

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Engineering Division
Honolulu, Hawaii 96813

December 10, 2021

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

**AUTHORIZE THE APPROVAL AND ISSUANCE OF DAM SAFETY PERMIT FOR
MISCELLANEOUS IMPROVEMENTS AT WAIMANALO RESERVOIR (OA-0129)
OAHU, HAWAII, TMK: 4-1-010:002**

The Engineering Division (Division) hereby submits an application for your approval and authorization for the Chairperson and Department to stipulate terms and conditions and issue a Dam Safety Permit for the subject project, WAIMANALO RESERVOIR MISCELLANEOUS IMPROVEMENT, pursuant to Hawaii Revised Statutes Chapter 179D and current Administrative Rules.

APPLICANT and LAND OWNER

State of Hawaii, Department of Agriculture
1428 South King Street
Honolulu, HI 96814

SUMMARY OF REQUEST

Application for a Dam Safety Permit to repair and improve the Waimanalo 60 MG Reservoir (OA-0129), Waimanalo, Oahu, Hawaii. (See Exhibit 1)

LOCATION: Waimanalo, Oahu, Hawaii, TMK: 4-1-010:002. (See Exhibit 2)

BACKGROUND

The Waimanalo Reservoir is owned and operated by the Hawaii Department of Agriculture, Agricultural Resource Management Division (DOA). The dam was constructed in 1993 to serve as an agricultural water storage facility in the Waimanalo Irrigation System. The dam is approximately 65 feet high, 2,118 feet long, and is classified as an intermediate size dam with a capacity of storing approximately 60 million gallons of water.

Past rehabilitation on the Waimanalo 60 MG Reservoir includes work in 2013 to address overgrown vegetation and trees along the upstream emergency spillway discharge channel, downstream earth fill embankment slopes, and downstream toe of the dam. In 2017, voids were identified along the embankment's downstream crest from decaying roots/tree stumps left behind from past vegetation clearing, along with ponding water near the toe of the downstream embankment slope along the north side of the reservoir.

DESCRIPTION

The DOA proposes to rehabilitate the Waimanalo 60 MG Reservoir structure and facility. The scope of work includes repairs to the embankment crest where voids were documented, including excavation and replacement with similar earth fill, restoration to the surface drainage pattern near the north embankment toe, and replacement of security fencing surrounding the reservoir. (See Exhibit 3)

CHAPTER 343-HRS – ENVIRONMENTAL ASSESSMENT

The State of Hawaii, Department of Agriculture conducted an HRS-343 environmental assessment evaluation of the project and concluded the action is exempt from the preparation of an environment assessment pursuant to Exemption Class 1 on their Exemption list dated March 8, 2000 and will have minimal or no significant impact on the environment. (See Exhibit 4)

HAWAII REVISED STATUTES CHAPTER 6E-8 HISTORIC PRESERVATION REVIEW

The Division consulted with the State Historic Preservation Division (SHPD) for compliance with Chapter 6E-8 requirements. A SHPD review was conducted at the request of the Division, SHPD Project No. 2021PR00629, Waimanalo Reservoir Miscellaneous Improvements.

Based on the information provided, **SHPD’s determination is “no historic properties affected.”** (See Exhibit 5). In the event subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from further disturbance, and contact the State Historic Preservation Division at (808) 692-8015.

AGENCY CONSULTATION

The Division distributed notices to various agencies for their comments on this application. A summary of their responses is included in Exhibit 6. The Commission on Water Resource Management (CWRM) informed the Division the construction work will not impact any natural waterways (e.g., Waimanalo Stream) in the surrounding area.

REMARKS

The applicant/owner, State of Hawaii, Department of Agriculture has completed a basis of design, plans and specifications and requests the approval of a dam safety permit. The Division has reviewed the documents and concluded it is sufficient for its intended purposes. Staff recommends approval of this permit application with the Dam Safety General Permit Conditions. (See Exhibit 7)

RECOMMENDATION

1. Authorize the approval and issuance of a Dam Safety Permit for the Miscellaneous Improvements at the Waimanalo Reservoir (OA-0129).
2. Authorize the Chairperson to draft and issue a Dam Safety Permit for the Waimanalo Reservoir (OA-0129), subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

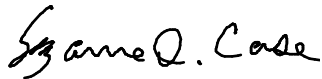
3. Authorize the Department to oversee performance of the permitted work and take appropriate action including, but not limited to, amending the permit, issuance of fines and/or revocation of the permit, if necessary.

Respectfully submitted,



CARTY S. CHANG
Chief Engineer

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE
Chairperson

- Exhibits:
1. Owner's Dam Safety permit application form
 2. Location map
 3. Construction drawing pages
 4. Chapter 343-HRS Review Exemption Notice form
 5. HRS Chapter 6E-8 Historic Preservation review
 6. Agency consultation summary
 7. General permit conditions
 8. Waimanalo 60MG Reservoir overview and aerial photo

**Hawaii Dam and Reservoir Safety Program
DAM SAFETY PERMIT**

Dam Name: **Waimanalo Reservoir** Project Type: **Improvement**

DAM SAFETY PERMIT APPLICATION FORM

Fill in the following information for the specified dam safety permit project. One application shall be used for each dam or reservoir structure.

Project Information	<i>Application Date</i>	April 13, 2021
	<i>Applicant Name (Attachment 1)</i>	Glenn Okamoto, State of Hawaii Department of Agriculture
Dam Name	Waimanalo Reservoir	
Dam ID No. (State) (if New Dam enter N/A)	HI-00129	
Type of Project (check one)	<input type="checkbox"/> New Construction <input checked="" type="checkbox"/> Improvement (repair/rehabilitation/alteration) <input type="checkbox"/> Reduction (alteration to below regulatory jurisdiction) <input type="checkbox"/> Removal (breach, no pond)	
Dam/Reservoir Location (City)	Waimanalo	
Dam/Reservoir Location (Latitude/Longitude)	Waimanalo Reservoir	
TMK(s)	4-1-010:002	
Island/County	Oahu	
State Land Use District (check all applicable)	<input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Rural <input type="checkbox"/> Urban <input type="checkbox"/> Conservation	

Application Package	Included (Y/N)
1. Dam Safety Permit Application Form (with each owner's signature page) [Ref. 13-190.1-20(d)(1)]	Y
2. Design Report(s) [Ref. 13-190.1-20(d)(2)]	N
3. Documentation for compliance with Chapter 343 Environmental Review	Y
4. Documentation for compliance with State Historic Preservation Division (SHPD) See SHPD website for HRS 6E Intake form to be submitted with backup documentation and determination. Government entities shall complete the 6E-08 review. (http://dlnr.hawaii.gov/shpd/review-compliance/forms/)	Y
5. Construction Plans (2 sets) [Ref. 13-190.1-20(d)(3)]	Y
6. Construction Specifications (2 sets) [Ref. 13-190.1-20(d)(3)]	Y
7. Construction Quality Assurance Plan [Ref. 13-190.1-20(d)(4)]	N
8. Detailed Cost Estimate [Ref. 13-190.1-20(d)(5)]	N
9. Filing fee calculation [Ref. 13-190.1-20(d)(6)]	Y
10. Filing fee (check) [Ref. 13-190.1-20(d)(6)]	N
11. Other Supporting Documents	N
12. Electronic copy of all of the above on CD/DVD/USB flash drive/other	Y

Exhibit 1

**Hawaii Dam and Reservoir Safety Program
DAM SAFETY PERMIT**

Dam Name: Waimanalo Reservoir Project Type: Improvement

Technical Information	
Drainage Area (sq. miles/acres)	5 acres
Type of Structure (Earthen/Concrete, etc.)	Earthen
Size Classification of Dam	Small
Hazard Classification	High
Purpose of Structure (Water supply, irrigation, recreation, real estate development, etc...)	Irrigation
Maximum Capacity (existing volume)	309 acre feet
Maximum Capacity (revised volume after project completed)	Same
Year completed/last modified	2013

Description of Work to be performed (describe construction work to be done on dam and reservoir facility)
Repair embankment crest where voids were documented, including excavation and replacement with similar earth fill; restore the drainage pattern near the north embankment toe; and replace security fencing surrounding reservoir.

Anticipated effect of proposed structure on natural environment:
The proposed rehabilitation is not intended to alter the stability of the dam nor diminish freeboard. No effects on the natural environment are anticipated.

List all parties who share ownership of the parcels where the dam and reservoir are located and identify their interest in the property. All owners herein listed below shall sign **Attachment 2 – Owner Signature** and concur with the work proposed within this application by the applicant.

Owner Information	
<u>Owner 1 Name:</u> State of Hawaii Department of Agriculture Company: Agricultural Resource Management Division	TMK: 4-1-010:002
<u>Owner 2 Name:</u> Company:	TMK:
<u>Owner 3 Name:</u> Company:	TMK:
<u>Owner 4 Name:</u> Company:	TMK:

**Hawaii Dam and Reservoir Safety Program
DAM SAFETY PERMIT**

Dam Name: Waimanalo Reservoir Project Type: Improvement

Attachment 1

APPLICANT CONTACT INFORMATION

Applicant Information (primary contact for Dam Safety Permit process)	
Applicant Contact Name	Glenn Okamoto
Firm/Company	State of Hawaii Department of Agriculture: Agricultural Resource Management Division
Mailing Address	1428 South King Street, Honolulu, HI 96814
Telephone	(808) - 973 - 9436
Fax	(808) - 973 - 9467
Email	Glenn.M.Okamoto@hawaii.gov

I, Glenn Okamoto, the applicant, hereby certify that the information herein is
(print name)
true and factual to the best of my knowledge. Signing below indicates that the applicant understands that, if the permit requested is granted by the Board of Land and Natural Resources, the proposed work is to be initiated and completed within five (5) years of the approval date, unless specifically permitted in the approved permit terms and conditions.



Applicant Signature

Date: April 13, 2021

Hawaii and Kauai Section Head

Applicant Title

ENGINEER CONTACT INFORMATION

Licensed Engineer Contact Information	
Registered Hawaii Professional Engineer	Kealohi Sandefur
Registration No.	12362-C
Firm/Company	Yogi Kwong Engineers
Mailing Address	677 Ala Moana Blvd. Suite 710, Honolulu, HI 96813
Telephone	(808) - 942 - 0001
Mobile/Other	(808) - 942 - 0001
Fax	(808) - 942 - 0004
Email	Kealohi@yogikwong.com

**Hawaii Dam and Reservoir Safety Program
DAM SAFETY PERMIT**

Dam Name: Waimanalo Reservoir Project Type: Improvement

Attachment 2

OWNER INFORMATION/SIGNATURE

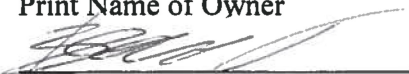
A separate signature page is required for each and all owners of the dam and reservoir for the subject project. The Owner herein listed below concurs with the work proposed within this application by the applicant and by signing hereto, the owner of the land extends to the Board of Land and Natural Resources, and its designated representatives, a right-of-entry onto the project site to conduct any investigations or inspections required in compliance with the provisions of Chapter 13-190.1, Hawaii Administrative Rules. (Submit copies of this sheet for each owner)

Owner Information	
Owner Contact Name	Brian Kau
Firm/Company	State of Hawaii Department of Agriculture: Agricultural Resource Management Division
Mailing Address	1428 South King Street, Honolulu, HI 96814
Telephone	(808) - 973 - 9473
Mobile/Other	(808) - 973 - 9473
Fax	(808) - 973 - 9467
Email	Brian.K.Kau@hawaii.gov
TMK for dam/reservoir property	4-1-010:002

Owner Signature

Brian Kau, P.E.

Print Name of Owner



Signature of Owner

4/13/21

Date

**Hawaii Dam and Reservoir Safety Program
DAM SAFETY PERMIT**

Dam Name: Waimanalo Reservoir Project Type: Improvement

Attachment 3

FEE REQUIREMENTS/FILING FEE CALCULATION

Payment of the filing fee is required pursuant to HRS §179D-6 and §13-190.1-50 for all applications. The Department shall accept and take action on the following applications and filings only if the fee shown for the application or filing is paid at the time the application or filing is submitted. The fee is based upon two percent of the total project costs associated with construction of the dam and appurtenant works integral to the design and safe operation of the dam.

The applicant or owner shall submit with the application for construction, enlargement, alteration, repair, or removal a fee calculation sheet and the application fee in the amount equal to two per cent of the estimated cost of construction including engineering costs. The estimated cost of the construction, enlargement, alteration, repair, or removal shall include the cost of all labor and materials entering into the construction of the dam and appurtenant works or reservoir, the cost of preliminary investigations and surveys, the cost of the construction plans properly chargeable to the cost of the dam or reservoir, and any and all other items entering directly into the cost of the construction, enlargement, alteration, repair or removal. The costs of right-of-way, detached powerhouses, electrical generating machinery, and roads and railroads affording access to the dam or reservoir shall not be included among the items used in the determination of cost.

An application shall not be considered by the department until the application fee is received. In the event the actual cost exceeds the estimated cost by more than 15 percent, a further fee shall be required by the board before final approval and shall be two per cent of the amount the actual cost exceeded the estimated cost of the construction, enlargement, alteration, repair, or removal. No further fee shall be required, if such fee is to be computed at less than twenty dollars (\$20).

FILING FEE CALCULATION

Engineering costs (studies, plans, specifications, etc...)	<u>\$ 373,016.00</u>
Estimated Construction cost	<u>\$ 1,464,801.14</u>
Total estimated costs	<u>\$ 1,837,817.14</u>
Initial Application fee = 2% x Total estimated costs	<u>\$ 36,756.30</u>

STATE OF HAWAII
 DEPARTMENT OF AGRICULTURE
 PROJECT NO. DOAO-13

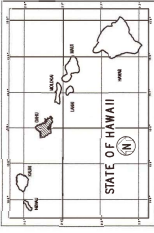


Exhibit 2

WAIMANALO RESERVOIR MISCELLANEOUS IMPROVEMENTS

WAIMANALO, OAHU, HAWAII
 TAX MAP KEY : (1) 4-1-010: 002

PREPARED FOR :
HAWAII STATE DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESOURCE MANAGEMENT DIVISION
 1428 SOUTH KING STREET
 HONOLULU, HAWAII 96814

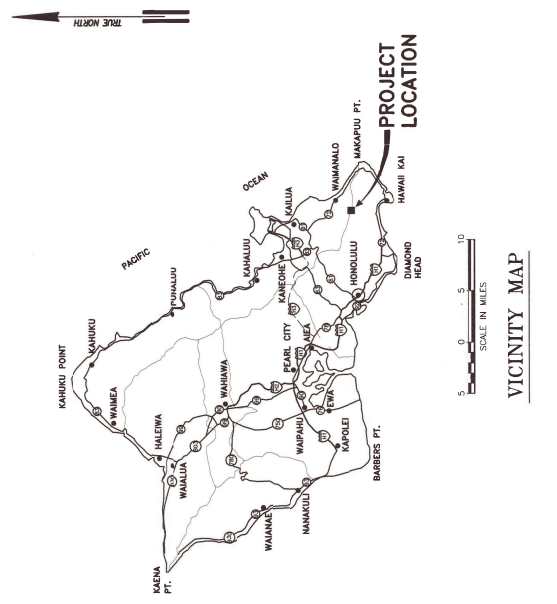
PREPARED BY :



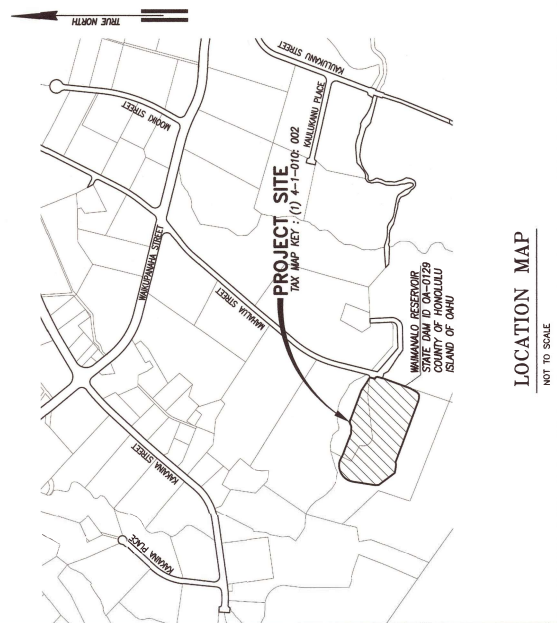
YOGI KWONG ENGINEERS, LLC
 877 ALA MOANA BOULEVARD, SUITE 710
 HONOLULU, HAWAII 96813



R. M. IOWILL CORPORATION
 SINCE 1939
 (808) 842-1133 2024 NORTH KING STREET SUITE 200 HONOLULU, HAWAII 96819



VICINITY MAP
 SCALE IN MILES



LOCATION MAP
 NOT TO SCALE

APPROVED:

[Signature]
 ADMINISTRATOR AND CHIEF ENGINEER, AGRICULTURAL RESOURCE MANAGEMENT DIVISION
 DEPARTMENT OF AGRICULTURE, STATE OF HAWAII
 DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING CITY & COUNTY OF HONOLULU
 (FOR GRADING ONLY)

DATE: 4/20/2020
 DATE:

INDEX TO DRAWINGS:

SHT. NO.	DWG. NO.	TITLE
1	T-1	TITLE SHEET AND INDEX
2	C001	CONSTRUCTION NOTES
3	C101	OVERALL SITE PLAN
4	C102	EROSION & SEDIMENT CONTROL NOTES
5	C103	EROSION & SEDIMENT CONTROL PLAN
6	C104	DEMOLITION PLAN
7	C105	SITE PLAN - 1
8	C106	SITE PLAN - 2
9	C107	SINGLE GRADING PLAN
10	C201	TYPICAL SECTION
11	C301	MISCELLANEOUS DETAILS - 1
12	C302	MISCELLANEOUS DETAILS - 2
13	C303	MISCELLANEOUS DETAILS - 3
14	G-1	INSTRUMENTATION RESTORATION PLANS AND DETAILS

MAHAILUA STREET (CITY)

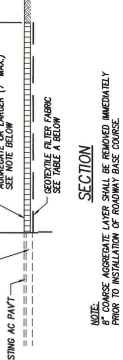
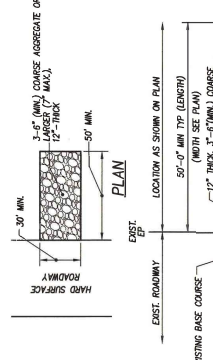
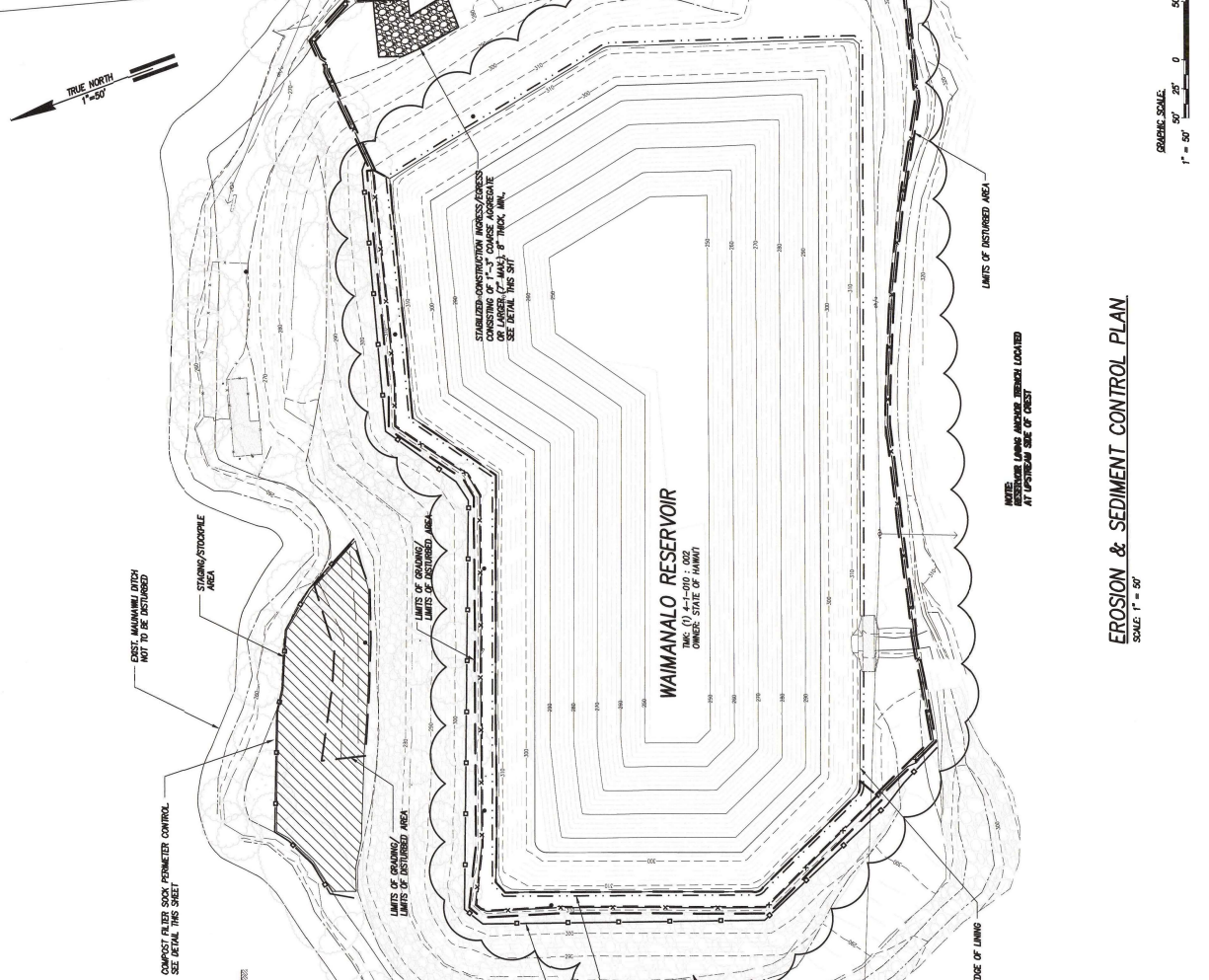
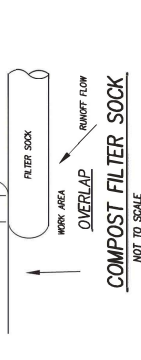
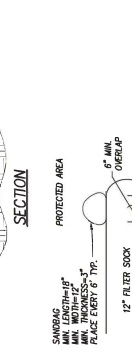
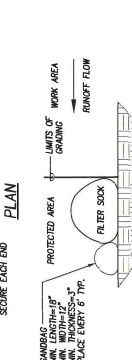
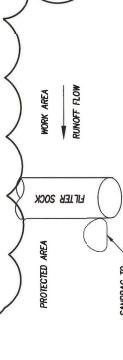
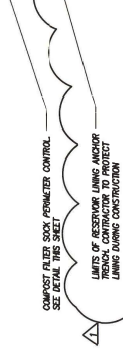


TABLE A GEOTEXTILE REQUIREMENTS

PILE STRENGTH	200 LB (ASTM D1682)
TEAR STRENGTH	200 LB (ASTM D1682)
EXTENSION FAILURE	60% (ASTM D1682)
MULLER BURST STRENGTH	430 LB (ASTM D3769)
PUNCTURE STRENGTH	125 LB (ASTM D751, MODIFIED)
EQUIPMENT OPENING	1/2 SIZE 40-200 (U.S. STD. SIEVE, CEN-20225)

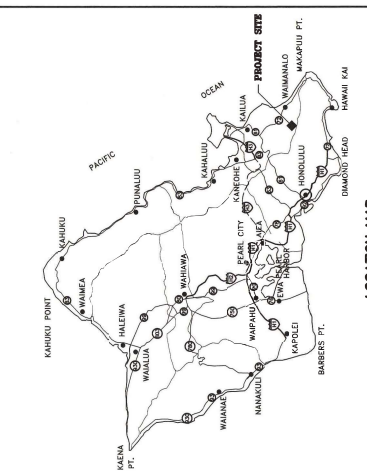
STABILIZED CONSTRUCTION INGRESS/EGRESS

NOT TO SCALE



COMPOST FILTER SOCK

NOT TO SCALE



LOCATION MAP

NOT TO SCALE

- PRE-CONSTRUCTION BMP**
- STABILIZED CONSTRUCTION ENTRANCE
 - COMPOST FILTER SOCK
- DURING CONSTRUCTION BMP**
- TEMPORARY STABILIZATION
 - WATER TRACK
- POST CONSTRUCTION BMP**
- PERMANENT STABILIZATION (GRASS)

APPROXIMATE QUANTITIES

SELESOX COMPOST FILTER SOCK 1,838 LF

TOTAL PROJECT LIMITS 0.72 AC
 TOTAL LIMIT DISTANCE 0.72 AC
 PROJECT CATEGORY 4

PROJECT: WAIMANALO RESERVOIR REPAIR
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 4/7/21
 SECTION: [Name]
 SHEET: 5 OF 14 SHEETS

DESIGNED BY: [Name]
 DATE: [Date]
 SECTION: [Section]
 SHEET: 5 OF 14 SHEETS

PROJECT: WAIMANALO RESERVOIR REPAIR
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 DATE: [Date]
 SECTION: [Section]
 SHEET: 5 OF 14 SHEETS

EROSION & SEDIMENT CONTROL PLAN

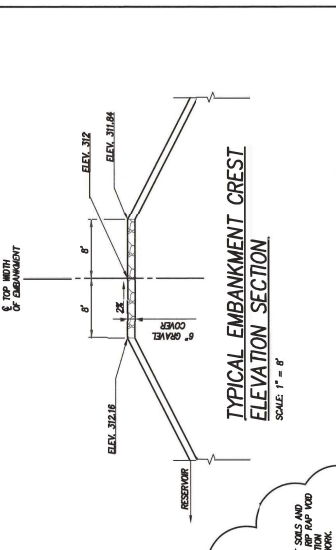
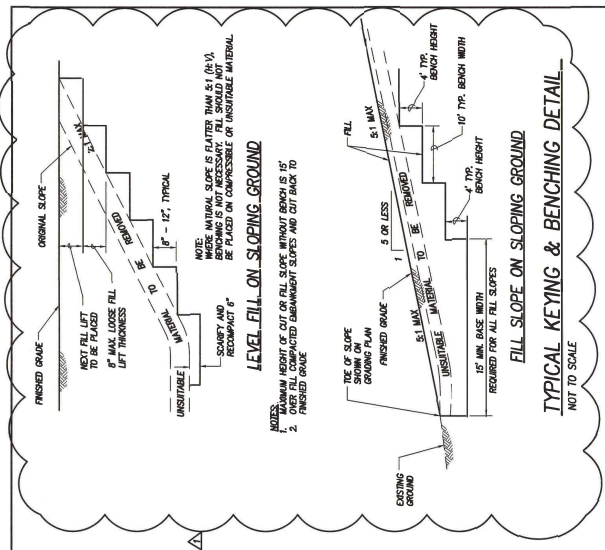
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PROJECT: WAIMANALO RESERVOIR REPAIR
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 DATE: 4/7/21
 SECTION: [Name]
 SHEET: 5 OF 14 SHEETS

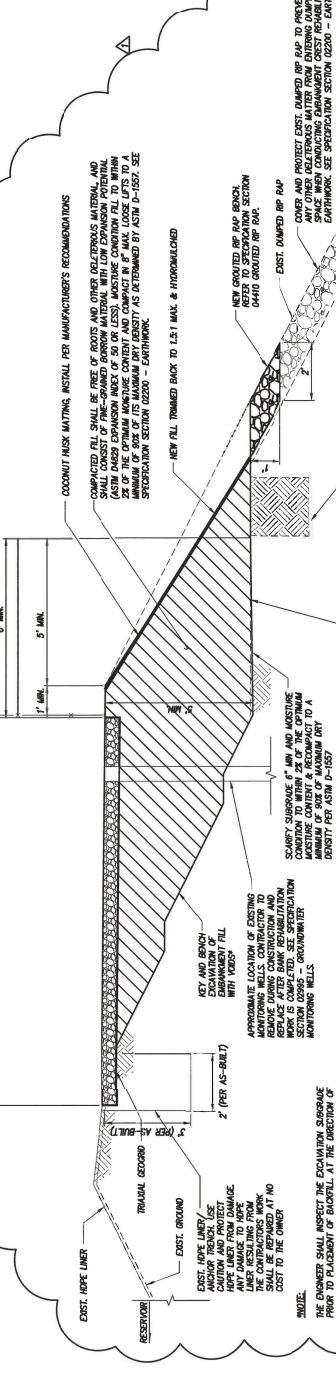
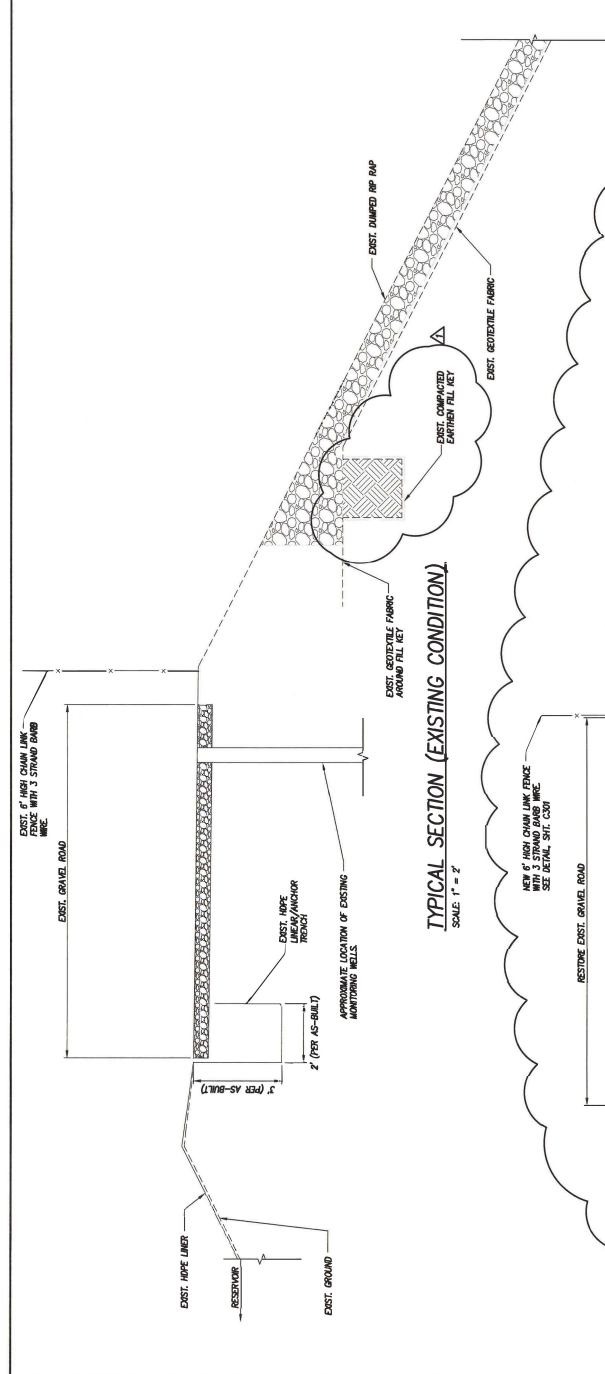
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PROJECT: WAIMANALO RESERVOIR REPAIR
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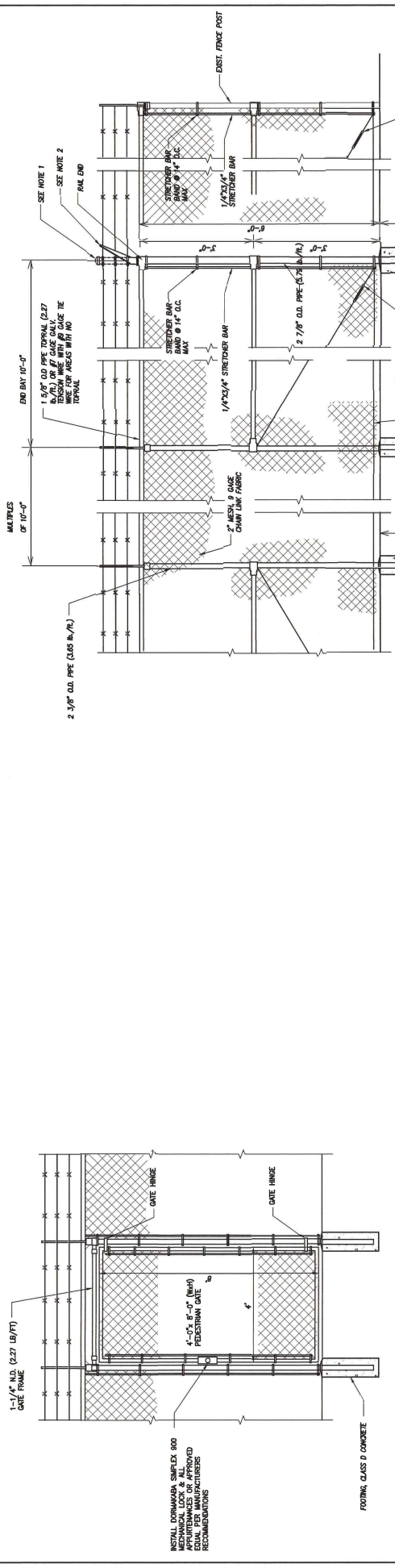
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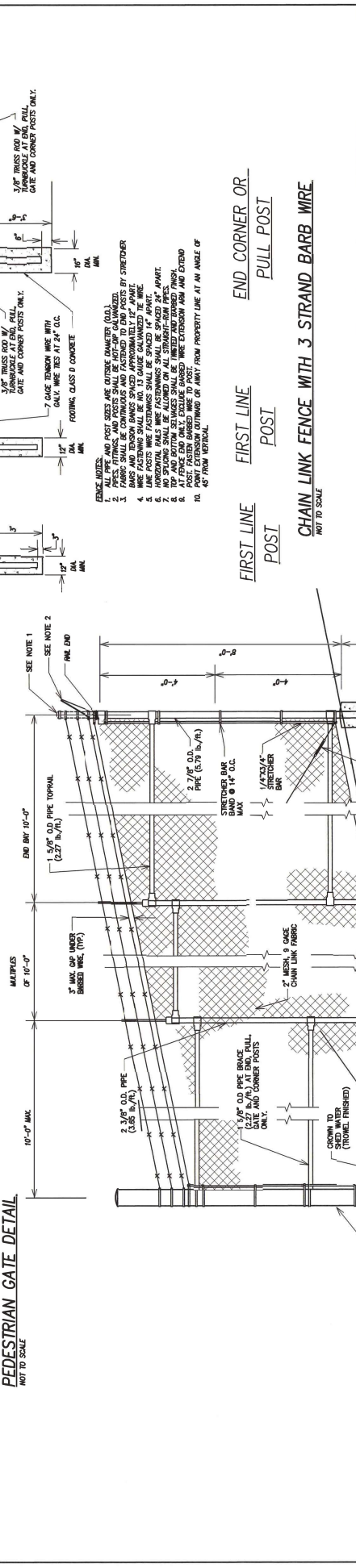
OWNER	DATE	NO. OF REV. DETAILS	BY	APPROVED
STATE OF HAWAII	4/7/21	1	REVISION	BY
R. M. TOWILL CORPORATION DEPARTMENT OF AGRICULTURE STATE OF HAWAII WAIMANALO RESERVOIR REPAIR WAIMANALO, OAHU, HAWAII TEL: (808) 251-1211				
TYPICAL SECTION				



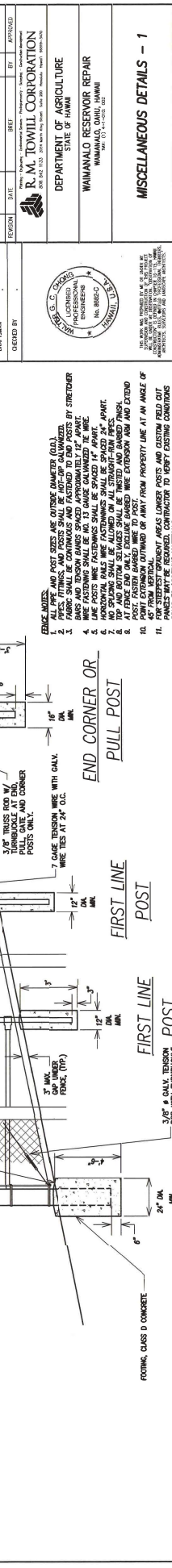
TYPICAL SECTION ALONG EMBANKMENT CREST (PRIVATE)
 SCALES: 1" = 1'



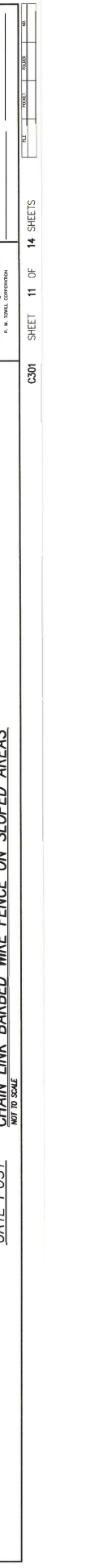
PEDESTRIAN GATE DETAIL
NOT TO SCALE



CHAIN LINK BARBED WIRE FENCE ON SLOPED AREAS
NOT TO SCALE



CHAIN LINK FENCE WITH 3 STRAND BARB WIRE
NOT TO SCALE



MISCELLANEOUS DETAILS - 1

ENGINEER: R. M. TOWILL CORPORATION
 DATE: 10/15/22
 REASON: DEPARTMENT OF AGRICULTURE
 WAIMANALO RESERVOIR REPAIR
 WAIMANALO, OAHU, HI 96791
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

- FENCE NOTES:**
1. ALL PIPE AND POST SIZES ARE OUTSIDE DIAMETER (O.D.).
 2. ALL POSTS SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 3. PIPES, FITTINGS, AND POSTS SHALL BE 307-2P GALVANIZED.
 4. FABRIC SHALL BE CONTINUOUS AND FASTENED TO END POSTS BY STRETCHER.
 5. WIRE FASTENING SHALL BE NO. 13 GAUGE GALVANIZED STEEL WIRE.
 6. HORIZONTAL WIRE FASTENINGS SHALL BE SPACED 24" APART.
 7. NO SPACING SHALL BE ALLOWED ON ALL STRAIGHT-RUN PIPES.
 8. AT FENCE END ONLY, EXCLUDE BARBED WIRE EXTENSION AND EXTEND POST, FASTEN BARBED WIRE TO POST.
 9. AT FENCE END ONLY, EXCLUDE BARBED WIRE EXTENSION AND EXTEND 45° FROM VERTICAL.
 10. AT FENCE END ONLY, EXCLUDE BARBED WIRE EXTENSION AND EXTEND 45° FROM VERTICAL.
 11. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 12. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 13. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 14. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 15. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 16. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
 17. BARBED WIRE SHALL BE GALVANIZED OR HOT-DIP GALVANIZED.
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DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor



PHYLLIS SHIMABUKURO-GEISEF
Chairperson, Board of Agriculture

MORRIS M. ATTA
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

EXEMPTION NOTICE FORM

TO: 1. Agency-Maintained Public Files for Chapter 343 HRS Exemption Determinations
2. Office of Environmental Quality Control, if publication by OEQC is desired

FROM: Administrator and Chief Engineer
Agricultural Resource Management Division
State of Hawai'i, Department of Agriculture

SUBJECT: Exemption Notice for Waimanalo Reservoir Miscellaneous Improvements (DOAO-13)

DATE: 5/14/2021

AGENCY OR APPLICANT ACTION

Check applicable box

- This exempted action is an agency action as defined by Section 343-5(b), Hawai'i Revised Statutes (HRS), and Section 11-200.1-8, Hawai'i Administrative Rules (HAR),
- This exempted action is an applicant action as defined by Section 343-5(e), HRS, and Section 11-200.1-9, HAR

EXEMPTION TYPE:

The Exemption Notice for the action described below is based on the general types enumerated in Section 11-200.1-15(c), Hawai'i Administrative Rules (HAR), Exemption Type 1.

As applicable, the exemption for the action described below is also supported by the Exemption List for the State of Hawai'i, Department of Agriculture, reviewed and concurred to by the Environmental Council on 3/8/2000.

- Exemption List Class 1.
- Item Number 1.
- Applicable language from the exemption list: Exemption Class 1: Operations, repairs or maintenance of existing structures, facilities, equipment, or topographic features, involving negligible or no expansion or change of use beyond that previously existing. Item #1: Repairs or rehabilitation which are necessary to maintain existing infrastructure improvements and facilities.

Exhibit 4

DESCRIPTION OF ACTION

Proposing Agency or Applicant: State of Hawai'i, Department of Agriculture
Project Name & Address/Location: Waimanalo Reservoir Miscellaneous Improvements, 41-919 Mahailua Street, Waimanalo, Oahu, Hawai'i, 96795
Anticipated Start Date: 8/1/2021
Anticipated End Date: 2/1/2022
Island and District: O`ahu Ko`olaupoko
Tax Map Key(s) and other geolocation means: 4-1-010:002, Latitude 21.332177°, Longitude -157.737816°
All Necessary Permits and Approvals: State Historic Preservation Division (SHPD) Hawai'i Revised Statutes (HRS) Chapter 6E-08 Review, Building Permit, DCAB Approval, USACE Jurisdictional Determination

NARRATIVE

Describe the action and why it qualifies for the exemption: The State of Hawai'i, Department of Agriculture (DOA) intends to rehabilitate portions of the existing Waimanalo Reservoir embankment crest where voids were previously documented, including excavation and replacement with similar earth fill; restore the drainage pattern near the north embankment toe; and replace security fencing surrounding the reservoir. The improvements qualify for the exemption as they are repairs or rehabilitation which are necessary to maintain existing infrastructure improvements and facilities and involves negligible or no expansion or change of use beyond that previously existing.

RECEIVING ENVIRONMENT

Describe the site, including any impacts on the receiving environment: The Waimanalo Reservoir is situated on 17 acres of land owned by the DOA and is zoned for agricultural use. A garden nursery is directly north of the reservoir and dense vegetation is located east, west, and south of the project boundary. The existing Maunawili Ditch lies outside of the project and property boundaries and runs along the northern property boundary. Short term temporary effects during construction to be managed by construction best management practices. From a long-term perspective, the proposed project is not anticipated to result in any adverse environmental impacts.

ENVIRONMENTAL ANALYSIS

I have considered the potential effects of the proposed project and all related activities against the criteria checked below:

	Not Applicable
<input checked="" type="checkbox"/> Land Use and Zoning Conformance	<input type="checkbox"/>
<input checked="" type="checkbox"/> Traffic (Vehicles, Bicycles, Pedestrian)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Infrastructure (Roads, Buildings, Utilities)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Air Quality Pollutant Emissions	<input type="checkbox"/>
<input checked="" type="checkbox"/> Noise Emissions	<input type="checkbox"/>

- Solid, Hazardous, and Liquid Waste Management
- Social
- Economic
- Health and Safety
- Recreation
- Public Beach Access
- Cultural Resources and Practices
- Visual/Aesthetic
- Environmental Justice
- Rare, Threatened, and/or Endangered Species
- Surface and Ground Water Resources
- Wetlands
- Floodplains
- Riparian/Coastal Resources
- Other

Comments/summary of impact analysis: The Waimanalo Reservoir is within the State Land Use Agricultural District, and the current use is consistent with the permitted activities and uses as stated in HRS Chapter 25, Section 205-2(4)(d). The site also lies within the County of Honolulu’s AG-1 agricultural zoning district and is not within the Special Management Area. According to the Federal Emergency Management Agency’s Flood Insurance Rate Map, the site is within Zone D, which is an area where there are possible but undetermined flood hazards, as no analysis of flood hazards has been conducted. There are no wetlands located on or near the project site. According to the U.S. Fish and Wildlife Service’s (FWS) Environmental Conservation Online System (ECOS), the Waimanalo Reservoir is not located near a critical habitat for threatened or endangered species as identified by FWS. Improvements to the existing Waimanalo Reservoir will not change the use of the land, and thus will not require additional land use or zoning permits and/or approvals. All improvements will occur on the Waimanalo Reservoir site and will not affect vehicular traffic on the adjacent Mahailua Street. The State Historic Preservation Division (SHPD) determined no adverse effect to historic properties for a previous Waimanalo Reservoir improvements project (DOASW01-C) within a similar construction footprint. At the time of this letter, the Hawai’i Revised Statutes (HRS) Chapter 6E-8 Review Application Form has been delivered to DLNR Engineering Division, Dam Safety for submittal to SHPD to obtain the Determination of SHPD Jurisdiction Requirements for the current DOA project (DOAO-13).

MITIGATION

Describe all mitigation measures and best management practices planned to address impacts during the project activities and after project completion: Erosion control and construction Best Management Practices (BMPs) will be applied to minimize any temporary impacts to the site and surrounding area. BMPs that will be applied include: providing construction entrance for ingress/egress, installing compost filter sock perimeter control, and planting grass after construction.

CONSULTATION

The following parties have been consulted about this declaration exemption (Name, affiliation, consultation date): Department of Land and Natural Resources (DLNR) Engineering Division, Dam Safety, May 6, 2021

EXEMPT DECLARATION

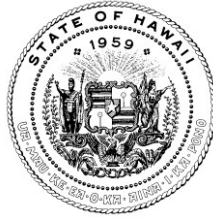
The direct, cumulative, and potential impacts of the action described above have been considered pursuant to Chapter 343, Hawai'i Revised Statutes and Chapter 11-200.1, Hawai'i Administrative Rules. I declare that the action described above will have minimal or no significant impact on the environment and is therefore exempt from the requirement to prepare an environmental assessment.

Alycia J. Fornaluluu-Pasir
Signature of Director or Delegate

5-14-2021
Date

- This document is on file in our office and is available for public review.
- This document has been submitted to the Office of Environmental Quality Control for publication in *The Environmental Notice*.

DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
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
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD., STE 555
KAPOLEI, HI 96707

November 1, 2021

Mr. Brian Kau, Administrator
State of Hawaii
Department of Agriculture
Agricultural Resource Management Division
1428 South King Street
Honolulu, Hawaii 96814
Brian.K.Kau@hawaii.gov

Mr. Carty Chang, Chief Engineer
State of Hawaii
Department of Land and Natural Resources
Engineering Division
P.O. Box 373
Honolulu, Hawaii 96809
Carty.S.Chang@hawaii.gov

Dear Mr. Kau and Mr. Chang:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –
Request for Concurrence with Project Effect Determination
Waimanalo Reservoir Miscellaneous Improvements Project (DOAO-13)
Waimānalo Ahupua‘a, Ko‘olaupoko District, Island of O‘ahu
TMK: (1) 4-1-010:002**

This letter provides the State Historic Preservation Division's (SHPD's) review of the State of Hawai'i, Department of Land and Natural Resources (DLNR), Engineering Division's request for an effect determination. The Department of Agriculture (DOA), Agricultural Resource Management Division has applied for a Dam Safety permit from DLNR in regard to their Reservoir Miscellaneous Improvements Project. The DOA requests SHPD's concurrence with a project effect determination of "No historic properties affected." The SHPD received this submittal on June 4, 2021, which included the following:

- [X] DLNR letter dated June 1, 2021, initiating consultation with SHPD and requesting concurrence with project effect determination;
- [X] SHPD HRS 6E Submittal Form from DOA;
- [X] Construction Plans; and
- [X] Photos of the project area

The DOA proposes to rehabilitate the Waimanalo Reservoir structure and facility. The scope of work will include repairs to the embankment crest where voids were documented, including excavation and replacement with similar earth fill, restoration to the drainage pattern near the north embankment toe, and replacement of security fencing surrounding the reservoir. The reservoir is owned and operated by the DOA, Agricultural Resource Management Division. It was constructed in 1993 and is listed within the National Inventory of Dams (NID HI00129). It is not 50 years old and, thus, is not a historic property as defined in §6E-2, HRS.

The proposed subsurface disturbance will include removal of the embankment area with voids and restoration of the removed embankment with similar earth fill, slight re-grading and construction of a drainage swale near the toe of the

IN REPLY REFER TO:
Project No.: 2021PR00629
Doc. No.: 2111LS02
Archaeology, Architecture

Mr. Kau and Mr. Chang

November 1, 2021

Page 2

dam to restore the drainage away from the toe towards the existing downstream irrigation ditch, and installation of a geogrid reinforced gravel swale section to stabilize the access area for maintenance vehicles that cross the planned drainage swale near the toe of the dam.

A SHPD records review indicates that there are multiple traditional Hawaiian archaeological sites in the vicinity of this project which include Pohakunui Heiau (Site 50-80-15-0382), as well as remnants of a combined tunnel, pipeline, and ditch system which was constructed in 1923 to carry water from Kawainui Marsh to sugar lands in Waimanalo. (Site 50-80-15-4042), and the historic Waimanalo irrigation ditch (Site 50-80-15-4042). However, the construction plans indicate that a temporary protective barrier (erosion control filter sock) will be placed along the project limits near the boundary of the Maunawili Ditch to buffer the ditch from any potential harm during this project.

The SHPD concurs with the DOA's project effect determination of "No historic properties affected" for the current project. The proposed project is a routine maintenance and repair project and will not affect any identified historic properties. Pursuant to HAR §13-275-7(e), when the SHPD comments that the action shall not affect any significant historic properties, the historic preservation review ends. The HRS 6E historic preservation review process is ended for the subject project. The permit issuance process may proceed.

The SHPD hereby notifies the DOA that the HRS 6E historic preservation review process is ended. Project initiation may proceed.

Please attach to permit: In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division, at (808) 692-8015.

Please contact Susan A. Lebo, Archaeology Branch Chief, at Susan.A.Lebo@hawaii.gov or at (808) 321-9000 for any matters regarding this letter.

Aloha,

Alan Downer

Alan S. Downer, PhD

Administrator, State Historic Preservation Division

Deputy State Historic Preservation Officer

cc: Janice Fujimoto, janice.fujimoto@hawaii.gov
Tony Koyamatsu, tony.koyamatsu@hawaii.gov
Suzanne Case, Suzanne.case@hawaii.gov
Robert K. Masuda, robert.k.masuda@hawaii.gov
Edwin Matsuda, Edwin.matsuda@hawaii.gov

DAM SAFETY PERMIT AGENCY CONSULTATION SUMMARY

PERMIT NO. 83 – WAIMANALO RESERVOIR (OA-0129) – Dam Improvement

Agency	Date Sent by Dam Safety	Date Returned	No Comments	Comments	No Reply
DLNR Division of Aquatic Resources	7/29/2021				X
DLNR Commission on Water Resource Mgt	7/29/2021	8/30/2021	X		
DLNR Division of Forestry & Wildlife	7/29/2021				X
DLNR Historic Preservation Division	6/4/2021	11/1/21		No historic properties affected	
DLNR Land Division	7/29/2021				X
DLNR Office of Conservation & Coastal Lands	7/29/2021				X
Department of Agriculture	7/29/2021				X
DOA Agribusiness Development Corporation	7/29/2021				X
C&C of Honolulu, National Flood Insurance Program	7/29/2021				X
C&C of Honolulu, Dept of Emergency Management	7/29/2021				X
Hawaii Emergency Management Agency	7/29/2021	8/9/2021	X		

DAM SAFETY PERMIT GENERAL CONDITIONS

APPROVAL OF PLANS AND SPECIFICATIONS FOR DAM AND RESERVOIR CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION OR REMOVAL

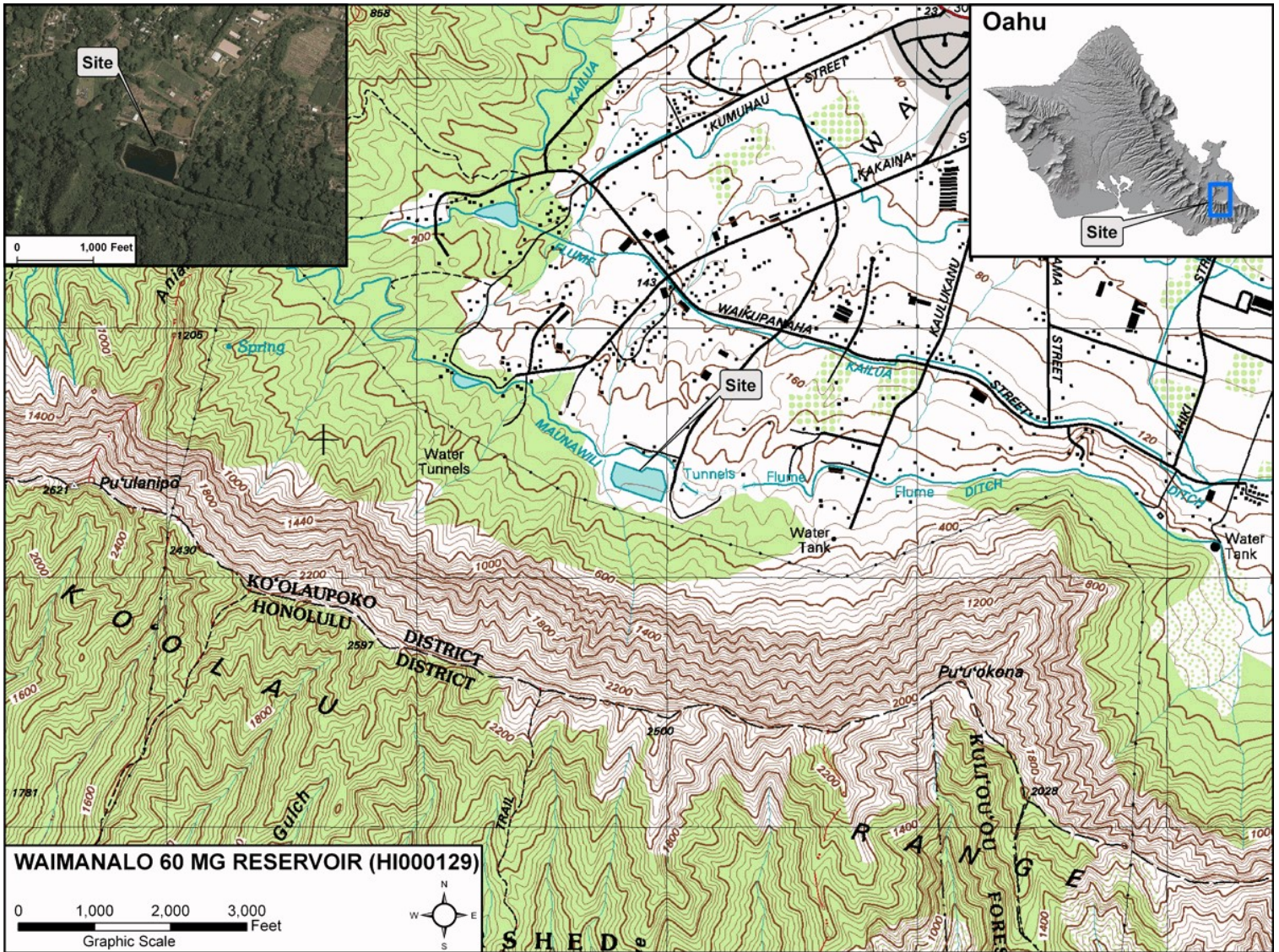
The following General Conditions shall be adhered to for all Dam Safety permits unless otherwise authorized in writing.

1. Actual construction, enlargement, repair, alteration or removal shall be completed within 5 years of issuance of the permit application approval unless an extension authorized in writing by the Board is issued.
2. Prior to the start of work the owner or applicant shall provide a construction engineer to ensure compliance with the approved plans and specifications and who shall have ultimate responsibility for the supervision of all inspection tasks. The construction engineer may assign some inspection tasks to a duly authorized agent under the construction engineer's supervision. The engineer shall be licensed in the State of Hawaii.
3. The construction engineer shall maintain a record of construction that at a minimum, shall include, daily activity, and progress reports, all test results pertaining to construction; photographs sufficient to provide a record of foundation conditions and various stages of the construction through completion, all geologic information obtained; and construction problems and remedies.
4. A construction quality assurance plan shall be prepared and submitted to the Department for approval prior to the start of construction, which details the minimum requirements of the construction engineer's observation of construction.
5. A construction schedule, which includes the notice to proceed date and estimated project duration and a construction emergency action plan shall be submitted prior to the preconstruction meeting.
6. A preconstruction meeting shall be held subsequent to submitting the quality assurance plan, construction schedule and construction emergency action plan, but not later than 14 days prior to the start of construction. All parties actively involved in the construction should be requested to attend, such as the dam owner, the design engineer, the construction engineer, the contractor and the Department.
7. The Department shall be notified 5 calendar days prior to the commencement of construction.
8. Any changes from the approved plans and specifications shall be approved by the design engineer and a change order, including details and supporting calculations, must be provided to the Department. Major changes must be submitted in writing with supporting documentation and approved in writing by the Department. No work shall be initiated until the approval by the Department or Board is received. Minor changes may be transmitted verbally and approved by the Department verbally provided that documentation of the change is provided to the Department within 10 days of the approval.

9. For new dam construction and for dams and reservoirs that have lowered the water level or have been drained to facilitate construction, the construction engineer shall file and obtain approval of a filling plan with the Department. The applicant/owner shall not proceed with the filling of the reservoir until it receives permission from the Department. The construction engineer shall provide documentation of monitoring during the filling operation.
10. Prior to the filling of the reservoir, the construction engineer shall submit one copy each of the approved Operations Manual and the approved Emergency Action Plan for the facility upon completion of the project as applicable.
11. The construction engineer shall give the Department at least ten days advanced notice of initial materials placement of the dam's foundation, in the cutoff trench, outlet backfill, outlet foundation, and any appurtenance requested by the Department in the approval of the plan for construction observation, to allow for observation by the Department.
12. Notice of substantial completion shall be issued by the construction engineer to the Department stating that the permitted improvements are functionally complete such that filling of the reservoir can be initiated with an approved filling plan.
13. The construction engineer shall give the Department fifteen (15) calendar days advance written notice prior to the project's final construction inspection. The construction engineer shall coordinate with the Department to conduct this inspection in the presence of the Department's dam safety personnel.
14. The construction engineer shall provide notice at least ten (10) days prior to initiating filling the reservoir, unless agreed at the final inspection.
15. If conditions are revealed which will not permit the construction, enlargement, repair, alteration, or removal of a safe dam or reservoir, the application for approval for construction, enlargement, repair, alteration, or removal shall be revoked.
16. A topographic survey of completed work including all monuments, inverts, crest alignment, spillways, and significant appurtenant features, when required by the Department shall be completed.
17. The applicant/owner shall utilize appropriate erosion control best management practice measures during construction to minimize turbidity (such as scheduling of work during period of low stream flow) and prevent debris and construction materials, including concrete, petroleum products, and other pollutants from enter the waters of the State. Construction related water and debris should be properly disposed of in a legal and environmentally safe manner and in accordance with the Department of Health and other Federal regulations.
18. The applicant/owner shall submit a copy of the dam safety application and the plans and specifications of the proposed improvements to the County Engineer of the County for which the dam resides for compliance with County codes.
19. Within fifteen (15) calendar days of completing the project, the applicant/owner or its representative shall provide the Department with a confirmation letter of compliance, signed and stamped by the construction engineer, indicating that the construction

was completed in accordance to approved plans and specifications including any field changes. The construction engineer shall submit the remaining construction completion documents which may include, but not be limited to, as-constructed drawing, final construction report, topographic survey, record of the location of permanent monuments, log of recorded water levels and other readings from the refilling operation, long-term instrumentation monitoring plan, and affidavit showing the actual cost of construction including engineering costs, within 60 calendar days of the submittal of the final construction inspection.

20. Construction completion documents and the construction engineer's certification shall be provided to the Department within 60 days of the final construction inspection. The Department will review the submitted items and furnish acceptance or denial within 60 days of receipt of satisfactorily completed construction completion documents and close out the dam safety permit.
21. This permit does not relieve the applicant/owner of their obligations to comply with all applicable Federal, State, and County regulations.
22. In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division at (808) 692-8015.
23. Compliance with Hawaii Revised Statutes 179D, and Hawaii Administrative Rules 13-190.1.



1. General Information	
a. State Dam ID	OA-0129
b. National ID	HI00129
c. Dam Name	WAIMANALO 60 MG RESERVOIR
d. Other Name(s)	
e. Longitude / Latitude	-157.7378 / 21.3322
f. County / Island	Honolulu / Oahu
g. Type of Dam	Earthen
h. Purpose	Irrigation
i. Completed / Last Modified	1993 /
j. Nearest City / Town	WAIMANALO
k. Water Body Type	State Regulated Dam
l. Dam Height	65 ft
m. Dam Length	2,118 ft
n. Drainage Area	0.01 sq. miles / 5 acres
o. Size Classification	Intermediate

2. Owner Information	
a. Name of Owner	State of Hawaii, Dept of Agriculture
b. TMK(s)	(1) 4-1-010:002, (1) 4-1-010:092

3. Hazard Potential Classification	
a. Hazard Classification	High
b. Emergency Action Plan	Yes
c. Date of Last EAP	10/29/2019

Exhibit 8



Aerial Photo (03/14/2008)

4. Reservoir

a. Normal Storage	182 ac-ft / 59 MG
b. Maximum Storage	182 ac-ft / 59 MG
c. Surface Area	5.0 acres

5. Primary Spillway

a. Minimum Width	24 ft
b. Length	23 ft
c. Type	Channel
d. Protection	Concrete
e. Maximum Discharge	200 cfs

6. Primary Outlet Works

a. Works Type	Downstream Control
b. Maximum Discharge	
c. Size	
d. Control Description	Downstream

7. Embankment

a. Type of Dam	Earthen
b. Minimum Crest Width	15 ft
c. Upstream Slope Grade	26° / 2.1:1
d. Upstream Slope Protection	Fabric Liner
e. Downstream Slope Grade	26° / 2.1:1
f. Downstream Slope Protection	Vegetation / Dumped Rock
g. Dam Height	65 ft
h. Dam Length	2,118 ft

8. Inflow Works

Type	Name	Controlled	Size
Pipe		Yes	16 Inch Diameter