STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STREAM CHANNEL ALTERATION PERMIT APPLICATION

For Official Use Only:

Instructions: Please print in ink or type and send one (1) completed hardcopy and one (1) digital copy of the application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Applications must be accompanied by a non-refundable filing fee of **$25.00** payable to the Department of Land and Natural Resources. The Commission may not accept incomplete applications without the required signatures. For assistance, call the Stream Protection and Management Branch at **587-0234**. For further information and updates to this application form, visit http://dlnr.hawaii.gov/cwrm.

☒ Check here to allow Commission staff to communicate primarily via e-mail.
Legally required and other key correspondence will still be transmitted via postal mail.

PERMIT TYPE:

1. Permit Applying For: ☒ New ☐ After-The-Fact

2. Type of Construction: ☒ Installation ☐ Modification ☐ Removal

APPLICANT INFORMATION

3. APPLICANT'S NAME / COMPANY	Applicant's Contact Person	Applicant's Phone
U.S. Army Garrison Hawaii, DPW	Nisit Gainey	808-787-6128
Applicant's Mailing Address	**Applicant's E-mail Address**	
947 Wright Ave, Bldg 104 WAAF Schofield Barracks, HI 96857	nisit.a.gainey.civ@army.mil	

☐ **Check here if project will impact multiple landowners.** *If project impacts multiple landowners, skip* ***Item 4*** below, *then complete and attach* ***Form LND-APP*** *to identify and verify landowner's approval of proposed stream channel alteration work.*

4. LANDOWNER'S NAME / COMPANY	Landowner's Contact Person	Landowner's Phone
U.S. Army Garrison Hawaii, DPW	Nisit Gainey	808-787-6128
Landowner's Mailing Address	**Landowner's E-mail Address**	
947 Wright Ave, Bldg 104 WAAF Schofield Barracks, HI 96857	nisit.a.gainey.civ@army.mil	

5. CONSULTANT'S NAME / COMPANY	Consultant's Contact Person	Consultant's Phone
AECOM Technical Services, Inc.	Courtney Hymes	808-529-7297
Consultant's Mailing Address	**Consultant's E-mail Address**	
1001 Bishop St Suite 1600, Honolulu HI 96813	courtney.cacace@aecom.com	

6. CONTRACTOR'S NAME / COMPANY	Contractor's Contact Person	Contractor's Phone
Contractor's Mailing Address	**Contractor's E-mail Address**	

STREAM INFORMATION

7. Island: *(Check only one)* ☐ Kauai ☒ Oahu ☐ Molokai ☐ Lanai ☐ Maui ☐ Hawaii

8. Tax Map Key(s) *List all affected tax map key parcels*

(1)-1-1-008:005

9. Stream / Gulch Name(s) *List all affected streams and/or gulches.*

Kahauiki Stream

FOR OFFICIAL USE ONLY:	SWHU ID:	FILE ID:
LAT:	GWHU ID:	DOC ID:
LON:	REACH ID:	

GENERAL PROJECT INFORMATION

10. Project Type: *Check all that apply*

☒ Bank Stabilization	☐ Bridge	☐ Channel Alignment	☐ Channel Lining	☐ Culvert	☐ Dam / Dike / Weir
☐ Desilting Area	☐ Drainage Outlet	☐ Dredging	☐ Ford Crossing	☐ Grading	☐ Levee / Flood Wall
☐ Restoration	☐ Retaining Wall	☐ Retention Basin	☐ Stream Gage	☐ Sewer Line	☐ Water Line

☐ Other - Describe:

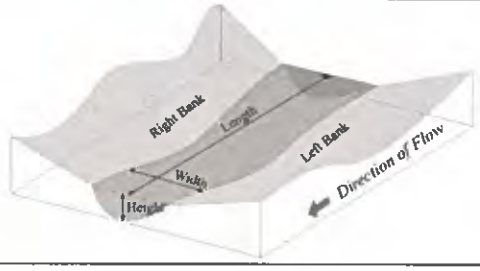
11. Project Site Location(s): *Provide site coordinates of downstream-most point of project in degrees, minutes, seconds (NAD83).*

Latitude: 21° 20' 52.42" Longitude: 517° 52' 59.72" Elevation: 70 ft. above mean sea level

12. Structure Dimensions: *(feet)*

Provide generalized dimensions for the entire project / structure area. If the project includes a pipe (e.g., culvert, drain, etc.), provide the pipe diameter.

Width: 0.83 LF
Height: 10 LF
Length: 157 LF
Diameter:



13. Structure Location:

Provide the general location of the stream channel alteration structure in relation to the streambank.

☒ Left bank *(downstream view)*
☐ Right bank *(downstream view)*
☐ Across entire stream channel

14. State Land Use Classification: *(Check all that apply)* ☐ Agriculture ☐ Conservation ☐ Rural ☒ Urban

LEGAL REQUIREMENTS

If required, the permits or approvals below must be obtained before the Commission on Water Resource Management can legally issue a permit. Visit the Commission's Applications & Forms webpage (http://dlnr.hawaii.gov/cwrm/info/forms/) for links to agency websites/contact information.

15. Conservation District Use Permit (CDUP): *To find out if your stream channel alteration project is located in a Conservation District (CD), you may visit to the Land Use Commission (LUC) website at http://luc.hawaii.gov/maps to view Land Use District Boundary maps. If the stream channel alteration will be located in a CD, contact the Department of Land and Natural Resources' Office of Conservation and Coastal Lands (OCCL) at (808) 587-0377 to determine is a CDUP is required.*

☐ Stream channel alteration is in a Conservation District.
- ☐ Required. CDUP #: _____ Date CDUP approved: _____
- ☐ Not Required. *Attach documentation from Office of Conservation and Coastal Lands (OCCL), Department of Land and Natural Resources.*
- ☐ I have not checked with the OCCL about whether or not a CDUP is required.

☒ Stream channel alteration is not in a Conservation District.

16. Special Management Area Permit (SMAP): *To determine if an SMAP is necessary, contact your County Planning Department.*

☐ Required. SMAP #: _____ Date SMAP approved: _____
☒ Not Required. *Attach documentation from applicable County agency.* See Attachment 1 for SMA map.
☐ I have not checked with the County about whether or not an SMA Permit is required

17. State Historic Preservation Division (SHPD), Department of Land and Natural Resources: *If the parcel(s) affected by the stream alteration has been reviewed by the State Department of Land and Natural Resources Historic Preservation Division (SHPD or through an OEQC Environmental Review, Special Management Area Permit, etc.), check "yes" and attach any relevant documentation from SHDP. If the affected parcel(s) has not undergone SHDP review, attach a photograph of the affected area, a schematic diagram (showing the location, access road and infrastructure for the alteration), and a short description of the prior use(s) of the land on which the alteration resides.*

Please note: You are **strongly advised to contact the SHPD to obtain a pre-review of your project. In the event that you do not get an HP pre-review and if during the course of either review or the permit itself it is determined that you need SHPD's concurrence, your application or permit may be held in abeyance or denied until issues with HP are resolved. To contact SHPD, please call (808) 692-8015.*

☒ I have consulted the SHPD regarding potential impacts of stream channel alteration activities on historic sites. I have attached applicable documentation from the SHPD. See Attachment 10.
☐ I have not consulted with the SHPD regarding potential impacts of stream channel alteration activities on historic sites.

18. Chapter 343, Hawaii Revised Statutes, Hawaii Environmental Policy Act:

☐ An Environmental Assessment was completed, and
☐ An Environmental Impact Statement was required and has been accepted (attach letter of acceptance).
Publication date in The Environmental Notice: _____
☐ A Finding of No Significant Impact has been determined (attach letter).
Publication date in The Environmental Notice: _____

This project proposes:

☐ Use of state or county lands, or use of state or county funds	☐ A wastewater treatment unit
☐ Use within a state conservation district	☐ Waste-to-energy facility
☐ Use within a shoreline setback area	☐ Landfill
☐ Use within a national or Hawaii registered historic site	☐ Oil refinery
☐ Use within the Waikiki Special District	☐ Power-generating facility
☐ The construction, expansion or modification of helicopter facility	☒ None of the above 11 items

OTHER REGULATORY REQUIREMENTS

If the proposed stream channel alteration is subject to the following permits or approvals, indicate by checking the appropriate box below and submit either the approval letter from the appropriate agency or attach a copy of the application form. If the proposed stream channel alteration is not subject to the following permits or approvals, indicate by checking the "N/A" (Not Applicable) field.

	Attached	N/A
19. **U.S. Army Corps of Engineers** (Harbors and Rivers Act, Section 404, Clean Water Act) See Attachment 5 for NWP	☒	☐
20. **State Department of Health, Clean Water Branch** (Section 401, Clean Water Act, Water Quality Certification, Best Management Practices Plan) See Attachment 6 for Blanket WQC	☒	☐
21. **Right-of-Entry or Right-of-Way Permit** if the proposed stream channel alteration includes State lands. (Chapter 171, Hawaii Revised Statutes)	☐	☒
22. **Hawaii Environmental Policy Act** (Chapter 343, Hawaii Revised Statutes; Title 11, Chapter 200, Hawaii Administrative Rules)	☐	☒
23. **Soil and Water Conservation District**	☐	☒
24. **County Certification of "No-Rise"**	☐	☒
25. **County Grading Permit**	☐	☒
26. **County Discretionary Permit(s)**	☐	☒

CULTURAL IMPACTS

Articles IX and XII of the State Constitution, other state laws, and the courts of the State, require government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups. If there is not enough space available, please make a note in the field (e.g., "See attached") and attach all information with this application as requested.

27. Please provide the identity and scope of cultural, historical, and natural resources in which traditional and customary native Hawaiian rights are exercised in the area.

There are currently no cultural, historical, or natural resources in which traditional and customary Native Hawaiian rights are exercised in the area.

In a letter dated, January 9, 2019, the USAG-HI consulted with the SHPO and Native Hawaiian organizations in accordance with Section 106 of the National Historic Preservation Act of 1966. Based on the results of the cultural resources identification report (Ortega, 2018), the USAG-HI determined there are no historic properties or cultural resources present and the undertaking would have no effects to historic properties and accordingly proposed a finding of no historic properties affected. The 30-day period for objections, per 36 CFR § 800.4(d)(1)(i) passed with no response from SHPO or other consulting parties.

28. Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action.

There are no resources, or associated traditional and customary Native Hawaiian rights, that will be affected or impaired by the proposed action in the vicinity of the stream bank stabilization site.

The streambank stabilization has been designed to avoid impacts to stream flow. Appropriate erosion and sediment control, spill prevention, and severe weather response best management practices (BMPs) have been incorporated into the design to avoid impacts to downstream water quality . Therefore, the proposed action is not anticipated to effect resources associated with traditional and customary Native Hawaiian rights that may exist farther down stream outside of the project area.

29. What feasible action, if any, could be taken by the Commission on Water Resource Management in regards to your application to reasonably protect Native Hawaiian rights?

The proposed action is not anticipated to affect Native Hawaiian rights; therefore, no action is needed on the part of the Commission on Water Resource Management (CWRM) to protect Native Hawaiian rights.

PROJECT DESCRIPTION

Please complete the following sections by providing detailed information on the project components identified below. If there is not enough space available, please make a note in the field (e.g., "See attached") and attach all information with this application as requested.

30. Describe the overall project scope and objectives.

United States Army Corps of Engineers (USACE) is developing a project package for the installation of the Command and Control Facility Parking Garage. In January 2023, during the revalidation of the topographic survey for design of the parking garage, AECOM discovered an unforeseen change in condition: significant streambank erosion of Kahauiki Stream adjacent to the planned parking garage. The objective for the proposed soil nail wall retaining system is to stabilize the slope for this area to mitigate any susceptibility to erosion for the foundation of the parking garage structure.

A soil nail retaining wall system that consists of a series of individual reinforcing bars grouted into drilled holes will be used to stabilize the eroded slope adjacent to the planned parking garage. These 15-foot-long soil nails would be drilled directly into the stream bank slope in a cut condition with a slightly battered slope of 1H:12V, maximizing the cross-section of the stream. The stained shotcrete wall facing is approx. 10-feet tall. The total length of the wall be approx. 160 feet. The bottom of the wall facing would need to be tied into the bottom of the stream with a shotcrete lining and a buried cutoff wall to accommodate the potential scour. See Attachment 8 for project plans.

31. Describe existing stream channel and streamflow conditions at the site of the proposed stream channel alteration.

Kahauiki Stream runs through the project area in Fort Shafter through a culvert on Morton Drive and downstream towards Carter Drive.The stream channel is largely overgrown on all sides, with signs of erosion and loose rock located on the left side of the embankment where the proposed soil nail wall will be installed. See Attachment 9 for photos of the existing stream channel with ordinary high water mark.

Kahauiki Stream is located on the northwest boundary of the project area. The stream is a collector for stormwater from parts of Kalihi Valley and Moanalua Valley and directs this water out to Ke'ehi Lagoon via a concrete ditch. From top of bank to top of bank, the stream spans approximately 55 feet and from bottom of bank to bottom of bank is approximately 15 feet. The approximate depth of the streambank is 15 feet at various slopes. The purpose of installing a wall along the bank of the stream is to prevent erosion to the bank along the existing fence line shown in the figure below which is where the proposed parking garage will be located. During major storms, the water flows directly against the bank where the proposed garage will be before veering right which causes the most erosion potential along the left bank of the stream. There is no USGS monitoring location for Kahauiki Stream and streamflow conditions at the site are negligible outside of major storm events.

32. Identify and describe the project components outlined below

A. Materials

For construction of the stream stabilization project, shotcrete with a compressive strength of 4000 PSI will be used for the embankment wall and stabilized with 15-ft long epoxy coated soil nails.

B. Quantities

Construction of the stream stabilization project will include approximately 325 CY of earthwork (excavation, disposal, backfill), installation of 31 soil nails, and 200 CY of shotcrete (7000 SF with 15" thick wall and 4" thick lining).

C. Excavation

Breakdown of the excavation required for the stream stabilization project is approximately 222 CY of rock, soil, and vegetation from the left side of the embankment where the soil nail wall will be installed.

D. Fill

Breakdown of the fill required for the stream stabilization project is approximately 93 CY of backfill that will be used to fill the area between the wall and the existing ground.

E. Disposal

Disposal excavated material will be left to the means and methods of the contractor and on-site material may be used for the backfill of the wall.

F. Construction methods

The embankment will be cut to a slope of 1H:12V and contractor will install the test nails for verification prior to construction of the wall. After verification tests, they will install drill, grout, and install soil nails and use shotcrete to create the rest of the 15" soil nail wall and 4" lining over bottom of embankment.

G. Temporary facilities

The project will have the following temporary facilities and BMPs, Stabilized construction ingress/egress, silt fence/dust screen, compost filter socks (not for use in stream, for use in uplands only), designated concrete truck washdown area, stockpile and dredged material management, and grated drain inlet protection and catch basin filters, review of BMPs with field crew, spill prevention and control, rain response plan (including stopping work during heavy rain and storm events), waste disposal, good housekeeping, BMP inspection and checklist forms. Stockpile management BMPs including perimeter controls and covering of stockpile prior to storm events will be implemented to prevent return flows to the stream. No materials will be stockpiled in the stream. All temporary BMPs will be removed at project completion. Best management practices are shown on Attachment 10: BMP Details.

H Expected period of time required for construction

Expected construction for the installation of the soil nail wall and shotcrete wall is between 3-5 months. This work is included in the parking garage package and will be done prior to the construction of the new parking structure.

I. Liability during construction

USACE construction inspector and the contractor will be liable for BMP installations and inspections to ensure they follow the designated procedures from the SWPPP to avoid construction runoff from entering the stream during construction.

33. Describe the project's consistency with county zoning and development plans.

This federal project under the USACE is located within Fort Shafter, an F-1 Federal and Military Preservation District. All regulations and requirements will be fulfilled under federal standards and follow or are not applicable to the provisions from the Central Oahu development plan. See Attachment 2 for zoning map.

34. Identify potential alternatives to the project and describe the relative costs and benefits of each alternative.

To address the scouring and mitigate erosion at the Kahauiki Stream embankment, three alternatives were identified and the following cost and benefits for each alternative is listed below;

Option 1: Soil Nail Wall (Best option due to lowest impact on stream bank)
The finished ground will tie into the footing of the building and slope minimally downward towards the stream. The stained shotcrete wall facing will be built down 10'deep at a 12:1 slope and then tied into the existing ground. 15' soil nails will be installed at a 15 degrees angle beginning at 2.5' below the top of the wall and spaced every 5' laterally. Stained shotcrete lining will also extend to near the bottom of the bank.

Pros:
- There will be minimal excavation work into existing stream bank slope.
- There is minimal disturbance to the stream bank, and it is a long-term solution that requires minimal/no future maintenance.

Cons:
- Some of the soil nail anchors extend into the building foundation drilled piers.

Option 2: Gabion Retaining Wall
The finished ground will tie into the top of the bank and slope minimally downward towards the top of the gabion wall. The wall will be supported by CLSM backfill that is lined with a geo-composite drain with drain gravel wrapped in geotextile fabric.

Pros:
- Economical solution using gravel earth material, it is a flexible gravity retaining wall system that can tolerate some settlement due to erosion.
- Provides good drainage with geo-composite drains and gravel.
- Does not conflict with the drilled piers for the building foundation.

Cons:
- Requires corrosion protection for the basket which means that future maintenance is required.
- Excavation to the existing stream bank is needed causing a reduction to the stream cross-section area.

Option 3: Concrete Retaining Wall
The finished ground for the concrete retaining wall will also tie into the top of bank and slope downward slightly to the top of the wall. The wall will also be supported by CLSM backfill and lined with geo-composite drain. Near the bottom of the wall, there will be a weephole that outlets to the bottom of the bank which will have a 12" thick layer of GRP to help with drainage.

Pros:
- Rigid concrete structure that will be a long-term solution that requires minimal/no future maintenance.
- Does not conflict with the drilled piers for the building foundation.

Cons:
- Excavation of the existing stream bank which will reduce the cross-section area of the stream bank.

SUBMITTALS

Please submit the following plans, maps, or drawings in legible form, preferably on 8.5" by 11" sheets.

35. Location Map: Provide a location map of the proposed project relative to major roadways.

36. Plans / Elevations / Sections: Provide a plan view of the proposed stream channel alteration structure in relation to the stream channel and property boundaries. Elevation and section views of the structure in relation to the stream channel should also be provided if available.

SIGNATURES

Signing below indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that if the permit requested is granted by the Commission on Water Resource Management (Commission), the permit shall be subject to the following conditions:

1) The proposed work is to be completed within two (2) years from the date of permit approval.
2) The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion.
3) The permittee shall submit a set of as-built plans and photographs to the Commission upon completion of the project.
4) The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months.
5) If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

37. APPLICANT

Print Name:	**Signature:**	**Date:**
Tony Gainey		6DEC2024

38. CONSULTANT

Print Name:	**Signature:**	**Date:**

39. CONTRACTOR

Print Name:	**Signature:**	**Date:**

40. LANDOWNER *(If multiple landowners, skip **Section 53**, then complete and attach **Form SCAP-LND** with appropriate landowner signatures.)*

Print Name:	**Signature:**	**Date:**
Tony Gainey		6DEC2024

CHECKLIST FOR A COMPLETE APPLICATION and ITEM DESCRIPTIONS (ITEMS 1 - 14)

- ☐ Fill in the most recent application form (check **http://dlnr.hawaii.gov/cwrm** or call 587-0234 for updates).
- ☐ Fill in every line which includes Items 1-40, as indicated (total 8 pages).
- ☐ Enclose a check for $25 payable to the Department of Land and Natural Resources.
- ☐ Mark the proposed stream channel alteration location on: the appropriate USGS quad map, TMK map, photo and schematic, and attach to the application.
- ☐ Attach Form LND-APP to identify and obtain authorizations for the project if multiple landowners will be impacted.
- ☐ Attach a grading plan and cross section profiles showing existing and finish grades, if available.
- ☐ Attach documentation from CDUP, SMAP, SHPD when applicable regarding Items 15-17.
- ☐ Attach letters from U.S. Army Corps of Engineers, Hawaii Department of Health, Office of Conservation and Coastal Lands, and appropriate county agencies regarding Items 18-26.
- ☐ Provide digital copies on CD-ROM or via e-mail, if available.
- ☐ Obtain the necessary signatures for the application form.

Send the application and maps, copies, and the filing fee to:
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

PERMIT TYPE

1. **Permit Status:** Indicate whether this application is for a new stream channel alteration project (including medication or abandonment) or if the project has already been completed and an after-the-fact permit is being applied for.
2. **Type of Construction:** Is the permit application for the installation of a new stream channel alteration, or modification or removal of an existing stream channel structure.

APPLICANT INFORMATION

3. **Applicant's Information:** Fill in the information for the applicant. This should be the entity that will be responsible for the maintenance of the stream channel alteration when the project is completed.
4. **Landowner's Information:** Fill in the information for the landowner of the property where the stream channel alteration will be located.
5. **Consultant's Information:** Fill in the information for the consultant who will assist with plan and design preparation for the subject project.
6. **Contractor's information:** Fill in the information for the contractor who will perform the work on the subject stream channel alteration project.

STREAM INFORMATION

7. **Island:** The island name where the stream channel alteration will be located.
8. **TMK:** Tax Map Key number (generally there is no lot number, but where a parcel is divided into two lots, fill in the lot number)
9. **Stream / Gulch Name:** Name of the stream or gulch where the stream channel alteration will be located.

GENERAL PROJECT INFORMATION

10. **Project Type:** Identify the type of work being performed, and select all that apply to the project.
11. **Project Site Location(s):** Fill in stream channel alteration location coordinates taken from a GPS unit at the project site. Units are Degrees, Minutes and Seconds (seconds should be filled out to at least one decimal place; e.g. 19°59'32.8"N, 155°14'51.5"W). If more than one site, attach separate sheet. Elevations should be provided in feet above mean sea level.
12. **Structure Dimensions:** What are the physical dimensions of the stream channel alteration structure that will be located in or adjacent to the stream channel?
13. **Structure Location:** Will the structure be located on the right or left bank (facing downstream) or across the entire stream channel?
14. **State Land Use Classification:** Identify the current State Land Use Classification.

Please see header descriptions for remaining Sections in completing Items 15 to 40.

ATTACHMENTS

to

Stream Channel Alteration Permit Application

for

Command and Control Facility
Phase 3 – Streambank Stabilization
Fort Shafter, Oahu, Hawaii

Attachment 1: SMA Map

Attachment 2: Zoning Map

Attachment 3: USGS Quad Map

Attachment 4: TMK Map

Attachment 5: Nationwide Permit Notification

Attachment 6: Blanket Water Quality Certification for NWP

Attachment 7: Project Plans

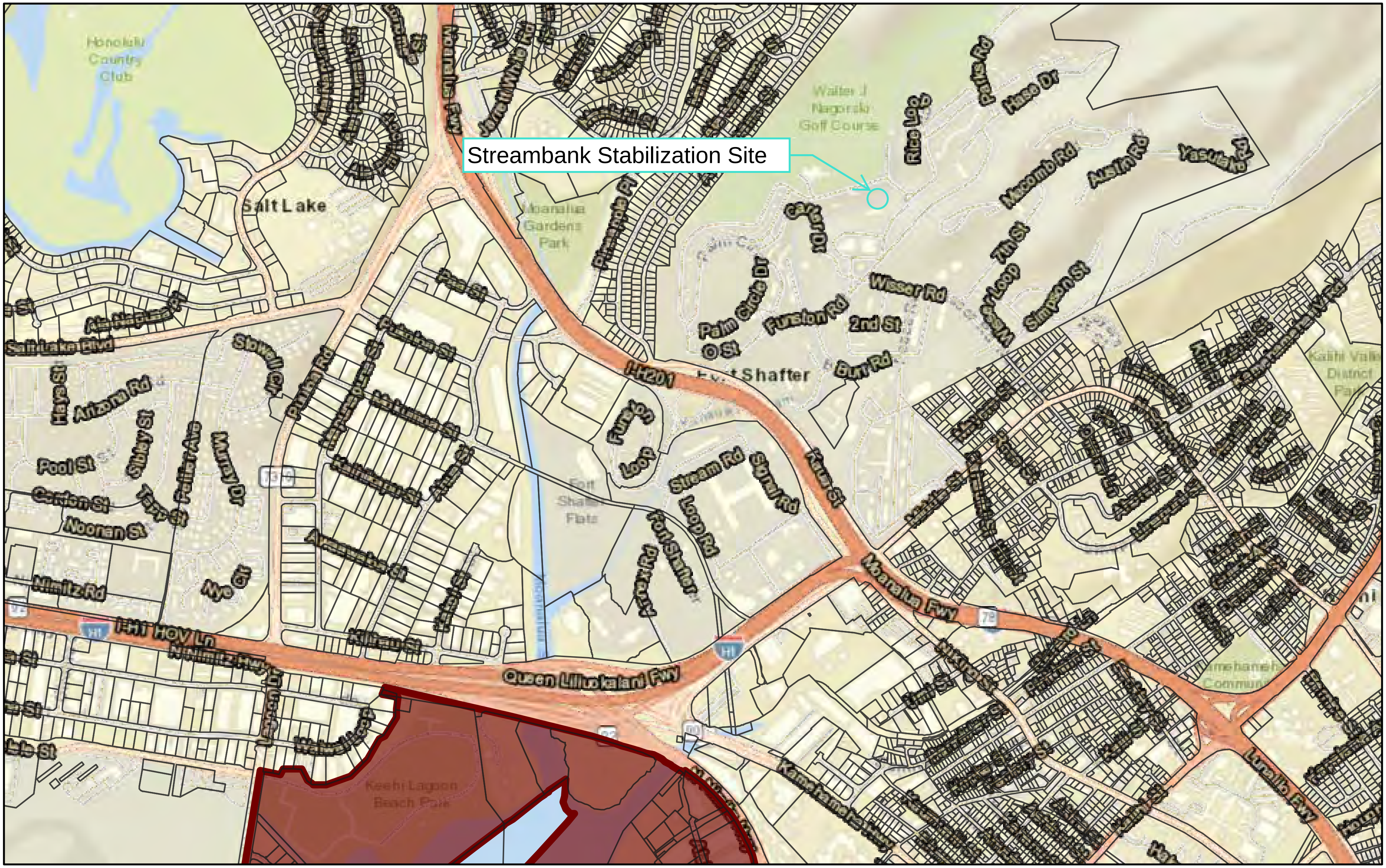
Attachment 8: Kahauiki Stream Photos with OHWM

Attachment 9: BMP Details

Attachment 1

SMA Map

SMA Map



May 31, 2024

TMK - Oahu

Special Management Area (SMA)

1:18,056

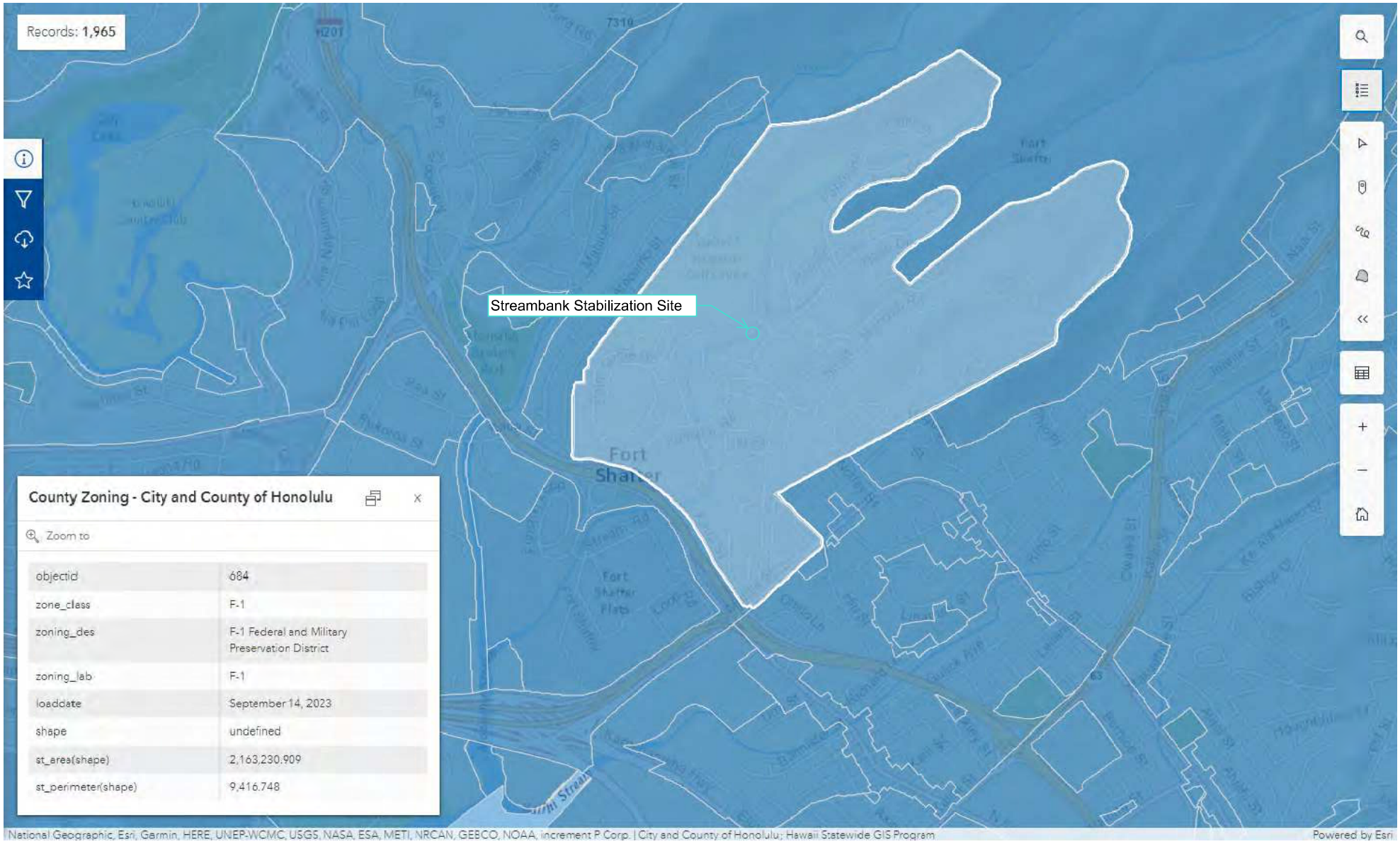
0 0.13 0.25 0.5 mi

0 0.23 0.45 0.9 km

Esri, HERE, Garmin, NGA, USGS, Esri, HERE, iPC

Attachment 2

Zoning Map


Records: 1,965
Streambank Stabilization Site
County Zoning - City and County of Honolulu
Zoom to
objectid 684
zone_class F-1
zoning_des F-1 Federal and Military Preservation District
zoning_lab F-1
loaddate September 14, 2023
shape undefined
st_area(shape) 2,163,230.909
st_perimeter(shape) 9,416.748
Fort Shafter
Fort Shafter Flats
National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp. | City and County of Honolulu; Hawaii Statewide GIS Program
Powered by Esri

Attachment 3

USGS Quad Map

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map
US Topo

HONOLULU QUADRANGLE
HAWAII-HONOLULU CO.
7.5-MINUTE SERIES

SCALE 1:24 000

CONTOUR INTERVAL 40 FEET
DATUM IS LOCAL MEAN SEA LEVEL

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 04Q
10 000-foot ticks: Hawaii Coordinate System of 1983 (zone 3)

Imagery....................Digital Globe, ©January 2011
Roads.................................©2006-2012 TomTom
Names...GNIS, 2012
Hydrography....................National Hydrography Dataset, 2011
Contours.........................National Elevation Dataset, 2001
Boundaries....................Census, IBWC, IBC, USGS, 1972 - 2012

UTM GRID AND 2013 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
FJ
Grid Zone Designation 04Q

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.11

ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
State Route	

QUADRANGLE LOCATION

Waipahu	Kāne'ohe	Mōkapu Point
Pearl Harbor	Honolulu	Koko Head

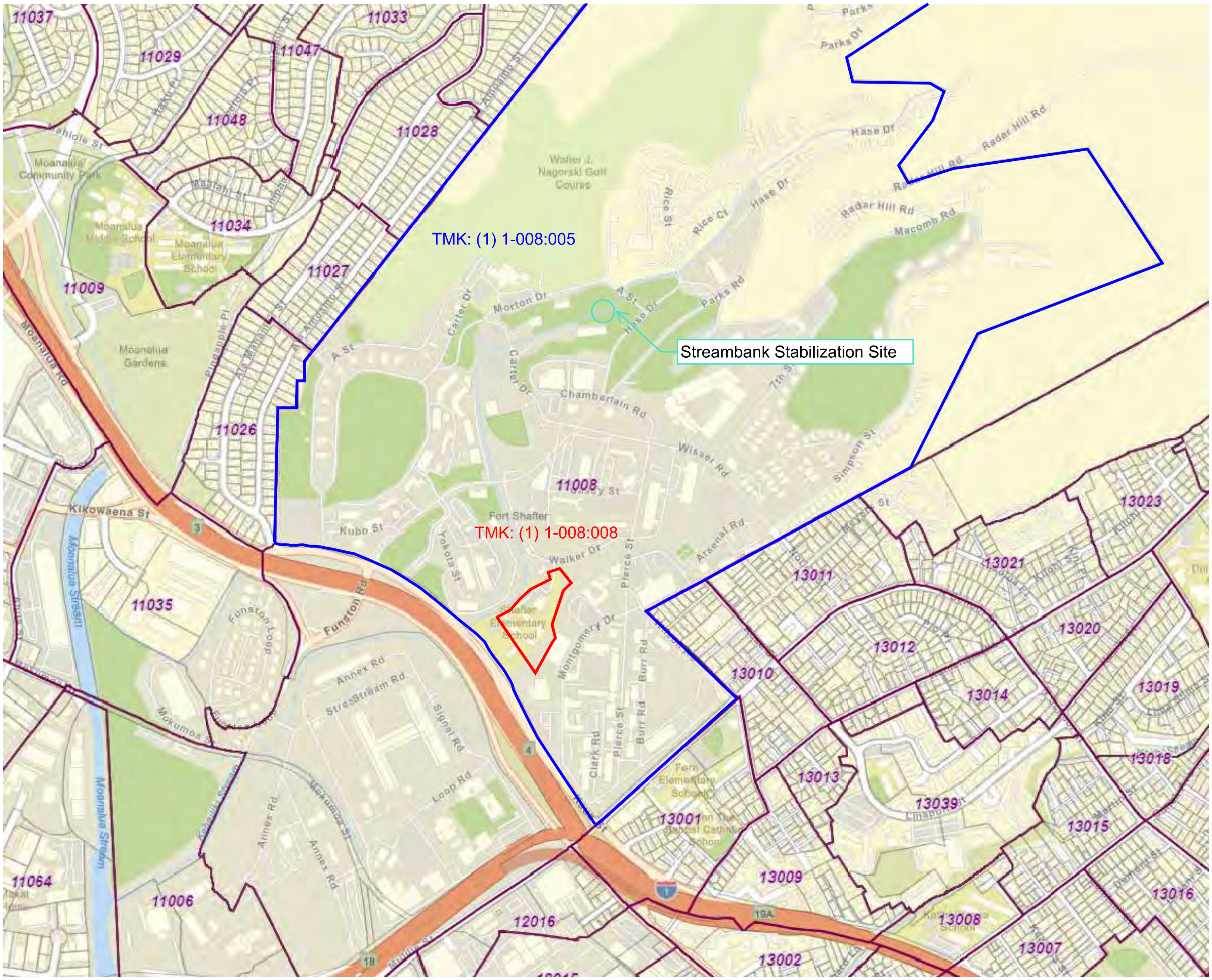
ADJOINING 7.5' QUADRANGLES

HONOLULU, HI
2013

NSN. 7643016367229
NGA REF NO. USGSX24K27685

Attachment 4

TMK Map


TMK: (1) 1-008:005
Streambank Stabilization Site
TMK: (1) 1-008:008
Fort Shafter
Shafter Elementary School
Walter J. Nagorski Golf Course
Moanalua Community Park
Moanalua Middle School
Moanalua Elementary School
Moanalua Gardens
Fern Elementary School
Kikowaena St
Moanalua Stream
Funston Rd
Chamberlain Rd
Wisser Rd
Morton Dr
Carter Dr
Hase Dr
Radar Hill Rd
Macomb Rd
Parks Rd
Simpson St
Arsenal Rd
Walker Dr
Montgomery Dr
Pierce St
Burr Rd
Clark Rd
Yokota St
Kubo St
Annex Rd
Signal Rd
Loop Rd
Mokumoa St
Ala Mahamoe St
Ahiahi St
11037
11029
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13002
13007

Attachment 5

Nationwide Permit Notification

DEPARTMENT OF THE ARMY
HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

March 15, 2024

SUBJECT: Nationwide Permit Verification for USA Garrison, Kahuiki Streambank Stabilization, Kahauiki Stream near the Morton Drive crossing, Ft. Shafter, Island of Oahu, HI Department of the Army File No. POH-2024-00054

Nisit A. Gainey
USA Garrison
Director of Public Works
947 Wright Avenue
Wheeler AAF
Wahiawa, HI 96957

Dear Mr. Gainey:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Branch has completed review of your Pre-Construction Notification dated 16 Feb. 2024, requesting authorization for the proposed Kahauiki streambank stabilization located at the Kahauiki Stream near the Morton Avenue Crossing at 21.34819°, -157.88322°. Please reference Department of the Army (DA) file number POH-2024-00054 in any future correspondence related to this permit.

This letter verifies your activity complies with the terms and conditions of Nationwide Permit (NWP) #13, (Streambank Stabilization) issued on February 25, 2022. This NWP verification letter is being issued pursuant to Section 404 of the Clean Water Act for the discharge of dredged and/or fill material into waters of the U.S. You are authorized to conduct the following work below the OHWM as described below and as depicted on the enclosed drawings (Enclosure 1):

The project will involve the temporary discharge of 100 cubic yards of sandbags below the OHWM to isolate the project site and the discharge of 90 cubic yards of shotcrete below the OHWM to stabilize the bank.

Based upon the information and plans you provided, we hereby verify that the work described above, which would be performed in accordance with the enclosed plan (Enclosure 1, sheets 1-18), dated March 11, 2024, is authorized by Nationwide Permit (NWP) No. 13, Streambank Stabilization. NWP No. 13 and its associated Regional and General Conditions can be accessed at: https://www.poh.usace.army.mil/Missions/Regulatory/Permits/Nationwide-Permits/. Regional Conditions 3 and 4 apply to your project. You must comply with all terms and conditions associated with NWP No. 13, as well as with the special conditions listed below:

Special Condition 1: Trimming or disturbance woody vegetation taller than 15 feet will not be performed from June 1 to September 15.

Verification of your project under this NWP is valid until **March 14, 2026,** unless this NWP is modified, reissued, or revoked prior to that date. It is incumbent upon you to remain informed of changes to the NWPs. If the Corps modifies, reissues, or revokes any NWP at an earlier date, we will issue a public notice announcing the changes. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of the Clean Water Act. This authorization does not relieve you of the responsibility to obtain any other federal, state, and/or local authorizations required by law.

Your project complies with the requirements of the Clean Water Act, Section 401 Blanket Water Quality Certification (WQC) WQC1092.FNL.20 issued for this Nationwide Permit by the State of Hawaii Department of Health, Clean Water Branch. You are responsible for complying with the attached General Conditions of this WQC (Enclosure 2).

Your project complies with the requirements of the Coastal Zone Management Consistency Concurrence for this Nationwide Permit issued by the State of Hawaii Department of Business, Economic Development and Tourism, Office of Planning; during the Nationwide Permit reissuance process in 2021.

Finally, General Condition #30 requires a signed certification be submitted to this office upon completion of work. Therefore, please sign, date and return the enclosed *Compliance Certification* form (Enclosure 3) within 30 days of completion of work to the email address or mailing address indicated on the compliance certification form.

Thank you for your cooperation with the Honolulu District Regulatory Program. Should you have any questions related to this authorization, please contact Connor Gallagher at 808-835-4107 or connor.c.gallagher@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Office by accessing our web-based customer survey form at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Jeremy Morgan
Regulatory Specialist, Regulatory Branch

Enclosures
1. Project Plans
2. WQC1092.FNL.20
3. Compliance Certification

Electronic cc:
State of Hawaii Department of Health, Clean Water Branch
CleanWaterBranch@doh.hawaii.gov
Darryl C Lum darryl.lum@doh.hawaii.gov
State of Hawaii Office of Planning, Coastal Zone Management Program
Debra.L.Mendes@hawaii.gov
Courtney Hymes, AECOM Courtney.Cacace@aecom.com
Emmanuel Alvarez, POH Program Manager, Emmanuel.R.Alvarez@usace.army.mil

Attachment 6

Blanket Water Quality Certification for NWP

DAVID Y. IGE
GOVERNOR OF HAWAII

ELIZABETH A. CHAR, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

WQC1092.FNL.22

April 28, 2022

David S. Hobbie
Regional Regulatory Chief
Honolulu District
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

Dear Mr. Hobbie:

Subject: Blanket Section 401 Water Quality Certification (WQC) for Certain 2021 Department of the Army (DA) Nationwide Permits (NWP) and Activities File No. WQC1092

Purpose. This letter is a blanket Section 401 WQC (Blanket Certification) and sets forth applicable qualifications and activity-specific conditions to certain NWPs and activities, as described below. This Blanket Certification may be utilized by any applicant that is seeking authorization and/or verification from the U.S. Army Corps of Engineers (USACE), Honolulu District of the Pacific Ocean Division (POH) for work in Waters of the United States.

This Blanket Certification supersedes and replaces previous WQC0901.FNL.20 issued in May and November of 2020 (WQC0901). The following shall apply:

1. Requirements and conditions set forth in WQC0901 which are not set forth in this Blanket Certification shall no longer be applicable;
2. Activities covered under WQC0901 shall be subject to this Blanket Certification, including requirements and conditions different from or in addition to WQC0901;
3. Pending applications, including those currently under review by USACE or the Department of Health (DOH), shall be subject to this Blanket Certification.

Note: A previous version of this Blanket Certification was public noticed on September 23 and 24, 2020, for the proposed 2020 NWPs. Since the aforementioned public notices, the NWPs were reissued and modified in 2021, the federal Section 401 WQC regulations were revised, and the State Section 401 WQC rules were revised. This Blanket Certification incorporates these revisions.

Overview. The DA has published a list of NWPs and applicable general conditions that attach to those NWPs.[1] Certain NWPs may require a Section 401 WQC from the State of Hawaii. The DOH has the authority to issue a Blanket Certification and may qualify or condition the Blanket Certification. The conditions in this Blanket Certification become additional conditions to the NWPs. The qualifications would set forth the applicability of the Blanket Certification to a NWP or other described activity.

The DOH reviewed the NWP and General Conditions published in the Federal Register: Final Rules and the additional comments submitted by USACE POH. DOH believes that when all requirements and conditions contained in this Blanket Certification are fully complied with, there is a reasonable assurance that the activities will be conducted in a manner which will not violate the applicable State water quality standards and will comply with the applicable provisions of the CWA, Sections 301, 302, 303, 306, and 307.

The NWPs and activities in Item 2.a below do not require a Section 401 WQC. The NWPs and activities in Item 2.b below are covered under this Blanket Certification. The DOH has determined that projects authorized by the USACE POH for the NWPs and activities in Item 2.b below, subject to the requirements of the General Conditions in Item 3 below, will not cause adverse environmental impacts or effects; are in the public interest; and represent the optimum balance between economic development and environmental quality.

1. Term of this Blanket Certification

    a. This Blanket Certification becomes effective with respect to a specific project on **April 28, 2022.**

    b. This Blanket Certification will expire at midnight, **March 14, 2026**.

    c. This Blanket Certification's coverage is administratively extended to a certain project beyond midnight, March 14, 2026, when the USACE POH extends the project authorization/verification.

2. Coverage of this Blanket Certification

    a. The NWPs and activities listed below do not require a Section 401 WQC.

        - NWP 1 – Aids to Navigation
        - NWP 8 – Oil and Gas Structures on the Outer Continental Shelf

[1] The DA NWP authorizes activities under 1) Section 404 of the Clean Water Act (CWA), 2) Section 10 of the Rivers and Harbors Act of 1899 (RHA), and/or 3) a Letter of Permission. The NWPs were published on September 15, 2020, in the Federal Register, Volume 85, Number 179 and December 27. 2021, Volume 86, Number 245 (Federal Register).

- Projects in response to a public emergency proclaimed by the President of the United States or Governor of Hawaii where HRS Chapter 342D has been suspended
- Any emergency project as determined by the Director of Health
- Projects granted an exemption under Act 048 of 2017 (temporary exemption of certain bridge rehabilitation projects)
- Activities exempt under CWA, Section 404(f)(1)
- Directional drilling under a waterbody where entry and exit pits are located on land and all slurry/spoils/runoff is contained on land
- Structures over a waterbody where debris and other pollutants associated with the installation, construction, and operation do not enter the waterbody
- Installation of temporary Best Management Practices (BMPs) with inert material in State waters, excluding material used to divert or dam stream flow
- Comprehensive Environmental Response, Compensation, and Liability Act actions with oversight from DOH Hazard Evaluation and Emergency Response (HEER) Office and/or EPA
- DOH HEER response actions
- Bridge inspections
- Improvements or modifications to Department of Land and Natural Resources, Division of Boating and Ocean Recreation permitted existing offshore moorings installed prior to October 4, 2017
- Coral transplant with National Oceanic and Atmospheric Administration oversight
- Fireworks where visible debris is collected after event
- Lanterns and rubber duckies collected after event
- Ashes from funeral ceremonies 3 miles away from shore
- After-The-Fact applications for USACE POH enforcement actions[2]

b. The NWPs and activities listed below are hereby granted coverage under this Blanket Certification in the State of Hawaii if the applicant of the activity/discharge complies with the General Conditions (Item No. 3) and USACE POH provides notification (Item No. 4). Any person, including any public body, conducting activities authorized by these NWPs and activities that cannot or will not comply with this Blanket Certification must apply for and obtain an individual Section 401 WQC from DOH Clean Water Branch (CWB).

- NWP 2 – Structures in Artificial Canals
- NWP 3 – Maintenance

[2] DOH has decided not to process After-The-Fact applications so the USACE POH can proceed with their enforcement action.

- NWP 4 – Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
- NWP 5 – Scientific Measurement Devices
- NWP 6 – Survey Activities
- NWP 7 – Outfall Structures and Associated Intake Structures
- NWP 9 – Structures in Fleeting and Anchorage Areas
- NWP 10 – Mooring Buoys
- NWP 11 – Temporary Recreational Structures
- NWP 12 – Oil or Natural Gas Pipeline Activities
- NWP 13 – Bank Stabilization
- NWP 14 – Linear Transportation Projects
- NWP 15 – U.S. Coast Guard Approved Bridges
- NWP 16 – Return Water from Upland Contained Disposal Areas
- NWP 17 – Hydropower Projects
- NWP 18 – Minor Discharge
- NWP 19 – Minor Dredging
- NWP 20 – Response Operations for Oil or Hazardous Substances
- NWP 22 – Removal of Vessels
- NWP 23 – Approved Categorical Exclusions
- NWP 25 – Structural Discharges
- NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities
- NWP 28 – Modifications of Existing Marinas
- NWP 29 – Residential Developments
- NWP 31 – Maintenance of Existing Flood Control Facilities
- NWP 32 – Completed Enforcement Actions
- NWP 33 – Temporary Construction, Access and Dewatering
- NWP 35 – Maintenance Dredging of Existing Basins
- NWP 36 – Boat Ramps
- NWP 37 – Emergency Watershed Protection and Rehabilitation
- NWP 38 – Cleanup of Hazardous and Toxic Waste
- NWP 39 – Commercial and Institutional Developments
- NWP 40 – Agricultural Activities
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 42 – Recreational Facilities
- NWP 43 – Stormwater Management Facilities
- NWP 45 – Repair of Uplands Damaged By Discrete Events
- NWP 46 – Discharges in Ditches
- NWP 48 – Commercial Shellfish Mariculture Activities
- NWP 51 – Land-Based Renewable Energy Generation Facilities
- NWP 53 – Removal of Low-Head Dams
- NWP 54 – Living Shorelines

- NWP 55 – Seaweed Mariculture Activities
- NWP 56 – Finfish Mariculture Activities
- NWP 57 – Electric Utility Line and Telecommunications Activities
- NWP 58 – Utility Line Activities to Water and Other Substances
- NWP 59 – Water Reclamation and Reuse Facilities
- Letters of Permission – Section 10 only activities with no discharge of fill material
- Any activity conducted in compliance with DOH pre-approved Standard Operating Procedures

c. Limitations on Coverage

This Blanket Certification shall not cover:

(1) Discharge(s) regulated under CWA, Section 402.
(2) Any project that may result in downstream/downdrift post construction impacts to the physical, chemical, and/or biological environment.
(3) Concrete lining any section of natural streambed or bank.[3]
(4) Projects involving the removal of dams, impoundments, structures, or sand bars that will result in the downstream/downdrift mobilization of material, sediment, and/or water pollutants.
(5) Waste Discharges to natural lakes and anchialine pools as specified in HAR 11-54 or any State waters.
"Waste" means sewage, industrial and agricultural matter, and all other liquid, gaseous, or solid substance, including radioactive substance, whether treated or not, which may pollute or tend to pollute the waters of this State. Hawaii Revised Statutes (HRS) §342D-1.
Non-contaminated and suitable dredge and fill material authorized under a 2021 NWP is not considered waste.
(6) New sewage discharges and new industrial discharges to estuaries as specified in HAR 11-54. New industrial discharges do not include the repair and/or replacement within the footprint of an existing structure.
(7) New sewage and industrial discharges to Embayments: Class AA and Class A as identified in HAR 11-54. New industrial discharges do not include the repair and/or replacement within the footprint of an existing structure.

[3] This type of activity is prohibited as it will result in adverse post construction impacts by eliminating ground water recharge, raising pH, and lowering dissolved oxygen or causing downstream bank erosion.

3. General Conditions

The applicant of the activity/discharge shall:

a. Report any non-compliance with the conditions of this Blanket Certification to the USACE POH. Do not report or submit compliance related information to DOH. This Blanket Certification is a condition of the USACE POH permit.[4]

b. Maintain records at the project site or in the nearby field office demonstrating that all Blanket Certification requirements have been fully complied with.

c. Ensure that all activities are conducted in a manner that will comply with the "Basic Water Quality Criteria Applicable to All Waters" as specified in HAR 11-54.

d. Ensure that all material(s) placed or to be placed in State waters are free of waste metal products, organic materials, debris, and any pollutants at toxic or potentially hazardous concentrations to aquatic life as specified in HAR 11-54.

e. Ensure that the activities will not permanently interfere with or become injurious to any designated uses and/or existing uses of the receiving State water. Any permanent adverse impacts to the designated uses and/or existing uses of the receiving State water is a violation of HAR Chapter 11-54.

f. Ensure that pollution control measures and BMPs are utilized that prevent water pollutants from leaving the in-water work area authorized by the USACE POH permit.[5] Any visual plume emanating from the authorized in-water work area is a violation of HAR Chapter 11-54.

g. Ensure that all construction debris from any portion of the activities (including but not limited to debris caused by hydraulic saws, water jets, or drilling equipment) are contained and prevented from entering or re-entering State waters. All construction debris and sidecast material shall be properly removed from the aquatic environment and disposed of at an upland State and county approved site. Before the start of the activities, a Solid Waste Disclosure Form for Construction Sites shall be completed and returned to the DOH's Solid and Hazardous Waste Branch,

[4] With respect to USACE projects granted coverage under Item 2.c above, non-compliance reports from USACE POH should be submitted to DOH CWB.
[5] With respect to USACE projects granted coverage under Item 2.c above, the relevant in-water work area is identified in the USACE project.

Office of Solid Waste Management. No construction material or construction related materials shall be stockpiled in the aquatic environment or stored or placed in ways that will disturb the aquatic environment. The Solid Waste Disclosure Form for Construction Sites is available online at: https://health.hawaii.gov/shwb/files/2018/04/swdiscformapr2018.pdf.

h. Utilize only BMPs that are inert and not sources of pollution themselves. Examples of inappropriate in-water porous material BMPs include but are not limited to: compost biosocks since they are a source of nutrients; and a soil berm since the soil particles will erode.

i. Collect activity/discharge related water pollutants utilizing appropriate catchment/detention devices (e.g. construction debris, airborne particulates, dust, concrete slurry, concrete chips, concrete surface preparation washing effluent, excess water and overflow from boring related activity, horizontal directional drilling slurry, etc.) from localized work areas and minimize or prevent the release of these water pollutants into State waters, including the in-water work area.

j. Utilize BMPs for all upland project activity to minimize the discharge of water pollutants into State waters, including the designated in-water work area.

k. For a stream, ditch, or gulch: Allow unimpeded flow around the in-water work area to allow for aquatic animal migration and/or to prevent work site and downstream flooding situations. The unimpeded flow shall be equivalent to a 2-year, 24-hour duration storm event and/or the existing flow capacity of the stream, ditch, or gulch. Pumped diversions may be utilized if the stream, ditch, or gulch is dry or there is only standing/ponded water without the existence of living aquatic animals.

l. Not discharge any type of wash water and/or effluent into State waters without first obtaining from DOH a National Pollutant Discharge Elimination System (NPDES) permit authorizing such type of water pollutant discharge to State waters.

m. Not allow any concrete truck wash water to be disposed by percolation into the ground.

n. Ensure that all areas temporarily impacted, either directly or indirectly, by the project construction activities are fully restored to its pre-construction conditions. For example: Incidental construction debris is cleaned up prior to removal of BMPs; remove all scientific measurement devices and any other structures or fills associated with installation and use of these

devices (e.g., foundations, anchors, buoys, lines, etc.) when no longer in use; etc.

o. When projects involve dredging/excavation activities:

(1) Be required to check the DOH, HEER Office Sites, Incidents and Records through the "Viewer" in iHEER at: https://eha-cloud.doh.hawaii.gov/iheer.[6]

(2) Be required to contact the HEER Office at (808) 586-4249 and through e-permitting Form "Notification of Construction Activities" at Form Finder https://eha-cloud.doh.hawaii.gov/epermit/finder if contaminated soil, sediment, vapor, or groundwater is known to be present at your project site. The applicant shall notify the HEER Office at least 90 days prior to surface and subsurface disturbing activities that may disturb the ground surface at HEER sites. If the 90-days prior notification is missed, the applicant shall notify the HEER Office as soon as possible to avoid any potential delays regarding the covered project.

(3) Contain return flow or runoff from upland dredged spoils dewatering site(s)/disposal site(s), including the confined disposal facility (CDF), which shall be contained on land and not allowed to discharge and/or re-enter any State waters without first obtaining the required discharge permit from USACE POH or CWB. Unless authorized by a USACE POH or NPDES permit, the applicant shall not allow any runoff, return flow, or airborne particulate pollutants from the excavated or dredged material dewatering or stockpiling site, including the CDF, to enter or re-enter State waters.

(4) Properly deploy warning signs, which shall be maintained until the portion of the in-water work is completed and the affected area water quality has returned to its preconstruction condition and turbidity control devices have been removed from the waterway.

p. When projects involve moorings:

(1) Avoid locating moorings (including anchors and floats) in sensitive aquatic habitats such as coral reefs, fish spawning areas, and submerged aquatic vegetation (unless location is acceptable to the Department of Land and Natural Resources, Division of Aquatic Resources or the National Oceanic Atmospheric Administration);

(2) Ensure moorings (including anchors and floats) are made of clean, inert material. Treated lumber shall not be used as it may contain

[6] The HEER Office is currently updating site information for sites. Most, but not all, sites may be displayed on the viewer map. Site Document data upload is ongoing and not all documents may be currently available via this website. To get the complete record for the site, a record request form can be filled and submitted it to the HEER Office. Users will then be notified when they are able to download all information via the iHEER system website.

compounds that can be released into the water and become toxic to the aquatic environment;

(3) Pre-cast and cure concrete anchors, if required, away from State waters prior to use to prevent seepage of potentially toxic substances into the waterbody;

(4) Locate moorings in depths that allow structures and vessels to remain afloat at the lowest possible water levels and that prevent propellers from disturbing bottom sediments;

(5) Select mooring anchors of an adequate size to secure vessels or structures and prevent the anchor from shifting or dragging along the bottom of the State water;

(6) Size the length of mooring lines, chains, or cables to avoid excess line, chain, or cable accumulation on the bed of the State water;

(7) Ensure native beach material such as logs, sand, gravel, and boulders that are important components of fish habitat are not used as mooring structures and are left in place on the foreshore;

(8) Properly dispose of derelict or unused floats, lines, chains, or cables in accordance with appropriate laws and rules; and

(9) Ensure moorings are kept in good repair by regularly inspecting and maintaining the structure. Mooring maintenance must be performed into perpetuity (or until it is properly disposed of) or it will itself become a pollution source.

4. USACE POH shall e-mail to CWB (cleanwaterbranch@doh.hawaii.gov and darryl.lum@doh.hawaii.gov) a pdf copy of all issued final verifications. This Blanket Certification coverage shall become valid with respect to an activity only when USACE POH notifies CWB via email of a project authorization/verification and conditions of this Blanket Certification have been incorporated as part of the USCE POH final verification; provided, that this email notification requirement shall not apply to activities that do not require a pre-construction notification, and this Blanket Certification shall automatically become valid with respect to such activities.

If you agree with the terms and conditions of this Blanket Certification, please sign and date below; make a copy for your administrative record; and submit this entire letter with your original signature to CWB within 14 calendar days from your signature date.

If you have any questions, please contact Mr. Darryl Lum of the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

for ELIZABETH A. CHAR, M.D.
Director of Health

c: Regulatory Office, POH, COE [via e-mails linda.speerstra@usace.army.mil only]
Ms. Debra Mendes, CZM Program, Office of Planning, DBEDT
[via e-mail debra.l.mendes@hawaii.gov only]
U.S. Fish and Wildlife Service [via e-mail pifwo_admin@fws.gov only]
U.S. National Marine Fisheries Service [via e-mail pirohonolulu@noaa.gov only]
Division of Aquatic Resources, DLNR [via e-mail dlnr.aquatics@hawaii.gov only]
CWRM, DLNR [via e-mail dlnr.cwrm@hawaii.gov only]
OCCL, DLNR [via e-mail dlnr.occl@hawaii.gov only]
DHO (Hawaii, Maui, Kauai) and EHS, Molokai/Lanai [via e-mail only]

I AGREE WITH THE TERMS AND CONDITIONS OF THIS LETTER:

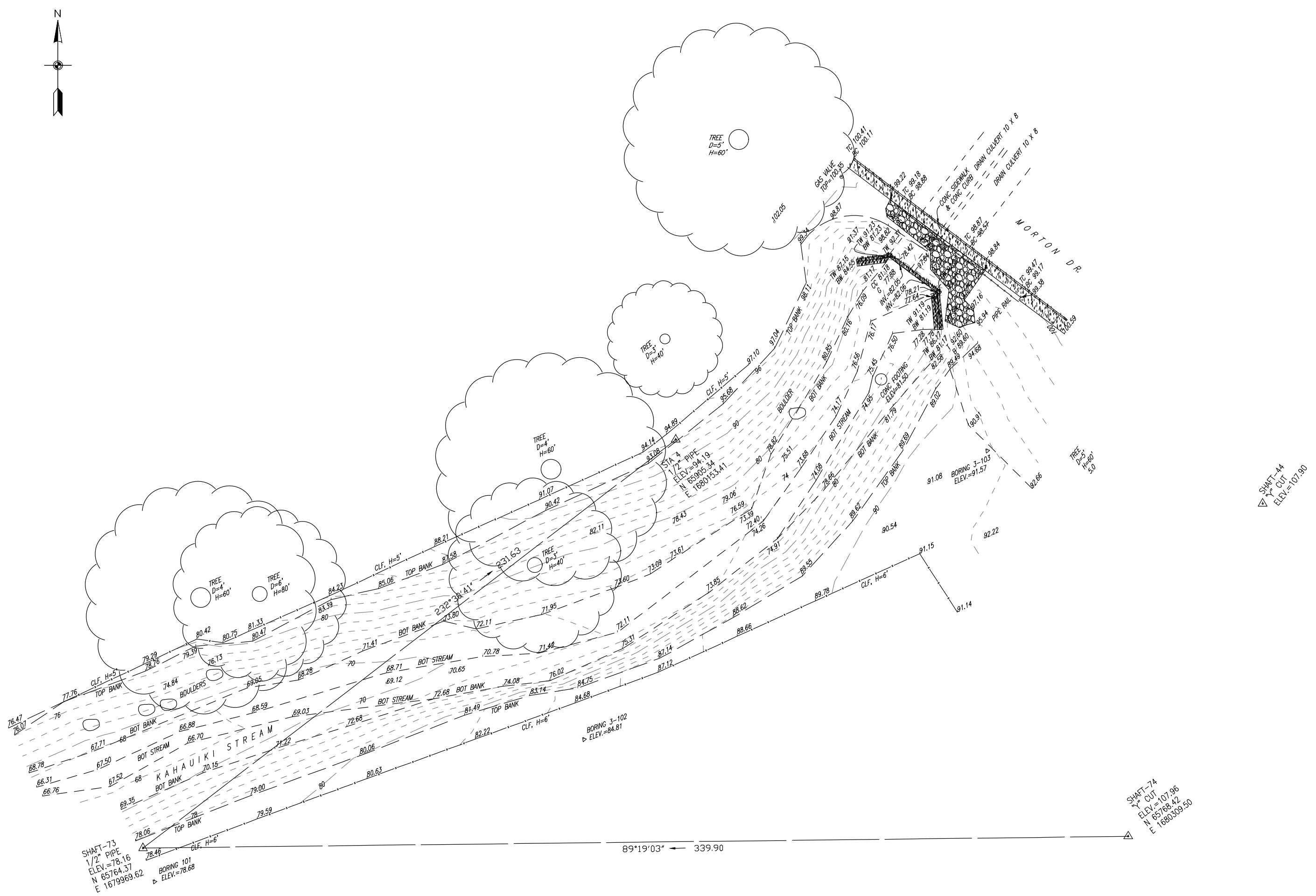
David S. Hobbie DATE
Regional Regulatory Chief
Honolulu District

Attachment 7

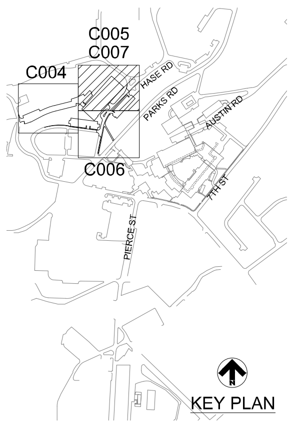
Project Plans

NOTES THIS SHEET:

1. SEE GENERAL CONSTRUCTION NOTES ON SHEET C001 FOR SURVEY INFORMATION.
2. SEE SHEET C002 FOR ABBREVIATIONS AND LEGEND.
3. PREVIOUS PHASE'S DESIGN DRAWINGS ARE NOT SHOWN ON THIS SHEET.
4. DATE OF SURVEY: JUNE 22, 2023



A1 EXISTING CONDITIONS - 4
C007 1" = 20'



KEY PLAN

SCALE: 1"=20' 0 10' 20' 40'

GRAPHIC SCALES

MINGXUN DING LICENSED PROFESSIONAL ENGINEER NO. 9246-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

US Army Corps of Engineers Honolulu District

Mark	Description	Date	Chk'd	Appr

Mark	Description	Date	Chk'd	Appr

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
FORT SHAFTER, HAWAII

AECOM
1001 BISHOP STREET, SUITE 1600
HONOLULU, HI 96813

Designed by: GN/JS
Drawn by: MT
Submitted by: KOL
Chief:
Date: 1/24/2024
Checked by: MD
Drawing code: 141-82-007
File name: C2F_PH3-C007
Plot date: Jan. 18, 24
Plot scale: 1:1
Rev.: -

COMMAND AND CONTROL FACILITY (C2F)
FORT SHAFTER, OAHU, HAWAII
PHASE 3 - PARKING GARAGE

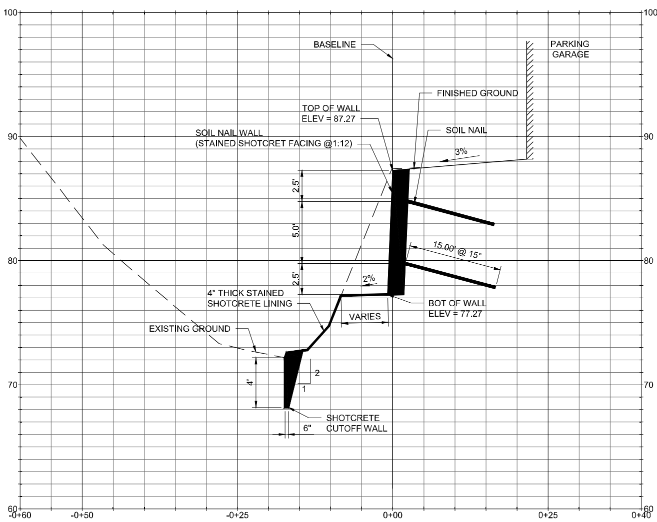
EXISTING CONDITIONS - 4

Location code: 9344
Drawing no. 141-82-007
PHASE 3
Sheet number:
C007
Sheet 22 of 370

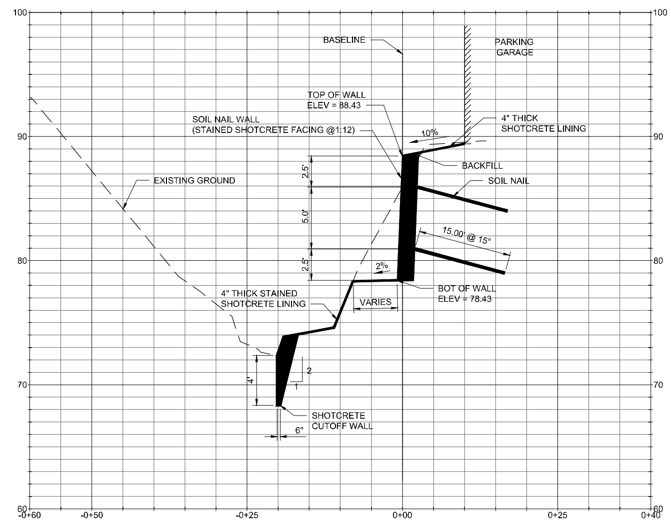
FINAL READY TO ADVERTISE (RTA)

NOTES:

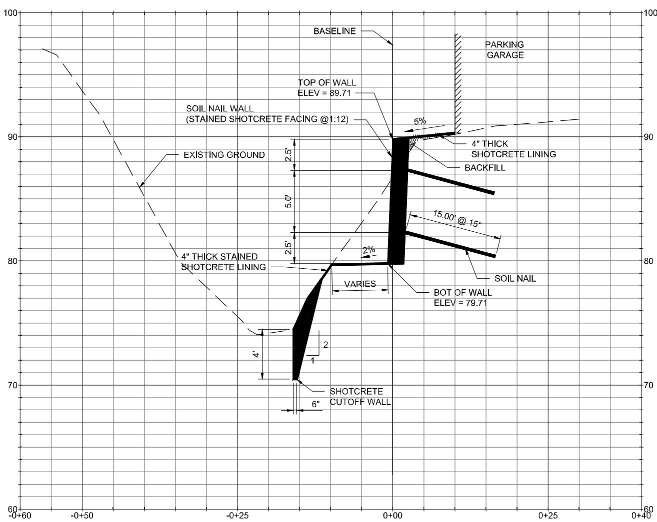
1. FOR SOIL NAIL WALL STATIONS, SEE SHEET CS401.
2. FOR SOIL NAIL STRUCTURAL WALL DETAILS, SEE SHEETS SS001 TO SS204.
3. SHOTCRETE STAIN TO MATCH EXISTING GEOLOGY IN COLOR, SEE SP 03 37 13.



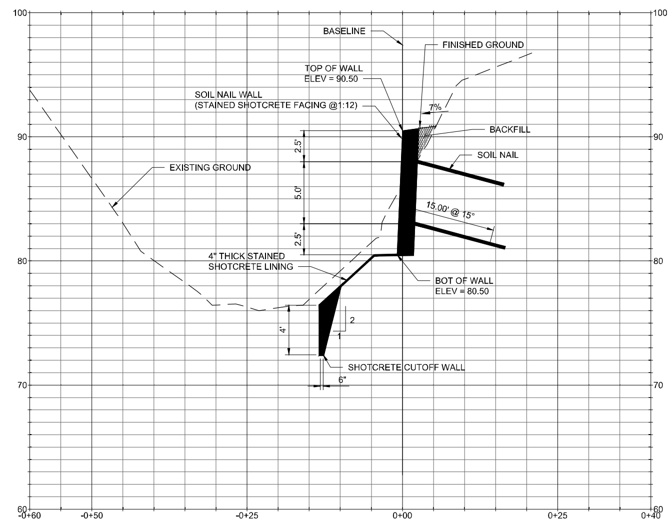
C2 CS302 STREAM SECTION A-A - BASELINE STA 0+05.00
HORIZ: 1"=10'
VERT: 1"=5'



C4 CS302 STREAM SECTION B-B - BASELINE STA 0+50.00
HORIZ: 1"=10'
VERT: 1"=5'



A2 CS302 STREAM SECTION C-C - BASELINE STA 1+00.00
HORIZ: 1"=10'
VERT: 1"=5'



A4 CS302 STREAM SECTION D-D - BASELINE STA 1+50.00
HORIZ: 1"=10'
VERT: 1"= 5'

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

VERT: 1"=5' 0 2.5' 5' 10'

HORIZ: 1"=10' 0 5' 10' 20'

GRAPHIC SCALES

US Army Corps of Engineers
Honolulu District

Designed by: GN/JS
Drawn by: JO
Submitted by: KDL
Date: 1/24/2024
Checked by: MD
Drawing code: 141-82-007

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
FORT SHAFTER, HAWAII

AECOM
1001 BISHOP STREET, SUITE 1600
HONOLULU, HI 96813

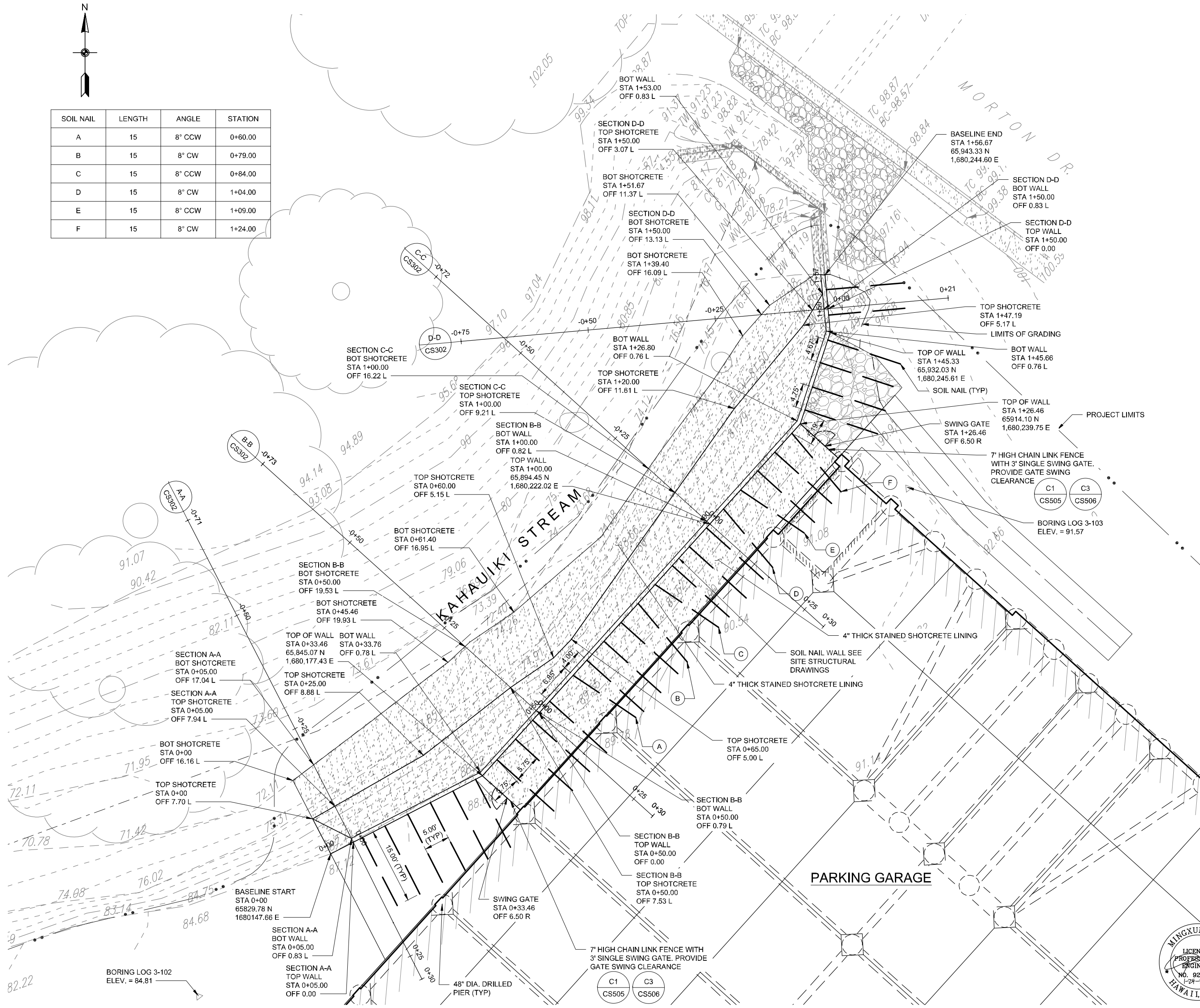
COMMAND AND CONTROL FACILITY (C2F)
FORT SHAFTER, OAHU, HAWAII
PHASE 3 - PARKING GARAGE

STREAMBANK SECTIONS

Location code: 9344
Drawing no. 141-82-007
PHASE 3
Sheet number:
CS302
Sheet 37 of 370

FINAL READY TO ADVERTISE (RTA)

SOIL NAIL	LENGTH	ANGLE	STATION
A	15	8° CCW	0+60.00
B	15	8° CW	0+79.00
C	15	8° CCW	0+84.00
D	15	8° CW	1+04.00
E	15	8° CCW	1+09.00
F	15	8° CW	1+24.00



A1 STREAMBANK STABILIZATION SITE PLAN

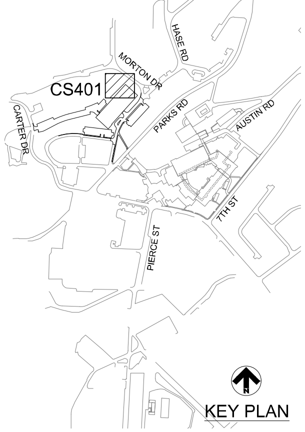
CS401 1" = 10'

NOTES THIS SHEET:

1. SOIL NAIL SPACING SHALL BE 5-FT O.C. UNLESS OTHERWISE SHOWN ON PLAN. SOIL NAILS SHALL BE PERPENDICULAR TO BASELINE IN PLAN UNLESS NOTED OTHERWISE. A MAXIMUM OF 8 DEGREES DEFLECTION IN PLAN IS ALLOWED TO AVOID DRILLED PIERS, SEE DETAIL B1, SS204 FOR ANGLE OF SOIL NAILS IN SECTION.
2. SOIL NAIL RETAINING WALL SHALL BE CONSTRUCTED PRIOR TO DRILLED CAISSON CONSTRUCTION. EACH OF THE SOIL NAIL ANCHORS INSTALLED SHALL BE CLEARLY MARKED ON THE GROUND SURFACE WITH SURVEY STAKES, TO AVOID POTENTIAL CONFLICT/DAMAGE TO THE GROUND ANCHORS BY THE DRILLED CAISSON CONSTRUCTION.
3. SEE SHEET CS203 FOR SOIL NAIL WALL PROFILE. SEE SHEET302 FOR STREAMBANK SECTIONS.
4. FOR SOIL NAIL STRUCTURAL WALL DETAILS, SEE SHEETS SS001 T0 SS204.
5. SHOTCRETE STAIN TO MATCH EXISTING GEOLOGY IN COLOR, SEE SP 03 37 13.

LEGEND:

- PROJECT LIMITS
- STAINED SHOTCRETE
- BUILDINGS
- SOIL NAIL
- LIMITS OF GRADING
- STREAM SECTION LINE
- BORING LOG (JUNE 22, 2023)
- DRILLED PIER



KEY PLAN

SCALE: 1"=10' 0 5' 10' 20'

GRAPHIC SCALES

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

MINGXUN DING LICENSED PROFESSIONAL ENGINEER NO. 9246-C HAWAII, U.S.A.

US Army Corps of Engineers Honolulu District

Mark	Description	Date	Appr.

Designed by: GN/JS | Drawn by: JO | Checked by: MD | Submitted by: KDL | Date: 1/24/2024 | Rev.: - | Drawing code: 141-82-007 | File name: C2F_PH3-CS401 | Plot date: Jan. 18, 24 | Plot scale: 1:1

U.S. ARMY CORPS OF ENGINEERS HONOLULU DISTRICT FORT SHAFTER, HAWAII

AECOM 1001 BISHOP STREET, SUITE 1600 HONOLULU, HI 96813

COMMAND AND CONTROL FACILITY (C2F) FORT SHAFTER, OAHU, HAWAII PHASE 3 - PARKING GARAGE

STREAMBANK STABILIZATION SITE PLAN

Location code: 9344
Drawing no. 141-82-007
PHASE 3
Sheet number: CS401
Sheet 38 of 370

FINAL READY TO ADVERTISE (RTA)

Attachment 8

Kahauiki Stream Photos with OHWM

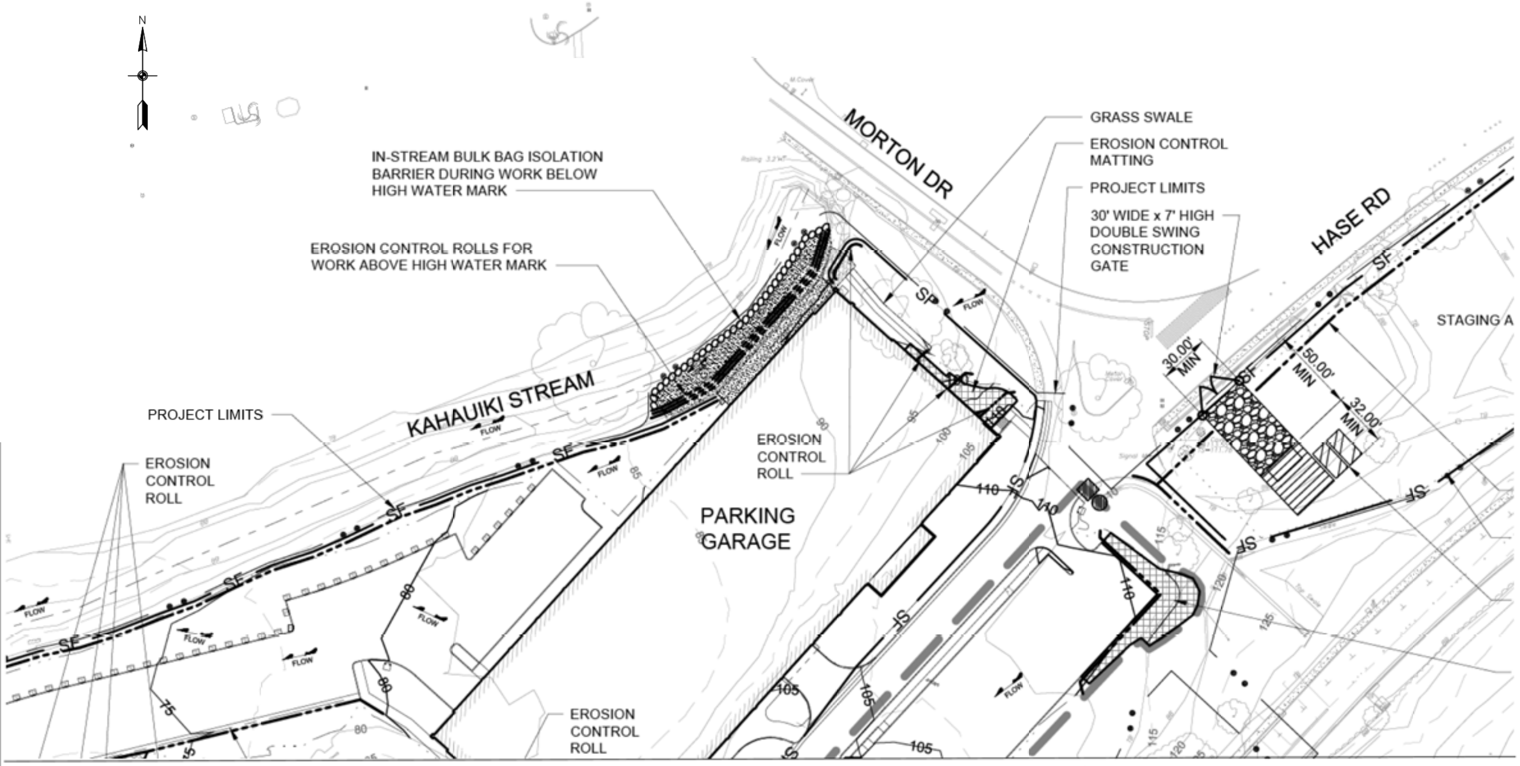
Photo 1 - Kahauiki Stream with OHWM facing SE from Morton Drive

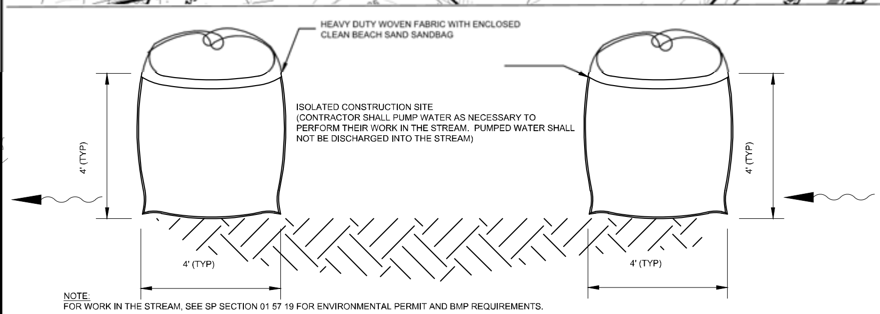
Photo 2 - Kahauiki Stream with OHWM facing SE from Morton Drive Culvert

Photo 3 - Kahauiki Stream with OHWM facing SW from Morton Drive (Close Up)

Attachment 9

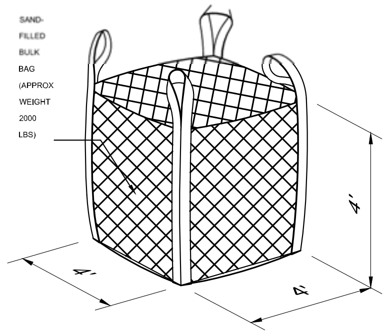
BMP Details





NOTE:
FOR WORK IN THE STREAM, SEE SP SECTION 01 57 19 FOR ENVIRONMENTAL PERMIT AND BMP REQUIREMENTS.

D4 / CG501 IN-STREAM BULK BAG ISOLATION BARRIER DETAIL
NOT TO SCALE



TYPICAL BULK BAG DETAIL

A1 / CG101 EROSION & SEDIMENT CONTROL PLAN
1" = 60'

NOTES THIS SHEET:

1. SEE SHEET CG501 FOR EROSION & SEDIMENT CONTROL DETAILS.
2. DISTURBED AREA = 6.8 ACRES.
3. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A SITE-SPECIFIC BMPS PLAN IN COMPLIANCE WITH THE REQUIREMENTS OF THE STATE DOH'S STORMWATER NPDES PERMIT. THE BMPS PLAN SHALL INCORPORATE, AT A MINIMUM, THE EROSION AND SEDIMENT CONTROL PLAN SHOWN ON THIS SHEET.
4. DUST SCREEN SHALL MEET THE FOLLOWING CRITERIA AS A RECOMMENDED MINIMUM: 15' TALL, 4" STEEL POSTS WITH 8' SPACING, CLOTH BARRIER MADE OF "WOVEN GEOTEXTILE" OR "NURSERY SHADE". DUST SCREEN MAY BE USED AS SILT FENCE IF CLOTH BARRIER MATERIAL MEETS THE SILT FENCE REQUIREMENTS PER DETAIL C1/CG501
5. DURING CONSTRUCTION, ADDITIONAL PREVENTIVE MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS NEEDED TO CONTROL DUST AND/OR EROSION AND SEDIMENT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING OFFSITE STORM WATER THAT ENTERS THE PROJECT LIMITS.
7. CONTRACTOR TO PROVIDE SITE SPECIFIC BEST MANAGEMENT PRACTICES FOR VEHICLE AND CONCRETE TRUCK WASHDOWN AREA TO PREVENT CONTAMINATED WASHDOWN WATER FROM ENTERING THE STORM DRAIN SYSTEM.
8. SEE SHEET C001 FOR EROSION & SEDIMENT CONTROL NOTES.

LEGEND:

- STABILIZED CONSTRUCTION INGRESS/EGRESS (B1/CG501)
- GRATED DRAIN INLET PROTECTION (A1/CG501)
- CATCH BASIN FILTER (B4/CG501)
- DIRECTION OF SURFACE FLOW
- NEW SILT FENCE / DUST SCREEN
- EROSION CONTROL ROLL (B2/CG501)
- PROPOSED NEW BUILDING/STRUCTURE
- PROJECT LIMITS
- EXISTING CONTOURS
- NEW CONTOURS
- PERMANENT EROSION CONTROL MATTING (A2/CG501)
- LIMITS OF GRADING
- STAGING AREA
- BID OPTION
- SWALE ℄
- IN-STREAM BULK BAG ISOLATION BARRIER (D4/CG501)

SCALE: 1"=60' 0 60' 120'

GRAPHIC SCALES

US Army Corps of Engineers
Honolulu District

Designed by: GN/JS	Date: 10/17/2023	Rev. -
Drawn by: MT	Checked by: MD	
Submitted by: KDL	Drawing code: 141-82-007	
Chief,	File name: C2F_PKG-CG101; Plot date: Oct. 12, 23; Plot scale: 1:1	

U.S. ARMY CORPS OF ENGINEERS
HONOLULU DISTRICT
FORT SHAFTER, HAWAII

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COMMAND AND CONTROL FACILITY (C2F)
FORT SHAFTER, O'AHU, HAWAII
PHASE 3 - PARKING GARAGE

EROSION & SEDIMENT CONTROL PLAN

Location code: 9344
Drawing no. 141-82-007
PHASE 3
Sheet number:
CG101
Sheet

NOT FOR CONSTRUCTION