							
9							
10							
11							
12							

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
B. Yoza	7.25.23	Trinidad Shutt	07-26-23 A10:34 RCVD

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a **FOREIGN SOIL SAMPLE** (outside Hawaii) in the comment section.
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☐ via HAC ☐ via USPS ☑ via drop box ☐ via FedEx

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐New Client?

Report To*	: Tiana rey, Brandon Yoza
Company	: Environmental Science International, Inc.
Address*	: 354 Uluniu Street, Suite 304
	Kailua, HI 96734
Phone / Cell No.*	: (808) 428-3386 - Brandon Yoza
Report results to	:
Email / Fax	: trey@esciencei.com, byoza@esciencei.com

Invoice To*	: Stacey Acma
Company	: Environmental Science International, Inc.
Address*	: 354 Uluniu Street, Suite 304
	Kailua, HI 96734
Phone / Cell No.*	: (808) 261-0740
Purchase Order No.	:
Email Invoice To	: sacma@esciencei.com

Need Results By*:
- ☑5 Working Days (WD)
- ☐4 WD
- ☐3 WD
- ☐2 WD
- ☐24 hours
- ☐6 hours or less
- ☐4 hours or less
- ☐1-2 hours

Site/Project Name: **Dillingham Airfield**

Client Project No.: **120037:DO38**

Verbal results? ☐

Sampled By & Certif. # :

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐+ stop / SAMPLE
- ☐+ stop / LAYER

Lab Report No.: 202307162

Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-LP-11	07.24.23	Bulk	-	Lead		202350754
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Brandon Yoza	07.25.23	Trinidad Shutt	07-26-23A10:32 RCVD

***Sample description can be paint chips, concrete, specific sample collection location, etc...**
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
***Required fields, failure to complete these fields may result in a delay in your samples being processed.**

☐via HAC ☐via USPS ☑via drop box ☐via FedEx ☐via pick up
awb#: 173-.....

Page: _____ of _____

Appendix D

Acronyms

Appendix D- Acronym List

ACM- Asbestos Containing Material
EPA- Environmental Protection Agency
ESI- Environmental Science International Inc.
HAL- Hawaii Analytical Laboratory LLC.
HAR- Hawaii Administrative Rules
HDOTA- Hawaii Department of Transportation, Airports
UST- Underground Storage Tank

Appendix E

Hazardous Materials Review Form

Work Order No.: WO2023-14

State of Hawaii Department of Transportation – Airports Division
Hazardous Materials Review Form

Instructions:

1. Requestor (e.g., HDOT-AIR Personnel, Designer, Construction Manager, Maintenance Contractor, Construction Contractor, Tenant) shall complete Sections 1, 2, and 3, then submit the form (along with any attachments) via email to the Hazardous Materials [HazMat]/Asbestos Manager at HazMat@esciencei.com.
2. HazMat/Asbestos Manager will assign a Work Order Number to the request and will review the Hazardous Materials Database, complete Section 4, then email the form back to the Requestor.
3. If additional work is required per Section 4, the HazMat/Asbestos Manager is available to assist with the coordination of additional sampling/assessment and management of hazardous materials.
4. Requestor is responsible for notifying HazMat/Asbestos Manager when work is complete. HazMat/Asbestos Manager will then conduct a final inspection of the work performed.

SECTION 1. Contact Information (To be completed by the Requestor).

Requestor Information:

Name: Robert Chong
Phone: (808) 479-5217
Email: rchong@sciencei.com
Requestor Affiliation: DOR

HDOT Contact Information (if different from Requestor):

Name: Benton Ho
Phone: (808) 838-8804
Email: benton.ho@hawaii.gov
Requestor Affiliation: AIR-EM

SECTION 2. Project Information (To be completed by the Requestor).

Type of Project (Select One): Maintenance: ☐ Construction: ☑ Other (Please specify): _____

HDOT Contract/Project Name: UST Fuel System Removal at Kawaihapai Airfield

Location of Work:

Airport: HDH Building(s): N/A Level(s): N/A

Provide Description of Work (Attach plans, specifications, photos, and additional information):

Removal UST fuel system. Attach are the tank installation plans.

SECTION 3. Hazardous Materials Request (Check box for specific Hazardous Materials Review).

☑ Asbestos ☑ Lead ☐ Mold ☐ Other (Please specify): _____

SECTION 4. Review (To be completed by the HazMat/Asbestos Manager).

Inspector Name: Brandon Yoza Certification No. (if applicable): HIASB-4996 Date: August 7, 2023

*Asbestos Containing Material (ACM) was not detected in the materials sampled and described in Appendix A. If any additional materials will be disturbed, other than those described in Appendix A, ESI recommends consultation with a person certified in the State of Hawaii as an asbestos inspector.

*Lead based and lead containing paint was identified on the surfaces of painted materials associated with the Fuel Pumping Station located at Kawaihapai Airport. Those materials sampled are described in Appendix B. Please refer to OSHA's Lead in Construction standard (29 CFR 1926.62) involving paints having any level of lead.

SECTION 5. Final Inspection (To be completed by the HazMat/Asbestos Manager).

Inspector Name: _____ Certification No. (if applicable): _____ Date: _____

Notes:

Airports Division

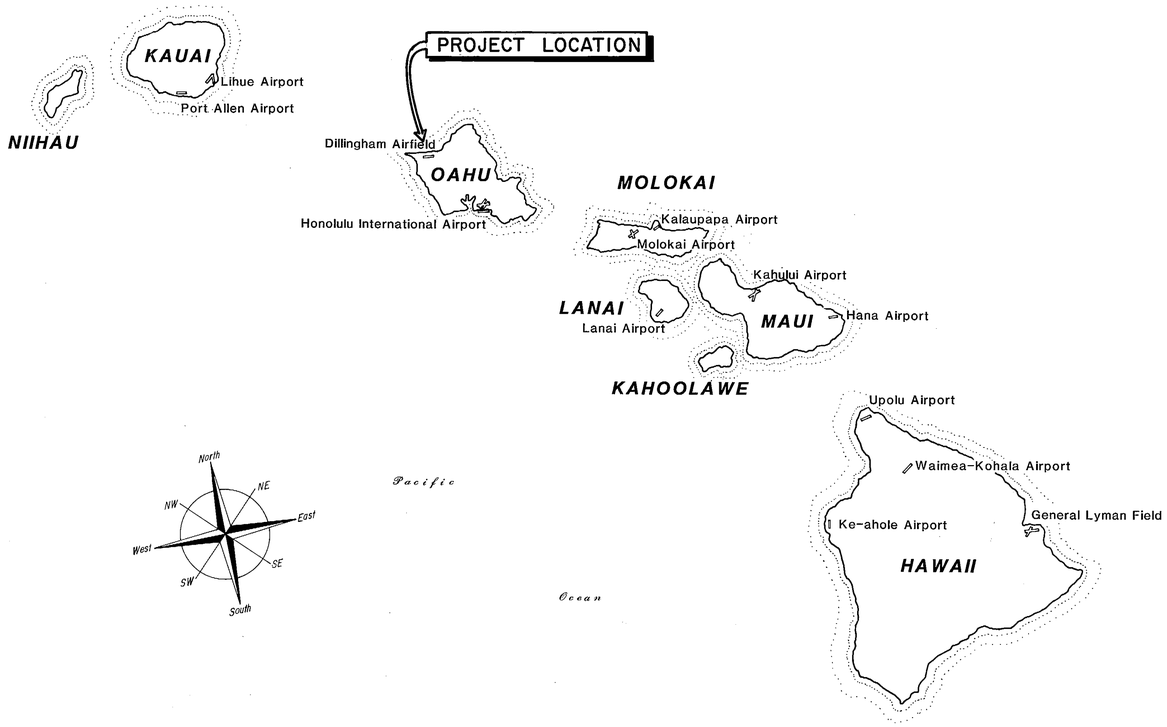
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PLANS FOR

REPLACEMENT OF FUELING SYSTEM

AT

DILLINGHAM AIRFIELD
OAHU
PROJECT NO. A02023-11



DEPARTMENT OF HEALTH STATE OF HAWAII	
APPROVED: James K. Mead	12-14-87
CHIEF, ENVIRONMENTAL PROTECTION & HEALTH SERVICES DIVISION	DATE

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED: Owen Miyamoto	2/16/88
for DIR. OF TRANSPORTATION	DATE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :

1. SEE SHEET C-1 FOR INDEX TO DRAWINGS.

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

SHEET TITLE :

TITLE SHEET

DATE :

DWG. NO. : T-1

GRADING NOTES

1. All grading work shall be done in accordance to Chapter 23, Grading, Soil Erosion and Sediment Control, of the Revised Ordinances of Honolulu, 1978, as amended (Ordinance No. 81-13).

2. The Contractor shall remove all silt and debris resulting from his work deposited in the project area, drainage facilities, roadways, and other areas. The costs incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.

3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.

4. All grading operations shall be performed in conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.

5. The limits of grading areas shall be flagged before the commencement of grading.

6. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area, within which work has been interrupted or delayed, shall be planted.

7. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Chief Engineer.

TEMPORARY EROSION CONTROL

1. The Contractor shall minimize the amount of land to be exposed at any one time.

2. Grading operations shall proceed from the higher ground area first, where excavation operations are necessary. The existing vegetation on the lower area shall be left in place as long as feasible to serve as a filtering medium.

3. If the excavated material from the higher area is needed to fill the lower areas described in note #2 above, filling operations shall be done in phases in order that erosion and sedimentation problems can be minor.

4. Grassing common bermuda grass or stargrass cuttings at the rate of 50 bushels per acre or an average of 2 springs per square foot of all areas graded shall be done immediately after final grades are established.

5. Graded areas that are not at final grade and are expected to be exposed for more than 30 days, shall be mulched (at a rate of 45 cu.ft. per 1,000 sq.ft.) in order to prevent erosion and silt runoff.

6. When installing the drainage system for the project, filtering material (jute strips or equal) at the inlets to the system shall be provided to prevent silt from entering the system.

7. The above procedure for erosion and sediment control may be revised by the Contractor to conform to his grading operation procedures. Any revision to the above, however, shall be submitted to the Department of Public Works, Division of Engineering for approval, by the Contractor.

GENERAL NOTES

1. The existing utilities shown on the plans are approximate only. The Contractor shall make an independent check on the ground and with the various utility companies and government agencies to ascertain their exact location.

2. All existing utilities, whether or not shown on the plans, shall be protected at all times during construction, unless noted otherwise. Any damage to them shall be repaired and paid for by the Contractor.

INDEX TO DRAWINGS

SHEET	DESCRIPTION
T-1	TITLE SHEET
C-1	GENERAL NOTES, INDEX
C-2	GENERAL PLAN
C-3	DETAIL PLAN & PROFILE
C-4	CROSS SECTIONS, TYPICAL SECTIONS
C-5	MISCELLANEOUS DETAILS
S-1 TO S-3	STRUCTURAL DETAILS
M-1	MECHANICAL SITE PLAN, NOTES
M-2	NEW FUELING SYSTEM PLAN
M-3 TO M-4	SECTIONS
M-5	PIPING DIAGRAM
M-6	LEAK DETECTOR DIAGRAM
M-7	CONTROL DIAGRAM
M-8	DETAILS
E-1	ELECTRICAL SITE PLAN
E-2	SINGLE LINE DIAGRAM
E-3	GROUNDING PLAN AND DETAILS

TOTAL NUMBER OF SHEETS = 20

APPROVED:

DEC 2 1991

FIRE DEPARTMENT, C & C OF HONOLULU DATE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO. DATE REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

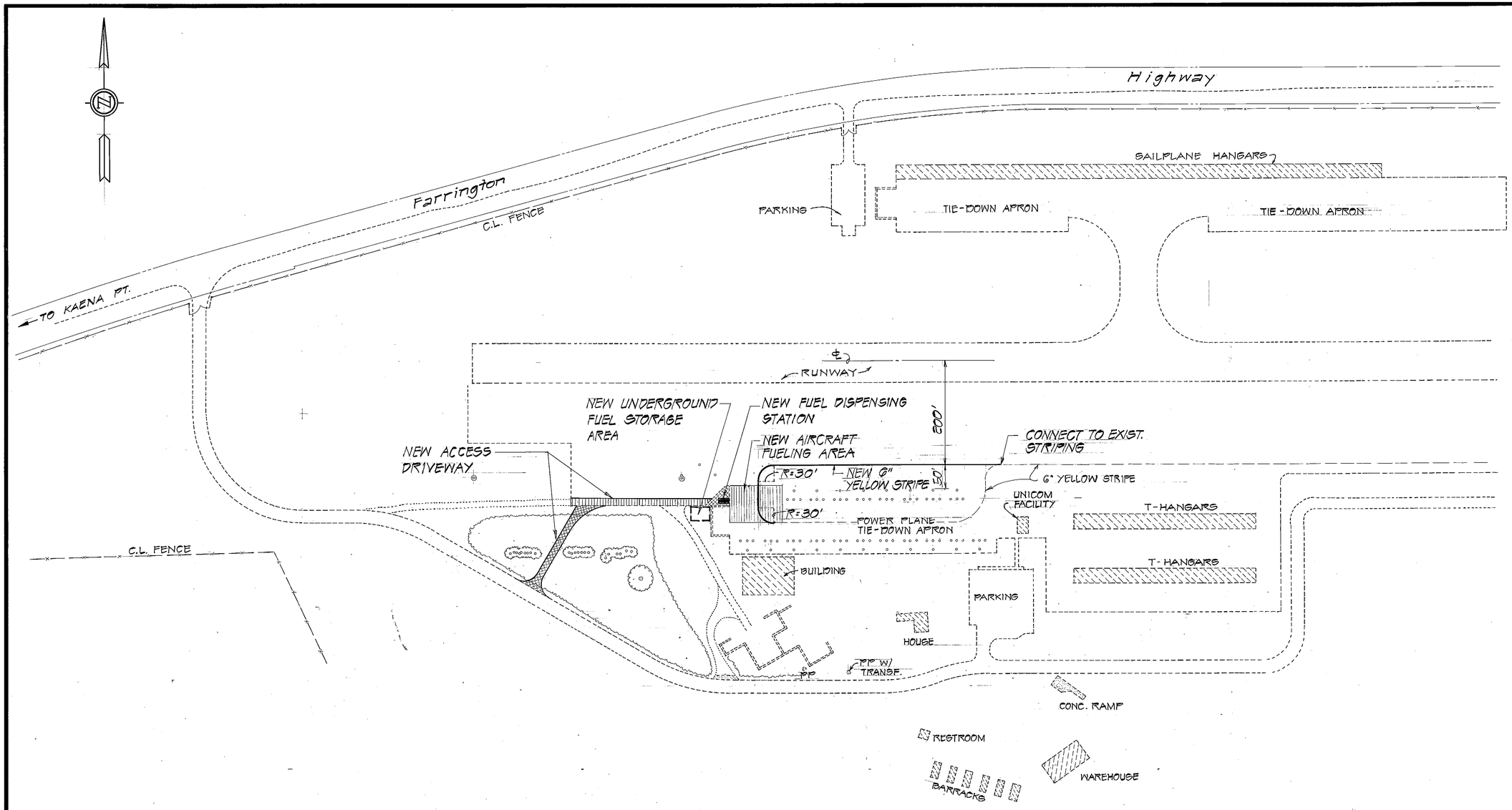
A02023-11

SHEET TITLE :

GENERAL NOTES INDEX

DATE :

DWG. NO. : C-1



GENERAL PLAN

Scale : 1" = 100'

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

SHEET TITLE :

GENERAL PLAN

DATE :

DWG. NO. : C-2

North
Scale: 1"=20'

DANGER
ACTIVE RUNWAY
DO NOT CROSS

NO UNAUTHORIZED VEHICLES ON RUNWAYS OR TAXIWAYS

NEW SIGN SEE B C-3|C-5

GRAVEL

GRAVEL DRIVEWAY

GRAVEL

EDGE OF SHRUBS

LIMIT OF GRADING

NEW A.C. PAV'T. w/ BASE COURSE

SHRUBS

IRONWOOD TREES

STOP

NEW R1-1 (30"x30")

NEW EDGE OF SHOULDER

℄ NEW ACCESS DWY.

NEW EDGE OF SHOULDER

NEW CHAIN BARRIER. SEE A C-3|C-4 / A C-3|C-5

STA. 0+09 ± NEW ACCESS DRIVEWAY

EDGE OF PAV'T.

℄ 4" YELLOW STRIPE

EDGE OF PAV'T.

GRASS

EDGE OF SHRUBS

MAKE SMOOTH RIDING CONNECTION TO EXIST. PAV'T.

EDGE OF PAV'T.

A.C. PAV'T.

B.M. ELEV. 11.37. SPIKE IN PAV'T.

NEW DRAIN PIT TOP=10.00 SEE C-3|S-1

NEW SEAL COAT ON EXIST. A.C. PAV'T.

270° 30' — (ASSUMED) (SPIKE TO SPIKE)

℄ NEW ACCESS DRIVEWAY

7'

5'

VARIES 7' TO 11'

P.T. STA. 2+34.72

NEW SWALE

EDGE OF SHRUBS

INV. = 11.0

MAKE SMOOTH RIDING CONN. TO EXIST. PAV'T.

B C-3|C-4

R = 100.00

P.C. STA. 1+60.00

LIMIT OF GRADING

SHRUBS

IRONWOOD TREES

IRONWOOD TREES

A C-3|C-4

DO NOT ENTER
AUTHORIZED VEHICLES ONLY

NEW SIGN SEE B C-3|C-5

PLUM TREE

SHRUBS

GRAVEL

EDGE OF SHRUBS

℄ CURVE DATA
Δ = 60°00'
4/2 = 30°00'
R = 100.00
T = 57.74
Lc = 104.72
Ch = 100.00

DRAIN INLET

4" C.I. DRAIN

B.M. ELEV. 11.08. SPIKE IN PAV'T. STA. 4+36.72 (5' O/S, LEFT)

LIMIT OF GRADING

MAKE SMOOTH RIDING CONN. TO EXIST. PAV'T.

NEW CONC. PAVEMENT. SEE SHT. S-3.

A C-3|S-3

EDGE OF PAV'T.

A.C. PAV'T.

GRAVEL

NEW A.C. PAV'T. w/ BASE COURSE

SEE SHT. C-2 FOR CONTINUATION.

NEW SEAL COAT ON EXIST. PAV'T.

STA. 4+94.72

EDGE OF PAV'T.

TIE-DOWN ANCHORS

TRANSIENT

30'

TRANSIENT

TRANSIENT

NEW FUEL DISPENSING STATION. SEE M C-3|S-1

REMOVE PAVEMENT LETTERS

CONC. CURB

DRAIN

HB

55'

NEW 6" YELLOW STRIPE

45'

6" YELLOW PAV'T. STRIPE

BEGIN NEW PAV'T. STRIPE.

A.C. PAV'T.

CONC. CURB

2" WATER

HB

TIE-DOWN ANCHORS

EDGE OF PAV'T.

CONC. DWY.

BUILDING

Note: All structures and topographical features are existing and are to remain unless noted otherwise.

DETAIL SITE PLAN
Scale: 1" = 20'

MAKE SMOOTH RIDING CONNECTION TO EXIST. PAV'T.

12.4 ±

FINISH GR. @ ℄ NEW ACCESS DRIVEWAY

11.2 ±

MEET EXIST. GR.

EXIST. GR. @ ℄ NEW ACCESS DWY.

(-) 0.62%

MEET EXIST. GR.

20

10

0+00 1+00 2+00 3+00 4+00 5+00

PROFILE
Horiz. Scale: 1"=20'
Vert. Scale: 1"=4'

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

DSGN.	DRWN.	CHK'D.	APP'D.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DETAIL SITE PLAN & PROFILE

DATE :

DWG. NO. : C-3

SUMMARY OF EARTHWORK:

TOTAL EXCAVATION = 282 CY

TOTAL EMBANKMENT = 0 CY

AREA TO BE GRADED = 0.5 ACRE

EXC. = 55 CY
EMB. = 0 CY

15
10 C = 30 SF
F = 0 SF

EXC. = 55 CY
EMB. = 0 CY

2+00

15
10 C = 30 SF
F = 0 SF

EXC. = 62 CY
EMB. = 0 CY

1+50

15
10 C = 35 SF
F = 0 SF

EXC. = 56 CY
EMB. = 0 CY

1+00

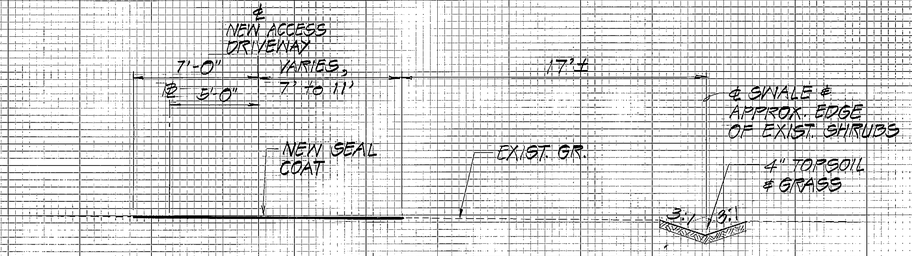
15
10 C = 25 SF
F = 0 SF

EXC. = 54 CY
EMB. = 0 CY

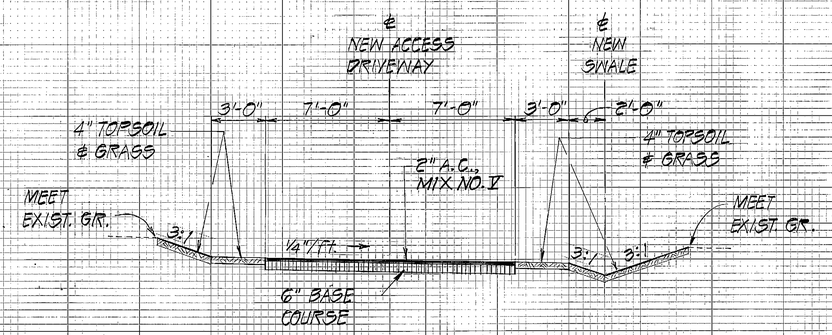
0+50

℄ ACCESS DRIVEWAY

HORIZ. SCALE: 1"=10', VERT. SCALE: 1"=5'



SECTION B
SCALE: 1/4"=1'-0"
C-3 | C-4



TYPICAL DWY. SECTION A
Scale: 1/4"=1'-0"
C-3 | C-4

Airports Division
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DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

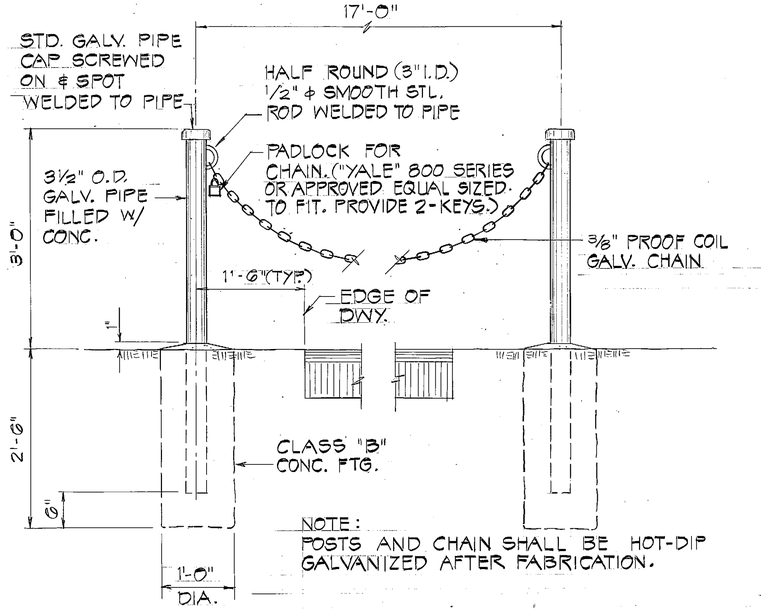
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
CROSS SECTIONS

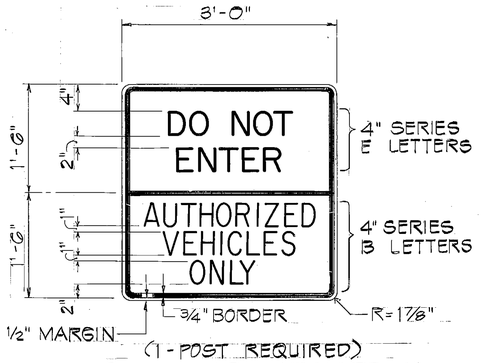
DATE :

DWG. NO. :
C-4



CHAIN BARRIER DETAIL (A) C-3 | C-5

NO SCALE



(1-POST REQUIRED)

BLACK LETTERS & BORDER ON WHITE BACKGROUND

NOTES:

1. ALL SIGNS SHALL BE REFLECTORIZED.
2. ALL SIGNS SHALL HAVE 3/8" ϕ BOLT HOLES DRILLED AT APPROPRIATE LOCATIONS.

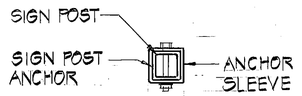


(3-POSTS REQUIRED)

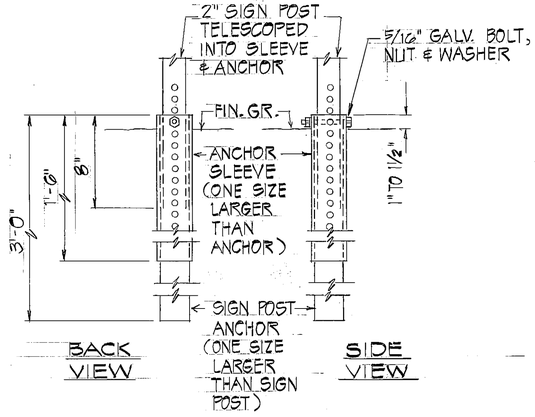
RED LETTERS & BORDER ON WHITE BACKGROUND

SIGN DETAILS (B) C-3 | C-5

NO SCALE



TOP VIEW

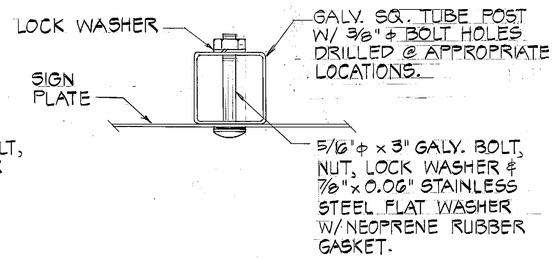


BACK VIEW

SIDE VIEW

SIGN POST DETAIL (D) C-5 | C-5

NO SCALE



SIGN INSTALLATION DETAIL (E) C-5 | C-5

NO SCALE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Paul T. Taniguchi

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

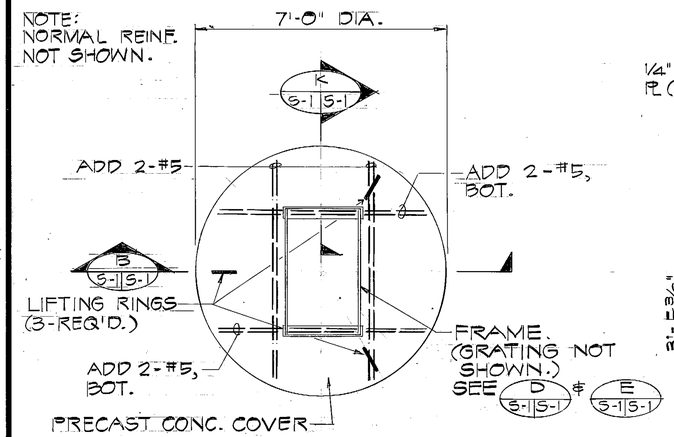
SHEET TITLE :

MISCELLANEOUS DETAILS

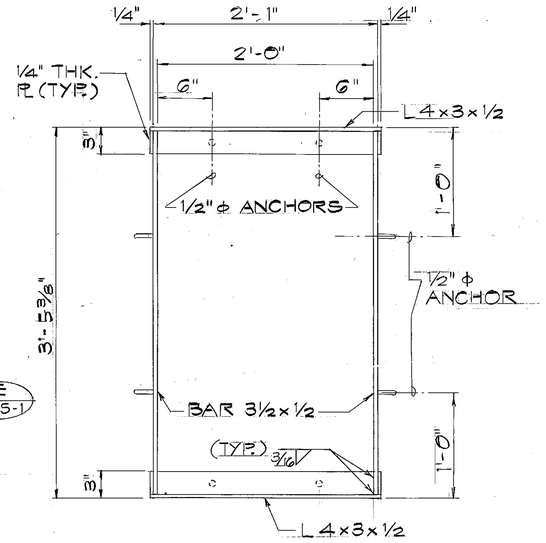
DATE :

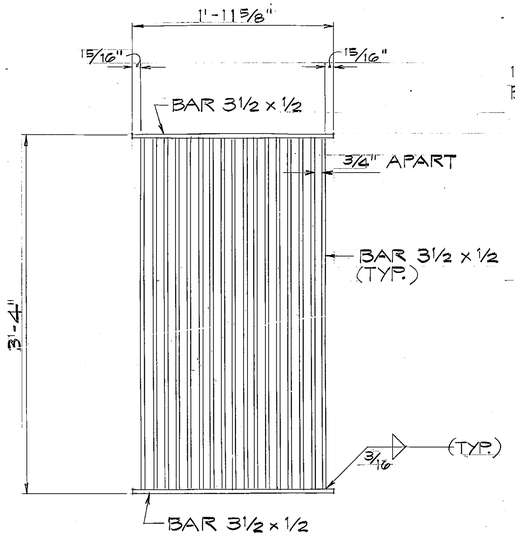
DWG. NO. : C-5

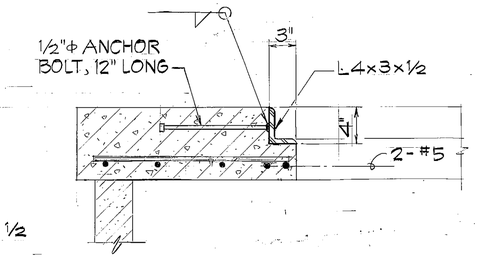
NOTE:
NORMAL REINF. NOT SHOWN.



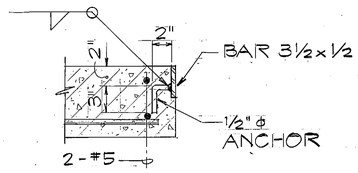
PLAN OF DRAIN PIT A
SCALE: 1½" = 1'-0"
C-3 | S-1



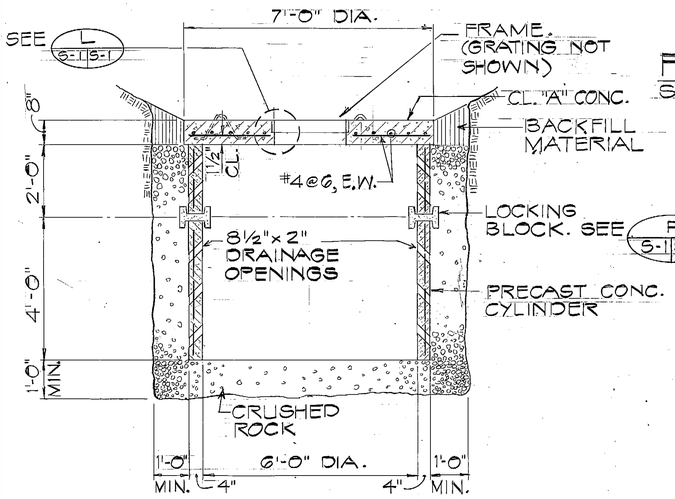




SECTION K
SCALE: 1½" = 1'-0"
S-1 | S-1

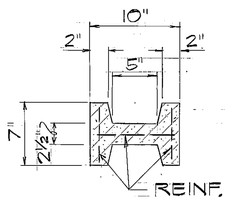


DETAIL L
SCALE: 1½" = 1'-0"
S-1 | S-1



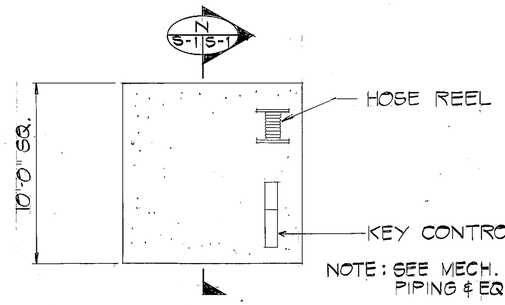
SECTION B
SCALE: ½" = 1'-0"
S-1 | S-1

FRAME DETAIL D
SCALE: 1½" = 1'-0"
S-1 | S-1

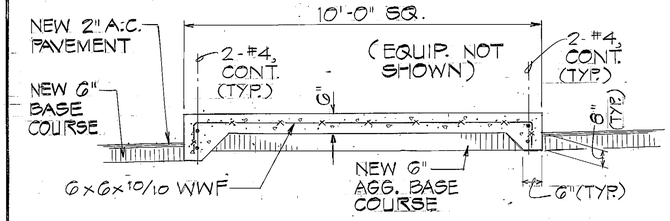


LOCKING BLOCK DETAIL F
SCALE: 1½" = 1'-0"
S-1 | S-1

GRATING DETAIL E
SCALE: 1½" = 1'-0"
S-1 | S-1



CONCRETE PAD FOR FUEL DISPENSING STATION M
SCALE: 1/4" = 1'-0"
C-3 | S-1



SECTION N
SCALE: 1½" = 1'-0"
S-1 | S-1

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 364-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHK'D.	APP'D.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

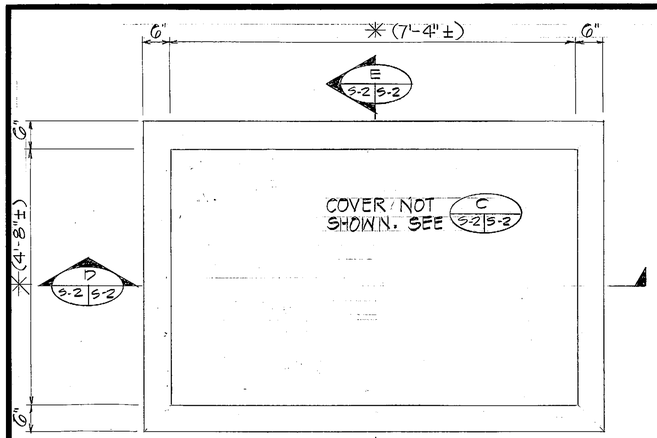
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DRAIN PIT DETAILS, CONCRETE PAD

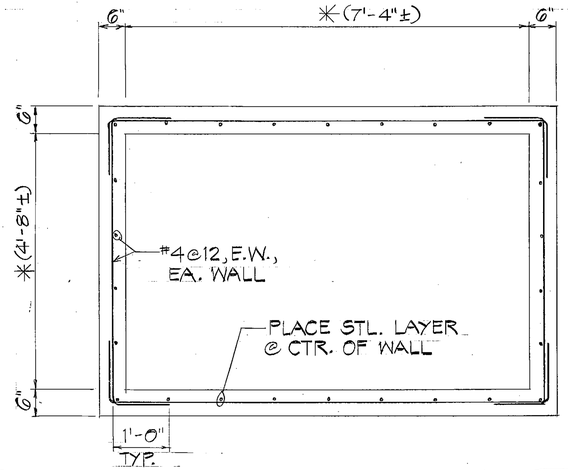
DATE :

DWG. NO. : S-1



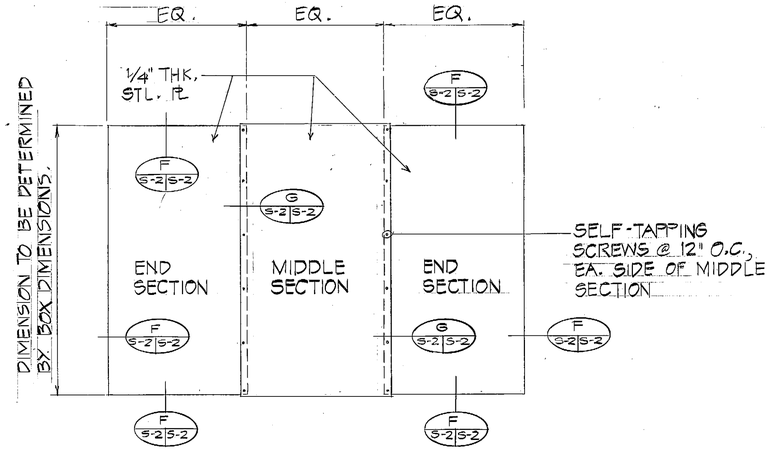
PLAN OF FILTER VESSEL BOX A S-2 S-2

SCALE: 3/4" = 1'-0"



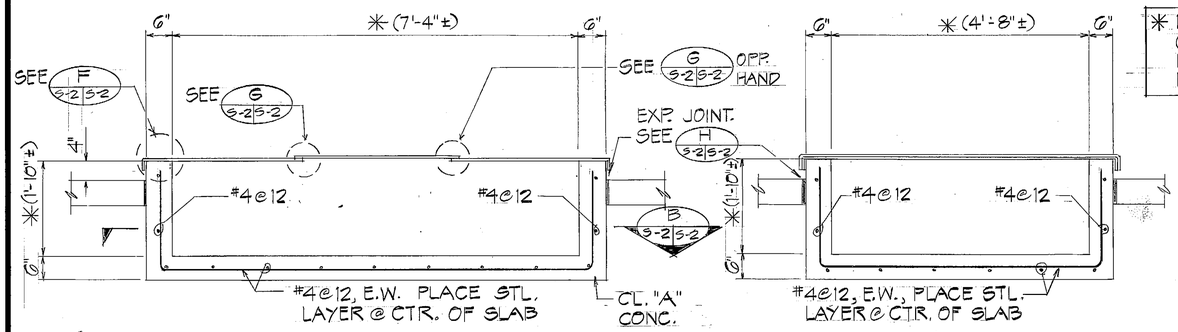
PLAN-SECTION B S-2 S-2

SCALE: 3/4" = 1'-0"



PLAN OF COVER C S-2 S-2

NO SCALE.



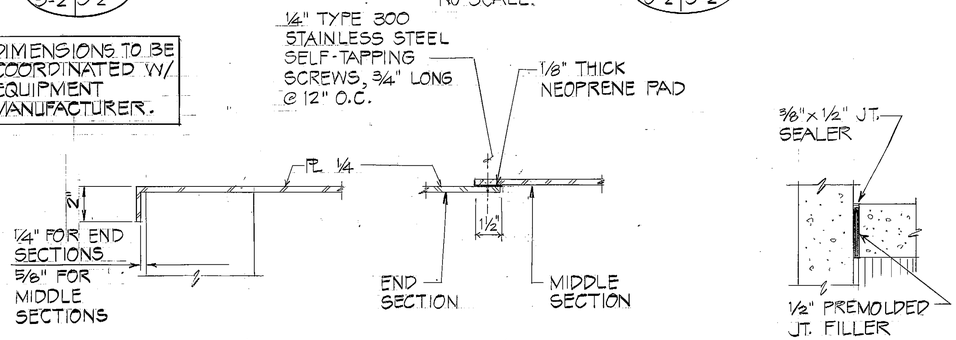
SECTION D S-2 S-2

SCALE: 3/4" = 1'-0"

SECTION E S-2 S-2

SCALE: 3/4" = 1'-0"

✳ DIMENSIONS TO BE COORDINATED W/ EQUIPMENT MANUFACTURER.



DETAIL F

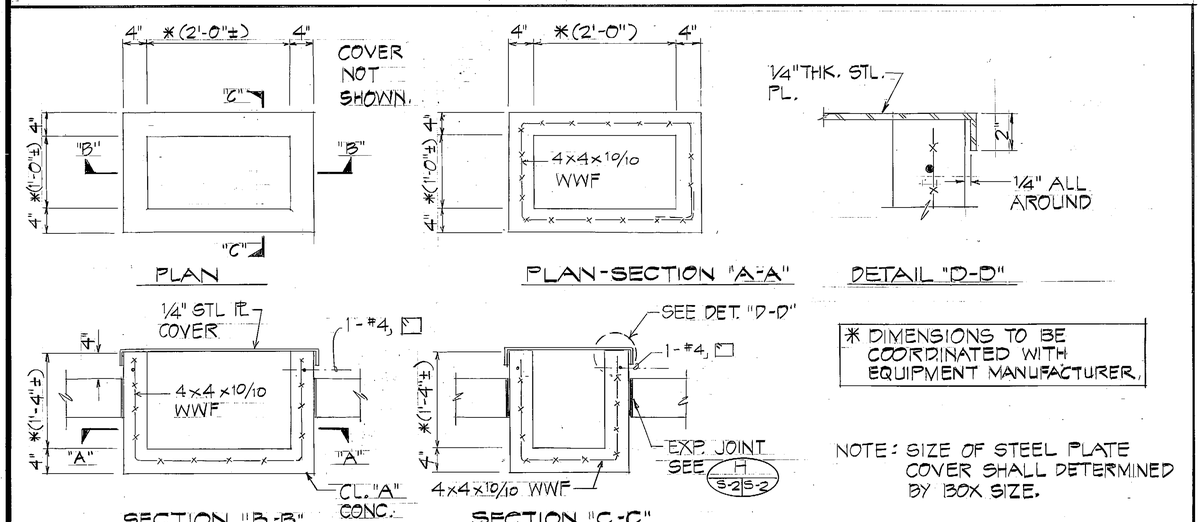
SCALE: 3" = 1'-0"

DETAIL G S-2 S-2

SCALE: 3" = 1'-0"

DETAIL H S-2 S-2

NO SCALE



✳ DIMENSIONS TO BE COORDINATED WITH EQUIPMENT MANUFACTURER.

NOTE: SIZE OF STEEL PLATE COVER SHALL DETERMINED BY BOX SIZE.

HAND PUMP PIT DETAILS I S-2 S-2

NO SCALE

STATE OF HAWAII 1959

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PAUL T. TANIGUCHI
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No. 364-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHK'D.	APP'D.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

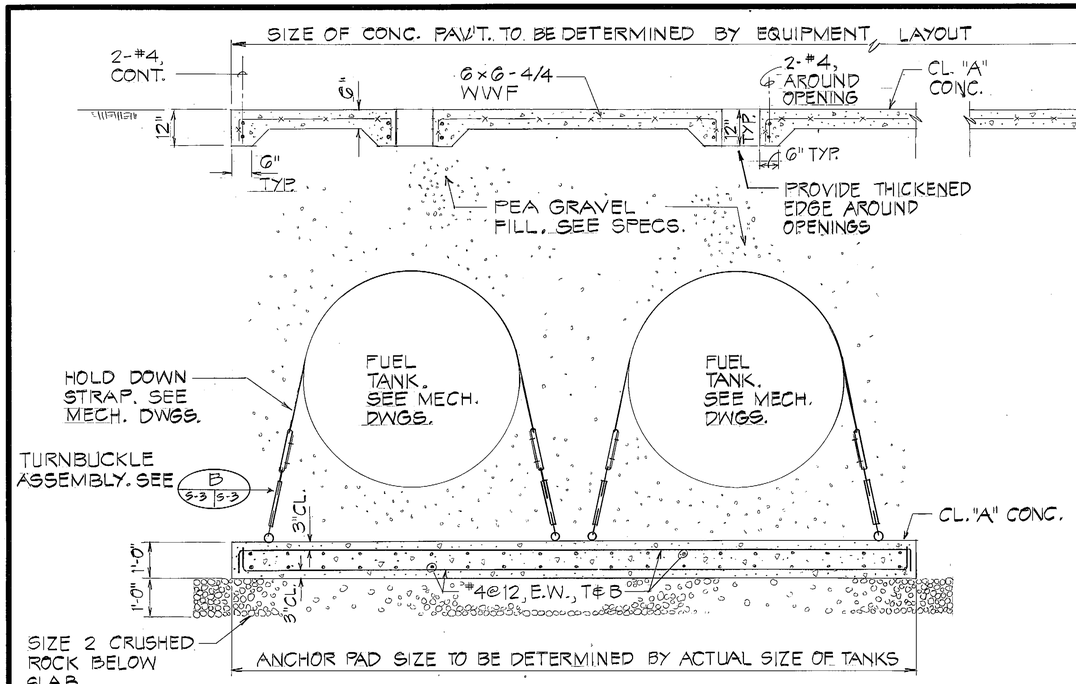
A02023-11

SHEET TITLE :

FILTER VESSEL BOX HAND PUMP PIT

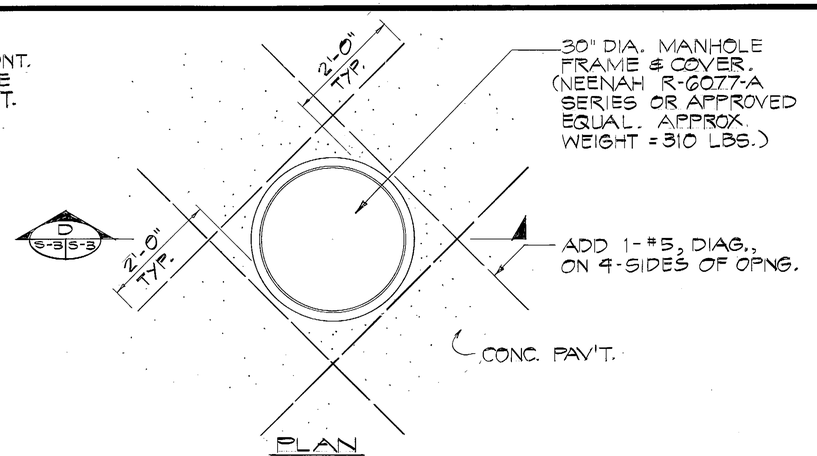
DATE :

DWG. NO. : S-2



SECTION THRU FUEL STORAGE AREA (A C-3 | S-3)

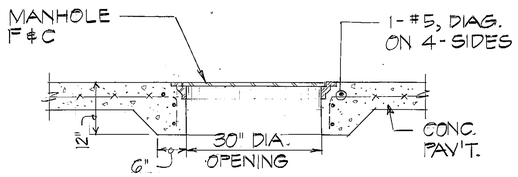
SCALE: 1/2" = 1'-0"



PLAN

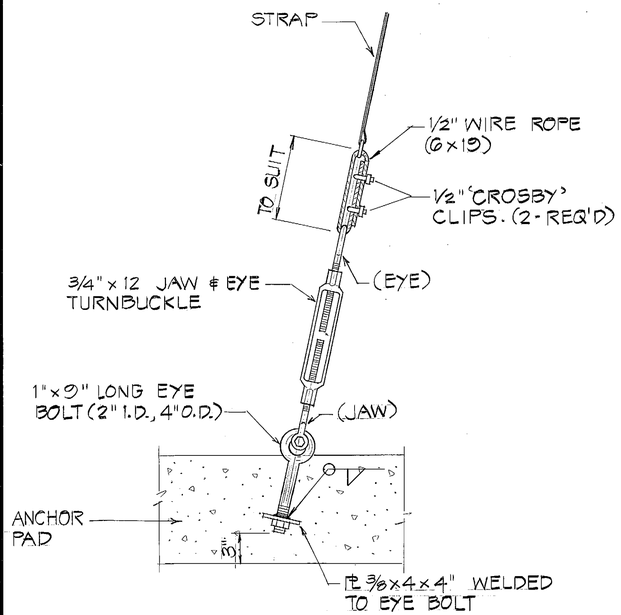
MANHOLE AT PIPING SUMP (C S-3 | S-3)

SCALE: 3/4" = 1'-0"



SECTION (D S-3 | S-3)

SCALE: 3/4" = 1'-0"



TURNBUCKLE ASSEMBLY (B S-3 | S-3)

SCALE: 1 1/2" = 1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION
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KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

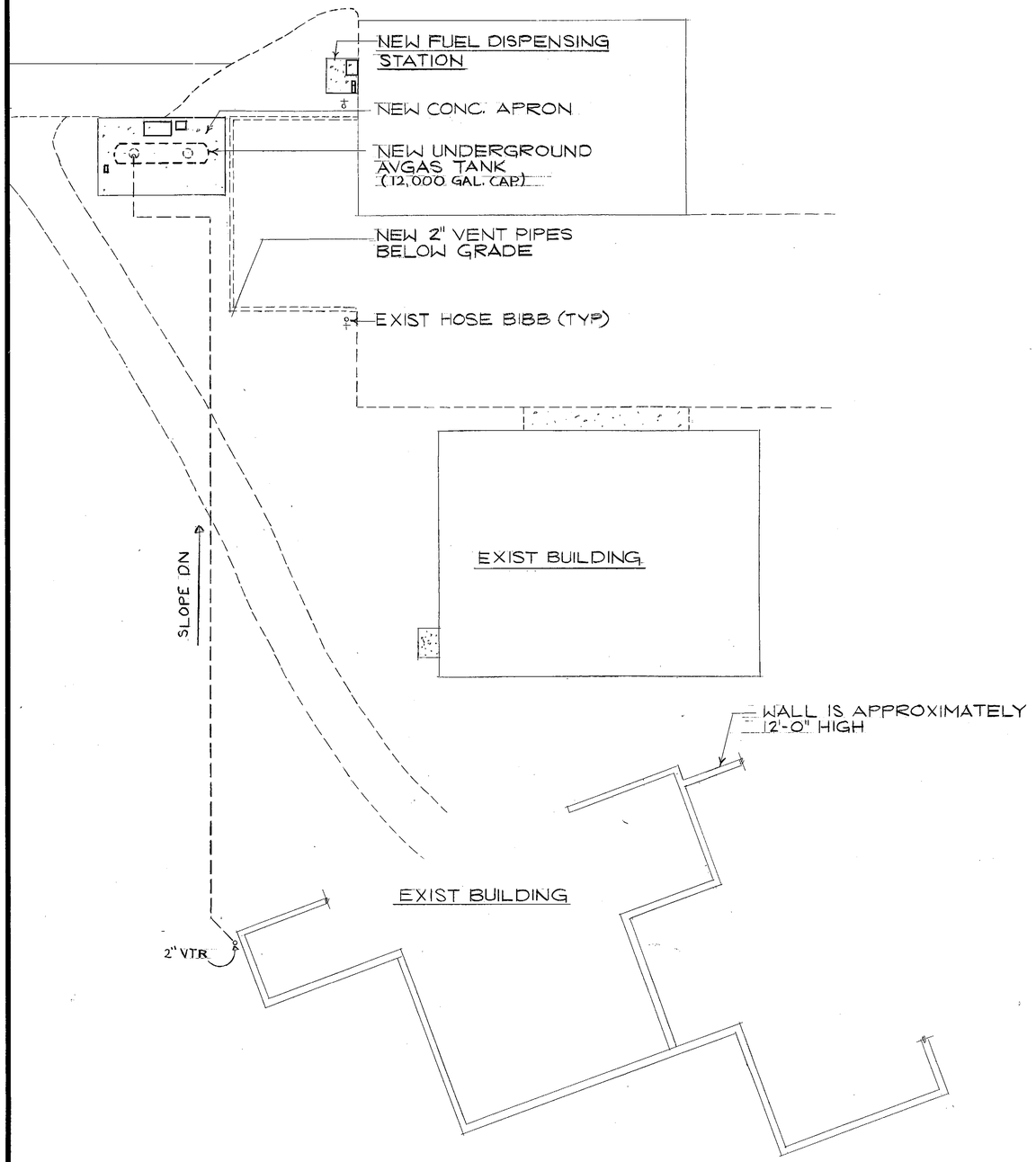
A02023-11

SHEET TITLE :

ANCHOR PAD, CONC. PAVEMENT

DATE :

DWG. NO. : S-3



SITE PLAN
1" = 20'

MECHANICAL GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY FIELD CONDITIONS, DIMENSIONS, OBSTRUCTIONS AND SIZES PRIOR TO START OF WORK.
2. PROVIDE EXPLOSION PROOF SEAL FITTINGS WHERE REQUIRED BY THE ELECTRICAL CODE.
3. PROVIDE ELECTRICAL GROUNDING OF FILTER VESSELS, FILTER CARTRIDGES, FUEL PUMPS, VALVES, AND OTHER METALLIC COMPONENTS IN THE AVGAS PIPING SYSTEM. SEE ELECTRICAL DRAWINGS FOR DETAILS.
4. PANEL SUPPORT LEGS, BASES, AND HOSE REEL CABINET FRAMING SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

LEGEND & ABBREVIATION

SYMBOL	ABBREV.	DESCRIPTION
	CONC.	CONCRETE
	DN	DOWN
	EXIST	EXISTING
	FRP	FIBERGLASS REINFORCED PLASTIC
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	TDH	TOTAL DYNAMIC HEADS
	THK	THICK
	TYP	TYPICAL
		DOUBLE WALL PIPING

Airports Division
DEPARTMENT OF TRANSPORTATION
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Signature

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

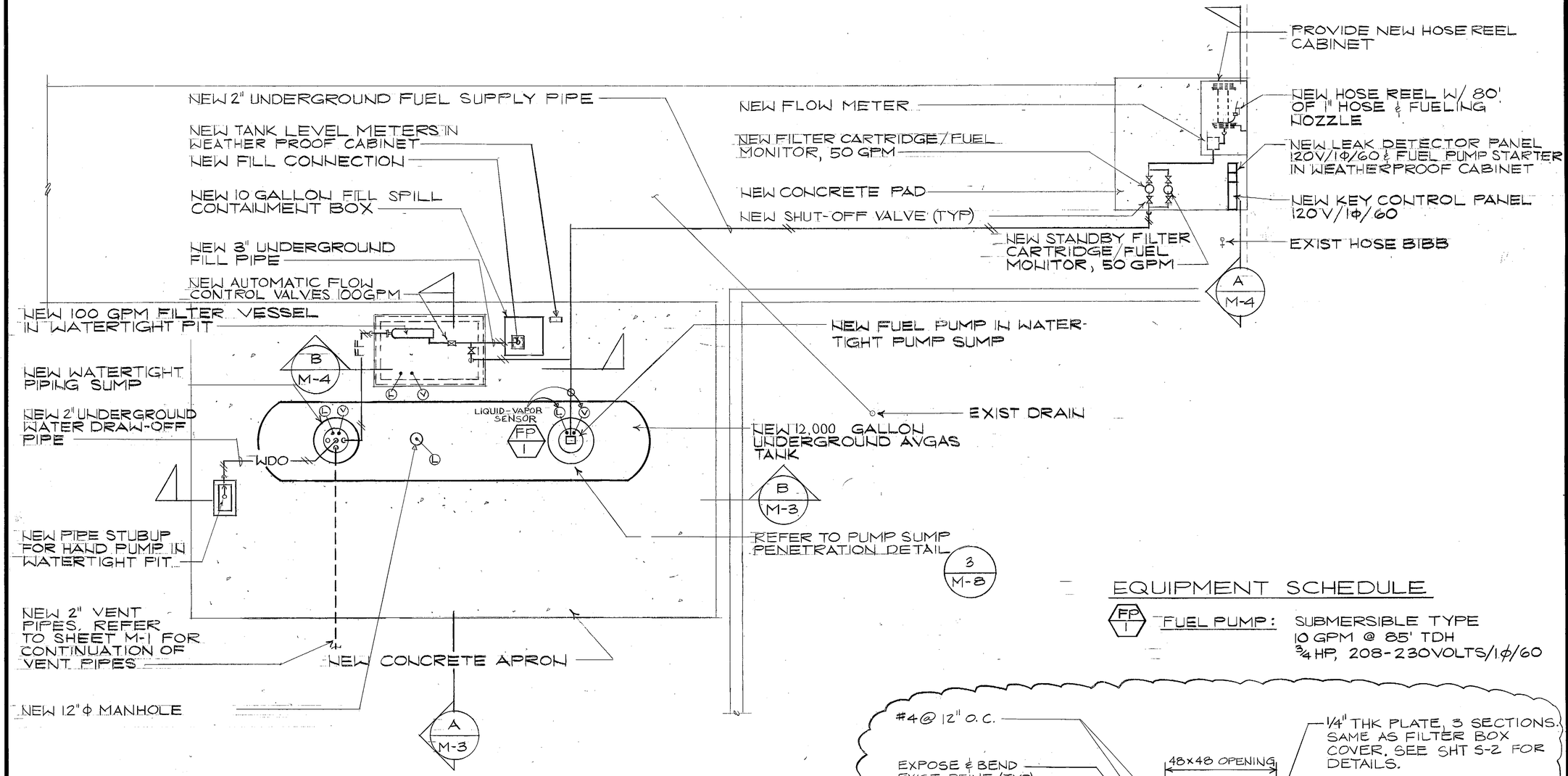
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-II

SHEET TITLE :
SITE PLAN
MECH GENERAL NOTES
LEGEND & ABBREVIATION

DATE :

DWG. NO. : M-1

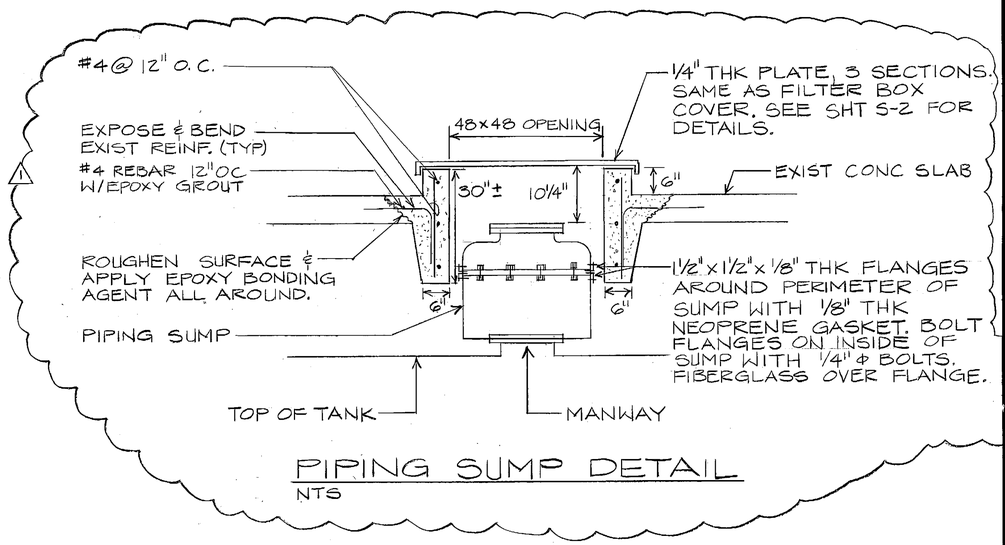


NEW FUELING SYSTEM PLAN

NOT TO SCALE

EQUIPMENT SCHEDULE

FP 1 — FUEL PUMP: SUBMERSIBLE TYPE
10 GPM @ 85' TDH
¾ HP, 208-230VOLTS/1ϕ/60



PIPING SUMP DETAIL

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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No. 2981-M
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KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED PIPING SUMP FLANGES

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

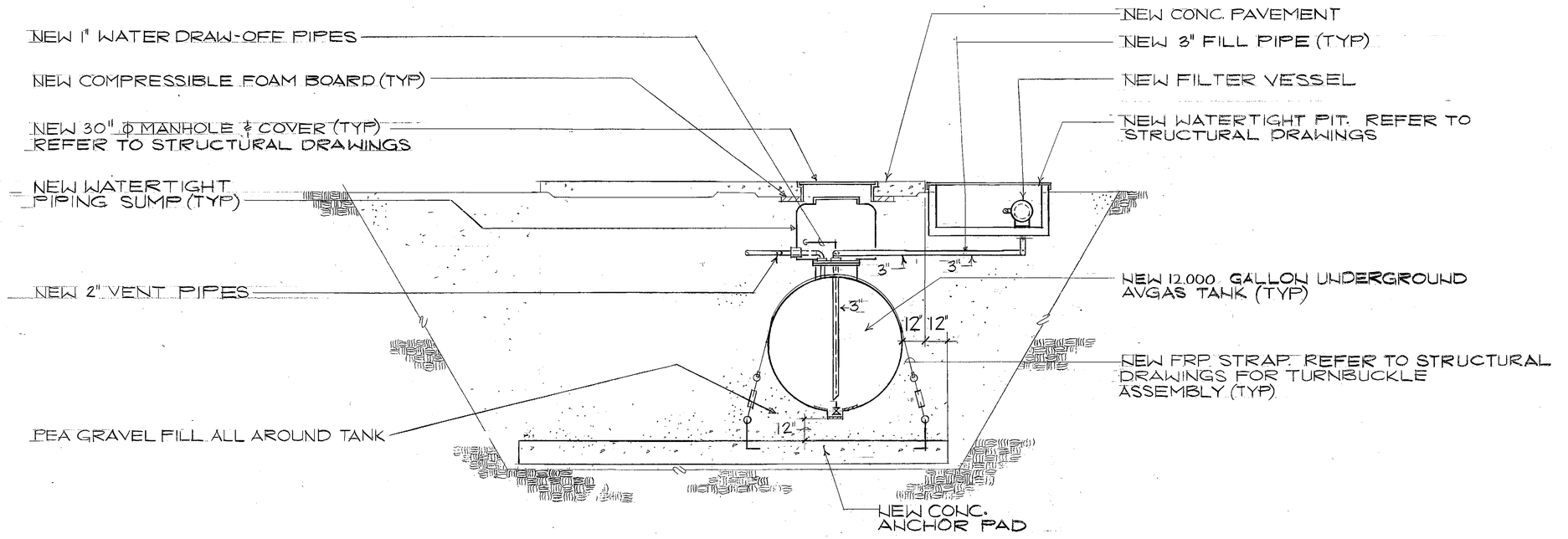
A02023-11

SHEET TITLE :

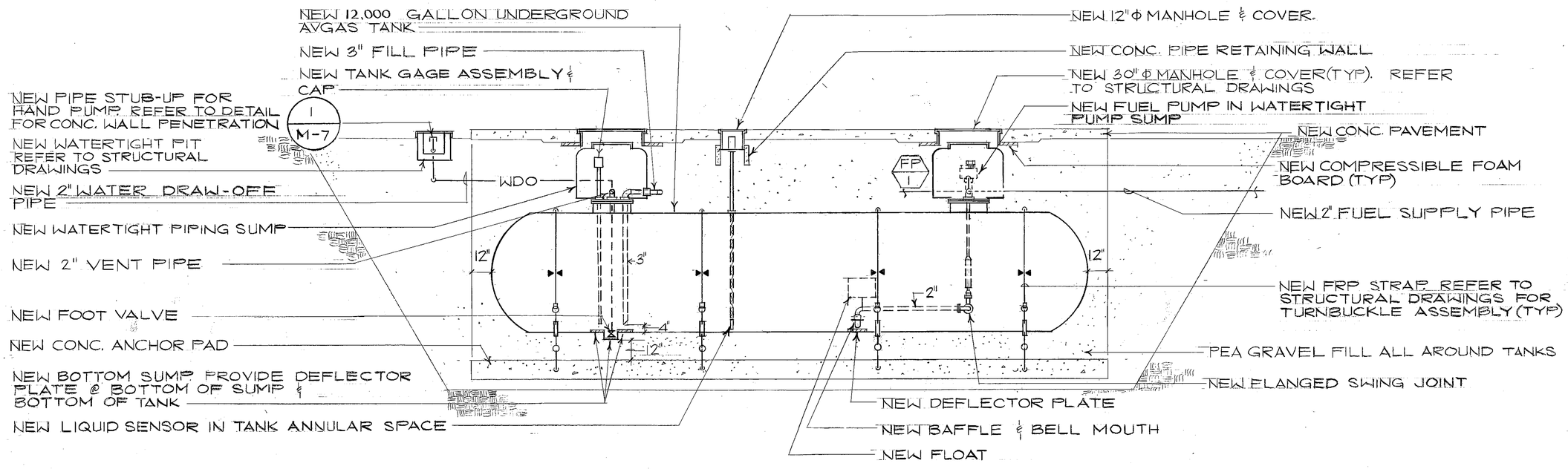
NEW FUELING SYSTEM PLAN, EQUIPMENT SCHEDULE, PIPING SUMP DETAIL

DATE :

DWG. NO. : M-2



A / M-3 SECTION
NOT TO SCALE



B / M-3 SECTION
NOT TO SCALE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

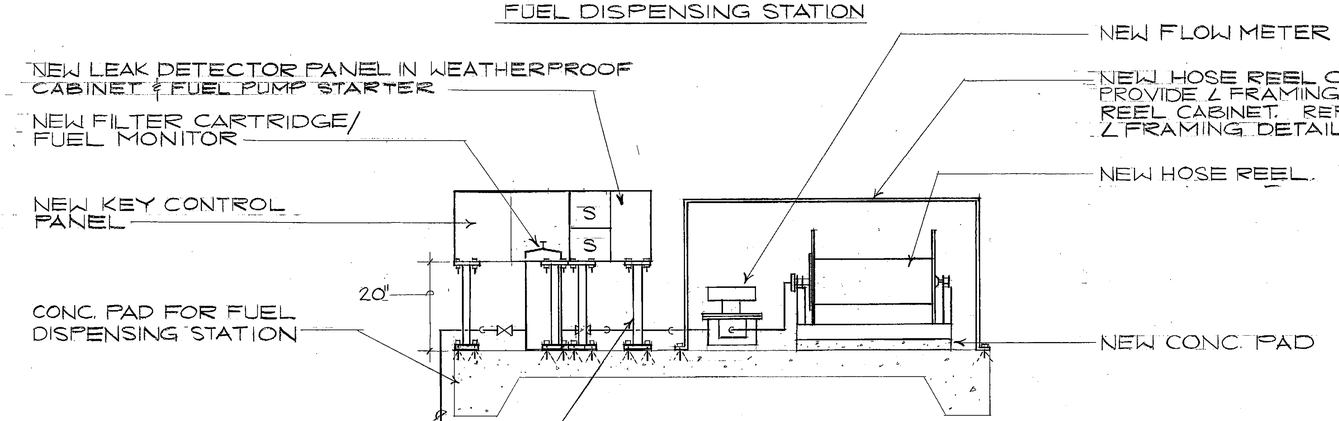
PROJECT NO. :
A02023-11

SHEET TITLE :
SECTIONS

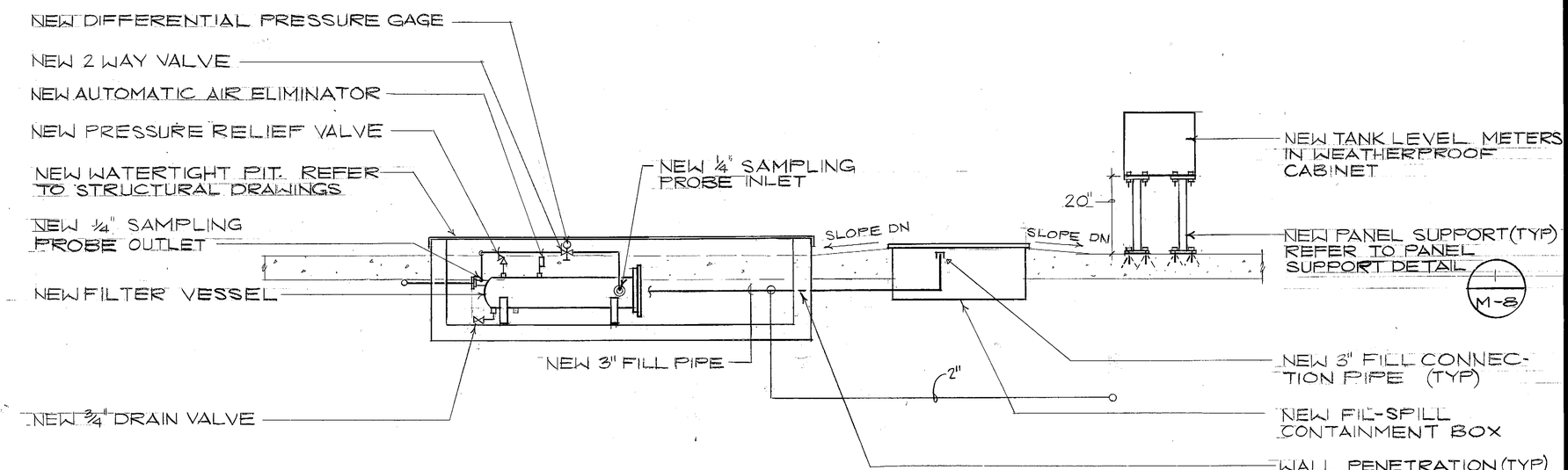
DATE :

DWG. NO. : M-3

FUEL DISPENSING STATION



A / M-4 SECTION
SCALE: 3/4"=1'-0"



B / M-4 SECTION
SCALE: 3/4"=1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

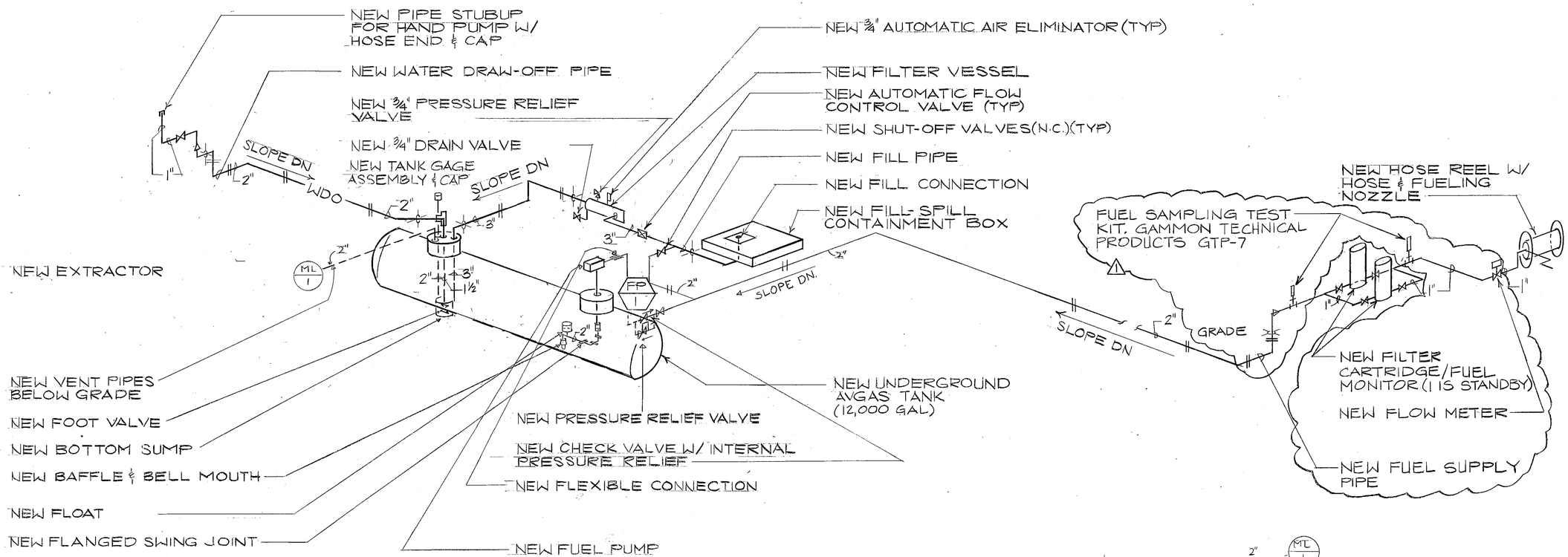
A02023-11

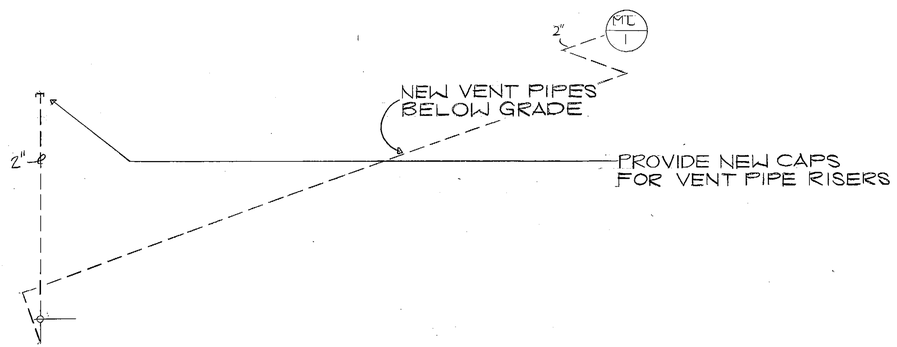
SHEET TITLE :

SECTIONS

DATE :

DWG. NO. : M-4





NEW FUELING SYSTEM PIPING DIAGRAM

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

ALLEN S. KUWANOE
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Signature

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KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED FUEL SAMPLING TEST KIT

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

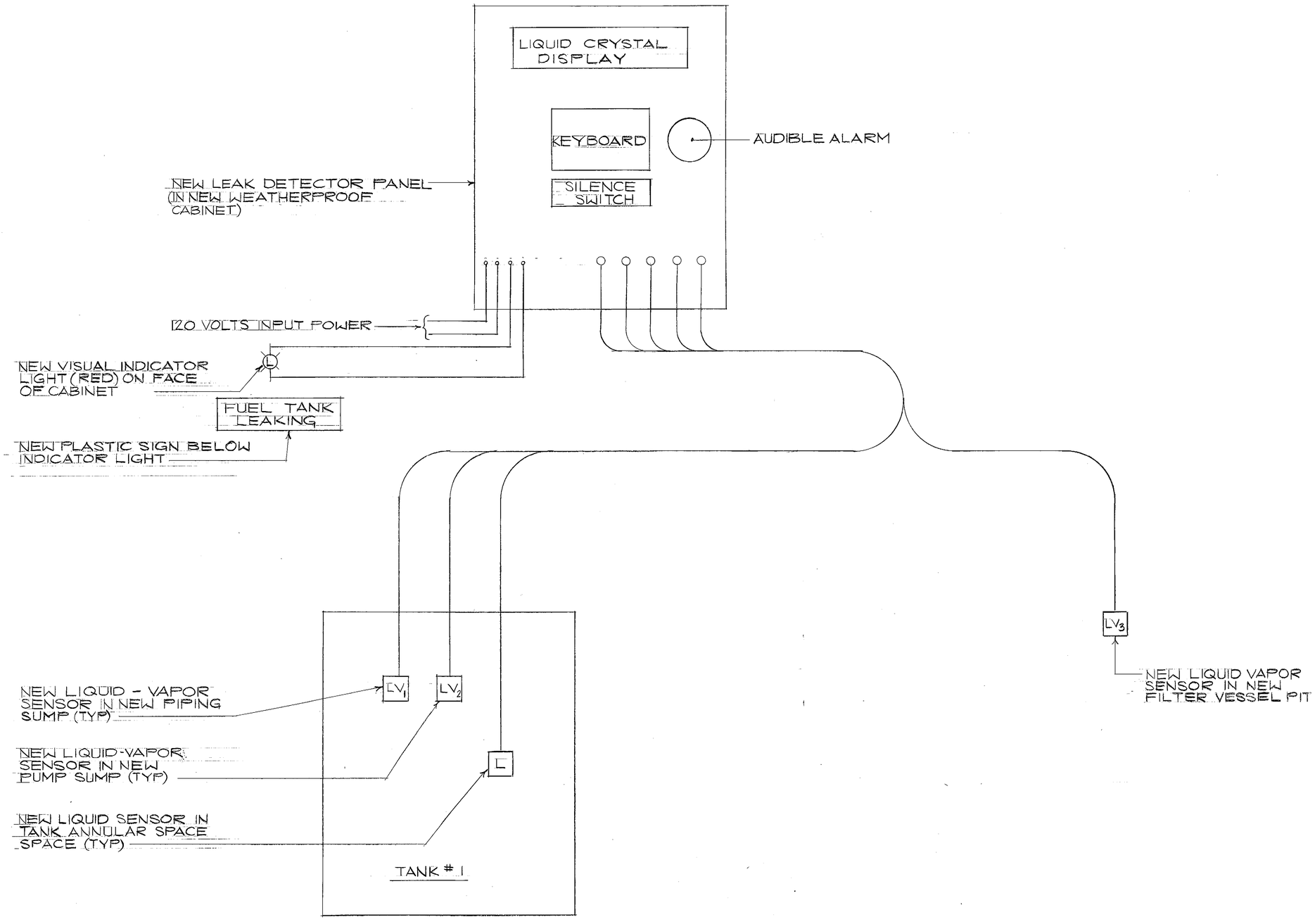
A02023-11

SHEET TITLE :

NEW FUELING SYSTEM PIPING DIAGRAM

DATE :

DWG. NO. : M-5



FUEL LEAK DETECTOR DIAGRAM

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

ALLEN S. KUWAHARA
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Allen S. Kuwahara
Signature

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

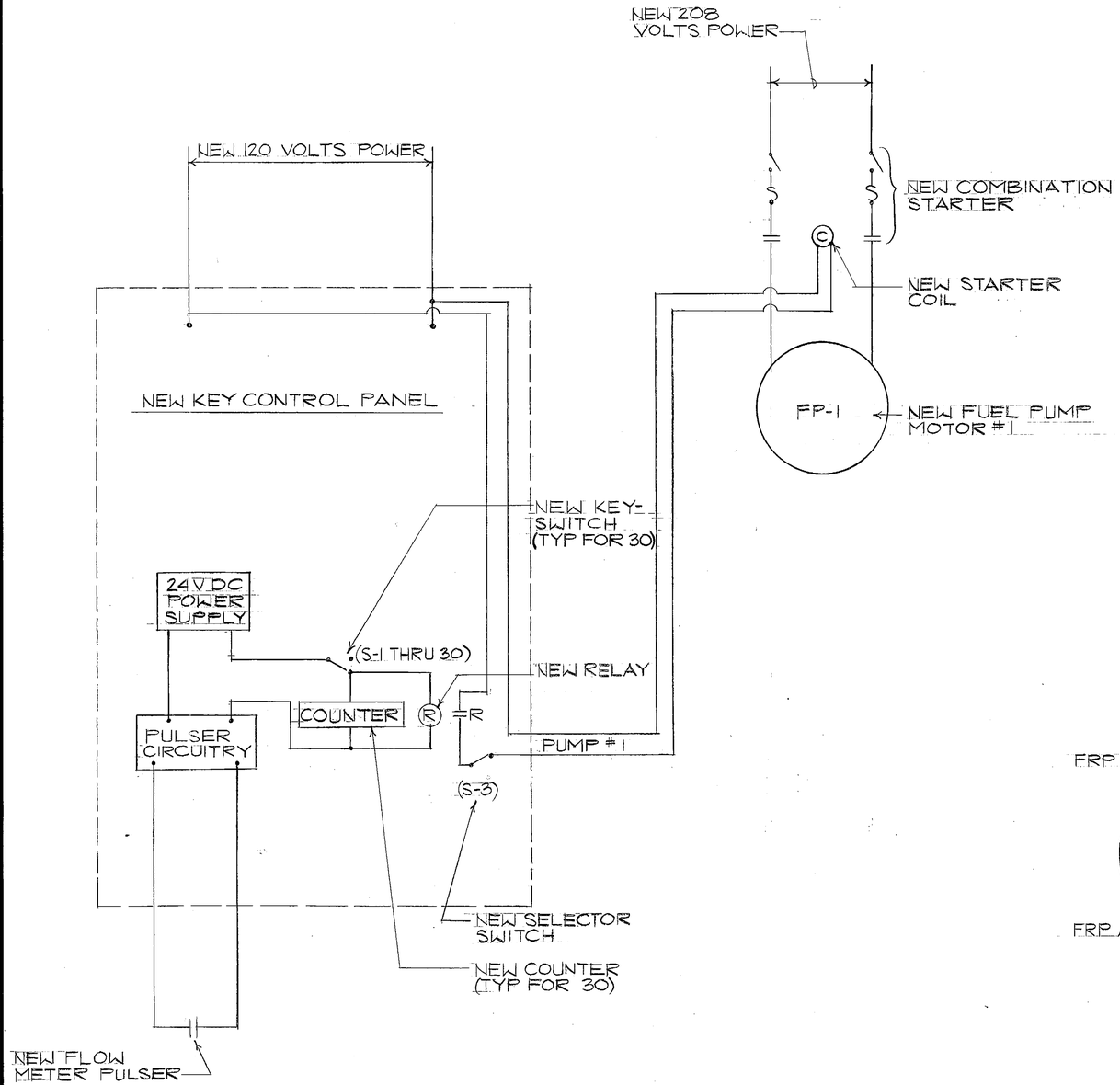
SHEET TITLE :

FUEL TANK LEAK DETECTOR DIAG.

DATE :

DWG. NO. :

M-6



FUEL SYSTEM CONTROL DIAGRAM

NTS

FUEL SYSTEM OPERATION

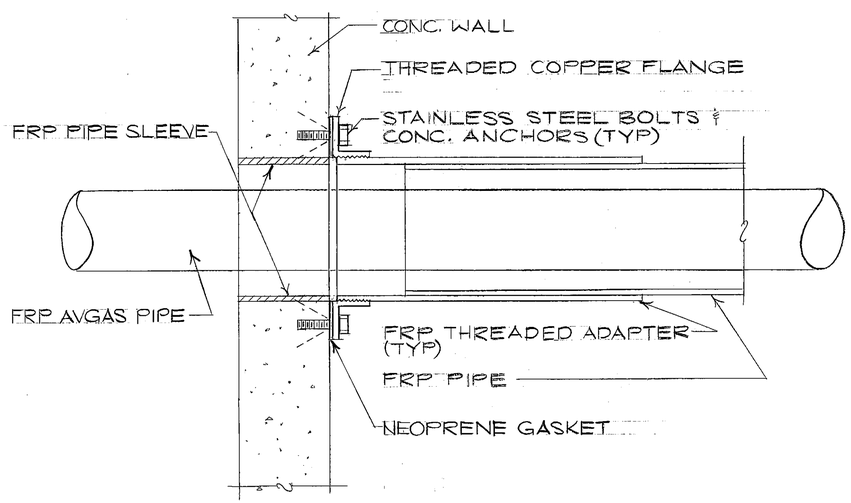
1. KEYSWITCHES (S-1 THRU S-30) CONTROL THE OPERATION OF THE FUEL PUMPS AND INDIVIDUAL COUNTERS. ONLY 1 FUEL PUMP OPERATES AT ANY TIME. SWITCH (S-3) SELECTS THE PUMP WHICH WILL BE ALLOWED TO RUN.

2. FLOW METER PULSER ACTIVATE THE APPLICABLE COUNTER.

3. SECURED AUTO-MANUAL SWITCH (NOT SHOWN) PERMITS AUTHORIZED PERSONNEL TO SWITCH OFF THE KEY CONTROL SYSTEM FOR TESTING AND SYSTEM BYPASS.

4. TIME DELAY RELAY (NOT SHOWN) PREVENTS A FALSE COUNT DURING STARTUP.

5. LOCKOUT SWITCHES (NOT SHOWN) ALLOW AUTHORIZED PERSONNEL TO LOCKOUT INDIVIDUAL KEYSWITCHES.



1 / M-7 CONCRETE WALL PENETRATION DETAIL

NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

ALLEN S. KUWAHARA
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HAWAII, U.S.A.

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Signature

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

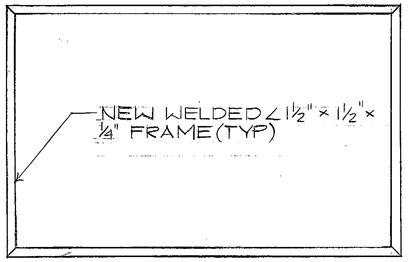
A02023-11

SHEET TITLE :

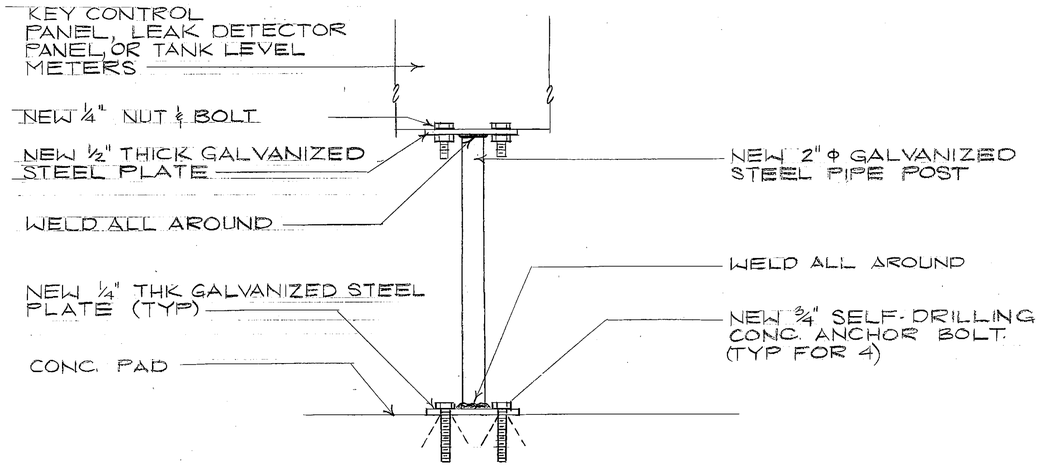
FUEL SYSTEM CONTROL DIAGRAM & OPERATION, DETAIL

DATE :

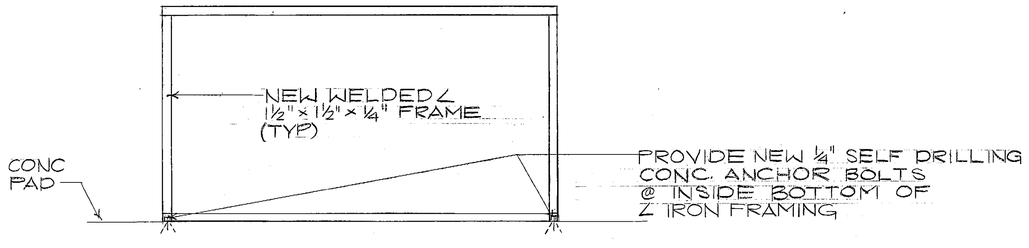
DWG. NO. : M - 7



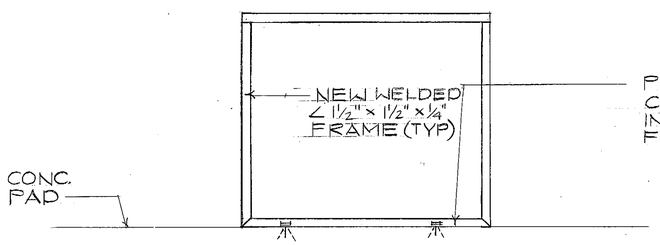
TOP VIEW



2 / M-8 PANEL SUPPORT DETAIL
NTS



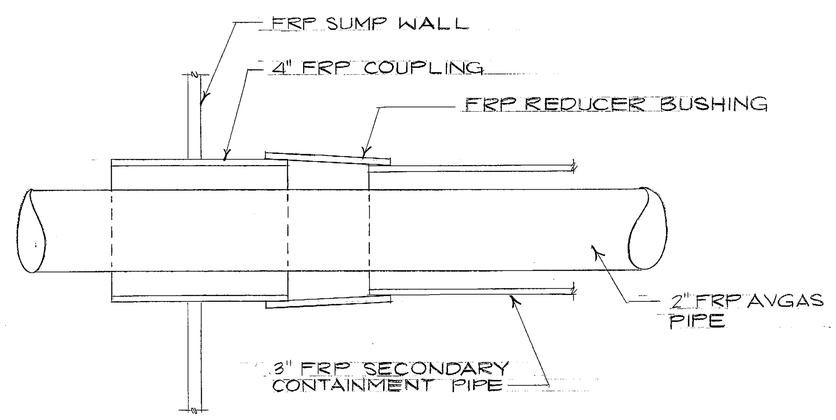
FRONT VIEW



SIDE VIEW

NOTE:
PROVIDE HOSE REEL CABINET FRAMING W/ 18 GAUGE STAINLESS STEEL SHEETS @ TOP, SIDES, & BACK. BOLT SHEETS TO ∠ FRAMING.

1 / M-8 HOSE REEL CABINET FRAMING DETAIL
SCALE: 1" = 1'-0"



3 / M-8 PUMP SUMP PENETRATION DETAIL
NTS

Airports Division
DEPARTMENT OF TRANSPORTATION
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Allen S. Kuwanoe
Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

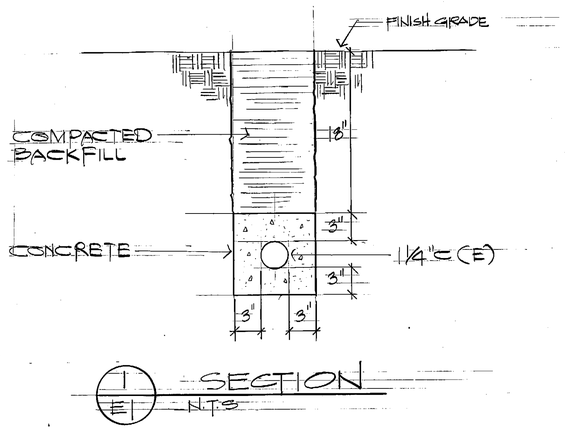
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DETAILS

DATE :

DWG. NO. :
M-8



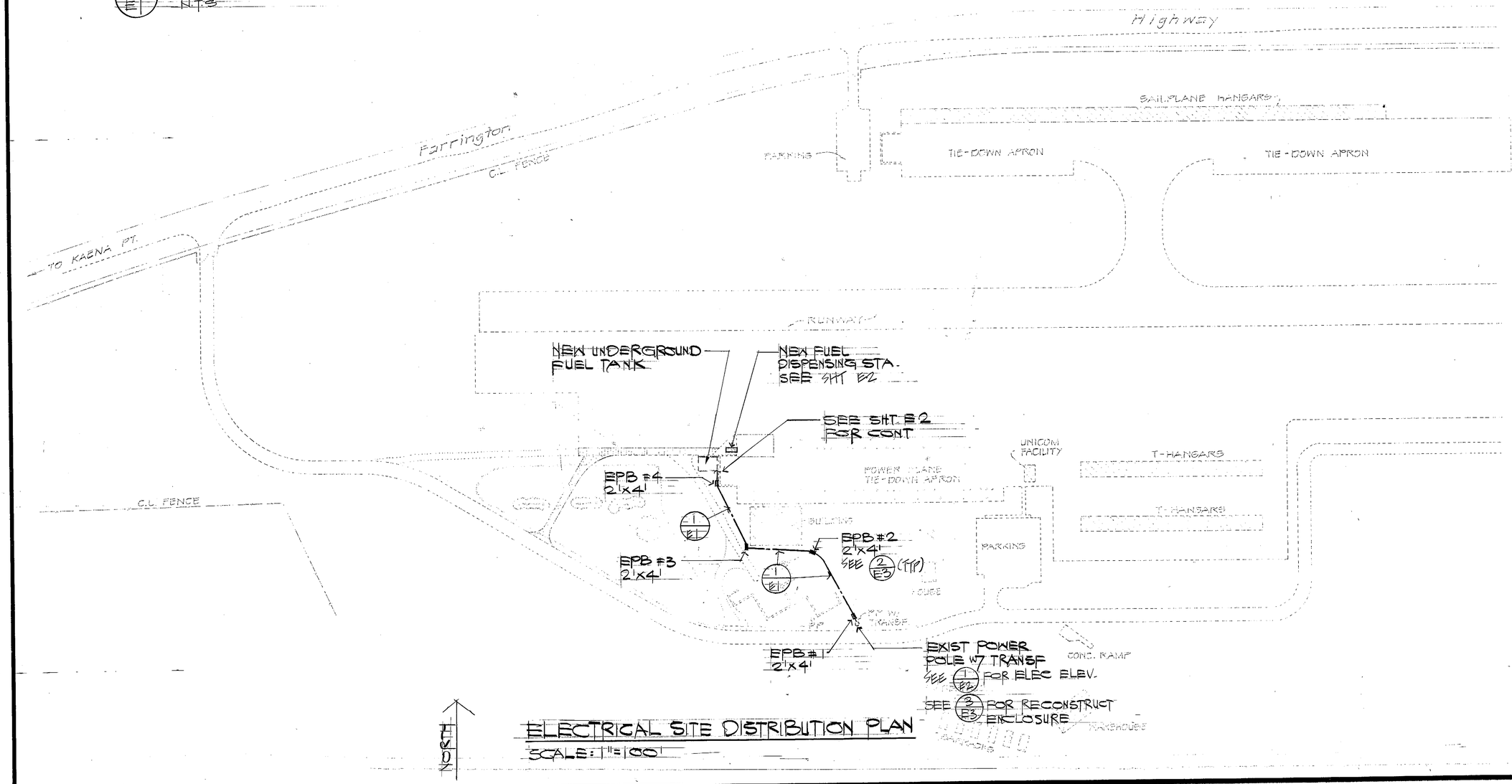
E1 SECTION N.T.S

ELECTRICAL SYMBOLS

○	EXISTING UTILITY POLE
■	ELECTRIC PULL BOX
▬	PANELBOARD
(E)	EQUIPMENT CONNECTION
⊙	GROUND TERNIMAL
EP	EXPLOSION PROOF
——·——	WIRING IN RACEWAY CONCEALED IN RACEWAY BELOW GRADE
—×—	EXPLOSION PROOF SEAL FITTING
—FS—	UNDERGROUND FUEL SUPPLY LINE, SEE (E2)

NOTES: ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUIT WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS —//— , 3 WIRES, —///— , 4 WIRES, ETC.

—⊂— INDICATES GROUNDING CONDUCTOR SIZED PER NATIONAL ELECTRICAL CODE ARTICLE 250



NORTH

ELECTRICAL SITE DISTRIBUTION PLAN

SCALE: 1"=100'

Airports Division
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HAWAII, U.S.A.

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AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

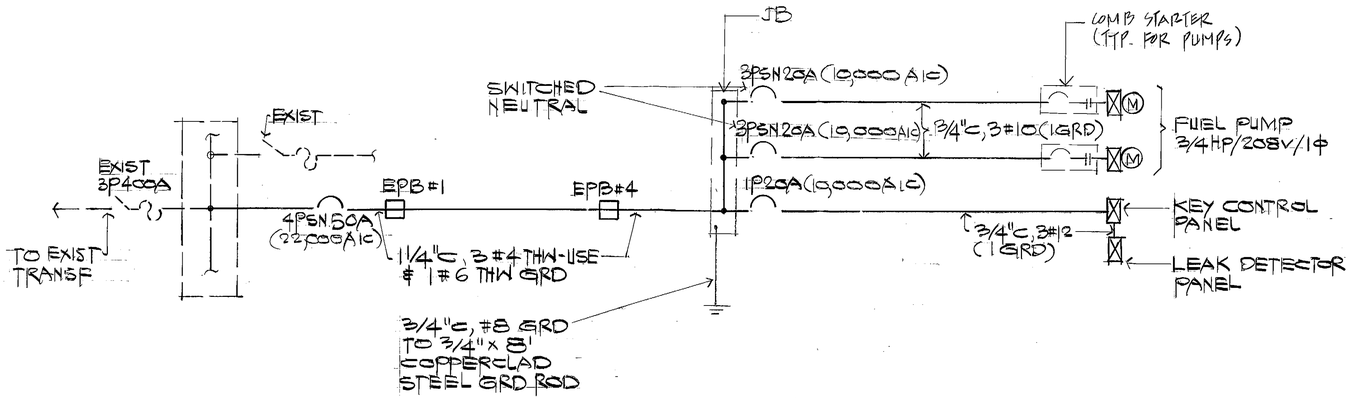
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

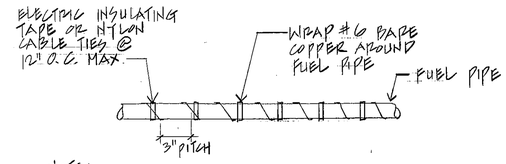
SHEET TITLE :
ELECTRICAL SITE DISTRIBUTION PLAN, SYMBOLS

DATE :

DWG. NO. : E-1

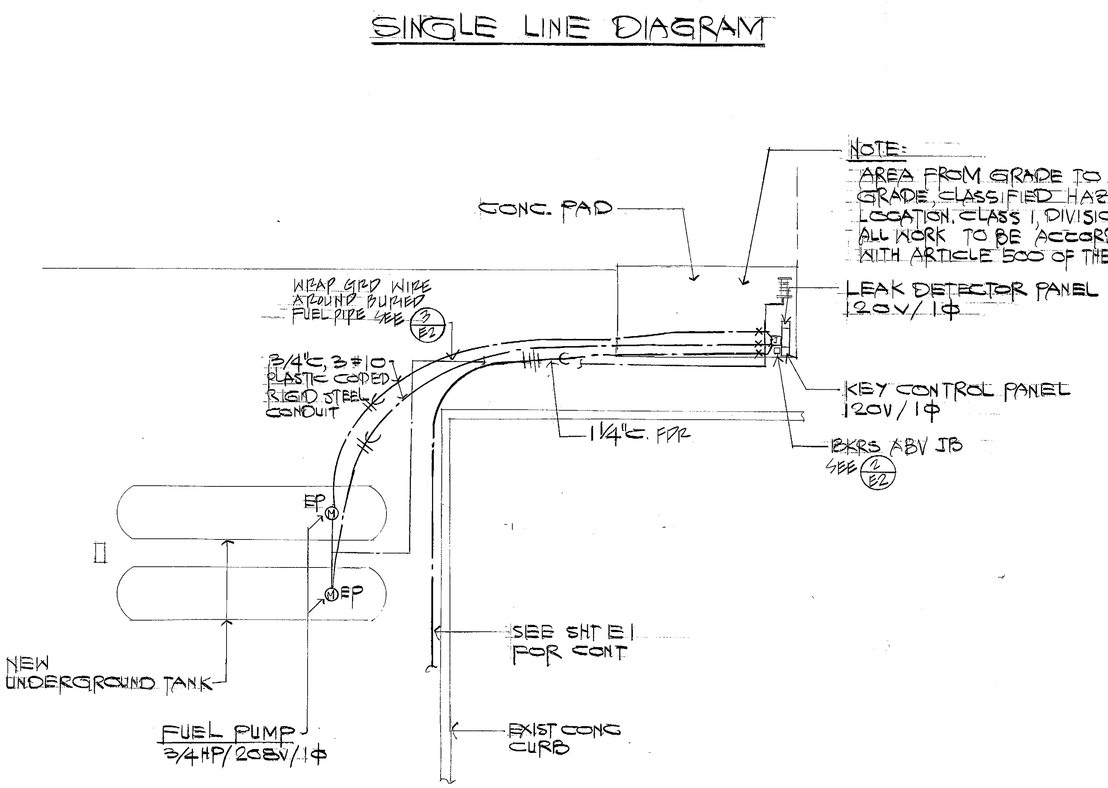


SINGLE LINE DIAGRAM

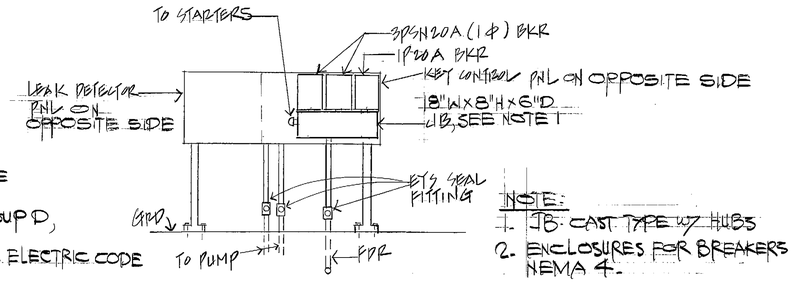


NOTES:
1. BOND & GROUND STATIC GROUND WIRES WRAPPED ON PIPES.
2. BOND & GROUND ALL VALVES, PIPE FITTINGS, BOXES & ALL METAL PARTS OF FUELING SYSTEM.
3. GROUND TO COPPER CLAD STEEL GROUND RODS

3/E2 DETAIL
N.T.S.

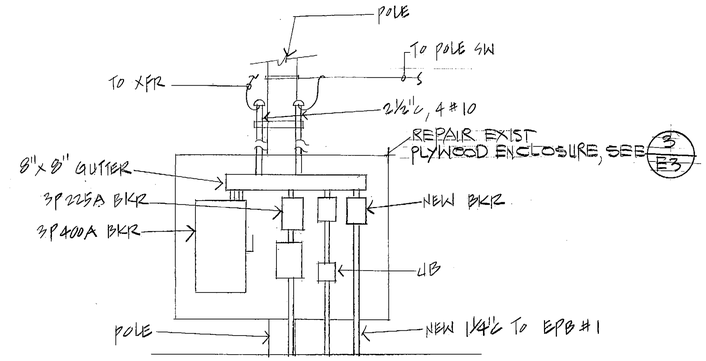


ELECTRICAL SITE PLAN
SCALE: 1/8"=1'-0"



NOTE:
1. JB: CAST TYPE W/ HUBS
2. ENCLOSURES FOR BREAKERS NEMA 4.

2/E2 ELEVATION
SCALE: 3/4"=1'-0"



NOTE: ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED.

1/E2 ELEVATION
SCALE: 3/8"=1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

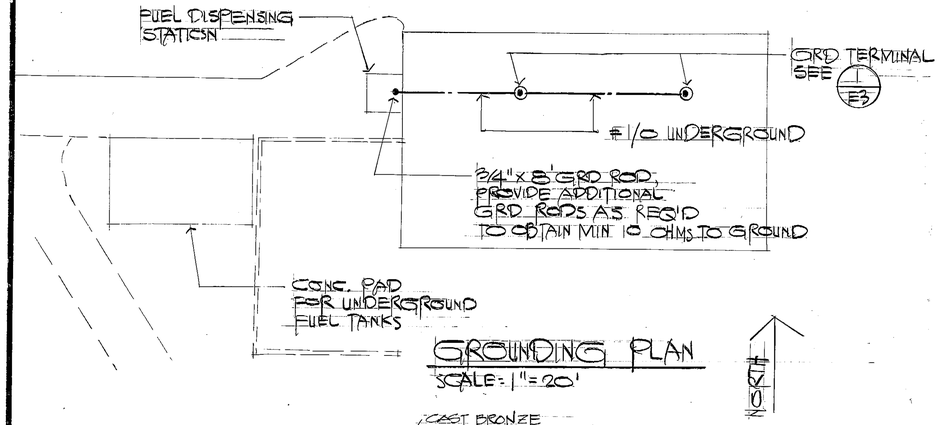
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

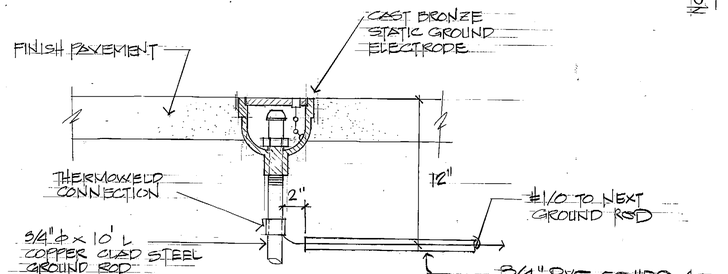
PROJECT NO. :
A02023-11

SHEET TITLE :
ELECTRICAL SITE PLAN, SINGLE-LINE DIAGRAM

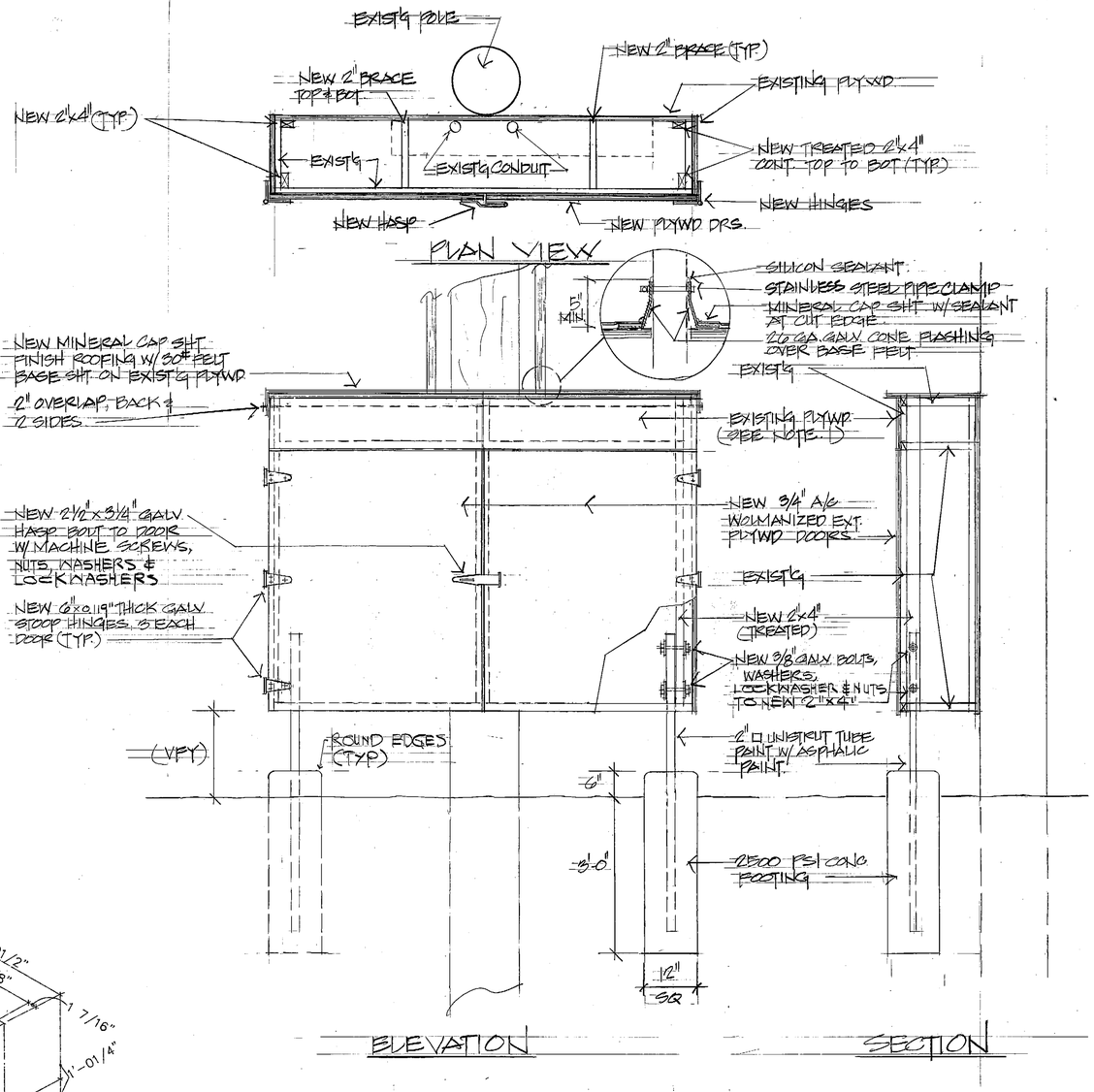
DATE :

DWG. NO. :
E-2





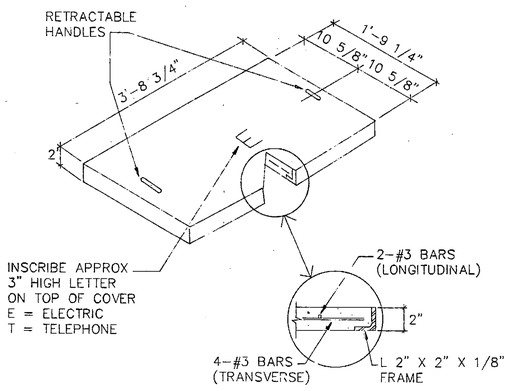
1/E6 GROUNDING DETAIL
N.T.S.



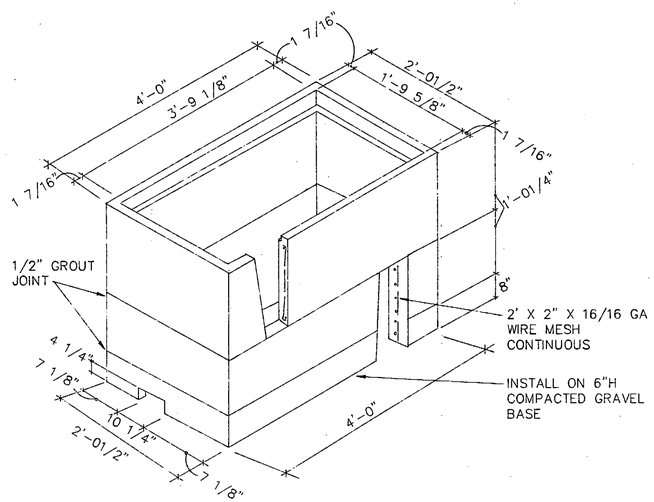
3/E3 DETAIL
SCALE: 3/4"=1'-0"

NOTES:

1. SQUARE UP EXISTING WOOD EQUIPMENT ENCLOSURE AND PROVIDE ADDITIONAL POST SUPPORTS, NAILS AND BRACING AS REQUIRED
2. PROVIDE NEW DOORS WITH NEW HINGES AND HASP. BOLT NEW HINGES TO NEW DOORS AND EXISTING PLYWD SIDING WITH #10 GALV. STEEL MACHINE SCREWS, WASHERS, LOCKWASHERS AND NUTS.
3. SAND ENTIRE EXTERIOR SURFACES INCLUDING BOTH SIDES OF NEW DRS. PRIME ENCLOSURE WITH 1 COAT OF OIL BASE PRIMER AND FINISH WITH 2 HEAVY COATS OF ACRYLIC LATEX PAINT, MEDIUM GREEN BY DEVOE #58177-01 #285 OR APPROVED EQUAL.
4. ALL EQUIPMENT AND MATERIALS EXIST'G UNLESS OTHERWISE INDICATED NEW.
5. ALL HARDWARE TO BE HEAVY HOT DIPPED GALVANIZED OR EQUAL.



CONCRETE COVER DETAIL



2/E3 2' X 4' PULL BOX DETAIL
N.T.S.

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
GROUNDING PLAN AND DETAILS

DATE :

DWG. NO. : E-3

Record of Environmental Consideration
DMR, Honolulu Soaring Hangar UST Closure bldg 91A

DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL DIVISION (IMHW-PWE)
BLDG. 105, WHEELER ARMY AIRFIELD
U.S. ARMY GARRISON, HAWAII
SCHOFIELD BARRACKS, HI 96857-5013
PHONE: (808) 656-2878, FAX: (808) 656-1039

DPW
Environmental
Division

Memo

To: Tod Deery
From: Ed Hewitt
Date: 12-Mar-2026
REC #: 5079
FEWR #: RJ000083J
Re: DMR, Honolulu Soaring Hangar UST Closure bldg 91A

Attached is the completed REC for the subject project. Please note compliance with the REC is contingent upon compliance with the comments from the below mentioned programs. Comments are either found in the Review and Concurrences section (page 6) or at the end of this document. Work is limited to the actions and locations described in the REC and any alterations or expansion of the scope of work invalidates the REC unless the proposed changes are submitted for further review and subsequently approved.

Failure to comply with these requirements may result in fines, penalties, and supplemental environmental project costs, which will be paid by the organization against which the fine or penalty has been assessed, using applicable Army appropriations unless otherwise required by law. Payments of fines and penalties will be charged to the funding account of the operation causing the violation. Contracting Officers will ensure that contracts require contractors to pay fines or penalties resulting from their operations (Army Regulation 200-1, Chapter 15-1, d.)

Please read this document and indicate your acceptance of the conditions by signing below and returning a copy to DPW Environmental.

The undersigned has read this REC and agrees to incorporate the listed environmental protective measures into the planning and execution of this project.

Proponent Signature X_____ Date 7/19/2023

If additional guidance is needed to meet these requirements, please contact the following personnel.

Natural Resources Program (OAHU), Kapua Kawelo at 808.864.1014 or hilary.k.kawelo.civ@army.mil

Cultural Resources Program, Dave Crowley at 520.687.2399 or david.m.crowley22.civ@army.mil

Installation Restoration Program / Military Munitions Response Program, Darrin Dukes at 520.687.2249 or darrin.g.dukes.civ@army.mil

Clean Water Program, Darrin Dukes at 520.687.2249 or darrin.g.dukes.civ@army.mil

Clean Air/Safe Drinking Water Program,Kyle Sasahara at 520.687.2254 or kyle.c.sasahara.civ@army.mil

Recycling Program, Kim Welch at 520.687.2247 or kimberly.m.welch14.civ@army.mil

Toxic Substances Control Program, Whit Somerall at 520.687.2207 or adam.w.somerall.civ@army.mil

Underground Storage Tank Program, Anthony Corigliano at 520.687.2250 or anthony.p.corigliano2.civ@army.mil

Clear Form

RECORD OF ENVIRONMENTAL CONSIDERATION

U.S. Army Garrison-Hawaii, Directorate of Public Works, Environmental Division

REC #: 5079

REC CHECKLIST (Check before submitting)
☑ Detailed Project Description
☑ Location Map and Plans
☑ Date of Proposed Action
☑ Reason for Categorical Exclusion
☑ Impact Analysis Checklist

1. DATE: 30-Aug-2023

2. SUBMITTED BY THE PROPONENT:

Tod Deery, Environmental Science International
Name, Organization

(808) 404-8482
Phone Number

"original signed"
Signature

3. DESCRIPTION OF PROPOSED ACTION:

DMR	Honolulu Soaring Hangar UST Closure	91A	RJ000083J
Installation	Project Title	Location/Bldg No.	FEWR #

The proposed action is to close an existing 12,000-gallon AV gas underground storage tank (UST), the associated underground (u/g) ac anchor pad, ac apron, 10-gallon fill spill containment box, automatic and hand pump fueling dispensers, fuel filters, automatic tank gage system, leak detection system, control panels, Qtpod fueling terminal, underground (u/g) 12 kV electrical service, electrical distribution equipment, u/g tank vent pipe, and all incidental valves, piping, wires, fittings etc.

The awarded contractor will conduct environmental sampling, hauling and disposal of all materials off-site. The site will be backfilled and compacted with clean suitable materials. Minor landscaping may be performed or an asphalt concrete (AC) paved connection to the existing AC may be installed (to be determined). There are no plans to install a replacement facility at this time.

The closure construction plans for this project are not yet completed. All activities shall be performed in compliance with HAR Title 11 DOH Chapter 280.1 Underground Storage Tanks.

Estimated Construction Cost: $55,000

4. ESTIMATED START DATE & DURATION OF PROPOSED ACTION: 9/2024 -12/31/2024

5. THIS ACTION HAS BEEN COORDINATED WITH THE FOLLOWING OFFICES/AGENCIES:

Office/Agency	Name(s)	Concur/Non-Concur
HDOH-UST Division - Permit	Future	
Fire Department - UST Permit	Future	

RECORD OF ENVIRONMENTAL CONSIDERATION

ENVIRONMENTAL IMPACT ANALYSIS ***(Any "YES" or "MAY" answers need to be explained in the "Discussion" section at the end of this checklist.)***	**YES**	**NO**	**MAY**
1. AIR QUALITY			
a. Will the proposal cause air emissions such as smoke, dust, suspended particles, or air pollutants during construction or operations?	☑	☐	☐
b. Will the proposal involve the removal, modification, or addition of an air emitting device (e.g., boilers, generators, or refrigerant containing equipment)?	☐	☑	☐
2. WATER QUALITY			
a. Is the total disturbance of land over one acre?	☐	☑	☐
b. Is the total area of new impervious surface over 5,000 square feet?	☐	☑	☐
c. Does the project involve an individual wastewater system (e.g., septic tank) or pretreatment unit (e.g., oil-water separator or grease trap)?	☐	☑	☐
3. TOPOGRAPHY AND SOILS			
a. Will there be any land/ground disturbance (e.g., excavating, coring, digging, trenching, grubbing, dredging, excavation, or fence installation)? ***Please specify total land disturbance acreage below in "Discussion."***	☑	☐	☐
4. NATURAL RESOURCES			
a. Will the proposal affect undeveloped areas, affect endangered or threatened species or their habitat, occur in areas with known invasive species infestations, or affect plant or animal critical habitat?	☐	☐	☑
b. Will the proposal require removal or trimming of trees? ***Please provide map of tree location below in "Discussion."***	☐	☑	☐
c. Does the project involve soil importing/exporting?	☑	☐	☐
5. CULTURAL RESOURCES			
a. Will the proposed action involve alterations of existing buildings or structures?	☐	☑	☐
b. Will the proposed action be located within or adjacent to a historic district?	☐	☑	☐
c. Will the proposed action involve ground disturbance or occupancy in or near a known archaeological site?	☐	☐	☑
i. If yes/may, will archaeological work be needed? (Permit required)	☐	☑	☐

RECORD OF ENVIRONMENTAL CONSIDERATION

ENVIRONMENTAL IMPACT ANALYSIS ***(Any "YES" or "MAY" answers need to be explained in the "Discussion" section at the end of this checklist.)***	**YES**	**NO**	**MAY**
6. LAND USE			
a. Will the proposal result in a change in operations, activities, or land use occurring at the site or facility?	☑	☐	☐
7. NOISE ENVIRONMENT			
a. Will there be any changes to the numbers, types, and operations of aircraft, vehicles, or weapon systems that could affect noise levels?	☑	☐	☐
8. TRAFFIC			
a. Will the proposal generate or increase vehicular traffic?	☐	☑	☐
b. Will there be a requirement to construct, reroute or alter roadways?	☐	☑	☐
9. HAZARDOUS MATERIALS/WASTE OR TOXIC SUBSTANCES			
a. Will the proposal result in the disturbance of lead containing paint or asbestos containing material?	☑	☐	☐
b. Will the proposal result in the use, storage, or disposal of hazardous materials?	☐	☑	☐
c. Will the proposal involve pesticide application (e.g., herbicide or insecticide)?	☐	☑	☐
10. UTILITIES SYSTEMS			
a. Will the proposal require disposal or alterations to existing utility systems or drainage systems (e.g., power, drinking water, waste water, storm water)? ***Please specify type of utility affected in "Discussion."***	☑	☐	☐
11. FLOODPLAIN			
a. Will the proposed action take place within the 100 year floodplain?	☐	☑	☐

RECORD OF ENVIRONMENTAL CONSIDERATION

DISCUSSION ***(Annotate items answered "YES" or "MAY" and provide a brief explanation of the potential impacts and mitigation measures to be implemented. Provide answers to the questions of how much, whom, where, when, and how? Contact the DPW Environmental Division at usarmy.hawaii.nepa@mail.mil if assistance is needed.)***

Required Discussion: 1a 3a 4a 4c 5c 6a 7a 9a 10a

1a. The project will involve excavation and demolition that will generate construction dust.
3a. The project will involve excavation to remove the UST, u/g vent pipe, and an existing u/g 12kV electrical service.
4a. The project may, but should not, impact the Hawaiian Hoary Bat (ʻŌpeʻapeʻa) pupping season (1 June to 15 September) as the pups, or babies cannot fly and hang in trees so it is recommended not to trim tress taller than 15 feet during pupping season. There may be incidental tree trimming to excavate the existing u/g 12 kV electrical service. However, the contract will include a clause within the Selective Site Demolition Technical Specification to limit trimming to only trees greater than 15 feet unless the work is performed during non-pupping season or as otherwise required by the authority having jurisdiction.
4c. Excavation of the UST, vent pipe, and existing u/g vent pipe, and an existing u/g 12kV electrical service will require the import, backfill, and compaction of clean suitable fill materials.
5c. No known archaeological or historic sites are located in the proposed UST closure project site. According to the Hawaii Cultural Resource Information System [HICRIS] database (SHPD, 2022), there are no records of historical properties or archaeological assessments on or near the Property. A review of the ERP EA and EIS Library was performed to search for reports that contain information for historical, archaeological, or cultural resources in the vicinity of the project site. The proposed project is not expected to result in adverse impacts to historical, archaeological, or cultural resources since the project will be executed within the footprint of the existing project features.
6a. Closure of the UST and its appurtenances will prevent future AV gas fueling at the current location. If a replacement system is desired by HDOTA or their tenant a new project and associated approvals will be required.
7a. Closure of the UST and its appurtenances will prevent future AV gas fueling at the current location. This is expected to result in the reduction of aircraft noise.
9a. Some existing above ground components, such as the fueling dispenser enclosures, the slab markings, and other incidental surfaces were sampled and determined to have lead containing paint.
10a. The project will remove an existing u/g 12 kV electrical service. The service was dedicated to the UST fueling facility. Its removal will include all connections, cables, wires, transformers (if any) from the load to the riser connection at a nearby existing wood electrical pole.

RECORD OF ENVIRONMENTAL CONSIDERATION

REC# 5079

THIS SECTION TO BE COMPLETED BY ENVIRONMENTAL DIVISION:

The Environmental Impact Analysis checklist was reviewed and potential impacts on the quality of the environment have been considered. It has been concluded that this action is not segmented and no extraordinary circumstances exist that would preclude the use of the applicable categorical exclusion identified in section below.

This document does not relieve the proponent from compliance with other applicable federal, state and local environmental laws and regulations.

REASON FOR USING RECORD OF ENVIRONMENTAL CONSIDERATION:

☐ Is adequately covered in the following EA/EIS titled:

_____

Dated: _____

The EA/EIS may be reviewed at:

_____

Or,

☑ Is categorically excluded under Appendix B, Section II, paragraph (c)(1) of 32 CFR Part 651 for the following reason (See 32 CFR Part 651, Environmental Analysis of Army Actions):

Construction of an addition to an existing structure or new construction on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acres of new surface disturbance.

RECORD OF ENVIRONMENTAL CONSIDERATION

REC# 5079

REVIEW AND CONCURRENCES *(For Environmental Division use)*:

	YES	WITH CMNT	NO	
WINCHESTER.JESSICA.NICHOLE.ADINOLFI.1540393377 Digitally signed by WINCHESTER.JESSICA.NICHOLE.ADINOLFI.1540393377 Date: 2023.10.24 10:29:41 -10'00'	☑	☑	☐	24-Oct-2023
Natural Resources Program				Date
CROWLEY.DAVID.M.1512306469 Digitally signed by CROWLEY.DAVID.M.1512306469 Date: 2026.03.09 13:34:54 -10'00'	☑	☑	☐	09-Mar-2026
Cultural Resources Program				Date
NHPA S106 concluded 07MAR26. No SHPO followup response. Follow archaeological monitor & cultural advisor requiremts				
SOMERALL.ADAM.WHITTEN.1594625664 Digitally signed by SOMERALL.ADAM.WHITTEN.1594625664 Date: 2023.11.14 13:12:27 -10'00'	☑	☑	☐	14-Nov-2023
IRP/MMRP Program				Date
See attached IRP comments. Follow the 3Rs: Recognize, Retreat, Report (www.3rs.mil)				
DUKES.DARRIN.GARNETT.1190182572 Digitally signed by DUKES.DARRIN.GARNETT.1190182572 Date: 2023.10.31 10:22:35 -10'00'	☑	☑	☐	31-Oct-2023
Clean Water Program				Date
See attached comments				
SASAHARA.KYLE.C.1617800060 Digitally signed by SASAHARA.KYLE.C.1617800060 Date: 2023.11.02 15:19:38 -10'00'	☑	☑	☐	02-Nov-2023
Clean Air/Safe Drinking Water Program				Date
WELCH.KIMBERLY.MALIA.1299064731 Digitally signed by WELCH.KIMBERLY.MALIA.1299064731 Date: 2023.10.30 12:31:12 -10'00'	☑	☑	☐	30-Oct-2023
Recycling Program				Date
BLANTON.RICHARD.ALVIN.JR.1072774848 Digitally signed by BLANTON.RICHARD.ALVIN.JR.1072774848 Date: 2023.10.04 12:43:31 -10'00'	☑	☐	☐	04-Oct-2023
Hazardous Waste Program				Date
ALVAREZ-MARTINEZ.JACQUELINE.SUZANNE.1597023550 Digitally signed by ALVAREZ-MARTINEZ.JACQUELINE.SUZANNE.1597023550 Date: 2023.11.08 12:19:10 -10'00'	☑	☑	☐	08-Nov-2023
TSCA/SPCC/EPCRA Program				Date
SOMERALL.ADAM.WHITTEN.1594625664 Digitally signed by SOMERALL.ADAM.WHITTEN.1594625664 Date: 2023.11.14 13:13:11 -10'00'	☑	☑	☐	14-Nov-2023
Other ENV Staff as needed				Date
See attached Underground Storage Tank Program comments.				

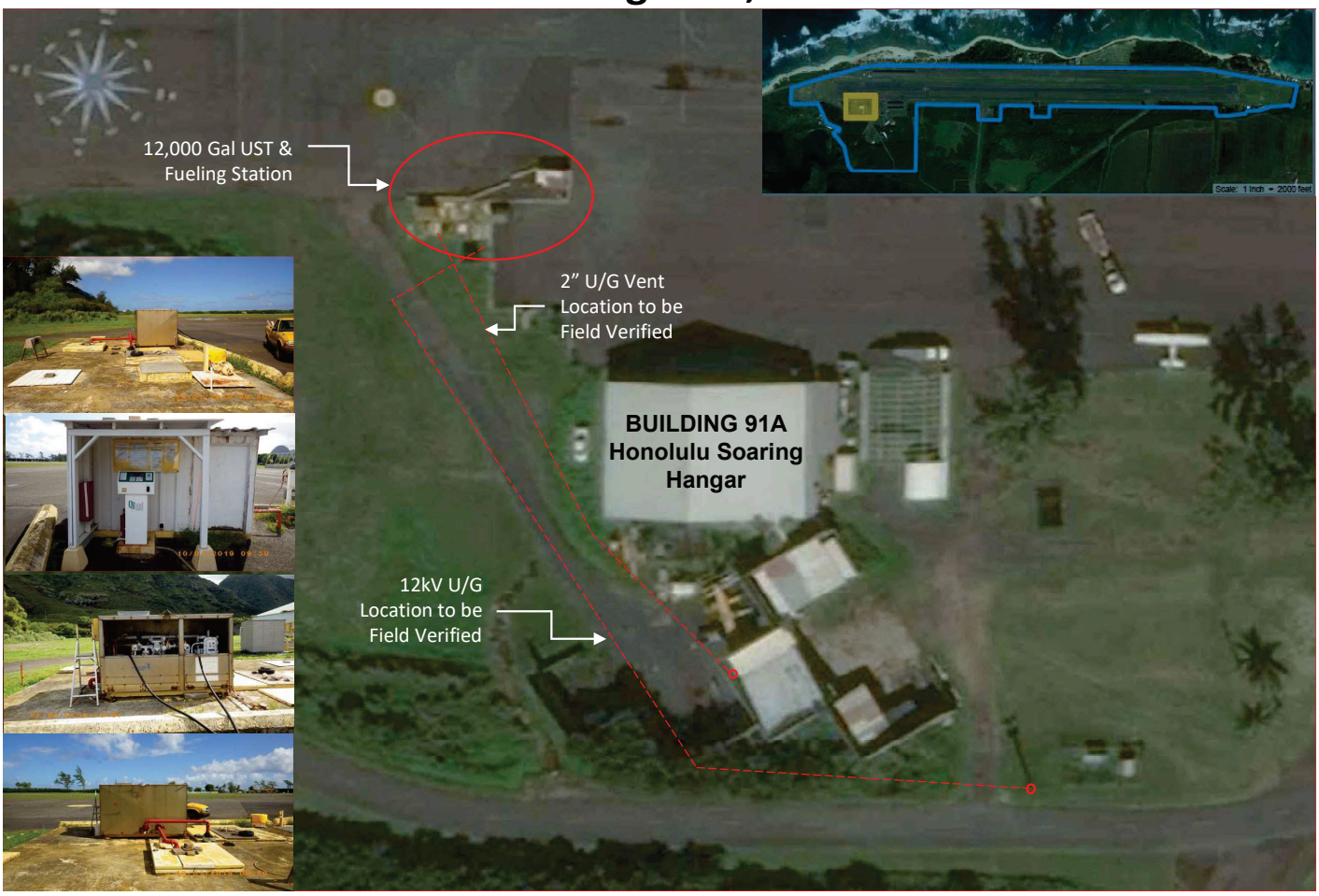
APPROVED BY:

Environmental Coordinator — Date: 12 Mar 26

☑ ***Concurrence is contingent upon compliance with comments provided.***

Attachment A
Project Site & Vicinity Map

UST Closure, Dillingham Military Reservation (DMR) aka Kawaihapai Airfield (HDH), Waialua, Oahu
Bldg. 91A,



Attachment B
Letter Report - Limited Asbestos and Lead Paint Survey

Environmental Science International
354 Uluniu Street, Suite 304, Kailua, Hawaii 96734
(808) 261-0740 phone

120037:DO-38

August 7, 2023

State of Hawaii Department of Transportation, Airports
Engineering Maintenance
400 Rodgers Blvd. Suite 700
Honolulu, Hawaii 96819

Attention: Mr. Benton Ho

Subject: Letter Report – Limited Asbestos and Lead Paint Survey, Kawaihapai Airport, Fuel Pumping Station, Honolulu, Hawaii.

This letter report documents the limited asbestos and lead paint survey performed by Environmental Science International on behalf of the State of Hawaii Department of Transportation, Airports. The survey was conducted in association with the Underground Storage Tank Leak Removal Project. The survey only included visually and physically accessible materials in the areas that could be disturbed as part of the UST Removal at the Fuel Pumping Station located North of Hanger 91A.

A Hazardous Materials Review Form was submitted to the HDOTA Asbestos Manager. No asbestos information was found in the HDOTA asbestos database. The Hazardous Material Review Form is included in Appendix D.

Asbestos Sampling and Analysis

ESI personnel (Tiana Rey and Brandon Yoza) inspected the areas around the Fuel Pumping Station associated with the UST for ACM. Suspect ACM included concrete and roofing materials. Following the inspection,15 samples of suspect ACM were collected. The sample area is shown in Figure 1a. A description of the materials sampled and photographs of the materials are provided in Appendix A.

The samples were collected in accordance with Hawaii Administrative Rules Title 11, Chapter 501, Section 7. Following sample collection, the samples were placed into transparent polyethylene Loctop sample bags and transported to Hawaii Analytical Laboratory for analysis. Chain-of-custody forms were used to track the samples from collection to final disposition at the

laboratory. HAL is a current participant in the National Voluntary Laboratory Accreditation Program.

The samples were analyzed for asbestos by polarized light microscopy using EPA Method 600/R-93-116. Asbestos was not detected in any of the samples. A summary of the laboratory results is included in Appendix A. The laboratory report and chain-of-custody forms are included in Appendix C.

Lead Sampling and Analysis

ESI personnel (Tiana Rey and Brandon Yoza) inspected the materials associated with the Fuel Pumping Station, that could be disturbed as part of the UST Removal for lead paint. A total of 16 paint chip samples were collected. The sample locations are shown in Figure 1b. A description of the paint and photographs are provided in Appendix B.

The samples were collected using a hammer and a chisel. Each sample consisted of approximately 0.25 grams of paint. The samples were placed into laboratory-supplied polyethylene Loctop sample bags and transported to HAL for analysis. A Chain-of-custody form was used to track the samples from collection to final disposition at the laboratory. HAL is a current participant in the National Lead Laboratory Accreditation Program. The tools used to collect the samples were wiped clean between sample locations to avoid cross-contamination.

The samples were analyzed for lead using the NIOSH Method 7082m. Lead-based and lead -containing paint was identified. A summary of the laboratory results is included in Appendix B. The laboratory report and chain-of-custody form are included in Appendix C.

Summary, Recommendations, and Conclusions

ESI collected 15 samples of suspect ACM and 16 samples of suspect lead paint. Asbestos was not detected in any of the samples. Lead-based and lead-containing paint was identified on all the sampled surfaces except for the paint outside the enclosed structure. Please refer to the OSHA Lead in Construction standard (29 CFR 1926.62) involving paints that contain lead.

Asbestos and lead may be present in materials and paint that were not sampled during the survey. Should suspect ACM or suspect lead paint other than those identified in Appendices A and B be encountered, ESI recommends that representative samples of the suspect materials be collected and analyzed in accordance with applicable federal and state requirements.

ESI appreciates this opportunity to assist you with this project. Should you have any questions regarding this letter report or require further assistance, please contact us at (808) 261-0740.

Sincerely,



Tiana Rey
Environmental Scientist
Environmental Science International, Inc.
State of Hawaii Asbestos Certification No. HIASB-5120
State of Hawaii Lead Risk Assessor Certification No. PB-1275

Brandon A. Yoza

Brandon Yoza
Environmental Scientist
Environmental Science International, Inc.
State of Hawaii Asbestos Certification No. HIASB-4996
State of Hawaii Lead Risk Assessor Certification No. PB-1207

Attachments: Figures - Sample Location Maps
Appendix A - Summary of Asbestos Results
Appendix B - Summary of Lead Results
Appendix C - Laboratory Report and Chain-of-Custody
Appendix D - Acronyms
Appendix E - Hazardous Materials Review Form

Figures

Sample Location Maps





LEGEND	NOTES	SOURCES
MAP INSET NEGATIVE ASBESTOS SAMPLES	The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.	Google Earth Pro, August 8, 2023.

FIGURE 1
ASBESTOS SAMPLE LOCATION MAP

LIMITED ASBESTOS AND LEAD PAINT SURVEY
KAWAIHAPAI AIRPORT
69-415 Farrington Hwy, Waialua, HI 96791
State of Hawaii Department of Transportation
Airports Division

ENVIRONMENTAL SCIENCE INTERNATIONAL





LEGEND	NOTES	SOURCES
MAP INSET LEAD BASED AND CONTAINING PAINT PAINT WITHOUT LEAD	The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.	Google Earth Pro, August 8, 2023.

FIGURE 1

LEAD SAMPLE LOCATION MAP

LIMITED ASBESTOS AND LEAD PAINT SURVEY
KAWAIHAPAI AIRPORT
69-415 Farrington Hwy, Waialua, HI 96791
State of Hawaii Department of Transportation
Airports Division

ENVIRONMENTAL SCIENCE INTERNATIONAL

Appendix A

Summary of Asbestos Results

Appendix A

Summary of Asbestos Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building Number and Floor	Functional Space	Material Description	Sample Photos	Laboratory Description	Sample Name	Sample Results	Date Sampled	Friability (NF/F)	Condition (SD, D, G)
HDH Fuel Pumping Station	UST Concrete Slab	Yellow Painted Concrete Slab Above UST		Gray and Black Concrete, Yellow Paint	HDH-Floor-1a to 1c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	Fuel Pumping Station	Yellow Painted Concrete Curbs		Gray Concrete and Yellow Paint	HDH-Floor-2a to 2c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	UST Concrete Slab	Gray Painted Roofing Material on UST Covers		Black Roofing	HDH-Floor-3a to 3c	Not Detected	07.24.23	NF	G

Appendix A

Summary of Asbestos Results, Kawaihapai Airpor
Fuel Pumping Station
July 24, 2023

Building Number and Floor	Functional Space	Material Description	Sample Photos	Laboratory Description	Sample Name	Sample Results	Date Sampled	Friability (NF/F)	Condition (SD, D, G)
HDH Fuel Pumping Station	UST Concrete Slab	White Painted Roofing Material on UST Covers		Black Roofing and White Roof Coat	HDH-Floor-4a to 4c	Not Detected	07.24.23	NF	G
HDH Fuel Pumping Station	UST Concrete Slab	Yellow Painted Concrete Slab BelowOutdoor Structure		Black Roofing and White Roof Coat	HDH-Floor-5a to 5c	Not Detected	07.24.23	NF	G

Appendix B

Summary of Lead Results

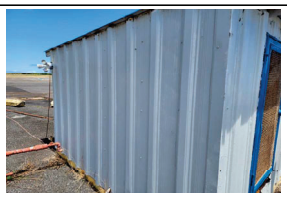
Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Concrete Slab Over UST	Yellow	Concrete/ Metal	Good	HDH-LP-01	**3,900 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Bollards	Yellow	Metal	Good	HDH-LP-02	**190 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Piping Outside of Enclosed Structure	Red	Metal	Good	HDH-LP-03	**32,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Piping Outside of Dispenser Housing	Red	Metal	Good	HDH-LP-04	**430 mg/kg**	07.24.23

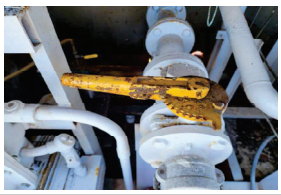
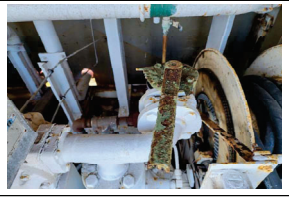
Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Outside of Enclosed Sturcture	Blue	Wood	Good	HDH-LP-05	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Outside of Enclosed Structure	Gray Over Red Paint	Metal	Good	HDH-LP-06	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Pipes Inside Dispenser Housing	White	Metal	Good	HDH-LP-07	**1,300 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Conduit Piping	Red	Metal	Good	HDH-LP-08	**10,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Outside of Enclosed Structure	White over red paint	Wood	Good	HDH-LP-09	<40 mg/kg	07.24.23

Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Key Control Panel on Dispenser Housing	Yellow	Metal	Good	HDH-LP-10	<40 mg/kg	07.24.23
HDH Fuel Pumping Station	1		Dispenser Housing and Pipe	Red	Metal	Good	HDH-LP-11	**2,600 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Tank Covers	Yellow	Metal	Good	HDH-LP-12	**8,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Valves inside Dispenser Housing	Yellow	Metal	Good	HDH-LP-13	**17,000 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Valves inside Dispenser Housing	Green	Metal	Good	HDH-LP-14	**610 mg/kg**	07.24.23

Appendix B

Summary of Lead Results, Kawaihapai Airport
Fuel Pumping Station
July 24, 2023

Building No.	Floor Level	Sample Photos	Building Component	Color	Substrate	Condition	Sample ID	Lead concentration	Date Sampled
HDH Fuel Pumping Station	1		Pipes inside Dispenser Housing	Blue	Metal	Good	HDH-LP-15	**440 mg/kg**	07.24.23
HDH Fuel Pumping Station	1		Pump Controller Boxes and Mounting Panel	Yellow	Metal/Wood	Good	HDH-LP-16	**34,000 mg/kg**	07.24.23

Appendix C

Laboratory Report and Chain-of-Custody

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Wednesday, August 2, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350755	**HDH-Floor-1A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350756	**HDH-Floor-1B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350757	**HDH-Floor-1C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350758	**HDH-Floor-2A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete / yellow paint							
Comments								
202350759	**HDH-Floor-2B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete							
Comments								
202350760	**HDH-Floor-2C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray concrete / yellow paint							
Comments								

Hawaii Analytical Laboratory is a NIST NVLAP accredited laboratory (NVLAP Lab Code 200655-0) and is accredited in accordance with the recognized ISO/ IEC 17025:2017. Controlled doc.: Asbestos Report, rev. 3 – 20200630

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350761	**HDH-Floor-3A**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350762	**HDH-Floor-3B**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350763	**HDH-Floor-3C**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350764	**HDH-Floor-4A**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350764	**HDH-Floor-4A**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350765	**HDH-Floor-4B**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								
202350765	**HDH-Floor-4B**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350766	**HDH-Floor-4C**		NONE DETECTED		Fibrous glass (amorphous)	**25**	Tar + calcite + aggregate	8/1/2023
Layer	Black roofing							
Comments								

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202350766	**HDH-Floor-4C**		NONE DETECTED		None detected		Calcite + binder	8/1/2023
Layer	White roof coat							
Comments								
202350783	**HDH-Floor-5A**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350784	**HDH-Floor-5B**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								
202350785	**HDH-Floor-5C**		NONE DETECTED		None detected		Calcite + quartz + paint	8/1/2023
Layer	Gray/black concrete / yellow paint							
Comments								

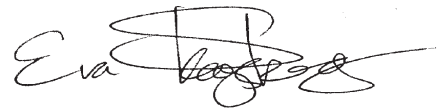
Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

General Comments
The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Governement. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy.



Eva Skogsberg
Laboratory Supervisor

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Wednesday, August 2, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202350767	**HDH-LP-1**	3900	mg/kg	7/31/2023
Comments				
202350768	**HDH-LP-2**	190	mg/kg	7/31/2023
Comments				
202350769	**HDH-LP-3**	32000	mg/kg	7/31/2023
Comments				
202350770	**HDH-LP-4**	430	mg/kg	7/31/2023
Comments				
202350771	**HDH-LP-5**	< 40	mg/kg	7/31/2023
Comments				
202350772	**HDH-LP-6**	< 40	mg/kg	7/31/2023
Comments				
202350773	**HDH-LP-7**	1300	mg/kg	7/31/2023
Comments				
202350774	**HDH-LP-8**	10000	mg/kg	7/31/2023
Comments				

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202350775	**HDH-LP-9**	< 40	mg/kg	7/31/2023
Comments				
202350776	**HDH-LP-10**	< 40	mg/kg	7/31/2023
Comments				
202350778	**HDH-LP-12**	8000	mg/kg	7/31/2023
Comments				
202350779	**HDH-LP-13**	17000	mg/kg	7/31/2023
Comments				
202350780	**HDH-LP-14**	610	mg/kg	7/31/2023
Comments				
202350781	**HDH-LP-15**	440	mg/kg	7/31/2023
Comments				
202350782	**HDH-LP-16**	34000	mg/kg	7/31/2023
Comments				

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

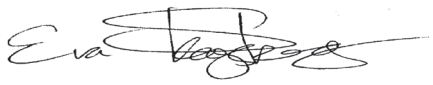
Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307163
Date Submitted: 7/26/2023
Your Project: District Hazmat Program, 7/24/23

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.



Eva Skogsberg
Laboratory Supervisor

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, August 1, 2023

Environmental Science International, Inc
354 Uluniu Street, Suite 304
Kailua HI 96734

Phone Number: (808)261-0740
Facsimile:
Email: -

Lab Job No: 202307162
Date Submitted: 7/26/2023
Your Project: 120037; DO38, Dillingham Airfield, 7/24/23

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202350754	**HDH-LP-11**	2600	mg/kg	7/31/2023
Comments				

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

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# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Jennifer Hsu Liao
Laboratory Manager

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
www.analyzehawaii.com

☐ New client?

Report To*	Brandon Yoza, Tiana Rey, Aimee Taniguchi
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 428-3386
Report results to	
Email / Fax	byoza@esciencei.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
Email Invoice To	accounting@esciencei.com

Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: District Hazmat Program

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maxmium of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-floor-1a	7/24/23	bulk	x	PLM	EPA 600	202350755
2	HDH-floor-1b						202350756
3	HDH-floor-1c						202350757
4	HDH-floor-2a						202350758
5	HDH-floor-2b						202350759
6	HDH-floor-2c						202350760
7	HDH-floor-3a						202350761
8	HDH-floor-3b						202350762
9	HDH-floor-3c						202350763
10	HDH-floor-4a						202350764
11	HDH-floor-4b						202350765
12	HDH-floor-4c						202350766

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
A. Yoza	7-28-23	Trinidad Shutt	07-26-23 A10:33 RCVD
		Trinidad Shutt	

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a **FOREIGN SOIL SAMPLE** (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☐ via HAC ☐ via USPS ☒ via drop box ☐ via FedEx

HAWAII ANALYTICAL LABORATORY, LLC

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☐ New client?

Report To*	Brandon Yoza, Tiana Rey, Aimee Taniguchi
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 428-3386
Report results to	
Email / Fax	byoza@esciencei.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
Email Invoice To	accounting@esciencei.com

Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: District Hazmat Program

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-LP-1	7/24/2023	paint chip	-	Lead	NIOSH 7082	202350767
2	HDH-LP-2	〃	〃	〃	〃	〃	202350768
3	HDH-LP-3	〃	〃	〃	〃	〃	202350769
4	HDH-LP-4	〃	〃	〃	〃	〃	202350770
5	HDH-LP-5	〃	〃	〃	〃	〃	202350771
6	HDH-LP-6	〃	〃	〃	〃	〃	202350772
7	HDH-LP-7	〃	〃	〃	〃	〃	202350773
8	HDH-LP-8	〃	〃	〃	〃	〃	202350774
9	HDH-LP-9	〃	〃	〃	〃	〃	202350775
10	HDH-LP-10	〃	〃	〃	〃	〃	202350776
11	~~HDH-LP-11~~ BY	〃	〃	〃	〃	〃	~~202350777~~
12	HDH-LP-12	〃	〃	〃	〃	〃	202350778

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
B. Yoza	7.25.23	Trinidad Shutt	07-26-23A10:33 RCVD
		Trinidad Shutt	

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
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☐ via HAC ☐ via USPS ☑ via drop box ☐ via FedEx

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☐ New client?

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Phone / Cell No.*	(808) 428-3386
Report results to	
Email / Fax	byoza@esciencei.com, trey@esciencei.com, ataniguchi@esciencei.com

Invoice To*	Stacey Acma
Company	Environmental Science International, Inc.
Address*	354 Uluniu Street, Suite 304 Kailua, HI 96734
Phone / Cell No.*	(808) 261-0740
Purchase Order No.	
Email Invoice To	accounting@esciencei.com

Need Results By*:
- ☑ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: **District Hazmat Program**

Client Project No.:

Verbal results? ☐

Sampled By:

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202307163

	Sample Identification / Description* (Maxmium of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1	HDH-LP-13	7/24/2023	paint chip	-	Lead	NIOSH 7082	202350779
2	HDH-LP-14	〃	〃	〃	〃	〃	202350780
3	HDH-LP-15	〃	〃	〃	〃	〃	202350781
4	HDH-LP-16	〃	〃	〃	〃	〃	202350782
5	HDH-Floor-Sa	〃	BULK		PLM	EPA600	202350783
6	HDH-Floor-Sb	〃	〃		〃		202350784
7	HDH-Floor-Sc	〃	〃		〃		202350785
8							
9							
10							
11							
12							

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
B. Yoza	7.25.23	Trinidad Shutt	07-26-23A10:34 RCVD

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a **FOREIGN SOIL SAMPLE** (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☐ via HAC ☐ via USPS ☒ via drop box ☐ via FedEx

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐New Client?

Report To*	: Tiana rey, Brandon Yoza
Company	: Environmental Science International, Inc.
Address*	: 354 Uluniu Street, Suite 304
	Kailua, HI 96734
Phone / Cell No.*	: (808) 428-3386 - Brandon Yoza
Report results to	:
Email / Fax	: trey@esciencei.com, byoza@esciencei.com

Invoice To*	: Stacey Acma
Company	: Environmental Science International, Inc.
Address*	: 354 Uluniu Street, Suite 304
	Kailua, HI 96734
Phone / Cell No.*	: (808) 261-0740
Purchase Order No.	:
Email Invoice To	: sacma@esciencei.com

Need Results By*:
- ☑5 Working Days (WD)
- ☐4 WD
- ☐3 WD
- ☐2 WD
- ☐24 hours
- ☐6 hours or less
- ☐4 hours or less
- ☐1-2 hours

Site/Project Name: **Dillingham Airfield**

Client Project No.: **120037:DO38**

Verbal results? ☐

Sampled By & Certif. # :

Special Instructions:

PLM POSITIVE STOP Instructions:
- ☐+ stop / SAMPLE
- ☐+ stop / LAYER

Lab Report No.: 202307162

Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
	HDH-LP-11	07.24.23	Bulk	-	Lead		202350754

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Brandon Yoza	07.25.23	Trinidad Shutt	07-26-23A10:32 RCVD

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☐via HAC ☐via USPS ☑via drop box ☐via FedEx ☐via pick up
awb#: 179-

Appendix D

Acronyms

Appendix D- Acronym List

ACM- Asbestos Containing Material
EPA- Environmental Protection Agency
ESI- Environmental Science International Inc.
HAL- Hawaii Analytical Laboratory LLC.
HAR- Hawaii Administrative Rules
HDOTA- Hawaii Department of Transportation, Airports
UST- Underground Storage Tank

Appendix E

Hazardous Materials Review Form

Work Order No.: WO2023-14

State of Hawaii Department of Transportation – Airports Division
Hazardous Materials Review Form

Instructions:

1. Requestor (e.g., HDOT-AIR Personnel, Designer, Construction Manager, Maintenance Contractor, Construction Contractor, Tenant) shall complete Sections 1, 2, and 3, then submit the form (along with any attachments) via email to the Hazardous Materials [HazMat]/Asbestos Manager at HazMat@esciencei.com.
2. HazMat/Asbestos Manager will assign a Work Order Number to the request and will review the Hazardous Materials Database, complete Section 4, then email the form back to the Requestor.
3. If additional work is required per Section 4, the HazMat/Asbestos Manager is available to assist with the coordination of additional sampling/assessment and management of hazardous materials.
4. Requestor is responsible for notifying HazMat/Asbestos Manager when work is complete. HazMat/Asbestos Manager will then conduct a final inspection of the work performed.

SECTION 1. Contact Information (To be completed by the Requestor).

Requestor Information:

Name: Robert Chong
Phone: (808) 479-5217
Email: rchong@sciencei.com
Requestor Affiliation: DOR

HDOT Contact Information (if different from Requestor):

Name: Benton Ho
Phone: (808) 838-8804
Email: benton.ho@hawaii.gov
Requestor Affiliation: AIR-EM

SECTION 2. Project Information (To be completed by the Requestor).

Type of Project (Select One): Maintenance: ☐ Construction: ☑ Other (Please specify): _____

HDOT Contract/Project Name: UST Fuel System Removal at Kawaihapai Airfield

Location of Work:

Airport: HDH Building(s): N/A Level(s): N/A

Provide Description of Work (Attach plans, specifications, photos, and additional information):

Removal UST fuel system. Attach are the tank installation plans.

SECTION 3. Hazardous Materials Request (Check box for specific Hazardous Materials Review).

☐ Asbestos ☑ Lead ☐ Mold ☐ Other (Please specify): _____

SECTION 4. Review (To be completed by the HazMat/Asbestos Manager).

Inspector Name: Brandon Yoza Certification No. (if applicable): HIASB-4996 Date: August 7, 2023

*Asbestos Containing Material (ACM) was not detected in the materials sampled and described in Appendix A. If any additional materials will be disturbed, other than those described in Appendix A, ESI recommends consultation with a person certified in the State of Hawaii as an asbestos inspector.

*Lead based and lead containing paint was identified on the surfaces of painted materials associated with the Fuel Pumping Station located at Kawaihapai Airport. Those materials sampled are described in Appendix B. Please refer to OSHA's Lead in Construction standard (29 CFR 1926.62) involving paints having any level of lead.

SECTION 5. Final Inspection (To be completed by the HazMat/Asbestos Manager).

Inspector Name: _____ Certification No. (if applicable): _____ Date: _____

Notes:

Attachment C
Construction Drawings – Existing Fueling Facility - To Be Removed

Airports Division

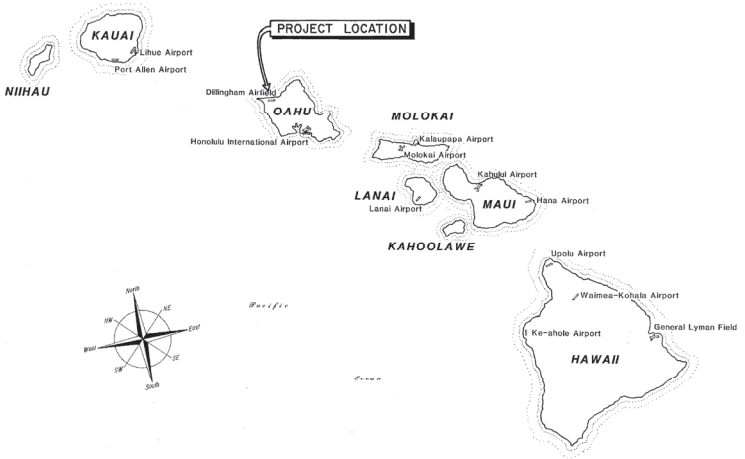
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

PLANS FOR

REPLACEMENT OF FUELING SYSTEM

AT

DILLINGHAM AIRFIELD
OAHU
PROJECT NO. A02023-11



DEPARTMENT OF HEALTH STATE OF HAWAII	
APPROVED:	
CHIEF, ENVIRONMENTAL PROTECTION & HEALTH SERVICES DIVISION	DATE

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
DIR. OF TRANSPORTATION	DATE 2/14/00

Airports Division

DSGN. DRWN. CHKD. APPD.

KEY PLAN / NOTES :

1. SEE SHEET C-1 FOR INDEX TO DRAWINGS.

NO. DATE REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
TITLE SHEET

DATE :

DWG. NO. : T-1

GRADING NOTES

1. All grading work shall be done in accordance to Chapter 23, Grading, Soil Erosion and Sediment Control, of the Revised Ordinances of Honolulu, 1978, as amended (Ordinance No. 81-13).

2. The Contractor shall remove all silt and debris resulting from his work deposited in the project area, drainage facilities, roadways, and other areas. The costs incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.

3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.

4. All grading operations shall be performed in conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.

5. The limits of grading areas shall be flagged before the commencement of grading.

6. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area, within which work has been interrupted or delayed, shall be planted.

7. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Chief Engineer.

TEMPORARY EROSION CONTROL

1. The Contractor shall minimize the amount of land to be exposed at any one time.

2. Grading operations shall proceed from the higher ground area first, where excavation operations are necessary. The existing vegetation on the lower area shall be left in place as long as feasible to serve as a filtering medium.

3. If the excavated material from the higher area is needed to fill the lower areas described in note #2 above, filling operations shall be done in phases in order that erosion and sedimentation problems can be minor.

4. Grassing common bermuda grass or stargrass cuttings at the rate of 50 bushels per acre or an average of 2 springs per square foot of all areas graded shall be done immediately after final grades are established.

5. Graded areas that are not at final grade and are expected to be exposed for more than 30 days, shall be mulched (at a rate of 45 cu ft. per 1000 sq. ft.) in order to prevent erosion and silt runoff.

6. When installing the drainage system for the project, filtering material (jute strips or equal) at the inlets to the system shall be provided to prevent silt from entering the system.

7. The above procedure for erosion and sediment control may be revised by the Contractor to conform to his grading operation procedures. Any revision to the above, however, shall be submitted to the Department of Public Works, Division of Engineering for approval, by the Contractor.

GENERAL NOTES

1. The existing utilities shown on the plans are approximate only. The Contractor shall make an independent check on the ground and with the various utility companies and government agencies to ascertain their exact location.

2. All existing utilities, whether or not shown on the plans, shall be protected at all times during construction, unless noted otherwise. Any damage to them shall be repaired and paid for by the Contractor.

INDEX TO DRAWINGS

SHEET	DESCRIPTION
T-1	TITLE SHEET
C-1	GENERAL NOTES, INDEX
C-2	GENERAL PLAN
C-3	DETAIL PLAN & PROFILE
C-4	CROSS SECTIONS, TYPICAL SECTIONS
C-5	MISCELLANEOUS DETAILS
S-1 TO S-3	STRUCTURAL DETAILS
M-1	MECHANICAL SITE PLAN, NOTES
M-2	NEW FUELING SYSTEM PLAN
M-3 TO M-4	SECTIONS
M-5	PIPING DIAGRAM
M-6	LEAK DETECTOR DIAGRAM
M-7	CONTROL DIAGRAM
M-8	DETAILS
E-1	ELECTRICAL SITE PLAN
E-2	SINGLE LINE DIAGRAM
E-3	GROUNDING PLAN AND DETAILS

TOTAL NUMBER OF SHEETS = 20

APPROVED:

FIRE DEPARTMENT, C & C OF HONOLULU DATE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

RALPH T. TAMASHIRO
REGISTERED PROFESSIONAL ENGINEER
No. 564-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

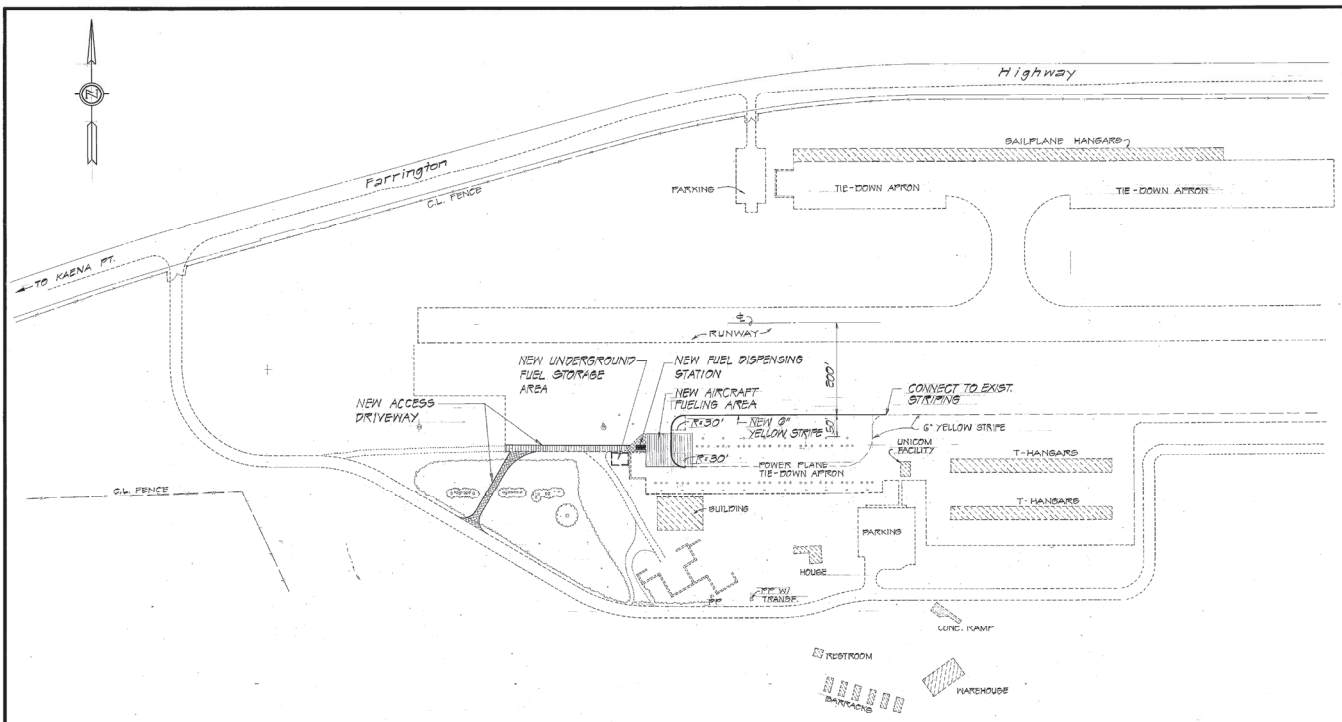
A02023-11

SHEET TITLE :

GENERAL NOTES INDEX

DATE :

DWG. NO. : C-1



GENERAL PLAN

Scale: 1"=100'

Airports Division

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 864-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

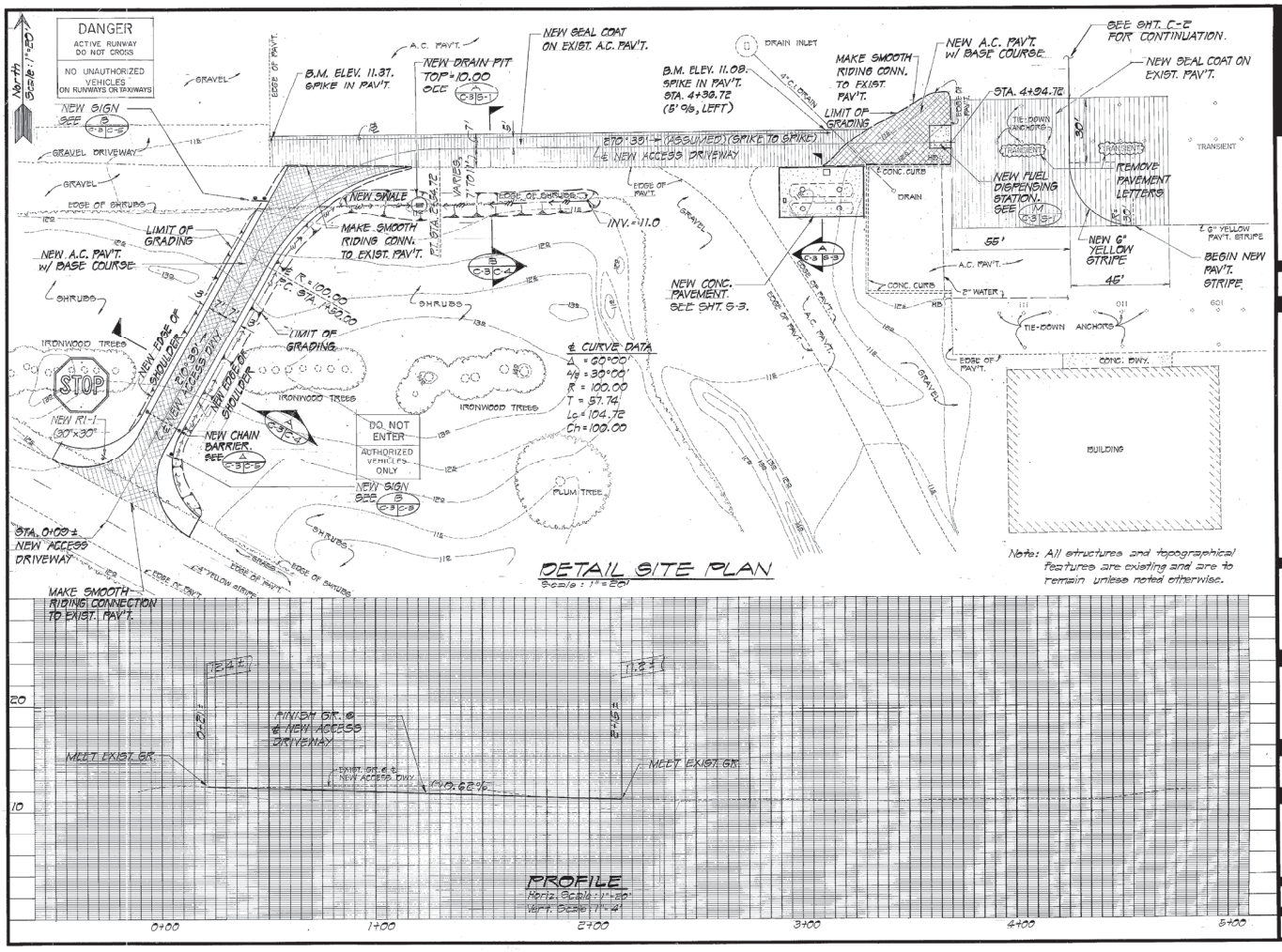
SHEET TITLE :

GENERAL PLAN

DATE :

DWG. NO. :

C-2

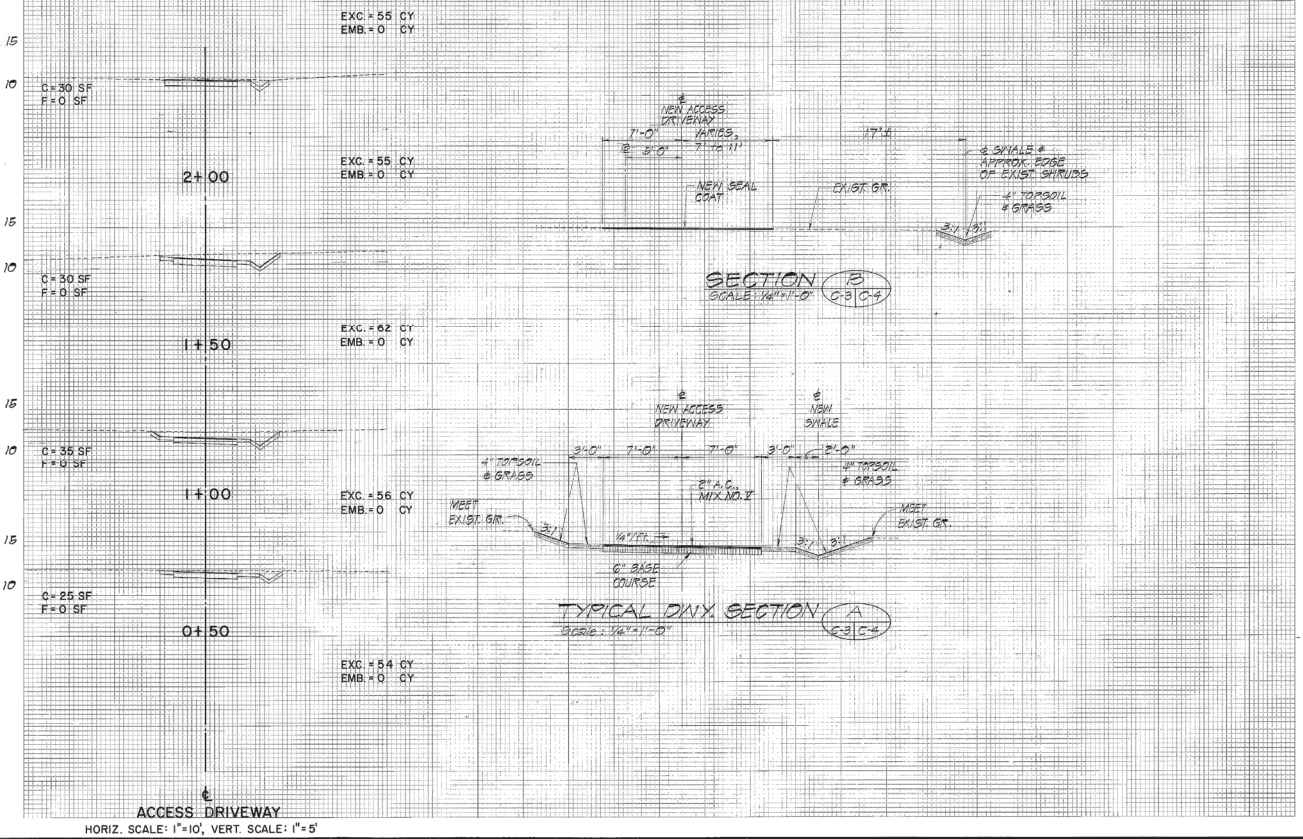

North
Scale: 1"=20'
DANGER
ACTIVE RUNWAY
DO NOT CROSS
NO UNAUTHORIZED VEHICLES ON RUNWAYS OR TAXIWAYS
NEW SIGN
GRAVEL DRIVEWAY
GRAVEL
EDGE OF SHRUBS
LIMIT OF GRADING
NEW A.C. PAV'T. w/ BASE COURSE
SHRUBS
IRONWOOD TREES
STOP
NEW RI-1 (30"x30")
NEW EDGE OF SHOULDER
NEW CHAIN BARRIER
DO NOT ENTER AUTHORIZED VEHICLES ONLY
NEW SIGN
PLUM TREE
STA. 0+09 ± NEW ACCESS DRIVEWAY
MAKE SMOOTH RIDING CONNECTION TO EXIST. PAV'T.
EDGE OF PAV'T.
A.C. PAV'T.
B.M. ELEV. 11.37. SPIKE IN PAV'T.
NEW DRAIN PIT TOP=10.00
NEW SEAL COAT ON EXIST. A.C. PAV'T.
B.M. ELEV. 11.08. SPIKE IN PAV'T. STA. 4+30.72 (5' 9/8, LEFT)
DRAIN INLET
A.C. DRAIN
MAKE SMOOTH RIDING CONN. TO EXIST. PAV'T.
NEW A.C. PAV'T. w/ BASE COURSE.
SEE SHT. C-E FOR CONTINUATION.
NEW SEAL COAT ON EXIST. PAV'T.
STA. 4+94.72
TIE-DOWN ANCHORS
TRANSIENT
REMOVE PAVEMENT LETTERS
NEW FUEL DISPENSING STATION. SEE
55'
NEW 6" YELLOW STRIPE
45'
BEGIN NEW PAV'T. STRIPE.
2" YELLOW PAV'T. STRIPE
CONC. CURB
DRAIN
2" WATER
CONC. PWY.
BUILDING
EXIST. 8" WATER
EXIST. 6" SEWER
EXIST. 12" SEWER

SUMMARY OF EARTHWORK:

TOTAL EXCAVATION = 282 CY

TOTAL EMBANKMENT = 0 CY

AREA TO BE GRADED = 0.5 ACRE



Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

KAY T. TANOUYE
REG. STRUCT. PROFESSIONAL ENGINEER
No. 8846
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

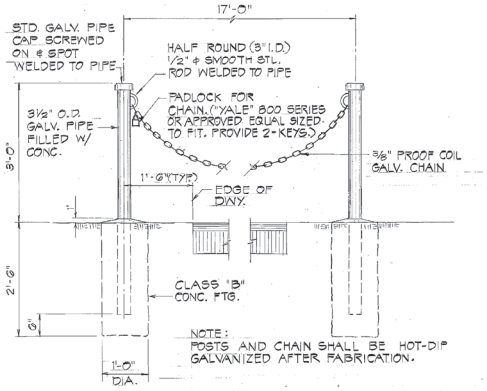
A02023-11

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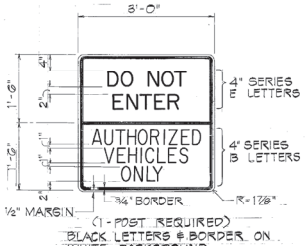
CROSS SECTIONS

DATE :

DWG. NO. : C-4



CHAIN BARRIER DETAIL (A) C-3 | C-5
NO SCALE



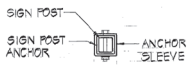
(1-POST REQUIRED)
BLACK LETTERS & BORDER ON WHITE BACKGROUND

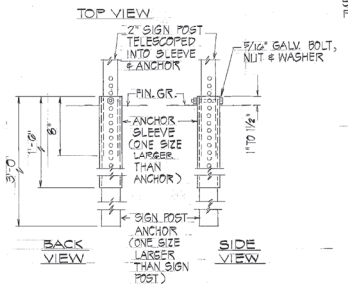
NOTES:
1. ALL SIGNS SHALL BE REFLECTORIZED.
2. ALL SIGNS SHALL HAVE 3/8" ø BOLT HOLES DRILLED AT APPROPRIATE LOCATIONS.



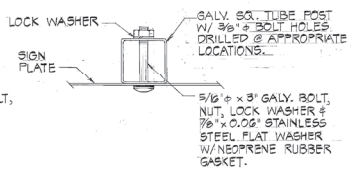
(3-POSTS REQUIRED)
RED LETTERS & BORDER ON WHITE BACKGROUND

SIGN DETAILS (B) C-3 | C-5
NO SCALE





SIGN POST DETAIL (D) C-5 | C-5
NO SCALE



SIGN INSTALLATION DETAIL (E) C-5 | C-5
NO SCALE

Airports Division

DSGN. PTT | DRWN. KTN | CHKD. PTT | APPD.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

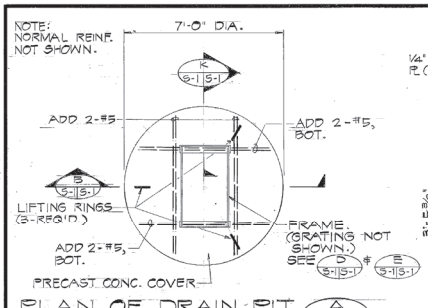
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

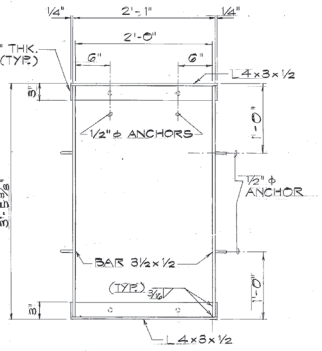
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MISCELLANEOUS DETAILS

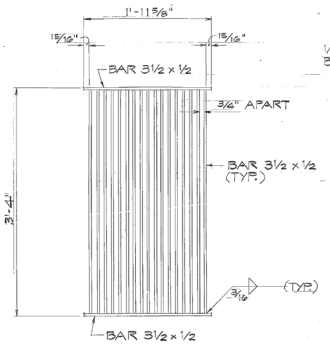
DATE :

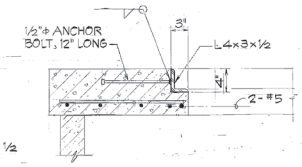
DWG. NO. :
C-5



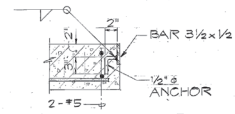
PLAN OF DRAIN PIT (A) C-3|S-1
SCALE: 1/2" = 1'-0"



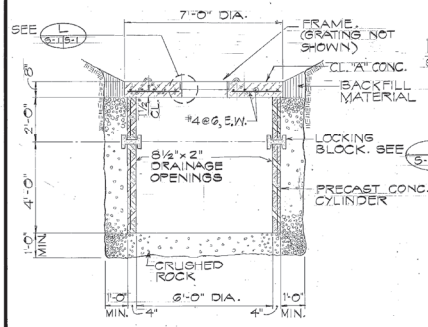




SECTION (K) S-1|S-1
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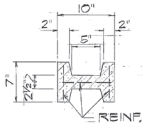


DETAIL (L) S-1|S-1
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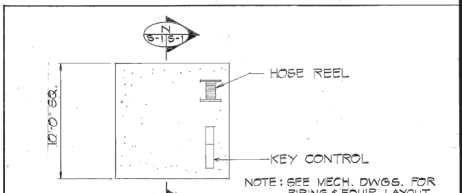
SECTION (B) S-1|S-1
SCALE: 1/2" = 1'-0"

FRAME DETAIL (D) S-1|S-1
SCALE: 1 1/2" = 1'-0"

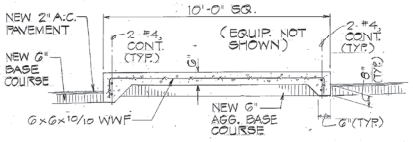


LOCKING BLOCK DETAIL (F) S-1|S-1
SCALE: 1 1/2" = 1'-0"

GRATING DETAIL (E) S-1|S-1
SCALE: 1 1/2" = 1'-0"



CONCRETE PAD FOR FUEL DISPENSING STATION (M) C-3|S-1
SCALE: 1/4" = 1'-0"



SECTION (N) S-1|S-1
SCALE: 1 1/2" = 1'-0"

STATE OF HAWAII
Airports Division
DEPARTMENT OF TRANSPORTATION

PAUL T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 9445
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DSGN.	DRWN.	CHK'D.	APP'D.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

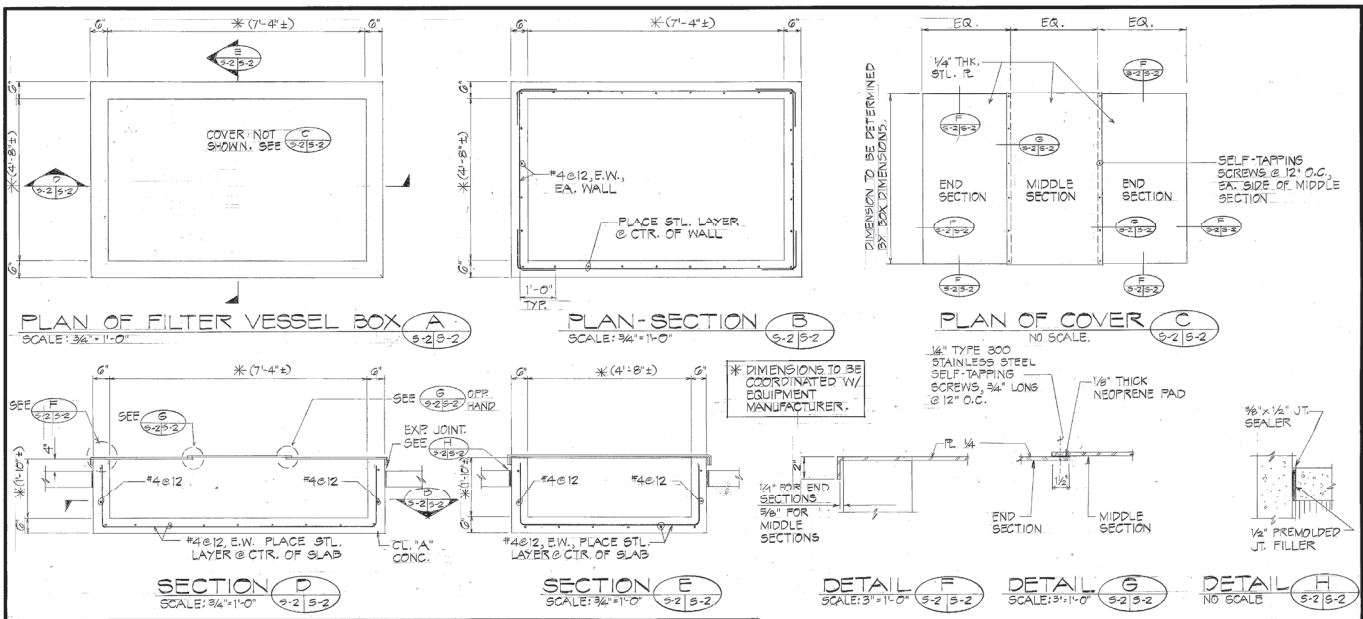
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DRAIN PIT DETAILS, CONCRETE PAD

DATE :

DWG. NO. : S-1



PLAN OF FILTER VESSEL BOX A S-2 S-2
SCALE: 3/4" = 1'-0"

PLAN-SECTION B S-2 S-2
SCALE: 3/4" = 1'-0"

PLAN OF COVER C S-2 S-2
NO SCALE.

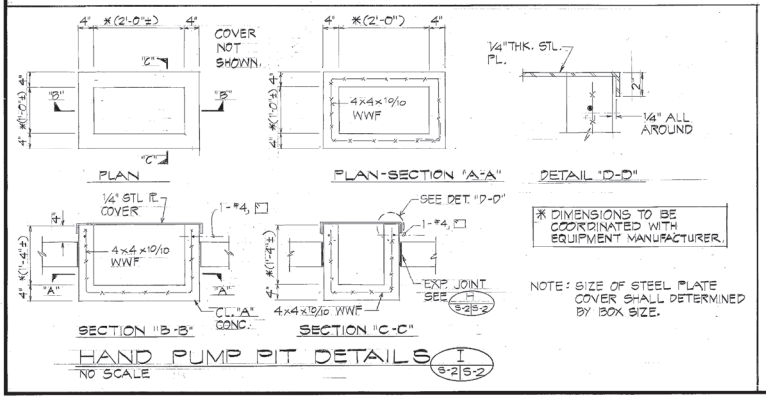
SECTION D S-2 S-2
SCALE: 3/4" = 1'-0"

SECTION E S-2 S-2
SCALE: 3/4" = 1'-0"

DETAIL F S-2 S-2
SCALE: 3" = 1'-0"

DETAIL G S-2 S-2
SCALE: 3" = 1'-0"

DETAIL H S-2 S-2
NO SCALE



HAND PUMP PIT DETAILS I S-2 S-2
NO SCALE

Airports Division

DSGN. PTT | DRWN. KTN | CHK'D. PTT | APP'D.

KEY PLAN / NOTES :

NO. DATE REVISIONS

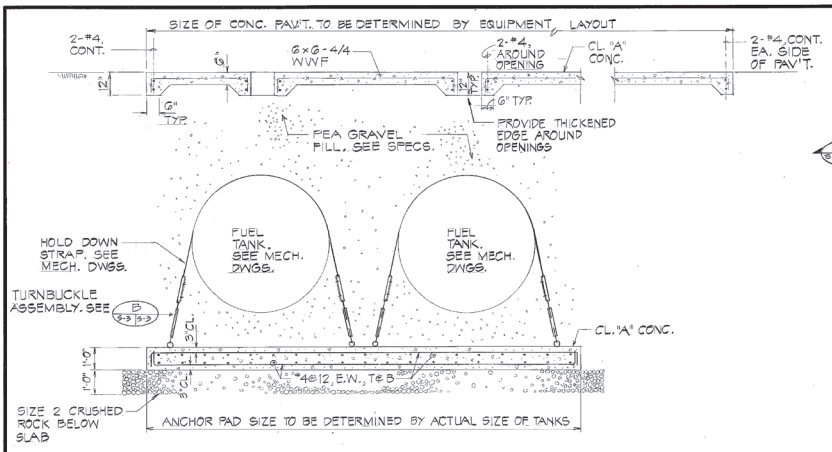
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

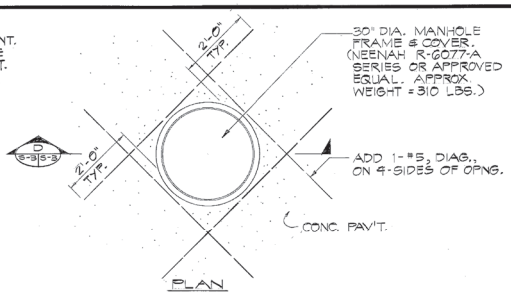
SHEET TITLE :
FILTER VESSEL BOX HAND PUMP PIT

DATE :

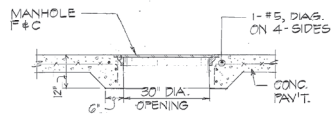
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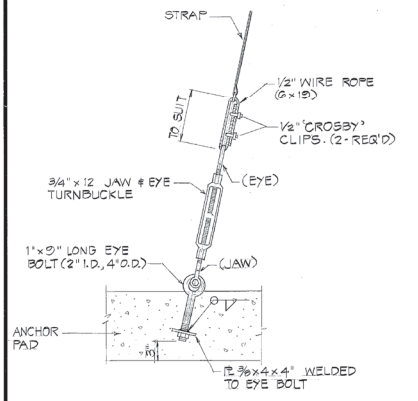
SECTION THRU FUEL STORAGE AREA A
C-3 | S-3
SCALE: 1/2" = 1'-0"



MANHOLE AT PIPING SUMP C
S-3 | S-3
SCALE: 3/4" = 1'-0"



SECTION D
S-3 | S-3
SCALE: 3/4" = 1'-0"



TURNBUCKLE ASSEMBLY B
S-3 | S-3
SCALE: 1 1/2" = 1'-0"

Airports Division
DEPARTMENT OF TRANSPORTATION STATE OF HAWAII

ELLIS T. TANIGUCHI
REGISTERED PROFESSIONAL ENGINEER
No. 8665
HAWAII, U.S.A.

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DSGN.	DRWN.	CHKD.	APPD.
PTT	KTN	PTT	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

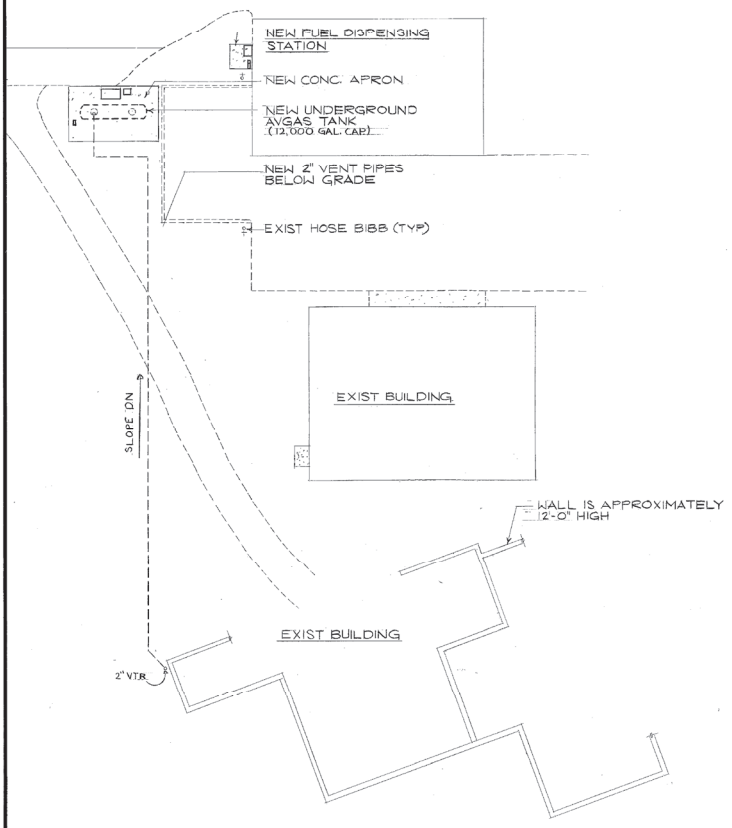
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
ANCHOR PAD, CONC. PAVEMENT

DATE :

DWG. NO. : S-3



SITE PLAN
1" = 20'

MECHANICAL GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY FIELD CONDITIONS, DIMENSIONS, OBSTRUCTIONS AND SIZES PRIOR TO START OF WORK.
2. PROVIDE EXPLOSION PROOF SEAL FITTINGS WHERE REQUIRED BY THE ELECTRICAL CODE.
3. PROVIDE ELECTRICAL GROUNDING OF FILTER VESSELS, FILTER CARTRIDGES, FUEL PUMPS, VALVES, AND OTHER METALLIC COMPONENTS IN THE AVGAS PIPING SYSTEM. SEE ELECTRICAL DRAWINGS FOR DETAILS.
4. PANEL SUPPORT LEGS, BASES, AND HOSE REEL CABINET FRAMING SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

LEGEND & ABBREVIATION

SYMBOL	ABBREV.	DESCRIPTION
	CONC.	CONCRETE
	DN	DOWN
	EXIST	EXISTING
	FRP	FIBERGLASS REINFORCED PLASTIC
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	TDH	TOTAL DYNAMIC HEADS
	THK	THICK
	TYP	TYPICAL
		DOUBLE WALL PIPING

Airports Division

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

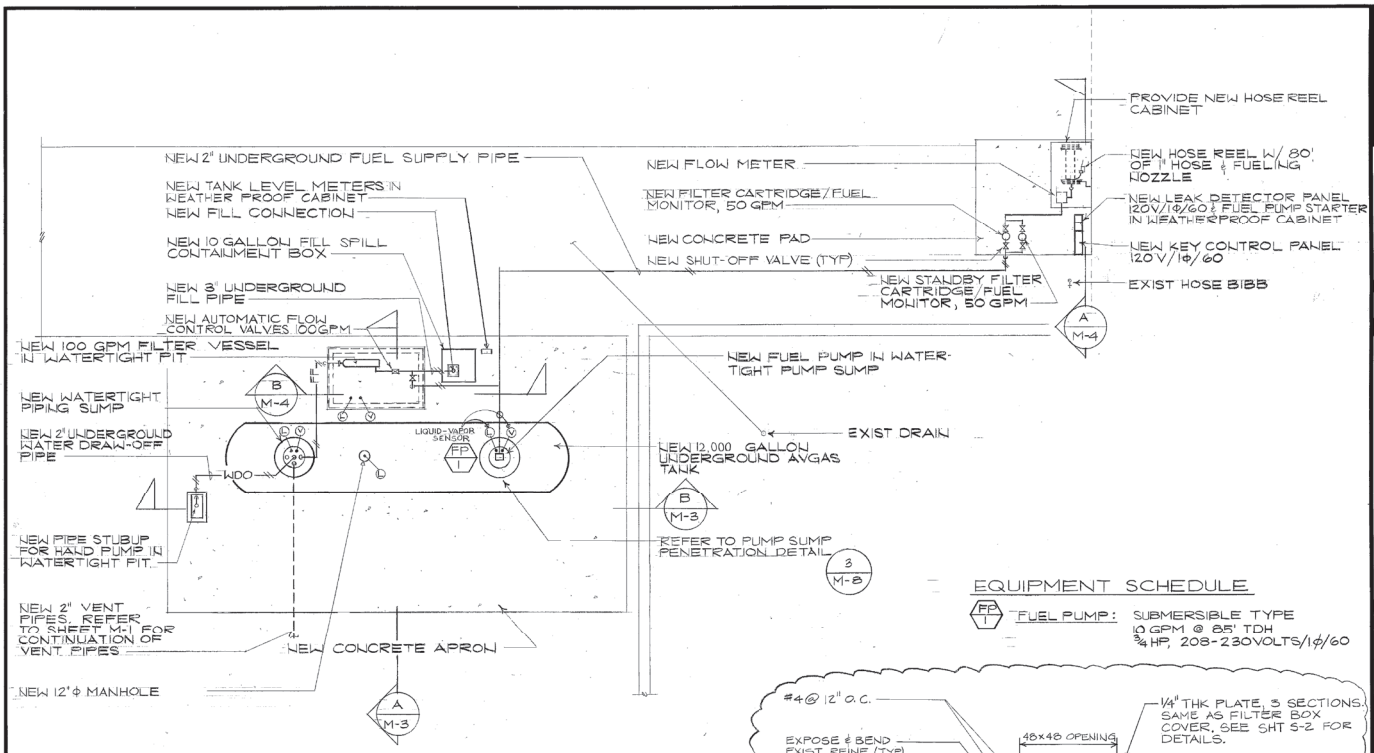
A02023-11

SHEET TITLE :

SITE PLAN
MECH GENERAL NOTES
LEGEND & ABBREVIATION

DATE :

DWG. NO. : M-1

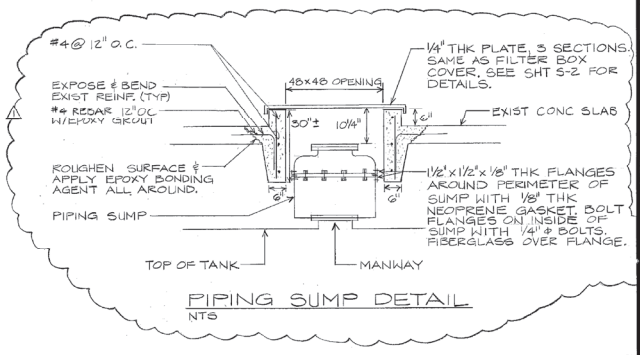


NEW FUELING SYSTEM PLAN

NOT TO SCALE

EQUIPMENT SCHEDULE

FP 1 — FUEL PUMP: SUBMERSIBLE TYPE
10 GPM @ 85' TDH
¾ HP, 208-230VOLTS/1ϕ/60



PIPING SUMP DETAIL

NTS

Airports Division

ALAN S. KUPKA — REGISTERED PROFESSIONAL ENGINEER — No. 7981-H — HAWAII, U.S.A.

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Signature

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AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED PIPING SUMP FLANGES

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

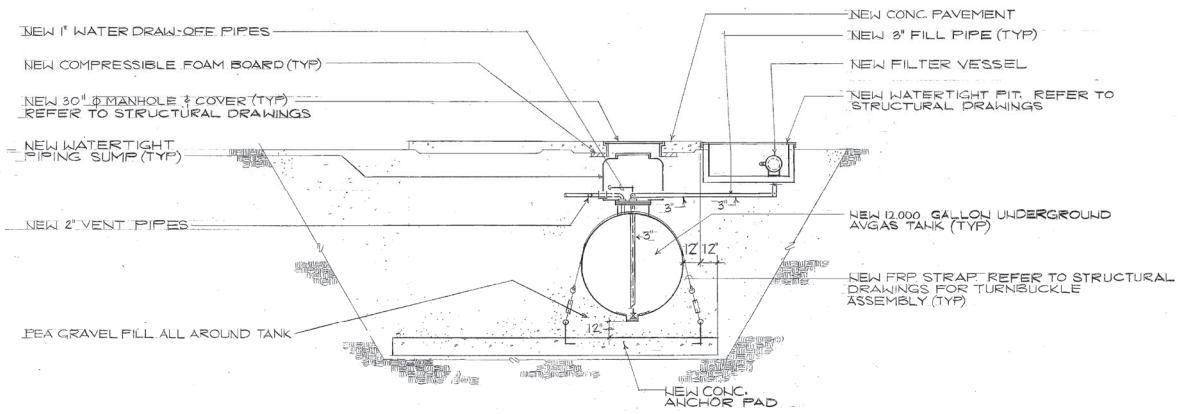
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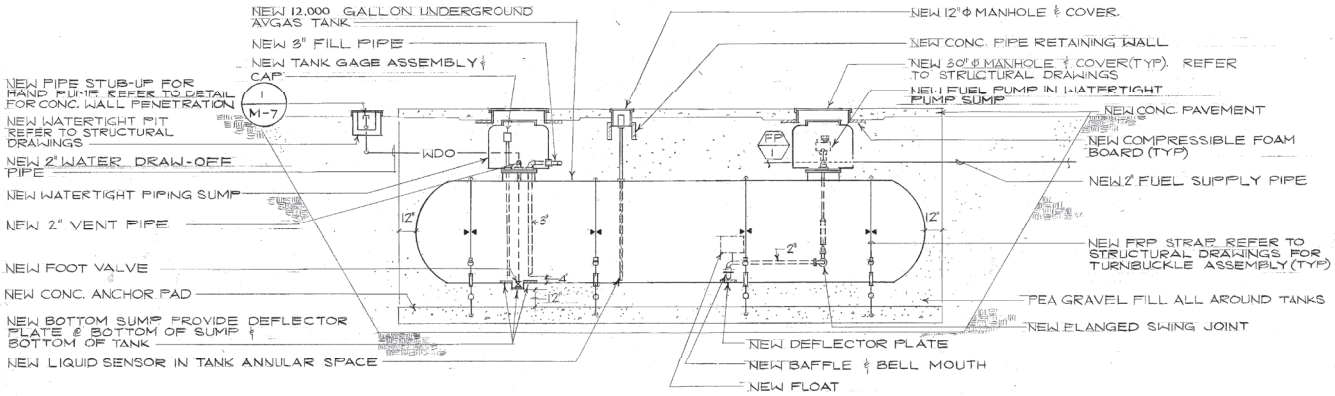
NEW FUELING SYSTEM PLAN, EQUIPMENT SCHEDULE, PIPING SUMP DETAIL

DATE :

DWG. NO. : M-2



A / M-3 SECTION
NOT TO SCALE



B / M-3 SECTION
NOT TO SCALE

Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF ALASKA

ALLEN S. KWAN
REGISTERED PROFESSIONAL ENGINEER
No. 2001-M
ALASKA, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Allen S. Kwan
Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

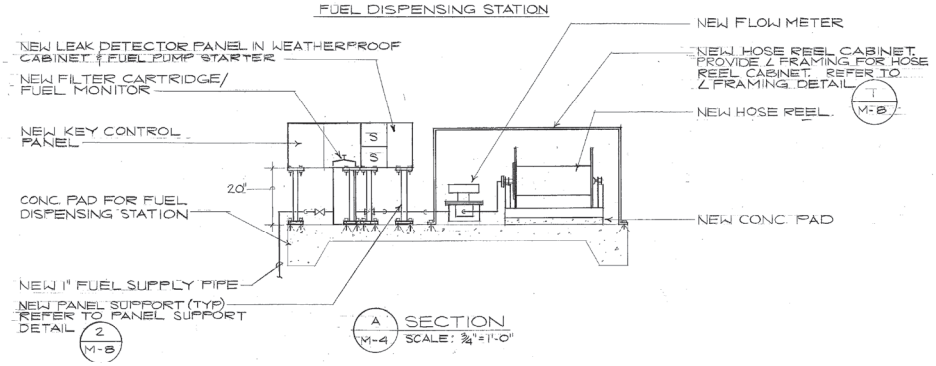
PROJECT NO. :
A02023-11

SHEET TITLE :
SECTIONS

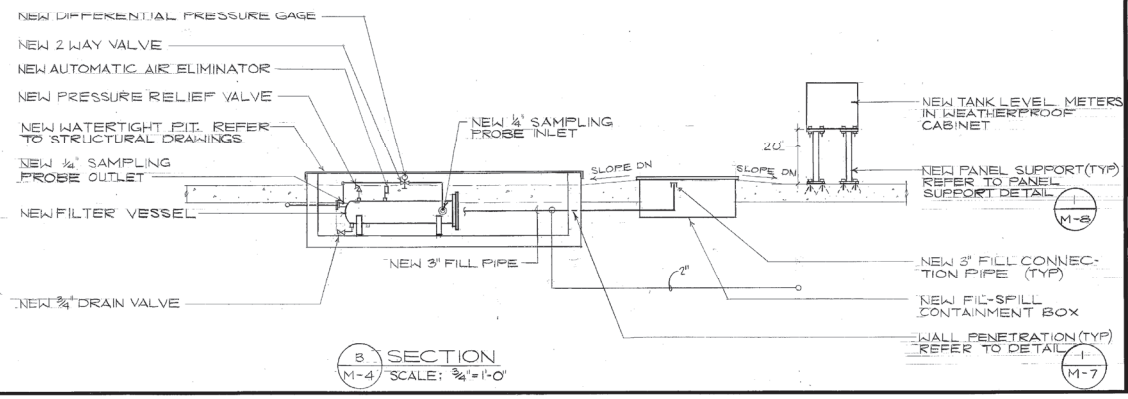
DATE :

DWG. NO. :
M-3

FUEL DISPENSING STATION



A / M-4 SECTION
SCALE: 3/4"=1'-0"



B / M-4 SECTION
SCALE: 3/4"=1'-0"

Airports Division

JAMES S. KOMEIJI
REGISTERED PROFESSIONAL ENGINEER
No. 9181-A
HAWAII, U.S.A.

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Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

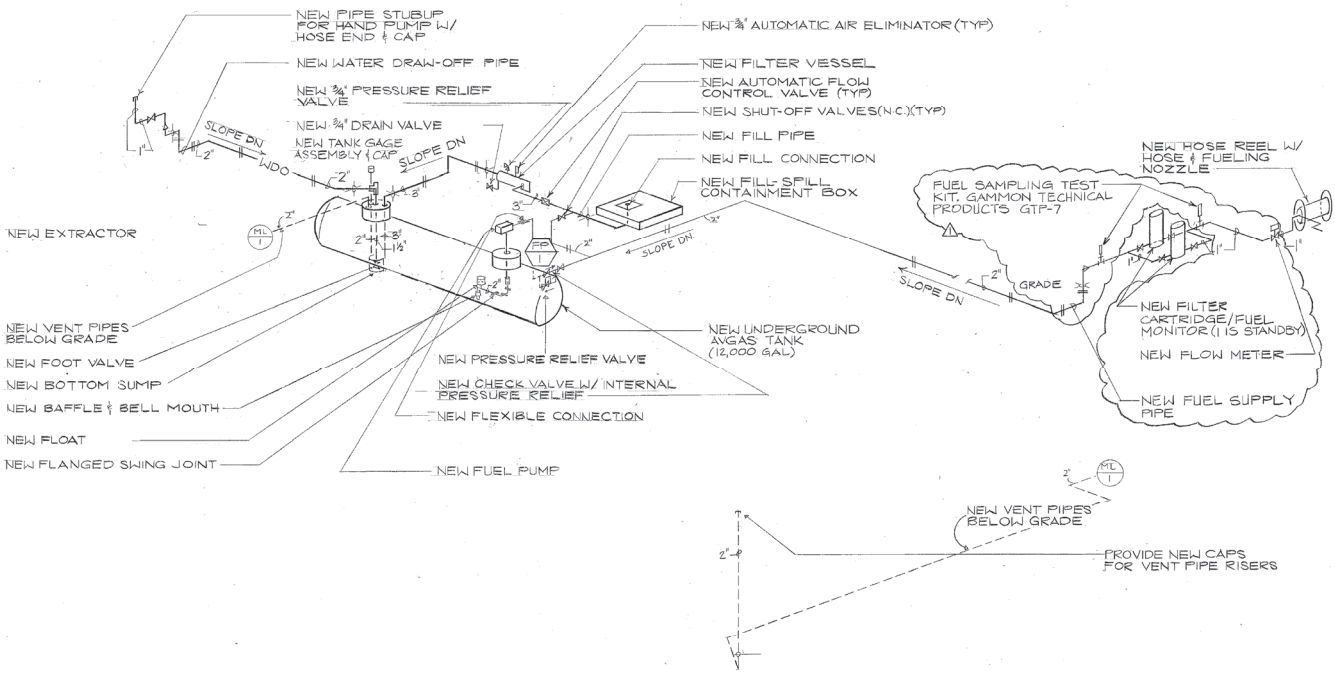
A02023-11

SHEET TITLE :

SECTIONS

DATE :

DWG. NO. : M-4



NEW FUELING SYSTEM PIPING DIAGRAM
NTS

Airports Division

KIUM S. EWALANI
REGISTERED PROFESSIONAL ENGINEER
No. 296
HONOLULU, U.S.A.

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Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS
1	11/1/89	ADDED FUEL SAMPLING TEST KIT

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

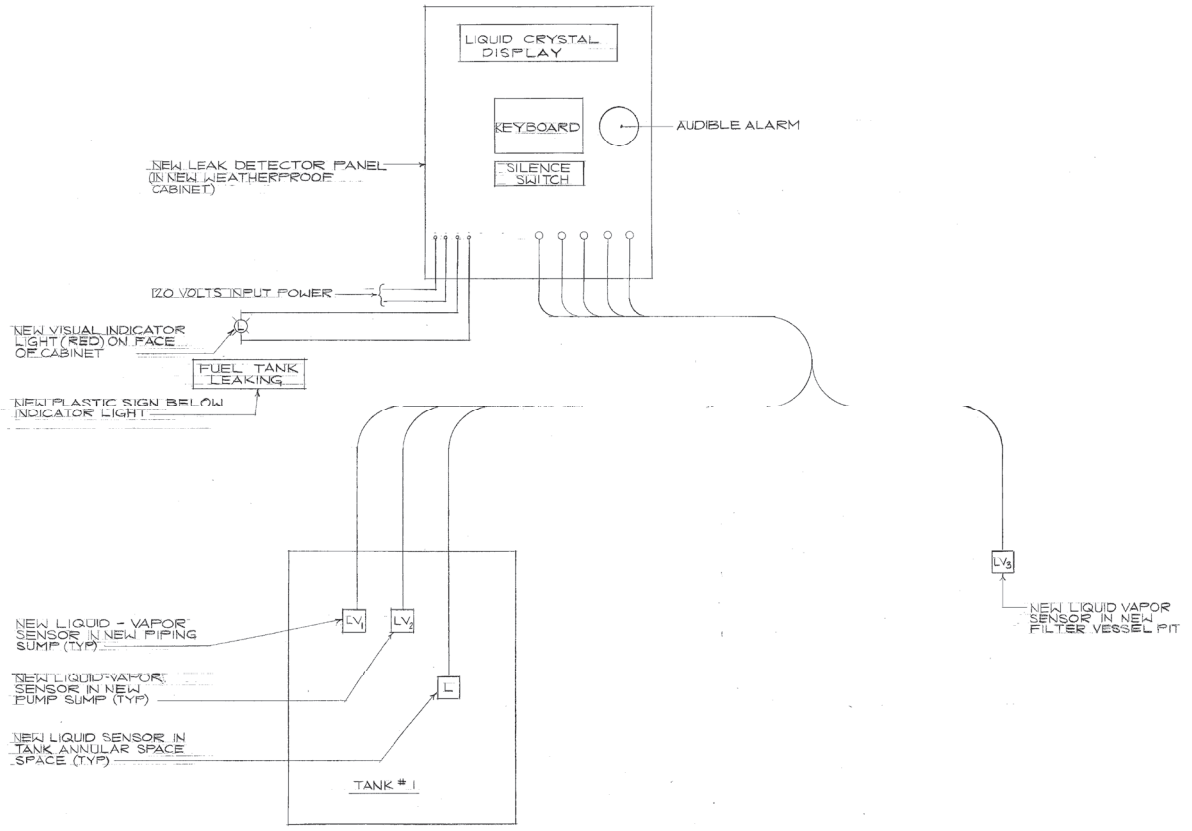
A02023-11

SHEET TITLE :

NEW FUELING SYSTEM PIPING DIAGRAM

DATE :

DWG. NO. : M-5



FUEL LEAK DETECTOR DIAGRAM

Airports Division

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Allen S. Kawamura
Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :

REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :

A02023-11

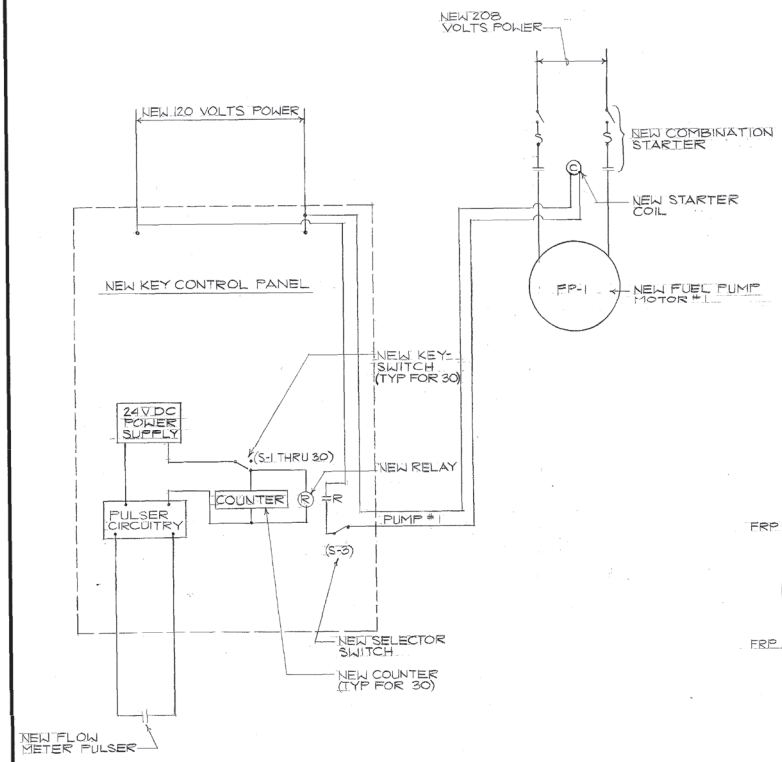
SHEET TITLE :

FUEL TANK LEAK DETECTOR DIAG.

DATE :

DWG. NO. :

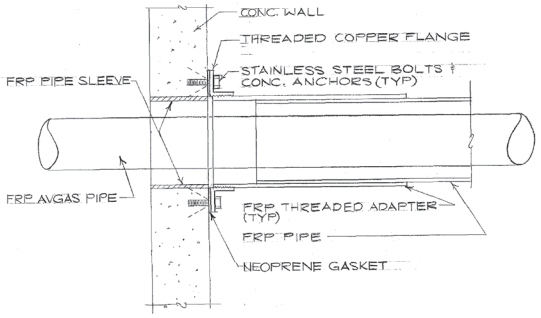
M-6



FUEL SYSTEM CONTROL DIAGRAM
NTS.

FUEL SYSTEM OPERATION

1. KEYSWITCHES (S-1 THRU S-30) CONTROL THE OPERATION OF THE FUEL PUMPS AND INDIVIDUAL COUNTERS. ONLY 1 FUEL PUMP OPERATES AT ANY TIME. SWITCH (S-3) SELECTS THE PUMP WHICH WILL BE ALLOWED TO RUN.
2. FLOW METER PULSER ACTIVATE THE APPLICABLE COUNTER.
3. SECURED AUTO-MANUAL SWITCH (NOT SHOWN) PERMITS AUTHORIZED PERSONNEL TO SWITCH OFF THE KEY CONTROL SYSTEM FOR TESTING AND SYSTEM BYPASS.
4. TIME DELAY RELAY (NOT SHOWN) PREVENTS A FALSE COUNT DURING STARTUP.
5. LOCKOUT SWITCHES (NOT SHOWN) ALLOW AUTHORIZED PERSONNEL TO LOCKOUT INDIVIDUAL KEYSWITCHES.



1 / M-7 CONCRETE WALL PENETRATION DETAIL
NTS

Airports Division

ALLEN & SHARIDAN ASSOCIATES — REGISTERED PROFESSIONAL ENGINEER — No. 7987-H — HONOLULU, U.S.A.

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Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

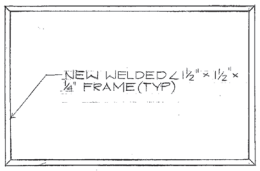
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

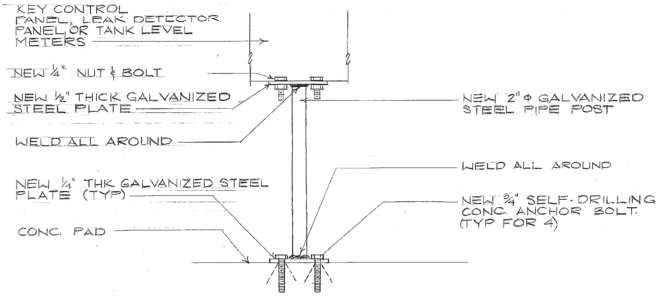
SHEET TITLE :
FUEL SYSTEM CONTROL DIAGRAM & OPERATION, DETAIL

DATE :

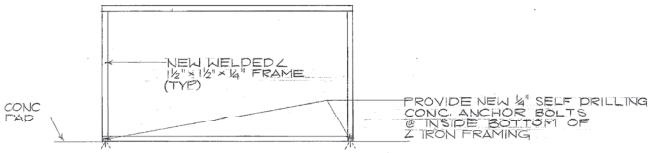
DWG. NO. : M - 7



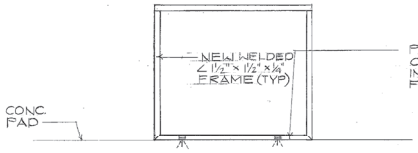
TOP VIEW



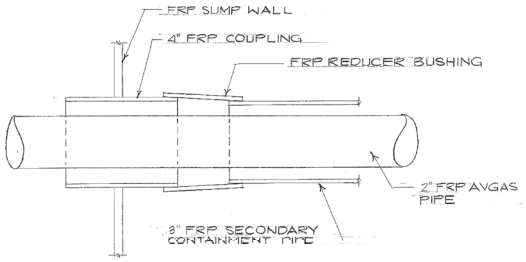
2 / M-8 PANEL SUPPORT DETAIL
NTS



FRONT VIEW



SIDE VIEW



NOTE:
PROVIDE HOSE REEL CABINET FRAMING W/ 18 GAUGE STAINLESS STEEL SHEETS @ TOP, SIDES, & BACK. BOLT SHEETS TO ∠ FRAMING.

1 / M-8 HOSE REEL CABINET FRAMING DETAIL
SCALE: 1" = 1'-0"

3 / M-8 PUMP SUMP PENETRATION DETAIL
NTS

Airports Division

JAMES S. KWIATKOWSKI
REGISTERED PROFESSIONAL ENGINEER
No. 9921-H
HAWAII, U.S.A.

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Signature

DSGN.	DRWN.	CHKD.	APPD.
AK	JC	AK	MKO

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

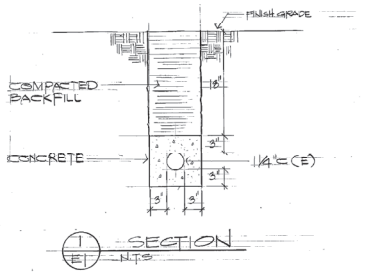
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM
AT
DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
DETAILS

DATE :

DWG. NO. :
M-8



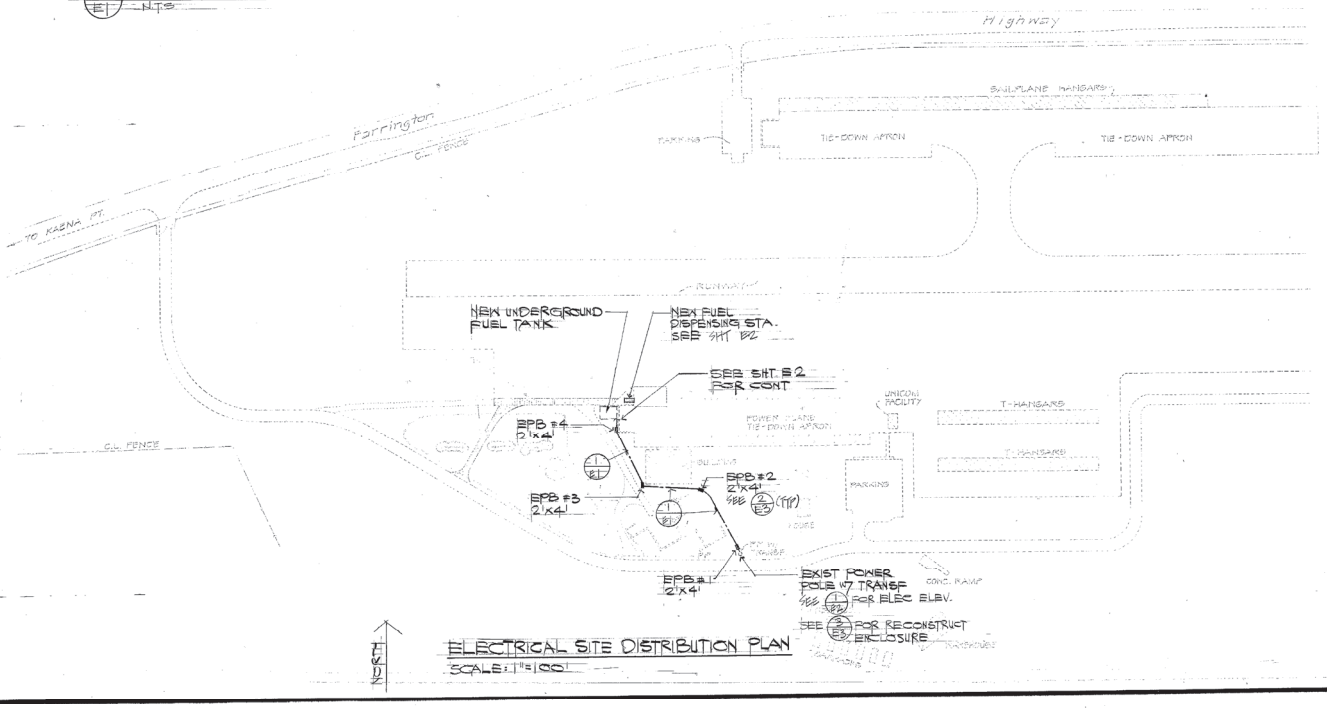
1 / E1 SECTION N.T.S.

ELECTRICAL SYMBOLS

- EXISTING UTILITY POLE
- ELECTRIC PULL BOX
- PANELBOARD
- (E) EQUIPMENT CONNECTION
- GROUND TERMINAL
- EP EXPLOSION PROOF
- WIRING IN RACEWAY CONCEALED IN RACEWAY BELOW GRADE
- EXPLOSION PROOF SEAL FITTING
- FS UNDERGROUND FUEL SUPPLY LINE, SEE (2/E1)

NOTES: ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUIT WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS -//- , 3 WIRES, -///- , 4 WIRES, ETC.

⟵ INDICATES GROUNDING CONDUCTOR SIZED PER NATIONAL ELECTRICAL CODE ARTICLE 250



ELECTRICAL SITE DISTRIBUTION PLAN
SCALE: 1"=100'

Airports Division
Department of Transportation
State of Hawaii

DSGN. AC/DW | DRWN. DW | CHKD. AC | APPD. AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

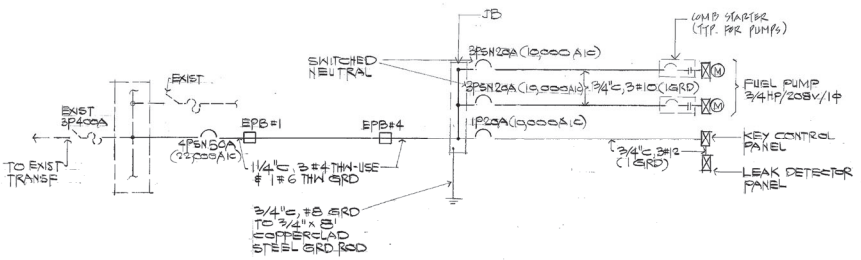
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

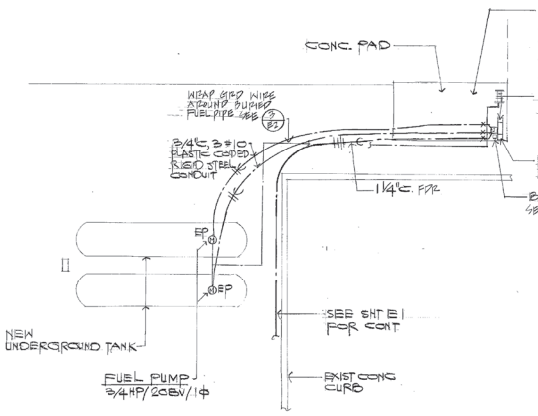
SHEET TITLE :
ELECTRICAL SITE DISTRIBUTION PLAN, SYMBOLS

DATE :

DWG. NO. : E-1



SINGLE LINE DIAGRAM



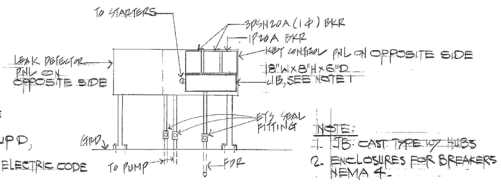
ELECTRICAL SITE PLAN

SCALE: 1/8"=1'-0"

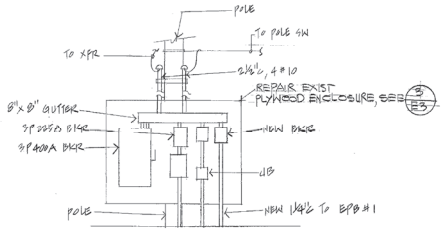


NOTES:
1. BOND & GROUND STATIC GROUND WIRES WRAPPED ON PIPES.
2. BOND & GROUND ALL VALVES, PIPE FITTINGS, BOXES & ALL METAL PARTS OF PUBLIC SYSTEM.
3. GROUND TO COPPER CLAD STEEL GROUND RODS

3/E2 DETAIL
N.T.S.



2/E2 ELEVATION
SCALE: 3/4"=1'-0"



NOTE: ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED.

1/E2 ELEVATION
SCALE: 3/8"=1'-0"

NORTH

Airports Division
DEPARTMENT OF TRANSPORTATION STATE OF HAWAII

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

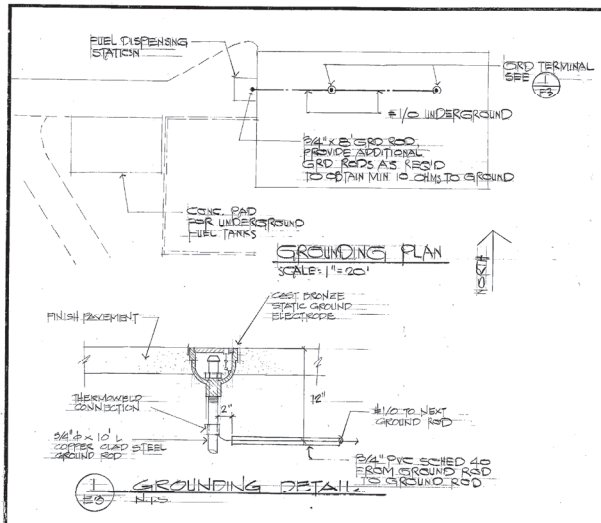
PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

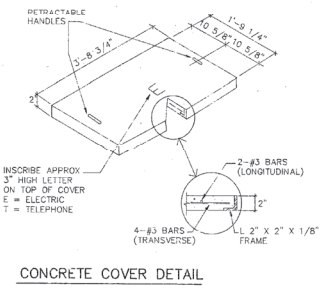
PROJECT NO. :
A02023-11

SHEET TITLE :
ELECTRICAL SITE PLAN, SINGLE-LINE DIAGRAM

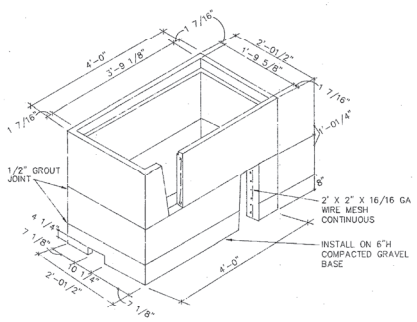
DATE :

DWG. NO. : E-2

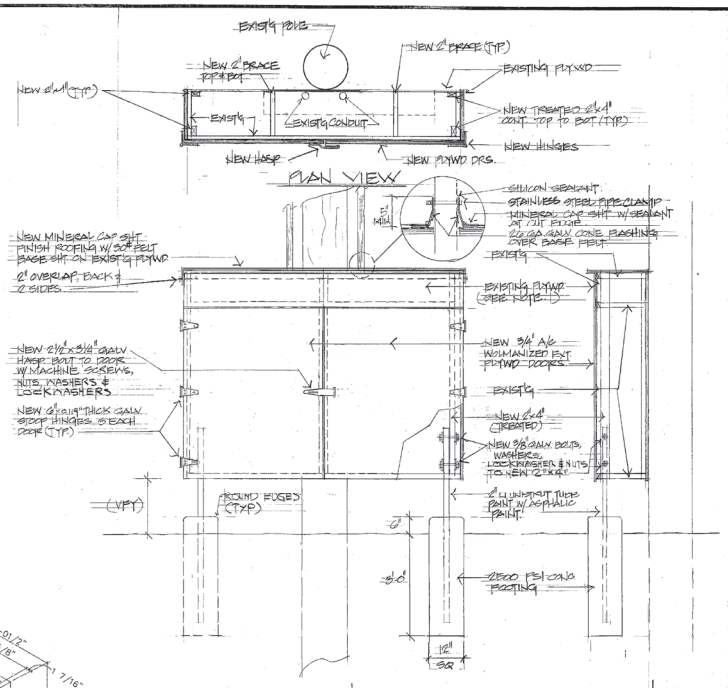




CONCRETE COVER DETAIL



2/E3 2' X 4' PULL BOX DETAIL
N.T.S.



3/E3 DETAIL
SCALE: 3/4"=1'-0"

NOTES:

1. SQUARE UP EXISTING WOOD EQUIPMENT ENCLOSURE AND PROVIDE ADDITIONAL POST SUPPORTS, NAILS AND BRACING AS REQUIRED
2. PROVIDE NEW DOORS WITH NEW HINGES AND HASP. BOLT NEW HINGES TO NEW DOORS AND EXISTING PLYWD. SIDING WITH #10 GALV. STEEL MACHINE SCREWS, WASHERS, LOCKWASHERS AND NUTS
3. SAND ENTIRE EXTERIOR SURFACES INCLUDING BOTH SIDES OF NEW DRS. PRIME ENCLOSURE WITH 1 COAT OF OIL BASE PRIMER AND FINISH WITH 2 HEAVY COATS OF ACRYLIC LATEX PAINT, MEDIUM GREEN BY DEVOE #581772L #4285 OR APPROVED EQUAL
4. ALL EQUIPMENT AND MATERIALS EXIST'G UNLESS OTHERWISE INDICATED NEW
5. ALL HARDWARE TO BE HEAVY HOT DIPPED GALVANIZED OR EQUAL.

Airports Division
Department of Transportation
State of Hawaii

DSGN.	DRWN.	CHKD.	APPD.
AC/DW	DW	AC	AC

KEY PLAN / NOTES :

NO.	DATE	REVISIONS

PROJECT TITLE :
REPLACEMENT OF FUELING SYSTEM AT DILLINGHAM AIRFIELD

PROJECT NO. :
A02023-11

SHEET TITLE :
GROUNDING PLAN AND DETAILS

DATE :

DWG. NO. : E-3

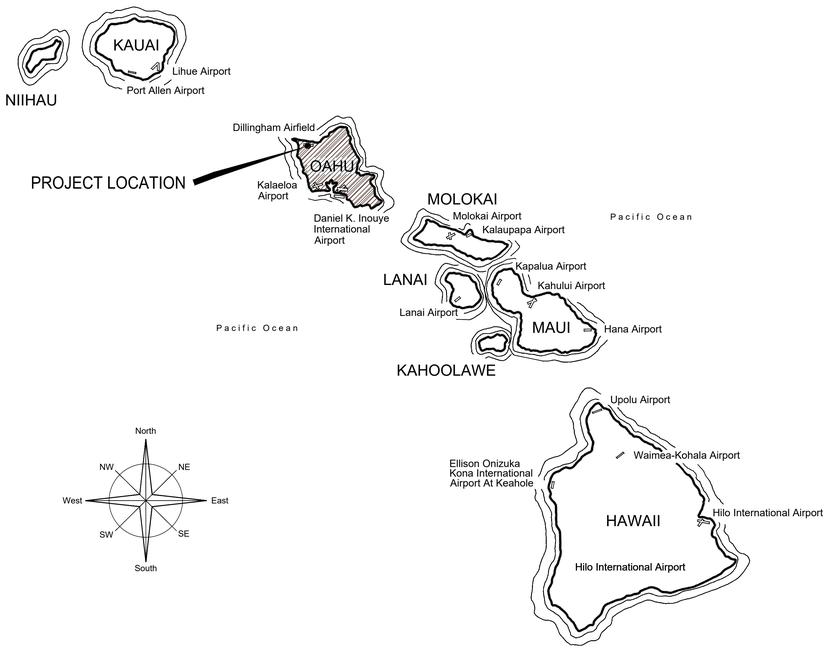
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

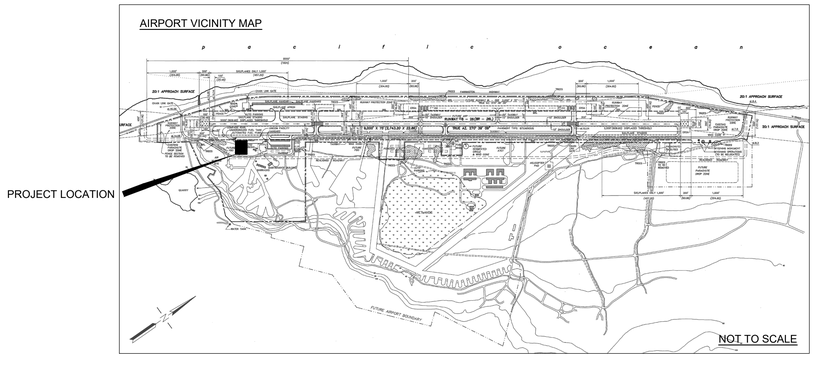
PLANS FOR

UST AND AST CLOSURE

AT

KAWAIHAPAI AIRFIELD (HDH)
MOKULEIA, OAHU, HAWAII
PROJECT NO. AO2023-14





DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

DIRECTOR OF TRANSPORTATION — DATE

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04/30/2026
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS
MAY 2, 2025
DATE

PROJECT TITLE :

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO.:

AO2023-14

SHEET TITLE:

TITLE SHEET, PROJECT LOCATION, AND AIRPORT VICINITY MAP

DATE :	DWG. NO.
5/2/2025	**G-001**
SHEET :	
1 OF 16 SHEETS	

P:\PROJECTS\2022-PROJECTS\12208-03 HDOT AIRPORTS - UST CLOSURE\08 DESIGN\AO2023-14 HDH\100% CONSTRUCTION DOCUMENTS REVISON 2\PLANS\01-GENERAL\AO2023-14_001_G001.DWG, 8/25/2025 2:32 PM

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GENERAL CONSTRUCTION NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STATE OF HAWAII, "2005 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND STATE OF HAWAII DOT HIGHWAYS DIVISION "STANDARD PLANS" DATED 2008.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLAN OR NOT, AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF DAMAGES DUE TO HIS CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE RESPECTIVE UTILITY COMPANIES.
3. THE CONTRACTOR SHALL NOTIFY THE STATE 48 HOURS BEFORE THE COMMENCEMENT OF ANY UTILITY LINE WORK TO SCHEDULE A FIELD REVIEW AND SECURE APPROVAL OF THE PROPOSED UTILITY LINE LOCATION.
4. THE PROPOSED UTILITY LINE LOCATION SHALL BE LAID OUT IN THE FIELD PRIOR TO THE CONDUCTING OF THE FIELD REVIEW BY THE STATE.
5. FIELD ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE STATE PRIOR TO THE COMMENCEMENT OF ANY UTILITY LINE WORK.
6. THE EXISTING PAVEMENT SHALL BE SAW-CUT BEFORE COMMENCEMENT OF GRADING OR TRENCHING WORK.
7. ANY PAVEMENT MARKINGS, STRUCTURES AND APPURTENANCES (WITHIN OR OUTSIDE THE CONTRACT ZONE LIMITS) DAMAGED AND/OR WORN AWAY AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL CONDITION, OR BETTER, AS DIRECTED BY THE STATE.
8. ANY PAVEMENT MARKINGS, STRUCTURES, AND APPURTENANCES (WITHIN OR OUTSIDE OF THE CONTRACT ZONE LIMITS) DAMAGED AND/OR WORN AWAY UNDER THE PERMIT SHALL BE REPAINTED OR RECONSTRUCTED AS DIRECTED BY THE STATE.
9. NO TRENCHING SHALL BE LEFT OPEN FOR MORE THAN FIVE (5) WORKING DAYS.
10. DIMENSIONS TAKE PRECEDENCE OVER SCALE.
11. THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR ANY DISCREPANCIES. IF ANY DISCREPANCY OR CONFLICT OCCURS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL WAIT FOR CLARIFICATION BEFORE RESUMING OR COMMENCING WORK ON THE DISCREPANCY ITEM.
12. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY, AND ENVIRONMENTAL QUALITY.
13. WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO ON THE CONTRACT DOCUMENTS, SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR.
14. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE AND CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS: AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE STATE AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STATE OR THE ENGINEER.
15. ALL PERMITS SHALL BE OBTAINED BY THE CONTRACTOR.
16. CONSTRUCTION WORK WILL BE PERMITTED ONLY DURING THE HOURS BETWEEN 8:00 A.M. AND 3:30 P.M. MONDAY THROUGH FRIDAY EXCEPT HOLIDAYS UNLESS OTHERWISE PERMITTED BY THE STATE.
17. SURVEY MONUMENT STAKEOUT SHALL BE MADE BY REGISTERED SURVEYORS ENGAGED BY THE CONTRACTOR.
18. REGISTERED SURVEYORS ENGAGED BY THE CONTRACTOR SHALL SUBMIT A LETTER TO THE STATE CERTIFYING THAT THE MONUMENT STAKEOUT AND INSTALLATION IS CORRECT.
19. ALL CONSTRUCTION AND GRADING STAKEOUT SHALL BE DONE BY A REGISTERED SURVEYOR TO BE ENGAGED BY THE CONTRACTOR.
20. BENCHMARK INFORMATION LOCATED ON SHEET C002.
21. THE STATE RESERVES THE RIGHT TO MAKE CHANGES TO THE DRAINAGE SYSTEM AS SUCH CHANGES ARE FOUND TO BE NECESSARY AS THE LAND IS CLEARED AND EROSION CONTROL CONSTRUCTION PROGRESSES.
22. THE CONTRACTOR SHALL PROVIDE TO THE STATE RECORD DRAWINGS OF ALL UTILITIES AND STRUCTURES UPON COMPLETION OF WORK. SPOT ELEVATIONS SHALL ALSO BE PROVIDED TO VERIFY THE FINISHED GRADES.
23. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR UTILITIES SUCH AS ELECTRICITY, WATER, ETC., REQUIRED FOR HIS OPERATIONS AND ALL COSTS SHALL BE BORNE BY THE CONTRACTOR.
24. NO BLASTING SHALL BE PERMITTED ON THIS PROJECT.
25. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF HIS MATERIAL WITH THE STATE AND OWNER.
26. THE CONTRACTOR SHALL PROVIDE VEHICULAR ACCESS TO ALL EXISTING STRUCTURES.
27. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE, SAFE, NONSKID BRIDGING MATERIAL OVER THE TRENCH, INCLUDING SHORING WHEN TRENCHING IN PAVEMENT AREAS TO HANDLE ALL TYPES OF VEHICULAR TRAFFIC. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS, STRIKES, OR JOB SHUTDOWN.

GENERAL CONSTRUCTION NOTES CONTINUED

28. CONTRACTOR SHALL SUBMIT FAA FORM 7460-1, NOTICE TO PROPOSED CONSTRUCTION OR ALTERATION AT LEAST 45 DAYS PRIOR TO THE START OF CONSTRUCTION OR THE DATE AN APPLICATION OF A CONSTRUCTION PERMIT IS FILLED, WHICHEVER IS EARLIEST. CONSTRUCTION EQUIPMENT AND STAGING AREA HEIGHTS INCLUDING HEIGHTS OF TEMPORARY CONSTRUCTION CRANES SHALL BE INCLUDED IN THE SUBMITTAL. THE FORM AND CRITERIA FOR SUBMITTAL CAN BE FOUND ONLINE AT: HTTPS://OEAAA.FAA.GOV/OEAAA/EXTERNAL/CONTENT/FORMS.JSP

AOA TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL ESCORTS, FLAG PEOPLE, AND COMMUNICATION DEVICES; AS WELL AS, ALL AOA TRAFFIC CONTROL DEVICES SPECIFIED IN THE TECHNICAL PROVISION SECTION 01800 - SPECIAL REQUIREMENTS FOR CONTRACTORS ON THE AOA.
2. THE CONTRACTOR'S ESCORTS SHALL CONTINUOUSLY MONITOR RADIO FREQUENCY, INDICATED IN THE TECHNICAL PROVISION SECTION 01800, FOR ALL POTENTIAL AIRCRAFT ACTIVITY THAT IS UNFORESEEN.
3. BEFORE STARTING ANY WORK AT EACH WORKDAY, THE CONTRACTOR SHALL SET UP ALL AOA TRAFFIC CONTROL DEVICES IN THE ORDER REQUIRED BY THE CONTRACT. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL TAKE DOWN ALL AOA TRAFFIC CONTROL DEVICES IN THE REVERSE ORDER.
4. THE CONTRACTOR SHALL NOT TAKE DOWN ANY AOA TRAFFIC CONTROL DEVICES UNTIL WORK IS COMPLETED IN THE AOA.
5. THE CONTRACTOR SHALL NOT LEAVE THE AOA UNTIL ALL AOA TRAFFIC CONTROL DEVICES HAVE BEEN TAKEN DOWN.
6. THE CONTRACTOR SHALL NOT LEAVE THE AIRPORT UNTIL ALL STAGING AREAS ARE CLEARED ACCORDING TO TECHNICAL PROVISION SECTION 01700 - MOBILIZATION AND DEMOBILIZATION.

TOPOGRAPHIC SURVEY ABBREVIATION LIST

AC	ASPHALT CONCRETE
B	BOTTOM
BC	BOTTOM CURB
BW	BOTTOM WALL
CONC.	CONCRETE
DSP	DRY STANDPIPE
EB	ELECTRICAL BOX
EP	EDGE OF PAVEMENT
FAA	FEDERAL AVIATION ADMINISTRATION
G	GROUND
GP	GUARD POST
H	HEIGHT
HH	HANDHOLE
HT/HTC	HAWAIIAN TELCOM
LP	LIGHT POLE
MH	MANHOLE
MW	MONITORING WELL
STA	STATION
T	TOP
TC	TOP CURB
TW	WATER

ABBREVIATION LIST

A.C.	ASPHALTIC CONCRETE
AOA	AIRPORT OPERATIONS AREA
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
ARFF	AIRCRAFT RESCUE AND FIRE FIGHTING
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BOTTOM OF CURB
BL	BASE LINE
BRL	BUILDING RESTRICTION LINE
BMP	BEST MANAGEMENT PRACTICES
BOT.	BOTTOM
BW	BOTTOM OF WALL
C.L.	CENTERLINE
CL.	CLASS
CMU	CONCRETE MASONRY UNITS
C.O.	CLEAN OUT
CONC.	CONCRETE
CONT.	CONTINUED
D6	DRAIN LINE WITH SIZE
DET.	DETAIL
DIAM.	DIAMETER
D.L.	DRAIN LINE
DOTA	DEPARTMENT OF TRANSPORTATION AIRPORTS
DWG.	DRAWING
E	EAST
ELEV.	ELEVATION
EP	EDGE OF PAVEMENT
EXIST.	EXISTING
GAL	GALLONS
GALV	GALVANIZED
G.I.	GALVANIZED IRON
H/HOR.	HORIZONTAL
HDOT	HAWAII DEPARTMENT OF TRANSPORTATION
HDPE	HIGH DENSITY POLYETHYLENE
INV.	INVERT
LCJ	LONGITUDINAL CONTRACTION JOINT
LONG.	LONGITUDINAL
LT.	LEFT
M	MECHANICAL
MIL	MILLIMETER
MIN.	MINIMUM
MAX.	MAXIMUM
N	NORTH
NTS	NOT TO SCALE
O.C.	ON CENTER
O/S	OFFSET
PARA.	PARAGRAPH
P.C.	PORTLAND CEMENT CONCRETE
PFAS	PER- AND POLYFLUOROALKYL SUBSTANCES
R	RADIUS
REF.	REFERENCE
REINF.	REINFORCED
ROFA	RUNWAY OBJECT FREE AREA
RSA	RUNWAY SAFETY AREA
RT.	RIGHT
RWY	RUNWAY
S	SLOPE
SECT.	SECTION
SCH./SCHED.	SCHEDULE
SCHED.	SHEET
ST	STREET
STA	STATION
SQ.	SQUARE
TCJ	TRANSVERSE CONTRACTION JOINT
TCSJ	TRANSVERSE CONSTRUCTION JOINT
TWY	TAXIWAY
TXL	TAXILANE
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
VERT.	VERTICAL
WWF	WELDED WIRE FABRIC

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

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04/30/2026
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
TK	TK	TK	TK

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS
MAY 2, 2025
DATE

PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

SHEET TITLE:

SHEET INDEX, CONSTRUCTION NOTES, AND ABBREVIATION LIST

DATE: **5/2/2025**

SHEET : 2 OF 16 SHEETS

DWG. NO. **G-002**

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CONSTRUCTION NOTES:

1. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY & COUNTY OF HONOLULU AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.

2. VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ALL CONFLICTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER.

3. THE UNDERGROUND PIPES, CABLES OR DUCTING LINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED OF THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE 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 THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.

4. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY OR STATE DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVERSED ORDINANCES OF HONOLULU, AS AMENDED, BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.

6. THE CONTRACTOR SHALL FIRST NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, AT 768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAY PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.

7. CONFINED SPACE

   FOR ENTRY BY STATE PERSONNEL, INCLUDING INSPECTORS AND REPRESENTATIVES, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(B), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVIDING:

   I. ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:

      a. FULL BODY HARNESSES FOR UP TO TWO PERSONNEL
      b. LIFELINE AND ASSOCIATED CLIPS
      c. INGRESS/EGRESS AND FULL PROTECTION EQUIPMENT
      d. TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT,
      e. EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION),
      f. CELLULAR TELEPHONE TO CALL FOR EMERGENCE ASSISTANCE,
      g. CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20 FEET AWAY).
      h. PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.

   II. CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.

   III ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).

   IV. ALL SAFETY EQUIPMENT SHALL COMPLY WITH THE STANDARDS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND ALL APPLICABLE FEDERAL, STATE, AND CITY LAWS AND REGULATIONS RELATING TO SAFETY.

8. ALL EXISTING UTILITIES TO REMAIN IN USE, WHETHER OR NOT SHOWN ON THE PLANS BY THE CONTRACTOR DURING CONSTRUCTION. ALL DAMAGES TO EXISTING UTILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.

9. WHEN TRENCH EXCAVATION IS CLOSE TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING, SHORING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDER-PINNING TO FULLY PROTECT THEM FROM DAMAGE.

10. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION OR BETTER, ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS PROVIDED FOR SPECIFICALLY IN THE PROPOSAL. DEMOLITION AND RESTORATION OF EXISTING ITEMS SHALL BE INCIDENTAL AND INCLUDED WITHIN THE AMOUNT PAID FOR UNCLASSIFIED TRENCH EXCAVATION.

11. ALL CONCRETE AND A.C. PAVEMENT TO BE TRENCHED OR RECONSTRUCTED SHALL BE SAW-CUT TO THE REQUIRED WIDTH PRIOR TO THE CONSTRUCTION.

12. PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT AND THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL INFORM THE CITY DEPARTMENT OF PLANNING PERMITTING, CIVIL ENGINEERING BRANCH.

STOCKPILING NOTES:

1. ALL STOCKPILING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 18A, ARTICLES 1, 2, 3 AND 4, AS RELATED TO STOCKPILING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 2021, AS AMENDED.

2. NO CONTRACTOR SHALL PERFORM ANY STOCKPILING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.

3. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".

4. 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 AREA. WHEREVER CONNECTIONS OF NEW 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.

5. ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.

6. ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL STOCKPILING WORK HAS BEEN COMPLETED. STOCKPILING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.

7. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.

8. THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW SITE FOR THE PROJECT WHEN THE APPLICATION FOR A STOCKPILING PERMIT IS MADE. THE BORROW SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.

9. NO STOCKPILING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO DOT-AIR, PROVIDED SUCH STOCKPILING WORK IS ALSO IN CONFORMANCE WITH THE COMMUNITY NOISE CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL".

10. THE LIMITS OF THE AREA TO BE STOCKPILED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE STOCKPILING WORK.

11. THE GENERAL CONTRACTOR/DEVELOPER/OWNER OF THE PROJECT SHALL BE RESPONSIBLE FOR ALL STOCKPILING OPERATIONS TO BE PERFORMED IN CONFORMANCE WITH APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS," AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.

THE GENERAL CONTRACTOR/DEVELOPER/OWNER OF THE PROJECT SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE(S) FOR THE FOLLOWING:

1. STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND
2. DISCHARGES OF HYDROTESTING EFFLUENT, DEWATERING EFFLUENT, AND WELL DRILLING EFFLUENT TO STATE WATERS.

IN ACCORDANCE WITH STATE LAW, ALL DISCHARGES RELATED TO PROJECT CONSTRUCTION OR OPERATIONS ARE REQUIRED TO COMPLY WITH STATE WATER QUALITY STANDARDS (HAWAII ADMINISTRATIVE RULES, CHAPTER 11-54). BEST MANAGEMENT PRACTICES SHALL BE USED TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENT, DEBRIS AND OTHER POLLUTANTS TO STATE WATERS. PERMIT COVERAGE IS AVAILABLE FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH AT HTTP://HEALTH.HAWAII.GOV/CWB. THE OWNER/DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING OTHER FEDERAL, STATE, OR LOCAL AUTHORIZATIONS AS REQUIRED BY LAW.

12. WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY STOCKPILING WORK IS INITIATED.

13. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.

14. IF THE STOCKPILING WORK INVOLVES CONTAMINATED SOIL, THEN ALL STOCKPILING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.

15. ALL STOCKPILING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.

16. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECTED TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

17. FOR BENCH MARK, SEE SHEET C101.

18. LIFE OF THE STOCKPILE SHALL BE 30 DAYS.

EROSION PREVENTION/ SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION - AIRPORTS (DOTA) CONSTRUCTION SITE RUNOFF/PBMP PROGRAM, WHICH INCLUDES, BUT IS NOT LIMITED TO, THE DOTA CONSTRUCTION ACTIVITIES BMP MANUAL AND ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION PROJECTS STANDARD OPERATING PROCEDURES.

2. PRIOR TO ANY EARTH DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL MEASURES. THE AREA OF SOIL DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY TO INSTALL THE THE TEMPORARY EROSION CONTROL MEASURES. UPON COMPLETION OF THE TEMPORARY EROSION CONTROL INSTALLATION, THE CONTRACTOR SHALL REQUEST AN INSPECTION CONDUCTED BY AIR-EE. THE SCHEDULE OF THE INSPECTION IS SUBJECT TO THE AVAILABILITY OF THE AIR-EE INSPECTOR. CONSTRUCTION ACTIVITIES CAN ONLY COMMENCE AFTER ALL DEFICIENCIES THAT ARE OBSERVED DURING THE INSPECTION ARE PROPERLY ADDRESSED AND DOCUMENTED.

3. SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THAN 15% AND ON AREAS OF MODERATE SLOPE THAT ARE PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES, SLOPE DRAINS) TO DIVERT WATER AROUND THE SLOPE. PROVIDE A 10-FT BUFFER ZONE AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANYTIME ON SLOPES GREATER THAN 15%.

4. TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE. STABILIZATION MUST COMMENCE IMMEDIATELY AND BE COMPLETED WITHIN THE 14 DAY PERIOD.

5. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED PRIOR TO THE PERMANENT STABILIZATION OF THE SITE. THE CONTRACTOR SHALL SUBMIT THEIR REQUEST FOR FINAL BMP INSPECTION TO AIR-EE ONCE PERMANENT STABILIZATION IS ESTABLISHED. SCHEDULE OF THE FINAL BMP INSPECTION IS SUBJECT TO THE AVAILABILITY OF THE AIR-EE INSPECTOR. TEMPORARY EROSION CONTROL MEASURES CAN ONLY BE REMOVED AFTER ALL DEFICIENCIES THAT ARE OBSERVED DURING THE FINAL BMP INSPECTION ARE PROPERLY ADDRESSED AND DOCUMENTED.

6. MINIMIZE SOIL COMPACTION AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION DURING CONSTRUCTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOILS TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS THAT HAVE BEEN COMPACTED AND ARE DESIGNATED TO REMAIN VEGETATIVE OR POST-CONSTRUCTION INFILTRATION AREAS.CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

7. PERIMETER CONTROLS ARE REQUIRED DOWN SLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED AREA.

8. INLET PROTECTION

   A. ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT BASIN.

   B. SEDIMENT LEVELS MAY NOT EXCEED ONE THIRD OF THE HEIGHT OF A SEDIMENT BARRIER OR INLET PROTECTION DEVICE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE.

   C. SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNCLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED.

   D. TORN, WEATHERED OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE REPAIRED OR REPLACED IMMEDIATELY.

   E. EACH INLET PROTECTION MUST BE INSPECTED AFTER EVERY RAINFALL EVENT, AND ANY ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED.

10. TRACKING CONTROL

   A. MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE.

   B. VEHICULAR PARKING AND MOVEMENT ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING.

   C. ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, SIDEWALKS MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING.

   D. WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND THE INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.

PROJECT SEQUENCE

1. INSTALL TEMPORARY EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO, STABILIZED CONSTRUCTION ENTRANCES, PERIMETER CONTROLS, AND INLET PROTECTION FOR PROTECTED AREAS. CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THESE BMPS.
2. SCHEDULE AN INSPECTION OF THE TEMPORARY BMPS WITH AIR-EE. THE SCHEDULE OF THE INSPECTION IS SUBJECT TO THE AVAILABILITY OF THE AIR-EE INSPECTOR. DOCUMENT AND ADDRESS ANY DEFICIENCIES FOUND DURING THE INSPECTION.
3. RELOCATE, RECONSTRUCT AND MAINTAIN BMPS AS NEEDED TO KEEP THEM EFFECTIVE AT ALL TIMES. INITIATE TEMPORARY STABILIZATION IMMEDIATELY ONCE GRADING IS COMPLETED.
4. PROCEED WITH CONSTRUCTION WITH LEAST POSSIBLE DISTURBANCE OF VEGETATIVE AREAS AND TEMPORARY STRUCTURES.
5. SCHEDULE FINAL BMP INSPECTION WITH AIR-EE (SCHEDULE SUBJECT TO THE AVAILABILITY OF THE AIR-EE INSPECTOR). DOCUMENT AND ADDRESS ANY OBSERVED DEFICIENCIES DURING THE FINAL BMP INSPECTION.
6. REMOVE OR DISMANTLE TEMPORARY EROSION CONTROL STRUCTURES AFTER FULL ESTABLISHMENT OF PERMANENT VEGETATIVE COVER, PAVEMENT, OR PROPOSED FINISHED SURFACE.
7. PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
8. INSPECTIONS SHALL BE PERFORMED WEEKLY.

RAIN RESPONSE PLAN

1. THE FOLLOWING WILL BE PERFORMED WHEN HEAVY RAINS, TROPICAL STORM OR HURRICANE IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:

   A. TEMPORARY SUSPENSION OF ACTIVE GRADING, GRUBBING AND TRENCHING.

   B. INSPECT ALL PERIMETER CONTROLS AND INLET PROTECTION DEVICES, AND MAINTAIN AS NEEDED. INLET PROTECTION DEVICES ARE NOT ALLOWED TO BE REMOVED UNTIL DIRECTED BY THE AIRPORT MANAGER OR WHEN THERE IS AN IMMEDIATE THREAT OCCURRING TO PUBLIC SAFETY. THE AIRPORT MANAGER WILL JUDGE THE SEVERITY OF ANY APPROACHING STORM AND ISSUE DIRECTIVES, AS NEEDED. ALL INLET PROTECTION DEVICES MUST BE REINSTALLED IMMEDIATELY HAVE THE CESSATION OF THE SEVERE WEATHER AND THREAT TO PUBLIC SAFETY.

   C. RE-INSPECT AFTER THE APPROACHING HEAVY RAINS, TROPICAL STORM OR HURRICANE AND REPLACE OR MAINTAIN BMPS AS NEEDED.

GOOD HOUSEKEEPING BMPS

1. STREET SWEEPING AND VACUUMING. ALL POLLUTANTS DISCHARGED FROM CONSTRUCTION SITE TO OFF-SITE AREAS MUST BE SWEPT OR VACUUMED EACH DAY BEFORE LEAVING THE JOB SITE.

2. MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT. PREVENT, REDUCE, OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM MATERIAL DELIVERY, STORAGE, AND USE TO THE STORM WATER SYSTEM OR WATERCOURSED BY MINIMIZING THE STORAGE OF HAZARDOUS MATERIALS ONSITE, STORING MATERIALS IN A DESIGNATED AREA, INSTALLING SECONDARY CONTAINMENT. CONSTRUCTION MATERIALS, WASTE, TOXIC AND HAZARDOUS SUBSTANCES, STOCKPILES AND OTHER SOURCES OF POLLUTION SHALL NOT BE STORED IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE MS4, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE. PRIMARY AND SECONDARY CONTAINMENT CONTROLS AND COVERS SHALL BE IMPLEMENTED TO THE MEP.

3. SPILL PREVENTION AND CONTROL. CREATE AND IMPLEMENT SPILL PREVENTION AND RESPONSE PLANS TO ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO THE MS4 AND RECEIVING WATERS FROM LEAKS AND SPILLS BY REDUCING THE CHANCE FOR SPILLS, ABSORBING, CONTAINING, AND CLEANING UP SPILLS AND PROPERLY DISPOSING OF SPILL MATERIALS. AT A MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND SPILLS IMMEDIATELY.

4. STOCKPILE MANAGEMENT. STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE STATE RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCES SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8 FOOT WIDE BENCHING. STOCKPILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL WHEN THEY ARE INACTIVE OR BY THE END OF THE WORK SHIFT, WHICHEVER IS SOONER.

5. HAZARDOUS MATERIALS. PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE, MATERIAL STORAGE, AND WASTE DISPOSAL IN THE EVEN THAT HAZARDOUS MATERIALS ARE DISCHARGED ONTO THE GROUND OR MS4, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE HAWAII DEPARTMENT OF HEAL TH (DOH) HAZARD EVALUATION AND EMERGENCY RESPONSE (HEER) OFFICE, DOH CLEAN WATER BRANCH (CWB), THE AIRPORT MANAGER, DOTA STATE PROJECT MANAGER, AND DOTA AIR-EE. A WRITTEN REPORT DESCRIBING THE DATE AND TIME OF DISCHARGE, DESCRIPTION OF EVENTS, POLLUTANTS THAT WERE DISCHARGED, THE REASONS OR CAUSE FOR THE DISCHARGE, SPILL RESPONSE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A RECURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO DOH HEER OFFICE AND DOTA AIR-EE WITHIN 30 DAYS OF THE DISCHARGE. A SPILL REPORTING FORM SHALL ALSO BE FILLED OUT AND SUBMITTED TO AIR-EE WITHIN 30 DAYS OF THE DISCHARGE. THE CONTRACTOR SHALL REFER TO THE HNL SPILL REPORTING FACT SHEET FOR THE SPILL REPORTING FORM AND ADDITIONAL INFORMATION.

6. NONHAZARDOUS MATERIALS. IN THE EVENT THAT NONHAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DOH HEER OFFICE, DOH CWB, AIRPORT MANAGER, DOTA STATE PROJECT MANAGER, AND DOTA AIR-EE. A WRITTEN REPORT DESCRIBING THE DATE AND TIME OF DISCHARGE, DESCRIPTION OF EVENTS, POLLUTANTS THAT WERE DISCHARGED, THE REASONS OR CAUSE FOR THE DISCHARGE, SPILL RESPONSE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A RECURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO DOH HEER OFFICE, DOH CWB, AND DOTA AIR-EE WITHIN 30 DAYS OF DISCHARGE. A SPILL REPORTING FORM SHALL ALSO BE FILLED OUT AND SUBMITTED TO AIR-EE WITHIN 30 DAYS OF THE DISCHARGE. THE CONTRACTOR SHALL REFER TO THE HNL SPILL REPORTING FACT SHEET FOR THE SPILL REPORTING FORM AND ADDITIONAL INFORMATION.

7. VEHICLE AND EQUIPMENT CLEANING. ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, WASHING IN DESIGNATED, CONTAINED AREAS ONLY, AND ELIMINATING DISCHARGES TO THE STORM DRAIN SYSTEM BY EVAPORATING AND/OR TREATING WASH WATER, AS APPROPRIATE OR INFILTRATING WASH WATER FOR EXTERIOR CLEANING ACTIVITIES THAT USE WATER ONLY.

8. VEHICLE AND EQUIPMENT FUELING. PREVENT FUEL SPILLS AND LEAKS BY USING OFF-SITE FACILITIES, FUELING ONLY IN DESIGNATED AREAS, ENCLOSING OR COVERING STORED FUEL, AND IMPLEMENTING SPILL CONTROLS SUCH AS SECONDARY CONTAINMENT AND ACTIVE MEASURES USING SPILL RESPONSE KITS.

9. VEHICLE AND EQUIPMENT MAINTENANCE. ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT MAINTENANCE OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.

10. SOLID WASTE MANAGEMENT. PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS. SOLID WASTE SHALL BE COVERED OR PLACED UNDER COVER TO PREVENT CONTACT WITH STORM WATER. TRUCKS HAULING SOLID WASTE, SOIL, OR AGGREGATE MUST BE COVERED WHEN USING THE HAUL ROADS/ROUTES WITHIN THE AOA.

11. SANITARY/SEPTIC WASTE MANAGEMENT. TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE SORTED NEAR THE MS4 OR RECEIVING WATERS.

12. LIQUID WASTE MANAGEMENT. LIQUID WASTE SHALL BE CONTAINED IN A CONTROLLED AREA SUCH AS A ROLL-OFF BIN OR PORTABLE TANK OF SUFFICIENT VOLUME AND TO CONTAIN THE LIQUID WASTES GENERATED. CONTAINMENT AREAS OR DEVICES MUST BE IMPERMEABLE AND LEAK FREE AND SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. THE LIQUID WASTE SHALL BE UNDER COVER, IN A COVERED CONTAINER OR IN CONTAINER WITH A LID TO PREVENT CONTACT WITH STORM WATER. IF THE LIQUID WASTE IS HAZARDOUS MATERIAL, IT MUST BE STORED WITH SECONDARY CONTAINMENT AND COVERED OR UNDER COVER.

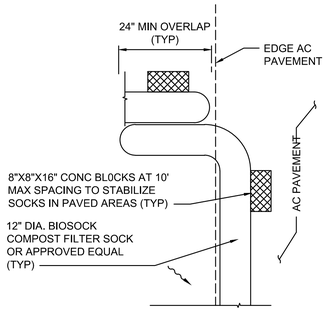
13. CONCRETE WASTE MANAGEMENT. PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL. FOUR (4) INCHES OF FREEBOARD MINIMUM MUST BE MAINTAINED. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTES.

14. FOR MANAGEMENT OF CONTAMINATED SOIL, IF ENCOUNTERED, THE PROJECT WILL NEED TO FOLLOW THE DOTA PROGRAMMATIC EHE-EHMP (https://hidot.hawaii.gov/airports/doing-business/engineering/env...rammatic-ehe-ehmp/).

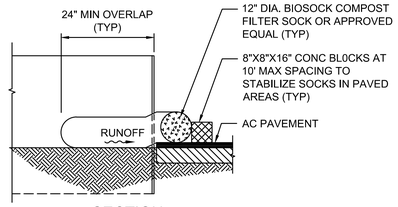
15. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS AS REFLECTED ON PLANS SHALL BE IN PLACE BEFORE ANY WORK IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGH

ABBREVIATIONS

AC	ASPHALT CONCRETE	MAX.	MAXIMUM
BC	BOTTOM CURB	MECH	MECHANICAL
BFE	BASE FLOOD ELEVATION	MIN.	MINIMUM
BLDG	BUILDING	MH	MANHOLE
BOT.	BOTTOM	MJ	MECHANICAL JOINT
BW	BOTTOM WALL	NOI	NOTICE OF INTENT
℄	CENTERLINE	NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
C.L.	CHAIN-LINK		
CONN	CONNECT	O/H	OVERHEAD
COTG	CLEANOUT TO GRADE	O.C.A.	ON CENTER
CONC.	CONCRETE	PAV'T	PAVEMENT
D	DIAMETER OR DRAIN	ℙ	PROPERTY LINE
DET.	DETAIL	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	RD.	ROAD
EA	EACH	ROW	RIGHT OF WAY
ELEV./EL.	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EP	EDGE OF PAVEMENT		
ESCP	EROSION AND SEDIMENT CONTROL PLAN	S	SEWER OR SPREAD
		S.L.	STREET LIGHT
EXIST.	EXISTING	SMH	SEWER MANHOLE
FF	FINISH FLOOR	STD.	STANDARD
FH	FIRE HYDRANT	STRUCT.	STRUCTURAL
FT	FEET	TC	TOP OF CURB
FL	FLANGE	TMK	TAX MAP KEY
GND.	GROUND	TP	TOP PIPE OR TOP PAVEMENT
G.P.	GUARD POST/GUY POLE/GATE POST	TS	TOP STEM
GV	GATE VALVE	TW	TOP WALL
HB	HOSE BIBB	TYP.	TYPICAL
HDPE	HIGH-DENSITY POLYETHYLENE	U/G	UNDERGROUND
ICV	IRRIGATION CONTROL VALVE	UP	UTILITY POLE
INV	INVERT	U.P./S.L	UTILITY POLE W/ STREET LIGHT
L	LENGTH	W	WATER / WIDTH
LF	LINEAR FOOT	WL	WATER LINE
LP	LIGHT/LAMP POLE	WM	WATER METER
		WMH	WATER MANHOLE
		WV	WATER VALVE BOX



PLAN



SECTION

NOTES:

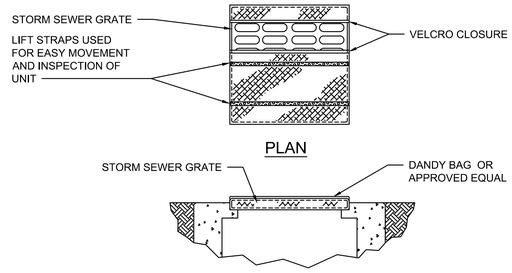
1. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD COMPLY WITH UNITED STATES ENVIRONMENTAL PROTECTION AGENCY GUIDELINES IN ACCORDANCE WITH THE CITY AND COUNTY OF HONOLULU STORM WATER BEST MANAGEMENT PRACTICE MANUAL, NOVEMBER 2011.
2. STAKING IS NOT REQUIRED.
3. OVERLAP ENDS OF BIOSOCK COMPOST FILTER SOCKS MINIMUM 12-INCHES.

1 C-002 COMPOST FILTER SOCK DETAIL
SCALE:NTS

HI-FLOW DANDY BAG OR APPROVED EQUAL (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1,62 (365) X 0,89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 X 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0,40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0,51 (115) X 0,33 (75)
UV RESISTENCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0,425 (40)
FLOW RATE	ASTM D 4491	l/min/m²(gal/min/ft²)	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec⁻¹	2,1

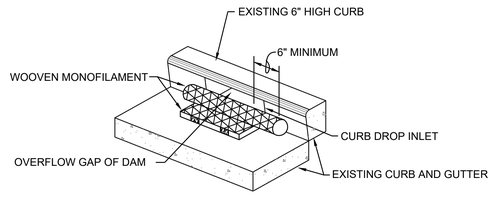
*NOTE: ALL DANDY BAGS OR APPROVED EQUAL CAN BE ORDERED WITH OPTIONAL OIL ABSORBENT PILLOWS

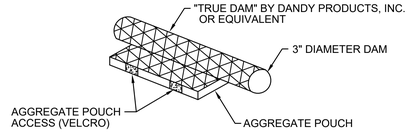


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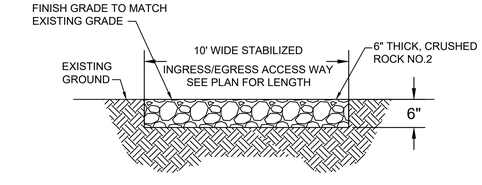
SECTION

2 C-002 DRAIN INLET PROTECTION DETAIL
SCALE:NTS





3 C-002 SEDIMENT FILTER FOR CATCHBASIN DETAIL
SCALE:NTS



4 C-002 STABILIZED CONSTRUCTION ENTRANCE
SCALE:NTS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

TORU R. KUMAGAI
LICENSED PROFESSIONAL ENGINEER
No. 17517-C
HAWAII, U.S.A.

04/30/2026
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
TK	TK	TK	TK

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS
MAY 2, 2025
DATE

PROJECT TITLE:

UST AND AST CLOSURE
AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

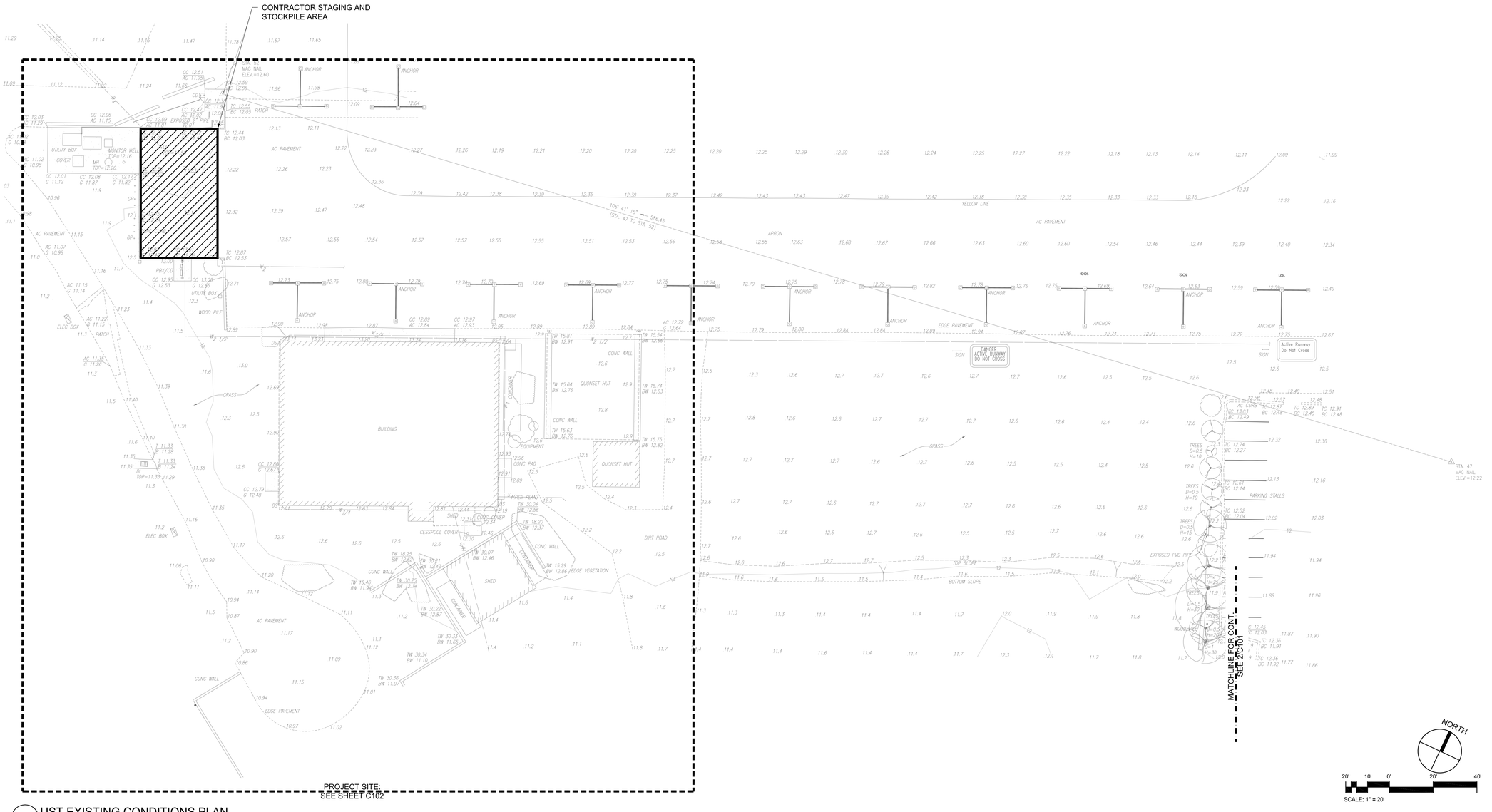
PROJECT NO:

AO2023-14

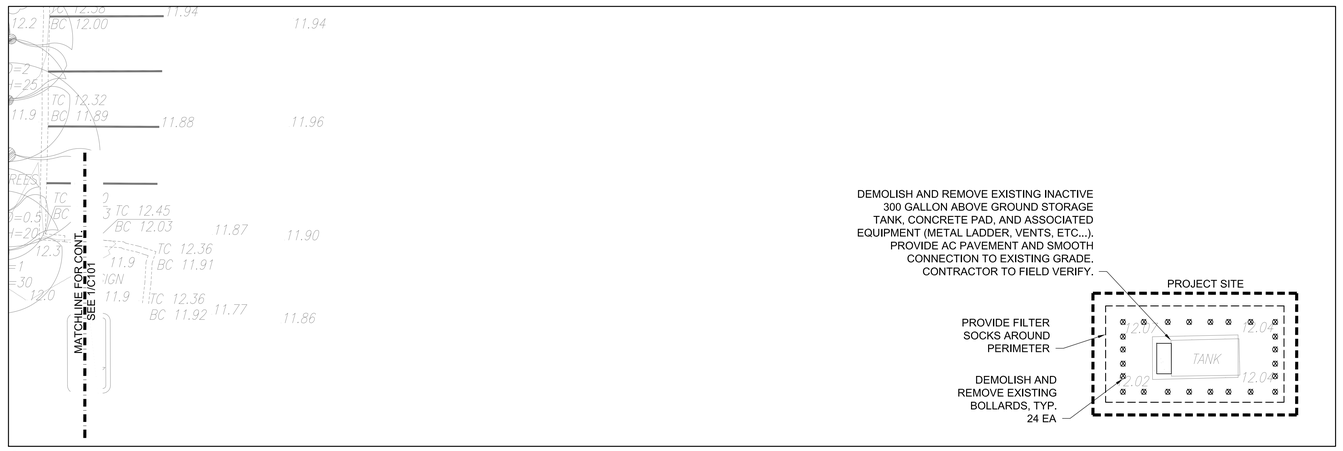
SHEET TITLE:

CIVIL GENERAL NOTES 2

DATE: **5/2/2025**
SHEET : 4 OF 16 SHEETS
DWG. NO. **C-002**



1 UST EXISTING CONDITIONS PLAN
1" = 20'-0"



2 AST EXISTING CONDITIONS AND DEMOLITION PLAN
1" = 10'-0"

LEGEND

PROJECT SITE

STAGING AND SOIL STOCKPILE AREA

NOTES:

1. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN. BEFORE STARTING ANY WORK, LOCATE AND PROTECT ALL EXISTING BURIED UTILITY LINES, WHETHER OR NOT SHOWN ON THESE DRAWINGS, DURING THE COURSE OF CONSTRUCTION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

TORU R. KUMAGAI
LICENSED PROFESSIONAL ENGINEER
No. 17517-C
HAWAII, U.S.A.

04/30/2026
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
TK	TK	TK	TK

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS

MAY 2, 2025
DATE

PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

SHEET TITLE:

EXISTING CONDITIONS PLAN

DATE: **5/2/2025**

SHEET : 5 OF 16 SHEETS

DWG. NO. **C-101**

DEMOLISH AND REMOVE CONCRETE PAD. PROVIDE AC PAVEMENT AND SMOOTH CONNECTION TO EXISTING GRADE, TYP.

EXISTING 12,000 GALLON UNDERGROUND STORAGE TANK FOR REMOVAL SPECIFICATIONS SEE MECHANICAL AND ELECTRICAL DRAWINGS. BACKFILL AS NECESSARY AND STABILIZE WITH TOP SOIL AND GRASS (EL TORO ZOYSIA), TYP.

AC PAVEMENT TRENCH RESTORATION

DEMOLISH AND REMOVE CONCRETE PAD. PROVIDE AC PAVEMENT AND SMOOTH CONNECTION TO EXISTING GRADE, TYP.

EXISTING DISPENSER SYSTEM FOR REMOVAL SPECIFICATIONS SEE MECHANICAL AND ELECTRICAL DRAWINGS

EXISTING GROUNDING SYSTEM FOR REMOVAL SPECIFICATIONS SEE MECHANICAL AND ELECTRICAL DRAWINGS. PROVIDE AC PAVEMENT RESTORATION AND SMOOTH CONNECTION TO EXISTING GRADE, TYP.

LIMITS OF WORK AND DISTURBANCE

RESTORE CONCRETE CURB SEE C&C OF HONOLULU STD DETAIL R-1 5 LF

EXISTING CONTROL PANEL FOR REMOVAL SPECIFICATIONS SEE ELECTRICAL DRAWINGS

AC PAVEMENT TRENCH RESTORATION

DEMOLISH AND REMOVE CONCRETE PAD. PROVIDE BACKFILL, STABILIZE SURFACE WITH 6" THICK GRAVEL AND SMOOTH CONNECTION TO EXISTING GRADE.

PROVIDE AC PAVEMENT TRENCH RESTORATION, TYP.

EXISTING QUONSET HUT (PROTECT DURING CONSTRUCTION)

EXISTING DRAIN INLET (PROTECT)

EXISTING NORTH SHORE AVIATION HANGAR (PROTECT DURING CONSTRUCTION)

EXISTING 2" VTR FOR REMOVAL SPECIFICATIONS SEE MECHANICAL DRAWINGS. PROVIDE BACKFILL, STABILIZE SURFACE WITH TOP SOIL, GRASS (EL TORO ZOYSIA) AND SMOOTH CONNECTION TO EXISTING GRADE, TYP.

EXISTING POWER POLE AND TRANSFORMER (PROTECT) FIELD VERIFY

EXISTING POWER POLE (PROTECT) FIELD VERIFY

EXISTING ACCESS ROAD

EXISTING ELECTRICAL CONDUITS AND HANDHOLES. FOR REMOVAL DETAILS SEE ELECTRICAL DRAWINGS. PROVIDE BACKFILL, STABILIZE SURFACE WITH GRASS AND SMOOTH CONNECTION TO EXISTING GRADE, TYP.

1 GENERAL SITE PLAN
1" = 20'-0"

NOTES:

1. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN. BEFORE STARTING ANY WORK, LOCATE AND PROTECT ALL EXISTING BURIED UTILITY LINES, WHETHER OR NOT SHOWN ON THESE DRAWINGS, DURING THE COURSE OF CONSTRUCTION
2. CONTRACTOR SHALL VERIFY THE LOCATION OF MONITORING WELL PRIOR TO ANY GROUND DISTURBING ACTIVITIES. IF MONITORING WELLS ARE FOUND WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL NOTIFY THE STATE PROJECT MANAGER AND ADEQUATELY PROTECT THE MONITORING WELLS FROM DAMAGE DURING CONSTRUCTION.
3. CONTRACTOR TO FIELD VERIFY THE EXISTING WATER LINES, ELECTRICAL, TELCOM LINES AND FUEL LINES.
4. CONTRACTOR SHALL NOTIFY THE STATE PROJECT MANAGER AND COORDINATE WITH HDOTA HDH MAINTENANCE AND ANY EXISTING TENANTS FOR ACCESS AND USE OF THE AREA NEAR THE NORTH SHORE AVIATION HANGAR AND ADJACENT LOT.
5. CONTRACTOR SHALL RESTORE ALL EXISTING IMPROVEMENTS DISTURBED DURING CONSTRUCTION TO MATCH OR EXCEED EXISTING CONDITION AND QUALITY.
6. SEE MECHANICAL DRAWINGS FOR PIPING AND EQUIPMENT REMOVAL.
7. COORDINATE ALL SITE DEMOLITION WITH PROPOSED SITE IMPROVEMENTS.
8. SAWCUT PAVEMENTS AND CURBING TO FULL DEPTH PRIOR TO REMOVAL OR REMOVE TO NEAREST JOINT.
9. THE CONTRACTOR SHALL CONTACT HAWAII ONE CALL CENTER

LEGEND

- LIMITS OF WORK
- CENTER LINE
- LANDSCAPE RESTORATION
- ASPHALT PAVEMENT RESTORATION

NORTH

20' 10' 0' 20' 40'
SCALE: 1" = 20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

TORU R. KUMAGAI
LICENSED PROFESSIONAL ENGINEER
No. 17517-C
HAWAII, U.S.A.

04/30/2026
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
TK	TK	TK	TK

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS
MAY 2, 2025
DATE

PROJECT TITLE:

UST AND AST CLOSURE
AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

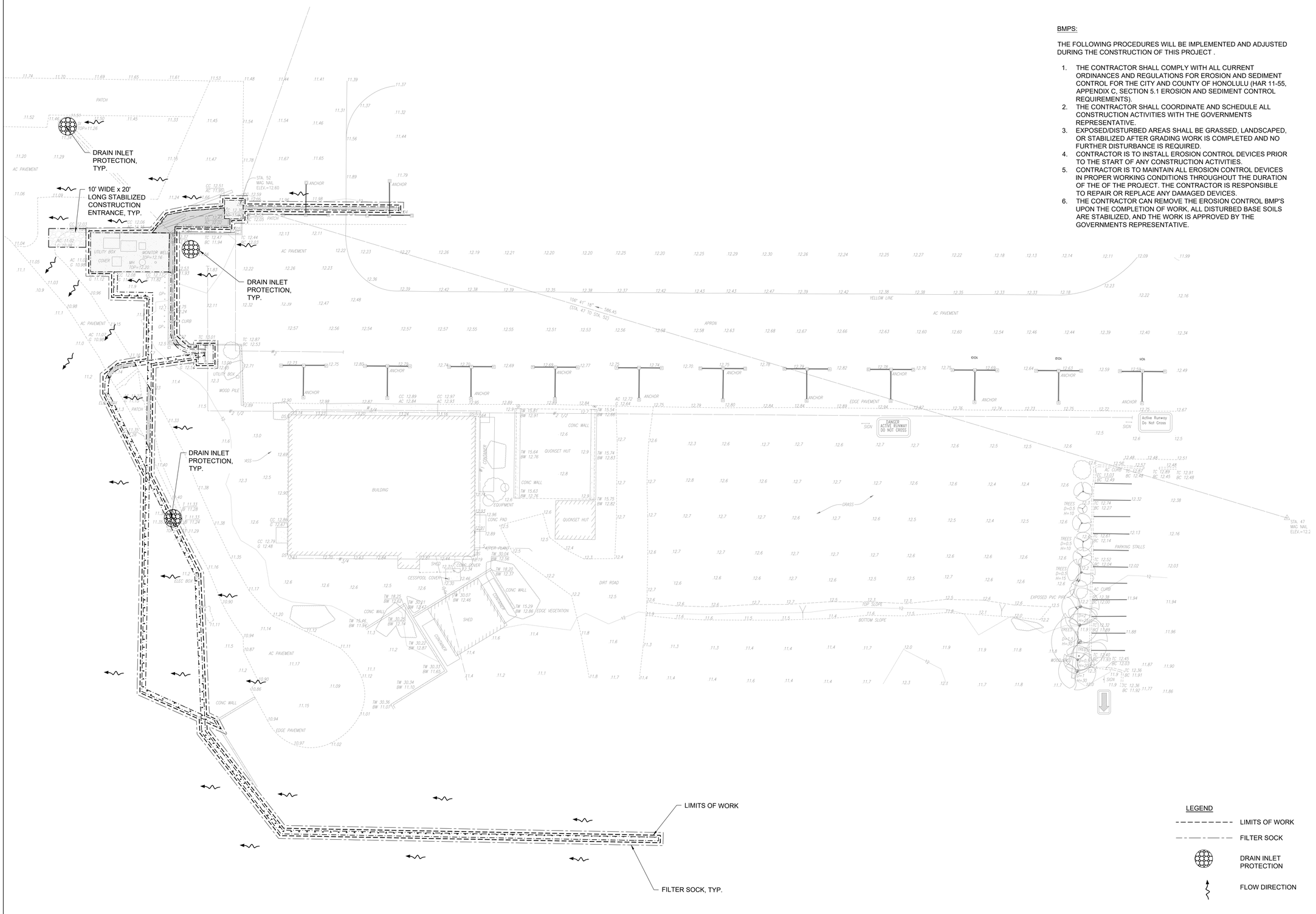
PROJECT NO:

AO2023-14

SHEET TITLE:

SITE PLAN

DATE: 5/2/2025
SHEET : 6 OF 16 SHEETS
DWG. NO. C-102



1 EROSION AND SEDIMENT CONTROL PLAN
1" = 10'-0"

LEGEND

- LIMITS OF WORK
- FILTER SOCK
- DRAIN INLET PROTECTION
- FLOW DIRECTION

NORTH

20' 10' 0' 20' 40'
SCALE: 1" = 20'

BMPS:

THE FOLLOWING PROCEDURES WILL BE IMPLEMENTED AND ADJUSTED DURING THE CONSTRUCTION OF THIS PROJECT .

1. THE CONTRACTOR SHALL COMPLY WITH ALL CURRENT ORDINANCES AND REGULATIONS FOR EROSION AND SEDIMENT CONTROL FOR THE CITY AND COUNTY OF HONOLULU (HAR 11-55, APPENDIX C, SECTION 5.1 EROSION AND SEDIMENT CONTROL REQUIREMENTS).
2. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE GOVERNMENTS REPRESENTATIVE.
3. EXPOSED/DISTURBED AREAS SHALL BE GRASSED, LANDSCAPED, OR STABILIZED AFTER GRADING WORK IS COMPLETED AND NO FURTHER DISTURBANCE IS REQUIRED.
4. CONTRACTOR IS TO INSTALL EROSION CONTROL DEVICES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS TO MAINTAIN ALL EROSION CONTROL DEVICES IN PROPER WORKING CONDITIONS THROUGHOUT THE DURATION OF THE OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY DAMAGED DEVICES.
6. THE CONTRACTOR CAN REMOVE THE EROSION CONTROL BMP'S UPON THE COMPLETION OF WORK, ALL DISTURBED BASE SOILS ARE STABILIZED, AND THE WORK IS APPROVED BY THE GOVERNMENTS REPRESENTATIVE.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

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HAWAII, U.S.A.

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UST AND AST CLOSURE
AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

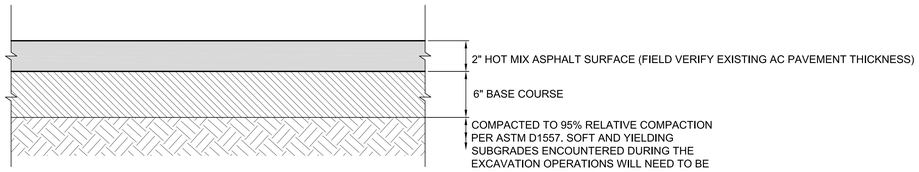
SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN

DATE: **5/2/2025**

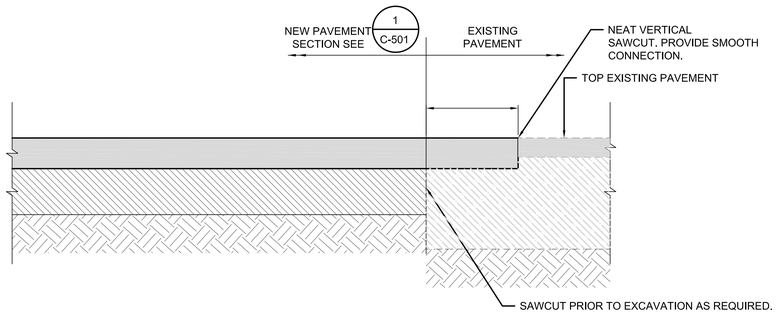
SHEET : 7 OF 16 SHEETS

DWG. NO. **C-103**



1 / C-501 TYPICAL AC PAVEMENT SECTION

NOT TO SCALE



2 / C-501 TYPICAL AC PAVEMENT SECTION AND CONNECTION TO EXISTING PAVEMENT

NOT TO SCALE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

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No. 17517-C
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AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

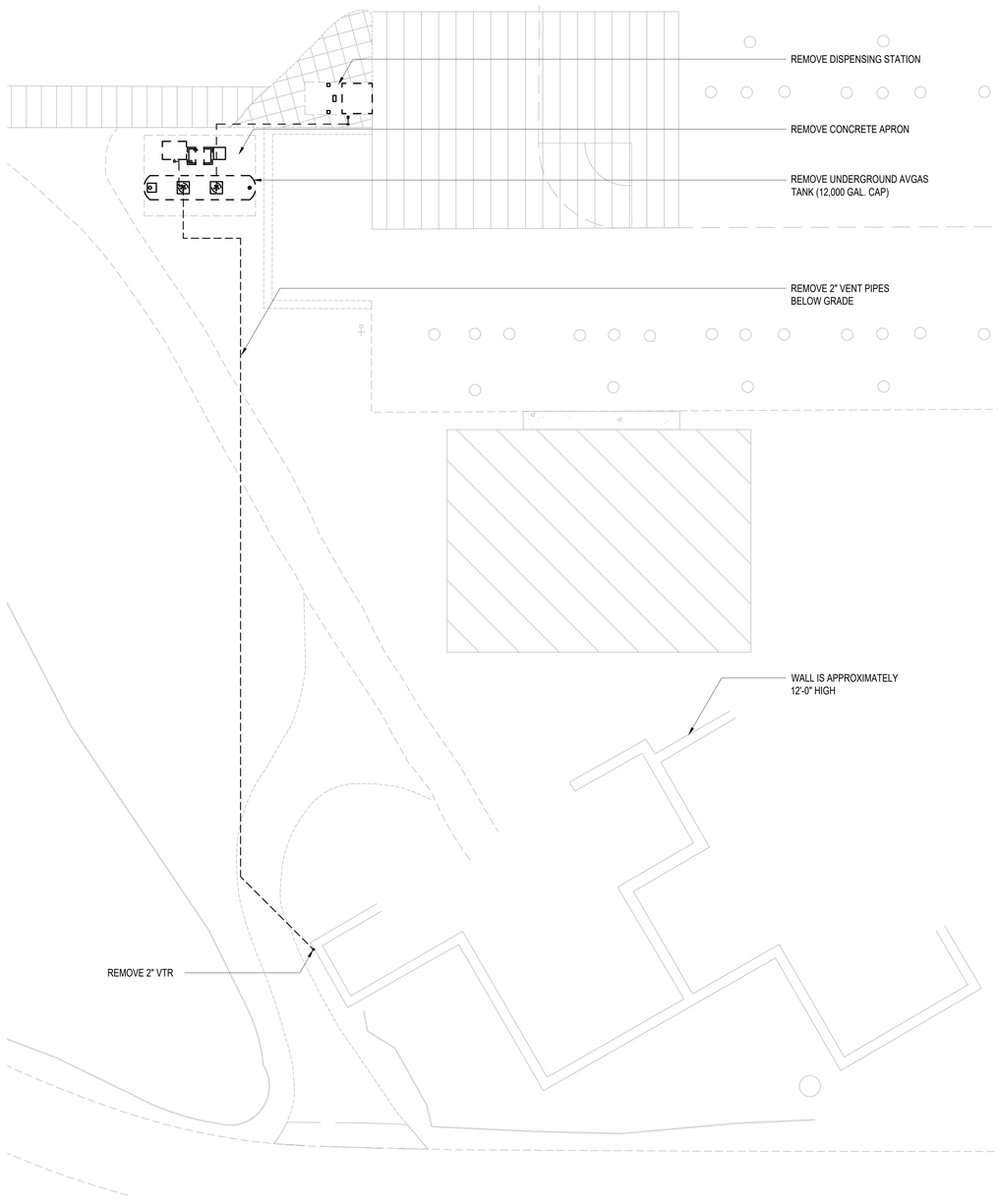
SHEET TITLE:

PAVEMENT SECTION DETAILS

DATE: **5/2/2025**

SHEET : 8 OF 16 SHEETS

DWG. NO. **C-501**



SITE PLAN
SCALE: 1" = 20'-0"

MECHANICAL GENERAL NOTES

1. COMPLETELY REMOVE ALL FUEL SYSTEM RELATED EQUIPMENT.
2. BACK FILL AND REPAIR ANY TRENCHES AND PITS.

LEGEND & ABBREVIATION

SYMBOL	ABBREV.	DESCRIPTION
	CONC.	CONCRETE
	DN	DOWN
	EXIST	EXISTING
	FRP	FIBERGLASS REINFORCE PLASTIC
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	TDH	TOTAL DYNAMIC HEADS
	THK	THICK
	TYP	TYPICAL
		DOUBLE WALL PIPING

MECHANICAL SERVICES SHEET INDEX

SHEET NUMBER	SHEET TITLE
M001	SITE PLAN, MECH GENERAL NOTES, LEGEND & ABBREVIATION
M002	FUELING SYSTEM PLAN, EQUIPMENT SCHEDULE, PIPING SUMP DETAIL
M003	SECTIONS
M004	SECTIONS
M005	FUELING SYSTEM PIPING DIAGRAM

SCALE: 1" = 20'-0"
0 5' 10' 20' 50'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

MICHAEL A. CHONG
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No. 9622-M
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04/30/2026
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PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

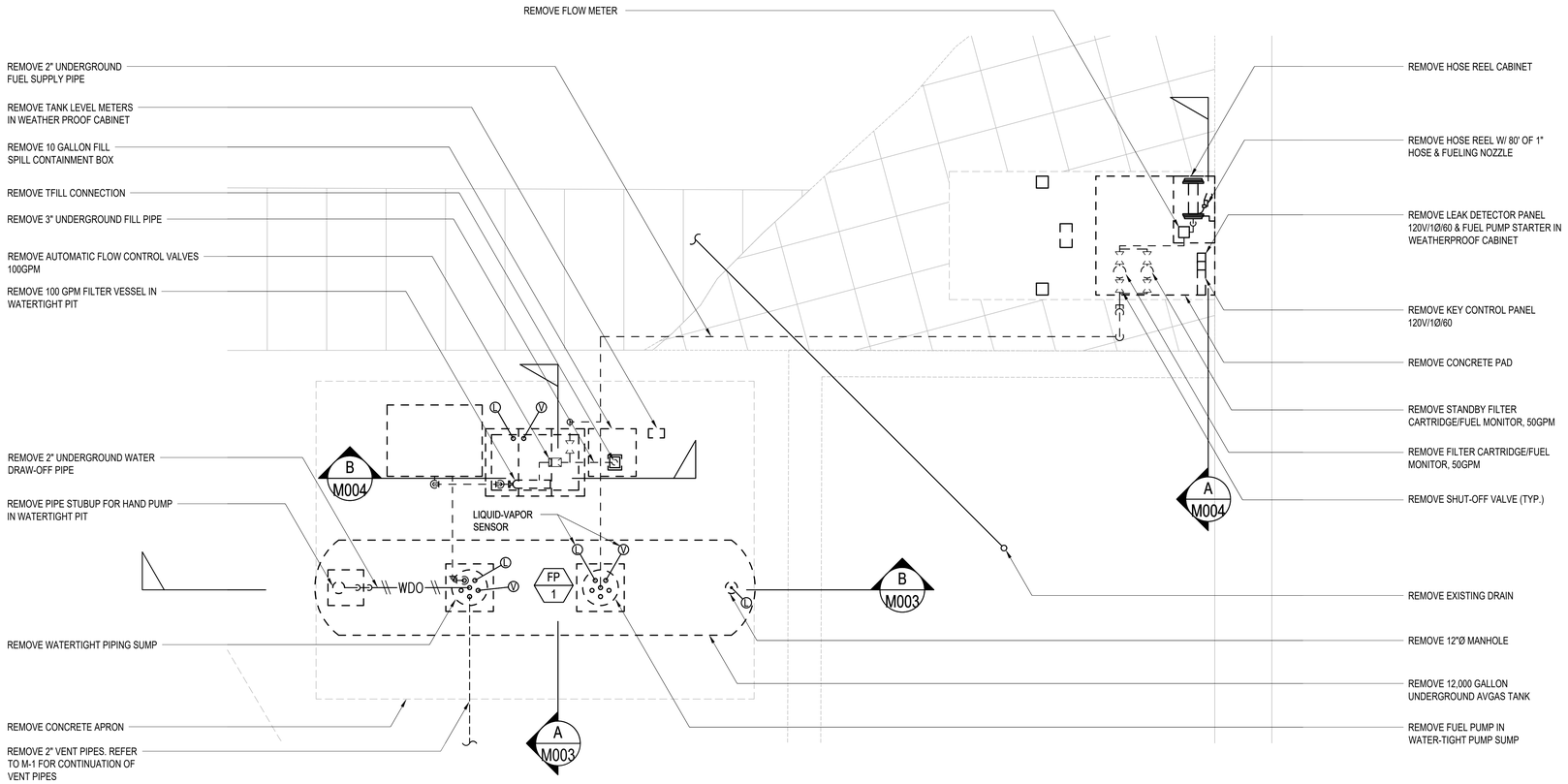
SHEET TITLE:

SITE PLAN, MECH GENERAL NOTES, LEGEND & ABBREVIATION

DATE: **5/2/2025**

SHEET : 9 OF 16 SHEETS

DWG. NO. **M-001**

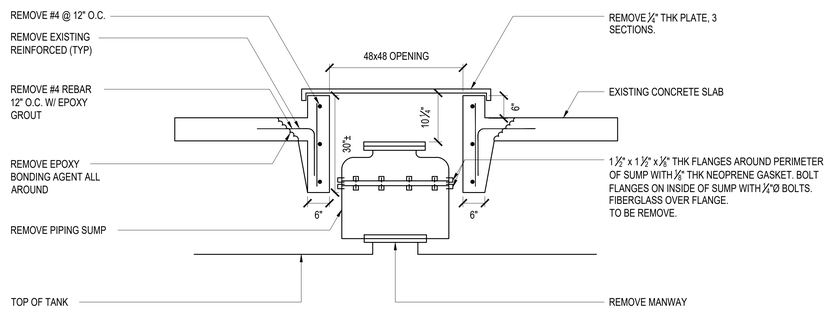


FUELING SYSTEM PLAN

SCALE: N.T.S.

EQUIPMENT SCHEDULE

FP 1	FUEL PUMP:	SUBMERSIBLE TYPE 10GPM @ 85' TDH ¾HP, 208-230VOLTS/1Ø/60



PIPING SUMP DETAIL

SCALE: N.T.S.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

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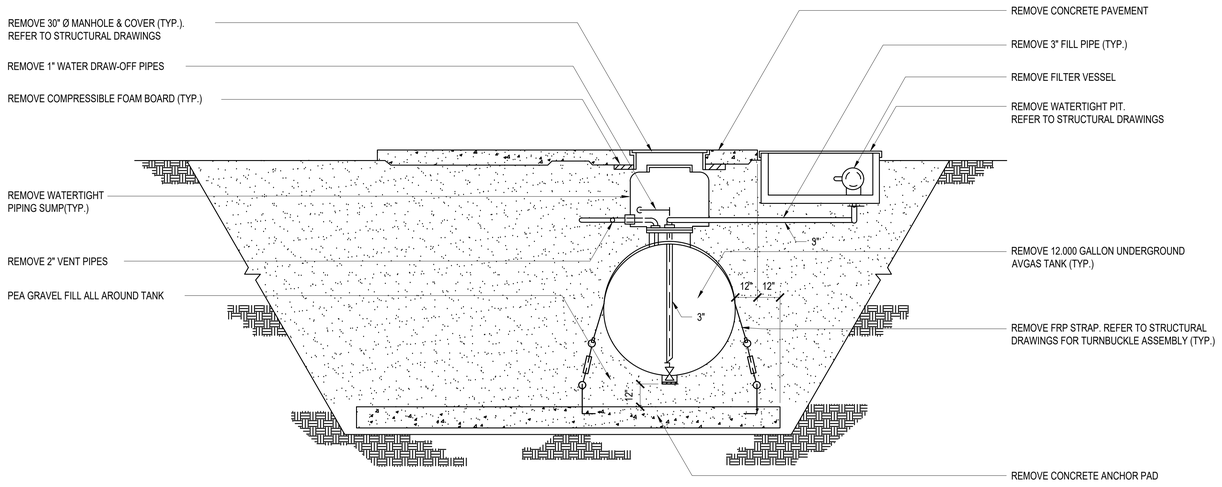
SHEET TITLE:

FUELING SYSTEM PLAN, EQUIPMENT SCHEDULE, PIPING SUMP DETAIL

DATE: **5/2/2025**

SHEET : 10 OF 16 SHEETS

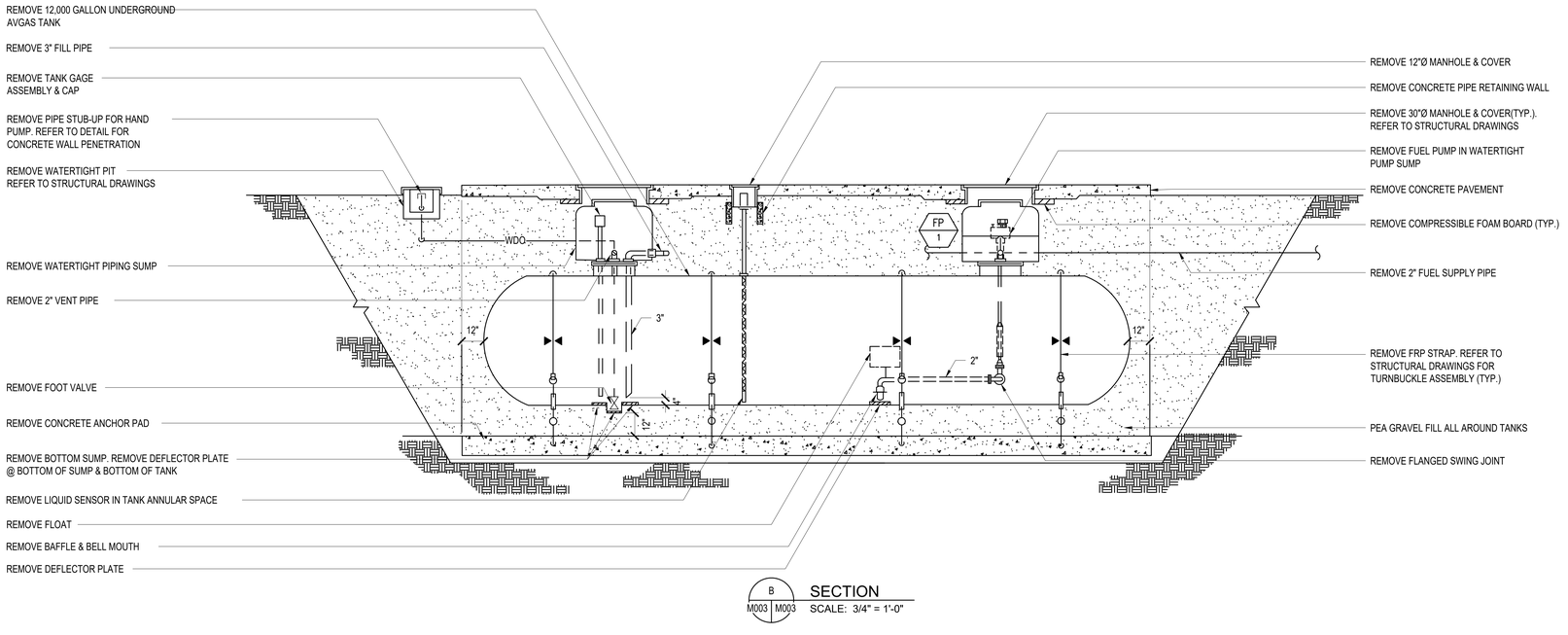
DWG. NO. **M-002**



A
M003 | M003

SECTION

SCALE: 3/4" = 1'-0"



B
M003 | M003

SECTION

SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"
0 3" 6" 1' 2'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

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UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

SHEET TITLE:

SECTIONS

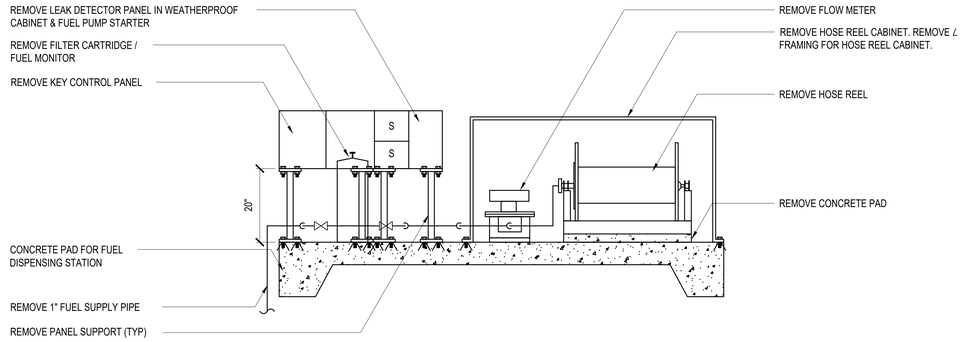
DATE: 5/2/2025

SHEET : 11 OF 16 SHEETS

DWG. NO.

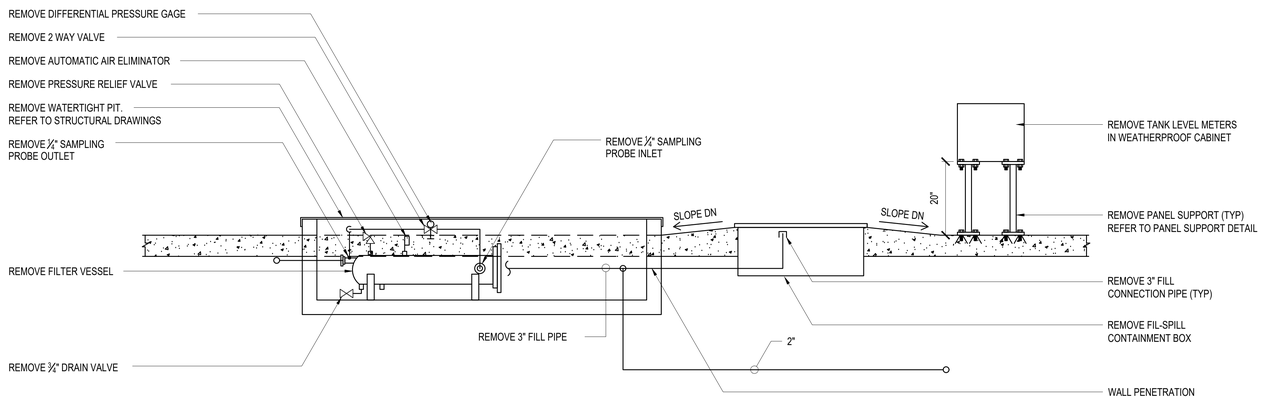
M-003

FUEL DISPENSING STATION



A M004 | M004 SECTION

SCALE: 3/4" = 1'-0"



B M004 | M004 SECTION

SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"
0 3" 6" 1' 2'

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DEPARTMENT OF TRANSPORTATION
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PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

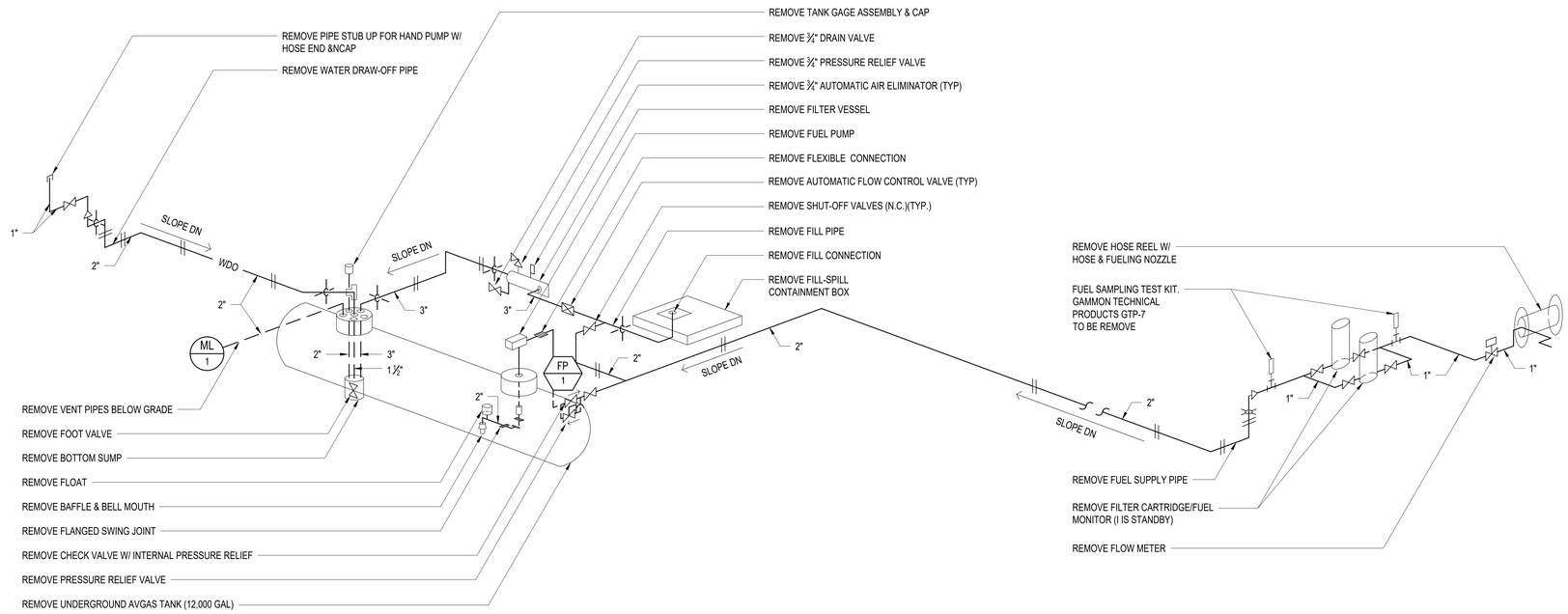
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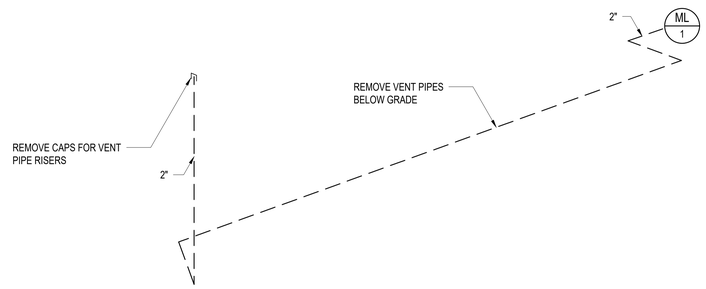
SECTIONS

DATE: **5/2/2025**

SHEET : 12 OF 16 SHEETS

DWG. NO. **M-004**





FUELING SYSTEM PIPING DIAGRAM

SCALE: N.T.S.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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MAY 2, 2025
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PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

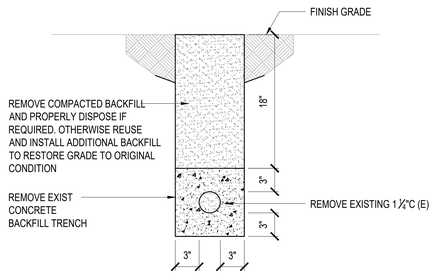
SHEET TITLE:

FUELING SYSTEM PIPING DIAGRAM

DATE: **5/2/2025**

SHEET : 13 OF 16 SHEETS

DWG. NO. **M-005**



1 E001 E001 SECTION

SCALE: N.T.S.

PROJECT SCOPE:
REMOVE ALL EXISTING MECHANICAL AND ELECTRICAL SYSTEMS RELATED TO THE FUELING SYSTEMS. NOTHING IS TO BE LEFT BEHIND.

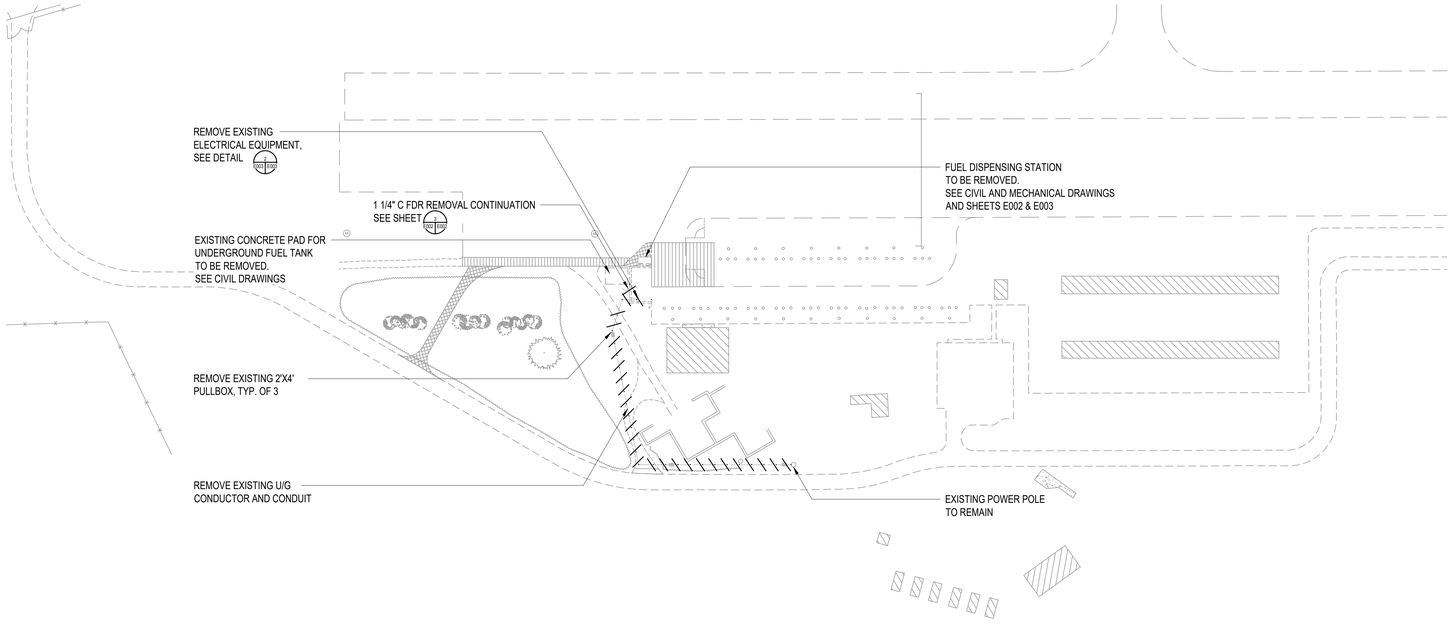
ELECTRICAL LEGEND

SYMBOLS	DESCRIPTION
o	EXISTING UTILITY POLE
■	ELECTRICAL PULL BOX
	PANELBOARD
(E)	ELECTRICAL CONNECTION
⊕	GROUND TERMINAL
EP	EXPLOSION ROOF
—— – ——	WIRING IN RACEWAY CONCEALED IN RACEWAY BELOW GRADE
——X——	EXPLOSION PROOF SEAL FITTING
——FS——	UNDERGROUND FUEL SUPPLY LINE, SEE E001 E001
\ \ \ \ \ \	DENOTES REMOVE

NOTES: ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUIT WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS —//— , 3 WIRES, —///— , 4 WIRES, ETC.
—C— INDICATES GROUNDING CONDUCTOR SIZED PER NATIONAL ELECTRICAL CODE ARTICLE 250

ELECTRICAL SERVICES SHEET INDEX

Sheet Number	SHEET TITLE
E001	ELECTRICAL SITE DISTRIBUTION PLAN, SYMBOLS
E002	ELEC. SITE PLAN, SINGLE LINE DIAGRAM REMOVAL OF WORK, DETAIL
E003	GROUNDING PLAN AND DETAILS, REMOVAL OF EXIST. ELECT. EQUIPMENT



N

2 E001 E001 ELECTRICAL SITE DISTRIBUTION PLAN

SCALE: 1"=100'-0"

SCALE: 1" = 100'-0"
0 25' 50' 100' 250'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

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04/30/2026
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MAY 2, 2025
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PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

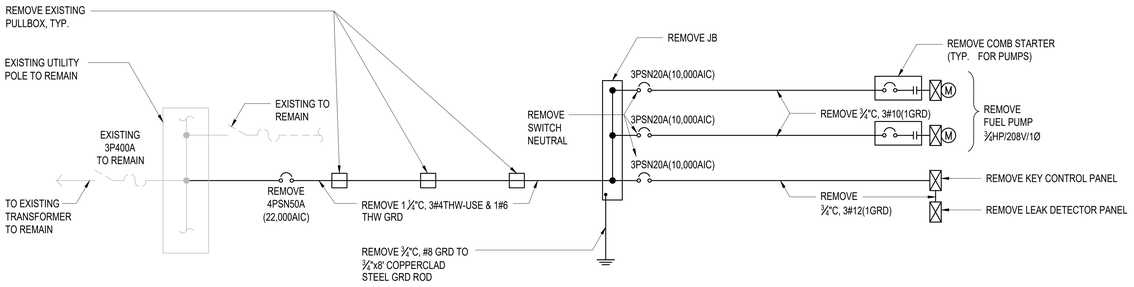
SHEET TITLE:

ELECTRICAL SITE DISTRIBUTION PLAN, SYMBOLS

DATE: **5/2/2025**

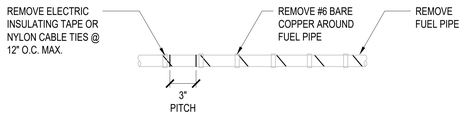
SHEET : 14 OF 16 SHEETS

DWG. NO. **E-001**



2 E002 | E002 SINGLE LINE DIAGRAM REMOVAL OF WORK

SCALE: N.T.S.

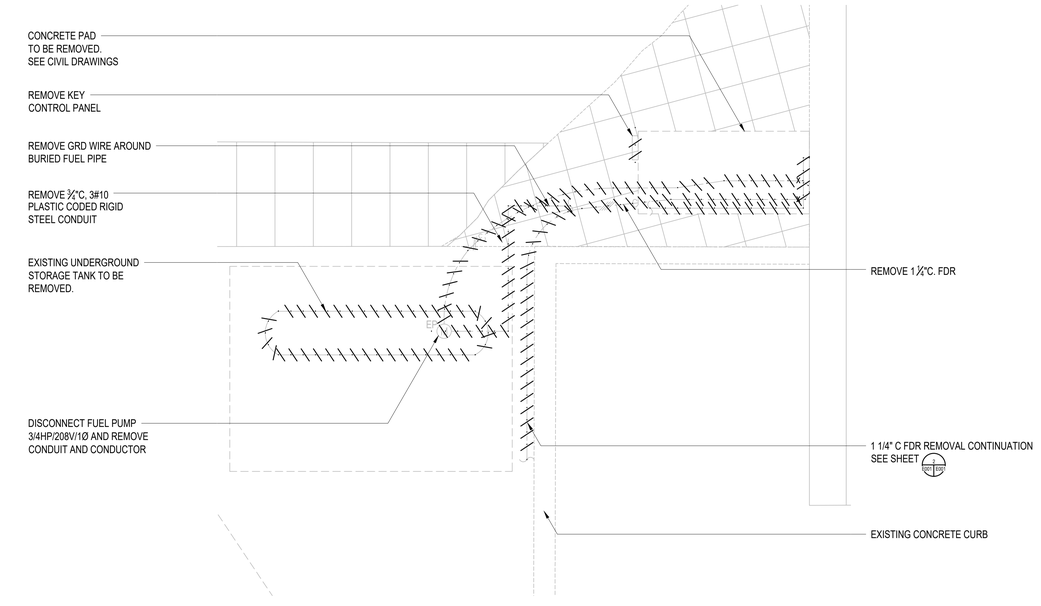


NOTES:

1. REMOVE BOND & GROUND STATIC GROUND WIRES WRAPPED ON PIPES.
2. REMOVE BOND & GROUND ALL VALVES, PIPE FITTINGS, BOXES & ALL METAL PARTS OF FUELING SYSTEM.
3. REMOVE GROUND TO COPPER CLAD STEEL GROUND RODS.

1 E002 | E002 DETAIL

SCALE: N.T.S.



N

3 E002 | E002 ELECTRICAL SITE PLAN

SCALE: 1/8" = 1'-0"

SCALE: 1/8"=1'-0"

0 2' 4' 8' 20'

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UST AND AST CLOSURE

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MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

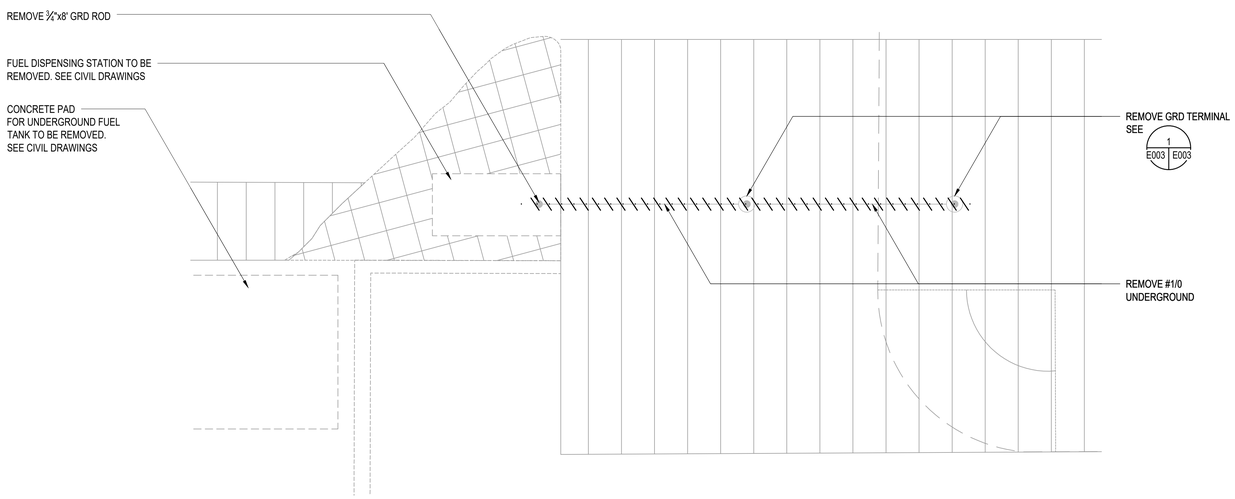
SHEET TITLE:

ELEC. SITE PLAN, SINGLE LINE DIAGRAM REMOVAL OF WORK, DETAIL

DATE:
5/2/2025

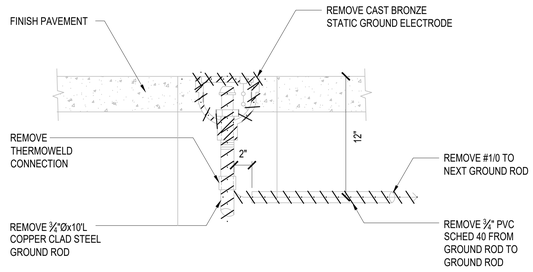
SHEET :
15 OF 16 SHEETS

DWG. NO.
E-002

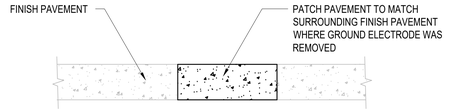


N

4 E003 E003 GROUNDING PLAN
SCALE: 1" = 20'-0"



1 E003 E003 GROUNDING DETAIL
SCALE: N.T.S.



3 E003 E003 PATCHING DETAIL
SCALE: N.T.S.







2 E003 E003 REMOVAL OF EXISTING ELECT. EQUIPMENT
SCALE: N.T.S.

SCALE: 3/32"=1'-0"
0 2" 4" 8" 20"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

MICHAEL A. CHONG
LICENSED PROFESSIONAL ENGINEER
No. 9622-E
HAWAII, U.S.A.
04/30/2026
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
MC	BP	MC	MC

NO.	DATE	REVISION

100% CONSTRUCTION DOCUMENTS
MAY 2, 2025
DATE

PROJECT TITLE:

UST AND AST CLOSURE

AT
KAWAIHAPAI AIRFIELD
MOKULEIA, OAHU, HAWAII

PROJECT NO:

AO2023-14

SHEET TITLE:

GROUNDING PLAN AND DETAILS, REMOVAL OF EXIST. ELECT. EQUIPMENT

DATE: **5/2/2025**
SHEET : 16 OF 16 SHEETS
DWG. NO. **E-003**

DPW Environmental Program Comments

Concurrence is contingent upon compliance with the following comments.

The following programs have comments:

Natural Resources Program (OAHU), Kapua Kawelo at 808.864.1014 or hilary.k.kawelo.civ@army.mil

Cultural Resources Program, Dave Crowley at 520.687.2399 or david.m.crowley22.civ@army.mil

Installation Restoration Program / Military Munitions Response Program, Darrin Dukes at 520.687.2249 or darrin.g.dukes.civ@army.mil

Clean Water Program, Darrin Dukes at 520.687.2249 or darrin.g.dukes.civ@army.mil

Clean Air/Safe Drinking Water Program,Kyle Sasahara at 520.687.2254 or kyle.c.sasahara.civ@army.mil

Recycling Program, Kim Welch at 520.687.2247 or kimberly.m.welch14.civ@army.mil

Toxic Substances Control Program, Whit Somerall at 520.687.2207 or adam.w.somerall.civ@army.mil

Underground Storage Tank Program, Anthony Corigliano at 520.687.2250 or anthony.p.corigliano2.civ@army.mil

REC_DMR UST Closure vicinity 91A (5079)

Natural Resources Program Comments (POC: Jessica Winchester, jessica.n.winchester.civ@army.mil):

1) Please take note of the attached Tree Cutting/Trimming moratorium policy during Hawaiian Hoary Bat pupping season. Bat pupping season extends from June 1st through September 15th. Please plan cutting or trimming of any trees greater than 15 ft in height for dates outside of this range. If tree cutting or trimming must occur within this window thermal scanning of the trees to be cut or trimmed will have to be contracted to occur within 24 hours of cutting or trimming trees.

2) If tree trimming occurs generating green waste, please follow the Green Waste Policy, which provides guidance for management and transport of suitable host material for the invasive coconut rhinoceros beetle (CRB). The requirements outlined in this policy adhere to the compliance agreement between USAG-HI and the Hawaii Department of Agriculture to minimize the spread and breeding of CRB.

DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND-PACIFIC
DIRECTORATE OF PUBLIC WORKS
947 WRIGHT AVENUE, BUILDING 104, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5013

AMIM-HWP-E (400b) 10 March 2023

MEMORANDUM FOR All Military Personnel, Contractors and Department of Defense Civilian Employees within United States Army Garrison, Hawaii (USAG-HI) Installations

SUBJECT: Policy Memorandum DPW-HI-02 Tree Cutting Moratorium

1. References.

a. Army Regulation (AR) 200-1, Environmental Protection and Enhancement, 13 Dec 07.

b. Federal Endangered Species Act (1973).

2. Applicability. This policy applies to all Soldiers, civilians, family members, contractors, and other personnel who work on, reside on, or visit any U.S. Army installation, facility, or work site on the Island of Oahu.

3. Policy.

a. In February, 2014, the Natural Resource Program (NRP) discovered the presence of the Federally-listed endangered species, Hawaiian Hoary Bat, *Lasiurus cinereus semotus*, at Schofield Barracks West Range. In addition, the NRP discovered the presence of the bat in Schofield Barracks East Range in Spring 2013. Bats have also been found by the US Geological Survey in numerous locations on Oahu spanning from Waikiki to Ford Island to the Waianae Mountains to the North Shore of Oahu. For this reason, bats are now considered to be ubiquitous on Oahu.

b. The Army is required to consult with the US Fish and Wildlife Service (USFWS) anytime an action may affect a listed threatened or endangered species or their critical habitat. In the meantime, the Army must practice avoidance.

c. The NRP is in the process of preparing a formal consultation package for the USFWS. Until a Biological Opinion is received from the USFWS, the following measures must be followed to maintain compliance with the Federal Endangered Species Act of 1973:

(1) During the bat pupping season, 1 June to 15 September, there shall be no cutting or trimming of any tree over 15 feet tall.

(2) If a tree falls on its own that is over 15 feet tall, the Army may remove the tree.

(3) In case of an emergency situation, e.g., a tree larger than 15 feet tall is threatening a power line, the staff must contact the Natural Resource Program for guidance prior to cutting the tree.

(4) This policy applies to all Army installations on the island of Oahu, including housing. The policy pertains to cantonment as well as to the actual training areas.

(5) This policy supersedes Policy Memorandum USAG-HI-72, SAB, 2 Sep 15, is effective immediately and remains in effect until rescinded or superseded in writing.

4. Proponent. The proponent for administration of the Tree Cutting Moratorium is the DPW Environmental Division, at 808-655-9189.

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NISIT A. GAINEY
Director, Public Works

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DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND-PACIFIC
HEADQUARTERS, UNITED STATES ARMY GARRISON, HAWAII
745 WRIGHT AVENUE, BUILDING 107, WHEELER ARMY AIRFIELD
SCHOFIELD BARRACKS, HAWAII 96857-5000

AMIM-HWP-E (400b)

19 DEC 22

MEMORANDUM FOR All Military Personnel, Family Members, Department of Defense (DoD) Civilian Personnel, DoD Contractors, and Visitors that Generate Green Waste on United States Army Garrison, Hawaii (USAG-HI) Installations

SUBJECT: Policy Memorandum USAG-HI 50, Green Waste Policy

1. References.

a. Coconut Rhinoceros Beetle Response Green Waste Management Guidelines.

b. Hawaii Department of Agriculture Plant Quarantine Interim Rule 22-1.

c. Compliance Agreement to Prevent the Spread of Coconut Rhinoceros Beetle in Hawaii.

d. Department of the Navy, Joint Base Pearl Harbor-Hickam Greenwaste Policy, 29 Oct 18.

e. U.S. Army Garrison Hawaii – Environmental Compliance Guide, Green Waste (Yard Waste).

2. Purpose. To establish local policy and procedures governing handling, transport, and disposal of green waste on USAG-HI installations. Green waste is suitable host material for an invasive pest, coconut rhinoceros beetle (CRB), *Oryctes rhinoceros*, which has been detected on USAG-HI installations and elsewhere on Oahu. Measures are provided to minimize the spread of CRB throughout USAG-HI land on Oahu and to Hawaii Island.

3. Applicability. This policy applies to all Military Personnel, Family Members, DoD Civilian Personnel, DoD Contractors, and others who work on, reside on, or visit any US Army installations, facilities, or work sites on Oahu.

4. Definitions.

a. Green Waste: Green waste includes any plant material that has been trimmed, cut, uprooted, or fallen such as logs, stumps, branches, leaves, palm fronds, plants, grass clippings, and trimmings.

b. CRB Host Material: Includes green waste as defined above; entire dead trees; fruit and vegetative scraps; mulch; compost; and live palms from the genera *Washingtonia*, *Livistona*, *Pritchardia*, *Cocos*, *Phoenix*, and *Roystonea*.

5. Policy.

a. Hawaii Department of Agriculture Plant Quarantine Interim Rule 21-1.

(1) Hawaii Department of Agriculture (HDOA) approved the Plant Quarantine Interim Rule 21-1 on 01 July 2022. The rule prohibits intra- and inter-island movement of CRB host material within the island of Oahu, to and from the Island of Oahu, and other areas known to be infested with CRB to un-infested islands in the state except by a compliance agreement issued by HDOA. If any life stage of CRB or suspected CRB is found, stop green waste clearing and call the HDOA CRB Response at 808-679-5244.

b. General.

(1) Removal and trimming of trees and shrubs can generate substantial amounts of green waste. Green waste provides suitable habitat for CRB. Anyone who conducts work that generates green waste must follow the handling, transportation, and disposal guidelines provided.

(2) Deliver green waste whole, trimmed, or processed/chipped to the Army Recycling Center (ARC). The ARC is located 1087 McMahon Road, Schofield Barracks, (808) 656-9911. No pick-up service is available for green waste. Green waste will be loaded into a rolloff and hauled to Hawaiian Earth Products for processing.

(3) The ARC requires all branches and stumps be cut into 4-foot lengths or smaller.

(4) Green waste generated by Hale Koa Hotel and Fort DeRussy must be delivered to their landscaping yard to be loaded into the appropriate dumpster. The dumpster will be picked up by Honolulu Disposal Service, or other compliant servicer, and taken directly to Hawaiian Earth Products twice a week.

(5) Do not stockpile green waste or allow it to accumulate for more than 30 days after removal from a living plant.

(6) Because organic mulch applied at any thickness can support CRB breeding, CRB-safe materials shall be used in landscaping. Weed mat, cinders, stone, gravel, rubber chips, reclaimed asphalt, and similar inorganic materials are recommended for weed control and moisture retention, and commercial fertilizers are recommended for adding nutrients to soil.

(7) If green waste material is intended for storage, the material must be subjected to a treatment that eradicates all life stages of CRB immediately before storage. The material must also be stored within a container that is impenetrable by CRB adults (e.g., tarps are not approved for storage) and completely sealed overnight, from sunset to sunrise, when CRB are most active.

(8) If green waste material has been stored or staged without being treated and sealed as described above, and it needs to be transported for disposal, it must either be treated to eradicate all life stages of CRB prior to transport or it must be taken to Hawaiian Earth Products for treatment and disposal. Infested material must be completely enclosed to prevent spills during transport. Notification to CRB Response and Hawaiian Earth Products must occur prior to transporting infested or potentially infested material.

(9) Do not dispose of green waste into or next to trash dumspters.

(10) Contracts involving green waste production, transport, or removal of any kind must designate waste be taken to Hawaiian Earth Products the same day it is removed from the installation.

(11) All CRB host material shall be completely enclosed or covered with a tarp during transport to avoid any loss of CRB Host Material.

(12) If for any reason Hawaiian Earth Products will not accept green waste material (e.g., it is mixed with rocks, excess soil, or rubbish), then it must be taken to another approved processing facility, such as H-Power for incineration.

(13) After unloading of all CRB host material, the container and/or vehicle used to contain transported material must have all remaining debris removed by sweeping or blowing. Containers/vehicles must be visually inspected for CRB prior to departure from the compliant receiving or processing facility (e.g., the ARC or Hawaiian Earth Products).

(14) Because host palms may harbor CRB, if any host palms will be transported they should be inspected within 48 hours of transport. If the palm shows signs of CRB damage or if any life stage of CRB is detected (see Enclosure), do not move the palm.

(15) The inspection must include the root zone, soil or potting medium, trunk, and crown.

(16) If CRB and/or damage from CRB are detected, call the HDOA CRB Response Office at 808-679-5244.

6. If any life stage of CRB or suspected CRB is found, stop green waste clearing and call the HDOA CRB Response at 808-679-5244.

7. This policy is effective immediately and remains in effect until rescinded or superseded in writing.

8. Point of contact for this policy memorandum is the USAG-HI Integrated Pest Management Coordinator, Environmental Division, Directorate of Public Works, at (808) 655-9181.

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Encl
Guide to Compliance

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GUIDE TO COMPLIANCE
COCONUT RHINOCEROS BEETLE (CRB) INTERIM RULE

REGULATED: CRB HOST MATERIAL



CRB breed in rotting plant material from any plant.

CRB Host Material includes: Entire dead trees, Mulch, trimmings, fruit and vegetative scraps and decaying stumps, and Compost, including bagged compost originating on O'ahu.

OPTIONS FOR TRANSPORT

1) FRESH

Material can be moved within 30 days of removal from a live plant.



30 days

2) TREATED

Treated material can move within 48 hours of treatment. Options for treatment are:

48 hours



Heat treated: core temperature 131 degrees F



Chipping or grinding: all material is run through a chipper or grinder



Fumigation: material is fumigated with sulfuryl flouride to 2000 CT

3) SECURE

Material may be moved if it is sealed overnight, every night in a CRB-safe container and it was CRB-free when loaded.



4) DIRECT TO PROCESSING SITE

Material may be taken directly to a certified processing facility where it will be ground within 72 hours of transport and heat treated to 131 degrees F.



REGULATED: CRB HOST PALMS

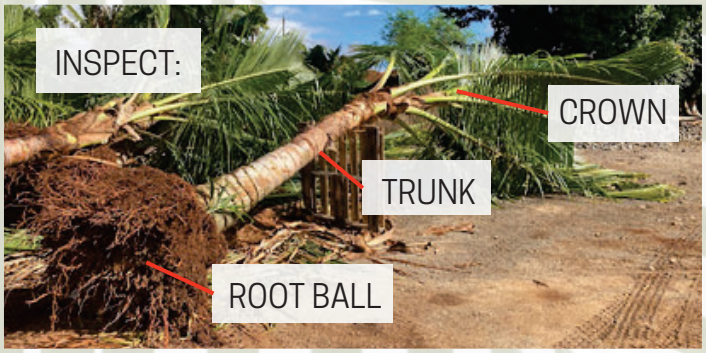


CRB can feed on other plants like hala, sugarcane, pinapple, and banana, but only coconut, fan, date, and royal palms are regulated by the Interim Rule.

CRB Host Palms are: Live palm plants in the following genera: Washingtonia, Livistona, *and* Pritchardia, *and* Cocos, Phoenix, *and* Roystonea.

INSPECT BEFORE TRANSPORT

All palms being moved off property on O'ahu must be self- inspected by staff. Stage the palm so that the root ball, trunk, and crown may be examined.



ROOT BALL: Inspect material, do not move if CRB are found. If potted, submerge the pot for 1 hour and collect and report any CRB found.

TRUNK: Inspect any holes and do not move if any rotting material is found.

CROWN: Inspect the entire crown and look closely at the spear. If the palm has signs of feeding on the spear, it cannot be moved. Report any tree damage, whether or not palm will be moved.







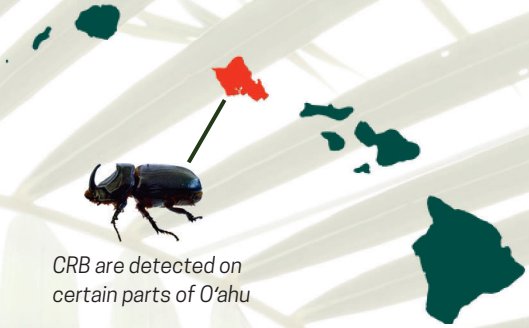


All interisland Transport of CRB Host Material must be inspected by HDOA staff.

GUIDE TO COMPLIANCE
COCONUT RHINOCEROS BEETLE (CRB) INTERIM RULE

INTERIM RULE

*On July 1, 2022 the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1, which designates **O'ahu as a Quarantine Area** and restricts the movement of **CRB host material** on O'ahu and to and from O'ahu.*



CRB are detected on certain parts of O'ahu



If you are moving CRB Host Material to a different property, you must safeguard the material.

REQUIREMENTS FOR WORK WITH THIS MATERIAL:

ALLOW ACCESS:

Allow the CRB Response to install traps, survey CRB Host Material, and inspect vehicles and equipment.



CRB traps



Canine survey



Tree damage survey

SELF-INSPECT:



Any CRB Host Material must be surveyed every 6 months (full turnover or spot check).

REPORT:

Coconut rhinoceros beetle:

Collect all CRB in a glass or hard plastic container and send a photo to the CRB Response at **808-679-5244.**





CRB eggs (2 -3 mm)



Final larval stage (3.5 - 4 ")



Pupa (2")



Adult (2")

Tree damage:

Look for boreholes in the crowns of trees or fronds with 45 degree, v-shaped cuts. Leaflets will have scalloped edges. Document and report signs of CRB damage, and inspect any palms before moving them.









This guide is designed as an explanatory document for businesses in training to obtain a Compliance Agreement required by HDOA Interim Rule 22-1. Reference the full Compliance Agreement document at crbhawaii.org/compliance for complete information.

Contact: CRB Response
crbhawaii.org | 808-679-5244 (call/text) | info@crbhawaii.org

ENCLOSURE 1

SUBJECT: National Historic Preservation Act of 1966 (NHPA) Section 106 Archaeological Monitoring and Post-Review Discoveries Plan for the Removal of the Honolulu Soaring Hangar Underground Fuel Storage Tank and Associated Infrastructure, Dillingham Military Reservation, Ka‘ena Ahupua‘a, Waialua District, Island of O‘ahu, Hawai‘i, TMK (1) 6-8-014:001, Project # CRS-23-198

A. Definitions

1. The terminology used throughout this plan will adhere to the definitions provided below and in 36 CFR § 800.16 and 43 CFR § 10.2, as applicable.

    a. Kanaka Maoli: indigenous Hawaiian person; a term to describe a familial connection with the land, inherent to the identity of the indigenous Hawaiian people. For the purposes of this plan, the term is used to include consulting parties who may also identify as a representative of a Native Hawaiian organization or ‘ohana.

B. Permits and Professional Qualifications

1. Archaeological monitoring will be conducted by an archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards and holding a current U.S. Army Garrison (USAG) Hawaii Permit for Cultural Resources Investigations.

2. The archaeological monitor must also have a minimum of 2 years of archaeology field experience in Hawai‘i.

C. Archaeological Monitoring

1. The archaeological monitor has three primary tasks:

    a. Ensure all ground disturbing work is only conducted within the designated area of potential effect (APE) as shown in Figure 1.

    b. Observe the ground disturbing work in progress to promptly identify buried archaeological resources.

    c. Minimize effects to archaeological resources by quickly stopping work in the event of an archaeological discovery.

2. Archaeological monitoring will be conducted on a full-time, on-site basis for all ground-disturbing activities throughout the project.

    a. If there is a request to switch to weekly spot monitoring, it must be submitted in writing to USAG Hawaii Cultural Resources Manager (CRM).

    b. This request should include appropriate field documentation (including photos) and a rationale to support the change.

    c. Any modifications to the monitoring plan may only occur with prior written approval by the USAG Hawaii CRM, who will provide notice of any approved modifications to the consulting parties.

3. The number of archaeological monitors will be determined by the USAG Hawaii CRM based on the type and number of pieces of equipment, as well as the type of work being performed. In general, plan for at least one archaeological monitor per discrete activity area.

4. No ground disturbing activities shall be conducted under this plan without an archaeological monitor present.

5. The archaeological monitor shall be responsible for coordinating all monitoring activities and communicating with the construction contractor and USAG Hawaii project manager and CRM.

6. The archaeological monitor shall coordinate all activities with the safety officer for the construction contractor to ensure that proper safety regulations and protective measures meet compliance.

7. The archaeological monitor shall provide a copy of this archaeological monitoring and post-review discoveries plan to the on-site construction contractor.

8. The archaeological monitor shall keep a copy of this plan and any applicable permits and National Historic Preservation Act (NHPA) or Native American

Graves Protection and Repatriation Act (NAGPRA) agreements on-site throughout the archaeological monitoring fieldwork.

9. The State of Hawaii Department of Transportation, Airports (DOT-A) and their tenants will be financially responsible for the cost of archaeological monitoring and all resulting excavations and reports.

D. Cultural Advisor

1. A cultural advisor will be present, or on stand-by in close coordination with the archaeological monitor, for all ground-disturbing activities throughout the project.

2. The cultural advisor’s duties include communicating with and providing regular updates to Kanaka Maoli consulting parties, providing cultural awareness briefings to project personnel, observing ground disturbance with the archaeological monitor, conducting appropriate cultural protocols before and after the project and upon discovery and treatment of human remains and NAGPRA cultural items, as well as providing advice on appropriate handling of human remains and NAGPRA cultural items.

3. Kanaka Maoli consulting parties request that cultural advisors have professional qualifications, including traditional connections to the land in the area and/or the Kanaka Maoli ‘ohana that lived in the area, knowledge of appropriate cultural protocols, and training with reputable kūpuna.

4. The selection of a cultural advisor will follow the process defined in the Dillingham Military Reservation (DMR) NAGPRA Comprehensive Agreement (CA) Section L.8 (USAG Hawaii 2025).

5. The State of Hawaii DOT-A and their tenants will be financially responsible for the cost of a cultural advisor.

E. Cultural Awareness Briefing

1. The cultural advisor and a USAG Hawaii Cultural Resources staff familiar with the project location shall provide all project personnel with a cultural awareness briefing prior to the start of the project.

2. If new personnel are assigned the project, subsequent briefing(s) will be conducted by the cultural advisor and archaeological monitor prior to any new personnel starting work.

3. If the cultural advisor is unavailable, the archaeological monitor and a member of the USAG Hawaii Cultural Resources staff will provide the briefing.

4. The purpose of the briefing is to ensure all parties are aware of:

    a. Purpose and need for archaeological monitoring and the presence of a cultural advisor.

    b. The types of cultural resources that may be encountered.

    c. The provisions set forth in this plan.

    d. The responsibility of the construction team to ensure that no ground disturbing work for which an archaeological monitor is required is conducted without an archaeological monitor present.

    e. The responsibilities and procedures to be conducted by each party should construction activities result in a post-review discovery of human remains and/or cultural resources.

    f. The removal of any artifacts is prohibited except for collection by the archaeological monitor in compliance with this plan, the applicable USAG Hawaii Permit for Cultural Resource Investigations, and any stipulations and direction provided by the USAG Hawaii CRM.

g. Photography of human remains is prohibited except as authorized in the DMR NAGPRA CA Section D.2 and Appendix C (USAG Hawaii 2025).

5. The archaeological monitor shall maintain a written log for each briefing including date, time, who gave the briefing, and who attended. This log will be submitted to the USAG Hawaii CRM following the briefing and updated as needed should additional personnel come on site.

F. Initial Assessment of Discoveries and Notification

1. If any potential cultural deposits, features, artifacts or other archaeological resources are discovered, all activities that have the potential to further disturb the discovery shall immediately halt within 30 meters of the discovery. The distance may be appropriately increased or decreased by the USAG Hawaii CRM based on topography, soil type, previous archaeological work, previous disturbance, and any other factors which may provide insight into the extent of the discovery area.

2. If the discovery involves potential human remains or cultural items as defined by NAGPRA, the DMR NAGPRA CA (USAG Hawaii 2025) will be followed.

3. If the discovery does <u>not</u> involve potential human remains or cultural items, as defined by NAGPRA:

   a. The archaeological monitor shall immediately begin the minimum level of identification and documentation necessary to determine if the discovery is a potential historic property and to effectively communicate with the USAG Hawaii CRM.

      i. Identification may include visual inspection and screening a sample of potentially associated back-fill soil.

      ii. Documentation may include profile/plan view sketches/drawings, photos, site and feature form completion, and GIS data collection. See Section F below for further information, as applicable.

b. If the discovery is determined to be a potential historic property (e.g. intact features or cultural deposits):

   i. The archaeological monitor will immediately notify the USAG Hawaii CRM, who will follow the requirements of 36 CFR § 800.13, as applicable. The notification will include photos, GIS data, sketches/drawings, and maps.

   ii. In compliance with 36 CFR § 800.13, the USAG Hawaii agency official will determine the appropriate action(s) and make a reasonable effort to avoid, minimize, or mitigate adverse effects in consultation with consulting parties and the State of Hawaii DOT-A and their tenants, which may result in further documentation and excavation by the archaeological monitor.

   iii. Ground disturbing activities may only resume in the vicinity of the discovery upon written authorization by the USAG Hawaii CRM.

c. If the discovery is determined <u>not</u> to be a potential historic property (e.g. isolated artifacts in a previously disturbed context), the archaeological monitor will include the discovery in the next progress report.

G. Documentation

For discoveries involving human remains or cultural items as defined by NAGPRA, all documentation will adhere to the DMR NAGPRA CA (USAG Hawaii 2025)

1. <u>Field Data Forms</u>

   a. Standard field data forms will be used. Prior to the start of the project, the field data forms will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

   b. A daily log will be kept of activities, schedule, personnel, field conditions, and general observations.

2. Photographs *(as applicable)*

a. Project and site overview photos will be taken to document setting, context, and location.

b. Photos will be taken of all locations of soil profile drawings with scale and north arrow.

c. Photos will be taken of all features with scale and north arrow in both plan and profile view, as applicable.

d. Photos will be taken of all diagnostic artifacts with a scale, as well as a representative sample of each artifact class identified.

3. Sketches and Drawings *(as applicable)*

a. A large-scale map shall be sketched or drawn in plan view showing all features and cultural layers in relation to excavation and test units, datum(s), sampling and soil profile locations, and any relevant geographic, natural, cultural, and modern features.

b. Each individual feature will be sketched or drawn *in situ* in plan and profile view, as applicable. Individual feature sketches/drawings will include all relevant information that falls within the map frame, such as datum(s), sampling and soil profile locations, etc.

c. At a minimum, all sketches and drawings shall include a legend, north arrow for plan views, direction facing in degrees for profiles, scale, recorder’s name, date, locational information, and any applicable area, site, and feature designations.

d. Soil profiles shall be sketched/drawn of a representative sample of soil stratigraphy across both the entire project area and each individual site:

   i. The number of soil profiles within each individual site and across the project area as a whole will be determined by professional judgement in coordination with the USAG Hawaii CRM based on the geologic context, the size of the site and project area, and the amount of variation in the soil stratigraphy across the site and project area.

   ii. An explanation of the number and locations of soil profiles will be included in the draft and final reports.

   iii. For project-related ground disturbance and excavation units measuring 1 meter or more in length/width (e.g. trenches), the soil profile will document a minimum width of 1 meter.

   iv. For project-related ground disturbance and excavation units measuring less than 1 meter in length/width (e.g. a small feature being bisected), the soil profile will document one side/wall.

   v. Soil profiles will be annotated with the soil descriptions, including texture, structure, and color, using U.S. Department of Agriculture (USDA) soil terminology and attributes where possible, as well as Munsell soil color charts or manuals.

4. Locational Information *(as applicable)*

   a. GIS data shall be collected, which may include, but is not limited to, the maximum extent of disturbance, feature and artifact points and polygons, a site boundary, excavation and test units, sampling locations, soil profile locations, and datum.

   b. A GPS unit with sub-meter accuracy must be used.

c. Prior to the start of the project, the Data Dictionary to be used during monitoring will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

d. The project area shall be plotted on both a 1:24,000 topographic map and a close-up aerial image. The close-up aerial image shall be annotated to include all project design elements and the maximum extent of disturbance.

e. Discoveries shall be plotted on a close-up aerial image overlaid with the project design, which shall be included in both the monitoring report and in the individual site form.

f. Discoveries shall be plotted on a 1:24,000 topographic map to be included in the individual site form.

g. The number of maps necessary to clearly and efficiently convey the required information in the monitoring report will be determined by professional judgement in coordination with the USAG Hawaii CRM with consideration for the size and complexity of the project, as well as the number, size, and complexity of discoveries and subsequent courses of action.

H. Excavation Methodology

If excavation is the determined course of action by USAG Hawaii in consultation with consulting parties:

1. For discoveries involving human remains or cultural items as defined by NAGPRA, excavation will adhere to the DMR NAGPRA CA (USAG Hawaii 2025).

2. Archaeological sites, features, and cultural deposits will be documented in original context to the extent feasible.

3. Excavation will be conducted in accordance with standard, controlled archaeological methods as specified in any applicable permits, National Historic

Preservation Act (NHPA) agreements, this plan, and any stipulations and guidance provided by the USAG Hawaii CRM.

4. Manual excavation will be carried out by the archaeologists using shovels, hand trowels, and other archaeology industry standard hand tools, as applicable.

5. The location, number, and type of excavation units will be determined by professional judgement and adjusted as results become available in coordination with the USAG Hawaii CRM on a case-by-case basis. It may be necessary to conduct exploratory test units or hand trenches where minimal to no feature locational/directional indicators are present.

6. All units will be excavated in either arbitrary 10-centimeter levels or natural soil stratigraphy levels as determined by professional judgement based on the depositional context and in coordination with the USAG Hawaii CRM on a case-by-case basis.

7. The total depth of excavation and/or the required measurement sterile of cultural materials for unit termination will be determined in coordination with the USAG Hawaii CRM on a case-by-case basis considering the nature of the discovery and the depositional context.

8. Horizontal and vertical proveniences will be measured systematically from a datum(s).

9. In sandy sediment, 100% of excavated material will be passed through 1/8-inch mesh screen except where the USAG Hawaii CRM approves 1/4-inch mesh screen on a limited basis to efficiently remove overburden and reach the cultural level. In loam or clay sediment, 1/4-inch mesh is acceptable.

10. Samples identified as potentially suitable for dating (e.g. wood charcoal, shell, non-human bone, kukui nut) from an undisturbed cultural context (e.g., cultural layer, pit feature) shall be collected.

11. Measured soil samples shall be collected from cultural deposits and features for analysis. The soil sampling strategy will be determined by professional judgement in coordination with the USAG Hawaii CRM.

12. All excavated artifacts and samples shall be labeled by an archaeologist with all provenience information and recorded on a maintained inventory list.

13. All artifacts collected will be stored at the archaeological service provider’s on-island laboratory until the completion of the undertaking and the associated reports at which time the collections will be turned over to the USAG Hawaii CRM in accordance with the USAG Hawaii Permit for Cultural Resources Investigations.

I. Analysis

a. For discoveries involving human remains or cultural items as defined by NAGPRA, any analysis will adhere to the DMR NAGPRA CA (USAG Hawaii 2025).

b. For discoveries <u>not</u> involving human remains or cultural items as defined by NAGPRA:

    a. All artifacts will be cleaned, sorted, counted, weighed (metric), and analyzed (both qualitative and quantitative data).

    b. All artifacts will be minimally identified to major class (e.g. for faunal remains: bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal).

    c. All data will be recorded on standard laboratory forms. Prior to the start of the analysis, the laboratory forms will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

    d. Samples (e.g. wood charcoal, shell, non-human bone, kukui nut) identified as potentially suitable for dating from an undisturbed cultural context (e.g., cultural layer, pit feature) shall be considered for radiocarbon dating.

i. Wood charcoal samples shall be species typed, and only short-lived species shall be considered for radiocarbon dating.

e. The archaeological service provider will process all collected samples, unless otherwise determined by the USAG Hawaii CRM, and include the results in the final report. Unprocessed samples will not be accepted by USAG Hawaii for curation.

f. Soil sample processing and analysis techniques and methodologies will be determined by professional judgement in coordination with the USAG Hawaii CRM.

J. Reporting and Deliverables

1. All reporting and deliverables will adhere to the requirements of the applicable USAG Hawaii Permit for Cultural Resource Investigations, this plan, and any stipulations and guidance provided by the USAG Hawaii CRM.

2. Reporting and deliverables may include, but are not limited to:

   a. Progress reports, including project status, work conducted to date, and anticipated schedule, submitted to the USAG Hawaii CRM at an interval to be determined by the CRM with consideration for anticipated project duration and complexity.

   b. End of Fieldwork Summary Report, final site forms, a minimum of one Draft Report, and a Final Technical Report. The draft and final reports will synthesize all background and field data into a coherent report, and include at a minimum:

      i. Background information, methodology, results, locational maps, and stratigraphic profiles as further outlined in the above sections.

      ii. Any relevant input shared by the cultural advisor, as appropriate, provided there are no confidentiality or sensitivity concerns.

iii. If there are any potential historic properties identified during archaeological monitoring:

1. The report will include site descriptions, site maps, site and feature sketches/drawings, artifact analyses (tables and text), and sample results, as applicable and further outlined in above sections.

2. Site descriptions shall include background research and contextual information relevant to the National Register of Historic Places (NRHP) significance criteria, as well as an assessment of the seven aspects of integrity as defined by the National Park Service (1997). No recommendations regarding NRHP eligibility are necessary.

iv. Photographs: project and site overviews, stratigraphic profiles, individual features, cultural layers, and a representative sample of artifacts, as applicable.

c. All notes, photographs, drawings, sketches, and final GIS data.

K. Confidentiality

1. All involved parties shall protect information regarding the nature and location of any archaeological resource in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

2. All reports, photographs, GIS data, and other records documenting “controlled unclassified information” (CUI) pertaining to cultural resources shall be securely stored as such. Any such information shall be exempt from public disclosure under the Freedom of Information Act Exemption 3.

References Cited

National Park Service

1997 National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Available online at https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf, accessed 12/09/2025.

U.S. Army Garrison Hawaii

2025 *U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation*. USAG Hawaii CRS Library # 2745

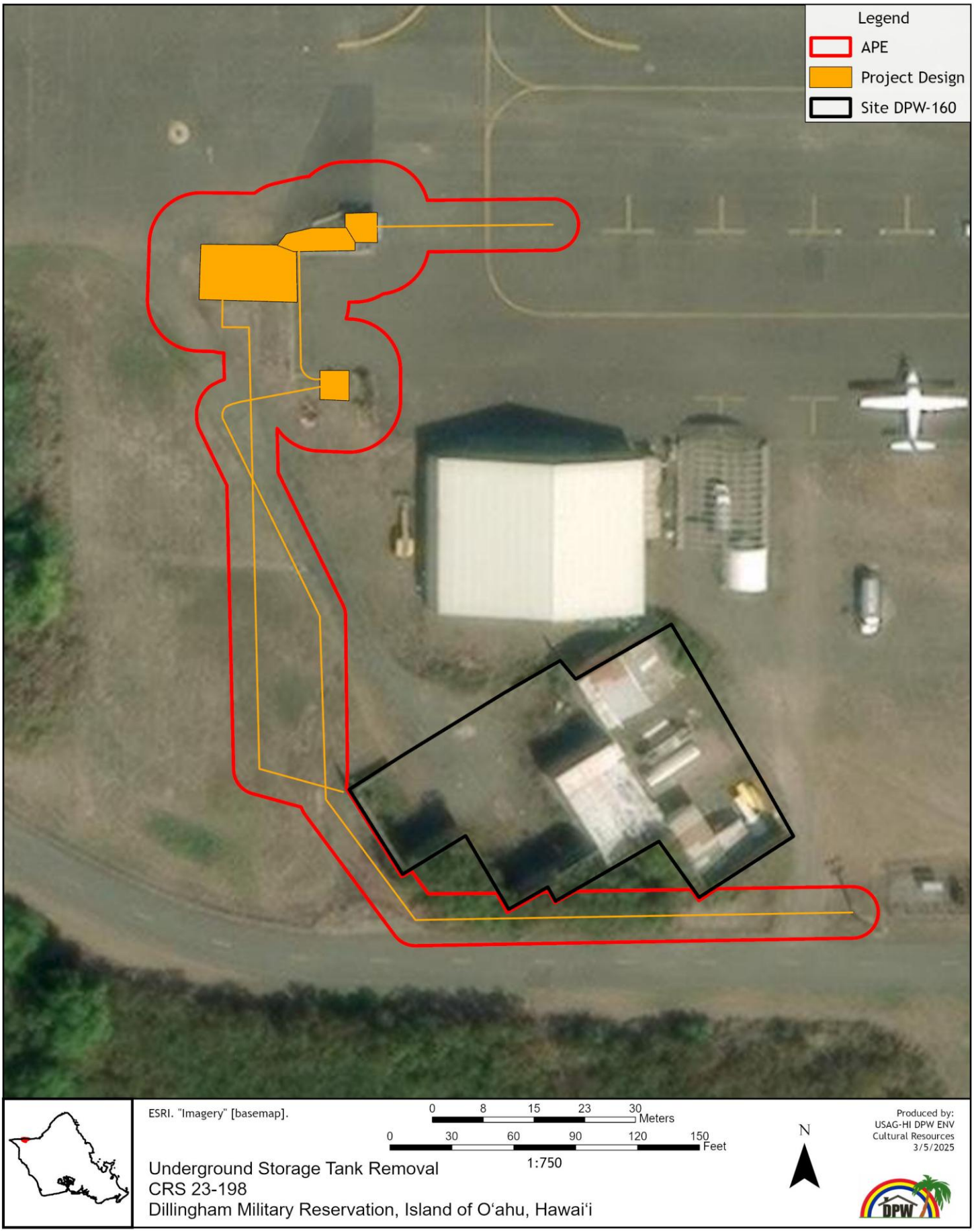


Figure 1. Close-up aerial image depicting the APE in relation to cultural resources.

SECTION 01100 – ARCHAEOLOGICAL MONITORING COORDINATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

A. An Archaeological Monitoring and Post-Review Discoveries Plan has been prepared for the project areas that will be impacted during construction work as indicated in the referenced report titled "Archaeological Monitoring and Post-Review Discoveries Plan for the Removal of the Honolulu Soaring Hangar Underground Fuel Storage Tank and Associated Infrastructure, Dillingham Military Reservation, Ka‘ena Ahupua‘a, Waialua District, Island of O‘ahu, Hawai‘i, TMK (1) 6-8-014:001, Project # CRS-23-198".

B. U.S. Army Cultural Resource Investigation Permit shall be provided by the Contractor. The Contractor shall review and comply with the approved Archaeological Monitoring & Post-Review Discoveries Plan, U.S. Army Cultural Resource Investigation Permit, and Native American Graves Protection and Repatriation Act (NAGPRA) Comprehensive Agreement (CA) for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation. See attachment for blank U.S. Army Garrison Hawaii Cultural Resources Investigation permit form, approved Archaeological Monitoring & Post-Review Discoveries Plan and NAGPRA CA for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation.

C. The report indicates human burials and/or cultural materials may be encountered during ground disturbing activities below the existing base course. The Contractor shall engage the services of a Qualified Archaeologist to ensure that all construction activities are performed in accordance with the referenced AMP and applicable State regulations. The Contractor shall be responsible for the necessary procedures and equipment required for full compliance with all requirements of these provisions for archaeological monitoring.

D. The Contractor shall engage the services of a Qualified Archaeologist to ensure that all construction activities are performed in accordance with the Cultural Resources Investigation permit, Archaeological Monitoring and Post-Review Discoveries Plan, and applicable State regulations. The Contractor shall be

responsible for the necessary procedures and equipment required for full compliance with all requirements of the provisions for archaeological monitoring.

E. The contractor shall notify the State Project Manager minimum 14 days prior to the start of excavation.

1.03 QUALIFIED ARCHAEOLOGIST REQUIREMENTS

A. The Contractor shall engage the services of a Qualified Archaeologist prior to Notice-to Proceed. A Qualified Archaeologist shall be approved by U.S. Army Garrison Hawaii, meet the Secretary of Interior Professional Qualification Standards (48 Federal Register 44716) as an archaeologist. Other field personnel conducting survey, recording, monitoring, testing, excavation or National Register evaluation of potential historic properties shall meet standards established by Office of Personnel Management for their respective disciplines in accordance with Section 112 of the National Historic Preservation Act (54 USC §306131).

B. An individual listed on the permit who meets the Secretary of Interior Professional Qualification Standards relevant to the nature of the project must be present on-site during active operations to directly oversee the work of less qualified field technicians.

a. The archaeological monitor must also have a minimum of 2 years of archaeology field experience in Hawai‘i.

1.04 MONITORING, REPORTS, PLANS, ARTIFACTS, RECORDS AND CURATION

The Qualified Archaeologist shall comply with the following archaeological provisions listed in the Archaeological Monitoring and Post-Review Discoveries Plan and U.S. Army Cultural Resource Investigation Permit. Any departure from specified monitoring requirements shall only follow consultation with, and written concurrence from, U.S. Army Garrison Hawaii.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the prices bid for the various items of work in

this project.

END OF SECTION

FINAL

U.S. Army Garrison Hawaii
Native American Graves Protection and Repatriation Act
Comprehensive Agreement
for Native Hawaiian Human Remains or Cultural Items
Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

November 2025

CA # IM-WX3JNN-26-002

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U.S. Army Garrison Hawaii
Native American Graves Protection and Repatriation Act
Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation

This comprehensive agreement (CA) was developed in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C. 3001 et seq) and its implementing regulations (43 CFR Part 10). This CA is intended to cover all land managing activities on federal land at Dillingham Military Reservation (DMR), including those activities conducted by the State of Hawai‘i Department of Transportation Airports Division (HDOT-A) and their tenants (Lease No. DACA84-1-24-0025).

Appropriate official

The Commander of U.S. Army Garrison (USAG) Hawaii is the federal agency official responsible for compliance with NAGPRA. The Garrison Commander may choose to delegate duties associated with NAGPRA compliance to the USAG Hawaii Cultural Resources Manager (CRM) in order to ensure operational implementation of the NAGPRA regulations at 43 CFR Part 10 Subpart B. The CRM is responsible for implementing the terms of this CA and for advising the Garrison Commander on related NAGPRA compliance issues.

Description

This CA encompasses all of DMR, including portions of the ahupua‘a of Ka‘ena, Keālia, Kawaihāpai, and Mokulē‘ia; Island of O‘ahu; Hawai‘i and includes lands leased to the HDOT-A (Appendix A: Figures 1-2).

A portion of DMR, described as approximately 87 acres previously ceded to the federal government by the Territory of Hawaii, will be returned to the State in accordance with the 1991 National Defense Authorization Act, Public Law 101-510, 104 Stat 1796 Section 2831 (Appendix A: Figure 2). The timeframe for return of the parcel is unknown. When that parcel is returned to the State, USAG Hawaii will revisit this CA to determine if it is appropriate for the parcel to remain part of this CA, consistent with the NAGPRA regulations. Any NAGPRA cultural items recovered from the 87-acre parcel that may have been reinterred at a designated cemetery on Army land after disposition pursuant to this NAGPRA CA shall remain in the designated cemetery.

Consultation

This CA was developed in consultation with the lineal descendants, ‘ohana, and Native Hawaiian organizations (NHOs) listed in Appendix B. Consent by a majority of the consulting parties is evidenced by the consultation record in Appendix B or by their signature on this CA.

Plan of Action

A. Definitions

The terminology used throughout this CA will adhere to the definitions provided below and in 43 CFR § 10.2, as applicable.

1. Iwi kūpuna: Native Hawaiian human remains.

2. Cultural items: a funerary object, sacred object, or object of cultural patrimony according to the traditional knowledge of a lineal descendant, ‘ohana, or NHO.

3. Kanaka Maoli: indigenous Hawaiian person; a term to describe a familial connection with the land, inherent to the identity of the indigenous Hawaiian people. For the purposes of this agreement, the term is used to include consulting parties who may also identify as a representative of a Native Hawaiian organization or ‘ohana.

B. Initial Assessment of Discoveries and Notification

USAG Hawaii shall use the following procedures in the event potential iwi kūpuna and/or cultural items are discovered during land management activities:

1. Any suspected human remains will immediately be shielded from exposure to sunlight, ideally covered with clean muslin or similar breathable fabric.

2. All activities that have the potential to further disturb the discovery shall immediately halt within 30 meters of the discovery. The distance may be appropriately increased or decreased by the CRM based on topography, soil type, previous archaeological work, previous disturbance, and any other factors which may provide insight into the extent of the discovery area.

3. The project proponent shall protect the area and notify the CRM with pertinent details as soon as possible on the same day as the discovery. The CRM, or his/her designee, will inspect the discovery location as soon as possible, no later than 24 hours from notification.

4. If the CRM determines that the discovery does <u>not</u> involve human remains or cultural items, the CRM shall provide written authorization for ground-disturbing activities to resume in the vicinity of the discovery following documentation in accordance with any applicable permits, project specific archaeological work plans, and guidance provided by the CRM.

5. Upon the CRM confirmation of any human remains, the CRM shall report the discovery to the U.S. Army Criminal Investigative Division (CID) and provide notice of the discovery and work stoppage to the Garrison Commander and applicable project proponents.

6. If the U.S. Army CID determines the iwi kūpuna are not part of a modern crime scene, the CRM shall notify Kanaka Maoli consulting parties and, where appropriate, the Hawai‘i State Historic Preservation Officer (SHPO) and State Historic Preservation Division Oahu Burial Sites Specialist, including the History and Culture Branch Chief, by email or telephone of the discovery of iwi kūpuna no later than the next business day after the U.S. Army CID determination. Notification shall include a summary of the discovery circumstances, context, material, any potential threats to the discovery, protection measures, and a map of the discovery location.

7. If the preliminary assessment is inconclusive as to cultural affiliation of the human remains, the preponderance of evidence will be evaluated, and in the absence of conflicting information, the remains will be presumed to be iwi kūpuna.

8. For each discovery, the CRM shall offer to coordinate a site visit for Kanaka Maoli consulting parties within seven (7) calendar days after notification for Kanaka Maoli consulting parties to conduct cultural protocols, such as pule (prayers) and ho‘okupu (offerings), to the extent feasible and following applicable safety requirements.

9. Immediately following notification of the discovery to Kanaka Maoli consulting parties, the CRM will notify the Office of Army Cemeteries (OAC) and request consideration of preservation-in-place as a potential option. The CRM will follow Section F (below) to determine if preservation-in-place is feasible and appropriate and to obtain the necessary approvals. Plans for recovery and disposition will begin immediately if a determination that preservation-in-place is not feasible or appropriate, or if the necessary approvals cannot be obtained.

10. Activities may resume after receipt of a written (including email) authorization from the CRM to the applicable project proponents. The authorization may include additional instructions or stipulations as determined during consultation and the development of a course of action.

C. Protective Measures

During work stoppage resulting from a discovery, the CRM shall ensure that USAG Hawaii or HDOT-A has physical protective measures in place or the area is otherwise guarded to prevent additional disturbance to the discovery.

1. All discovered iwi kūpuna shall be shielded from exposure to sunlight. Unless otherwise determined during consultation, clean muslin or similar breathable fabric shall be placed over the iwi kūpuna, and the original overburden material shall be placed over the fabric.

2. Measures to delineate the work stoppage area or control access may be implemented as appropriate and may include construction fencing, cones, or other barrier means as appropriate for the discovery and/or the work stoppage area.

3. The CRM may determine that overnight security personnel are necessary if the cultural items must be left in an unprotected location overnight. The project proponent (USAG Hawaii or HDOT-A) is responsible for tasking the security personnel.

4. In the case of preservation-in-place, protective measures will remain in place until the ground surface restoration is initiated.

5. In the case of recovery and disposition, protective measures will remain in place until recovery is completed.

6. Iwi kūpuna and/or cultural items recovered for disposition will be respectfully housed in a secure, climate-controlled facility at Schofield Barracks until disposition is complete (Section J).

D. Documentation and Analysis

1. Documentation and analysis of iwi kūpuna and cultural items shall be conducted in the original context to the extent feasible, using controlled archaeological methods as outlined below and in Appendix C, and in accordance with any applicable permits, project specific archaeological work plans, stipulations, and guidance provided by the CRM in consultation with consulting parties.

2. Photographs

    a. Investigators with U.S. Army CID may take photo documentation of iwi kūpuna, as necessary for the investigation.

    b. USAG Hawaii Cultural Resources staff may take photographs as outlined in Appendix C.

3. Locational Information

    a. GIS data shall be collected of each discovery as outlined in Appendix C and any applicable permits and project specific archaeological work plans, which may include, but is not limited to, feature and artifact points and polygons, a site boundary if applicable, and datum(s).

    b. USAG Hawaii shall incorporate the GIS data into the appropriate Army Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE).

4. Analysis

    a. Analysis of iwi kūpuna and cultural items may include:

        i. Inventory and measurements of cranium, mandible, and infracranial skeleton to determine minimum number of individuals (MNI), age-at-death, stature, and sex of the individual

        ii. Non-invasive observations of antemortem, perimortem, or postmortem trauma, health, pathology, or forensic characteristics (for example, arthritis or broken bones/mended bones, and cultural modifications)

        iii. Estimated percentage of present remains

        iv. Quantitative and qualitative observations of cultural items

    b. Measurements of iwi kūpuna shall be non-invasive using non-metal implements to the extent possible.

    c. All osteological analyses shall be done respectfully and in consideration of Kanaka Maoli consulting party concerns.

d. Free, prior, and informed consent from Kanaka Maoli consulting parties will be obtained in writing prior to performing or allowing any access to or research on iwi kūpuna or cultural items beyond the above stipulated analyses.

e. There will be no public exhibition of iwi kūpuna or cultural items.

E. Confidentiality and Reporting

1. USAG Hawaii shall protect information regarding the nature and location of any archaeological resource, including burials and cultural items, in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

2. Any evidence or information provided by consulting parties pursuant to NAGPRA is considered sensitive and is maintained in confidentiality by USAG Hawaii at the request of the consulting parties. Any such evidence or information provided by consulting parties is considered a privacy interest exempt from mandatory disclosure under the Freedom of Information Act pursuant to Exemption 6.

3. All reports, photographs, GIS data, and other records documenting burial information is considered “controlled unclassified information” (CUI) and shall be secured and stored at the USAG Hawaii Cultural Resources Office and protected in accordance with the Archaeological Resources Protection Act (32 CFR § 229.18). Any such information shall be exempt from public disclosure under the Freedom of Information Act Exemption 3.

4. USAG Hawaii shall ensure all NAGPRA discoveries and any resulting archaeological work or analyses are documented in a report, as outlined in Appendix C. Consulting parties will be given an opportunity to review and comment on any such report prior to finalization.

5. If there is an archaeological monitoring report associated with the discovery, a general discussion of the NAGPRA discoveries may be included, but consulting parties will be given an opportunity to review and comment on any such report prior to finalization.

6. Any publications or conference presentations involving information about iwi kūpuna or cultural items pursuant to this CA requires approval from USAG Hawaii. Consulting parties will be given an opportunity to review and comment on any such publications and presentations prior to approval by USAG Hawaii.

F. Preservation-in-place

1. USAG Hawaii acknowledges the consulting parties' preference for preservation-in-place and the desire for iwi kūpuna and cultural items to not leave the vicinity of the discovery.

2. If a consulting party would like to pursue preservation-in-place for a specific discovery location, they shall submit a written request to USAG Hawaii. The written request can be by letter or email. If the request is made during a meeting, USAG Hawaii will distribute meeting minutes (via email) detailing the request, and the consulting party will concur (via email response) on the accuracy of the meeting minutes.

3. For preservation-in-place to occur:

    a. The Office of Army Cemeteries would need to approve an exception to Army Regulation (AR) 290-5 for each preservation-in-place location.

    b. The project proponent would need to develop a new construction design to avoid the preservation-in-place location by an appropriate distance for approval by USAG Hawaii in consultation with consulting parties.

    c. The Garrison Commander would need to approve the plan to preserve-in-place.

    d. The new design would have to be approved through the site approval and National Environmental Policy Act (NEPA) review processes.

4. If preservation-in-place is requested, determined possible, and the necessary approvals are obtained, USAG Hawaii shall ensure the following:

    a. Metal markers are set above the discovery location to enable identification of the precise location with a metal detector for avoidance during future work in

the area. Markers shall be inconspicuous, installed very shallow or flush with the ground.

b. Contact information for the USAG Hawaii Cultural Resources Office and unique identification numbers are indicated on the markers for reference.

c. The ground surface is restored, and the vegetation is rehabilitated as necessary and appropriate.

d. The location is added to the schedule for condition monitoring performed by the USAG Hawaii Cultural Resources Office.

e. The project proponent is responsible for the costs of marking and restoring the preservation-in-place location.

5. The appropriate burial container, if any, will be determined during consultation and obtained by the project proponent at a reasonable cost. If the preferred container is unavailable or unreasonable to acquire, USAG Hawaii will identify an appropriate alternative in consultation with consulting parties.

6. Any landscaping and maintenance of preservation-in-place locations, beyond the stipulations in Section F.4. above, will be determined during consultation on a case-by-case basis.

7. The Kanaka Maoli consulting parties will take the lead on conducting any required cultural protocols, in accordance with their traditions, prior to ground surface restoration. USAG Hawaii shall provide access to the location. The consulting parties may request USAG Hawaii provide materials needed by the consulting parties to facilitate preservation-in-place. USAG Hawaii will explore options to acquire the requested material but cannot guarantee their acquisition.

8. The Kanaka Maoli consulting parties shall have access to the preservation-in-place location for visitation and religious and ceremonial uses, subject to any use restrictions, safety limitations, existing rights of way, leases, easements, or accessibility issues relating to the Army installation. Access is subject to USAG Hawaii approval, which shall not be unreasonably withheld.

G. Recovery

1. Army regulations and guidance favor recovery and disposition with the potential for reburial at a designated cemetery on lands under the jurisdiction of the U.S. Army. Recovery and disposition is the anticipated course of action for the majority of discoveries.

2. If preservation-in-place is not feasible or not approved, intentional excavation of iwi kūpuna or cultural items shall occur.

3. Excavation will be conducted in accordance with standard, controlled archaeological methods as specified in Appendix C, any applicable permits, project specific archaeological work plans, stipulations, and any guidance provided by the CRM in consultation with consulting parties.

4. Intentionally excavated iwi kūpuna or cultural items shall be disposed to the appropriate claimant pursuant to the NAGPRA process for disposition at 43 CFR § 10.7.

    a. After issuance of a written disposition statement, USAG Hawaii will consult on the custody and physical transfer of the iwi kūpuna or cultural items.

        i. The claimant may request physical transfer to them or they may request reburial (Section H) on lands under the jurisdiction of the U.S. Army.

        ii. Any physical transfer of iwi kūpuna or cultural items will be documented in writing with verification of receipt of the items or remains by the claimant (Appendix D).

5. The project proponent will be financially responsible for the cost of recovery and any resulting reports.

H. Reburial

1. USAG Hawaii has committed to considering requests for reburial of iwi kūpuna and cultural items excavated or removed from DMR at a designated cemetery to be determined during consultation.

2. After receiving a written disposition statement from USAG Hawaii recognizing that the claimant has ownership or control of the iwi kūpuna or cultural items, the claimant may request reburial on lands under the jurisdiction of the U.S. Army.

3. Upon Garrison Commander's approval of the reburial request, the CRM and the claimant will develop a Reburial Agreement (Appendix E). The agreement shall include an inventory list of iwi kūpuna or cultural items to be reburied.

4. The claimant is under no obligation to rebury iwi kūpuna or cultural items on lands under the jurisdiction of the U.S. Army.

5. USAG Hawaii shall develop the reburial method and process in consultation with the claimant prior to the reburial on a case-by-case basis.

6. Reburial may occur at a designated cemetery following the completion of a Reburial Agreement.

7. If the discovery was a result of a USAG Hawaii project, USAG Hawaii will bear the reasonable costs associated with the reburial. If the discovery was a result of a HDOT-A or tenant project, HDOT-A and/or their tenant will bear the reasonable costs associated with the reburial. Costs may include a reburial container (if not already established at the designated cemetery), a marker with inscription, and the costs of labor to open/close the burial site and install the marker.

8. The claimant will be responsible for preparation of the remains in accordance with their traditions prior to reburial.

9. USAG Hawaii shall be responsible for coordinating the reburial of iwi kūpuna or cultural items requested in the Reburial Agreement at the designated cemetery.

10. The U.S. Army has certain responsibilities for those interred in private cemeteries that are now on lands under the jurisdiction of the U.S. Army, such as Kawaihāpai Cemetery and Reburial Area. These responsibilities include accommodating existing rights of access, visitation, and interment. New access rights may be granted pursuant to AR 405-80. Access and visitation are subject to any use restrictions, existing rights of way, leases, easements, or accessibility issues relating to the Army installation. Access is also subject to USAG Hawaii approval, which shall not be unreasonably withheld.

11. Kawaihāpai Cemetery and Reburial Area:

    a. The Kawaihāpai Cemetery and Reburial Area is the anticipated location for reburial of iwi kūpuna and cultural items recovered from DMR, unless claimants demonstrate a strong reason against this location and/or for another location with evidentiary support.

    b. The Kawaihāpai Cemetery and Reburial Area was in use prior to the development and acquisition of the area as a military installation. The 1.37-acre cemetery was formally established as a private cemetery in 2025 by USAG Hawaii and the OAC in consultation with the Kawaihāpai ʻOhana and Nā Manu o Kaiona (Appendix A: Figure 2).

    c. As feasibility and funding allows, the USAG Hawaii will bear the reasonable costs of maintenance and protection for the Kawaihāpai Cemetery and Reburial Area, including a fence/wall, landscaping, vegetation trimming, and markers.

I. Duty of Care

1. Treatment of iwi kūpuna and cultural items shall be conducted in a respectful and professional manner, taking all precautions to prevent loss or damage, and to avoid unnecessary disturbance, physical modification, or separation of presumed individuals and associated funerary objects.

2. A reasonable and good-faith effort shall be made to incorporate and accommodate the traditional knowledge of lineal descendants, ʻohana, and Native Hawaiian organizations in the storage, treatment, or handling of iwi kūpuna or cultural items.

J. Temporary Storage

1. Iwi kūpuna and/or cultural items recovered for disposition will be respectfully housed in a secure, climate-controlled facility at Schofield Barracks until disposition is complete.

2. Archaeological collections that are <u>not</u> NAGPRA iwi kūpuna or cultural items will be stored at a USAG Hawaii facility or the archaeological service provider's on-island laboratory until the completion of the undertaking at which time the collections will be turned over to the USAG Hawaii Cultural Resources Office.

3. Temporary storage of iwi kūpuna or cultural items will be in secure cabinets, or other secure location, approved by USAG Hawaii.

4. Access to the storage facility can only be authorized by the CRM. Access shall be limited to necessary USAG Hawaii Cultural Resources staff, project archaeologists, and consulting partes as requested and approved by the CRM.

5. USAG Hawaii shall ensure that the storage facility has a log of personnel accessing the facility, and that each storage cabinet has a current and accurate inventory list. Copies of the log and inventory list will be made available upon request to consulting parties.

6. USAG Hawaii shall respond to consulting parties' requests to visit the storage facility within two (2) business days.

K. Archaeological Monitoring

1. An archaeological monitor will be present for undertakings involving ground disturbance in the following areas unless otherwise determined during the National Historic Preservation Act (NHPA) Section 106 process for a specific undertaking:

    a. Areas identified as jaucas sands (Appendix A: Figure 3).

    b. In undisturbed jaucas sands below areas identified as mixed fill soils. This includes below the existing runway grade (Appendix A: Figure 3).

2. Archaeological monitors are not required to be present for routine maintenance and repair within the existing runway grade unless determined otherwise during the NHPA Section 106 process for a specific undertaking.

3. The presence of an archaeological monitor for undertakings outside of the jaucas sands will be determined during the NHPA Section 106 process.

    a. Based on consultation and existing archaeological and ethnographical documentation, the CRM shall determine if the nature of an undertaking is the type that might result in the discovery of iwi kūpuna or cultural items.

b. If the CRM determines there is a likelihood to encounter iwi kūpuna or cultural items, the CRM shall ensure that professional archaeological monitoring services are incorporated into the project requirements.

4. If an archaeological monitor is determined necessary, the CRM shall ensure the development of a work plan for archaeological monitoring and discovery that is consistent with this document and any requirements identified through NHPA consultation.

5. The project proponent will be financially responsible for the cost of archaeological monitoring and all resulting excavations and reports.

L. Cultural Advisors

1. A cultural advisor will be present for undertakings involving ground disturbance in the following areas unless otherwise determined during the National Historic Preservation Act (NHPA) Section 106 process for a specific undertaking:

   a. Areas identified as jaucas sands (Appendix A: Figure 3).

   b. In undisturbed jaucas sands below areas identified as mixed fill soils. This includes below the existing runway grade (Appendix A: Figure 3).

2. Cultural advisors are not required to be present for routine maintenance and repair within the existing runway grade unless determined otherwise during the NHPA Section 106 process for a specific undertaking.

3. The presence of a cultural advisor for undertakings outside of the jaucas sands will be determined during the NHPA Section 106 process.

   a. Based on consultation and existing archaeological and ethnographical documentation, the CRM shall determine if the nature of an undertaking is the type that might result in the discovery of iwi kūpuna or cultural items.

   b. If the CRM determines there is a likelihood to encounter iwi kūpuna or cultural items, the CRM shall ensure that a cultural advisor is incorporated into the project requirements.

4. If a cultural advisor is determined necessary, the CRM shall ensure the presence and duties of a cultural advisor are incorporated into the work plan for archaeological monitoring and discovery that is consistent with this document and any requirements identified through NHPA consultation.

5. Cultural advisor duties may include communicating with and providing regular updates to consulting parties, providing cultural awareness briefings to project personnel, observing ground disturbance with the archaeological monitor, conducting appropriate cultural protocols upon the discovery and treatment of iwi kūpuna and cultural items, as well as providing advice on appropriate handling of cultural items.

6. Kanaka Maoli consulting parties request that cultural advisors have professional qualifications, including traditional connections to the land in the area and/or the Kanaka Maoli ‘ohana that lived in the area, knowledge of appropriate cultural protocols, and training with reputable kūpuna.

7. The project proponent will be financially responsible for the cost of a cultural advisor.

8. Cultural Advisor Selection:

    a. If a cultural advisor is determined necessary, the CRM will request a list of 3-5 cultural advisors from the consulting parties depending on the expected duration of the project.

    b. The consulting parties will develop and reach agreement on the list of cultural advisors amongst themselves and provide the list to the CRM within 30 days of receiving the request from the CRM. The list will identify the preferred cultural advisor for the project and back up cultural advisors in the event the preferred cultural advisor is unavailable, as well as all consulting parties who participated in the development of and agreed to the list.

    c. If consulting parties cannot reach an agreement on the list of cultural advisors within 30 days of the request or none of the cultural advisors selected by the consulting parties are available, the CRM shall organize a meeting to review potential cultural advisors and select a new list of cultural advisors. The list of cultural advisors developed during the meeting will be sent to consulting parties for an additional 30-day review period.

d. If consulting parties do not respond within 30 days of the first request for a cultural advisor list (Section L.8.b.) or, as applicable, do not respond or cannot reach an agreement within 30 days of receiving the additional cultural advisors list (Section L.8.c), the USAG Hawaii CRM will identify appropriate options for the proponent to select the cultural advisor(s).

M. Cultural Awareness Briefings

If an archaeological monitor and cultural advisor is determined necessary pursuant to Section K and L of this CA, or during the NHPA Section 106 process, the cultural advisor will provide all project personnel with a cultural awareness briefing prior to the start of the project. If the cultural advisor is unavailable, the archaeological monitor or a member of the USAG Hawaii Cultural Resources staff will provide the briefing.

N. Roles and Responsibilities

1. USAG Hawaii:

   a. Shall be responsible for maintaining inventories of:

      i. All new discoveries of iwi kūpuna and cultural items encountered;

      ii. All iwi kūpuna and cultural items that are stored at USAG Hawaii facilities, or other designated storage facility;

      iii. All iwi kūpuna and cultural items for which the custody has been transferred to claimants; and

      iv. All iwi kūpuna and cultural items reburied at a designated cemetery.

   b. Shall be responsible for maintaining records, including GIS data, reports, agreements, requests, and administrative records.

   c. Shall provide the supplies, materials, and services as stipulated throughout this document, as well as the personnel to fulfill the USAG Hawaii requirements of this document, as feasible.

2. Kanaka Maoli Consulting Parties:

    a. Shall keep their contact information current, as well as any designated secondary points of contact, with the CRM to facilitate notifications and distribution of materials.

    b. Shall respond to all correspondence within the specified timeframes, including, but not limited to, notices of discoveries and timeframes to conduct cultural protocols, as well as notice of intended disposition (NID).

    c. Shall submit written requests for preservation-in-place.

    d. Shall submit written claims for disposition of iwi kūpuna or cultural items.

    e. Shall provide written verification of physical transfer after disposition of iwi kūpuna or cultural items.

    f. Shall participate in the development of written reburial agreements for the reburial of iwi kūpuna and cultural items, as applicable.

    g. Shall participate in the selection of cultural advisor(s) as outlined in Section L.8.

    h. Shall provide the supplies and materials as stipulated throughout this document.

Plan for Disposition

If recovery has occurred, upon completion of the analysis, USAG Hawaii shall follow the procedures for disposition in accordance with all NAGPRA regulations at 43 CFR § 10.7 and applicable Army regulations.

Additional Parties

A. If at any time during the life of this agreement any ‘ohana or NHO expresses interest in participating in this agreement and can demonstrate at least equal strength of their claim relative to the claims of the Kanaka Maoli consulting parties, USAG Hawaii shall consult with the ‘ohana or NHO and may invite them to sign this CA.

B. The addition of a Kanaka Maoli consulting party to this agreement does not constitute an amendment to this agreement.

Terms of Agreement

A. This CA shall become effective when signed by the Commander of USAG Hawaii and shall remain in effect until terminated by the Commander.

B. Updating appendices and appending additional reference material to this CA are not considered to be amendments and does not require the signature of the Garrison Commander to become effective.

C. Amendments

1. Any responsible or consulting party may propose to USAG Hawaii that the terms of this CA be amended, whereupon USAG Hawaii shall consider the proposed amendment.

2. USAG Hawaii shall make reasonable and good faith efforts to consult with all parties to this agreement on the proposed amendments. In the event any consulting party is unresponsive following three contact attempts by email or telephone, the Garrison Commander reserves the right to decide the subsequent course of action.

3. Any amendment shall become effective upon the signature USAG Hawaii Garrison Commander.

D. Withdrawal

1. Any responsible or consulting party may withdraw their participation in this CA by providing 30-day written notice to the other parties.

2. Withdrawal of any consulting party from this CA does not terminate the agreement.

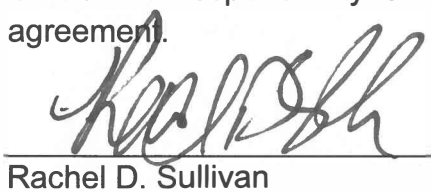
Anti-Deficiency Act

The stipulations of the CA are subject to the provisions of the Anti-Deficiency Act (31 USC § 1341). USAG Hawaii will make reasonable and good faith efforts to secure the necessary funds to implement this CA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs USAG Hawaii's ability to implement the procedures of this CA, USAG Hawaii will consult with the Kanaka Maoli consulting parties in accordance with the amendment and termination procedures outlined in the Terms of Agreement.

Signatures

Federal Agency Official:

The signature of the USAG Hawaii Garrison Commander, as the Federal Agency Official with responsibility for installation compliance with NAGPRA, executes this agreement.



24 NOV 2025

Rachel D. Sullivan
Colonel, U.S. Army
Commanding

Date

Kanaka Maoli Consulting Parties:

The signature of Kanaka Maoli consulting parties indicates their participation in consultation to develop this agreement and concurrence with the stipulations.



Carly Antone
Nā Manu o Kaiona

01 Dec 2025
Date



Kapena Liu
Kawaihāpai ʻOhana

11/26/2025
Date

Appendix A:
Maps

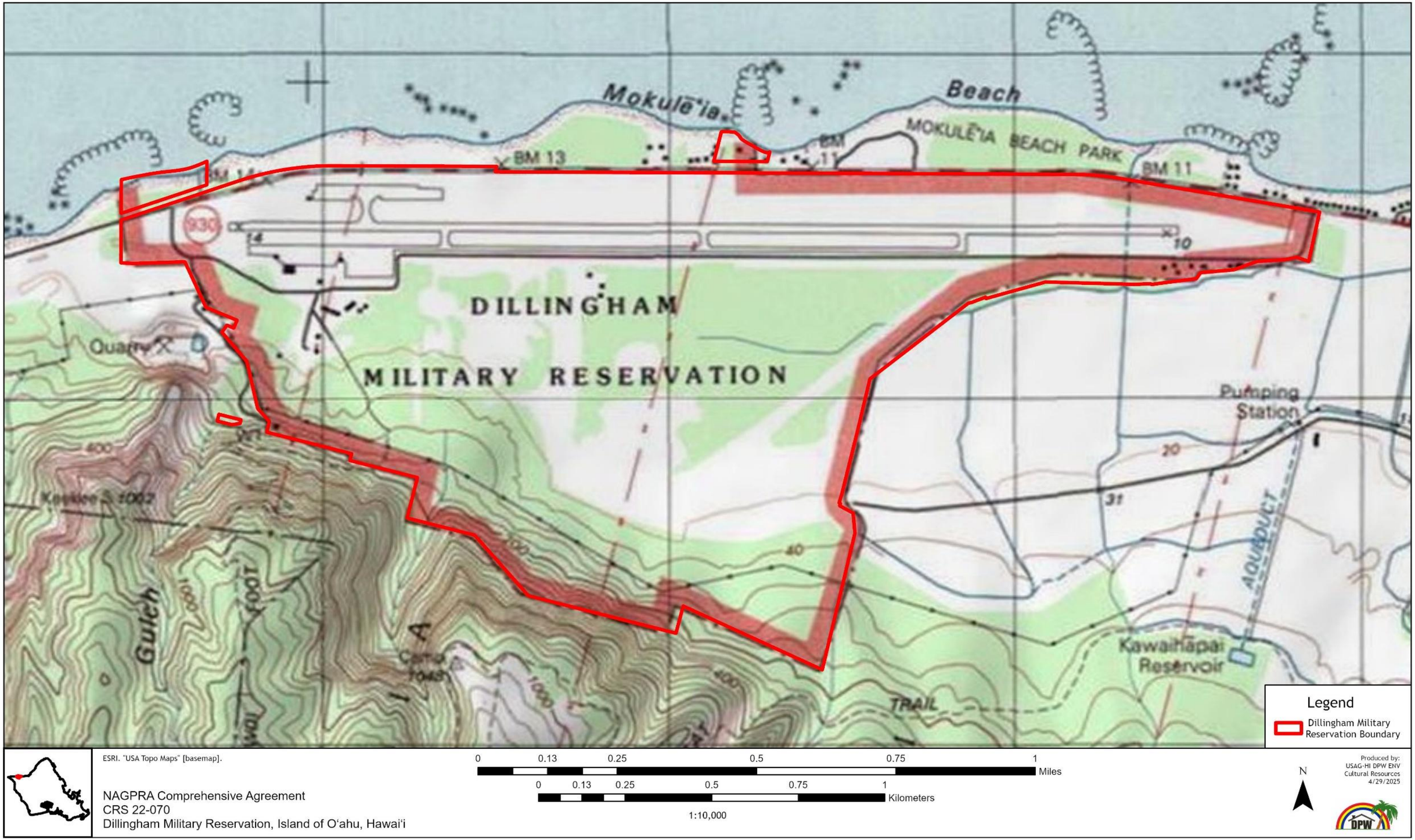


Figure 1. Topographic map of Dillingham Military Reservation

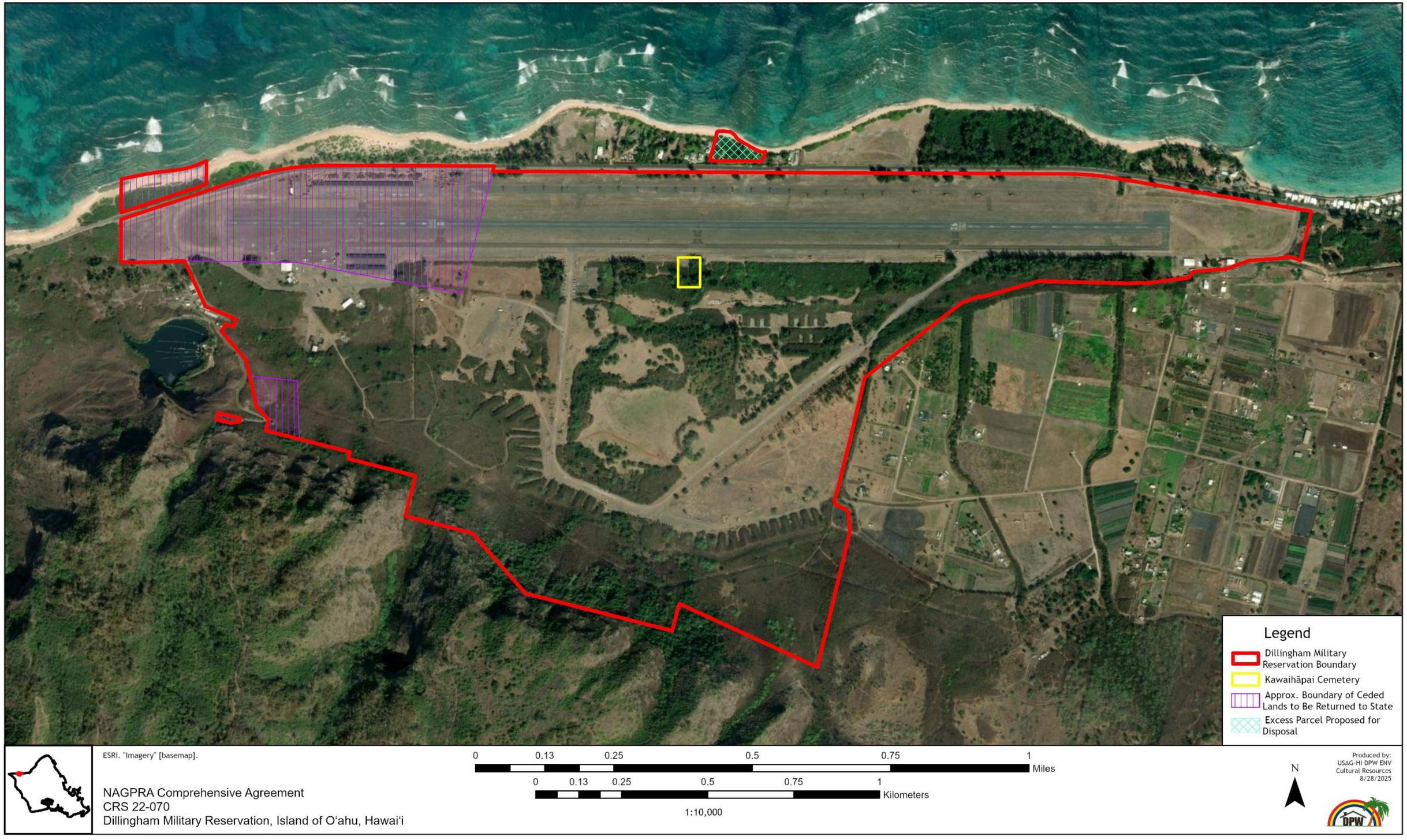


Figure 2. Aerial map of Dillingham Military Reservation depicting approximate land transfer locations and the Kawaihāpai Cemetery

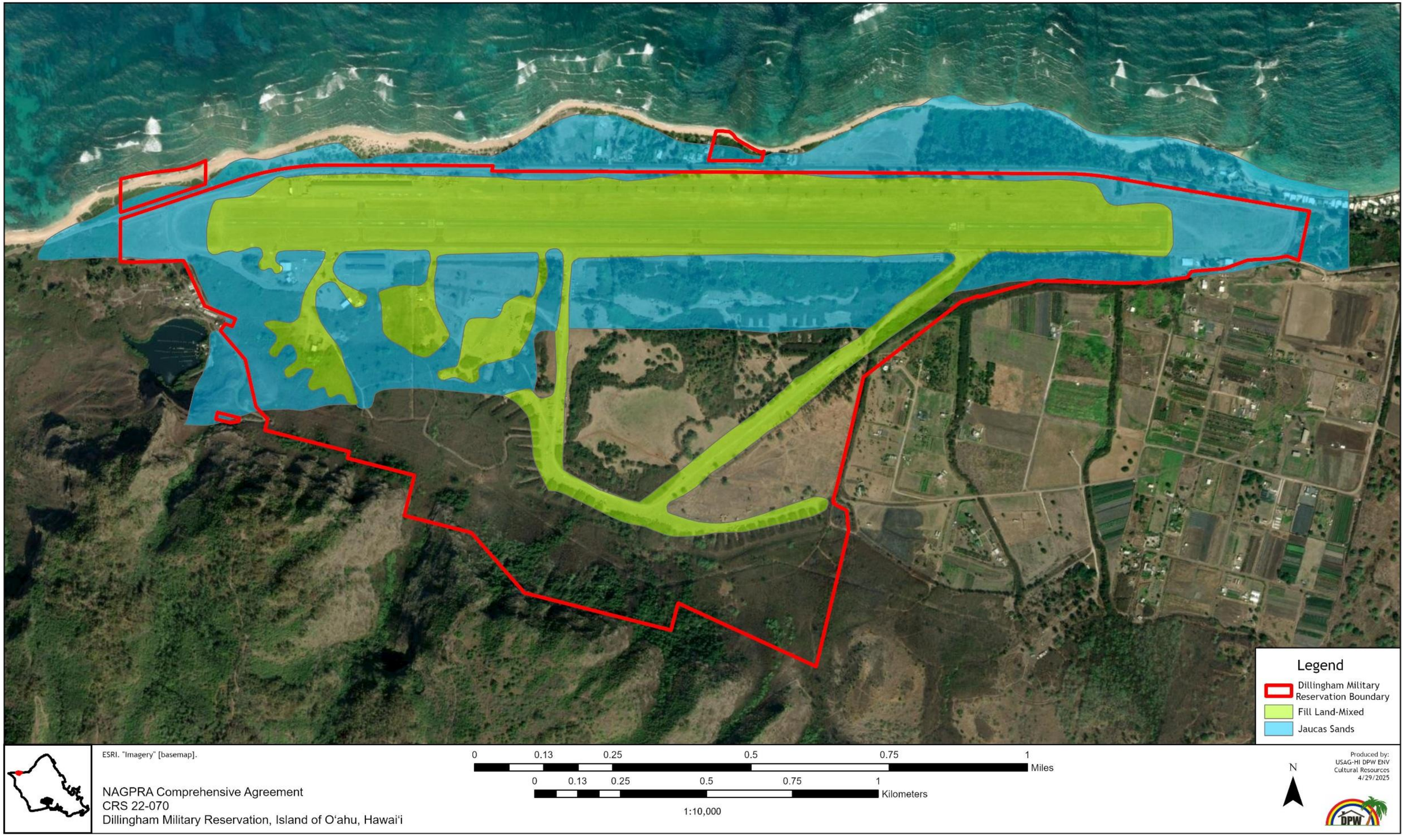


Figure 3. Map depicting Jaucas Sands and Mixed Fill at Dillingham Military Reservation

Appendix B:
Record of Consultation

Record of Consultation
for the U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

Initiation of Consultation

On May 21, 2025, written invitations to consult on the development of this Comprehensive Agreement (CA) were transmitted by the U.S. Army Garrison (USAG) Hawaii to the consulting parties listed in Table 1 with the exception of Mr. Kila, who was sent the invitation on July 2, 2025 at the suggestion of another consulting party. The invitation included a first draft of the CA and a list of all parties who received the invitation. Responses received by USAG Hawaii regarding the invitation and first draft are summarized in Table 1. Copies of each invitation to consult and all responses are on file with the USAG Hawaii Cultural Resources Section (CRS).

Table 1. Invitation Distribution List and Response Summaries

Consulting Party	Response
Mr. William J. Aila, Jr.and Mrs. Melva N. Aila Hui Mālama O Mākua	No response
Ms. Olinda (Nina) Fisher Ka ʻOhana O Hoʻohuli	No response
Dr. Haʻaheo Guanson Pacific Justice and Reconciliation Center, Native Hawaiian Church	No response
Mr. Josiah L. (Black) Hoʻohuli Ka ʻOhana O Hoʻohuli	No response
Ms. Dre Kalili Association of Hawaiian Civic Clubs	No response
Ms. Leilani Lindsey Kaʻapuni ʻOhana Lindsey	No response
Ms. Janis Keona Mark Mahu ʻOhana	No response
Ms. Carolyn Keala Norman 'Ohana Keaweamahi	No response
Lopaka Oliveira Heir of Kuihelani/Kaapuiki	No response
Dr. Kahu Kaleo Patterson Pacific Justice and Reconciliation Center	No response
Ms. Healani Sonoda-Pale Pu'uhonua o Wailupe	No response
Ms. Carly Rei Antone Nā Manu o Kaiona	May 21, 2025: Acknowledged Receipt June 19, 2025: Submitted comments on the first draft CA
Ms. Stacy Kealohalani Ferreira Office of Hawaiian Affairs	May 21, 2025: Email Read Receipt
Aliʻi Sir Nathan Keola Grace Royal Order of Kamehameha I, Moku ʻo Kōhala	No response
Mr. William "Willie" Aweau Hoʻohuli Ka ʻOhana O Hoʻohuli	No response

Record of Consultation
for the U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

Consulting Party	Response
Mr. Matthew Kahoopii House of Nobles	May 27, 2025: Acknowledged Receipt
Mr. Glen Makakauali'i Kila Koa Ike Marae Haakoa	July 3, 2025: Acknowledged Receipt
Mr. Tom Lenchanko ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau	May 21, 2025: Acknowledged Receipt May 22, 2025: Requested draft version with all black text. May 23, 2025: Requested fillable draft version.
Mr. Kapena Liu Kawaihāpai ʻOhana	May 3, 2025: Acknowledged receipt May 8, 2025: Confirmed review of the draft with no comments or edits.
Mr. James Medeiros Sr. ʻOhana Medeiros Protect Keopuka Ohana	No response
Mr. Christophor Oliveira Marae Ha'akoa	No response
Ms. Kaleo Paik Hoi Mai Ka Lei I Mamo Aha Wahine	No response
Mr. Joseph K. Simpliciano Jr. Kingdom Pathways	No response
Ms. Milillani B. Trask Na Koa Ikaika Ka Lahui Hawaii	No response
Ms. Kēhaulani Souza	No response
Mr. William Young House of Nobles	May 22, 2025: Acknowledged Receipt
Mr. Harry Wasson Hui Malama ʻAina ʻO Laʻie, Mahiʻai, Kiʻai	No response

Consultation Sessions and Results

On July 10, 2025, at Dillingham Military Reservation (DMR), Tom Lenchanko (ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau) and Matthew Kahoopii and his associates (House of Nobles) met with Dave Crowley (USAG Hawaii Cultural Resources Manager), Katie West (USAG Hawaii Archaeologist), and Anthony Casciano (Colorado State University [CSU] Center for the Environmental Management of Military Lands [CEMML]) to discuss the removal of an underground fuel storage tank (Project # CRS-23-198) and the first draft of the CA. The meeting was held at the request of Mr. Lenchanko and Mr. Kahoopii for the primary purpose of viewing the location of the proposed underground storage tank removal. However, Mr. Lenchanko requested a NAGPRA discussion be included in the meeting, as well.

During the July 10th meeting, Mr. Crowley provided a history of past NAGPRA actions at DMR and explained the purpose of the CA and how the CA relates to the underground storage tank removal and other future projects. No comments on the first draft of the CA were provided by consulting parties during the meeting.

On August 19, 2025, at the East Base Conference Room at Schofield Barracks, Carly Antone (Nā Manu o Kaiona), Kapena Liu (Kawaihāpai ʻOhana), and Tom Lenchanko (ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau) met with Dave Crowley (USAG Hawaii Cultural Resources Manager), Laura Gilda (USAG Hawaii Lead Archaeologist), Katie West (USAG Hawaii Archaeologist), and Amberle Czubernat (CSU CEMML). This meeting was an in-person opportunity to provide comments and discuss topics within the CA that required additional information and consultation prior to the distribution of a second draft of the CA. The topics discussed included the revision of Plan of Action Section L (Cultural Advisors) and the addition of Plan of Action Sections H.11. (Kawaihāpai Cemetery and Reburial Area) and M (Cultural Awareness Briefings), as well as the proper use of the term Kanaka Maoli.

Section L (Cultural Advisors) revisions included the process for determining when a cultural advisor is necessary, the process for selecting cultural advisor(s), the duties of a cultural advisor, and the resolution process for cultural advisor selection disputes. The addition of Section M (Cultural Awareness Briefings) included when to and who would provide required cultural awareness briefings. Section H.11. (Kawaihāpai Cemetery and Reburial Area) included background and locational information on the cemetery, as well as maintenance and protection responsibilities. The term Kanaka Maoli was added to Plan of Action Section A (Definitions), and the term Native Hawaiian was replaced by the term Kanaka Maoli as appropriate throughout the document.

The written comments received from Ms. Antone on the first draft and the revisions and additions discussed during the August 19th meeting were incorporated into the second draft of the CA, which was distributed to the August 19th meeting attendees on August 28, 2025. Comments on the second draft of the CA were received from Ms. Antone and Mr. Lenchanko, which resulted in a revision of the definition of the term Kanaka Maoli for the final CA.

Copies of the first and second drafts of the CA, all correspondence, and meeting minutes are on file with the USAG Hawaii CRS.

Appendix C:
Excavation Standard Operating Procedures:
Iwi Kūpuna and Cultural Items

U.S. Army Garrison Hawaii
Excavation Standard Operating Procedures: Iwi Kūpuna and Cultural Items

A. Permits and Professional Qualifications

Contractors must obtain a U.S. Army Garrison (USAG) Hawaii Permit for Cultural Resource Investigations and adhere to the professional qualifications for personnel therein.

B. Methodology

1. Iwi kūpuna and cultural items shall be documented in original context to the extent feasible.
2. Excavation shall be performed using controlled archaeological methods.
3. 1 x 1-meter units will be excavated in 10-centimeter arbitrary levels unless determined otherwise by the USAG Hawaii Cultural Resources Manager (CRM) in consultation with consulting parties.
4. The location and number of 1 x 1-meter units will be determined by professional judgement and adjusted as results become available in coordination with the USAG Hawaii CRM. It may be necessary to conduct exploratory test units or hand trenches where minimal to no feature locational/directional indicators are present.
5. The total depth of excavation and/or the required number of arbitrary levels sterile of cultural materials for unit termination will be determined in coordination with the USAG Hawaii CRM on a case-by-case basis.
6. Horizontal and vertical proveniences will be measured systematically from a datum(s).
7. Shovels, hand trowels, and non-metal tools may be used, as appropriate. Only non-metal tools may be used in contact with iwi kūpuna.
8. Excavated material will be passed through a 1/8-inch mesh screen except where the USAG Hawaii CRM approves 1/4-inch mesh screen on a limited basis to efficiently remove overburden and reach the cultural level.
9. Iwi kūpuna and cultural items will be rested on or wrapped with muslin (or similar material) and placed within lauhala baskets (or other breathable and natural container) prior to containment. Adequate ventilation and storage spacing will be maintained.
10. In a multiple-burial scenario, all observed burials and associated cultural items shall be excavated as a unit to ensure no separation occurs.
11. All excavated items and samples shall be labeled by an archaeologist with all provenience information and recorded on a maintained inventory list.

C. Documentation

1. Field Data Forms
   a. Standard excavation forms approved by USAG Hawaii will be utilized.
   b. A daily log will be kept of activities, schedule, personnel, field conditions, and general observations.
2. Photographs
   a. General locational photos are permitted at the discovery location. The iwi kūpuna must be covered in general locational photos, or photos may be taken of the location after the remains are removed to document setting, context, and location.
   b. USAG Hawaii Cultural Resources staff may take the minimal photo documentation of iwi kūpuna and cultural items necessary to fulfill management responsibilities, such as the documentation and monitoring of condition while iwi kūpuna and cultural items are in temporary storage. Light exposure will be as minimal as possible.
3. Sketches and Drawings
   a. Burials shall be sketched or drawn *in situ* in plan view and, as applicable, profile view, prior to any removal.
   b. A large-scale map shall be sketched or drawn in plan view showing the discovery in relation to excavation and test units, datum(s), and any relevant geographic, natural, cultural, and modern features.
   c. Soil profiles shall be sketched of at least one wall of each test or excavation unit to show relative stratigraphy in the vicinity of the discovery and annotated with soil descriptions, including texture, structure, and color.
   d. At a minimum, all sketches and drawings shall include a legend, north arrow for plan views, direction facing in degrees for profiles, scale, recorder's name, date, area designation, and feature designation.
4. Locational Information
   a. GIS data shall be collected, which may include, but is not limited to, feature and artifact points and polygons, a site boundary if applicable, excavation and test units, and datum(s).
   b. Discoveries shall be plotted on a 1:24k topographic map and a close-up aerial image overlaid with the project design.
   c. A Data Dictionary approved by USAG Hawaii will be utilized for data collection.

D. Analysis

Free, prior, and informed consent from Kanaka Maoli consulting parties will be obtained by USAG Hawaii in writing prior to performing or allowing any research on iwi kūpuna or cultural items.

E. Reporting and Deliverables

1. All reporting and deliverables will adhere to the requirements of the applicable USAG Hawaii Permit for Cultural Resource Investigations and any applicable project specific archaeological work plans.
2. Reporting and deliverables may include, but are not limited to:
    a. Progress reports, including project status, work conducted to date, and anticipated schedule, submitted to the CRM at an interval to be determined by the CRM with consideration for anticipated excavation duration and complexity.
    b. End of Fieldwork Summary Report, a minimum of one Draft Report, and a Final Technical Report. The draft and final reports will synthesize all background and field data into a coherent report, and include background information, methodology, results, locational maps, feature sketches/drawings, and stratigraphic profiles.
    c. All notes, photographs, drawings, sketches, and final GIS data.

F. Confidentiality

All involved parties shall protect information regarding the nature and location of any archaeological resource, including burials and cultural items, in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

Appendix D:
Transfer of Custody Acknowledgement Template

[INSERT INTO LETTER HEAD TEMPLATE]

TRANSFER OF CUSTODY ACKNOWLEDGEMENT

Transfer of Custody from U.S. Army Garrison Hawaii
to [Designated claimant]

We hereby document the transfer of custody of iwi kūpuna and cultural items discovered at Dillingham Military Reservation from U.S. Army Garrison (USAG) Hawaii to the [NHO/recipient name]. The USAG Hawaii hereby relinquishes possession of the iwi kūpuna and cultural items to [NHO/recipient name].

The iwi kūpuna and/or cultural items consist of [number] minimum number of individuals (MNI) and [number] of cultural items described in a Notice of [Inventory Completion/Notice of Intended Disposition/etc.], which was published in the [Federal Register/newspaper/etc] on [publication date(s)], in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001 et seq. The iwi kūpuna and cultural items inventoried in Enclosure 1 have been in the custody of USAG Hawaii.

Transfer of the iwi kūpuna and cultural items is effective as of [date], and is agreed to, and accepted by, the undersigned.

_____ _____

Colonel [Name of Garrison Commander]
Commander
US Army Garrison, Hawaii

Date

_____ _____

[Name of NHO Recipient]
[Title of NHO Recipient] [NHO Name]

Date

Enclosure: Inventory

Appendix E:
Reburial Agreement Template

REBURIAL AGREEMENT
Between
U.S. Army Garrison Hawaii and [Name of NHO]

In accordance with the terms of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013), 43 CFR Part 10 of its implementing regulations the United States Army Garrison (USAG) Hawaii has transferred legal control of Native Hawaiian remains and cultural items described in the [*Federal Register Notice/Newspaper Notice*] published [*date of publication*] to: [recipient *NHO*].

The Native Hawaiian remains and cultural items listed in Exhibit A will be reburied in the USAG Hawaii Cemetery at [cemetery name] as mutually agreed upon by the USAG Hawaii and the [*Name of NHO]:*

NOW THEREFORE, USAG Hawaii and [*Name of NHO]* agree that the terms of this Reburial Agreement shall document (1) transfer of custody of the Native Hawaiian remains [*and cultural items*] listed in Exhibit A for reburial in the [cemetery name]; (2) a process for reburial; and, a framework for access to, and use of the Cemetery following reburial, as provided below.

I. TRANSFER OF NATIVE HAWAIIAN REMAINS [*AND CULTURAL ITEMS]*

Pursuant to the terms of NAGPRA and its implementing regulations (43 CFR Part 10), and as reflected in the [*Federal Register Notice/Newspaper Notice*] published [*date of publication*], the USAG Hawaii has transferred to the [*Name of NHO]* custody of the Native Hawaiian remains and cultural items documented in the outgoing receipt attached hereto as Exhibit A [*may be a different list*].

II. REBURIAL

[Name of Cemetery], USAG Hawaii, and [*Name of NHO]* acknowledge and agree that they have had an opportunity to provide meaningful input regarding the location of the reburial area, the reburial site is within an area of compatible use and has been approved by both the USAG Hawaii and the [*Name NHO*].

USAG Hawaii and the [*Name of NHO]* will prepare the ground for reburial of the Native Hawaiian remains [*and cultural items*], as agreed to in prior meeting(s), the Comprehensive Agreement, and as described below.

A. Preparation

USAG Hawaii will continue to coordinate with [*Name of NHO*] on preparation activities for the reburial of the Native Hawaiian remains and cultural items, including but not limited to, the use of wrappings and containers, subject to USAG Hawaii's reasonable discretion. The [*Name of NHO*] will take the lead on preparation of the remains, in accordance with their traditions, prior to reburial.

Description of Preparation

B. Reburial

While USAG Hawaii is the lead entity with respect to activities associated with the reburial in the [cemetery name], it has consulted meaningfully with the [*Name NHO*] and will take reasonable and appropriate steps to support and maintain the sanctity of the reburial. Only those representatives and workers designated by USAG Hawaii and the [Name of NHO] will be allowed to attend and/or participate in the reburial. The timing and scheduling of the events will be determined by USAG Hawaii in coordination with the [*Name of NHO*].

The Native Hawaiian remains and cultural items shall be reburied in a manner as mutually agreed upon by USAG Hawaii and [*Name of NHO*].

The [*Name of NHO*] agree that they will take the lead on ceremony, in accordance with their traditions, to include the giving of gifts to the ancestors being reburied, as appropriate. However, the [*Name of NHO*] agree that USAG Hawaii must determine that all aspects of the ceremony are in compliance with applicable Federal, State and Local laws, regulations and policies.

To the extent permitted by applicable law, the Reburial Ceremony will be closed to the general public. Representatives for USAG Hawaii and [*Name of NHO*] shall be permitted to attend if mutually agreed upon by USAG Hawaii and the [*Name of NHO*]. To the extent reasonably practicable, USAG Hawaii and the [name of cemetery] will assist the [*Name of NHO*] in creating solitude for the ceremony and to minimize potential interference from visitors.

C. Marker

USAG Hawaii will install a grave-marker to identify the location of the reburial site, at the [*Name of NHO*] request. The [*Name of NHO*] will determine the inscription, subject to USAG Hawaii approval.

III. SITE ACCESS AND USE AFTER REBURIAL

The [*Name of NHO*] shall have access to the [name of cemetery] for religious and ceremonial uses, subject to any use restrictions, existing rights of way, easements or accessibility issues relating to the Cemetery and the Army installation. Subject to USAG Hawaii approval, which shall not be unreasonably withheld, [*Name of NHO*] Members may enter the [name of cemetery] at reasonable times during the day and may remain for a reasonable duration thereafter, in order to carry out cultural practices consistent with the purposes of this Reburial Agreement. Future reinterments shall be subject to the written approval of the Executive Director, Office of Army Cemeteries, in accordance with the Dillingham Military Reservation Comprehensive Agreement, and requisite documentation as set forth above and appended to Exhibit A.

USAG Hawaii reserves to itself and its representatives, all rights accruing from its ownership of the [name of cemetery], including the right to engage in or permit uses of the Reburial Cemetery which are consistent and compliant with all applicable laws and policies. The [*Name of NHO*] acknowledge that USAG Hawaii has the right to conduct generally-accepted property management activities in the Reburial Cemetery, in a manner consistent and compliant with all applicable laws and policies, and the [*Name of NHO*] shall not unreasonably interfere with the Army's use of the [name of cemetery].

IV. COSTS

USAG Hawaii will assume the costs of the reburial (the opening and closing of the gravesite) of the Native Hawaiian remains and cultural items listed in Exhibit A. USAG Hawaii will also assume the cost of the marker, including the inscription and installation, and preparation for repatriation as stated in the Dillingham Military Reservation Comprehensive Agreement. The [*Name of NHO*] will assume their own costs associated with this Reburial Agreement, including but not limited to preparation activities associated with the remains and cultural items that is above and beyond what is outlined in the Comprehensive Agreement.

V. TERMS AND TERMINATION

This Reburial Agreement shall become effective once fully executed by the Parties hereto and continue in perpetuity.

VI. GENERAL PROVISIONS

A. As a federal entity, USAG Hawaii neither objects to, nor endorses, any religious or ceremonial rituals that may be performed.

B. The [*Name of NHO*] acknowledge that they have provided meaningful input for this Reburial Agreement. Any issues regarding this Reburial Agreement raised by other persons or entities may be considered and decided upon by USAG Hawaii, in consultation with [*Name of NHO*].

C. Nothing in this Reburial Agreement shall be construed as obligating the Army to the expenditure of funds or for future payments of money in excess of that which is contemplated by this Reburial Agreement, or otherwise required by law.

D. Nothing contained in this Reburial Agreement shall be construed to entitle the NHO, individually or collectively, for any injury to or change in the Cemetery resulting from causes beyond their control, including without limitation, fire, flood, storm, earthquakes and earth movement, or from any prudent action taken by USAG Hawaii or any of their representatives under emergency conditions to prevent, abate, or mitigate significant injury to the Cemetery.

E. Exhibit A is made a part of this Reburial Agreement by this reference as though fully incorporated herein. New supplements or amendments to this Reburial Agreement may be proposed in writing by any signatory and shall become effective only upon agreement and signature by of all Signatories.

IN WITNESS WHEREOF, the Parties hereto have executed this Reburial Agreement as of the latest date of USAG Hawaii signatures below:

U.S. ARMY:
By and on behalf of USAG Hawaii

_____ _____

Colonel [Name of Garrison Commander] Date
Commander
US Army Garrison, Hawaii

[*COMPLETE NHO NAME(S) – IN ALL CAPS*]

_____ _____

[*Name*] Date

3Rs Explosives Safety Guide

Construction Industry









Recognize
Retreat
Report

THE UNITED STATES HAS ALWAYS MAINTAINED A HIGHLY TRAINED AND READY FORCE TO PROTECT ITS NATIONAL INTERESTS.

After both world wars and recently with force realignment and modernization efforts, the Department of Defense (DoD) closed a number of military installations and training areas, and returned other lands previously used for military-related activities to public use. Because of the live-fire training and testing required to maintain this force, millions of acres in the United States are known or suspected to contain military munitions in the form of unexploded ordnance (UXO), or discarded military munitions (DMM). In some cases, munitions constituents (e.g., TNT) may also exist in high enough concentrations to present an explosive (detonation) hazard. Although DoD routinely made an effort to remove any explosive hazards present before releasing land from its control, some may remain. These explosive hazards may be found on the surface or in the subsurface.



Munitions are designed to injure, maim or kill people, or to destroy equipment or structures. Consider any encounter with a known or suspected munition as an extremely dangerous situation.

During construction work (e.g. clearing vegetation, grubbing, grading, or excavation), munitions may be encountered. This is particularly true for areas known to have once been used by the military for munitions-related activities (e.g., live-fire training and testing, and munitions demilitarization).

Military munitions operating buildings (e.g., munitions production and demilitarization facilities) and any installed equipment may contain explosives residue in high enough concetrations to present an explosive hazard. Building features (e.g., floors, walls, drains, internal and external piping, and ventilation systems), in which explosives residues could accumulate and present an explosive hazard, are of particular concern. Industrial equipment, particularly equipment with internal cavities, from facilities used in munitions production or demilitarization operations (e.g., cast loading, milling, or steam-out) that generated explosive residues (e.g., dust or vapors) is also of concern.

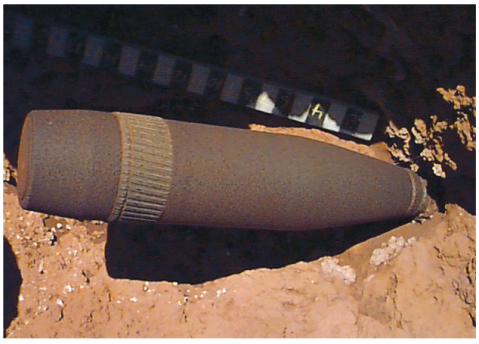
WILL YOU KNOW WHAT TO DO IF YOU ENCOUNTER A MUNITION?

Areas at which DoD conducted munitions-related activities include, but are not limited to operational and former ranges, and areas used for munitions demilitarization. The types of explosive hazards present may differ between areas. As an example, a former impact area may contain UXO, while a former maneuver area may only contain DMM.

Munitions can also be found in areas where combat operations once occurred. Even cannon balls found on Civil War battlefields present a potential explosive hazard. However, for a variety of reasons (unauthorized disposals, discarded souvenirs) munitions may be encountered almost anywhere.



Prior to working in areas with a history of military use, even areas where DoD has completed an environmental response to remove any hazards detected, it is important to familiarize yourself with the site history and potential hazards. This can be provided through site-specific safety training. In some cases, safety officials may determine that on-site or on-call construction support by UXO-qualified personnel is necessary to help ensure the safety of construction workers, particularly during ground disturbing or intrusive activities.





MUNITIONS ARE DESIGNED TO BE DANGEROUS

Remember that munitions:





- Come in many shapes and sizes.
  - They could look like a:
    - Pointed pipe
    - Soda can
    - Baseball
    - Car muffler
  - They may:
    - Look new or old
    - Be found alone or in clusters
- Should be considered extremely dangerous regardless of size or age
- Munitions often become more dangerous with age, not safer

Munitions may be:



- Found almost anywhere
- Clearly visible on the surface
- Buried at depths of inches to many feet
- Partially or completely hidden by dirt or vegetation
- Found under paved areas (roads, parking lots) or building slabs
- Underwater, in lakes, streams, or the ocean
- Exposed by natural phenomena (e.g., tides)
- Easy or difficult to recognize

While munitions are most likely to be encountered during construction in areas where DoD conducted munitions-related activities, they may be encountered anywhere. To protect yourself and your co-workers, know whether munitions-related activities ever occurred at your work site, and learn to follow the 3Rs: Recognize, Retreat, Report.



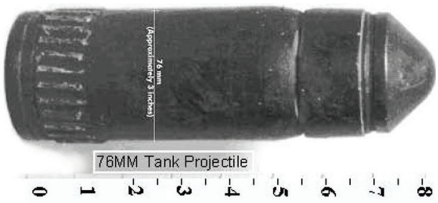
Recognize

Recognizing that you may have encountered a munition is one of the most important steps in reducing the potential risk of injury or death. Because munitions pose a potential explosive hazard, they should never be touched, moved or disturbed (handled).

WILL YOU DO THE RIGHT THING WHEN THE TIME COMES?

In 1993, a construction worker digging a trench unearthed what looked like large bullets. He recognized the potential danger, stopped digging and notified his supervisor. Local authorities were called. As a result of this worker's actions, nearly 150 high explosive tank shells were recovered from a former WWI training area.

Remember, whether complete or in pieces, any munition or suspect munition encountered should be considered extremely dangerous. Do the right thing! Immediately stop all operations in the area; do not touch, move or disturb it, and notify your supervisor or local authorities.



Retreat

If you encounter or suspect you may have encountered a munition, do not touch, move or disturb it. Instead, carefully retreat from the area by retracing your steps.

- Immediately stop all construction activities in the area, warning others of the potential danger.
- Do not approach the munition or a suspect munition. (Some fuzes are sensitive to changes in temperature, movement or pressure.)
- Move away from the area and keep others away from it!

Unfortunately, munitions are often popular, but potentially deadly souvenirs. Taking a munition for a keepsake presents an immediate and real danger to you. Bringing one home endangers your family, your friends, and your community. Don't be tempted.

Report

If you encounter or suspect you have encountered a munition, do not touch, move or disturb it. Instead, immediately stop construction activities and move away from the area and report what you saw.



Protect yourself, your co-workers, and the public by immediately reporting any munitions or suspect munitions encountered to your foreman, site supervisor, or by calling 911.

Provide as much information as possible about what you saw and where you saw it. This will help the police and explosive ordnance disposal personnel (usually referred to as EOD personnel) find, evaluate and address the situation.

If you believe you may have encountered a munition, report the following:

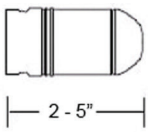
- The area where you encountered it.
- A general description of the munition, to include:
  - Its size
  - Its shape
  - Any readily visible markings--do not approach or handle the munition to see the markings

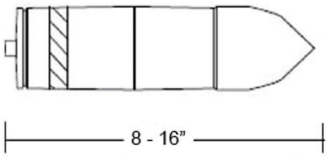


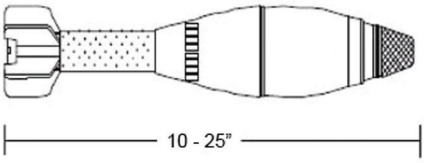


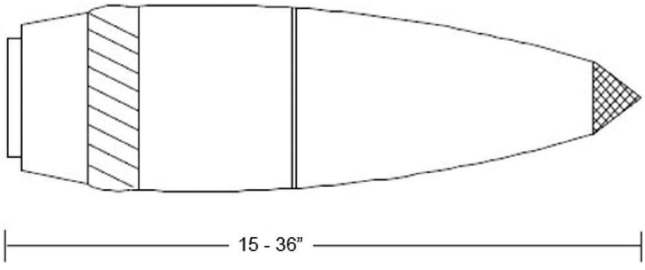


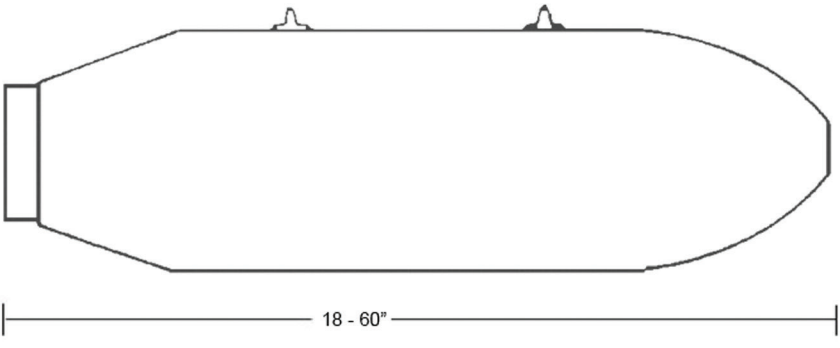
MUNITIONS COMMON SIZE AND SHAPE PROFILES











Don't Forget

- Munitions are dangerous and may not be easily recognizable!
- The history of your work site--know when you are working on a former military range or disposal area!
- Never touch, move or disturb a munition!

Follow the 3Rs

Recognize

When you may have come across a munition, and that munitions are dangerous

Retreat

Do not approach, touch, move, or disturb it, but carefully leave the area.

Report

Immediately what you saw and where you saw it to local law enforcement – call 911



For additional information visit the US Army's UXO Safety Education website

https://3Rs.mil

November 2022

HISTORY



Pohakuloa Training Area (PTA) was first used during World War II as a Marine Corps artillery live-fire training area. U.S. Marines from the 2nd and 5th Marine Divisions trained at PTA and on the western side of the Big Island in preparation for the Iwo Jima and Saipan campaigns. Few permanent structures existed at PTA during World War II. When the Marines trained at PTA, they slept in tents. After the war, PTA fell under the control of the Hawaii Territorial Guard, and in the mid-1950s, the U.S. Army took over PTA. From 1955 to 1958, Soldiers from the 65th Engineer Company built the Quonset huts, which are still in use.

PTA's 133,000 acres include an 80-acre cantonment area with a fuel yard, fire and police departments, and an airfield with a 3,700-foot runway. PTA's firing ranges allow units to conduct small-arms and crew-served weapons familiarization training and qualifications, as well as artillery and mortar live fire training. There has been continuous mortar and artillery live fire on PTA since its inception.

Due to the nature of the range activities, munitions may be present across the installation. These may include hand grenades, mortars, projectiles, practice and high explosive bombs, artillery shells, and rockets. Many munitions blend in with the environment and may be hard to see. Some areas are closed to hunting due to known explosives hazards, but munitions may remain in other areas as well.

To hunt at PTA, you must: possess a valid hunter education card and Hawaii hunting license; register on iSportsman; view the PTA safety briefing video and pass the safety quiz; clear a background check; register firearms with the PTA police; and purchase the appropriate hunting permit via iSportsman. Hunters must check in and out of hunting areas via iSportsman. Hunters are responsible for knowing where they are at all times and should refer to the latest hunting map and signs/markings to ensure they stay within the hunt boundary.

Munitions present may be heavily corroded, whole or in parts, buried or covered with vegetation, making them difficult to recognize. Do not approach, touch, move, or disturb anything encountered that may be a munition or part of one, but carefully leave the area. Consider munitions dangerous, regardless of how long they may have been in the environment. Help protect yourself from potential explosive hazards by following the 3Rs of Explosives Safety: **Recognize, Retreat, Report.**



40mm Projectile

Follow the 3Rs
of Explosives Safety

Recognize when you may have come across a munition, and that munitions are dangerous;

Retreat do not approach, touch, move, or disturb a suspect munition, but carefully leave the area; and

Report immediately what you saw and where you saw it to the emergency contacts in the table below.

IF YOU ENCOUNTER MUNITIONS

Emergency Contacts	
Pohakuloa Training Area	
Call Range Control	(808) 969-2455 or (808) 969-2456

Visit the U.S. Army's
Explosives Safety Education website:

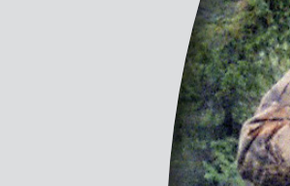
https://3Rs.mil

December 2022

3Rs Explosives Safety Guide

POHAKULOA TRAINING AREA

Hunters





Recognize
Retreat
Report

Follow the 3Rs
of Explosives Safety




105mm Projectile


Mortar Round

Recognize

When you see a munition and that it is dangerous.



Recognizing when you may have encountered a munition is the most important step in reducing the risk of injury or death. Munitions may be encountered on land or in the water. They may be easy or hard to identify. Although munitions may be present almost anywhere, hunting area maps identify areas of highest risk.

To avoid the risk of injury or death:

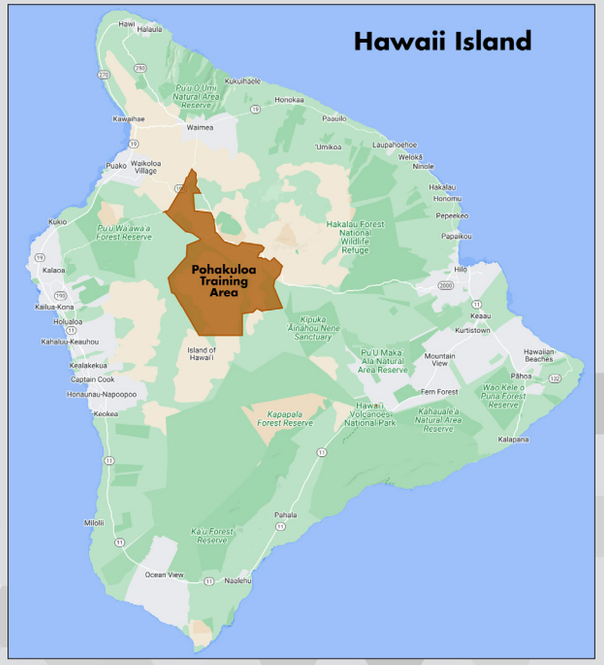
- Never approach, touch, move, or disturb a munition or suspect munition.
- Be aware that munitions do not become safer with age.
- Don't be tempted to take or keep a munition as a souvenir.

Munitions come in many sizes, shapes, and colors. Some may look like bullets or bombs, while others may look like pipes, small cans, or even a car muffler. Whether whole or in parts, new or old, shiny or rusty, munitions can still explode. The best way to avoid injury or death is to stay out of marked areas with no entry signs, heed posted warnings, and stay in designated hunting areas.

Retreat

Do not touch it, but carefully leave the area.

Avoid death or injury by recognizing that you may have encountered a munition and by promptly retreating from the area. If you encounter what you believe is a munition, do not approach, touch, move, or disturb it. Instead, immediately and carefully leave the area by retracing your steps—going out the way you entered. Once safely away from the munition, mark the path if possible (e.g., with a piece of clothing) so response personnel can find the munition.



Report

Call local authorities to report what you saw.

Protect yourself, your family, your friends, and your community by immediately reporting munitions or suspect munitions.

Help improve the safety of future hunts by providing as much information as possible about what you saw and where you saw it. This will help the police and military explosive ordnance disposal, police bomb squad, or authorized range personnel find, evaluate, and address the situation.

If you believe you may have encountered a munition, report:

- The area where you encountered it.
- Its general description. Do not approach, touch, move, or disturb it to get a better description.
- When possible, describe its:
  - Estimated size;
  - Shape; and
  - Visible markings, including coloring.


Rocket

BACKGROUND

Established in 1910 as the District of Hawaii, U.S. Army Garrison (USAG) Hawaii was a sub-element of the Department of California. It became the Hawaiian Department in 1911 and its headquarters moved to Fort Shafter in 1921. After the outbreak of World War II, the Hawaiian Department was charged with a variety of logistical support and installation functions across the Hawaiian Islands.



Damage to Wheeler Army Airfield on December 7, 1941

In the years after World War II, the Hawaiian Department headquarters was formally abolished, and Headquarters, U.S. Army Pacific was established in 1947. In 1957, U.S. Army Hawaii/25th Infantry Division was created as the new command. These two commands were separated in 1960, with the U.S. Army Hawaii assuming the role of installation support. U.S. Army Support Command Hawaii was established in 1973 to succeed U.S. Army Hawaii as the command responsible for installation services. On January 6, 1994, U.S. Army Support Command Hawaii was redesignated as USAG Hawaii.

Today, USAG Hawaii provides services, installation facilities, training, and recreational centers at 22 sites across the islands of Oahu and Hawaii, including Fort Shafter, Schofield Barracks, Wheeler Army Airfield, Kawailoa Training Area, and Pohakuloa Training Area. USAG Hawaii supports nearly 100,000 Soldiers, civilians, and family members across more than 167,000 acres of land and 5,200 buildings. There has been continuous artillery live fire on USAG Hawaii installations since their inception, including the use of mortars, aerial gunnery, 155mm Howitzers, grenade launchers, and explosive charges.

Due to the nature of the range activities, munitions may be present across the installations. Munitions present may be heavily corroded, whole or in parts, buried, or covered with vegetation, making them difficult to recognize. Do not approach, touch, or disturb anything encountered that may be a munition or part of one, but carefully leave the area. Consider munitions dangerous, regardless of how long they may have been in the environment. Help protect yourself, co-workers, and the public from potential explosive hazards present by following the 3Rs of Explosives Safety: **Recognize, Retreat, Report**.



3Rs Explosives Safety Guide

U.S. ARMY GARRISON HAWAII

IF YOU ENCOUNTER MUNITIONS

Emergency Contacts	
Installation Cantonment Areas and Off Post	
Call 911	
Oahu Training Areas and Ranges	
Call Range Control	(808) 655-1434
Pohakuloa Training Area	
Call Range Control	(808) 969-2455 or (808) 969-2456

Follow the 3Rs

of Explosives Safety

Recognize
Retreat
Report

Visit the U.S. Army's Explosives Safety Education website:

https://3Rs.mil

December 2022



Recognize
Retreat
Report



105mm Projectile

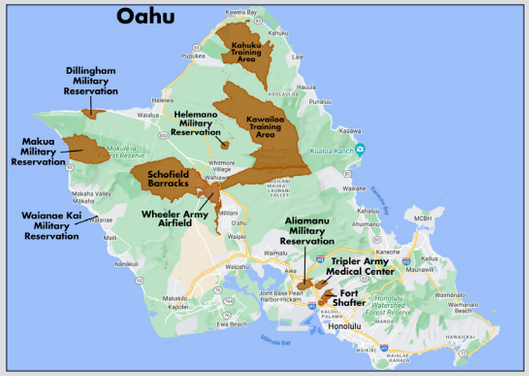


Mortar Round

FREQUENTLY ASKED QUESTIONS

Q: What are military munitions?

A: Military munitions are material used by our Nation's Armed Forces to defend the United States. Military munitions are dangerous by design. They are made to kill or injure enemy forces or damage enemy equipment. When military munitions do not function as intended (do what they are supposed to do) during use, they become unexploded ordnance or UXO.



Q: What do military munitions look like?

A: Military munitions come in many different sizes, shapes, and colors. Their size and shape depends on how the military intends to use them. For example, rounds used to train soldiers on crew-served weapons, like tanks and artillery, are large. Rockets, fired from aircraft or ground vehicles, can vary in size, as can bombs dropped from aircraft. Other types of munitions include grenades, practice mines, submunitions, simulators, and pyrotechnics. Weathering changes the appearance of military munitions making them more difficult to spot or recognize.

Q: Where could I encounter military munitions?

A: You are most likely to encounter munitions in areas where the military conducts or formerly conducted live-fire training or testing with military munitions, but they also may be encountered in other areas. The vast majority of military munitions, however, are in impact areas of both operational and former ranges. Because of changing military needs, locations once used by the military during training may now be used by the public for other purposes, such as recreational areas. Many of these locations are no longer on military installations.

Q: What do I do if I come across a military munition?

A: If you suspect you have come across a military munition, the best way to ensure your safety is to follow the 3Rs of Explosives Safety:

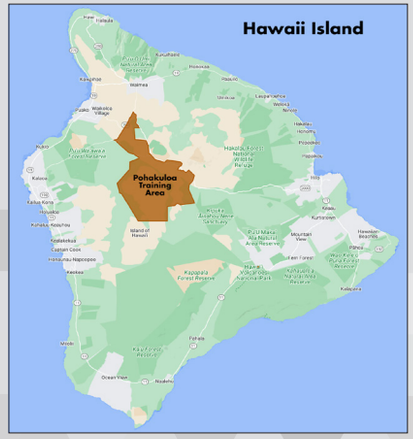
Recognize* — *when you see a munition and that it is dangerous;

Retreat* — *do not touch it, but carefully leave the area; and

Report* — *call 911 to tell the police what you saw

(see back panel for additional emergency contacts).

Remember, military munitions may be encountered anywhere. Should you come across a munition or suspect you may have, follow the 3Rs of Explosives Safety.

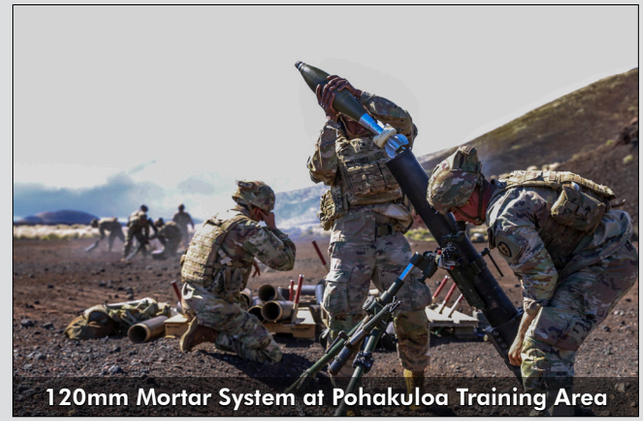


Follow the 3Rs
of Explosives Safety

Recognize when you may have come across a munition, and that munitions are dangerous;

Retreat do not approach, touch, move, or disturb a suspect munition, but carefully leave the area; and

Report immediately what you saw and where you saw it to emergency contacts on the back of this guide.



120mm Mortar System at Pohakuloa Training Area



105mm Howitzer Live-Fire Exercise at Schofield Barracks

Defense Visual Information Distribution Service

Clean Water Program Comments:

REC #: 5079: DMR Honolulu Soaring Hangar UST Closure
Reviewed by: Darrin Dukes

- The REC states that this project is under 1 acre of ground disturbance, to include definitions stated in HAR 11-55 Appendix C. If the project expands for any reason, please notify DPW Clean Water Program immediately.

- Implement sediment and erosion control BMPs consistent with the City and County of Honolulu's Best Management Practices Manual for Construction Sites in Honolulu throughout the duration of construction activities to prevent sediment and construction debris from entering the storm sewer system. http://www.honolulu.gov/rep/site/dfmswq/library/BMP_manual_2011-11.pdf

- Construction project must comply with USAG-HI Construction Site Runoff Control Program Policy (https://home.army.mil/hawaii/application/files/5516/5249/9001/Construction_Site_Runoff_Control_Policy_Program_12MAY2022.pdf)

- Collect and contain all concrete waste and washout water. Concrete washout should be collected and retained in leak proof containers. Concrete washout areas should be located away from any storm drain features present.

- Monitor surrounding area (roadways, sidewalks, etc.) for sediment track out. If track out occurs ensure that the area is swept within 24 hours or before the next predicted rain event.

- Spill response kits MUST be available for use ON-SITE during ALL periods of activity when a potential exists for fuel, oil, or chemical release (leak/spill). Workers on-site must be knowledgeable concerning spill response procedures. ALL spills must be reported to DPW. During working hours spills should be reported to DPW Spill Notification Line at 808-656-1111. After hours or on weekends, call the Installation Operations Center (IOC) at 808-656-3279.

- Any project that creates ground disturbance must ensure that the area is revegetated 70% or greater from preconstruction conditions. Until the vegetation is stabilized BMP measures must remain and be inspected according to City and County of Honolulu's Strom Water Best Management Practice Manual for Construction, November 2011. http://www.honolulu.gov/rep/site/dfmswq/library/BMP_manual_2011-11.pdf

- USARHAW Reg 190-5 prohibits vehicles (both construction and personal) from parking on grassed or seeded areas. All parking associated with this project (during and post construction) will be only in designated and marked parking areas (i.e. striped parking stalls). The project proponent and/or their designated organization will be responsible for enforcement.

Please contact a member of the Clean Water Program Team if you have questions or concerns:

Michelle Ogman: Michelle.r.ogman.civ@army.mil / 808-656-3316
Lexa Medero: lexa.d.mederohernandez.civ@army.mil/ 808-656-3096
Darrin Dukes: darrin.g.dukes.civ@army.mil/ 808-656-3097

CLEAN AIR/SAFE DRINKING WATER PROGRAM COMMENTS

Date: 11/02/2023

REC 5079, Honolulu Soaring Hanger UST Closure

- Take reasonable precautions to minimize fugitive dust generated from construction activities. Please see Hawaii Administrative Rules 11-60.1-33, “Fugitive Dust” for a description of reasonable precautions: http://health.hawaii.gov/opppd/files/2015/06/11-60.1.pdF
- Please be aware of water utility lines in the vicinity of the project. Contact DPW Engineering Div. to obtain excavation approvals.

Please direct any requested information and questions to:
Jackie Alvarez-Martinez, jacqueline.s.alvarez-martinez.civ@army.mil , 808-656-3107
Kyle Sasahara, kyle.c.sasahara.civ@army.mil, 808-656-1743
Priscilla Ramirez, priscilla.ramirez18.ctr@army.mil , 808-656-3104

Recycling Program Comments

REC 5079: DMR UST Closure

Reviewed by: Kim Welch

POC: Kim Welch, kimberly.m.welch14.civ@army.mil, 808-656-5411

- Army goal is to achieve at least 60% of construction and demolition material recycling. The project planning shall incorporate recycling and reuse measures to reduce the amount of nonhazardous construction and demolition waste requiring landfill disposal or incineration. This includes cardboard, scrap metal, concrete, asphalt, excess soil and greenwaste, which should be taken to an appropriate recycling or reuse facility.

- At the close of the project, a summary of the amount of nonhazardous solid waste that was recycled and disposed, as well as copies of the weight tickets must be reported to the Army Recycle Program. See attached Summary of Solid Waste Disposal and Diversion form as an example.

- Send completed Summary of Solid Waste Disposal and Diversion form to Army Recycling Program at: kimberly.m.welch14.civ@army.mil

Email completed form and corresponding weight receipts to: DPW Recycling Program
kimberly.m.welch14.civ@army.mil

Revised 10/05/2023

Summary of Solid Waste Disposal and Diversion

Negative Response Required

Project Title: _____

Project #: _____

Type of Material	Name of Disposal Facility	(a) Diverted (Recycled/Reused)			(b) Disposed (Landfill/Incinerated)		
		Tons	Cost ($)	Revenue ($)	Tons	Cost ($)	Revenue ($)
Asphalt							
Concrete							
Dirt							
Metals							
Wood Waste							
Green Waste							
Cardboard							
Deconstruction							
Other: _____							
Total (tons)		0	0	0	0	0	0

Total Waste Generated (tons): 0

Total % Diversion:	0%

Total % Diversion Formula: (Total Recycled Tons(a)/ Total Waste Generated) x100

Name of company: _____ Contact Phone #: _____

Person completing form: _____ Signature: _____

Period covered: From: Ed Hewitt To: Tod Deery

Note: Contractor is to attach weight tickets to this form

Record of Environmental Consideration for DMR Honolulu Soaring Hangar UST Closure Bldg 91A
REC No.: 5079
TSCA Comments

This REC indicates lead-based paint (LBP) and lead-containing paint (LCP) was discovered during a previous survey.

Ensure workers who disturb lead paint are properly protected, trained, and certified by Stat of Hawaii Department of Health. If additional suspect materials are discovered during the renovation process, the work will cease until samples can be collected and analyzed, and if positive, properly removed and disposed.

Work activities disturbing lead paint must comply with OSHA Lead in Construction Regulations, 29 CFR 1926.62.

Debris must be handled, stored, removed, and disposed of in accordance with State and Federal laws and regulations.

Please contact a member of the TSCA team if you have any questions or concerns:
Jacqueline Alvarez-Martinez: jacqueline.s.alvarez-martinez.civ@army.mil 808-656-3107

Record of Environmental Consideration (5079) for DMR, UST Closure

AST Comments (POC: Whit Somerall, 808-656-3317, or adam.w.somerall.civ@army.mil)

In accordance with Hawaii Administrative Rules 11-280.1-10 (b) (6) and 40 CFR 280, any emergency spill or overflow containment Underground Storage Tank (UST) is excluded from requirements if emptied expeditiously.

Provide all clousre reports and documents for Army record. Follow all HDOH UST Branch guidelines for UST closure. Ensure all HEER Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater methods and materials are followed to ensure proper closure of the UST system.

All USTs must be properly accounted for. If the USTs are utilized for any other purpose other than those outlined in the design, it will require additional review and approval. Please provide the following to DPW ENV:

Tank manufacturer specifications to include and not limited to:

1. Tank manufacturer name
2. Tank Capacity
3. Tank Material (e.g. fiberglass reinforced plastic, steel, etc.)
4. Type of product that will be stored in UST during emergency spill/fire suppression activities
5. Exact location where the emergency UST will be installed.
6. Tank design & As-builts.

Contract should clarify who will dispose of old fuel or liquids in existing tank (recommend this be the Contractor's responsibility).

Please keep USAG-HI abreast of the UST removal project at Dillingham and provide closure documents once they system has been completely removed and closed with the State of Hawaii Department of Health Underground Storage Tanks Branch.

---BREAK---

The proposed is located within the general vicinity of a former MMRP site. In the event that an munitions are discovered follow the 3R's (Recognize, Retreat, Report to 911). Please see the attached construction, hunting and safety 3R's guides. Do not hesitate to inquire with the above contact regarding the 3R's and military munitions risks.

U.S. Army Garrison Hawaii
Native American Graves Protection and Repatriation Act
Comprehensive Agreement
for Native Hawaiian Human Remains or Cultural Items
Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

FINAL

U.S. Army Garrison Hawaii
Native American Graves Protection and Repatriation Act
Comprehensive Agreement
for Native Hawaiian Human Remains or Cultural Items
Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

November 2025

CA # IM-WX3JNN-26-002

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U.S. Army Garrison Hawaii
Native American Graves Protection and Repatriation Act
Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation

This comprehensive agreement (CA) was developed in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C. 3001 et seq) and its implementing regulations (43 CFR Part 10). This CA is intended to cover all land managing activities on federal land at Dillingham Military Reservation (DMR), including those activities conducted by the State of Hawai‘i Department of Transportation Airports Division (HDOT-A) and their tenants (Lease No. DACA84-1-24-0025).

Appropriate official

The Commander of U.S. Army Garrison (USAG) Hawaii is the federal agency official responsible for compliance with NAGPRA. The Garrison Commander may choose to delegate duties associated with NAGPRA compliance to the USAG Hawaii Cultural Resources Manager (CRM) in order to ensure operational implementation of the NAGPRA regulations at 43 CFR Part 10 Subpart B. The CRM is responsible for implementing the terms of this CA and for advising the Garrison Commander on related NAGPRA compliance issues.

Description

This CA encompasses all of DMR, including portions of the ahupua‘a of Ka‘ena, Keālia, Kawaihāpai, and Mokulē‘ia; Island of O‘ahu; Hawai‘i and includes lands leased to the HDOT-A (Appendix A: Figures 1-2).

A portion of DMR, described as approximately 87 acres previously ceded to the federal government by the Territory of Hawaii, will be returned to the State in accordance with the 1991 National Defense Authorization Act, Public Law 101-510, 104 Stat 1796 Section 2831 (Appendix A: Figure 2). The timeframe for return of the parcel is unknown. When that parcel is returned to the State, USAG Hawaii will revisit this CA to determine if it is appropriate for the parcel to remain part of this CA, consistent with the NAGPRA regulations. Any NAGPRA cultural items recovered from the 87-acre parcel that may have been reinterred at a designated cemetery on Army land after disposition pursuant to this NAGPRA CA shall remain in the designated cemetery.

Consultation

This CA was developed in consultation with the lineal descendants, ‘ohana, and Native Hawaiian organizations (NHOs) listed in Appendix B. Consent by a majority of the consulting parties is evidenced by the consultation record in Appendix B or by their signature on this CA.

Plan of Action

A. Definitions

The terminology used throughout this CA will adhere to the definitions provided below and in 43 CFR § 10.2, as applicable.

1. Iwi kūpuna: Native Hawaiian human remains.

2. Cultural items: a funerary object, sacred object, or object of cultural patrimony according to the traditional knowledge of a lineal descendant, ‘ohana, or NHO.

3. Kanaka Maoli: indigenous Hawaiian person; a term to describe a familial connection with the land, inherent to the identity of the indigenous Hawaiian people. For the purposes of this agreement, the term is used to include consulting parties who may also identify as a representative of a Native Hawaiian organization or ‘ohana.

B. Initial Assessment of Discoveries and Notification

USAG Hawaii shall use the following procedures in the event potential iwi kūpuna and/or cultural items are discovered during land management activities:

1. Any suspected human remains will immediately be shielded from exposure to sunlight, ideally covered with clean muslin or similar breathable fabric.

2. All activities that have the potential to further disturb the discovery shall immediately halt within 30 meters of the discovery. The distance may be appropriately increased or decreased by the CRM based on topography, soil type, previous archaeological work, previous disturbance, and any other factors which may provide insight into the extent of the discovery area.

3. The project proponent shall protect the area and notify the CRM with pertinent details as soon as possible on the same day as the discovery. The CRM, or his/her designee, will inspect the discovery location as soon as possible, no later than 24 hours from notification.

4. If the CRM determines that the discovery does <u>not</u> involve human remains or cultural items, the CRM shall provide written authorization for ground-disturbing activities to resume in the vicinity of the discovery following documentation in accordance with any applicable permits, project specific archaeological work plans, and guidance provided by the CRM.

5. Upon the CRM confirmation of any human remains, the CRM shall report the discovery to the U.S. Army Criminal Investigative Division (CID) and provide notice of the discovery and work stoppage to the Garrison Commander and applicable project proponents.

6. If the U.S. Army CID determines the iwi kūpuna are not part of a modern crime scene, the CRM shall notify Kanaka Maoli consulting parties and, where appropriate, the Hawai‘i State Historic Preservation Officer (SHPO) and State Historic Preservation Division Oahu Burial Sites Specialist, including the History and Culture Branch Chief, by email or telephone of the discovery of iwi kūpuna no later than the next business day after the U.S. Army CID determination. Notification shall include a summary of the discovery circumstances, context, material, any potential threats to the discovery, protection measures, and a map of the discovery location.

7. If the preliminary assessment is inconclusive as to cultural affiliation of the human remains, the preponderance of evidence will be evaluated, and in the absence of conflicting information, the remains will be presumed to be iwi kūpuna.

8. For each discovery, the CRM shall offer to coordinate a site visit for Kanaka Maoli consulting parties within seven (7) calendar days after notification for Kanaka Maoli consulting parties to conduct cultural protocols, such as pule (prayers) and ho‘okupu (offerings), to the extent feasible and following applicable safety requirements.

9. Immediately following notification of the discovery to Kanaka Maoli consulting parties, the CRM will notify the Office of Army Cemeteries (OAC) and request consideration of preservation-in-place as a potential option. The CRM will follow Section F (below) to determine if preservation-in-place is feasible and appropriate and to obtain the necessary approvals. Plans for recovery and disposition will begin immediately if a determination that preservation-in-place is not feasible or appropriate, or if the necessary approvals cannot be obtained.

10. Activities may resume after receipt of a written (including email) authorization from the CRM to the applicable project proponents. The authorization may include additional instructions or stipulations as determined during consultation and the development of a course of action.

C. Protective Measures

During work stoppage resulting from a discovery, the CRM shall ensure that USAG Hawaii or HDOT-A has physical protective measures in place or the area is otherwise guarded to prevent additional disturbance to the discovery.

1. All discovered iwi kūpuna shall be shielded from exposure to sunlight. Unless otherwise determined during consultation, clean muslin or similar breathable fabric shall be placed over the iwi kūpuna, and the original overburden material shall be placed over the fabric.

2. Measures to delineate the work stoppage area or control access may be implemented as appropriate and may include construction fencing, cones, or other barrier means as appropriate for the discovery and/or the work stoppage area.

3. The CRM may determine that overnight security personnel are necessary if the cultural items must be left in an unprotected location overnight. The project proponent (USAG Hawaii or HDOT-A) is responsible for tasking the security personnel.

4. In the case of preservation-in-place, protective measures will remain in place until the ground surface restoration is initiated.

5. In the case of recovery and disposition, protective measures will remain in place until recovery is completed.

6. Iwi kūpuna and/or cultural items recovered for disposition will be respectfully housed in a secure, climate-controlled facility at Schofield Barracks until disposition is complete (Section J).

D. Documentation and Analysis

1. Documentation and analysis of iwi kūpuna and cultural items shall be conducted in the original context to the extent feasible, using controlled archaeological methods as outlined below and in Appendix C, and in accordance with any applicable permits, project specific archaeological work plans, stipulations, and guidance provided by the CRM in consultation with consulting parties.

2. Photographs

    a. Investigators with U.S. Army CID may take photo documentation of iwi kūpuna, as necessary for the investigation.

    b. USAG Hawaii Cultural Resources staff may take photographs as outlined in Appendix C.

3. Locational Information

    a. GIS data shall be collected of each discovery as outlined in Appendix C and any applicable permits and project specific archaeological work plans, which may include, but is not limited to, feature and artifact points and polygons, a site boundary if applicable, and datum(s).

    b. USAG Hawaii shall incorporate the GIS data into the appropriate Army Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE).

4. Analysis

    a. Analysis of iwi kūpuna and cultural items may include:

        i. Inventory and measurements of cranium, mandible, and infracranial skeleton to determine minimum number of individuals (MNI), age-at-death, stature, and sex of the individual

        ii. Non-invasive observations of antemortem, perimortem, or postmortem trauma, health, pathology, or forensic characteristics (for example, arthritis or broken bones/mended bones, and cultural modifications)

        iii. Estimated percentage of present remains

        iv. Quantitative and qualitative observations of cultural items

    b. Measurements of iwi kūpuna shall be non-invasive using non-metal implements to the extent possible.

    c. All osteological analyses shall be done respectfully and in consideration of Kanaka Maoli consulting party concerns.

d. Free, prior, and informed consent from Kanaka Maoli consulting parties will be obtained in writing prior to performing or allowing any access to or research on iwi kūpuna or cultural items beyond the above stipulated analyses.

e. There will be no public exhibition of iwi kūpuna or cultural items.

E. Confidentiality and Reporting

1. USAG Hawaii shall protect information regarding the nature and location of any archaeological resource, including burials and cultural items, in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

2. Any evidence or information provided by consulting parties pursuant to NAGPRA is considered sensitive and is maintained in confidentiality by USAG Hawaii at the request of the consulting parties. Any such evidence or information provided by consulting parties is considered a privacy interest exempt from mandatory disclosure under the Freedom of Information Act pursuant to Exemption 6.

3. All reports, photographs, GIS data, and other records documenting burial information is considered “controlled unclassified information” (CUI) and shall be secured and stored at the USAG Hawaii Cultural Resources Office and protected in accordance with the Archaeological Resources Protection Act (32 CFR § 229.18). Any such information shall be exempt from public disclosure under the Freedom of Information Act Exemption 3.

4. USAG Hawaii shall ensure all NAGPRA discoveries and any resulting archaeological work or analyses are documented in a report, as outlined in Appendix C. Consulting parties will be given an opportunity to review and comment on any such report prior to finalization.

5. If there is an archaeological monitoring report associated with the discovery, a general discussion of the NAGPRA discoveries may be included, but consulting parties will be given an opportunity to review and comment on any such report prior to finalization.

6. Any publications or conference presentations involving information about iwi kūpuna or cultural items pursuant to this CA requires approval from USAG Hawaii. Consulting parties will be given an opportunity to review and comment on any such publications and presentations prior to approval by USAG Hawaii.

F. Preservation-in-place

1. USAG Hawaii acknowledges the consulting parties' preference for preservation-in-place and the desire for iwi kūpuna and cultural items to not leave the vicinity of the discovery.

2. If a consulting party would like to pursue preservation-in-place for a specific discovery location, they shall submit a written request to USAG Hawaii. The written request can be by letter or email. If the request is made during a meeting, USAG Hawaii will distribute meeting minutes (via email) detailing the request, and the consulting party will concur (via email response) on the accuracy of the meeting minutes.

3. For preservation-in-place to occur:

    a. The Office of Army Cemeteries would need to approve an exception to Army Regulation (AR) 290-5 for each preservation-in-place location.

    b. The project proponent would need to develop a new construction design to avoid the preservation-in-place location by an appropriate distance for approval by USAG Hawaii in consultation with consulting parties.

    c. The Garrison Commander would need to approve the plan to preserve-in-place.

    d. The new design would have to be approved through the site approval and National Environmental Policy Act (NEPA) review processes.

4. If preservation-in-place is requested, determined possible, and the necessary approvals are obtained, USAG Hawaii shall ensure the following:

    a. Metal markers are set above the discovery location to enable identification of the precise location with a metal detector for avoidance during future work in

the area. Markers shall be inconspicuous, installed very shallow or flush with the ground.

b. Contact information for the USAG Hawaii Cultural Resources Office and unique identification numbers are indicated on the markers for reference.

c. The ground surface is restored, and the vegetation is rehabilitated as necessary and appropriate.

d. The location is added to the schedule for condition monitoring performed by the USAG Hawaii Cultural Resources Office.

e. The project proponent is responsible for the costs of marking and restoring the preservation-in-place location.

5. The appropriate burial container, if any, will be determined during consultation and obtained by the project proponent at a reasonable cost. If the preferred container is unavailable or unreasonable to acquire, USAG Hawaii will identify an appropriate alternative in consultation with consulting parties.

6. Any landscaping and maintenance of preservation-in-place locations, beyond the stipulations in Section F.4. above, will be determined during consultation on a case-by-case basis.

7. The Kanaka Maoli consulting parties will take the lead on conducting any required cultural protocols, in accordance with their traditions, prior to ground surface restoration. USAG Hawaii shall provide access to the location. The consulting parties may request USAG Hawaii provide materials needed by the consulting parties to facilitate preservation-in-place. USAG Hawaii will explore options to acquire the requested material but cannot guarantee their acquisition.

8. The Kanaka Maoli consulting parties shall have access to the preservation-in-place location for visitation and religious and ceremonial uses, subject to any use restrictions, safety limitations, existing rights of way, leases, easements, or accessibility issues relating to the Army installation. Access is subject to USAG Hawaii approval, which shall not be unreasonably withheld.

G. Recovery

1. Army regulations and guidance favor recovery and disposition with the potential for reburial at a designated cemetery on lands under the jurisdiction of the U.S. Army. Recovery and disposition is the anticipated course of action for the majority of discoveries.

2. If preservation-in-place is not feasible or not approved, intentional excavation of iwi kūpuna or cultural items shall occur.

3. Excavation will be conducted in accordance with standard, controlled archaeological methods as specified in Appendix C, any applicable permits, project specific archaeological work plans, stipulations, and any guidance provided by the CRM in consultation with consulting parties.

4. Intentionally excavated iwi kūpuna or cultural items shall be disposed to the appropriate claimant pursuant to the NAGPRA process for disposition at 43 CFR § 10.7.

    a. After issuance of a written disposition statement, USAG Hawaii will consult on the custody and physical transfer of the iwi kūpuna or cultural items.

        i. The claimant may request physical transfer to them or they may request reburial (Section H) on lands under the jurisdiction of the U.S. Army.

        ii. Any physical transfer of iwi kūpuna or cultural items will be documented in writing with verification of receipt of the items or remains by the claimant (Appendix D).

5. The project proponent will be financially responsible for the cost of recovery and any resulting reports.

H. Reburial

1. USAG Hawaii has committed to considering requests for reburial of iwi kūpuna and cultural items excavated or removed from DMR at a designated cemetery to be determined during consultation.

2. After receiving a written disposition statement from USAG Hawaii recognizing that the claimant has ownership or control of the iwi kūpuna or cultural items, the claimant may request reburial on lands under the jurisdiction of the U.S. Army.

3. Upon Garrison Commander's approval of the reburial request, the CRM and the claimant will develop a Reburial Agreement (Appendix E). The agreement shall include an inventory list of iwi kūpuna or cultural items to be reburied.

4. The claimant is under no obligation to rebury iwi kūpuna or cultural items on lands under the jurisdiction of the U.S. Army.

5. USAG Hawaii shall develop the reburial method and process in consultation with the claimant prior to the reburial on a case-by-case basis.

6. Reburial may occur at a designated cemetery following the completion of a Reburial Agreement.

7. If the discovery was a result of a USAG Hawaii project, USAG Hawaii will bear the reasonable costs associated with the reburial. If the discovery was a result of a HDOT-A or tenant project, HDOT-A and/or their tenant will bear the reasonable costs associated with the reburial. Costs may include a reburial container (if not already established at the designated cemetery), a marker with inscription, and the costs of labor to open/close the burial site and install the marker.

8. The claimant will be responsible for preparation of the remains in accordance with their traditions prior to reburial.

9. USAG Hawaii shall be responsible for coordinating the reburial of iwi kūpuna or cultural items requested in the Reburial Agreement at the designated cemetery.

10. The U.S. Army has certain responsibilities for those interred in private cemeteries that are now on lands under the jurisdiction of the U.S. Army, such as Kawaihāpai Cemetery and Reburial Area. These responsibilities include accommodating existing rights of access, visitation, and interment. New access rights may be granted pursuant to AR 405-80. Access and visitation are subject to any use restrictions, existing rights of way, leases, easements, or accessibility issues relating to the Army installation. Access is also subject to USAG Hawaii approval, which shall not be unreasonably withheld.

11. Kawaihāpai Cemetery and Reburial Area:

    a. The Kawaihāpai Cemetery and Reburial Area is the anticipated location for reburial of iwi kūpuna and cultural items recovered from DMR, unless claimants demonstrate a strong reason against this location and/or for another location with evidentiary support.

    b. The Kawaihāpai Cemetery and Reburial Area was in use prior to the development and acquisition of the area as a military installation. The 1.37-acre cemetery was formally established as a private cemetery in 2025 by USAG Hawaii and the OAC in consultation with the Kawaihāpai ʻOhana and Nā Manu o Kaiona (Appendix A: Figure 2).

    c. As feasibility and funding allows, the USAG Hawaii will bear the reasonable costs of maintenance and protection for the Kawaihāpai Cemetery and Reburial Area, including a fence/wall, landscaping, vegetation trimming, and markers.

I. Duty of Care

1. Treatment of iwi kūpuna and cultural items shall be conducted in a respectful and professional manner, taking all precautions to prevent loss or damage, and to avoid unnecessary disturbance, physical modification, or separation of presumed individuals and associated funerary objects.

2. A reasonable and good-faith effort shall be made to incorporate and accommodate the traditional knowledge of lineal descendants, ʻohana, and Native Hawaiian organizations in the storage, treatment, or handling of iwi kūpuna or cultural items.

J. Temporary Storage

1. Iwi kūpuna and/or cultural items recovered for disposition will be respectfully housed in a secure, climate-controlled facility at Schofield Barracks until disposition is complete.

2. Archaeological collections that are <u>not</u> NAGPRA iwi kūpuna or cultural items will be stored at a USAG Hawaii facility or the archaeological service provider's on-island laboratory until the completion of the undertaking at which time the collections will be turned over to the USAG Hawaii Cultural Resources Office.

3. Temporary storage of iwi kūpuna or cultural items will be in secure cabinets, or other secure location, approved by USAG Hawaii.

4. Access to the storage facility can only be authorized by the CRM. Access shall be limited to necessary USAG Hawaii Cultural Resources staff, project archaeologists, and consulting partes as requested and approved by the CRM.

5. USAG Hawaii shall ensure that the storage facility has a log of personnel accessing the facility, and that each storage cabinet has a current and accurate inventory list. Copies of the log and inventory list will be made available upon request to consulting parties.

6. USAG Hawaii shall respond to consulting parties' requests to visit the storage facility within two (2) business days.

K. Archaeological Monitoring

1. An archaeological monitor will be present for undertakings involving ground disturbance in the following areas unless otherwise determined during the National Historic Preservation Act (NHPA) Section 106 process for a specific undertaking:

    a. Areas identified as jaucas sands (Appendix A: Figure 3).

    b. In undisturbed jaucas sands below areas identified as mixed fill soils. This includes below the existing runway grade (Appendix A: Figure 3).

2. Archaeological monitors are not required to be present for routine maintenance and repair within the existing runway grade unless determined otherwise during the NHPA Section 106 process for a specific undertaking.

3. The presence of an archaeological monitor for undertakings outside of the jaucas sands will be determined during the NHPA Section 106 process.

    a. Based on consultation and existing archaeological and ethnographical documentation, the CRM shall determine if the nature of an undertaking is the type that might result in the discovery of iwi kūpuna or cultural items.

b. If the CRM determines there is a likelihood to encounter iwi kūpuna or cultural items, the CRM shall ensure that professional archaeological monitoring services are incorporated into the project requirements.

4. If an archaeological monitor is determined necessary, the CRM shall ensure the development of a work plan for archaeological monitoring and discovery that is consistent with this document and any requirements identified through NHPA consultation.

5. The project proponent will be financially responsible for the cost of archaeological monitoring and all resulting excavations and reports.

L. Cultural Advisors

1. A cultural advisor will be present for undertakings involving ground disturbance in the following areas unless otherwise determined during the National Historic Preservation Act (NHPA) Section 106 process for a specific undertaking:

   a. Areas identified as jaucas sands (Appendix A: Figure 3).

   b. In undisturbed jaucas sands below areas identified as mixed fill soils. This includes below the existing runway grade (Appendix A: Figure 3).

2. Cultural advisors are not required to be present for routine maintenance and repair within the existing runway grade unless determined otherwise during the NHPA Section 106 process for a specific undertaking.

3. The presence of a cultural advisor for undertakings outside of the jaucas sands will be determined during the NHPA Section 106 process.

   a. Based on consultation and existing archaeological and ethnographical documentation, the CRM shall determine if the nature of an undertaking is the type that might result in the discovery of iwi kūpuna or cultural items.

   b. If the CRM determines there is a likelihood to encounter iwi kūpuna or cultural items, the CRM shall ensure that a cultural advisor is incorporated into the project requirements.

4. If a cultural advisor is determined necessary, the CRM shall ensure the presence and duties of a cultural advisor are incorporated into the work plan for archaeological monitoring and discovery that is consistent with this document and any requirements identified through NHPA consultation.

5. Cultural advisor duties may include communicating with and providing regular updates to consulting parties, providing cultural awareness briefings to project personnel, observing ground disturbance with the archaeological monitor, conducting appropriate cultural protocols upon the discovery and treatment of iwi kūpuna and cultural items, as well as providing advice on appropriate handling of cultural items.

6. Kanaka Maoli consulting parties request that cultural advisors have professional qualifications, including traditional connections to the land in the area and/or the Kanaka Maoli ‘ohana that lived in the area, knowledge of appropriate cultural protocols, and training with reputable kūpuna.

7. The project proponent will be financially responsible for the cost of a cultural advisor.

8. Cultural Advisor Selection:

    a. If a cultural advisor is determined necessary, the CRM will request a list of 3-5 cultural advisors from the consulting parties depending on the expected duration of the project.

    b. The consulting parties will develop and reach agreement on the list of cultural advisors amongst themselves and provide the list to the CRM within 30 days of receiving the request from the CRM. The list will identify the preferred cultural advisor for the project and back up cultural advisors in the event the preferred cultural advisor is unavailable, as well as all consulting parties who participated in the development of and agreed to the list.

    c. If consulting parties cannot reach an agreement on the list of cultural advisors within 30 days of the request or none of the cultural advisors selected by the consulting parties are available, the CRM shall organize a meeting to review potential cultural advisors and select a new list of cultural advisors. The list of cultural advisors developed during the meeting will be sent to consulting parties for an additional 30-day review period.

d. If consulting parties do not respond within 30 days of the first request for a cultural advisor list (Section L.8.b.) or, as applicable, do not respond or cannot reach an agreement within 30 days of receiving the additional cultural advisors list (Section L.8.c), the USAG Hawaii CRM will identify appropriate options for the proponent to select the cultural advisor(s).

M. Cultural Awareness Briefings

If an archaeological monitor and cultural advisor is determined necessary pursuant to Section K and L of this CA, or during the NHPA Section 106 process, the cultural advisor will provide all project personnel with a cultural awareness briefing prior to the start of the project. If the cultural advisor is unavailable, the archaeological monitor or a member of the USAG Hawaii Cultural Resources staff will provide the briefing.

N. Roles and Responsibilities

1. USAG Hawaii:

   a. Shall be responsible for maintaining inventories of:

      i. All new discoveries of iwi kūpuna and cultural items encountered;

      ii. All iwi kūpuna and cultural items that are stored at USAG Hawaii facilities, or other designated storage facility;

      iii. All iwi kūpuna and cultural items for which the custody has been transferred to claimants; and

      iv. All iwi kūpuna and cultural items reburied at a designated cemetery.

   b. Shall be responsible for maintaining records, including GIS data, reports, agreements, requests, and administrative records.

   c. Shall provide the supplies, materials, and services as stipulated throughout this document, as well as the personnel to fulfill the USAG Hawaii requirements of this document, as feasible.

2. Kanaka Maoli Consulting Parties:

    a. Shall keep their contact information current, as well as any designated secondary points of contact, with the CRM to facilitate notifications and distribution of materials.

    b. Shall respond to all correspondence within the specified timeframes, including, but not limited to, notices of discoveries and timeframes to conduct cultural protocols, as well as notice of intended disposition (NID).

    c. Shall submit written requests for preservation-in-place.

    d. Shall submit written claims for disposition of iwi kūpuna or cultural items.

    e. Shall provide written verification of physical transfer after disposition of iwi kūpuna or cultural items.

    f. Shall participate in the development of written reburial agreements for the reburial of iwi kūpuna and cultural items, as applicable.

    g. Shall participate in the selection of cultural advisor(s) as outlined in Section L.8.

    h. Shall provide the supplies and materials as stipulated throughout this document.

Plan for Disposition

If recovery has occurred, upon completion of the analysis, USAG Hawaii shall follow the procedures for disposition in accordance with all NAGPRA regulations at 43 CFR § 10.7 and applicable Army regulations.

Additional Parties

A. If at any time during the life of this agreement any ‘ohana or NHO expresses interest in participating in this agreement and can demonstrate at least equal strength of their claim relative to the claims of the Kanaka Maoli consulting parties, USAG Hawaii shall consult with the ‘ohana or NHO and may invite them to sign this CA.

B. The addition of a Kanaka Maoli consulting party to this agreement does not constitute an amendment to this agreement.

Terms of Agreement

A. This CA shall become effective when signed by the Commander of USAG Hawaii and shall remain in effect until terminated by the Commander.

B. Updating appendices and appending additional reference material to this CA are not considered to be amendments and does not require the signature of the Garrison Commander to become effective.

C. Amendments

1. Any responsible or consulting party may propose to USAG Hawaii that the terms of this CA be amended, whereupon USAG Hawaii shall consider the proposed amendment.

2. USAG Hawaii shall make reasonable and good faith efforts to consult with all parties to this agreement on the proposed amendments. In the event any consulting party is unresponsive following three contact attempts by email or telephone, the Garrison Commander reserves the right to decide the subsequent course of action.

3. Any amendment shall become effective upon the signature USAG Hawaii Garrison Commander.

D. Withdrawal

1. Any responsible or consulting party may withdraw their participation in this CA by providing 30-day written notice to the other parties.

2. Withdrawal of any consulting party from this CA does not terminate the agreement.

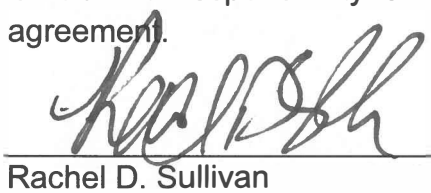
Anti-Deficiency Act

The stipulations of the CA are subject to the provisions of the Anti-Deficiency Act (31 USC § 1341). USAG Hawaii will make reasonable and good faith efforts to secure the necessary funds to implement this CA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs USAG Hawaii's ability to implement the procedures of this CA, USAG Hawaii will consult with the Kanaka Maoli consulting parties in accordance with the amendment and termination procedures outlined in the Terms of Agreement.

Signatures

Federal Agency Official:

The signature of the USAG Hawaii Garrison Commander, as the Federal Agency Official with responsibility for installation compliance with NAGPRA, executes this agreement.



24 NOV 2025

Rachel D. Sullivan
Colonel, U.S. Army
Commanding

Date

Kanaka Maoli Consulting Parties:

The signature of Kanaka Maoli consulting parties indicates their participation in consultation to develop this agreement and concurrence with the stipulations.



Carly Antone
Nā Manu o Kaiona

01 Dec 2025
Date



Kapena Liu
Kawaihāpai ʻOhana

11/26/2025
Date

Appendix A:
Maps

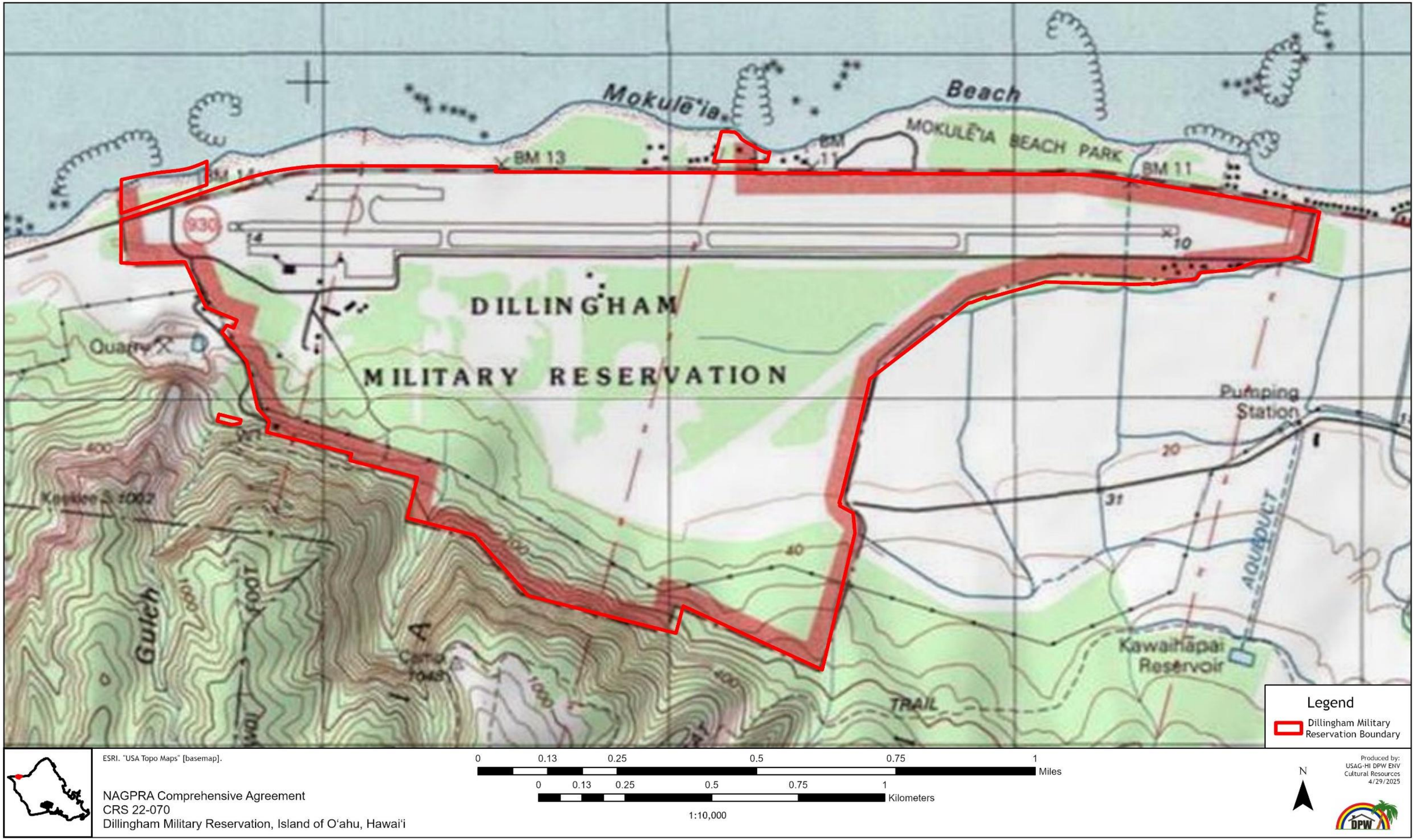


Figure 1. Topographic map of Dillingham Military Reservation

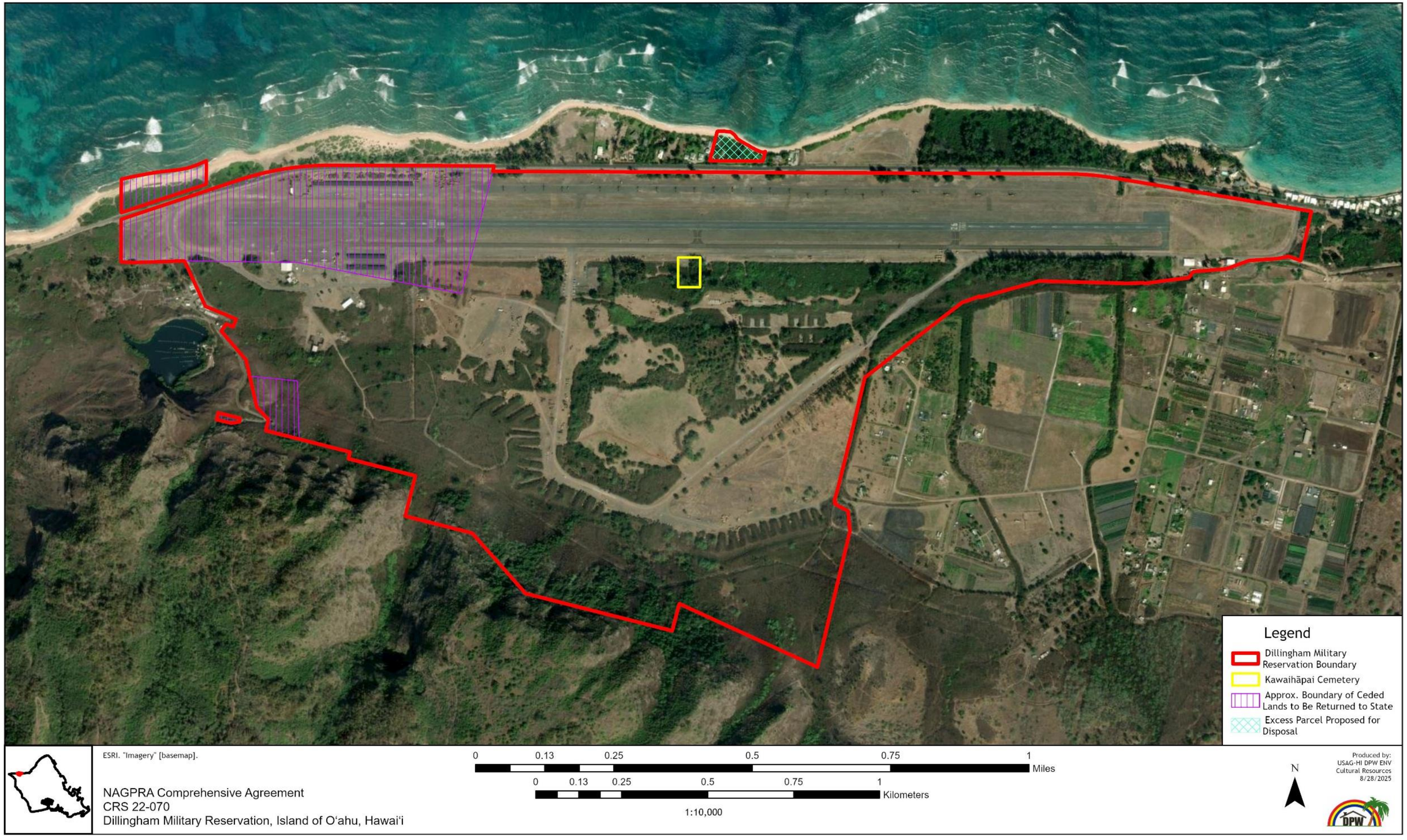


Figure 2. Aerial map of Dillingham Military Reservation depicting approximate land transfer locations and the Kawaihāpai Cemetery

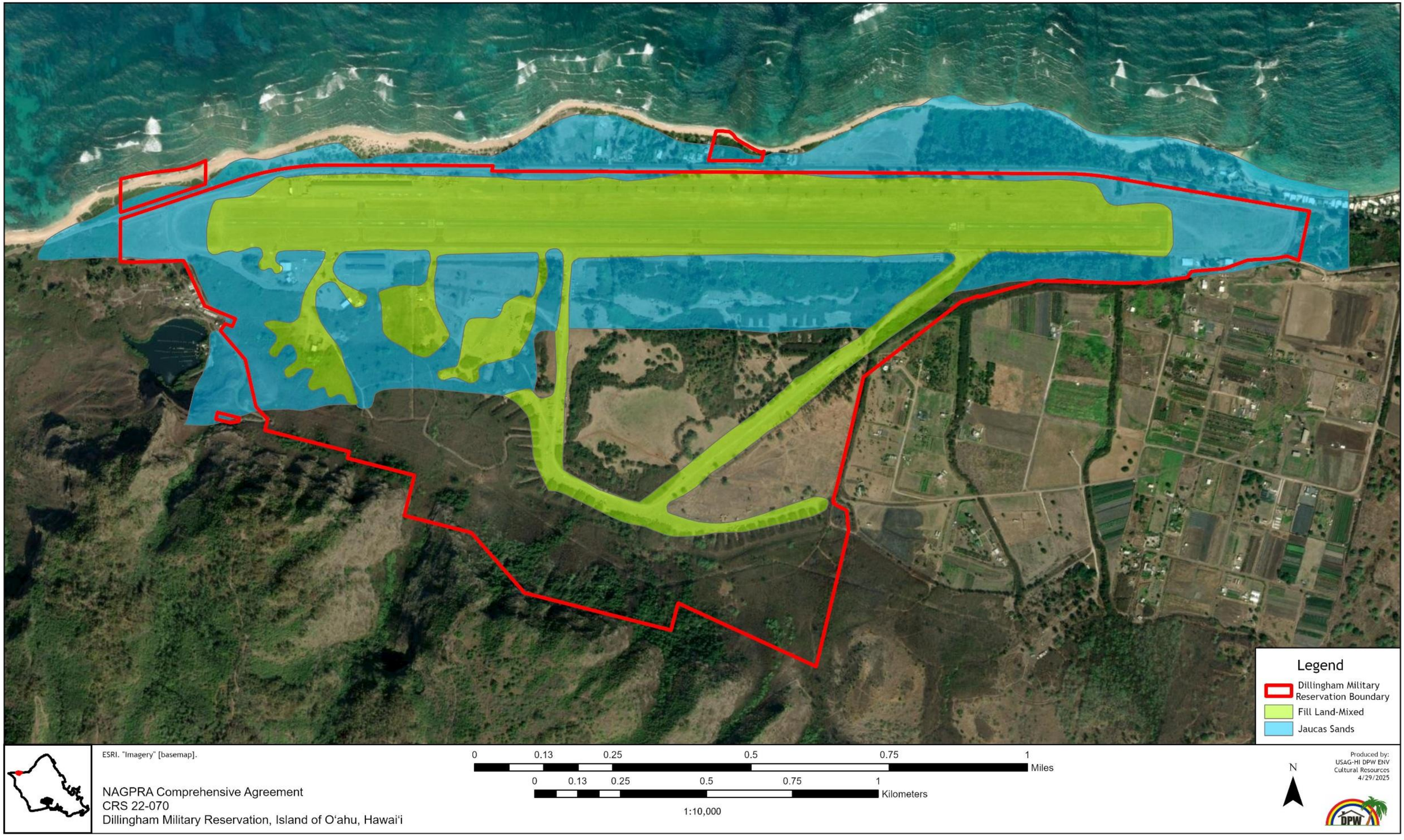


Figure 3. Map depicting Jaucas Sands and Mixed Fill at Dillingham Military Reservation

Appendix B:
Record of Consultation

Record of Consultation
for the U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

Initiation of Consultation

On May 21, 2025, written invitations to consult on the development of this Comprehensive Agreement (CA) were transmitted by the U.S. Army Garrison (USAG) Hawaii to the consulting parties listed in Table 1 with the exception of Mr. Kila, who was sent the invitation on July 2, 2025 at the suggestion of another consulting party. The invitation included a first draft of the CA and a list of all parties who received the invitation. Responses received by USAG Hawaii regarding the invitation and first draft are summarized in Table 1. Copies of each invitation to consult and all responses are on file with the USAG Hawaii Cultural Resources Section (CRS).

Table 1. Invitation Distribution List and Response Summaries

Consulting Party	Response
Mr. William J. Aila, Jr.and Mrs. Melva N. Aila Hui Mālama O Mākua	No response
Ms. Olinda (Nina) Fisher Ka ʻOhana O Hoʻohuli	No response
Dr. Haʻaheo Guanson Pacific Justice and Reconciliation Center, Native Hawaiian Church	No response
Mr. Josiah L. (Black) Hoʻohuli Ka ʻOhana O Hoʻohuli	No response
Ms. Dre Kalili Association of Hawaiian Civic Clubs	No response
Ms. Leilani Lindsey Kaʻapuni ʻOhana Lindsey	No response
Ms. Janis Keona Mark Mahu ʻOhana	No response
Ms. Carolyn Keala Norman 'Ohana Keaweamahi	No response
Lopaka Oliveira Heir of Kuihelani/Kaapuiki	No response
Dr. Kahu Kaleo Patterson Pacific Justice and Reconciliation Center	No response
Ms. Healani Sonoda-Pale Pu'uhonua o Wailupe	No response
Ms. Carly Rei Antone Nā Manu o Kaiona	May 21, 2025: Acknowledged Receipt June 19, 2025: Submitted comments on the first draft CA
Ms. Stacy Kealohalani Ferreira Office of Hawaiian Affairs	May 21, 2025: Email Read Receipt
Aliʻi Sir Nathan Keola Grace Royal Order of Kamehameha I, Moku ʻo Kōhala	No response
Mr. William "Willie" Aweau Hoʻohuli Ka ʻOhana O Hoʻohuli	No response

Record of Consultation
for the U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at
Dillingham Military Reservation

Consulting Party	Response
Mr. Matthew Kahoopii House of Nobles	May 27, 2025: Acknowledged Receipt
Mr. Glen Makakauali'i Kila Koa Ike Marae Haakoa	July 3, 2025: Acknowledged Receipt
Mr. Tom Lenchanko ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau	May 21, 2025: Acknowledged Receipt May 22, 2025: Requested draft version with all black text. May 23, 2025: Requested fillable draft version.
Mr. Kapena Liu Kawaihāpai ʻOhana	May 3, 2025: Acknowledged receipt May 8, 2025: Confirmed review of the draft with no comments or edits.
Mr. James Medeiros Sr. ʻOhana Medeiros Protect Keopuka Ohana	No response
Mr. Christophor Oliveira Marae Ha'akoa	No response
Ms. Kaleo Paik Hoi Mai Ka Lei I Mamo Aha Wahine	No response
Mr. Joseph K. Simpliciano Jr. Kingdom Pathways	No response
Ms. Milillani B. Trask Na Koa Ikaika Ka Lahui Hawaii	No response
Ms. Kēhaulani Souza	No response
Mr. William Young House of Nobles	May 22, 2025: Acknowledged Receipt
Mr. Harry Wasson Hui Malama ʻAina ʻO Laʻie, Mahiʻai, Kiʻai	No response

Consultation Sessions and Results

On July 10, 2025, at Dillingham Military Reservation (DMR), Tom Lenchanko (ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau) and Matthew Kahoopii and his associates (House of Nobles) met with Dave Crowley (USAG Hawaii Cultural Resources Manager), Katie West (USAG Hawaii Archaeologist), and Anthony Casciano (Colorado State University [CSU] Center for the Environmental Management of Military Lands [CEMML]) to discuss the removal of an underground fuel storage tank (Project # CRS-23-198) and the first draft of the CA. The meeting was held at the request of Mr. Lenchanko and Mr. Kahoopii for the primary purpose of viewing the location of the proposed underground storage tank removal. However, Mr. Lenchanko requested a NAGPRA discussion be included in the meeting, as well.

During the July 10th meeting, Mr. Crowley provided a history of past NAGPRA actions at DMR and explained the purpose of the CA and how the CA relates to the underground storage tank removal and other future projects. No comments on the first draft of the CA were provided by consulting parties during the meeting.

On August 19, 2025, at the East Base Conference Room at Schofield Barracks, Carly Antone (Nā Manu o Kaiona), Kapena Liu (Kawaihāpai ʻOhana), and Tom Lenchanko (ʻAha Kūkaniloko Koʻa Mana Mea Ola Kanaka Mauli Hoalii Iku Pau) met with Dave Crowley (USAG Hawaii Cultural Resources Manager), Laura Gilda (USAG Hawaii Lead Archaeologist), Katie West (USAG Hawaii Archaeologist), and Amberle Czubernat (CSU CEMML). This meeting was an in-person opportunity to provide comments and discuss topics within the CA that required additional information and consultation prior to the distribution of a second draft of the CA. The topics discussed included the revision of Plan of Action Section L (Cultural Advisors) and the addition of Plan of Action Sections H.11. (Kawaihāpai Cemetery and Reburial Area) and M (Cultural Awareness Briefings), as well as the proper use of the term Kanaka Maoli.

Section L (Cultural Advisors) revisions included the process for determining when a cultural advisor is necessary, the process for selecting cultural advisor(s), the duties of a cultural advisor, and the resolution process for cultural advisor selection disputes. The addition of Section M (Cultural Awareness Briefings) included when to and who would provide required cultural awareness briefings. Section H.11. (Kawaihāpai Cemetery and Reburial Area) included background and locational information on the cemetery, as well as maintenance and protection responsibilities. The term Kanaka Maoli was added to Plan of Action Section A (Definitions), and the term Native Hawaiian was replaced by the term Kanaka Maoli as appropriate throughout the document.

The written comments received from Ms. Antone on the first draft and the revisions and additions discussed during the August 19th meeting were incorporated into the second draft of the CA, which was distributed to the August 19th meeting attendees on August 28, 2025. Comments on the second draft of the CA were received from Ms. Antone and Mr. Lenchanko, which resulted in a revision of the definition of the term Kanaka Maoli for the final CA.

Copies of the first and second drafts of the CA, all correspondence, and meeting minutes are on file with the USAG Hawaii CRS.

Appendix C:
Excavation Standard Operating Procedures:
Iwi Kūpuna and Cultural Items

U.S. Army Garrison Hawaii
Excavation Standard Operating Procedures: Iwi Kūpuna and Cultural Items

A. Permits and Professional Qualifications

Contractors must obtain a U.S. Army Garrison (USAG) Hawaii Permit for Cultural Resource Investigations and adhere to the professional qualifications for personnel therein.

B. Methodology

1. Iwi kūpuna and cultural items shall be documented in original context to the extent feasible.
2. Excavation shall be performed using controlled archaeological methods.
3. 1 x 1-meter units will be excavated in 10-centimeter arbitrary levels unless determined otherwise by the USAG Hawaii Cultural Resources Manager (CRM) in consultation with consulting parties.
4. The location and number of 1 x 1-meter units will be determined by professional judgement and adjusted as results become available in coordination with the USAG Hawaii CRM. It may be necessary to conduct exploratory test units or hand trenches where minimal to no feature locational/directional indicators are present.
5. The total depth of excavation and/or the required number of arbitrary levels sterile of cultural materials for unit termination will be determined in coordination with the USAG Hawaii CRM on a case-by-case basis.
6. Horizontal and vertical proveniences will be measured systematically from a datum(s).
7. Shovels, hand trowels, and non-metal tools may be used, as appropriate. Only non-metal tools may be used in contact with iwi kūpuna.
8. Excavated material will be passed through a 1/8-inch mesh screen except where the USAG Hawaii CRM approves 1/4-inch mesh screen on a limited basis to efficiently remove overburden and reach the cultural level.
9. Iwi kūpuna and cultural items will be rested on or wrapped with muslin (or similar material) and placed within lauhala baskets (or other breathable and natural container) prior to containment. Adequate ventilation and storage spacing will be maintained.
10. In a multiple-burial scenario, all observed burials and associated cultural items shall be excavated as a unit to ensure no separation occurs.
11. All excavated items and samples shall be labeled by an archaeologist with all provenience information and recorded on a maintained inventory list.

C. Documentation

1. Field Data Forms
   a. Standard excavation forms approved by USAG Hawaii will be utilized.
   b. A daily log will be kept of activities, schedule, personnel, field conditions, and general observations.
2. Photographs
   a. General locational photos are permitted at the discovery location. The iwi kūpuna must be covered in general locational photos, or photos may be taken of the location after the remains are removed to document setting, context, and location.
   b. USAG Hawaii Cultural Resources staff may take the minimal photo documentation of iwi kūpuna and cultural items necessary to fulfill management responsibilities, such as the documentation and monitoring of condition while iwi kūpuna and cultural items are in temporary storage. Light exposure will be as minimal as possible.
3. Sketches and Drawings
   a. Burials shall be sketched or drawn *in situ* in plan view and, as applicable, profile view, prior to any removal.
   b. A large-scale map shall be sketched or drawn in plan view showing the discovery in relation to excavation and test units, datum(s), and any relevant geographic, natural, cultural, and modern features.
   c. Soil profiles shall be sketched of at least one wall of each test or excavation unit to show relative stratigraphy in the vicinity of the discovery and annotated with soil descriptions, including texture, structure, and color.
   d. At a minimum, all sketches and drawings shall include a legend, north arrow for plan views, direction facing in degrees for profiles, scale, recorder's name, date, area designation, and feature designation.
4. Locational Information
   a. GIS data shall be collected, which may include, but is not limited to, feature and artifact points and polygons, a site boundary if applicable, excavation and test units, and datum(s).
   b. Discoveries shall be plotted on a 1:24k topographic map and a close-up aerial image overlaid with the project design.
   c. A Data Dictionary approved by USAG Hawaii will be utilized for data collection.

D. Analysis

Free, prior, and informed consent from Kanaka Maoli consulting parties will be obtained by USAG Hawaii in writing prior to performing or allowing any research on iwi kūpuna or cultural items.

E. Reporting and Deliverables

1. All reporting and deliverables will adhere to the requirements of the applicable USAG Hawaii Permit for Cultural Resource Investigations and any applicable project specific archaeological work plans.
2. Reporting and deliverables may include, but are not limited to:
    a. Progress reports, including project status, work conducted to date, and anticipated schedule, submitted to the CRM at an interval to be determined by the CRM with consideration for anticipated excavation duration and complexity.
    b. End of Fieldwork Summary Report, a minimum of one Draft Report, and a Final Technical Report. The draft and final reports will synthesize all background and field data into a coherent report, and include background information, methodology, results, locational maps, feature sketches/drawings, and stratigraphic profiles.
    c. All notes, photographs, drawings, sketches, and final GIS data.

F. Confidentiality

All involved parties shall protect information regarding the nature and location of any archaeological resource, including burials and cultural items, in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

Appendix D:
Transfer of Custody Acknowledgement Template

[INSERT INTO LETTER HEAD TEMPLATE]

TRANSFER OF CUSTODY ACKNOWLEDGEMENT

Transfer of Custody from U.S. Army Garrison Hawaii
to [Designated claimant]

We hereby document the transfer of custody of iwi kūpuna and cultural items discovered at Dillingham Military Reservation from U.S. Army Garrison (USAG) Hawaii to the [NHO/recipient name]. The USAG Hawaii hereby relinquishes possession of the iwi kūpuna and cultural items to [NHO/recipient name].

The iwi kūpuna and/or cultural items consist of [number] minimum number of individuals (MNI) and [number] of cultural items described in a Notice of [Inventory Completion/Notice of Intended Disposition/etc.], which was published in the [Federal Register/newspaper/etc] on [publication date(s)], in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001 et seq. The iwi kūpuna and cultural items inventoried in Enclosure 1 have been in the custody of USAG Hawaii.

Transfer of the iwi kūpuna and cultural items is effective as of [date], and is agreed to, and accepted by, the undersigned.

_____ _____

Colonel [Name of Garrison Commander]
Commander
US Army Garrison, Hawaii

Date

_____ _____

[Name of NHO Recipient]
[Title of NHO Recipient] [NHO Name]

Date

Enclosure: Inventory

Appendix E:
Reburial Agreement Template

REBURIAL AGREEMENT
Between
U.S. Army Garrison Hawaii and [Name of NHO]

In accordance with the terms of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013), 43 CFR Part 10 of its implementing regulations the United States Army Garrison (USAG) Hawaii has transferred legal control of Native Hawaiian remains and cultural items described in the [*Federal Register Notice/Newspaper Notice*] published [*date of publication*] to: [recipient *NHO*].

The Native Hawaiian remains and cultural items listed in Exhibit A will be reburied in the USAG Hawaii Cemetery at [cemetery name] as mutually agreed upon by the USAG Hawaii and the [*Name of NHO]:*

NOW THEREFORE, USAG Hawaii and [*Name of NHO]* agree that the terms of this Reburial Agreement shall document (1) transfer of custody of the Native Hawaiian remains [*and cultural items*] listed in Exhibit A for reburial in the [cemetery name]; (2) a process for reburial; and, a framework for access to, and use of the Cemetery following reburial, as provided below.

I. TRANSFER OF NATIVE HAWAIIAN REMAINS [*AND CULTURAL ITEMS]*

Pursuant to the terms of NAGPRA and its implementing regulations (43 CFR Part 10), and as reflected in the [*Federal Register Notice/Newspaper Notice*] published [*date of publication*], the USAG Hawaii has transferred to the [*Name of NHO]* custody of the Native Hawaiian remains and cultural items documented in the outgoing receipt attached hereto as Exhibit A [*may be a different list*].

II. REBURIAL

[Name of Cemetery], USAG Hawaii, and [*Name of NHO]* acknowledge and agree that they have had an opportunity to provide meaningful input regarding the location of the reburial area, the reburial site is within an area of compatible use and has been approved by both the USAG Hawaii and the [*Name NHO*].

USAG Hawaii and the [*Name of NHO]* will prepare the ground for reburial of the Native Hawaiian remains [*and cultural items*], as agreed to in prior meeting(s), the Comprehensive Agreement, and as described below.

A. Preparation

USAG Hawaii will continue to coordinate with [*Name of NHO*] on preparation activities for the reburial of the Native Hawaiian remains and cultural items, including but not limited to, the use of wrappings and containers, subject to USAG Hawaii's reasonable discretion. The [*Name of NHO*] will take the lead on preparation of the remains, in accordance with their traditions, prior to reburial.

Description of Preparation

B. Reburial

While USAG Hawaii is the lead entity with respect to activities associated with the reburial in the [cemetery name], it has consulted meaningfully with the [*Name NHO*] and will take reasonable and appropriate steps to support and maintain the sanctity of the reburial. Only those representatives and workers designated by USAG Hawaii and the [Name of NHO] will be allowed to attend and/or participate in the reburial. The timing and scheduling of the events will be determined by USAG Hawaii in coordination with the [*Name of NHO*].

The Native Hawaiian remains and cultural items shall be reburied in a manner as mutually agreed upon by USAG Hawaii and [*Name of NHO*].

The [*Name of NHO*] agree that they will take the lead on ceremony, in accordance with their traditions, to include the giving of gifts to the ancestors being reburied, as appropriate. However, the [*Name of NHO*] agree that USAG Hawaii must determine that all aspects of the ceremony are in compliance with applicable Federal, State and Local laws, regulations and policies.

To the extent permitted by applicable law, the Reburial Ceremony will be closed to the general public. Representatives for USAG Hawaii and [*Name of NHO*] shall be permitted to attend if mutually agreed upon by USAG Hawaii and the [*Name of NHO*]. To the extent reasonably practicable, USAG Hawaii and the [name of cemetery] will assist the [*Name of NHO*] in creating solitude for the ceremony and to minimize potential interference from visitors.

C. Marker

USAG Hawaii will install a grave-marker to identify the location of the reburial site, at the [*Name of NHO*] request. The [*Name of NHO*] will determine the inscription, subject to USAG Hawaii approval.

III. SITE ACCESS AND USE AFTER REBURIAL

The [*Name of NHO*] shall have access to the [name of cemetery] for religious and ceremonial uses, subject to any use restrictions, existing rights of way, easements or accessibility issues relating to the Cemetery and the Army installation. Subject to USAG Hawaii approval, which shall not be unreasonably withheld, [*Name of NHO*] Members may enter the [name of cemetery] at reasonable times during the day and may remain for a reasonable duration thereafter, in order to carry out cultural practices consistent with the purposes of this Reburial Agreement. Future reinterments shall be subject to the written approval of the Executive Director, Office of Army Cemeteries, in accordance with the Dillingham Military Reservation Comprehensive Agreement, and requisite documentation as set forth above and appended to Exhibit A.

USAG Hawaii reserves to itself and its representatives, all rights accruing from its ownership of the [name of cemetery], including the right to engage in or permit uses of the Reburial Cemetery which are consistent and compliant with all applicable laws and policies. The [*Name of NHO*] acknowledge that USAG Hawaii has the right to conduct generally-accepted property management activities in the Reburial Cemetery, in a manner consistent and compliant with all applicable laws and policies, and the [*Name of NHO*] shall not unreasonably interfere with the Army's use of the [name of cemetery].

IV. COSTS

USAG Hawaii will assume the costs of the reburial (the opening and closing of the gravesite) of the Native Hawaiian remains and cultural items listed in Exhibit A. USAG Hawaii will also assume the cost of the marker, including the inscription and installation, and preparation for repatriation as stated in the Dillingham Military Reservation Comprehensive Agreement. The [*Name of NHO*] will assume their own costs associated with this Reburial Agreement, including but not limited to preparation activities associated with the remains and cultural items that is above and beyond what is outlined in the Comprehensive Agreement.

V. TERMS AND TERMINATION

This Reburial Agreement shall become effective once fully executed by the Parties hereto and continue in perpetuity.

VI. GENERAL PROVISIONS

A. As a federal entity, USAG Hawaii neither objects to, nor endorses, any religious or ceremonial rituals that may be performed.

B. The [*Name of NHO*] acknowledge that they have provided meaningful input for this Reburial Agreement. Any issues regarding this Reburial Agreement raised by other persons or entities may be considered and decided upon by USAG Hawaii, in consultation with [*Name of NHO*].

C. Nothing in this Reburial Agreement shall be construed as obligating the Army to the expenditure of funds or for future payments of money in excess of that which is contemplated by this Reburial Agreement, or otherwise required by law.

D. Nothing contained in this Reburial Agreement shall be construed to entitle the NHO, individually or collectively, for any injury to or change in the Cemetery resulting from causes beyond their control, including without limitation, fire, flood, storm, earthquakes and earth movement, or from any prudent action taken by USAG Hawaii or any of their representatives under emergency conditions to prevent, abate, or mitigate significant injury to the Cemetery.

E. Exhibit A is made a part of this Reburial Agreement by this reference as though fully incorporated herein. New supplements or amendments to this Reburial Agreement may be proposed in writing by any signatory and shall become effective only upon agreement and signature by of all Signatories.

IN WITNESS WHEREOF, the Parties hereto have executed this Reburial Agreement as of the latest date of USAG Hawaii signatures below:

U.S. ARMY:
By and on behalf of USAG Hawaii

_____ _____

Colonel [Name of Garrison Commander] Date
Commander
US Army Garrison, Hawaii

[*COMPLETE NHO NAME(S) – IN ALL CAPS*]

_____ _____

[*Name*] Date

3Rs Explosives Safety Guide

Construction Industry









Recognize
Retreat
Report

THE UNITED STATES HAS ALWAYS MAINTAINED A HIGHLY TRAINED AND READY FORCE TO PROTECT ITS NATIONAL INTERESTS.

After both world wars and recently with force realignment and modernization efforts, the Department of Defense (DoD) closed a number of military installations and training areas, and returned other lands previously used for military-related activities to public use. Because of the live-fire training and testing required to maintain this force, millions of acres in the United States are known or suspected to contain military munitions in the form of unexploded ordnance (UXO), or discarded military munitions (DMM). In some cases, munitions constituents (e.g., TNT) may also exist in high enough concentrations to present an explosive (detonation) hazard. Although DoD routinely made an effort to remove any explosive hazards present before releasing land from its control, some may remain. These explosive hazards may be found on the surface or in the subsurface.



Munitions are designed to injure, maim or kill people, or to destroy equipment or structures. Consider any encounter with a known or suspected munition as an extremely dangerous situation.

During construction work (e.g. clearing vegetation, grubbing, grading, or excavation), munitions may be encountered. This is particularly true for areas known to have once been used by the military for munitions-related activities (e.g., live-fire training and testing, and munitions demilitarization).

Military munitions operating buildings (e.g., munitions production and demilitarization facilities) and any installed equipment may contain explosives residue in high enough concetrations to present an explosive hazard. Building features (e.g., floors, walls, drains, internal and external piping, and ventilation systems), in which explosives residues could accumulate and present an explosive hazard, are of particular concern. Industrial equipment, particularly equipment with internal cavities, from facilities used in munitions production or demilitarization operations (e.g., cast loading, milling, or steam-out) that generated explosive residues (e.g., dust or vapors) is also of concern.

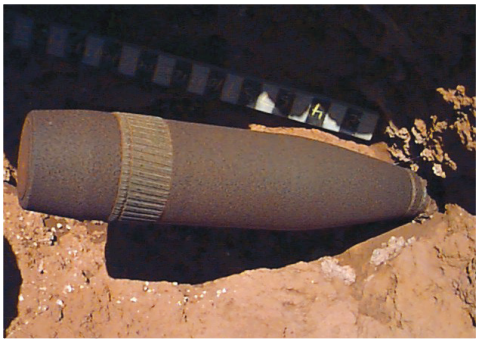
WILL YOU KNOW WHAT TO DO IF YOU ENCOUNTER A MUNITION?

Areas at which DoD conducted munitions-related activities include, but are not limited to operational and former ranges, and areas used for munitions demilitarization. The types of explosive hazards present may differ between areas. As an example, a former impact area may contain UXO, while a former maneuver area may only contain DMM.

Munitions can also be found in areas where combat operations once occurred. Even cannon balls found on Civil War battlefields present a potential explosive hazard. However, for a variety of reasons (unauthorized disposals, discarded souvenirs) munitions may be encountered almost anywhere.



Prior to working in areas with a history of military use, even areas where DoD has completed an environmental response to remove any hazards detected, it is important to familiarize yourself with the site history and potential hazards. This can be provided through site-specific safety training. In some cases, safety officials may determine that on-site or on-call construction support by UXO-qualified personnel is necessary to help ensure the safety of construction workers, particularly during ground disturbing or intrusive activities.





MUNITIONS ARE DESIGNED TO BE DANGEROUS

Remember that munitions:





- Come in many shapes and sizes.
  - They could look like a:
    - Pointed pipe
    - Soda can
    - Baseball
    - Car muffler
  - They may:
    - Look new or old
    - Be found alone or in clusters
- Should be considered extremely dangerous regardless of size or age
- Munitions often become more dangerous with age, not safer

Munitions may be:



- Found almost anywhere
- Clearly visible on the surface
- Buried at depths of inches to many feet
- Partially or completely hidden by dirt or vegetation
- Found under paved areas (roads, parking lots) or building slabs
- Underwater, in lakes, streams, or the ocean
- Exposed by natural phenomena (e.g., tides)
- Easy or difficult to recognize

While munitions are most likely to be encountered during construction in areas where DoD conducted munitions-related activities, they may be encountered anywhere. To protect yourself and your co-workers, know whether munitions-related activities ever occurred at your work site, and learn to follow the 3Rs: Recognize, Retreat, Report.



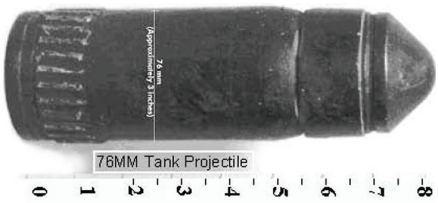
Recognize

Recognizing that you may have encountered a munition is one of the most important steps in reducing the potential risk of injury or death. Because munitions pose a potential explosive hazard, they should never be touched, moved or disturbed (handled).

WILL YOU DO THE RIGHT THING WHEN THE TIME COMES?

In 1993, a construction worker digging a trench unearthed what looked like large bullets. He recognized the potential danger, stopped digging and notified his supervisor. Local authorities were called. As a result of this worker's actions, nearly 150 high explosive tank shells were recovered from a former WWI training area.

Remember, whether complete or in pieces, any munition or suspect munition encountered should be considered extremely dangerous. Do the right thing! Immediately stop all operations in the area; do not touch, move or disturb it, and notify your supervisor or local authorities.



Retreat

If you encounter or suspect you may have encountered a munition, do not touch, move or disturb it. Instead, carefully retreat from the area by retracing your steps.

- Immediately stop all construction activities in the area, warning others of the potential danger.
- Do not approach the munition or a suspect munition. (Some fuzes are sensitive to changes in temperature, movement or pressure.)
- Move away from the area and keep others away from it!

Unfortunately, munitions are often popular, but potentially deadly souvenirs. Taking a munition for a keepsake presents an immediate and real danger to you. Bringing one home endangers your family, your friends, and your community. Don't be tempted.

Report

If you encounter or suspect you have encountered a munition, do not touch, move or disturb it. Instead, immediately stop construction activities and move away from the area and report what you saw.



Protect yourself, your co-workers, and the public by immediately reporting any munitions or suspect munitions encountered to your foreman, site supervisor, or by calling 911.

Provide as much information as possible about what you saw and where you saw it. This will help the police and explosive ordnance disposal personnel (usually referred to as EOD personnel) find, evaluate and address the situation.

If you believe you may have encountered a munition, report the following:

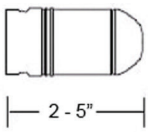
- The area where you encountered it.
- A general description of the munition, to include:
  - Its size
  - Its shape
  - Any readily visible markings--do not approach or handle the munition to see the markings

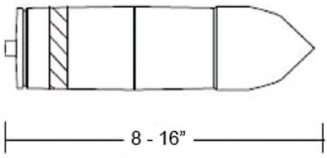


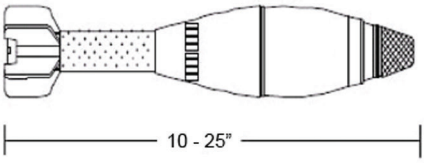


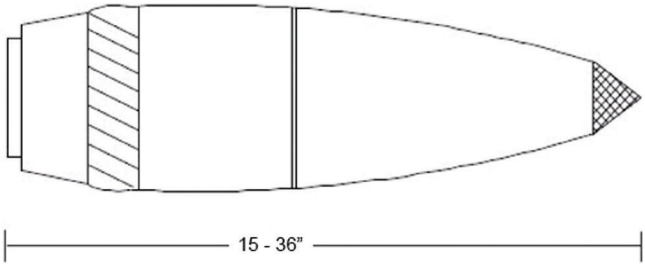


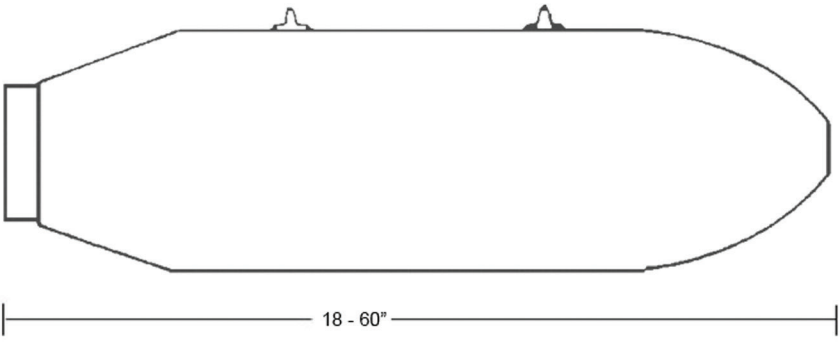
MUNITIONS COMMON SIZE AND SHAPE PROFILES











Don't Forget

- Munitions are dangerous and may not be easily recognizable!
- The history of your work site--know when you are working on a former military range or disposal area!
- Never touch, move or disturb a munition!

Follow the 3Rs

Recognize

When you may have come across a munition, and that munitions are dangerous

Retreat

Do not approach, touch, move, or disturb it, but carefully leave the area.

Report

Immediately what you saw and where you saw it to local law enforcement – call 911



For additional information visit the US Army's UXO Safety Education website

https://3Rs.mil

November 2022

HISTORY



Pohakuloa Training Area (PTA) was first used during World War II as a Marine Corps artillery live-fire training area. U.S. Marines from the 2nd and 5th Marine Divisions trained at PTA and on the western side of the Big Island in preparation for the Iwo Jima and Saipan campaigns. Few permanent structures existed at PTA during World War II. When the Marines trained at PTA, they slept in tents. After the war, PTA fell under the control of the Hawaii Territorial Guard, and in the mid-1950s, the U.S. Army took over PTA. From 1955 to 1958, Soldiers from the 65th Engineer Company built the Quonset huts, which are still in use.

PTA's 133,000 acres include an 80-acre cantonment area with a fuel yard, fire and police departments, and an airfield with a 3,700-foot runway. PTA's firing ranges allow units to conduct small-arms and crew-served weapons familiarization training and qualifications, as well as artillery and mortar live fire training. There has been continuous mortar and artillery live fire on PTA since its inception.

Due to the nature of the range activities, munitions may be present across the installation. These may include hand grenades, mortars, projectiles, practice and high explosive bombs, artillery shells, and rockets. Many munitions blend in with the environment and may be hard to see. Some areas are closed to hunting due to known explosives hazards, but munitions may remain in other areas as well.

To hunt at PTA, you must: possess a valid hunter education card and Hawaii hunting license; register on iSportsman; view the PTA safety briefing video and pass the safety quiz; clear a background check; register firearms with the PTA police; and purchase the appropriate hunting permit via iSportsman. Hunters must check in and out of hunting areas via iSportsman. Hunters are responsible for knowing where they are at all times and should refer to the latest hunting map and signs/markings to ensure they stay within the hunt boundary.

Munitions present may be heavily corroded, whole or in parts, buried or covered with vegetation, making them difficult to recognize. Do not approach, touch, move, or disturb anything encountered that may be a munition or part of one, but carefully leave the area. Consider munitions dangerous, regardless of how long they may have been in the environment. Help protect yourself from potential explosive hazards by following the 3Rs of Explosives Safety: **Recognize, Retreat, Report.**



40mm Projectile

Follow the 3Rs
of Explosives Safety

Recognize when you may have come across a munition, and that munitions are dangerous;

Retreat do not approach, touch, move, or disturb a suspect munition, but carefully leave the area; and

Report immediately what you saw and where you saw it to the emergency contacts in the table below.

IF YOU ENCOUNTER MUNITIONS

Emergency Contacts	
Pohakuloa Training Area	
Call Range Control	(808) 969-2455 or (808) 969-2456

Visit the U.S. Army's
Explosives Safety Education website:

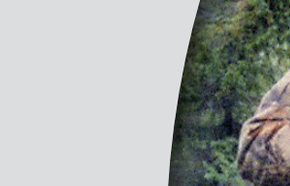
https://3Rs.mil

December 2022

3Rs Explosives Safety Guide

POHAKULOA TRAINING AREA

Hunters





Recognize
Retreat
Report

Follow the 3Rs
of Explosives Safety




105mm Projectile


Mortar Round

Recognize

When you see a munition and that it is dangerous.



Recognizing when you may have encountered a munition is the most important step in reducing the risk of injury or death. Munitions may be encountered on land or in the water. They may be easy or hard to identify. Although munitions may be present almost anywhere, hunting area maps identify areas of highest risk.

To avoid the risk of injury or death:

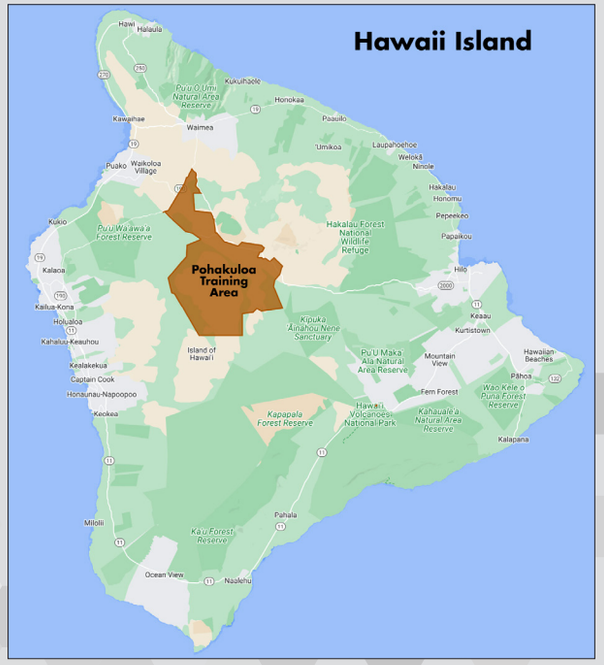
- Never approach, touch, move, or disturb a munition or suspect munition.
- Be aware that munitions do not become safer with age.
- Don't be tempted to take or keep a munition as a souvenir.

Munitions come in many sizes, shapes, and colors. Some may look like bullets or bombs, while others may look like pipes, small cans, or even a car muffler. Whether whole or in parts, new or old, shiny or rusty, munitions can still explode. The best way to avoid injury or death is to stay out of marked areas with no entry signs, heed posted warnings, and stay in designated hunting areas.

Retreat

Do not touch it, but carefully leave the area.

Avoid death or injury by recognizing that you may have encountered a munition and by promptly retreating from the area. If you encounter what you believe is a munition, do not approach, touch, move, or disturb it. Instead, immediately and carefully leave the area by retracing your steps—going out the way you entered. Once safely away from the munition, mark the path if possible (e.g., with a piece of clothing) so response personnel can find the munition.



Report

Call local authorities to report what you saw.

Protect yourself, your family, your friends, and your community by immediately reporting munitions or suspect munitions.

Help improve the safety of future hunts by providing as much information as possible about what you saw and where you saw it. This will help the police and military explosive ordnance disposal, police bomb squad, or authorized range personnel find, evaluate, and address the situation.

If you believe you may have encountered a munition, report:

- The area where you encountered it.
- Its general description. Do not approach, touch, move, or disturb it to get a better description.
- When possible, describe its:
  - Estimated size;
  - Shape; and
  - Visible markings, including coloring.


Rocket

BACKGROUND

Established in 1910 as the District of Hawaii, U.S. Army Garrison (USAG) Hawaii was a sub-element of the Department of California. It became the Hawaiian Department in 1911 and its headquarters moved to Fort Shafter in 1921. After the outbreak of World War II, the Hawaiian Department was charged with a variety of logistical support and installation functions across the Hawaiian Islands.



Damage to Wheeler Army Airfield on December 7, 1941

In the years after World War II, the Hawaiian Department headquarters was formally abolished, and Headquarters, U.S. Army Pacific was established in 1947. In 1957, U.S. Army Hawaii/25th Infantry Division was created as the new command. These two commands were separated in 1960, with the U.S. Army Hawaii assuming the role of installation support. U.S. Army Support Command Hawaii was established in 1973 to succeed U.S. Army Hawaii as the command responsible for installation services. On January 6, 1994, U.S. Army Support Command Hawaii was redesignated as USAG Hawaii.

Today, USAG Hawaii provides services, installation facilities, training, and recreational centers at 22 sites across the islands of Oahu and Hawaii, including Fort Shafter, Schofield Barracks, Wheeler Army Airfield, Kawailoa Training Area, and Pohakuloa Training Area. USAG Hawaii supports nearly 100,000 Soldiers, civilians, and family members across more than 167,000 acres of land and 5,200 buildings. There has been continuous artillery live fire on USAG Hawaii installations since their inception, including the use of mortars, aerial gunnery, 155mm Howitzers, grenade launchers, and explosive charges.

Due to the nature of the range activities, munitions may be present across the installations. Munitions present may be heavily corroded, whole or in parts, buried, or covered with vegetation, making them difficult to recognize. Do not approach, touch, or disturb anything encountered that may be a munition or part of one, but carefully leave the area. Consider munitions dangerous, regardless of how long they may have been in the environment. Help protect yourself, co-workers, and the public from potential explosive hazards present by following the 3Rs of Explosives Safety: **Recognize, Retreat, Report**.



3Rs Explosives Safety Guide

U.S. ARMY GARRISON HAWAII

IF YOU ENCOUNTER MUNITIONS

Emergency Contacts	
Installation Cantonment Areas and Off Post	
Call 911	
Oahu Training Areas and Ranges	
Call Range Control	(808) 655-1434
Pohakuloa Training Area	
Call Range Control	(808) 969-2455 or (808) 969-2456

Follow the 3Rs

of Explosives Safety

Recognize
Retreat
Report

Visit the U.S. Army's Explosives Safety Education website:

https://3Rs.mil

December 2022



Recognize
Retreat
Report



105mm Projectile

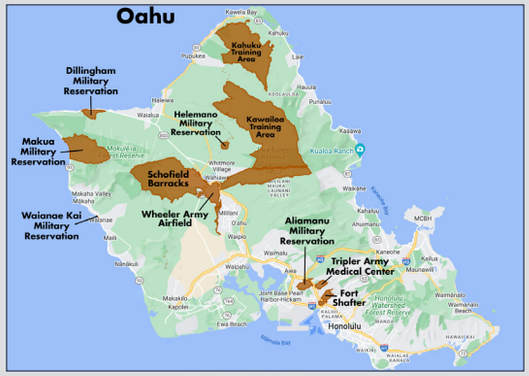


Mortar Round

FREQUENTLY ASKED QUESTIONS

Q: What are military munitions?

A: Military munitions are material used by our Nation's Armed Forces to defend the United States. Military munitions are dangerous by design. They are made to kill or injure enemy forces or damage enemy equipment. When military munitions do not function as intended (do what they are supposed to do) during use, they become unexploded ordnance or UXO.



Q: What do military munitions look like?

A: Military munitions come in many different sizes, shapes, and colors. Their size and shape depends on how the military intends to use them. For example, rounds used to train soldiers on crew-served weapons, like tanks and artillery, are large. Rockets, fired from aircraft or ground vehicles, can vary in size, as can bombs dropped from aircraft. Other types of munitions include grenades, practice mines, submunitions, simulators, and pyrotechnics. Weathering changes the appearance of military munitions making them more difficult to spot or recognize.

Q: Where could I encounter military munitions?

A: You are most likely to encounter munitions in areas where the military conducts or formerly conducted live-fire training or testing with military munitions, but they also may be encountered in other areas. The vast majority of military munitions, however, are in impact areas of both operational and former ranges. Because of changing military needs, locations once used by the military during training may now be used by the public for other purposes, such as recreational areas. Many of these locations are no longer on military installations.

Q: What do I do if I come across a military munition?

A: If you suspect you have come across a military munition, the best way to ensure your safety is to follow the 3Rs of Explosives Safety:

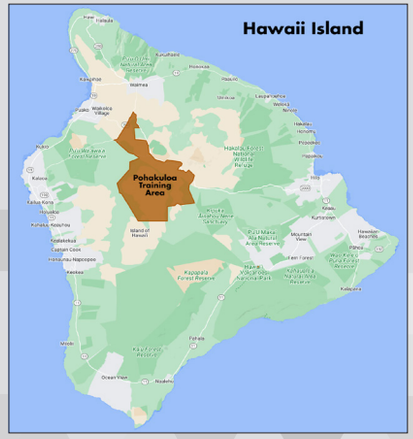
Recognize* — *when you see a munition and that it is dangerous;

Retreat* — *do not touch it, but carefully leave the area; and

Report* — *call 911 to tell the police what you saw

(see back panel for additional emergency contacts).

Remember, military munitions may be encountered anywhere. Should you come across a munition or suspect you may have, follow the 3Rs of Explosives Safety.

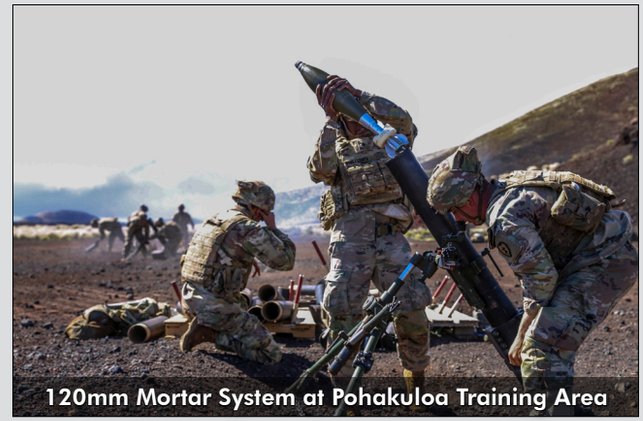


Follow the 3Rs
of Explosives Safety

Recognize when you may have come across a munition, and that munitions are dangerous;

Retreat do not approach, touch, move, or disturb a suspect munition, but carefully leave the area; and

Report immediately what you saw and where you saw it to emergency contacts on the back of this guide.



120mm Mortar System at Pohakuloa Training Area



105mm Howitzer Live-Fire Exercise at Schofield Barracks

Defense Visual Information Distribution Service

DLNR SHPD Letter

JOSH GREEN, M.D.
GOVERNOR | KE KIA'AINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

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CHAIRPERSON
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BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

September 15, 2025

IN REPLY REFER TO:
Project No.: 2025PR00730
Doc No.: 2509SH04
Archaeology
Architecture

Colonel Rachel D. Sullivan, Commanding
United States Army Installation Management Command
Headquarters, United States Army Garrison Hawaii
United States Department of the Army
745 Wright Avenue, Building 107, Wheeler Army Airfield
Schofield Barracks, Hawai'i 96857-5013
Email Reply to: usarmy.hawaii.crmp@army.mil
Electronic Transmittal Only, No Hard Copy to Follow

Dear Colonel Rachel Sullivan:

SUBJECT: **National Historic Preservation Act (NHPA) Section 106 Review –**
Continued Consultation and Request for Concurrence with the Determination of Effect
Removal of the Honolulu Soaring Hangar Fuel Underground Storage Tank and Associated Infrastructure
USAG Project # CRS-23-198
Ka'ena Ahupua'a, Waialua District, Island of O'ahu
TMK: (1) 6-8-014:001

The State Historic Preservation Division (SHPD) received a letter dated August 12, 2025 from the United States Department of the Army, U.S. Army Garrison (USAG) Hawaii to continue the Section 106 historic preservation process for the Removal of the Honolulu Soaring Hangar Fuel Underground Storage Tank and Associated Infrastructure project on the island of O'ahu and to request the State Historic Preservation Officer's (SHPO's) concurrence with the USAG Hawaii's determination of effect. The SHPD received this submittal on August 20, 2025 (HICRIS Submission No. 2025PR00730.003).

The USAG Hawaii leases a portion of the airfield at Dillingham Military Reservation (DMR) to the State of Hawaii Department of Transportation, Airports (HDOT-A) for commercial aviation purposes. The proposed State of Hawai'i Department of Transportation project will be permitted and conducted on federal lands under the jurisdiction of USAG Hawaii. The project is a federal undertaking as defined in 36 CFR 800.16(y) and is subject to compliance with Section 106 of the NHPA.

The HDOT-A proposes to excavate and remove a 12,000 gallon fuel UST, the associated underground asphalt concrete anchor pad, asphalt concrete apron, 10-gallon fill spill containment box, automatic and hand pump fueling dispensers, fuel filters, automatic tank gage system, leak detection system, control panels, QTpod fueling terminal, an underground tank vent pipe, an underground 12kV electrical service, electrical distribution equipment, and all incidental valves, piping, wires, fittings, etc. The contractor will conduct environmental sampling, hauling and disposal of all materials off-site. The site will be backfilled and compacted with imported, clean, suitable materials and finished with minor landscaping or a paved connection to the existing taxiway. There are no plans to install a replacement fueling facility at this time.

The total Area of Potential Effects (APE) for has been determined by the USAG Hawaii to be approximately 1 acre that includes all proposed areas of tank and infrastructure removal, as well as temporary workspace, such as staging areas and equipment turn-around space.

The USAG Hawaii identified one historic property within the APE, termed DPW-160, a board-formed, reinforced concrete aircraft revetment with two T-shaped compartments. Based on aerial imagery (U.S. Army 1942), it was constructed in 1942 to provide the aircraft and personnel a minimum level of protection from flying debris and munitions in the event of an aerial attack. A total of four identical multi-compartmented reinforced concrete revetments were constructed at DMR in 1942-1943. Two were demolished in the 1980s, and DPW-160 is one of two concrete revetments still standing at DMR. The USAG Hawaii determined DPW-160 is eligible for listing in the NRHP under Criterion C because it embodies distinctive characteristics of a type and period of construction: concrete aircraft revetments of World War II. The SHPO concurred with the USAG-HI's determination in a letter dated July 25, 2025 (SHPD Doc. No. 2507SH12).

The proposed activity in the vicinity of DPW-160 consists of the removal of the electrical line and vent. The USAG states that a vertical, aboveground segment of fuel ventilation pipe proposed for removal is attached to the exterior wall of the revetment by one screw and a metal bracket, which will be carefully removed. The USAG has determined the removal of the vertical portion of the vent pipe will not result in any damage or alteration to the revetment.

The SHPD conducted a modest search for previously documented historic properties within the area of the APE. This review found that south, or mauka, of the APE there are several historic properties, related to both historical era military and ranching activities as well as an agriculture and temporary habitation complex. Additionally, human remains have been documented north, or makai, of the airstrip. The APE is situated on Jaucus sands, a soil type known to contain archaeological sites and human burials.

Given the potential to impact archaeological resources or human remains during the proposed undertaking, the SHPO previously requested an archaeologist meeting the Secretary of the Interior's professional qualification standards for archaeology, be present and monitor each ground disturbing activity during the undertaking to identify any cultural findings or human remains. The purpose of this monitoring is to identify, document, and appropriately address any cultural materials or human remains that may be encountered. **The SHPO stated that the archaeological monitoring should be completed under the stipulations of an archaeological monitoring plan and the SHPO requested the USAG prepare and submit to SHPD an archaeological monitoring report** (AMR) within a reasonable time following completion of the undertaking. The USAG states that the Office of Hawaiian Affairs also requested the presence of an archaeological monitor during ground disturbing activities.

The USAG has committed to an archaeological monitor that meets Secretary of Interior standards and holds a current permit with the USAG Hawaii CRS be present for all ground disturbing activities to occur in areas identified as jaucas sand and in undisturbed jaucas sand below areas identified as mixed fill soils, where there is the possibility of Traditional Hawaiian burials with no surface expression.

The SHPO maintains the original request for the archaeological monitoring to be completed under the stipulations of an archaeological monitoring plan and the SHPO request that the USAG prepare and submit to SHPD an archaeological monitoring report within a reasonable time following completion of the undertaking. The archaeological monitoring plan should be agreed upon between the USAG and the SHPD and should stipulate the field and laboratory documentation to be recorded by the archaeological monitor and be provided in the AMR.

Additionally, the SHPO requests that one qualified archaeological monitor, meeting the Secretary of the Interior's Professional Qualification Standards and holding a current USAG Hawai‘i CRS permit, be assigned to each ground-disturbing activity associated with the undertaking. Monitoring should occur at all times during such activities. This continuous presence is necessary because construction personnel and equipment operators cannot reasonably be expected to determine when subsurface conditions, such as Jaucas sand or undisturbed Jaucas sand beneath mixed fill soils, are encountered. Without direct archaeological oversight, there is substantial risk that cultural deposits or Traditional Hawaiian burials with no surface expression could be inadvertently missed.

At this time **the SHPO does not concur** with the USAG's effect determination of *no historic properties affected*. The SHPO requests that both agencies establish agreement on appropriate archaeological monitoring measures to ensure that, should human remains or other archaeological deposits be encountered, potential impacts are minimized and the finds are adequately documented.

For USAG's consideration, the SHPD has attached a proposed Archaeological Monitoring Plan (AMP) for review by the USAG. This document sets forth specific provisions for archaeological monitoring to ensure that any historic properties or human remains encountered during project activities are appropriately identified, documented, and protected in accordance with applicable archaeological standards. **SHPD is prepared to concur with implementation of the attached AMP, contingent upon the USAG's acceptance of the provisions stipulated therein.**

The SHPD looks forward to continuing consultation under Section 106 for the proposed project.

Please submit all forthcoming information and correspondence related to the subject project to SHPD via HICRIS under Project No. 2025PR00730 using the Project Supplement option.

The USAG Hawaii and HDOT-A are the offices of record for this undertaking. Please maintain a copy of this letter with your environmental review record for this undertaking.

Please contact Mary Kodama, Architecture Branch Chief, at Mary.Kodama@hawaii.gov, for any matters regarding architectural resources and contact Stephanie Hacker, Historic Preservation Archaeologist IV, at (808) 692-8046 or at Stephanie.Hacker@hawaii.gov, for matters regarding archaeological resources or this letter.

Aloha,

Dawn N. S. Chang, Esq.
DLNR Chairperson
State Historic Preservation Officer

cc: Katharine West, USAG Hawaii (Katherine.J.West5.civ@army.mil)
David Crowley, USAG Hawaii (David.M.Crowley22.civ@army.mil)
Curt Otaguro, HDOT Airports (Curt.Otaguro@hawaii.gov)
Henry Kennedy, HDOT HWY (Henry.Kennedy@hawaii.gov)
Holly Yuen, HDOT HWY (Holly.Yuen@hawaii.gov)
Lawrence M. Laus, HDOT HWY (Lawrence.M.Laus@hawaii.gov)
Gregory M. Ibara, HDOT HWY (Gregory.M.Ibara@hawaii.gov)
Trisha K. Watson, Consultant (Watson@honuaconsulting.com)
Andrew McCallister, AECOM (Andrew.McCallister@aecom.com)
Courtney Hymes, AECOM (Courtney.Cacace@aecom.com)

Attachment

This Archaeological Monitoring Plan (AMP) have been prepared in accordance with Hawaii Administrative Rules (HAR) §13-279-4 governing standards for Archaeological Monitoring Plans (AMP). Specific monitoring provisions are provided below.

1. Archaeological monitoring will be conducted on a full-time, on-site basis for all ground-disturbing activities throughout the project. If there is a request to switch to weekly spot monitoring, it must be submitted in writing to SHPD. This request should include appropriate field documentation (including photos) and a rationale to support the change. Any modifications to the monitoring may only occur with prior written approval by the SHPD.
2. Archaeological monitoring will be conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards and holding a current USAG Hawai'i CRS permit along with a minimum of 2 years of archaeology field experience in Hawai'i.
3. At least one archaeological monitor will be assigned to monitor each piece of moving equipment or ground disturbing activity.
4. The archaeological monitor shall conduct a pre-construction briefing with all construction personnel, the landowner (or their representative). A subsequent briefing will be conducted each time new personnel come on site and prior to any new personnel starting on site. Additionally, the archaeological monitor shall main

a written log for each briefing including date, time, who gave the briefing, and who attended. This log will be uploaded to HICRIS following the briefing and updated as needed should additional personnel come on site.

The purpose of the briefing is to ensure all parties are aware of the need for archaeological monitoring, the types of historic properties (archaeological, cultural, and/or burial) that may be encountered, the archaeological provisions set forth in the AMP, and the responsibility of the construction team to ensure that no ground disturbing work is conducted without an archaeological monitor present. If an archaeological monitor is not available for one or any of the ground disturbing activities, no ground disturbing work may occur until one is available.

The briefing must also describe the responsibilities and procedures to be conducted by each party should construction activities result in an inadvertent discovery of human remains and/or archaeological historic properties. Lastly, they shall be informed that the removal of any artifacts or photography of human remains is prohibited.

5. The archaeological monitor shall be responsible for conducting all coordination with the contractor and landowner. The archaeological monitor shall coordinate all monitoring, sampling, and documentation activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance.
6. The archaeological monitor shall provide a copy of this letter containing the AMP to the contractor and landowner. The monitor shall also keep a copy of this letter and AMP on-site throughout the archaeological monitoring fieldwork.
7. Manual excavation, by shovel or trowel, shall be carried out by the archaeologists using current standard archaeological methods if cultural deposits or features are encountered.
8. GPS data shall be collected for all cultural site boundaries and features if encountered. A GPS unit with sub-meter accuracy must be used. Site boundaries shall be recorded as a polygon, not as a single point.
9. If any potential cultural deposits, features, or archaeological sites are identified, the archaeological monitor has the authority to halt the work in the immediate area (up to 5 meters) and shall carry out appropriate identification and documentation. If the find is determined to be a potential historic property, the archaeological monitor will immediately notify the USAG who will follow the requirements of 36 CFR 800.13.
10. Archaeological documentation of cultural deposits, features, etc. will include recording its location using a sub- meter accurate GPS unit (to obtain point or polygon data as appropriate); plotting its location on a scaled site map; taking digital photographs with scale and north arrow, and where possible, in both plan view and profile view; illustrating feature morphology in scaled plan view and profile drawings; recording dimensions (length, width, depth, etc.); screening at least a 25% sample of a cultural deposit [or other % as determined in consultation with consulting parties to this undertaking] through 1/4-inch wire mesh screen to identify potential small fraction remains; screening a measured volume of pit fill matrix through 1/8-inch wire mesh screen to facilitate identification of pit function; documenting in the field historic artifacts in large infilled pit features and fill layers, including digital photographs with scales, and descriptions of the range of artifact types, context, and relative abundance of types; collecting all artifacts from cultural layers and pit features to facilitate identification of function and age. Construction work will only continue in the area of the non-burial find when all documentation has been completed.
11. The archaeologist shall screen at least a 25% sample of all excavated soils and through 1/4-inch wire mesh screen to identify potential small fraction remains.
12. Stratigraphy will be recorded to provide an accurate sequence from the top to the base of the excavation. Soil descriptions will be completed using USDA soil terminology and attributes, as well as Munsell soil color charts or manuals. Photographs with scales and north arrows will be taken at all locations where stratigraphic profiles are recorded. Measured soil samples will be collected from cultural deposits and features. Their locations will be recorded on the site map using a hand-held GPS with submeter accuracy, and also on individual stratigraphic profiles. Soil samples will also be collected from each of the layers identified in the field as possible former A-horizons.
13. In the event that no significant historic properties are identified, representative soil profiles will be collected from across the project area. Representative soil profiles will measure a minimum of 2 meters across (when possible), and their locations will be recorded using GPS data points and on a USGS topographic Quadrangle Map and will be included in the AMR.

14. In the event that human remains (burial or isolated, displaced skeletal elements) are inadvertently encountered, all work in the immediate area of the find will cease, the area and human remains will be secured, and the archaeological monitor will immediately notify the USAG. Work will resume in the area of the inadvertent find only following written approval from the USAG.
15. All artifacts and samples collected during the project (excluding human remains) shall be transported to the USAG's office/laboratory for analysis; none will be transported off-island. They will be cleaned, sorted, counted, weighed (metric), and analyzed (both qualitative and quantitative data), with all data recorded on standard laboratory forms. Midden samples will be minimally identified to major class (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). Digital photographs with scales will be taken of a representative sample of the diagnostic artifacts. Tables and text discussing the artifact and sample results will be provided in the report, along with appropriate digital photographs.
16. Samples (wood charcoal, shell, non-human bone, kukui nut) identified as potentially suitable for dating from an undisturbed context (e.g., cultural layer, pit feature) shall be considered for radiocarbon dating.
17. All stratigraphic profiles and plan view maps of identified historic properties (e.g., sites, cultural layers, features) shall be drafted for presentation in the final report. Photographs of project work, including overviews, and of individual profiles, cultural layers, and features shall also be included in the final report. Representative soil profiles (non-cultural) summaries, stratigraphy and their location will be plotted on a USGS topographic map.
18. All historic properties, both burial and non-burial sites, that are identified and/or further documented during archaeological monitoring (such as cultural layers, pit features, and buried walls) may be assessed for eligibility to be listed in the National Register of Historic Places. This assessment, along with an appropriate recommendation for future mitigation, may be included in the final AMR.

Archaeological Monitoring and Post-Review Discoveries Plan

ENCLOSURE 1

SUBJECT: National Historic Preservation Act of 1966 (NHPA) Section 106 Archaeological Monitoring and Post-Review Discoveries Plan for the Removal of the Honolulu Soaring Hangar Underground Fuel Storage Tank and Associated Infrastructure, Dillingham Military Reservation, Ka‘ena Ahupua‘a, Waialua District, Island of O‘ahu, Hawai‘i, TMK (1) 6-8-014:001, Project # CRS-23-198

A. Definitions

1. The terminology used throughout this plan will adhere to the definitions provided below and in 36 CFR § 800.16 and 43 CFR § 10.2, as applicable.

    a. Kanaka Maoli: indigenous Hawaiian person; a term to describe a familial connection with the land, inherent to the identity of the indigenous Hawaiian people. For the purposes of this plan, the term is used to include consulting parties who may also identify as a representative of a Native Hawaiian organization or ‘ohana.

B. Permits and Professional Qualifications

1. Archaeological monitoring will be conducted by an archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards and holding a current U.S. Army Garrison (USAG) Hawaii Permit for Cultural Resources Investigations.

2. The archaeological monitor must also have a minimum of 2 years of archaeology field experience in Hawai‘i.

C. Archaeological Monitoring

1. The archaeological monitor has three primary tasks:

    a. Ensure all ground disturbing work is only conducted within the designated area of potential effect (APE) as shown in Figure 1.

    b. Observe the ground disturbing work in progress to promptly identify buried archaeological resources.

    c. Minimize effects to archaeological resources by quickly stopping work in the event of an archaeological discovery.

2. Archaeological monitoring will be conducted on a full-time, on-site basis for all ground-disturbing activities throughout the project.

    a. If there is a request to switch to weekly spot monitoring, it must be submitted in writing to USAG Hawaii Cultural Resources Manager (CRM).

    b. This request should include appropriate field documentation (including photos) and a rationale to support the change.

    c. Any modifications to the monitoring plan may only occur with prior written approval by the USAG Hawaii CRM, who will provide notice of any approved modifications to the consulting parties.

3. The number of archaeological monitors will be determined by the USAG Hawaii CRM based on the type and number of pieces of equipment, as well as the type of work being performed. In general, plan for at least one archaeological monitor per discrete activity area.

4. No ground disturbing activities shall be conducted under this plan without an archaeological monitor present.

5. The archaeological monitor shall be responsible for coordinating all monitoring activities and communicating with the construction contractor and USAG Hawaii project manager and CRM.

6. The archaeological monitor shall coordinate all activities with the safety officer for the construction contractor to ensure that proper safety regulations and protective measures meet compliance.

7. The archaeological monitor shall provide a copy of this archaeological monitoring and post-review discoveries plan to the on-site construction contractor.

8. The archaeological monitor shall keep a copy of this plan and any applicable permits and National Historic Preservation Act (NHPA) or Native American

Graves Protection and Repatriation Act (NAGPRA) agreements on-site throughout the archaeological monitoring fieldwork.

9. The State of Hawaii Department of Transportation, Airports (DOT-A) and their tenants will be financially responsible for the cost of archaeological monitoring and all resulting excavations and reports.

D. Cultural Advisor

1. A cultural advisor will be present, or on stand-by in close coordination with the archaeological monitor, for all ground-disturbing activities throughout the project.

2. The cultural advisor’s duties include communicating with and providing regular updates to Kanaka Maoli consulting parties, providing cultural awareness briefings to project personnel, observing ground disturbance with the archaeological monitor, conducting appropriate cultural protocols before and after the project and upon discovery and treatment of human remains and NAGPRA cultural items, as well as providing advice on appropriate handling of human remains and NAGPRA cultural items.

3. Kanaka Maoli consulting parties request that cultural advisors have professional qualifications, including traditional connections to the land in the area and/or the Kanaka Maoli ‘ohana that lived in the area, knowledge of appropriate cultural protocols, and training with reputable kūpuna.

4. The selection of a cultural advisor will follow the process defined in the Dillingham Military Reservation (DMR) NAGPRA Comprehensive Agreement (CA) Section L.8 (USAG Hawaii 2025).

5. The State of Hawaii DOT-A and their tenants will be financially responsible for the cost of a cultural advisor.

E. Cultural Awareness Briefing

1. The cultural advisor and a USAG Hawaii Cultural Resources staff familiar with the project location shall provide all project personnel with a cultural awareness briefing prior to the start of the project.

2. If new personnel are assigned the project, subsequent briefing(s) will be conducted by the cultural advisor and archaeological monitor prior to any new personnel starting work.

3. If the cultural advisor is unavailable, the archaeological monitor and a member of the USAG Hawaii Cultural Resources staff will provide the briefing.

4. The purpose of the briefing is to ensure all parties are aware of:

    a. Purpose and need for archaeological monitoring and the presence of a cultural advisor.

    b. The types of cultural resources that may be encountered.

    c. The provisions set forth in this plan.

    d. The responsibility of the construction team to ensure that no ground disturbing work for which an archaeological monitor is required is conducted without an archaeological monitor present.

    e. The responsibilities and procedures to be conducted by each party should construction activities result in a post-review discovery of human remains and/or cultural resources.

    f. The removal of any artifacts is prohibited except for collection by the archaeological monitor in compliance with this plan, the applicable USAG Hawaii Permit for Cultural Resource Investigations, and any stipulations and direction provided by the USAG Hawaii CRM.

g. Photography of human remains is prohibited except as authorized in the DMR NAGPRA CA Section D.2 and Appendix C (USAG Hawaii 2025).

5. The archaeological monitor shall maintain a written log for each briefing including date, time, who gave the briefing, and who attended. This log will be submitted to the USAG Hawaii CRM following the briefing and updated as needed should additional personnel come on site.

F. Initial Assessment of Discoveries and Notification

1. If any potential cultural deposits, features, artifacts or other archaeological resources are discovered, all activities that have the potential to further disturb the discovery shall immediately halt within 30 meters of the discovery. The distance may be appropriately increased or decreased by the USAG Hawaii CRM based on topography, soil type, previous archaeological work, previous disturbance, and any other factors which may provide insight into the extent of the discovery area.

2. If the discovery involves potential human remains or cultural items as defined by NAGPRA, the DMR NAGPRA CA (USAG Hawaii 2025) will be followed.

3. If the discovery does <u>not</u> involve potential human remains or cultural items, as defined by NAGPRA:

   a. The archaeological monitor shall immediately begin the minimum level of identification and documentation necessary to determine if the discovery is a potential historic property and to effectively communicate with the USAG Hawaii CRM.

      i. Identification may include visual inspection and screening a sample of potentially associated back-fill soil.

      ii. Documentation may include profile/plan view sketches/drawings, photos, site and feature form completion, and GIS data collection. See Section F below for further information, as applicable.

b. If the discovery is determined to be a potential historic property (e.g. intact features or cultural deposits):

   i. The archaeological monitor will immediately notify the USAG Hawaii CRM, who will follow the requirements of 36 CFR § 800.13, as applicable. The notification will include photos, GIS data, sketches/drawings, and maps.

   ii. In compliance with 36 CFR § 800.13, the USAG Hawaii agency official will determine the appropriate action(s) and make a reasonable effort to avoid, minimize, or mitigate adverse effects in consultation with consulting parties and the State of Hawaii DOT-A and their tenants, which may result in further documentation and excavation by the archaeological monitor.

   iii. Ground disturbing activities may only resume in the vicinity of the discovery upon written authorization by the USAG Hawaii CRM.

c. If the discovery is determined <u>not</u> to be a potential historic property (e.g. isolated artifacts in a previously disturbed context), the archaeological monitor will include the discovery in the next progress report.

G. Documentation

For discoveries involving human remains or cultural items as defined by NAGPRA, all documentation will adhere to the DMR NAGPRA CA (USAG Hawaii 2025)

1. <u>Field Data Forms</u>

   a. Standard field data forms will be used. Prior to the start of the project, the field data forms will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

   b. A daily log will be kept of activities, schedule, personnel, field conditions, and general observations.

2. Photographs *(as applicable)*

a. Project and site overview photos will be taken to document setting, context, and location.

b. Photos will be taken of all locations of soil profile drawings with scale and north arrow.

c. Photos will be taken of all features with scale and north arrow in both plan and profile view, as applicable.

d. Photos will be taken of all diagnostic artifacts with a scale, as well as a representative sample of each artifact class identified.

3. Sketches and Drawings *(as applicable)*

a. A large-scale map shall be sketched or drawn in plan view showing all features and cultural layers in relation to excavation and test units, datum(s), sampling and soil profile locations, and any relevant geographic, natural, cultural, and modern features.

b. Each individual feature will be sketched or drawn *in situ* in plan and profile view, as applicable. Individual feature sketches/drawings will include all relevant information that falls within the map frame, such as datum(s), sampling and soil profile locations, etc.

c. At a minimum, all sketches and drawings shall include a legend, north arrow for plan views, direction facing in degrees for profiles, scale, recorder’s name, date, locational information, and any applicable area, site, and feature designations.

d. Soil profiles shall be sketched/drawn of a representative sample of soil stratigraphy across both the entire project area and each individual site:

   i. The number of soil profiles within each individual site and across the project area as a whole will be determined by professional judgement in coordination with the USAG Hawaii CRM based on the geologic context, the size of the site and project area, and the amount of variation in the soil stratigraphy across the site and project area.

   ii. An explanation of the number and locations of soil profiles will be included in the draft and final reports.

   iii. For project-related ground disturbance and excavation units measuring 1 meter or more in length/width (e.g. trenches), the soil profile will document a minimum width of 1 meter.

   iv. For project-related ground disturbance and excavation units measuring less than 1 meter in length/width (e.g. a small feature being bisected), the soil profile will document one side/wall.

   v. Soil profiles will be annotated with the soil descriptions, including texture, structure, and color, using U.S. Department of Agriculture (USDA) soil terminology and attributes where possible, as well as Munsell soil color charts or manuals.

4. Locational Information *(as applicable)*

   a. GIS data shall be collected, which may include, but is not limited to, the maximum extent of disturbance, feature and artifact points and polygons, a site boundary, excavation and test units, sampling locations, soil profile locations, and datum.

   b. A GPS unit with sub-meter accuracy must be used.

c. Prior to the start of the project, the Data Dictionary to be used during monitoring will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

d. The project area shall be plotted on both a 1:24,000 topographic map and a close-up aerial image. The close-up aerial image shall be annotated to include all project design elements and the maximum extent of disturbance.

e. Discoveries shall be plotted on a close-up aerial image overlaid with the project design, which shall be included in both the monitoring report and in the individual site form.

f. Discoveries shall be plotted on a 1:24,000 topographic map to be included in the individual site form.

g. The number of maps necessary to clearly and efficiently convey the required information in the monitoring report will be determined by professional judgement in coordination with the USAG Hawaii CRM with consideration for the size and complexity of the project, as well as the number, size, and complexity of discoveries and subsequent courses of action.

H. Excavation Methodology

If excavation is the determined course of action by USAG Hawaii in consultation with consulting parties:

1. For discoveries involving human remains or cultural items as defined by NAGPRA, excavation will adhere to the DMR NAGPRA CA (USAG Hawaii 2025).

2. Archaeological sites, features, and cultural deposits will be documented in original context to the extent feasible.

3. Excavation will be conducted in accordance with standard, controlled archaeological methods as specified in any applicable permits, National Historic

Preservation Act (NHPA) agreements, this plan, and any stipulations and guidance provided by the USAG Hawaii CRM.

4. Manual excavation will be carried out by the archaeologists using shovels, hand trowels, and other archaeology industry standard hand tools, as applicable.

5. The location, number, and type of excavation units will be determined by professional judgement and adjusted as results become available in coordination with the USAG Hawaii CRM on a case-by-case basis. It may be necessary to conduct exploratory test units or hand trenches where minimal to no feature locational/directional indicators are present.

6. All units will be excavated in either arbitrary 10-centimeter levels or natural soil stratigraphy levels as determined by professional judgement based on the depositional context and in coordination with the USAG Hawaii CRM on a case-by-case basis.

7. The total depth of excavation and/or the required measurement sterile of cultural materials for unit termination will be determined in coordination with the USAG Hawaii CRM on a case-by-case basis considering the nature of the discovery and the depositional context.

8. Horizontal and vertical proveniences will be measured systematically from a datum(s).

9. In sandy sediment, 100% of excavated material will be passed through 1/8-inch mesh screen except where the USAG Hawaii CRM approves 1/4-inch mesh screen on a limited basis to efficiently remove overburden and reach the cultural level. In loam or clay sediment, 1/4-inch mesh is acceptable.

10. Samples identified as potentially suitable for dating (e.g. wood charcoal, shell, non-human bone, kukui nut) from an undisturbed cultural context (e.g., cultural layer, pit feature) shall be collected.

11. Measured soil samples shall be collected from cultural deposits and features for analysis. The soil sampling strategy will be determined by professional judgement in coordination with the USAG Hawaii CRM.

12. All excavated artifacts and samples shall be labeled by an archaeologist with all provenience information and recorded on a maintained inventory list.

13. All artifacts collected will be stored at the archaeological service provider’s on-island laboratory until the completion of the undertaking and the associated reports at which time the collections will be turned over to the USAG Hawaii CRM in accordance with the USAG Hawaii Permit for Cultural Resources Investigations.

I. Analysis

a. For discoveries involving human remains or cultural items as defined by NAGPRA, any analysis will adhere to the DMR NAGPRA CA (USAG Hawaii 2025).

b. For discoveries <u>not</u> involving human remains or cultural items as defined by NAGPRA:

    a. All artifacts will be cleaned, sorted, counted, weighed (metric), and analyzed (both qualitative and quantitative data).

    b. All artifacts will be minimally identified to major class (e.g. for faunal remains: bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal).

    c. All data will be recorded on standard laboratory forms. Prior to the start of the analysis, the laboratory forms will be submitted to the USAG Hawaii CRM for review to ensure all necessary information will be captured.

    d. Samples (e.g. wood charcoal, shell, non-human bone, kukui nut) identified as potentially suitable for dating from an undisturbed cultural context (e.g., cultural layer, pit feature) shall be considered for radiocarbon dating.

i. Wood charcoal samples shall be species typed, and only short-lived species shall be considered for radiocarbon dating.

e. The archaeological service provider will process all collected samples, unless otherwise determined by the USAG Hawaii CRM, and include the results in the final report. Unprocessed samples will not be accepted by USAG Hawaii for curation.

f. Soil sample processing and analysis techniques and methodologies will be determined by professional judgement in coordination with the USAG Hawaii CRM.

J. Reporting and Deliverables

1. All reporting and deliverables will adhere to the requirements of the applicable USAG Hawaii Permit for Cultural Resource Investigations, this plan, and any stipulations and guidance provided by the USAG Hawaii CRM.

2. Reporting and deliverables may include, but are not limited to:

   a. Progress reports, including project status, work conducted to date, and anticipated schedule, submitted to the USAG Hawaii CRM at an interval to be determined by the CRM with consideration for anticipated project duration and complexity.

   b. End of Fieldwork Summary Report, final site forms, a minimum of one Draft Report, and a Final Technical Report. The draft and final reports will synthesize all background and field data into a coherent report, and include at a minimum:

      i. Background information, methodology, results, locational maps, and stratigraphic profiles as further outlined in the above sections.

      ii. Any relevant input shared by the cultural advisor, as appropriate, provided there are no confidentiality or sensitivity concerns.

iii. If there are any potential historic properties identified during archaeological monitoring:

1. The report will include site descriptions, site maps, site and feature sketches/drawings, artifact analyses (tables and text), and sample results, as applicable and further outlined in above sections.

2. Site descriptions shall include background research and contextual information relevant to the National Register of Historic Places (NRHP) significance criteria, as well as an assessment of the seven aspects of integrity as defined by the National Park Service (1997). No recommendations regarding NRHP eligibility are necessary.

iv. Photographs: project and site overviews, stratigraphic profiles, individual features, cultural layers, and a representative sample of artifacts, as applicable.

c. All notes, photographs, drawings, sketches, and final GIS data.

K. Confidentiality

1. All involved parties shall protect information regarding the nature and location of any archaeological resource in accordance with Section 9(a) of the Archaeological Resources Protection Act and the implementing regulations at 32 CFR § 229.18.

2. All reports, photographs, GIS data, and other records documenting “controlled unclassified information” (CUI) pertaining to cultural resources shall be securely stored as such. Any such information shall be exempt from public disclosure under the Freedom of Information Act Exemption 3.

References Cited

National Park Service

1997 National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Available online at https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf, accessed 12/09/2025.

U.S. Army Garrison Hawaii

2025 *U.S. Army Garrison Hawaii Native American Graves Protection and Repatriation Act Comprehensive Agreement for Native Hawaiian Human Remains or Cultural Items Discovered or Excavated on Federal Lands at Dillingham Military Reservation*. USAG Hawaii CRS Library # 2745

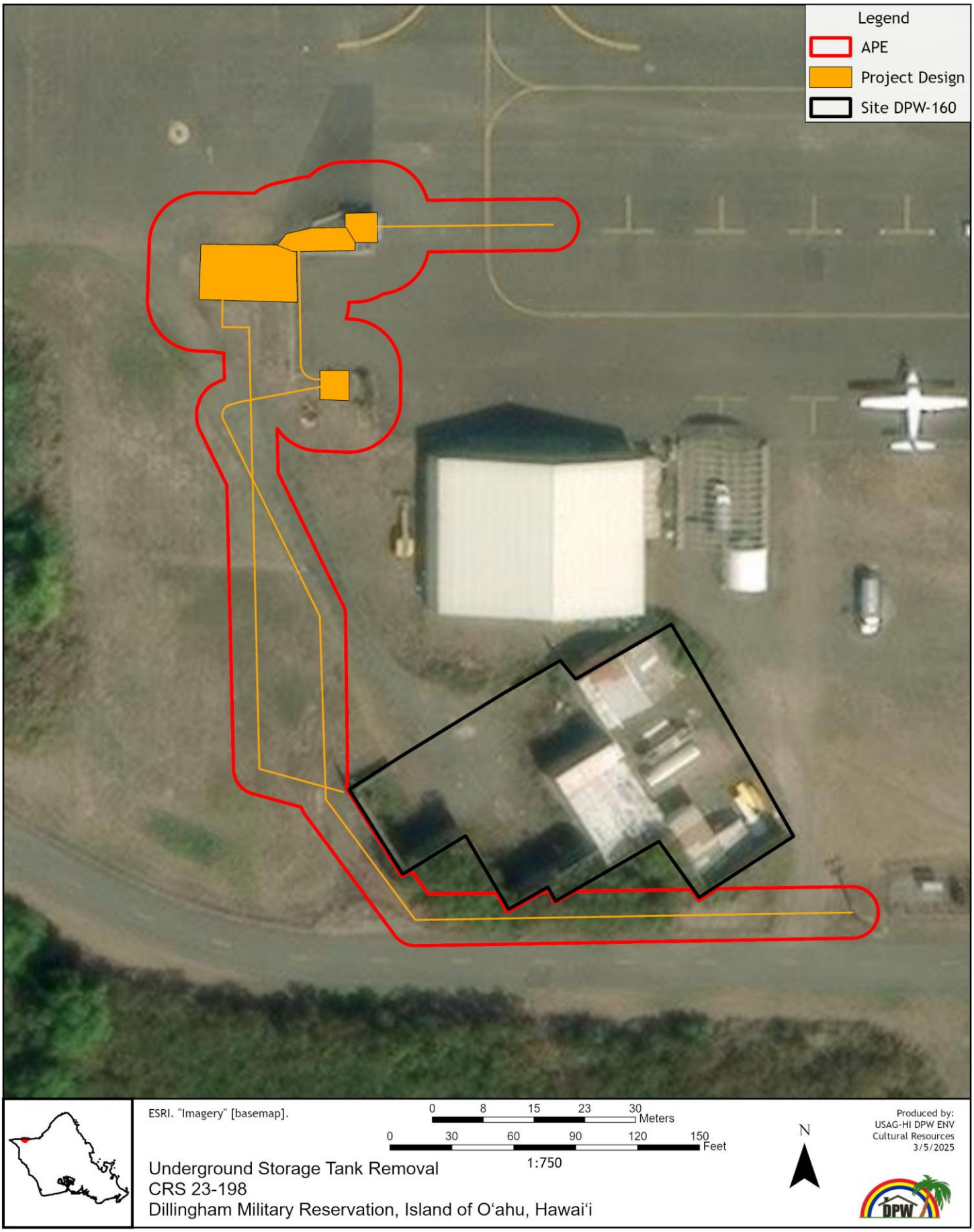


Figure 1. Close-up aerial image depicting the APE in relation to cultural resources.

U.S. Army Garrison, Hawaii
PERMIT FOR CULTURAL RESOURCES INVESTIGATIONS

U.S. Army Garrison, Hawaii

PERMIT FOR CULTURAL RESOURCES INVESTIGATIONS

Under the Authority of

The Antiquities Act of 1906 (as amended)
(P.L. 59-209; 34 Stat. 225; 54 U.S.C. 320302-320303; 43 CFR 3);

and **The National Historic Preservation Act of 1966** (as amended)
(P.L. 89-665 80 Stat. 915; 54 U.S.C. 306101; 36 CFR 800);

and **The Archaeological Resources Protection Act of 1979** (as amended)
(Pub. L. 96-95, 93 Stat. 721,16 U.S.C. 470aa-mm; 32 CFR 229);

and **Army Regulation 200-1; 13 December 2007**
(Environmental Quality: Environmental Protection and Enhancement)

USAG-HI CRM ADMIN
Date Received _____
Date Reviewed _____
Permit No. _____

Instructions: Complete and return this permit and required attachments to the U.S Army Garrison, Hawaii Cultural Resources Manager. Attach additional pages if more space is needed to complete a section. Appendix A is required for all permits except background research/data sharing. Depending on the nature of the organization, the Permit Holder and Field Director may be the same individual. The principal Investigator will be assumed to also be a field director. Field directors are not required on permits for background research, data and information sharing only.

1. **Name of applicant** (institution, corporation, partnership, individual, or other entity)

2. Mailing address	3. **Physical Address** (if different from mailing)
4. Permit Holder Name and title of individual responsible for fulfilling the terms and conditions of the permit (must be legally empowered to obligate applicant organization).	Telephone number(s): (808) 838-8804 Email address(es):
5. Principal Investigator Name of individual(s) responsible for overseeing projects, and for the professional quality of all work, reports, and product. (Must meet SOI Qualification Standards)	Telephone number(s): 808-359-8332 Email address(es):
6. Field Director(s) (list all who may work on the project) Name of individual(s) responsible for conducting, overseeing, and ensuring technical quality of fieldwork (Must meet SOI Qualification Standards)	Telephone number(s): Email address(es):
7. Nature of Cultural Resources work proposed ☐ Survey, Recordation and/or Evaluation (appendix A required) ☐ Monitoring and/or Testing (appendix A required) ☐ Excavation and Data Recovery (appendix A required) ☐ Background Research, Data and Information Sharing Only	**8. Location of proposed work** a. If a concise description is not feasible, attach a map b. List the associated cultural resource(s) (if known).

9. **Dates of proposed work** (specify dates of field work and deliverable work)

10. **Applicant must provide the following. Attached supporting information as appropriate.**

a. Description of the purpose, nature, and extent of the work proposed, and what the resulting product will be. Include the name of the project, the name of the client / project proponent (if applicable) and the Federal agency governing the contract (if applicable)

b. Provide a Summary of organizational capabilities, including a description of the organization and information about location(s) of facilities and staff to be involved in the proposed work.

c. Provide a summary of organizational experience with the type of work proposed, including similar past projects, and any experience related to projects in Hawaii.

d. For each individual named in boxes 4, 5, and 6, provide a resume summarizing education, training, and experience in the kind of cultural resources investigation proposed and any related roles. (Please do not include social security number, date of birth, or medical records.)

11. Curatorial facility in which collections, records, data, photographs, and other documents resulting from activities conducted under this permit shall be deposited for permanent preservation on behalf of the United States Government.

Directorate of Public Works – Environmental Division
United States Army Garrison, Hawaii
Cultural Resources Section - Curation Facility
1513 Kolekole Ave. Building 494, Schofield Barracks, Hawaii 96857

12. Signature of Project Client (if applicable) acknowledging awareness of permit terms and conditions and Permit Holder's responsibilities.	**Date signed**
13. Signature of Permit Holder named in box 4, indicating acceptance of all terms, conditions, and requirements of the permit.	**Date signed**

PERMIT APPROVED ☐ **PERMIT DENIED** ☐ **Reason:**_____

_____ _____

David M. Crowley, Cultural Resources Manager
U.S. Army Garrison, Hawaii

DATE

In accordance with the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

TERMS AND CONDITIONS

A. AUTHORITY. This permit is issued pursuant to The Archeological Resources Protection Act, 16 U.S.C. 470 aa-mm, 32 CFR 229; The National Historic Preservation Act, 54 U.S.C. 306101, 36 CFR 800, The Antiquities Act, 54 U.S.C. 320301-320303, 43 CFR 3; Army Regulation 200-1, 13 December 2007.
B. AUTHORIZED OFFICER. The authorized officer for this permit is the U.S. Army Garrison Hawaii (USAG-HI) Cultural Resources Manager (CRM).
C. PERMIT NUMBER. The permit holder shall reference the assigned permit number on all related correspondence and communication, and all materials developed pursuant to this permit.
D. AMENDMENT. This permit may be amended in whole or in part by USAG-HI, at the discretion of the CRM, to incorporate new terms that may be required by law, regulation, or USAG-HI policy. Any amendments requested by the permit holder must reviewed and approved by the CRM.
E. TRANSFERANCE AND ASSIGNABILTY. This permit is not assignable or transferable to clients, subcontractors, or any other entity.
F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS. In exercising the privileges granted by this permit, the permit holder shall comply with all federal laws and regulations and other legal requirements that apply to the permit area.
G. DAMAGE TO UNITED STATES PROPERTY. The permit holder has an affirmative duty to protect from damage the land, property, and other interests of the United States.
H. NON-EXCLUSIVE USE. The use and occupancy authorized by this permit are not exclusive. The United States reserves the right of access and a continuing right of physical entry to the permit area and storage area of any recovered materials and related records for inspection and monitoring.
I. CONTROLLED UNCLASSIFIED INFORMATION (CUI). The permit holder may be granted access to CUI for lawful governmental purposes under the terms of this permit in accordance with 32 CFR 2002.20. The Permit Holder is responsible for completing CUI training and providing evidence of training to the CRM. All CUI provided to the permit holder will be appropriately marked by USAG-HI or the CUI originator. Any CUI generated under this permit must be appropriately marked by the permit holder in accordance with DOD Instruction 5200.48. The permit holder must appropriately safeguard all CUI and prevent unauthorized dissemination in accordance with CUI markings and applicable dissemination controls. The permit may not to disclose CUI to any other organization or person, and shall report unauthorized disclosure of CUI.
J. USE OF INFORMATION. The information, data, and material recovered, developed, gathered, assembled, and reproduced by the permit holder shall become the property of the Government and shall, therefore, not be used by the permit holder for any purpose or use, nor made publically available without the written consent of the USAG-HI CRM and Public Affairs Officer after review and approval.
K. PERMIT LIABILITY. If active permits are noncompliant or there are outstanding obligations from a previous permit the permit holder shall not be eligible for additional permits or permit renewals.
L. ANNUAL REVIEW. If this permit is active for more than one calendar year, it shall be reviewed annually by the CRM.
M. TERMINATION. The USAG-HI CRM shall terminate the when the permit holder has fulfilled all permit obligations or if the proposed work is canceled and no work has begun.
N. SUSPENSION. The CRM may suspend this permit for noncompliance with the terms and conditions and/or with applicable federal laws and other legal requirements in accordance with 16 U.S.C. §470ee. The CRM shall provide the permit holder written notice of the grounds for suspension and shall provide 30 days for the permit holder to correct the noncompliance issue.
O. RELINQUISHMENT OF ARTIFACTS AND DOCUMENTS. If the permit is suspended and noncompliance issues are not within the specified timeframe, the permit holder shall deliver to USAG-HI CRM all artifacts, photographs, catalogues, field notes, maps, GPS/GIS data, reports, and any other records, whether digital or hardcopy, in any stage of preparation resulting from permitted activity.
P. VIOLATIONS. Violations of this permit and failure to correct noncompliance issues may affect future permit eligibility and may lead to civil penalties pursuant to 16 U.S.C §470ff.

Permit Holder Initials_____

I. OWNERSHIP

All archaeological materials and cultural resources information collected from federal land and any resulting information and data produced under this permit are the property of the U.S. Army. The material, information, and data developed, gathered, recovered, assembled, and produced by the Permit Holder, and any associates, or subcontractors shall not be shared with or disseminated to any party outside of the U.S. Army Garrison Hawaii (USAG-HI) unless authorized in writing by the USAG-HI Garrison Commander or installation Cultural Resources Manager (CRM). The Permit Holder, associates, or subcontractors shall not use the material, information, or data created by, provided for, or otherwise associated with this permit for any reason beyond the scope of this permit without written consent of the CRM or Garrison Commander. All material, information, and data developed, gathered, recovered, assembled, or produced pursuant to this permit shall be submitted to the CRM at the conclusion of the project or termination of the permit, as applicable.

II. PROFESSIONAL QUALIFICATIONS

A. The Principal Investigator(s) and Field Directors must meet the Secretary of Interior Professional Qualification Standards (48 Federal Register 44716) appropriate to the project. Other field personnel conducting survey, recording, monitoring, testing, excavation or National Register evaluation of potential historic properties shall meet standards established by Office of Personnel Management for their respective disciplines in accordance with Section 112 of the National Historic Preservation Act (54 USC §306131).

B. An individual listed on the permit who meets the Secretary of Interior Professional Qualification Standards relevant to the nature of the project must be present on-site during active operations to directly oversee the work of less qualified field technicians.

C. The Permit Holder shall notify the CRM of any proposed changes in the Principal Investigator, Field Director, or Permit Administrator and the CRM reserves the right to approve or disapprove such changes based on professional qualifications.

III. RESPONSIBIITY

A. The Permit Holder and Principal Investigator are responsible for informing their client(s) Field Directors, and all employees about all permit requirements and ensuring all permit requirements are met. The Permit Holder's client, if any, must sign the permit acknowledging the permit conditions.

B. The Permit Holder is responsible for ensuring that all aspects of the project adhere to the requirements and stipulations in related NHPA Section 106 compliance documents, including staying within the defined Area of Potential Effects.

C. The Permit Holder, Principal Investigator and Field Director, are responsible for immediately and directly notifying the USAG-HI CRM and their Client when a project deviates from NHPA Section 106 compliance requirements, including exceeding the Area of Potential Effects, and must immediately stop all permitted work on the project.

D. The Permit Holder, Principal Investigator and Field Director, are responsible for immediately and directly notifying the USAG-HI CRM and their Client upon the discovery of potential human remains and shall ensure work is either immediately halted in the vicinity of the discovery or otherwise follows the approved NAGPRA plan or agreement.

Permit Holder Initials_____

E. The Permit Holder, Principal Investigator(s), and Field Director(s), shall be responsible for the validity and professional quality of all material presented in the report(s).

F. If it is clear to the USAG-HI that the draft report(s) are inadequate and that provisions of the Work Plan, as applicable, have not been followed (without written permission from with the CRM), the CRM may require that additional data analysis, edits, or work tasks be performed to assure that a satisfactory and professional report is submitted in a timely manner and at no additional cost to the government.

G. Failure to meet all permit requirements will affect the ability to receive future permits.

IV. REPORTS AND PLANS

A. Work Plan: Depending on the nature of the project, the CRM may require the Permit Holder to submit a work plan for review and approval prior to beginning the project. The work plan shall, at a minimum, state the reason and goals for the proposed work with reference to applicable laws and regulations and any contract requirements, describe proposed survey, testing and/or excavation areas and methods with specific reference to any known resources to be evaluated, and the products that will result from the work.

B. Progress Reports. Depending on the nature of the project or issues affecting progress, the CRM may require the Permit Holder to submit periodic or occasional project updates to the CRM summarizing project status, work conducted to date, and anticipated schedule. The CRM may also require submission of preliminary site documentation and GIS data in order to review and confirm compliance with applicable standards and implement any necessary changes.

C. End of Field Summary Report: The Permit Holder shall submit an end-of-field summary report to the CRM within 15 working days of completion of project fieldwork. The end-of-field report shall summarize the work conducted and preliminary results. Depending on the nature of the project, the CRM may require a preliminary map and table of archaeological sites documented.

D. Draft Report. The Permit Holder shall submit an edited draft report to the CRM for review and approval within 90 days of completion of fieldwork, or as otherwise specified in an associated federal contract. The CRM shall review the draft report for conformance with applicable laws, regulations, policies, and procedures and the terms and conditions of this permit. The CRM will send comments on the draft report to the Permit Holder and may require subsequent resubmission of a revised draft or for review, or revisions for the final report submission, at the Permit Holder's expense.

E. Final Report. After incorporating comments and revisions from the CRM as applicable, the Permit Holder shall submit the final report to the CRM within 30 days of receipt of comments, or as otherwise specified in an associated federal contract.

F. Publication. Prior to any publication, public dissemination, or public presentations (such as professional conferences) using data or information acquired under this permit, the Permit Holder must submit a copy of the intended public work for review and approval by USAG-HI. If approved, the holder shall submit a copy of any published or unpublished report, article, paper, presentation, or book resulting from the authorized activities (other than reports required by clause II.) to the CRM. Any such publication must specify that the work was performed on USAG-HI land pursuant to a permit from USAG-HI.

V. ARTIFACTS AND RECORDS

A. Collection Policy: The USAG-HI policy is to minimize collection of archaeological material. The Permit Holder shall photograph, document, and record the GPS location of artifacts found on the surface but shall not collect archaeological material unless it is recovered from subsurface testing, excavation, or monitoring, or if an artifact is likely to be destroyed, damaged, or stolen during the proposed project, or unless otherwise specified by the CRM. The Permit Holder shall maintain an inventory of all soil or other samples collected during the project.

B. Temporary Storage: The Permit Holder shall provide secure storage facilities for all materials recovered during the project. If human remains are discovered, the Permit Holder shall immediately contact the CRM to determine the appropriate treatment and storage of human remains pursuant to any Native American Graves Protection and Repatriation Act agreement. All human remains shall be treated in a respectful, dignified, and culturally sensitive manner while in the custody of the Permit Holder. All recovered materials and project-related documentation remain the property of the U.S. Army and shall be turned over to the USAG-HI at the completion of the project or upon the direction of USAG-HI.

C. Curation. The Permit Holder shall submit cultural resources information, archaeological materials and associated field documents, along with a catalogue and description of those archaeological materials, to the CRM within 30 days following USAG-HI acceptance of the final report or the date otherwise specified in the federal PWS/SOW for the project. The Permit Holder shall submit all artifacts, all original or color copies of all field and laboratory records, and newly-discovered background research materials resulting from activities authorized by this permit with the curatorial facility named in block 12 of the permit. See section VII below for specific curation requirements.

D. Site Forms and Field Notes. The Permit Holder shall provide final site forms, organized and unbound from the final report. The Permit Holder shall also provide good quality digital copies of all site form pages and all original field notes, photographs, images, and maps.

E. Photography/Videography. The Permit Holder shall provide all digital photographs and videos associated with the project on CD or DVD along with a corresponding typed and organized photo/video log.

VI. CURATION REQUIREMENTS

The Permit Holder must prepare archaeological materials and associated records for long-term archival storage and curation as specified below.

A. Artifacts and Material Remains. The Permit Holder shall prepare an item-level inventory of all artifacts and material remains collected during the project**,** (including measurements and photographs where appropriate). The inventory shall accompany the submission of material remains and must be both in hard copy and electronic formats. A brief explanation of the inventory system must also be provided.

B. Cleaning: The Permit Holder shall clean all artifacts prior to submission, except those that are designated for residue analysis in coordination with the CRM. Such artifacts will be wrapped separately to prevent contamination and noted in the curation inventory.

C. Processing: The Permit Holder shall process all soil samples, bulk samples, and other samples collected during the project and shall incorporate the results into the final report. Unprocessed samples shall not be submitted for curation.

Permit Holder Initials_____

D. Labeling and Packaging: Artifacts and other material remains shall be packaged with their primary containers labeled to include appropriate site number, provenience, project number and permit number. Items shall be placed in bags with the exterior permanently labeled, and a Mylar strip or acid-free paper label containing provenience information placed within the bag.
   i. In most cases, artifacts and other material remains may be packaged in polyethylene, zip-lock plastic bags.
   ii. Natural fiber cloth bags or boxes are required for faunal remains, provided they can be securely closed and labeled with the appropriate information.
   iii. All packaged artifacts and material remains shall be organized by sequential bag number and placed in an archivally-stable storage box.
   iv. If the box includes more than one layer, a tray or similar partition must be used to prevent crushing any material. Fragile items requiring special, archivally-stable packaging may be placed within the same box as other material, if the secondary container provides adequate protection.
   v. Label boxes on their exterior surface with the Permit Holder name, permit number, project name, and site number(s), as applicable.
   vi. Each box shall contain an itemized inventory of its contents keyed to a master inventory of the collection.

E. Laboratory Documentation. Laboratory documentation includes. but is not limited to, testing reports, notes, applied artifact cleaning and conservation techniques, and laboratory discard records.
   i. The Permit Holder shall submit original or high quality copies of all laboratory records and analysis reports.
   ii. A list of conserved objects along with a description of the techniques applied to objects during cleaning, preservation, and/or analysis shall accompany the collection.

Maps and Plans. All pertinent maps used and generated by this contract shall be considered part of the collection. This includes, but may not be limited to. project area maps, site plan maps, survey maps, excavation unit profiles and plans, building floor plans and elevations, etc. The collection inventory shall include a list of maps and plans.

VII. GEOGRAPHIC INFORMATION SYSTEM DATA

All GIS data about archaeological resources or Army infrastructure provided by USAG-HI or collected by the Permit Holder is considered Controlled Unclassified Information (CUI) and may not be shared or distributed by the Permit Holder without express written permission from USAG-HI. Use of any USAG-HI GIS data is limited to the duration of the permitted project.

A. All final GIS data must include Federal Geographic Data Committee (FGDC) compliant metadata per Executive Order 12906.

B. All final GIS data will be compliant with Spatial Data Standards (SDS) and will be delivered in Universal Transverse Mercator (UTM) projection, World Geodetic System 1984 (WGS 84), meters, in the appropriate geographic zone.

C. All geospatial data will have Global Positioning System (GPS) points will be differentially corrected for sub-meter accuracy, and contain attribute detail on its time and date of collection, as well as its Positional Dilution of Precision (PDOP). All GPS points collected must have a PDOP less than or equal to 6.

D. All GIS data must be submitted in a format compatible with ESRI ArcGIS. Submission in MicroStation, QGIS, or any other geospatial software formats will not be accepted.

E. A CD or DVD with all geospatial data must be included with the final report. The CD/DVD must include a file listing the GIS contents.