

PROJECT DESCRIPTION & MITIGATION MEASURES

USCG BASE HONOLULU BERTH G EXTENSION

1. PURPOSE

The United States Coast Guard (USCG) proposes to extend the existing Berth G at the USCG Base Honolulu in Honolulu Harbor, HI, to accommodate the anticipated return of a second 225-foot Seagoing Buoy Tender (WLB).

2. NEED

The USCG Fourteenth District is responsible for carrying out the Coast Guard’s mission throughout Oceania. In order to carry out this mission, USCG proposes to upgrade the waterfront facilities at Base Honolulu to support an expanded fleet. Prior development phases accommodated the homeporting of two new National Security Cutters (NSCs) at the base. One of the previously existing WLB berths was modified to accommodate an NSC, reducing the number of WLB berths to one.

The current phase under development accommodates a larger WLB vessel at Berth G. This existing fixed pier does not have the capacity to support the larger WLBs, so this project will provide the needed facility size for the longer and larger vessels.

USCG has assessed the effects of this action in a series of NEPA documents evaluating the accommodation of new vessels at Base Honolulu. A 2015 Environmental Assessment evaluated shoreside facility improvements to homeport the two new NSCs. In 2016, a Supplemental EA was developed to evaluate necessary decking, pier, and fendering upgrades required to facilitate the revised mooring plan. With the anticipated return of a second WLB and associated upgrades and due to the passage of time since the preceding NEPA evaluations, USCG developed a second Supplemental EA, which was finalized in July 2024. Also assessed in this EA, but not proposed at this time, is a potential future replacement of the floating dock which will be removed during this project to accommodate the extension of Berth G, as well as a potential lateral expansion of Berth G which will not be completed at this time. This 2024 Supplemental EA will be provided along with this project description for background on the environmental evaluations of USCG’s ongoing upgrades at Base Honolulu to date.

3. LOCATION

Latitude	Longitude	USGS Quad
21.307312°	-157.872860°	Honolulu

Tide Station	Station Datums (elevation, ft.)		
	MLLW	HTL	MHW
NOAA station 161-2340 Honolulu, HI	(0)	2.72	1.44

4. DRIVING INSTRUCTIONS

To reach the project site from the Daniel K. Inouye International Airport, head north on Rodgers Boulevard, and turn right onto Queen Lili'uokalani Freeway. After traveling, turn right onto Sand Island Access Road. Continue onto Sand Island Parkway for 1.2 miles to arrive at USCG Base Honolulu gates. Prior arrangement and proper security clearance is required for access.

5. ADJACENT LAND OWNERSHIP

This project is located on parcel 15041042 owned by the United States of America. Adjacent submerged lands in the harbor are owned by the Hawai'i Department of Land and Natural Resources (HDLNR).

Parcel ID	Owner
15041042	United States of America
15041003	HDLNR

6. DESCRIPTION

USCG proposes to modify Berth G by removing an existing floating pier and constructing a fixed, pile-supported pier extending approximately 110 feet (ft.) eastward from the existing southeast end of Berth G. The extended Berth G will have adequate moorage options, equipped with fenders, mooring hardware, and services for the 225-foot WLB vessel. USCG has selected Duwamish-Pacific Joint Venture (DPJV) as the design-build contractor to complete design and construction of the project.

6.1 SITE ESTABLISHMENT

USCG's Contracting Officer's Representative (COR) offices and DPJV's field office will be installed together with the project sign and designated parking for COR vehicles. The designated laydown and staging area will be fenced; orange high-vis safety fencing will be installed as well as requisite safety signage.

6.2 MOBILIZATION

Following site establishment, a crane will be delivered to the site and erected within the designated laydown area. Appropriate load-spreading materials will be installed to ensure no damage occurs to the existing bulkhead. Pile-driving and augering equipment along with the piles, precast concrete elements, and other project materials will be loaded onto a barge in Seattle, WA for delivery to the site concurrent with the arrival of the crane. The vessel utilized will be compliant with the 2013 EPA Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels. Upon arrival in Honolulu, equipment and materials will be unloaded from the supply barge or delivered via local truck and equipment rigged for work.

6.3 DEBRIS REMOVAL

In accordance with the project's Essential Fish Habitat (EFH) consultation and ongoing coordination, a debris removal program will be performed in the vicinity of the existing dock and float. The project is anticipated to result in an increase of overshadowing footprint of 1,349 sq ft. Debris will be removed within an area of 5,400 sq ft (of which 2,400 sq ft is affected by debris, for a ratio of 1.84 times the overshadowing increase. Debris will be removed using divers and a support vessel or shore-based crane.

6.4 DEMOLITION

All electrical power will be disconnected before demolition is initiated, and existing electrical and mechanical utilities will be removed. Demolition of the existing structures will commence on two fronts. The pile-driving crew will begin the removal of the existing 11.5 ft. by 120.5 ft. float, existing 60 ft. by 4 ft. gangway, and six (6) existing restraint piles (24-inch octagonal concrete piles). DPJV will attempt to fully extract the piles using vibratory extraction methods or dead-pulling. If unsuccessful, any remaining piles may have to be cut below the mudline by divers. A turbidity curtain will be used during pile removal efforts. The existing float and removed concrete piles will be loaded onto a barge or moved into uplands for eventual reuse or disposal.

Demolition of the existing concrete curb and dock appurtenances on Berth G will be accomplished concurrently with the float removal. Existing water, sewer, and electrical conduits and supports will be removed from under Berth G. Removed materials will be captured in a skiff or small work float beneath the pier.

All demolition materials will be reused or disposed of in accordance with all applicable regulations, depending upon material use or condition at the time of demolition.

6.5 PILE INSTALLATION

Piles will be installed utilizing an APE 200-6 vibratory hammer and a Demag D-62 impact hammer (or equivalent hammers). Protected species observers (PSOs) will be on duty during all pile-driving operations and a turbidity curtain will be used during all pile driving.

Existing rip rap slope protection may require temporary removal for pile placement. This will be achieved through the use of a clamshell bucket. A turbidity curtain will be used during rip rap removal or replacement.

Temporary piles will be installed to support a piling template used to hold the permanent piles in position. Installation will be primarily by vibratory hammer but may require augering or impact driving. All temporary piles will be removed after permanent pile installation. Soft start techniques will be utilized during all vibratory pile driving. Augering techniques are further described in the next section.

Permanent support piles will be 24-inch diameter steel pipe piles with concrete infill. Permanent piles will be lofted into position using the shore-based crane and initial vibratory driving will occur to start the piles. Pile locations with presumed difficult driving conditions (based upon subsurface data determined through geophysical survey) may be pre-driven using an H-pile probe or pre-augered. No materials will be removed from the water during augering and all spoils will be returned to the borehole as the auger is removed. Piles will be advanced until embedment depth is reached, or the soils allow for impact driving. Piles will be proofed with impact driving. All impact pile-driving will utilize pile cushions.

Upon successful installation, piles will be cut to grade. All permanent piles will be wrapped with HDPE to provide increased corrosion protection in the splash zone of the piles. Anodes will be installed on the piles to provide additional corrosion protection.

6.6 PILE AUGERING

Based on information obtained from a geophysical survey conducted within the project area, it is believed that hard coral lenses may exist in the location of at least 8 of the permanent pile locations. The coral lenses may potentially prevent permanent piles from being installed to their prescribed embedment depth. In order to ensure

piles can be installed according to the design, DPJV will perform pre-installation augering operations in the permanent pile locations where coral lenses are believed to be located in order to remove the coral obstructions.

DPJV will perform pre-pile installation augering operations in each permanent pile location utilizing Continuous Flight Auger (CFA) drilling equipment. DPJV will utilize a 26" diameter CFA and associated auger drive unit which will provide the necessary downward force and high torque necessary to penetrate the soil and associated coral lenses. Prior to augering operations, a template will be set up at each permanent pile location to ensure that augering and subsequent permanent pile installation occurs in the necessary location, within placement tolerance. The auger will be advanced into the seabed at each permanent pile location and advanced until any coral obstruction has been successfully drilled through. Once the necessary depth has been reached, the CFA will be slowly withdrawn and moved to the next hole. Permanent pile installation will proceed following CFA pre-drilling operations.

The nature of the CFA drilling methodology allows for the churned drill spoils to be returned to the borehole as the auger flight is withdrawn after reaching its design depth. This methodology does not result in the generation of any drill spoils and only disturbs the seafloor at the immediate location of drilling. Excess water is not generated as part of this operation. DPJV will have a turbidity curtain in place surrounding all CFA augering operations and pile driving to capture any potential turbidity generated during the operation to maintain water quality standards.

6.7 CONCRETE PILE INFILL

Following installation, permanent piles will be fully dewatered prior to the placement of concrete infill within the pile. The water removed from the pile prior to the placement of concrete is anticipated to be clean seawater without the presence of any turbidity or other contaminants. The clean water will be pumped out of the pile and discharged back into the ocean, within the enclosed turbidity curtain surrounding the area of active work.

Concrete placement will commence following pile dewatering, with the piles themselves providing primary containment for the concrete. Concrete placement will utilize "tremie" methodology with concrete placement occurring from the bottom up. This will a) prevent segregation of concrete during placement, b) further reduce risk of concrete spillage since the pump hose will be placed fully into the pile and c) minimize the mixing of concrete and any residual water remaining in the pile. It is possible that some water may make its way up to the top of the concrete and top of the pile towards the end of concrete placement operations. In the event of this situation, DPJV would utilize a small pump to remove the very small volume of concrete-contaminated water and place it into a concrete washout pan for disposal with any other concrete washout debris from the concrete truck/pump truck.

Concrete infill within the pile will initially be brought up to 3 feet below the top of the pile. This will act as an initial containment BMP, ensuring that there is sufficient room within the pile to contain any concrete or residual water, preventing spilling during the initial infill operation. The remaining amount of concrete infill will be placed following the installation of the concrete precast caps, during our second stage cast-in-place concrete pours. Additional BMPs, such as the placement of the concrete pumping hose into the pile to prevent spillage during placement, and the use of perimeter containment BMPs (such as water-tight concrete formwork) will be utilized during placement operations to ensure no spills or impacts to water quality.

6.8 PRECAST CAPS AND DECK PANELS

Precast concrete materials will be cast in Washington before being shipped to the project site. Precast concrete pile caps will be set on driven piles and connected with second-stage cast-in-place concrete. Following pile cap installation, approximately twenty precast deck panels will be lifted into place and connected to the caps with a third stage of cast-in-place concrete. The panels will form a new pier surface of approximately 25 ft. by 108 ft. The longitudinal joints between the deck panels will then be grouted. Once the deck panels have been installed, the topping slab reinforcement will be installed and the 4-inch topping slab will be poured.

6.9 DOLPHIN CONSTRUCTION

The dolphin will be comprised of four (4) 24-inch concrete-filled steel pipe piles supporting a precast, post-tensioned dolphin structure approximately 12 ft. by 12 ft. A pile template will be installed to guide dolphin construction and removed following dolphin completion. The dolphin piles will be vibrated, augered (if necessary), and impacted into place, cut to grade, and filled with concrete. A steel weldment will be installed at the top of each pile and the precast dolphin structure (pre-tensioned concrete deck panels) will be lifted into place. A second stage concrete pour will connect the precast dolphin cap to the piles to achieve the moment connection. The dolphin gangway will be installed with one gangway connection allowed to slide to accommodate lateral deflections under differential loading.

6.10 BOAT ACCESS PLATFORM INSTALLATION AND DOCK APPURTENANCES

Anchor bolts or precast inserts for the bollard, cleats and fendering system will precast into the concrete deck panels. Bollards and cleats will be installed according to specifications. Along the new and existing Berth G, round foam-filled fenders will be attached. A concrete curb will be cast along the existing Berth G to accommodate the change in mooring hardware. A new moveable aluminum tower and gangway will be lifted into place onto the pier following completion of the topping slab for personnel access on and off the vessel.

6.11 MECHANICAL AND ELECTRICAL INSTALLATION

Mechanical and electrical (M&E) installation will be initiated once the deck panels are installed following the completion of the structural work. The M&E subcontractors will be supported on floats for underdeck work.

New mechanical and electrical systems will be installed beneath the existing Berth G and new dock extension. The mechanical systems include new HDPE water and sanitary sewer pipe, both with stainless steel support hangers hung below the dock surface. Hangers will be attached to the underside of the dock and pile caps. A concrete curb will protect the valves, meter, backflow preventor and hook locations where they extend through the deck. The water and sewer services will be installed to meet the WLB requirements. The water service will be a 2" diameter HDPE pipe with a meter and backflow preventor. The sewer will be a 4" HDPE pipe with a gate valve for maintaining a closed system when not in use.

Electrical services will be upgraded to accommodate the modified infrastructure, including a new switch, circuit, and power mound to meet WLB requirements. New conduit and supports will be installed beneath Berth G to accommodate the new service. A new transformer will be installed in uplands adjacent to the dock and electrical conductors installed in existing conduits.

6.12 COMMISSIONING AND DEMOBILIZATION

Upon completion of the M&E work, the project will enter the commissioning phase where all systems are operated and verified to work. Pressure testing of the pipe, fitting, valves, and assemblies is conducted with water prior to beginning operations. The water service will also be disinfected to applicable standards for potable water. Any necessary training for USCG personnel will be carried out during this time. Project equipment will be demobilized to the port of origin according to the contractor’s needs and means. Excess project materials and waste will be disposed of in accordance with USCG policy and federal, state, and local laws and regulations.

7. QUANTITIES

Material quantities for activities with the potential to impact protected species are summarized in Table 1 and Table 2. These quantities will be used to support calculations of impact ranges and durations and for analysis of project effects.

Table 1. Demolition Quantities

	Construction Method	Project Total	Below HTL (EL =2.72')
Existing Float (11.5' x 120.5')	n/a	1386 sq ft	1386 sq ft
Existing Gangway (60' x 4')	n/a	240 sq ft	240 sq ft
Existing Float Pile (presumed 24" octagonal concrete piles)	Vibratory removal or cut at mudline	6 ea	6 ea
Total Shading Footprint Removed	n/a	~1625 sq ft	~1625 sq ft

Table 2. Installation Quantities

	Construction Method	Project Total	Below HTL (EL =2.72')
Temporary Piles (24" steel pipe)	Vibratory installation/removal	24	24
Permanent Piles (24" steel pipe)	Vibratory installation	16	16
	Continuous Flight Auger		
	Impact Proof		
New Pier (25' x 108')	n/a	2700 sq ft	2700 sq ft
Dolphin Piles (24" steel pipe)	Vibratory installation	4 ea	4 ea
	Continuous Flight Auger		
	Impact Proof		

	Construction Method	Project Total	Below HTL (EL =2.72')
New Catwalk (5' x 26')	n/a	130 sq ft	130 sq ft
Dolphin Structure (12' x 12')	n/a	144 sq ft	144 sq ft
Total Shading Footprint Added	n/a	2,974 sq ft	2,974 sq ft

8. SCHEDULE AND DURATION

Project mobilization is anticipated to begin in approximately July 2026 with demobilization in February 2027, although exact timing may vary. Site construction will occur over a duration of approximately 230 days.

9. BEST MANAGEMENT PRACTICES

The following best management practices will be implemented during project construction to prevent, minimize, or mitigate effects to the environment.

9.1 GENERAL MEASURES

1. All work will be performed from the existing pier, adjacent upland areas, or support barges or vessels.
2. Where practicable, in-water work will be performed at low or slack tides and when the sea is calm.
3. To the maximum extent practicable, all equipment and material will be lowered in a controlled manner.
4. In the event of approaching foul weather (i.e., tropical storms and hurricanes), equipment will either be removed from the Project site or adequately secured.
5. Sediment control BMPs such as catch basin inserts, compost sock, etc. will be used to control stormwater runoff on the project site.

9.2 VESSEL OPERATION

1. Construction vessel crews will use established ports and channels with depths sufficient for the safe navigation of boat traffic to minimize the likelihood of vessel grounding.
2. Vessel operators will abide by all project-specific BMPs established to prevent collisions or accidental spills and leaks.
3. Project vessels will comply with the 2013 EPA Vessel General Permit.
4. The contractor will ensure that all equipment, ballast, and vessel hulls do not pose the risk of introducing or increasing invasive species before entering Honolulu Harbor.
5. When piloting vessels, vessel operators will alter course to remain at least 328 feet (100 meters) from whales and at least 164 feet (50 meters) from other marine mammals and federally listed marine animals.
 - a. Vessel speeds will be reduced to 10 knots or less when piloting in proximity of federally listed marine mammals, sharks, and rays and 5 knots or less in areas of suspected sea turtle activity.

- b. If a marine mammal or turtle approaches the vessel, the vessel operator shall put the engine in neutral until the animal is at least 50 feet (15 meters) away.

9.3 WATER QUALITY

1. The contractor will implement a Storm Water Pollution Prevention Plan (SWPPP) to control/eliminate stormwater runoff from entering the harbor.
2. At all times, the Contractor will prevent oil or hazardous substances from entering the ground, drainage areas, or waters (navigable or non-navigable).
3. A turbidity/silt curtain will be deployed during all in-water and over-water work that may increase turbidity (e.g., pile removal, cutting, installation).
 - a. Turbidity curtains shall be monitored for damage, dislocation, or gaps on a daily basis, and immediately repaired where any such damage or issues are detected.
4. If dewatering is required, water will be filtered through sediment bags or similar treatment before discharge to prevent sediment-laden water from reaching State waters.
5. The contractor will conduct weekly water quality monitoring for turbidity, total suspended solids (TSS), and pH in accordance with CWA Section 401 standards. This monitor shall have project shut down authorization if turbidity levels exceed levels in permit standards.
6. To the maximum extent possible, project-related debris will not enter the water. Any project-related debris that inadvertently enters the water will be removed. A containment system will be placed under the deck during removal and installation. A temporary floating debris boom will be installed around all work located below the high tide line.
7. Only materials that are non-toxic to aquatic organisms will be used. For piles, concrete or steel will be used. All concrete grout, cement, and sealant used will be non-toxic and non-hazardous to aquatic organisms.
8. Materials and equipment that enter the water will be clean and free of pollutants.

9.4 AIR QUALITY

1. Class 1 Ozone Depleting Substances (ODS), as defined in Section 602(a) of the Clean Air Act, will not be used in the performance of this project, nor be provided as part of the equipment associated with the work.
2. The Contractor will keep dust down at all times, including during non-working hours.
3. When sandblasting or spray painting, tarp drop cloths and windscreens will be used under and around blasting and painting operations to confine and collect dust, sand, paint, and debris.
4. Concrete blocks, concrete, and asphalt will be wet cut.

9.5 PROTECTED SPECIES

1. Protected species observers will be on duty during underwater noise activities in accordance with the project's consultations.
2. Pile cushions will be used during all impact pile driving.

3. Pile driving will employ soft-start or ramp-up techniques (slow increase in hammering intensity) at the start of each workday or following any break of more than 30 minutes.
4. The contractor will follow NMFS recommendations to avoid in-water work during either the 06/22/26 – 7/13/2026 or 7/22/26 – 8/12/2026 coral spawning windows.
5. In-water work will only be conducted during normal business hours (i.e., 8 am to 5 pm) to avoid most of the sensitive spawning periods for coral species in the harbor.
6. Temporary in-water tethers, as well as mooring lines for vessels and marker buoys shall remain taut to the minimum length necessary and shall remain deployed only as long as needed.

9.6 HAZARDOUS MATERIALS

1. A Spill Prevention Control and Contingency (SPCC) plan to control hazardous materials will be developed and followed to prevent hazardous materials from entering or remaining in the marine environment during the project.
2. Spill kits with appropriate materials to contain and clean a spill will be kept on site at all times.
3. Construction equipment will be kept in good repair without leaks of hydraulic or lubricating fluids. Equipment would be checked daily, and if leaks or drips occur, they shall be cleaned up immediately.
4. Drip pans shall be utilized when construction equipment is parked.
5. Equipment maintenance and/or repair will be confined to one location. Runoff from this area will be controlled to prevent contamination of soils and water.
6. Fueling of land-based vehicles and equipment shall take place at least 50 ft away from the water (and away from drains), preferably over an impervious surface. Fueling of vessels will be done at approved fueling facilities. Any fuel spilled would be cleaned up immediately and the pads and materials from cleanup will be properly disposed of.
7. All fueling and lubricating operations of equipment and motor vehicles will be conducted in a manner that protects against spills and evaporation. All used oil generated on-site shall be managed in accordance with provisions detailed in 40 CFR 279. When possible, the capacity of aboveground storage tanks (ASTs) placed on-site for the purpose of storing petroleum products will be minimized.
8. All temporary ASTs will have built-in/integrated secondary weatherproof containment designed to hold the total capacity of the AST, and meet all SPCC requirements found in 40 CFR 112.
9. Concrete for decking will be pumped into watertight forms. All precautions shall be followed to prevent concrete from mixing with water and to prevent concrete from flowing through water.
10. Concrete will be pumped through hoses or tremied and started with the nozzle facing downward at the deepest part of the placement. The concrete placement will be continuous with the nozzle several feet below the top surface of the fluid concrete.
11. Water displaced by the concrete will be captured and treated or removed from the site. The top portion of the concrete that has mixed with water will be captured and removed from the site.
12. Anti-washout admixture shall be utilized and provided per the manufacturer's recommendation (or 10 ounces per 100 pounds of cement, whichever is greater).

13. Hazardous wastes will be handled, stored, transported, and disposed of according to provisions detailed in 40 CFR 262, where applicable. Hazardous wastes will be prevented from entering the ground, drainage areas, and surface waters.

9.7 WASTE MANAGEMENT

1. Construction debris and removed materials will be collected and disposed of at approved upland facilities. No disposal into water bodies is allowed.
2. The Contractor will pick up waste and debris and place them in covered containers. Containers will be emptied and waste and debris removed at least weekly. Containers will not be allowed to become overfilled. Wastes will be removed without spilling or contaminating streets, the site, or other areas. Offsite disposal will be at a licensed landfill and will comply with all local, state, and federal requirements.
3. Any excess soil/dirt/fill material generated as part of the project that is not required or suitable to complete on-site work will be transported and disposed of at an off-site permitted EPA RCRA Subtitle D Municipal Solid Waste Landfill that routinely accepts the type of material being removed from the site. The Contractor will also meet all additional state and local landfill regulatory requirements. The Contractor will manage, coordinate, and provide all material testing and permit coordination and prepare all manifesting requirements for proper disposal.

9.8 CULTURAL RESOURCES

1. If historic artifacts or buried human remains are uncovered, USCG will comply with all applicable federal, state, and local regulations regarding incidental finds. Activities will be suspended until a qualified archaeologist and/or Native Hawaiian representative could determine the significance of such resource(s).
2. The contractor will protect any cultural or historic resources or human skeletal remains discovered in-place. Upon discovery, work will be stopped in the immediate area of the discovery.

USCG BASE HONOLULU BERTH G EXTENSION

**APPLICABLE MONITORING AND ASSESSMENT PROGRAM
FOR CLEAN WATER ACT (CWA) SECTION 401 WATER QUALITY
CERTIFICATION**

JANUARY 2026

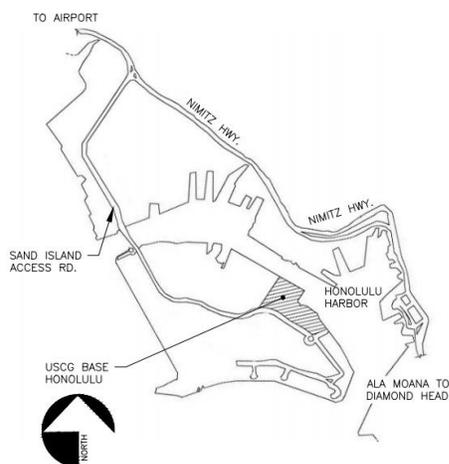
SUBMITTED TO: Sea Engineering Inc.
504 N. Nimitz Hwy,
Honolulu, HI 96817

SUBMITTED BY: Marine Research Consultants, Inc
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808 779-4009

CONSTRUCTION AREA: USCG HNL Berth G

I. PROJECT DESCRIPTION

The United States Coast Guard (USCG) proposes to extend the existing Berth G at the USCG Base Honolulu in Honolulu Harbor, HI, to accommodate the anticipated return of a second 225-foot (ft) Seagoing Buoy Tender (WLB) (Figure 1).



PROJECT LOCATION

SCALE: NTS

Figure 1.

The USCG Fourteenth District is responsible for carrying out the Coast Guard's mission throughout Oceania. In order to carry out this mission, USCG proposes to upgrade the waterfront facilities at Base Honolulu to support an expanded fleet. Prior development phases accommodated the homeporting of two new National Security Cutters (NSCs) at the base. One of the previously existing WLB berths was modified to accommodate an NSC, reducing the number of WLB berths to one.

The current phase under development accommodates a larger WLB vessel at Berth G. This existing fixed pier does not have the capacity to support the larger WLBs, so this project will provide the needed facility size for the longer and larger vessels. USCG proposes to modify Berth G by removing an existing floating pier and constructing a fixed, pile-supported pier extending approximately 110 feet eastward from the existing southeast end of Berth G (Figure 2). The extended Berth G will have adequate moorage options, equipped with fenders, mooring hardware, and services for the 225-ft WLB vessel. USCG has selected Duwamish-Pacific Joint Venture (DPJV)

as the design-build contractor to complete design and construction of the project.

This Applicable Monitoring and Assessment Plan (AMAP) is being prepared to demonstrate how the project will comply with the conditions of the Section 401 Water Quality Certification (WQC) under the Clean Water Act (CWA) and Hawai'i Administrative Rules (HAR) 11-54 by outlining procedures to monitor for potential water quality impacts and respond to any exceedances. The AMAP will also be responsive to existing environmental conditions of the receiving waters of Honolulu Harbor.

II. PROJECT CONSTRUCTION

A. Description of Construction Procedures

The construction sequence will be approximately as follows:

- 1) Mobilization and site preparation
- 2) Demolish existing float piles **(in-water work)**
 - a. DPJV will attempt to fully extract existing piles via Vibratory Hammer.
 - b. If piles cannot be fully extracted, existing concrete piles will be cut off at the mudline.
- 3) Demolish existing float **(in-water work)**
 - a. Prior to float removal, the existing gangway and gangway connection to the fixed dock will be removed.
 - b. Existing water, sewer, and electrical conduits and supports will be removed from under Berth G. Removed materials will be captured in a skiff or small work float beneath the pier.
- 4) Demolition of existing curb on existing Berth G
- 5) Installation of up to 24 each temporary piles to serve as guides **(in-water work)**
- 6) Installation of 16 each permanent piles **(in-water work)**
 - a. Due to the presence of competent coral layers present beneath mudline, augering may be required to fully install permanent piles.
- 7) Dolphin pile installation **(in-water work)**
- 8) Cut permanent piles to grade and dewater **(in-water work)**
- 9) Concrete infill of 16 each permanent piles **(in-water work)**
- 10) Installation of precast concrete pile caps
- 11) Installation of precast concrete deck panels
- 12) Installation of new cast-in-place curb on existing Berth G
- 13) Installation of new cast-in-place topping slab
- 14) Installation of new steel gangway to connect Berth G extension to new Dolphin
- 15) Installation of wharf appurtenances
 - a. Fenders
 - b. Bollards and cleats

- c. Access ladder
- d. Railings
- 16) Installation of electrical and communications components
- 17) Installation of mechanical and electrical components
- 18) Commissioning
- 19) Demobilization

B. Description of BMPs that will be used

Full-depth silt curtains will be placed around the perimeter of the active work area to prevent turbidity or any introduced pollutants from within the area from escaping and entering ocean waters. A spill apron will be used as debris catchment around the perimeter of the active work area to prevent any debris or pollutants from entering the water while the existing curbs are demolished from Berth G.

C. Duration of in-water work

Project mobilization is anticipated to begin in approximately July 2026 with demobilization in 2027, although exact timing may vary. Site construction will occur over a duration of approximately 230 days.

III. METHODS

A. Contractor Visual Inspection Monitoring

During construction, the Contractor will designate a person to perform daily visual inspections of the construction site to ensure that the construction activities do not result in adverse impacts. Photos will be taken by the Contractor daily with date/time stamp and will include a narrative describing photo-documentation. Observations recorded in a field notebook will include (but not be limited to): date, time, weather conditions, the description of the construction activity, and any other observed activities not related to the construction activities that may affect water quality. Any photographs that have been taken will be kept on file at the contractor's office. A hard or electronic copy of these observations and any photographs will be provided for use in preparing the final assessment report. This field notebook will be available for inspection by HDOH-CWB authorized personnel during normal business hours.

B. Water Quality Monitoring

1. Monitoring Stations

Six monitoring stations will be established (Figure 2) during pre-construction monitoring. Potential coordinates for each of these stations can be found in Table 1 (exact station locations will be determined following installation of silt containment device). Four “Impact Decision Stations” (IDUs) will be located 1 meter (m) (~3 ft) outside of silt curtains that surround the construction site. IDU-1 will be located off the northwest end of Berth G where demolition will take place. IDUs 2-4 will be located off the Construction area of Berth G. Two “Control Decision Units” (CDUs) will be located 15 m (~50 ft) off the northwest and southeast ends of Berth G (Figure 2). During demolition, the three IDUs in closest proximity of the activity will constitute the monitoring sites. At the completion of demolition activities, IDUs 2-4 will constitute the monitoring sites. The two CDUs will be monitored during both demolition and construction activities.

Table 1. Potential coordinates for station locations.

STATION	LATITUDE	LONGITUDE
IDU-1	21°18'33.99"N	157°52'27.64W
IDU-2	21°18'33.23"N	157°52'27.55W
IDU-3	21°18'32.89"N	157°52'26.04W
IDU-4	21°18'32.41"N	157°52'25.29W
CDU-1	21°18'34.09"N	157°52'27.97W
CDU-2	21°18'32.21"N	157°52'24.98W

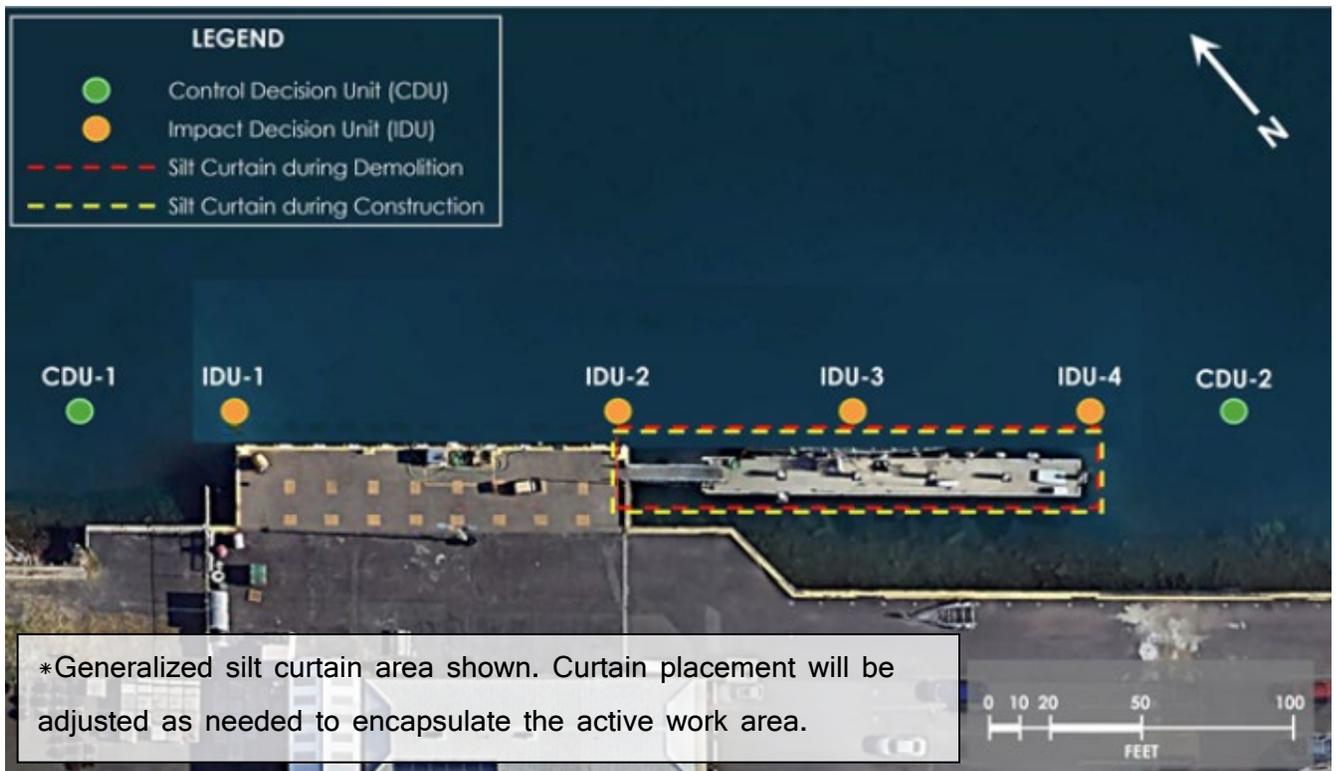


Figure 2. USCG HNL Berth G showing locations of AMAP water monitoring stations.

2. Measured Water Constituents

Water quality monitoring will include analysis of pH, turbidity (reported in nephelometric turbidity units [NTU]), and total suspended solids (mg/L).

3. Monitoring Frequency

In-water work is expected to span 140 calendar days (4.6 months). Prior to the commencement of in-water construction, all six stations will be analyzed for all constituents listed above for a minimum of ten increments over a minimum duration of 14 days in order to develop a baseline set of conditions that will be utilized to evaluate the effects of construction activities on water quality. During the entire period of in-water demolition and construction, each of the six stations will be monitored once per week. Water quality monitoring will only be performed during in-water work activities. Following the completion of construction, three increments of monitoring at the five monitoring sites will be conducted on a weekly basis commencing at least one week after completion of in-water work.

4. Field Monitoring Protocol

All water quality monitoring will be conducted by a qualified individual with at least one year of experience in conducting similar AMAP monitoring plans. All technicians participating in field collections will be professionally trained in all aspects of required monitoring protocols.

At the time of water monitoring, field notes will be recorded that include: time of monitoring, weather and ocean conditions, name of individuals conducting the monitoring, construction activities, and any other in-water activity.

All methods, instruments, and limits of detection for measurement and analysis are shown in Table 2. Water will be monitored from a small boat or floatation device, or from the adjacent pier. Measurements will be collected at three depths in the water column: ~0.5 m below the surface, midway in the water column, and ~1 m above the ocean floor. A YSI ProDSS Digital Water Quality Meter or similar device will be utilized. The ProDSS is a multiparameter field testing instrument consisting of a handheld device, cable assembly, and optional sensor configuration. Data will be reviewed onsite and recorded for reporting.

The second monitoring method involves data collection using an electronic logging instrument that continuously records environmental variables temperature, salinity, dissolved oxygen, pH, and turbidity as it is lowered through the water column. Continuously recorded data provides a vertical profile of water chemistry constituents extending through the entire water column. Collection of discrete samples or continuous profiles provides important information on stratification of the water column, which is not possible with an integrated sample that mixes water from all depths. The geometric means of measurements at each station will provide the data for compliance determinations.

Table 2. YSI ProDSS system specifications showing analytical constituents and sensor type for monitoring of USCG HNL Berth G.

Parameter (units)	Sensor Type	Range	Accuracy	Resolution
Turbidity (FNU, NTU)	Nephelometric - Optical, 90° Scatter	0 to 4000 FNU	0 to 999 (0.3 or ±2% of reading, whichever is	0.1 FNU

Parameter (units)	Sensor Type	Range	Accuracy	Resolution
			greater) 1000 to 4000 (±5% of reading)	
pH (mV, pH units)	Glass Bulb Combination Electrode; Ag/AgCl Reference Gel	0 to 14 units	±0.2 units	0.01 units
Total Suspended Solids (TSS) (mg/L)	Correlated from Turbidity Field Measurements	0 to 30000 mg/L	Calculated from Turbidity and User- Entered Correlation Points	0.01, 0.1 mg/L

C. Monitoring Assessment and Decision System

The methodological approach for implementation of the decision process relating to water quality parameters during the construction activities for modifications of Berth G is presented in detail in the "Project Data Quality Objectives (DQO)." In brief, the "Problem" defined in this process is to determine whether construction activities are affecting waters of the Pacific Ocean fronting USCG HNL above what can be considered natural variability. The primary potential sources of such negative effects are the in-water construction activities consisting of the installation/removal of temporary piles, the installation and potential augering of permanent piles, and the discharge of water resulting from the dewatering and discharge of pile water. The "Decision" is to determine if such differences occur, based on comparison of data collected during construction to pre-construction baseline data and to control station data. A "Decision rule" will be developed if results of construction monitoring fall both outside the limits developed by pre-construction monitoring, and outside the values from control stations. These decisions will involve either additional BMPs that may be implemented or revisions to the construction plan to reduce factors responsible for exceedances. Decision rules will be based on *t*-tests ($p=0.05$) [1-tailed for all constituents except pH, 2-tailed for pH] to determine if during construction monitoring results are significantly higher (or lower) than both pre-construction baseline values

and water quality measurements from control stations.

D. Reporting

Data reporting will be conducted in several formats.

1. Pre-Construction Report. The 10-day pre-construction baseline data will be reported in total in a single report following completion of the monitoring. The report will include all data collected, along with statistical treatment of each constituent in terms of geometric mean values, standard deviation, maxima and minima. These values will also be compared to State Water Quality Standards for Embayments [HR 11-54-6(b)] to determine pre-construction compliance.

2. During Construction Daily Reports. Contractor will independently inspect BMPs daily documenting findings in an official logbook (including non-project related activities that may impact water quality). Photos will be taken by the Contractor daily with date/time stamp and will include a narrative describing photo-documentation. The DOH Clean Water Branch (CWB) will be notified by the Contractor or any modifications of the work plan, BMPs, and/or AMAP.

Water quality data measured weekly in the field (turbidity, pH) will be incorporated into reports prepared by the sampler and submitted to the Contractor within 48 hours following the completion of monitoring. These reports will include results of field testing, along with descriptive information regarding conditions of the construction operation (i.e., date, time, weather, construction activity, appearance of waters, names of sampler). Contractor will attach photo-documentation to weekly report and submit via email to cleanwaterbranch@doh.hawaii.gov in portable document format (pdf) by close of the business day following the monitoring day. As a method of determining compliance of water quality, it will be stated whether turbidity measurements exceed either Water Quality Standard values and if pH falls outside the envelope of acceptability. Non-compliance will be noted if the geometric means of measurements from the IDUs exceed both the envelope of values determined during the 10-day pre-construction period and the control values collected on the same monitoring day. Consideration of the comparative values between the CDUs and IDUs will indicate if construction activities can be the cause of any elevated or anomalous measurements.

3. Post-Construction Report. Following completion of the three post-construction monitoring events, a final report will be prepared including all pre-construction, during construction and post-construction data. These data will be interpreted to determine if any changes detected during the construction phase returned to pre-construction levels.

17. DIRECTIONS TO THE SITE

To reach the project site from the Daniel K. Inouye International Airport, head north on Rodgers Boulevard, and turn right onto Queen Lili'uokalani Freeway. After traveling, turn right onto Sand Island Access Road. Continue onto Sand Island Parkway for 1.2 miles to arrive at USCG Base Honolulu gates. Prior arrangement and proper security clearance is required for access.

18. Nature of Activity (Description of project, include all features)

USCG proposes to modify Berth G by removing an existing floating pier and constructing a fixed, pile-supported pier extending approximately 110 feet (ft.) eastward from the existing southeast end of Berth G. The extended Berth G will have adequate moorage options, equipped with fenders, mooring hardware, and services for the 225-foot Seagoing Buoy Tender (WLB) vessel.

See attached project description for a detailed list of project elements.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The United States Coast Guard (USCG) proposes to extend the existing Berth G at the USCG Base Honolulu in Honolulu Harbor, HI, to accommodate the anticipated return of a second 225-foot Seagoing Buoy Tender (WLB).

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

n/a

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
n/a		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres n/a
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

n/a

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).
 Parcel 150410030000; Sand Island Access Road (Hawaii Department of Land and Natural Resources)

a. Address-

City - Honolulu State - HI Zip - 96819

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
U.S Coast Guard	NEPA FONSI	70Z05019DWEAIS	2023	7/28/2024	
NMFS	ESA LoC	PIRO-2023-02749	10/31/2023	1/12/2024	

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.



Digitally signed by
 ARMSTRONG, NEAL E. 1019861780
 Date: 2025.03.19 15:28:59 -04'00'

19Mar2025

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Brenna Hughes

From: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Sent: Tuesday, September 9, 2025 4:18 PM
To: Brenna Hughes
Subject: RE: USCG Honolulu Berth G Extension

You're correct. I had to think back on this one a bit. It would be the filling of the steel piles with concrete that would be a problem for an LOP since there is potential for that uncured concrete to spill out of the piles, even if it is unlikely. It sounds like you can disregard my previous email and continue with the 401.

Mahalo,
Jeremy

From: Brenna Hughes <BHughes@pndengineers.com>
Sent: Tuesday, September 9, 2025 12:48 PM
To: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Subject: [Non-DoD Source] RE: USCG Honolulu Berth G Extension

Thank you, Jeremy. Based on our previous conversation, I thought the dewatering discharge from the drilling would preclude us from using an LOP? We are preparing to submit a 401 app.

These are the pertinent updates:

Permanent support piles will be 24-inch diameter steel pipe piles with concrete infill. Permanent piles will be lofted into position using the shore-based crane and initial vibratory driving will occur to start the piles. Pile locations with presumed difficult driving conditions (based upon subsurface data determined through geophysical survey) may be pre-driven using an H-pile probe or pre-drilled with an auger. Down-the-hole (DTH) hammer drilling gear will then be utilized if required to advance the pile through the hard coral lenses and cemented sand observed in the geotechnical investigation. Drill cuttings will be contained and dewatered and pre-treated drilling water will be returned to the harbor. Piles will be advanced until embedment depth is reached, or the soils allow for impact driving. Piles will be proofed with impact driving.

Upon successful installation, piles will be cut to grade and dewatered and first-stage concrete fill will be placed above the mudline inside the pile to fill the void. Dewatering will occur prior to concrete filling with all water being returned to the harbor. All wet concrete will be contained within the pile or in containment systems. All permanent piles will be wrapped with HDPE to provide increased corrosion protection in the splash zone of the piles. Anodes will be installed on the piles to provide additional corrosion protection.

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.
(O) 907.561.1011 | (D) 907.646.2773

From: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Sent: Tuesday, September 9, 2025 2:42 PM
To: Brenna Hughes <BHughes@pndengineers.com>
Subject: RE: USCG Honolulu Berth G Extension

POH-2022-00187

Sorry for not responding to your previous email earlier. Letters of permission are covered under the 401 water quality certification blanket, so an individual certification would not be needed. I would also recommend adding a little more clarification for the drill spoils when you submit it. Where would they be disposed and how would runoff be prevented from reentering waters?

Mahalo,
Jeremy

From: Brenna Hughes <BHughes@pndengineers.com>
Sent: Tuesday, September 9, 2025 7:30 AM
To: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Subject: [Non-DoD Source] RE: USCG Honolulu Berth G Extension

Jeremy – Is there a POH number for this project that we can share with HDOH?

Thanks,
Brenna

Brenna Hughes | Lead Environmental Scientist
PND Engineers, Inc.
(O) 907.561.1011 | (D) 907.646.2773

From: Brenna Hughes
Sent: Thursday, August 28, 2025 1:00 PM
To: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Subject: RE: USCG Honolulu Berth G Extension

Jeremy,

In addition to concluding the debris mitigation planning and EFH consultation that you were cc'd on, we have been working on the project 401 certification application. During that process, we have revised our project description to include the dewatering discharge that we discussed previously as well as some additional utility work under the existing dock. Those will be addressed in the 401 application that our sub SEI is preparing to submit on USCG's behalf.

Attached is the revised project description as well as a tracked-changes word document so that you can see the modifications. Please let me know if you have any questions. We'll keep you posted about the 401!

Regards,
Brenna

From: Brenna Hughes
Sent: Friday, April 11, 2025 9:05 AM
To: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Subject: RE: USCG Honolulu Berth G Extension

Thank you, Jeremy. We will work on figuring out whether that is feasible ASAP and revise the application if it is not.

From: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Sent: Thursday, April 10, 2025 18:40
To: Brenna Hughes <BHughes@pndengineers.com>
Subject: RE: USCG Honolulu Berth G Extension

Aloha Brenna,

The dewatering effluent is still considered a discharge of dredged material (CFR 33 Part 323.2(d)(1)(ii)). The problem with discharging that into the harbor is that the Letter of Permission only applies to Section 10 activities and couldn't be used if there is a Section 404 discharge. So, it would not only add the 401 certification onto the permitting, but it would also push the LOP to a standard individual permit. The best option would be to discharge the material and effluent in uplands.

Mahalo,
Jeremy

From: Brenna Hughes <BHughes@pndengineers.com>
Sent: Thursday, April 10, 2025 7:33 AM
To: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Subject: [Non-DoD Source] RE: USCG Honolulu Berth G Extension

Jeremy,

After further discussion of the dewatering process for cuttings from pile drilling, we're not confident that dewatering effluent from that could be discharged to the stormwater system. The drilling cuttings will be processed in a "cyclone" air-water separator system to separate the sediment. Our intent was to discharge the effluent from that process to the storm water system, but barring that possibility, we would likely have to discharge to the harbor.

With that separator treatment, would the dewatering effluent still be considered a 404 discharge?

We anticipate that the 401 process would be a limiting factor in our permit issuance timeline, so we're trying to confirm as early as possible whether that will be required.

Thank you,
Brenna



Brenna Hughes | Lead Environmental Scientist
1506 West 36th Avenue, Anchorage, AK 99503

 (O) 907.561.1011 | (D) 907.646.2773
 bhughes@pndengineers.com
 www.pndengineers.com


From: Morgan, Jeremy K CIV USARMY CEPOH (USA) <Jeremy.K.Morgan@usace.army.mil>
Sent: Thursday, March 27, 2025 17:16

To: Brenna Hughes <BHughes@pndengineers.com>

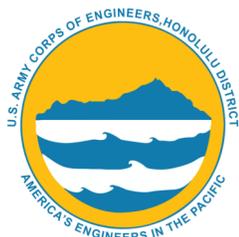
Subject: USCG Honolulu Berth G Extension

Aloha Brenna,

I attached the Blanket Water Quality Certification with the BMPs at the end of it. Letters of Permission are included in the list.

The project would be evaluated under an LOP because the piles would not have the effect of fill and would be regulated as part of the Section 10 structure.

Mahalo,

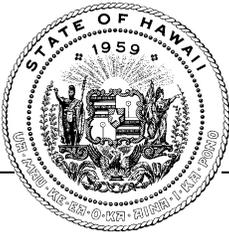


Jeremy Morgan
Biologist/Regulatory Specialist
Regulatory Division
U.S. Army Corps of Engineers | Honolulu District
230 Otake Street, Building 252
Fort Shafter, Hawaii 96858-5440
Phone: 808-551-5496
Jeremy.K.Morgan@usace.army.mil
<https://www.poh.usace.army.mil/Missions/Regulatory/>



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Web: <https://planning.hawaii.gov/>

DTS202404221423ME

Coastal Zone
Management
Program

April 26, 2024

Environmental Review
Program

Mr. Neal E. Armstrong, P.E.
Captain, U.S. Coast Guard Commanding Officer
USCG, Facilities Design & Construction Center
5505 Robin Hood Road, Suite K
Norfolk, VA 23513-2431

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented
Development

Attn: Jessica Parks
Jessica.E.Parks@uscg.mil

Statewide Geographic
Information System

Dear Mr. Armstrong:

Statewide
Sustainability Branch

Subject: Hawai'i Coastal Zone Management Program Federal Consistency Review for Seagoing Buoy Tender Mooring and Structural Pier Upgrades, USCG Base Honolulu, 400 Sand Island Parkway, Honolulu, Island of O'ahu; TMK: (1) 1-5-041:042

The Hawai'i Coastal Zone Management (CZM) Program has completed the federal consistency review received on April 1, 2024 for the proposed mooring and structure pier upgrades at US Coast Guard Base Honolulu (proposed activity). This CZM federal consistency review covers the following project elements, as represented in the CZM federal consistency application and supporting information:

The US Coast Guard proposes mooring and structure pier upgrades at Base Honolulu which include demolition and disposal of the existing floating dock with foundations and piles; construction of a new 110-foot fixed, pile-supported pier; a new floating dock (connected by a small dolphin); and a new small lateral pier extension to fill in a triangular gap between Berth F bulkhead and the new Berth G pier extension. The pile-supported pier extends the existing berth to accommodate a second 225-foot Seagoing Buoy Tender (WLB) and the three existing Fast Response Cutters (FRCs). The floating pier would be used as another berth for the existing FRCs and periods of maintenance and on/offloading that would otherwise require shifting berth positions as Base Honolulu.

The Hawai'i CZM Program published a public notice in the State Environmental Review Program publication, "The Environmental Notice," on April 8, 2024,

with the public review and comment period concluding on April 22, 2024. During the public notice period no public comments or inquiries were received.

We conditionally concur with the consistency determination by the US Coast Guard that the proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the Hawai'i CZM Program. The following conditions shall apply to this consistency concurrence:

1. The proposed activity shall be carried out as represented in the CZM federal consistency application and determination. Any changes to the proposed activity shall be submitted to the Hawai'i CZM Program for review and approval. Changes to the proposed activity may require a full CZM federal consistency review, including publication of a public notice and provision for public review and comment. This condition is necessary to ensure that the proposed action is implemented as reviewed for consistency with the enforceable policies of the Hawai'i CZM Program. Hawai'i Revised Statutes (HRS) Chapter 205A Coastal Zone Management, is the federally approved enforceable policy of the Hawai'i CZM Program that applies to this condition.
2. The proposed activity shall be carried out in compliance with the State of Hawai'i water quality standards and requirements, including the Clean Water Act (CWA) Section 401 Water Quality Certification, as specified in Hawai'i Administrative Rules (HAR) Chapter 11-53 Section 401 Water Quality Certification, HAR Chapter 11-54 Water Quality Standards, and HRS Chapter 342D Water Pollution. This condition is necessary to ensure consistency with Hawai'i CZM Program federally approved enforceable policies, including HRS Chapter 342D Water Pollution, and HAR Chapter 11-54 Water Quality Standards.
3. The proposed activity shall be carried out in compliance with the State of Hawai'i water pollution control requirements, including obtaining a National Pollutant Discharge Elimination System (NPDES) Permit, as specified in HAR Chapter 11-55 Water Pollution Control and HRS Chapter 342D Water Pollution. This condition is necessary to ensure consistency with Hawai'i CZM Program federally approved enforceable policies, including HRS Chapter 342D Water Pollution, and HAR Chapter 11-55 Water Pollution Control.
4. The best management practices (BMPs) that are represented in the Draft Environmental Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades at U.S. Coast Guard Base Honolulu, Hawai'i dated March 2024 to protect marine and terrestrial species during implementation of the proposed activity shall be fully implemented. This condition is necessary to ensure consistency with the Hawai'i CZM Program federally approved enforceable policies HRS Chapter 205A

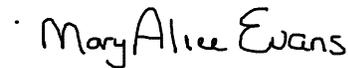
Mr. Neal E. Armstrong, P.E.
April 26, 2024
Page 3

Coastal Zone Management, Section 205A-2 Coastal Ecosystems, HRS 195D
Conservation of Aquatic Life, Wildlife, and Land Plans, and HAR Chapter 124
Indigenous Wildlife, Endangered and Threatened Wildlife, Injurious Wildlife,
Introduced Wild Birds, and Introduced Wildlife.

If the requirements for conditional concurrences specified in 15 CFR § 930.4(a), (1) through (3), are not met, then all parties shall treat this conditional concurrence letter as an objection pursuant to 15 CFR Part 930, subpart C. The U.S. Coast Guard shall immediately notify the Hawai'i CZM Program if the conditions are not acceptable in accordance with 15 CFR § 930.4(a)(2). Otherwise, acceptance of the conditions shall be presumed at the end of the 90-day federal consistency notification period on July 1, 2024.

This CZM consistency conditional concurrence does not represent an endorsement of the proposed activity, nor does it convey approval with any other regulation administered by any state or county agency. Thank you for your cooperation in complying with the Hawai'i CZM Program. If you have any questions, please contact Debra Mendes of our CZM Program at (808) 587-2840 or Debra.L.Mendes@hawaii.gov.

Mahalo,



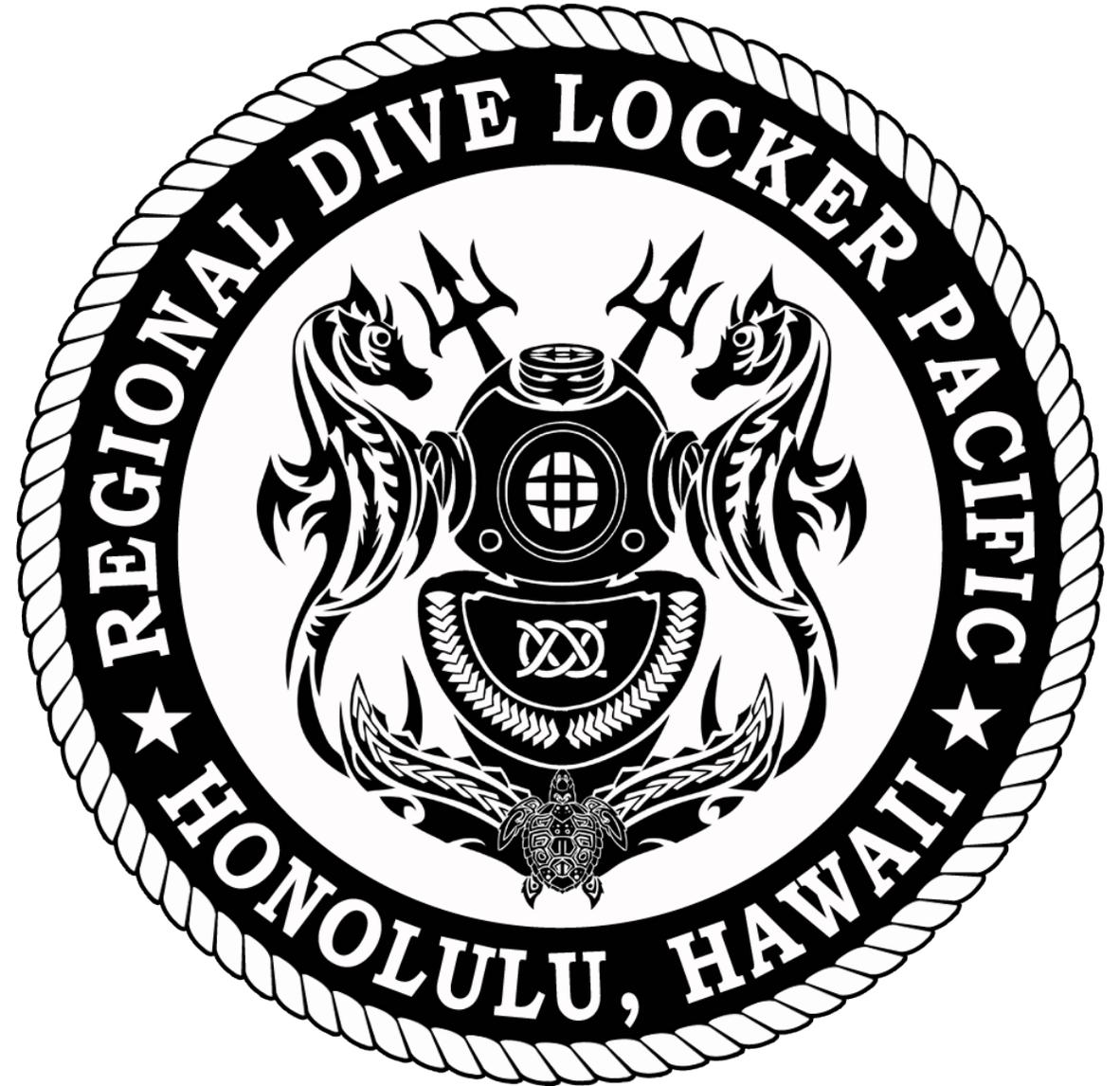
Mary Alice Evans
Director

ec: US. Army Corps of Engineers, Honolulu District Regulatory Office
State Dept of Health, Clean Water Branch
State Dept of Land and Natural Resources, Division of Aquatic Resources
State Dept of Land and Natural Resources, Historic Preservation Office
Nick Meisinger, WSP

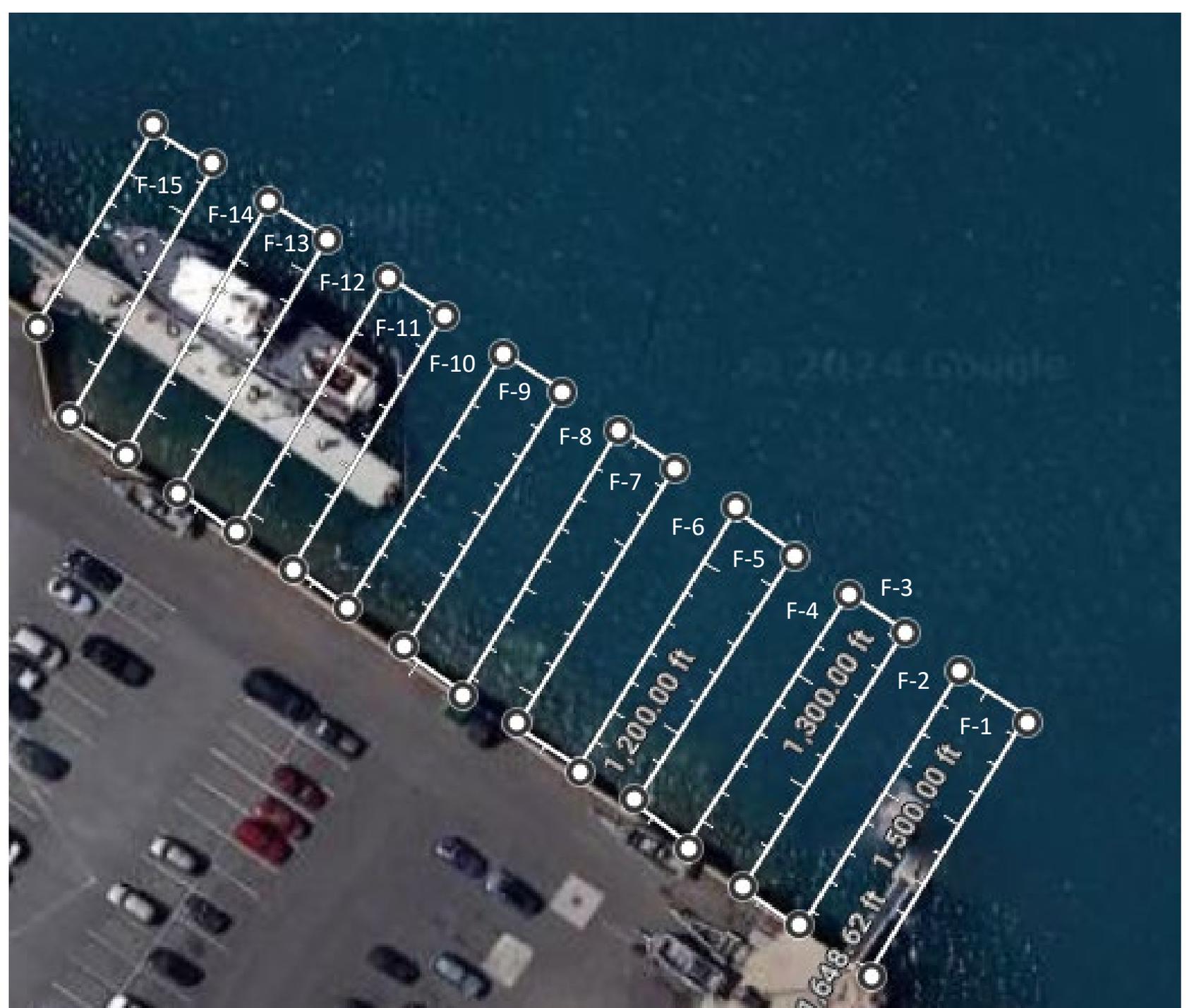
Bottom Survey

Base Honolulu, HI

Regional Dive Locker Pacific



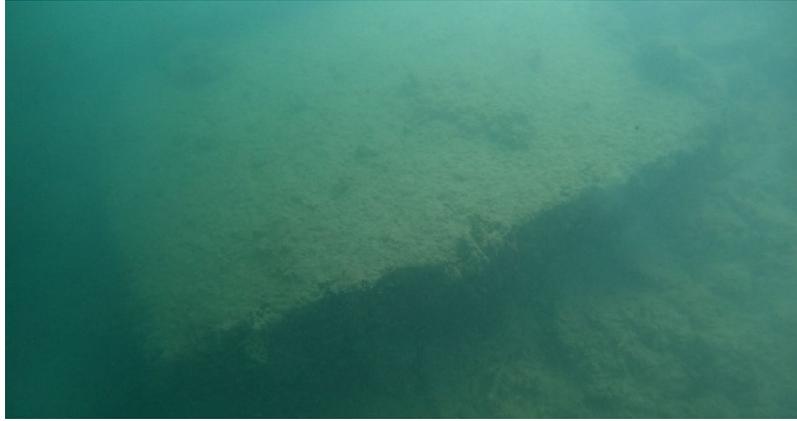
"F" Pier



“F” Pier

- Approximate grid size 60'X20'
- A large amount of the debris located off “F” Pier appeared to be remnants of an old pier.

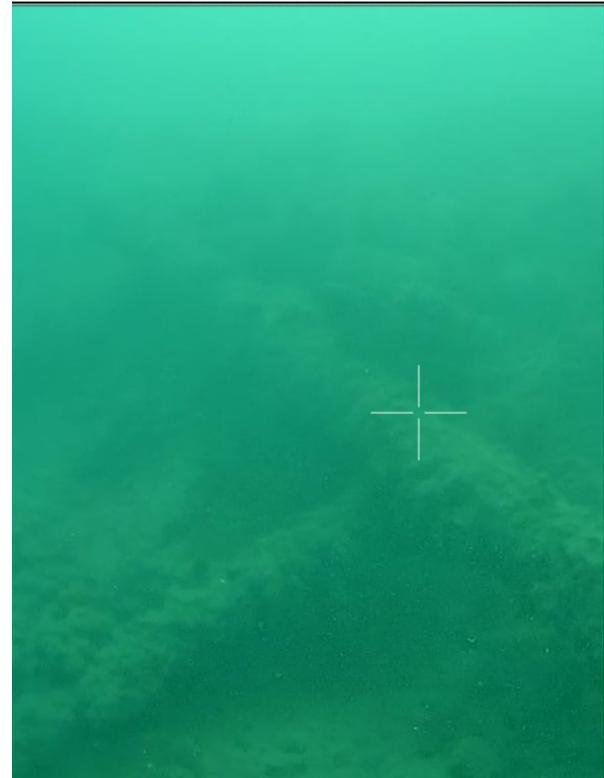




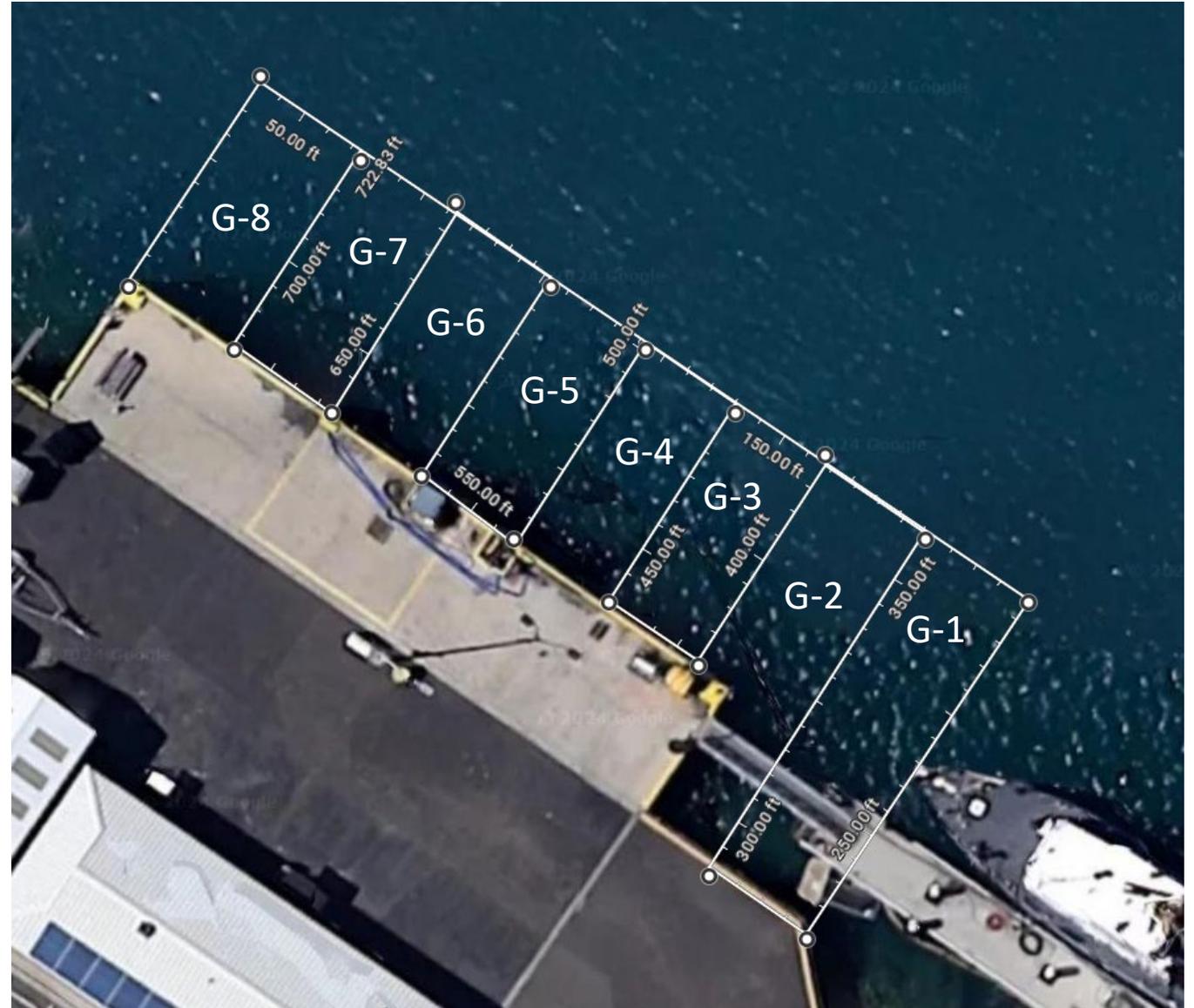
“F” Pier

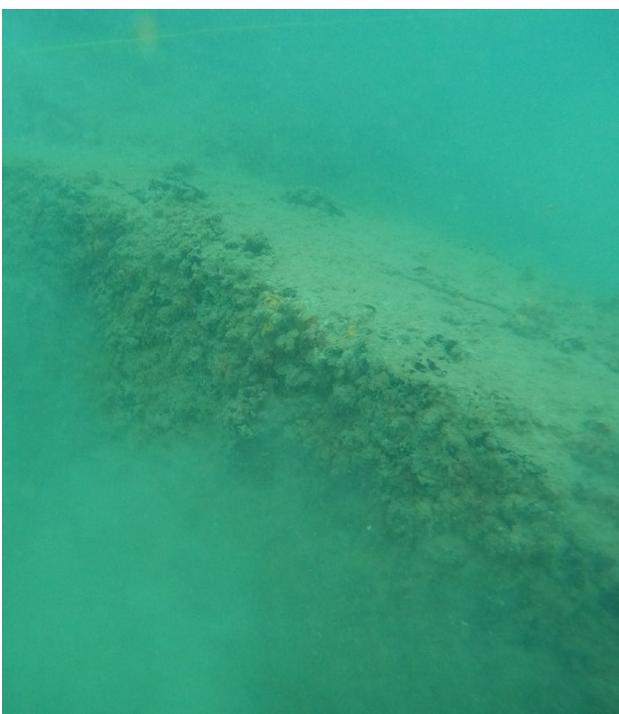
“F” Pier

Vehicle, approx. 40' off floating pier



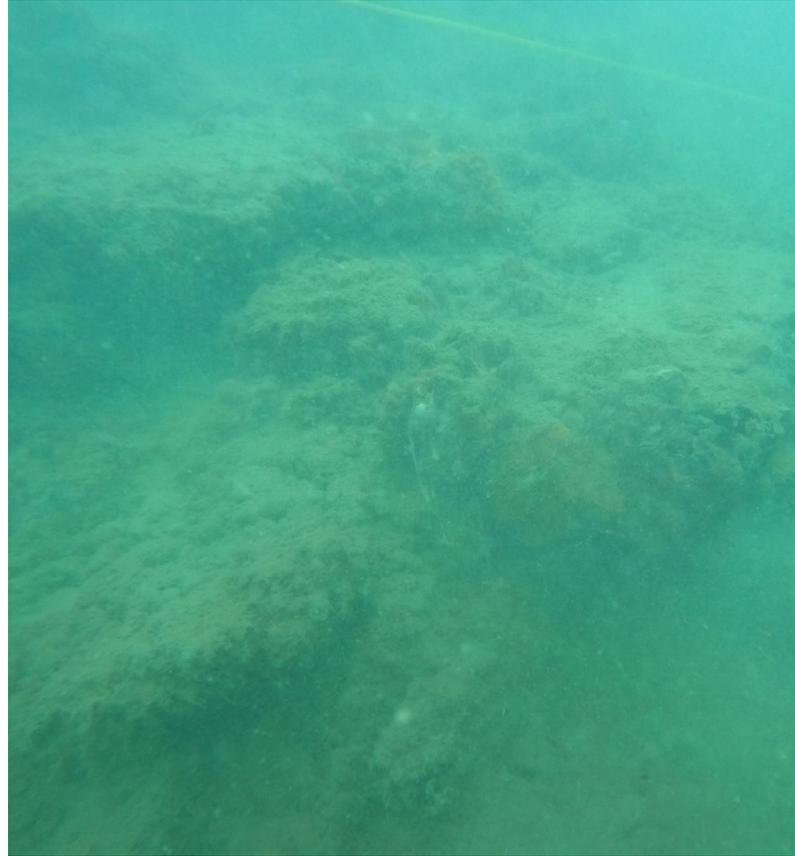
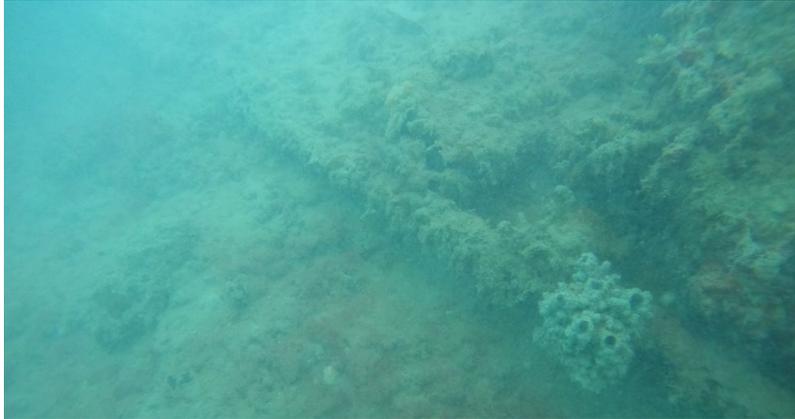
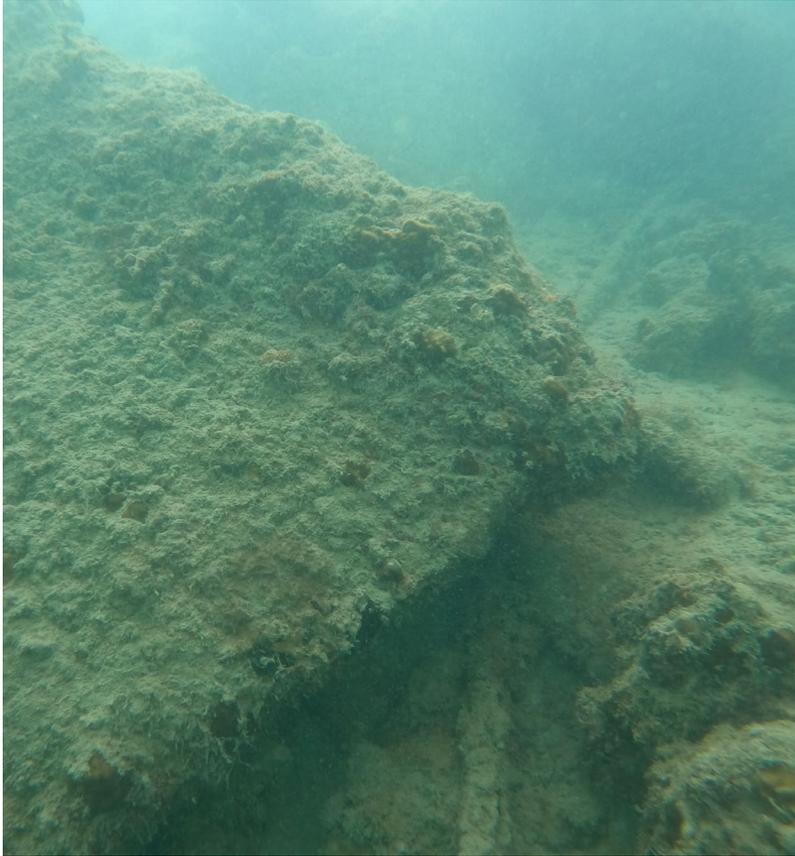
“G” Pier





“G” Pier

- Approximate grid size 40'X20'
- “G” Pier has similar debris that was located near pier “E” and “F”.

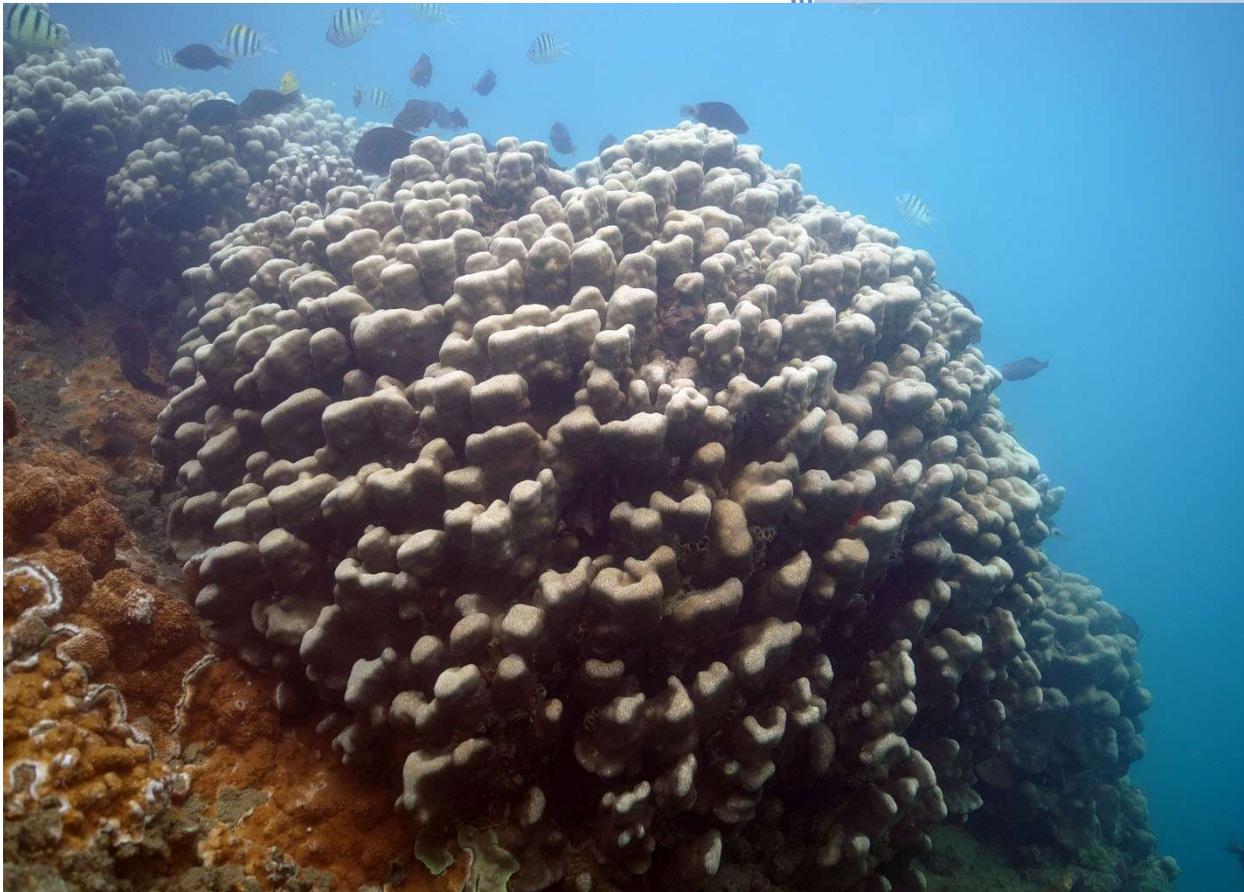


“G” Pier



MARINE RESEARCH CONSULTANTS, INC.

**BIOLOGICAL ASSESSMENT, UNDERWATER BIOLOGICAL SURVEY
FOR WLB MOORING AND STRUCTURAL PIER UPGRADES
USCG BASE HONOLULU, HAWAII**



SUBMITTED TO:

WSP
Environmental and Infrastructure Inc.

PREPARED BY:

Marine Research Consultants, Inc
46-312C Haiku Rd
Kaneohe, HI 96744
808-779-4009

DATE: January 3, 2024

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1 INTRODUCTION

United States Coast Guard (USCG) Base Honolulu is located on Sand Island, a man-made island situated near downtown Honolulu. The Honolulu Base consists of approximately 41 acres of USCG-owned property, including landside and waterside facilities adjacent to Honolulu Harbor. This project site is located primary within the limits of Berths F and G on the western side of the Base near the USCG property line (Figure 1, Figure 2).

The USCG Base Honolulu expects its second assigned 225-ft Seagoing Buoy Tender (WLB) to return to service soon from its Mid-Life Maintenance Availability (MMA). A previous (fiscal year 2016) NSC homeport buildout project modified the previous WLB berth for NSC use and did not provide the upgrades for a new replacement berth location. The current waterfront facilities at USCG Base Honolulu are inadequate to fully support both WLBs and NSCs simultaneously. Periods of maintenance and on/offloading will require shifting berth positions, increasing overall downtime.

Accordingly, the USCG proposes to extend Berth G by constructing a fixed, pile-supported pier extending approximately 110 feet eastward from Berth G to berth the second WLB. This project will allow for adequate mooring of the WLB, including fenders, mooring hardware, and services. Support pile materials have not been determined at this design stage, but could include steel, concrete (precast or auger-cast), or pressure-treated lumber.

The USCG would also demolish and dispose of the existing floating dock that currently supports an 87-foot coastal patrol boat (CPB) currently sited at Berth G. The demolition will include removal of foundations and piles, but not the floating gangway. The gangway may be reused if the construction options below are executed. The USCG assumes all demolished pilings and other wood debris are chemically treated and will require special disposal.

Optionally, the USCG proposes to construct a new precast concrete floating dock that would attach to the east side of the new fixed Pier G via a small gangway, occupying space off the Berth F area. This floating dock would support a 154-ft Fast Response Cutter (FRC) and would also include hardware and utility connections for a shore tie mound. The USCG also proposes to construct a small lateral pier extension to fill the angled gap between the Berth F bulkhead and the new Berth G pier extension. This lateral extension would be a pier-supported bridge section that would allow easier forklift vehicle transit to and from the Berth G area. No dredging, waterfront stabilization, or structural upgrades to any other facilities are proposed under this project.

This project constitutes a Federal action that must comply with Section 7 of the Federal Endangered Species Act (ESA). Section 7 of the ESA requires that actions of Federal agencies should be “not likely to jeopardize the continued existence of any [listed] species or result in the destruction or adverse modification of habitat of such species.” Under ESA Section 7(c), the USCG is required to prepare a Biological Assessment (BA) of the potential influence of its action on species listed in the ESA or on the critical habitat for these species.

This report provides the results of an underwater survey of the benthos and water column in the area of potential effect (APE) for the pile-supported extension of Pier G and its new connected floating dock. The objective of the benthic survey was to inspect water-based structures and submerged lands within the project footprint for corals, seagrass, fish, and other wildlife.

The survey provides a preliminary estimate of abundance and condition of major groups of marine benthic organisms. The survey provided additional details (e.g., abundance of species) of reef-building coral. The survey also provided counts of any observed protected marine species (e.g., turtles, monk seals, other marine mammals) within the survey area.



Figure 1. United States Coast Guard (USCG) Base in Honolulu, Hawaii, (orange outline); and Project Site (green outline)



Figure 2. Project Site with Blue Lines Indicating boundaries of Berths F and G.

2 METHODS

2.1 Field Work Operations

Fieldwork was conducted on September 23, 2022, by two marine biologists working from a small support vessel. Boat and dive support under EM-385 was provided by Sea Engineering, Inc. All in-water work was conducted using SCUBA. At the time of the survey the sky was partly cloudy with intermittent rain squalls, the temperature reached a high of approximately 82 degrees (°) Fahrenheit (F) (28° Celsius [C]). The water temperature was approximately 75°F (24°C).

A second survey was conducted on November 15, 2023 to perform two tasks. The first was to conduct a survey to collect photographs to construct an orthomosaic image of the area between the floating dock and the shoreline in order to quantify the

number of coral colonies in that area. The second task was to perform visual inspections of several areas along the frontage of the USCG Base Honolulu to determine suitability as sites for coral relocation.

2.2 Evaluation of Marine Biotic Community Structure

The primary goal of the marine biotic assessment survey at USCG Wharves F and G was to identify corals and other marine resources that could potentially be impacted by construction of proposed new pier structures. Inspections of the entire area spanning the wharves from the upper waterline down to the sediment surface of the harbor channel floor were carried out by divers swimming repeated transects through the length of the survey area. These survey swims served to identify major transitions between substrate types and benthic communities. All coral species were documented photographically, and abundance estimates were recorded.

To provide a representative image of the coral community with the highest colony density from near the face of the wharf to the harbor floor, an orthomosaic image was constructed. An orthomosaic image is the output from a process where a number of overlapping photos are stitched together to create a high resolution, distortion-free representation of a section of benthic surface. To create an orthomosaic the area of interest was demarcated by setting 30-cm metal scale bars marked in 10-cm increments at the corners of a rectangular area with dimensions of approximately 3 m x 6 m. The demarcated area was photographically recorded by a diver using a camera fitted with a 24-millimeter (mm) lens in an underwater housing. The diver collected approximately 550 photographs swimming parallel, overlapping, horizontal lines in a boustrophedonic “lawn mower” pattern.

Individual photographs were initially processed using Adobe Bridge and Adobe Photoshop software. Agisoft Metashape software was utilized to produce a seamless high-resolution orthomosaic scaled image of the survey site. The orthomosaic was then color-corrected and adjusted in Photoshop.

Biologists also recorded all fish species observed during the survey at Berths F and G. The presence of introduced and invasive species as well as other species of interest were documented photographically. Biologists also determined if seagrass was present. All federally protected marine species (i.e., turtles, seals, cetaceans) were also noted.

3 RESULTS

3.1 Physical Structure

The physical structure of the submerged areas of Berths F and G consists of the vertical faces of the wharves below the waterline that terminate in a shallow, nearly flat rock ledge. The gently sloping ledge extends several meters offshore, terminating in a distinct edge where the slope angle of the hard bottom increases sharply. The sloping hard bottom extends to the soft sediment harbor floor at a depth of approximately 20-25 ft.

At the southeastern end of Berth F, the supports for the offshore end of a gangway consists of concrete block and sunken piles. The pier structure of Berth G is supported by concrete piles anchored in the harbor floor. The under edge of the pier forming Berth G also extends into the water forming a submerged concrete face.

3.2 Coral Community Structure

a. Berth F

The submerged ledge and slope of Berth F provides an ideal setting for corals by providing solid substratum, apparently good water quality and circulation, adequate light, and most importantly, protection from destructive wave forces. As a result, the area contains a diverse and abundant coral community consisting of a multitude of species and growth forms. Dense coral occurs from just northwest of the gangway at the southern end of Berth F to the southern end of the pier structure at Berth G.

The coral community fronting Berth F is divided into distinct zones along the platform-shelf:

Vertical Wall: Most of the vertical concrete wall comprising the shoreline structure of Berth F is covered with a living carpet consisting of encrusting hard corals (primarily several encrusting growth form variants of *Porites* spp.) and the colonial anthozoans “soft corals” (*Zoanthus* spp. and *Palythoa* spp.) (Figure 3).

Shelf: At the base of the vertical wall, the hard platform consists of a narrow, shallow (less than 3 feet) reef shelf. Over most of the length of the Berth F, the shelf is nearly completely colonized by corals. The species assemblage is dominated by several forms of *Porites* spp. particularly a species tentatively identified as “Harbor *Porites*.” This growth form of *Porites* occurs either as knobby encrustations (Figure 4) or flat purple veneers (Figure 5, Figure 6). Presently, this growth and color form has been identified primarily in Honolulu Harbor.

Shelf Break and Slope: The outer edge of the shelf is defined by a sharp break to a slope of approximately 45 degrees. Coral cover at the shelf break and slope consists of a variety of species including large encrustations of *Montipora patula* and *M.*

capitata (Figure 7), as well as branching hemispherical colonies of *Pocillopora meandrina* (Figure 8). Most notable are numerous large hemispherical colonies of *Porites lobata* and what appears to be either short-branched *Porites compressa* or *Porites duerdeni*. Many of these colonies were 3-4 feet in diameter, indicating that they have been growing undisturbed for at least several decades (Figure 9, Figure 10, Figure 11). Also of note was an unusual growth form of *Porites lobata* with pointed conical extensions (Figure 12). Another indication of the physical stability of the community is the common occurrence of overgrowth of species of *Porites* by *Montipora* (Figure 13). Such interspecific competition is rarely seen on physically controlled reefs where corals generally do not compete for space to the degree seen off Berth F. Other coral species that were observed on the shelf break and slope were *Leptastrea purpurea* and *Pavona varians* which occur as small flat encrustations (Figure 14).

b. Berth G

The benthic community off Berth G differs considerably from Berth F. The concrete structures of the gangway at Berth F and the pier at Berth G shade the nearshore area, which likely restricts the growth of corals. The pilings and submerged pier faces were largely devoid of corals (Figure 15, Figure 16). Corals that do occur were isolated colonies of *P. meandrina* and encrustations of *P. lobata*, *Montipora* spp. and *L. purpurea*.

The reef slope below the piers fronting Berth G consist primarily of bare sediment covered rock surfaces (Figure 17, Figure 18). The extensive coral structures that occur off Berth F do not occur off Berth G.

c. Inshore Area Behind Floating Dock

The area shown in Figure 19 has been identified as site where fixed pier infill may occur. Analyses of a orthomosaic of the area provided the number of corals of each species within five size classes ranging from 0-10 cm to >160 cm (Figure 20). A total 310 corals were counted within the five sectors, with the most (77) occurring in Sections D and E (Table 1). The most common species is *Montipora patula* (79) followed by *Porites lobata* (64) and *Montipora capitata* (63). The least common coral is *Pavona varians* with 5 colonies.

In terms of size, the class with the highest number of individuals was 0<10 cm with 96 colonies. Number of colonies per size class decreased with size, with the exception of 10<20 (79 colonies) and 20<40 (80 colonies). No corals greater than 160 cm in diameter were present. It is important to note that the corals counted were all discrete colonies. The flat encrustations of "Harbor *Porites*" were not included in the colony counts, as they do not form discrete colonies. However, while not counted as discrete

colonies, the encrustations of Harbor *Porites* cover virtually all the hard surfaces of the survey area not occupied by other corals.

Table 1. Size frequency binning of corals within five sections of nearshore area inside floating dock at USCG Base Honolulu. See Figure 19 for location of area.

SPECIES	SIZE CLASS (cm)	SHORELINE SECTION					TOTAL
		A	B	C	D	E	
<i>Leptastrea bewickensis</i>	20 - 40	-	-	-	-	2	2
	TOTAL	-	-	-	-	2	2
<i>Leptastrea purpurea</i>	0 - 10	2	4	3	7	8	24
	TOTAL	2	4	3	7	8	24
<i>Montipora capitata</i>	0 - 10	2	4	2	1	2	11
	10 - 20	5	2	1	3	5	16
	20 - 40	4	1	1	3	7	16
	40 - 80	3	2		4	5	14
	80 - 160				1	4	5
	>160				1	-	1
TOTAL	14	9	4	13	23	63	
<i>Montipora patula</i>	0 - 10	1	4	2	2	5	14
	10 - 20	2	4	-	7	7	20
	20 - 40	3	5	7	4	12	31
	40 - 80	1	3	3	2	1	10
	80 - 160			3	1	-	4
TOTAL	7	16	15	16	25	79	
<i>Pavona varians</i>	0 - 10					2	2
	10 - 20		1	1		-	2
	20 - 40					1	1
	TOTAL	-	1	1	-	3	5
<i>Pocillopora damicornis</i>	0 - 10	3	2	1	4	3	13
	10 - 20	1	-	-	1	3	5
	TOTAL	4	2	1	5	6	18
<i>Pocillopora meandrina</i>	0 - 10		4	2		-	6
	10 - 20		1	2		1	4
	20 - 40			1		-	1
	TOTAL	-	5	5	-	1	11
<i>Porites lobata</i>	0 - 10				16	1	17
	10 - 20			2	9	2	13
	20 - 40	4	1	5	2	5	17
	40 - 80		2	6	6	1	15
	80 - 160			1	1	-	2
TOTAL	4	3	14	34	9	64	
<i>Protopalythoa</i> sp.	0 - 10		7	2		-	9
	10 - 20	1	6	12		-	19
	20 - 40		1	10	1	-	12
	40 - 80			1	1	-	2
	80 - 160			2		-	2
TOTAL	1	14	27	2	-	44	
ALL CORAL	0 - 10	8	25	12	30	21	96
	10 - 20	9	14	18	20	18	79
	20 - 40	11	8	24	10	27	80
	40 - 80	4	7	10	13	7	41
	80 - 160	-	-	6	3	4	13
	>160	-	-	-	1	-	-
TOTAL	32	54	70	77	77	310	

3.3 Other Invertebrates

The most abundant non-coral invertebrates throughout the Berth F/G area were a variety of sea urchins. These included *Tripneustes gratilla*, *Echinometra mathaei*, *Diadema paucispinum* and *Echinothrix diadema* (Figure 20). While there were numerous dead bivalve shells on the concrete pier structures, there few live mollusks

were observed. There were, however, a variety of fouling organisms including sponges, hydroids, and tunicates on the concrete surfaces (Figure 22, Figure 16). It is of note that virtually no marine algae were observed in the survey area. Several endemic Hawaiian pearl oysters (*Pinctada galtsoffi*) were observed on the piles as well as on the channel floor.

3.4 Fish

Fish were common throughout the survey area (Figure 23). A total of 25 species of fish were observed (Table 2) with the most abundance being Chaetodonts (butterflyfish), Acanthurids (surgeonfish), and Labrids (wrasses). No fish representing significant commercial resources were observed.

3.5 Federally Protected Species

No federally protected species (marine mammals, turtles) were observed during the survey. While it would be unusual for marine mammals to occupy the area, it is likely that green turtles (*Chelonia mydas*) may transit through the region. No seagrass was observed anywhere in the survey area.

3.6 Debris

Abundant man-made debris was observed at the base of the slope throughout the survey area, although the highest concentration of material occurred off Berth G. Debris consisted of pipes, concrete beams, metal objects, and tarps (Figure 24, Figure 25).

Table 2. Fish Detected During Marine Biotic Assessment Surveys at USCG

Acanthuridae (Surgeonfishes)
<i>Acanthurus blochii</i>
<i>A. nigrofuscus</i>
<i>A. triostegus</i>
<i>A. xanthopterus</i>
<i>Naso lituratus</i>
<i>Zebrasoma flavescens</i>
Apogonidae (Cardinalfishes)
<i>Pristiapogon kallopterus</i>
Balistidae (Triggerfishes)
<i>Rhinecanthus rectangulus</i>
Chaetodontidae (Butterflyfishes)
<i>Chaetodon auriga</i>
<i>C. lunula</i>
<i>C. lunulatus</i>
<i>Forcipiger flavissimus</i>
Holocentridae (Squirrelfishes and Soldierfishes)
<i>Neoniphon sammara</i>
Labridae (Wrasses)
<i>Stethojulis balteata</i>
<i>Thalassoma duperrey</i>
Lutjanidae (Snapper)
<i>Lutjanus fulvus</i>
Mullidae (Goatfishes)
<i>Parupeneus multifasciatus</i>
Ostraciidae (Boxfishes)
<i>Ostracion meleagris</i>
Pomocentridae (Damsel fishes)
<i>Abudefduf abdominalis</i>
<i>A. vaigiensis</i>
<i>Dascyllus albisella</i>
Scaridae (Parrotfishes)
<i>Chlorurus spilurus</i>
Tetraodontidae (Pufferfishes)
<i>Canthigaster jactator</i>
Zanclidae (Moorish Idol)
<i>Zanclus cornutus</i>
Eels
Eel

4 DISCUSSION and RECOMMENDATIONS

Results of the present assessment reveal that most of the solid surfaces of the face of Berth F are colonized by a variety of species of corals occurring in a variety of growth forms. The suitable physical and chemical habitat and lack of physical disturbance from waves or other factors has resulted in a region that includes numerous large coral colonies that have grown without interruption for at least several decades. The extensive coral community does not extend to the benthic surfaces off Berth G, primarily owing to the shading from pier and dock structures.

One of the goals of the assessment is to provide an estimate of the number of coral colonies that might have to be transplanted from the present location to another site in order to avoid direct or indirect damage from the proposed construction at Berths F and G. A relocation site would ideally have the same physical attributes as the donor site and already contain corals of the same species as the prospective transplants.

In the case of Berth F, providing an estimate of the discrete number of coral colonies cannot be precise as many (or most) of the corals occur in growth forms that do not form discrete colonies. Rather, they occur as either continuous interconnected mats of branching corals, or flat encrustations that grow over the rocky substratum. Therefore, while not precise, the estimate of corals that would need to be removed from the face of Berth F was determined by counting what are judged as discrete colonies larger than 25 cm in length within the orthomosaic image that depicted a vertical section of the shelf/slope fronting Berth F (Figure 24). The image covers an area of approximately 15 m². Approximately 70 coral “colonies” were present within this area. The length of the face of Berth F is approximately 60 m and the width of the reef slope/shelf is approximately 5 m for a total reef area of about 300 m². Based on these parameters, there is on the order of 1,400 coral colonies larger than 25 cm in diameter fronting Berth F. In addition, while not identifiable as discrete colonies, there is about 180 m² of flat encrusting coral on the submerged vertical face of Berth F and adjacent shelf.

While possible, removing these corals from their present location would require a significant effort, and would undoubtedly result in a net loss of corals owing to breakage and injury, particularly of the encrusting species, during the translocation.

Far fewer corals were documented to colonize the benthic surface off Berth G. Based on survey notes and observations, it is estimated that there was an average of about one colony per m². Most of these corals consist of encrusting forms (primarily *Montipora* spp.). The submerged slope area beyond the pier at Berth G is estimated to cover approximately 250 m². These estimates indicate that there are on the order of 250 corals fronting Berth G. However, it is important to note that these corals occur primarily as encrusting growth forms and not the large lobate and branching colonies that are present off Berth F.

As stated in the Introduction, the proposed plan for USCG is to extend Berth G by constructing a fixed, pile-supported pier extending approximately 110 feet eastward from Berth G. The USCG would also demolish and dispose of the existing floating dock at Berth G. The demolition will include removal of foundations and piles. Optionally, the USCG proposes to construct a new precast concrete floating dock that would attach to the east side of the new fixed Pier G via a small gangway, occupying space off the Berth F area.

Results of the benthic survey reveal a diverse coral community containing numerous large colonies and expansive encrustations off Berth F. However, the same community does not exist off Berth G, where bottom composition is primarily barren rock. Thus, if the proposed improvements at Berth G extent 110 feet off Berth G, in an area that is over the channel floor, it appears that environmental impacts to the marine benthic communities could be minimized or eliminated. In addition, if the option of placing a new concrete floating dock to the east side of the new fixed Pier at Berth G extends offshore to the extent that it will not affect the nearshore area fronting Berth F, there could be minimal or no effects to the existing coral community.

An area between the floating dock and the shoreline has been identified as a potential location for infill which would eliminate the marine setting. Quantification of the number of corals within five sectors delineated within this area revealed a total of about 300 colonies that could potentially be translocated. Inspection of the area revealed that in addition to these discrete coral colonies, most of the exposed solid substrate is covered with a unique species of *Porites*, termed "Harbor *Porites*." Owing to the flat encrusting growth form, this species could not realistically be removed from the substrate as such removal would result in chips of coral rather than colonies.

In addition, visual inspections were conducted at three shoreline sites within the boundaries of USCG Base Honolulu for the purpose of determining suitability as translocation recipient areas. At all three areas, most of the solid substrate that was not colonized by other reef corals was covered with a veneer of Harbor *Porites*. As a result, there was little bare hard substrate to serve as recipient sites for translocated corals. In order for any of these areas to provide adequate surface area for translocation, the veneer of Harbor *Porites* would have to be removed. If this species is considered "alien" or "invasive" in the future, removal could be considered an environmental benefit.

In addition to minimizing any direct impacts to the existing coral communities during construction of the proposed pier structures, the most important consideration during the planning process should be an analysis of the shading of the coral-rich area that may occur once the berthing improvements are completed. Care should be taken

to ensure that the new berths themselves, as well as ships moored to them, do not create shaded areas off Berth F. Such considerations should also include Best Management Practices during construction activities to prevent indirect impacts to the coral community from increased sedimentation.

Should the new construction incorporate factors to preserve the existing benthic community structure, there is no reason to expect any impacts to existing fish communities or federally protected species.



Figure 3. Submerged vertical face of Berth F showing near complete coverage with hard and soft corals. Water depth is 0-1 ft.



Figure 4. Shallow nearshore shelf fronting Berth F. Hard bottom is completely covered with encrusting coral, primarily "Harbor *Porites*."

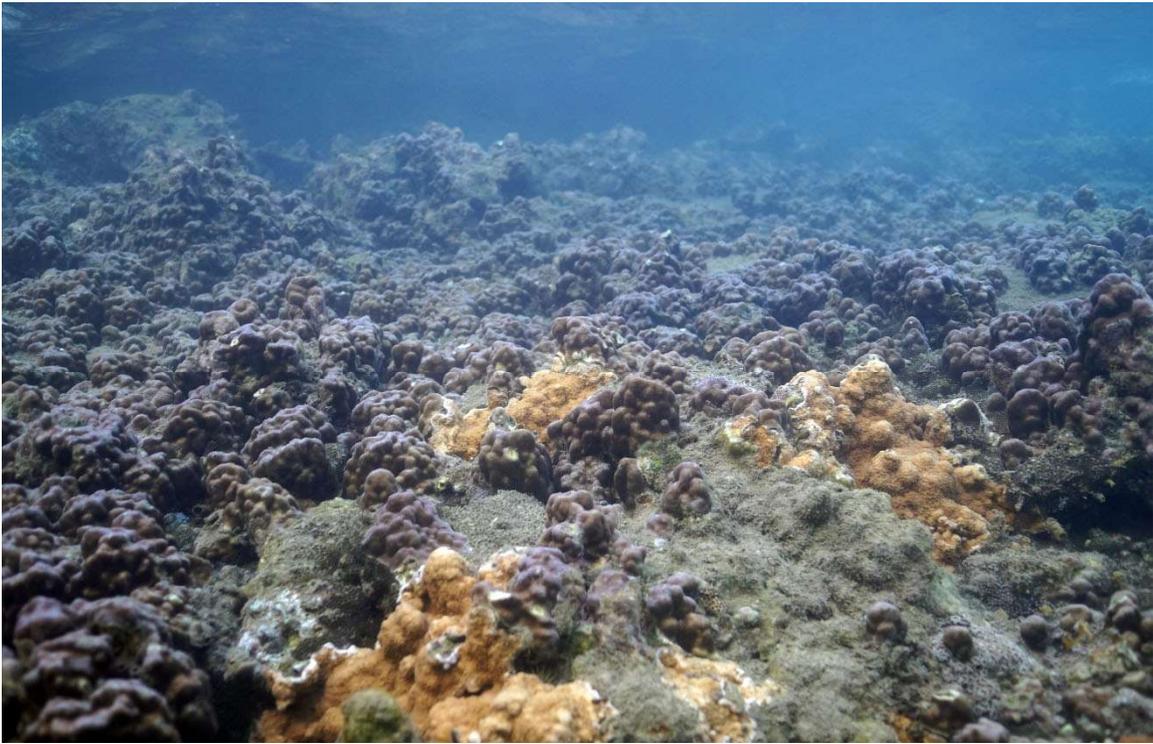


Figure 5. Shallow nearshore shelf fronting Berth F. Hard bottom is colonized by encrusting corals Harbor *Porites* (purple) and *Montipora* spp. (tan).

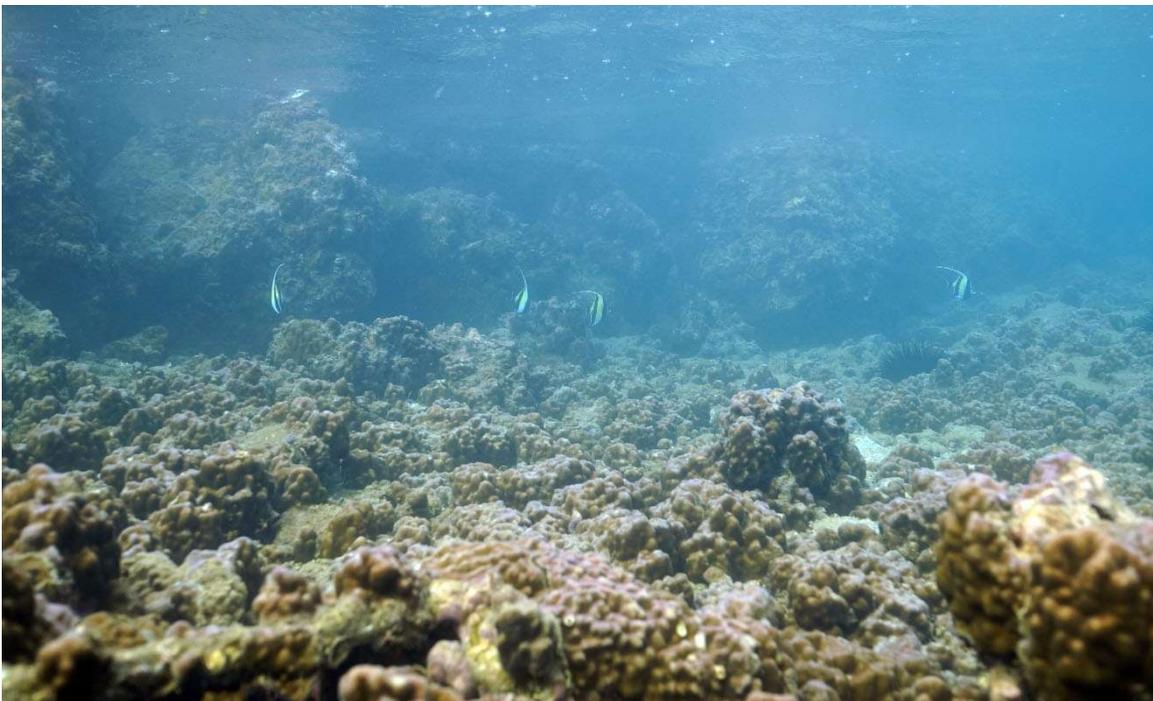


Figure 6. View of shallow shelf fronting Berth F looking landward from edge of shelf break. Hard bottom is colonized by encrusting corals Harbor *Porites* (purple) and *Pocillopora* spp. (brown).



Figure 7. Large encrusting colony of *Montipora capitata* on reef slope fronting Berth F. Colony is approximately 2 meters in diameter.



Figure 8. Colony of *Pocillopora* sp. growing on edge of reef shelf fronting Berth F.



Figure 9. Diver inspecting large hemispherical colonies of *Porites* spp. and *Montipora* spp. at top of shelf break fronting Berth F.



Figure 10. Colony of *Porites* sp. approximately 1.5 meters in diameter on reef slope fronting Berth F.



Figure 11. Colony of *Porites lobata* approximately 2 meters in diameter on reef slope off Berth F.



Figure 12. Unusual pointed conical branching growth form of *Porites lobata*.



Figure 13. Interspecific competition of corals with *Montipora capitata* overgrowing *Porites compressa*.



Figure 14. Mat of encrusting *Pavona varians* growing on wall of Berth F.



Figure 15. Base of piling supporting pier structure of Berth G.



Figure 16. Submerged face of pier at Berth G. Solitary coral is *Pocillopora* sp.



Figure 17. Reef slope fronting Berth G.

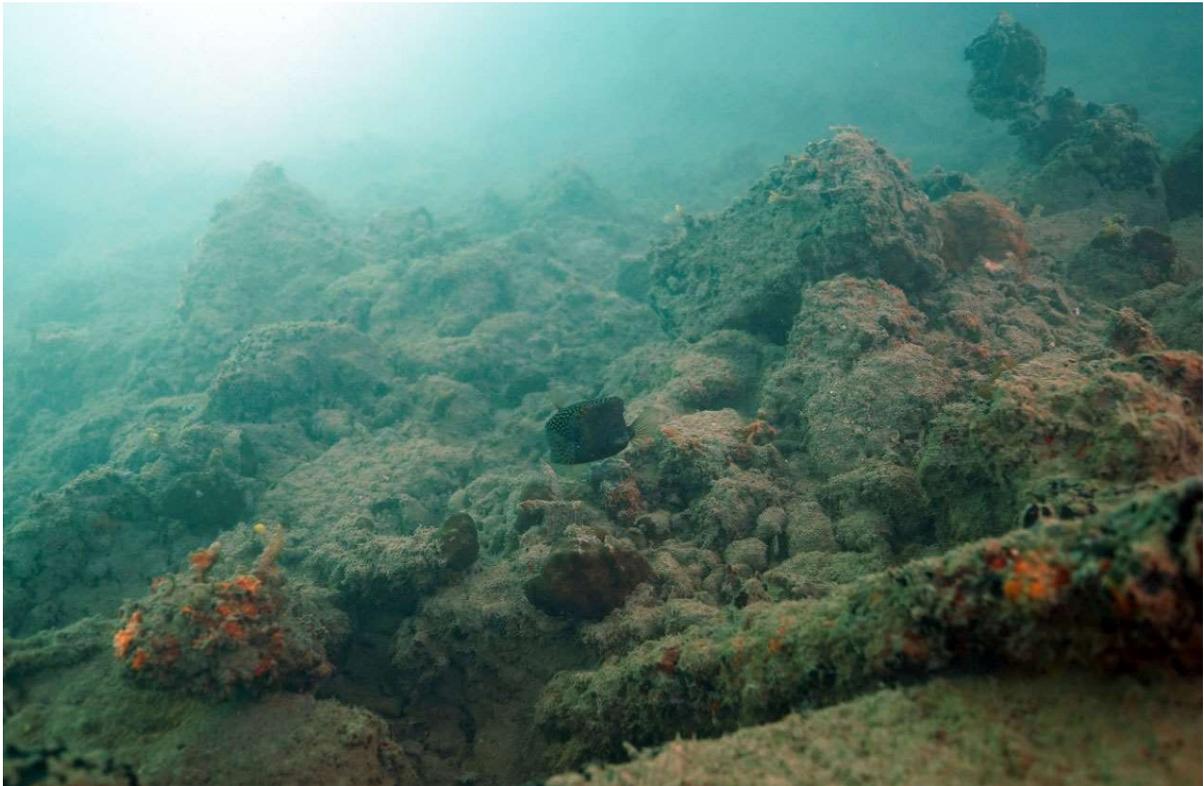


Figure 18. Reef slope fronting Berth G.

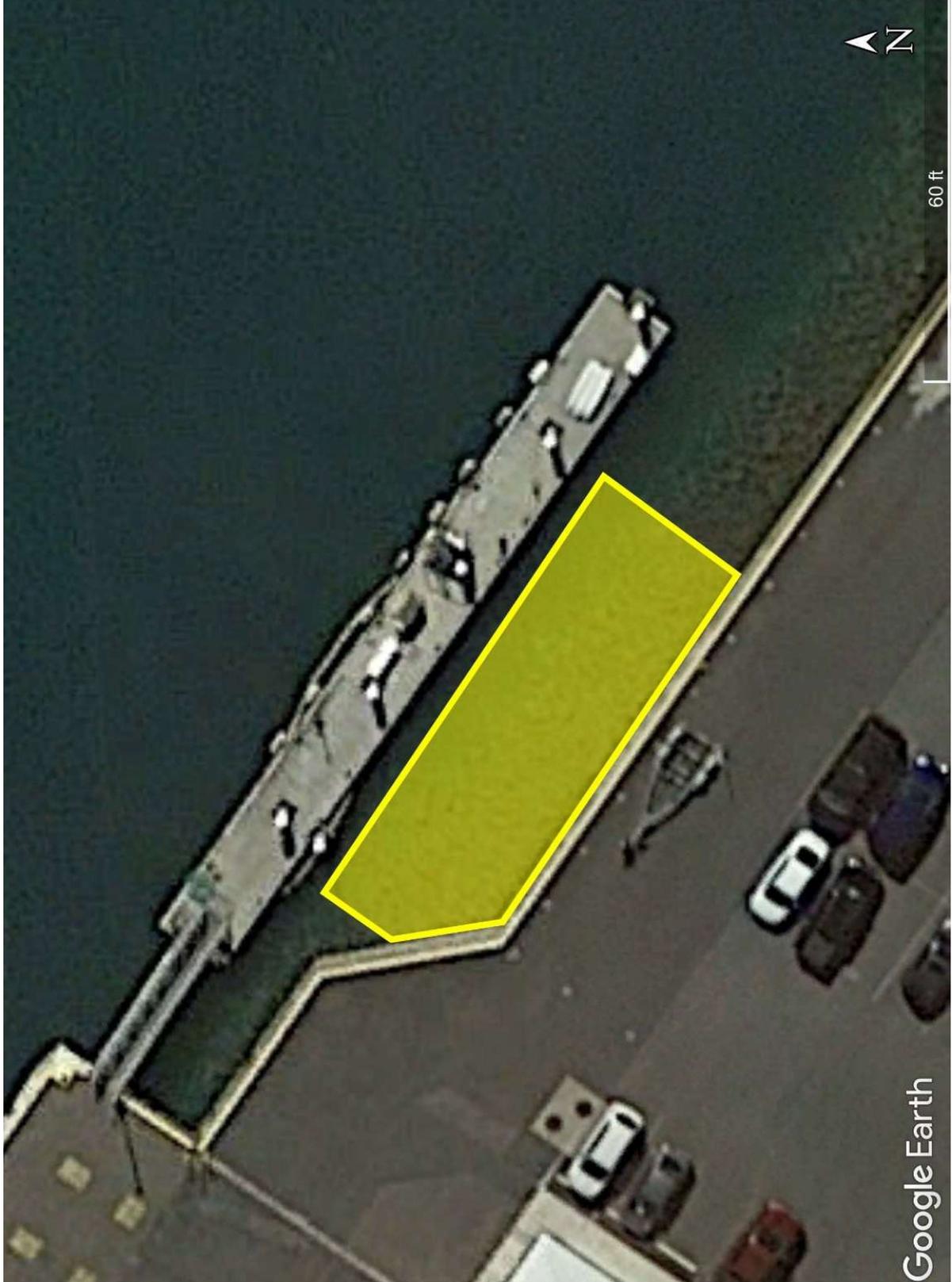


Figure 19. Yellow Area shows location of orthomosaic in Figure 20.

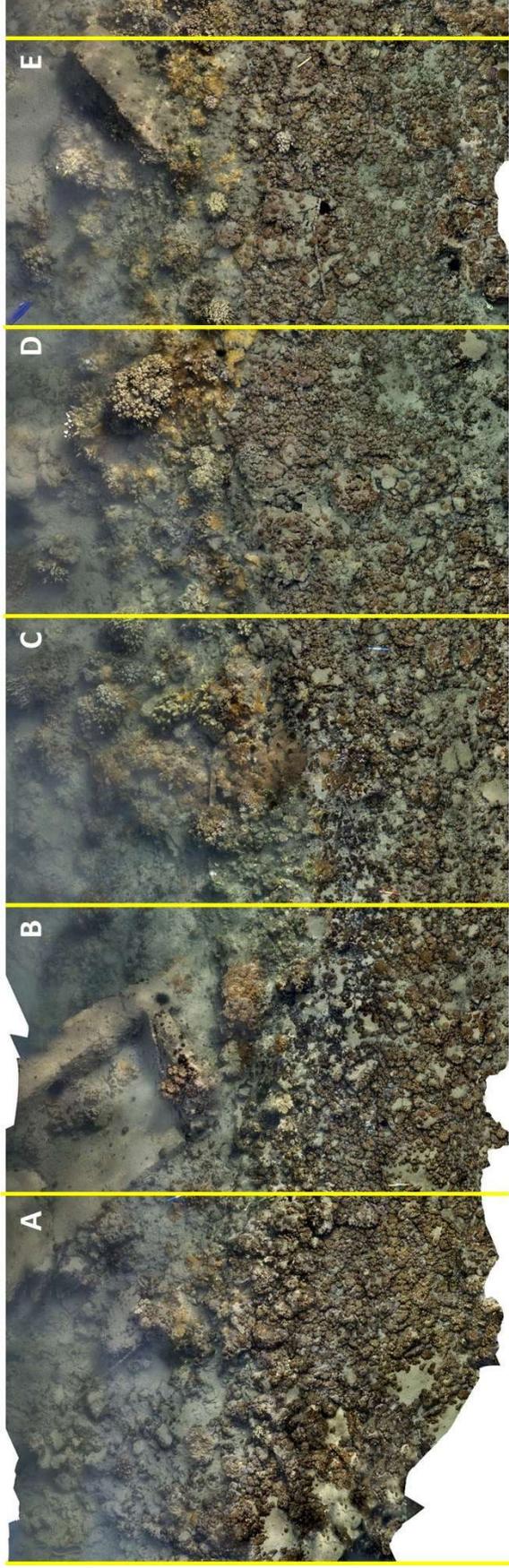


Figure 20. Orthomosaic of potential area of infill shown in Figure 19.



Figure 21. Sea urchin *Diadema paucispinum* on reef shelf fronting Berth F.



Figure 22. Mat of *Zoanthus* sp. overgrowing *Porites lobata* fronting Berth F.



Figure 23. Mixed species assemblage of reef fish on shelf edge fronting Berth F.

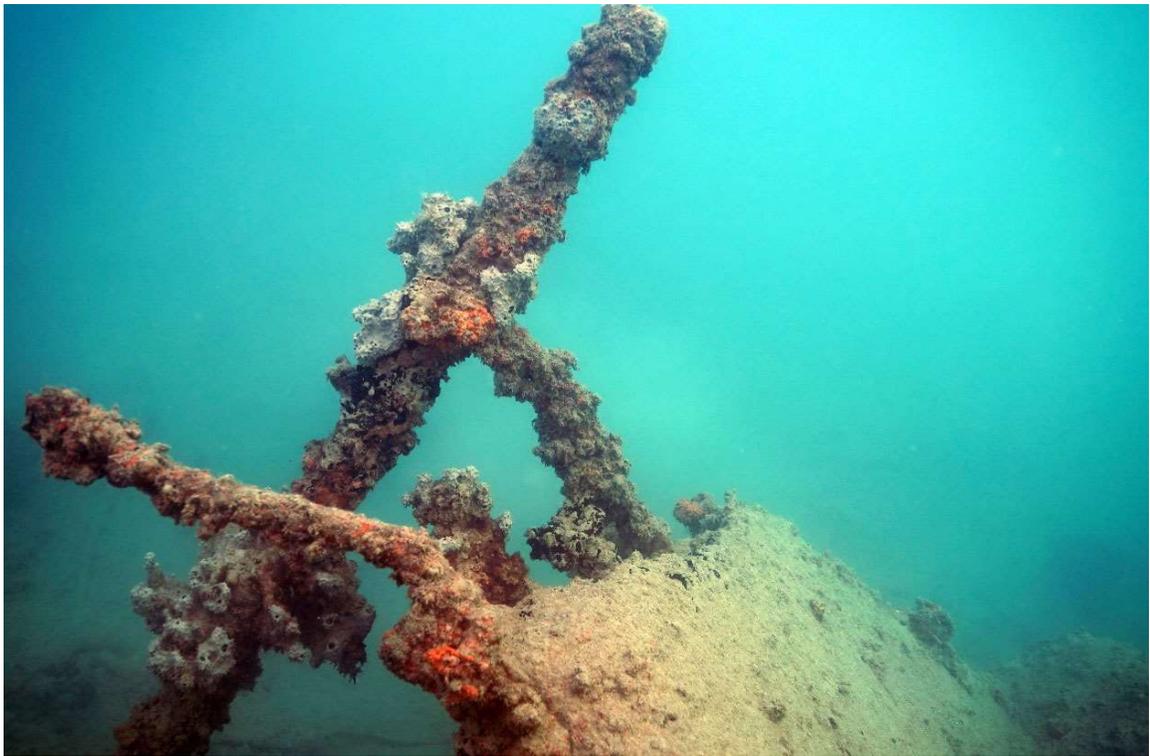


Figure 24. Metal debris on channel floor fronting Berth G.

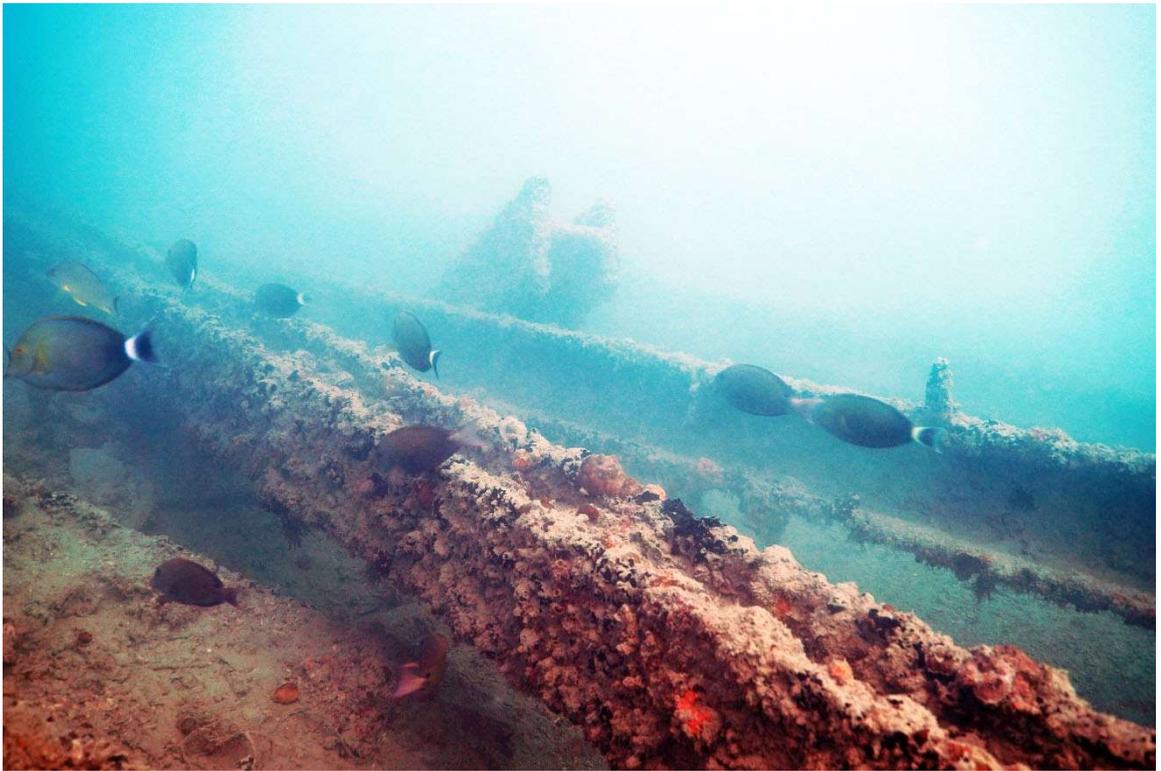


Figure 25. Metal debris on channel floor fronting Berth G.

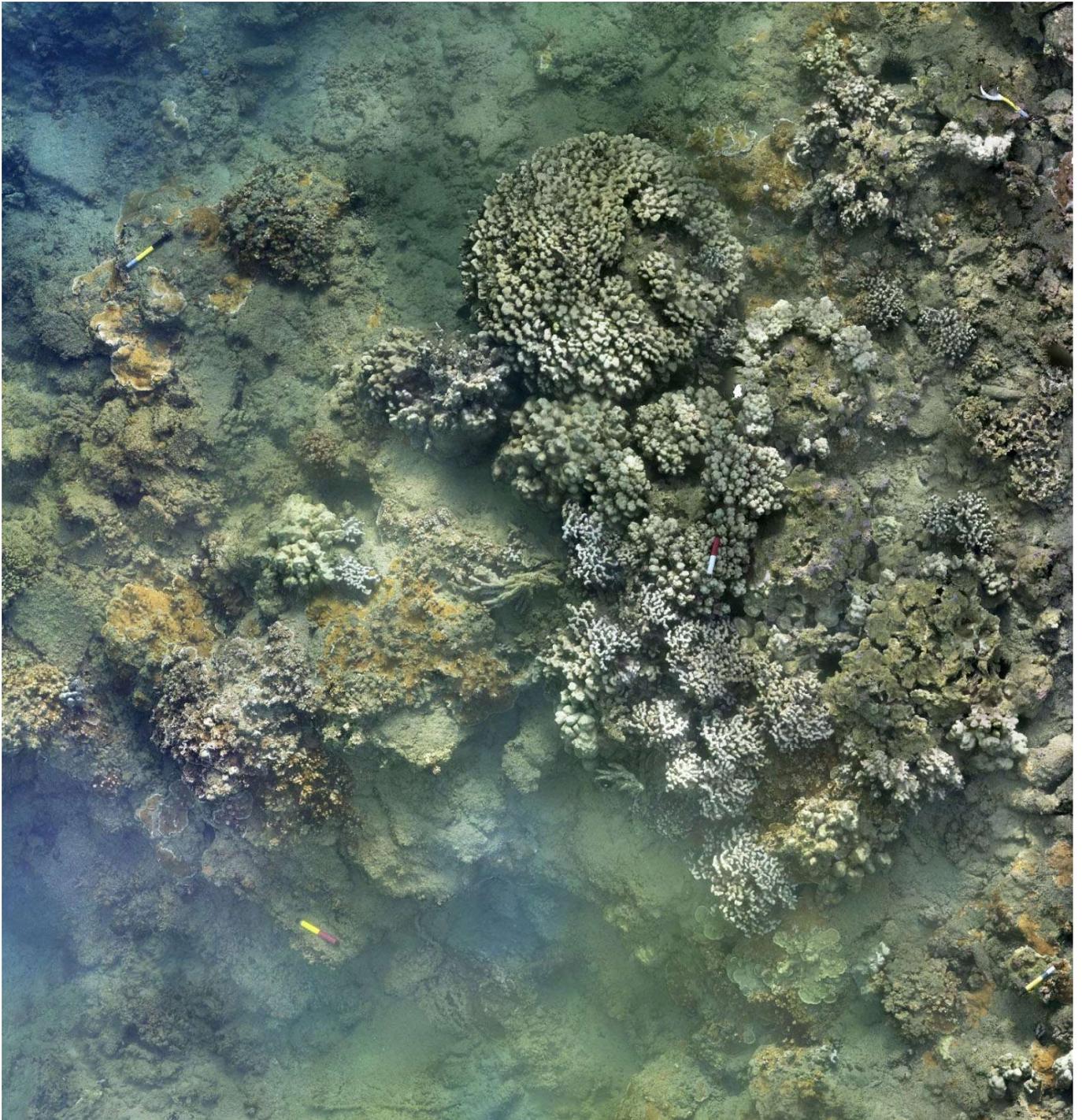


Figure 26. Orthomosaic image of coral community off Berth F. Image extends from top of shelf break to just above channel floor and encompasses approximately 15 square meters of reef.

Brenna Hughes

From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>
Sent: Thursday, August 21, 2025 2:49 PM
To: Brenna Hughes
Cc: Morgan, Jeremy K CIV USARMY CEPOH (USA)
Subject: Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Aloha Brenna,

Thank you for sharing the marine debris removal plan for the USCG Base Honolulu Piers F+G project and for meeting with me to discuss it. The plan looks good and fulfills the request from the EFH Consultation letter in Conservation Recommendation 3 to share the final offset plan. Thank you for being so thorough and keeping NMFS in the loop through the development of the plan.

If possible and not overly inconvenient, University of Hawaii Researcher Madalief Schelvis studies the *Porites lobata*/Harbor *Porites* coral observed throughout the project site including on the debris. She may be able to use corals or coral skeletons on the removed debris for her genetic analyses or other lab studies if there is a way for her to come to base to remove them from the debris after removal. Her email is madelief@hawaii.edu. No worries at all if that is too much to coordinate for whoever is in charge of the marine debris removal and nobody reaches out to her. She recently started a genetic study of the coral to determine if it is all one genotype.

Thanks,
Alex

On Mon, Aug 18, 2025 at 3:30 PM Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov> wrote:

Hi Brenna,

Received. I will review the documents and let you know if I have any questions. Do you want to schedule a call Thursday at either 12:30 or 1 HST to discuss? I will make sure to review by that time.

Alex

On Mon, Aug 18, 2025 at 12:36 PM Brenna Hughes <BHughes@pndengineers.com> wrote:

My apologies – I did not intend to require a password for download. Please use this link:

ShareFile Attachments

Expires February 17, 2026

250066 USCG Wharf G Dive Survey Report ...-29.pdf	12.6 MB
USCG Wharf G_Debris Mitigation Location.pdf	1.4 MB

WSP USA Environment & Infrastructure Inc._...ial.pdf

3.5 MB

Download Attachments

Brenna Hughes uses ShareFile to share documents securely.

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.

(O) 907.561.1011 | (D) 907.646.2773

From: Brenna Hughes

Sent: Monday, August 18, 2025 2:31 PM

To: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Subject: RE: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Alex,

I'm following up on the meeting we had in May regarding USCG's proposal for debris removal mitigation. As described in the May 2024 *Biological Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrade* (attached for convenience), debris removal is proposed at the ratios described in Section 6.3.2.1, with encrusting corals offset at a ration of 1.3:1.

Although previous project planning proposed construction requiring the translocation of substantial branching corals, the current project proposes the removal of the floating dock and only the extension of Berth G, an area shown to have minimal corals. The revised overshadowing change for the proposed project is a removal of 1,625 sq ft of float & gangway and the construction of 2,974 sq ft of dock extension, catwalk, & dolphin, for a *net increase of 1,349 sq ft of overshadowing*.

SeaEngineering, Inc. performed the attached dive survey to inventory debris within the project vicinity. Substantial debris was located, with the highest concentration offshore of the floating dock. Coral presence on the debris was also noted, with only 3 pieces harboring branching or massive corals.

In order to offset the increase of 1,349 sq ft of overshadowing, USCG proposes to remove debris from an area of approximately 5,400 sq ft. Of that area, approximately 2,400 sq ft is affected by debris, which is 1.84 times that size of the overshadowing increase. Debris removal will be performed as described in the attached survey report.

I would appreciate it if you would review the attached report and debris removal map and let us know your thoughts. I am available most days this week after 10 am (Hawai'i time) when you're ready to discuss.

Thank you,

Brenna

From: Brenna Hughes <BHughes@pndengineers.com>

Sent: Thursday, May 22, 2025 5:46 PM

To: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Subject: RE: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Thank you very much, Alex! I'll get this right over to the project managers.

Brenna

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.

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From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Sent: Thursday, May 22, 2025 17:38

To: Brenna Hughes <BHughes@pndengineers.com>

Subject: Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Hi Brenna,

Sorry for the delayed response regarding the spawning periods. The site has multiple species of corals and they do not have the same reproductive peak, so it is challenging to make a single recommended 22-day window. Some of the dominant species at the site spawn around the new moon (*M. capitata*) and others spawn around/after the full moon (*Porites* species) (Richmond and Hunter 1990). Ideally, in-water construction that could result in increased turbidity and chemical contamination would be avoided from 7 days before the July new moon (7/13/2026) through two weeks after the July full moon (7/29/26) to avoid a period before spawning, during spawning which can take place over a couple of days, and a week after to allow larvae development and settlement for species that peak around both moon phases. That would be a window from 7/6/2026- 8/12/2026.

That is a large window, so to narrow it down and prioritize, I looked back at the benthic report and noted that many of the large branching colonies providing 3D habitat in the area are *Porites*, and many of the *M. capitata* colonies are encrusting. I recommend blackout periods around the *Porites* June or July full moon spawning events **either 06/22/26 – 7/13/2026 or 7/22/26 – 8/12/2026.**

Thank you for your patience! I look forward to meeting with you on Tuesday.

Regards,

Alex

Richmond, R. H., & Hunter, C. L. (1990). Reproduction and recruitment of corals: comparisons among the Caribbean, the Tropical Pacific, and the Red Sea. *Marine ecology progress series*. *Oldendorf*, 60(1), 185-203.

On Mon, May 19, 2025 at 8:47 AM Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov> wrote:

Aloha Brenna,

My schedule is pretty open this week. I am available Tuesday 5/20 8 am - 10:30 HST, Wednesday 5/21 other than 10-11 am, and Thursday 5/22 8 am - 12 pm. I am also available Tuesday 5/27 8 am - 10:30 HST, and Thursday 5/29 8 am - 1 pm HST.

I am looking back at the biological report to see which corals are present at the site and their spawning periods. I will get back to you shortly on the coral spawning periods to avoid.

Thanks,

Alex

On Fri, May 16, 2025 at 4:28 PM Brenna Hughes <BHughes@pndengineers.com> wrote:

Alex,

Since our last conversation, USCG and the contractor have worked out some of the risk concerns regarding the debris removal and have settled on that as the preferred alternative. We have contracted with SeaEngineering, Inc. to prepare the debris removal plan. In preparation for that, they will be performing an additional dive survey to catalog debris and support removal planning. We would like to request a meeting with you to discuss potential data needs from that dive survey to support NMFS' approval of the debris removal mitigation. Could you send me a few times you might be available next week, and I will coordinate with SEI and DPJV.

Also, in order to refine our schedule for next year's construction, we'd like to narrow down the dates for coral spawning shut-down. The dates for previous consultation were in 2024 & 2025. Can you provide updated blackout dates for summer 2026?

Thank you,

Brenna

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.

(O) 907.561.1011 | (D) 907.646.2773

From: Brenna Hughes

Sent: Friday, March 28, 2025 09:31

To: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Subject: RE: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Alex,

USCG and the project's prime contractor have had some meetings to discuss the mitigation and it sounds like they are likely to settle on performing the coral translocation as a less risky prospect than debris removal. They've asked us to begin preparation of the translocation plan. Would you be able to share some past samples of coral mitigation plans (preferably from Honolulu Harbor, if available or otherwise in the region)?

Thank you,

Brenna

From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Sent: Wednesday, February 19, 2025 09:37

To: Brenna Hughes <BHughes@pndengineers.com>

Cc: Parks, Jessica E CIV USCG FDCC (USA) <Jessica.E.Parks@uscg.mil>; Wieland, Edward A CIV USCG FDCC-SEATTLE (USA) <Edward.A.Wieland@uscg.mil>; Stewart W <stewartw@duwamishservices.com>; Chris Willis <chrisw@pacificpile.com>; Zachary Martin <zachm@duwamishservices.com>

Subject: Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Hi Brenna,

Sorry for the delayed response. I reached out to DLNR but haven't heard back yet. Jeremy Raynal (jeremy_raynal@fws.gov) from the Fish and Wildlife Service reached out to me asking about this project and would like an update on the project as well.

Thanks for sharing the debris images. I would recommend estimating the area of coral cover that will be lost first. It is up to your team to figure out how to measure or estimate the size of the debris to make sure you account for the amount of area cleared to offset the loss of corals. The removal should be tracked to confirm the required area is cleared of debris. The purpose is for the debris removal to improve habitat in the area. Each marine debris offset plan has been tailored to the site, so I do not see one that is a great example in this case. Below is a general marine debris removal description from a NOAA programmatic consultation and some in-water BMPs. All of the appropriate BMPs from the consultations would apply to the in-water debris removals.

I can review a draft if needed.

Regards,

Alex

Biological and Conference Opinion and EFH Response Coral Reef Conservation Program and Mission: Iconic Reefs

In-water marine debris removal efforts may require the use of a vessel to access the work area and serve as a work platform. Dive teams assist in ensuring the vessel is anchored over the working site in an area and manner that does not impact marine habitat. A support team in charge of boating safety, equipment, and material handling will present on the vessel. Lift bags are used to ease and control the ascent of any large or heavy debris to avoid dragging items along the seafloor. Any diving or snorkeling associated with in-water marine debris removal will implement BMPs that include measures to avoid and minimize the effects on habitats, including EFH, corals and other sessile species.

In-water diving BMPs

1. SCUBA divers/snorkelers involved in in-water activities will have proper training and be capable of responsible dive/snorkel practices (e.g., proper buoyancy) such that they minimize injury to organisms or unnecessary habitat impacts.
2. To minimize disturbances (to animals and habitats), divers will use low-impact techniques, which typically include having no more than four divers per group in the water or spreading divers throughout a site and using appropriate dive equipment and tools.
3. Divers/snorkelers will not stand or rest on live corals or other slow-growing sessile benthic invertebrates. Bottom contact should only be in unconsolidated areas or non-living hardbottom. When contact with the seabed is necessary, contact with living organisms shall be minimized to the greatest extent practicable.

On Wed, Feb 5, 2025 at 2:24 PM Brenna Hughes <BHughes@pndengineers.com> wrote:

Alex,

USCG conferred again with their dive leadership in Honolulu and found that there are in fact records of a dive survey that was conducted for the purposes of identifying marine debris in the waters off Base Honolulu. Attached are some of the records of Berths G and F. There appears to be abundant steel, concrete, and wood debris.

If you think we're on the right track with this, we will proceed with preparation of a detailed mitigation plan. Regarding the state's participation, do you know if we would need to coordinate with the same folks at the Division of Aquatic Resources?

If you have any sample plans or other guidance that you could share to guide our preparation, that would be much appreciated. Any other next steps you would recommend would be appreciated.

Regards,

Brenna

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.

(O) 907.561.1011 | (D) 907.646.2773



From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Sent: Thursday, January 30, 2025 14:42

To: Brenna Hughes <BHughes@pndengineers.com>

Cc: Parks, Jessica E CIV USCG FDCC (USA) <Jessica.E.Parks@uscg.mil>; Wieland, Edward A CIV USCG FDCC-SEATTLE (USA) <Edward.A.Wieland@uscg.mil>; Stewart W <stewartw@duwamishservices.com>; Chris Willis

<chrisw@pacificpile.com>

Subject: Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Hi Brenna,

Thank you for the update. I filled out my availability. I would recommend either including in the upcoming meeting or meeting separately with representatives from the Division of Aquatic Resources (DAR) as the permit for any coral collections, if needed, will come from DAR, and DAR will have to provide input on offset for their lost resources, if any, due to the project.

Regards,

Alex

On Thu, Jan 30, 2025 at 12:54 PM Brenna Hughes <BHughes@pndengineers.com> wrote:

Alex,

We received some follow-up information from Steve Dollar at MRCI that indicates that corals in the Berth G extension area are limited to mostly encrusting type, not more per square meter. Attached is the original draft of MRCI's dive report, which contained more photos of the Berth G area before the focus was concentrated on the infill area (which is no longer in the plans).

We'd like to have a meeting to discuss this with you next week, if you're available. I have attached a scheduling poll below to see if we can find a time that works for everyone.

Thank you,

Brenna

 **Scheduling poll**

RE: FW: [Non-DoD Source] Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

 1 hour duration

 10 time options

[Vote](#)

[View all your polls](#)

Brenna Hughes | Lead Environmental Scientist

PND Engineers, Inc.

(O) 907.561.1011 | (D) 907.646.2773

 [Click to Explore PND's New Website!](#)

From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Sent: Tuesday, January 7, 2025 15:28

To: Brenna Hughes <BHughes@pndengineers.com>

Cc: Parks, Jessica E CIV USCG FDCC (USA) <Jessica.E.Parks@uscg.mil>

Subject: Fwd: FW: [Non-DoD Source] Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Aloha Brenna,

It seems my last message sent 12/17 may not have been delivered. I had a message that it was rejected and more attempts to deliver would be made. See my below forwarded email message. I am not sure I can help in the way you are expecting. NMFS did get in the water at the site, not do do

an official survey, but to better understand the action and the site. I suggest you contact the contractors who did the survey to understand how the resources overlap with the planned action. It is possible that the action may not result in the unavoidable loss of any corals, and that no corals will need to be translocated. I am available to help develop the translocation or offset plan if needed.

Alex

----- Forwarded message -----

From: **Alexandria Barkman - NOAA Federal** <alexandria.barkman@noaa.gov>

Date: Tue, Dec 17, 2024 at 2:21 PM

Subject: Re: FW: [Non-DoD Source] Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

To: Brenna Hughes <BHughes@pndengineers.com>

Cc: Jessica.E.Parks@uscg.mil <Jessica.E.Parks@uscg.mil>

Hi Brenna,

NMFS got in the water at the site for a site visit, but we did not do a field assessment survey. The actual field survey data should be used to understand where the corals are located within the project site and how many corals will be impacted by the project. We consulted on the maximum impact design with the understanding that the maximum impact design may not be chosen. If there are corals that will be directly impacted by the construction, the plans to minimize the loss (translocate corals) and offset the loss (marine debris removal or another method if chosen) will still be required.

I do remember looking under the existing floating dock to see if there were corals beneath it. I think the dock was out past the shelf like area with the corals, but again, we were visiting the site to understand the project, not to do a thorough survey. We were snorkeling, so we could not be positive that there weren't any corals on the pile, for example. We only knew roughly the potential dimensions of the proposed extension while in the water. I am not sure if the base project will directly impact corals or how many, though I expect the amount to be smaller than if a different design was chosen. I remember the majority of the corals being against the shoreline wall and in the corner.

Sorry I can't be more helpful. I hope you can find the detailed survey reports to confirm the extent of the coral cover at the site.

Alex

Alexandria Barkman, PhD.

EFH Consulting Biologist, PIRO Habitat Conservation Division

National Marine Fisheries Service | U.S. Department of Commerce
Office: (808) 725-5150

www.fisheries.noaa.gov



On Tue, Dec 17, 2024 at 2:13 PM Brenna Hughes <BHughes@pndengineers.com> wrote:

Alex,

In contacting various firms about preparation of a coral mitigation plan for the referenced project, I had a conversation with Ingrid Larsson at WSP. She recollected a discussion during a past site visit about a lack of corals under the “base project” expansion of Berth G. She recalls that the discussions around coral translocation were to address impacts from the Berth G lateral extension and the Berth F floating dock. WSP’s most recent BA and EFH assessment (attached) makes several references to this, including on page 62: “A site visit with NMFS on September 8, 2023, confirmed that coral communities are only located within the Berth G Lateral Extension and not within the deeper areas at Berth G Expansion and Berth F Floating Dock. The area of overwater coverage at Berth G Lateral Extension is up to 1,335 ft². Thus, the proposed Project may cover up to 1,335 ft² of coral habitat.”

Do you have a recollection of those conversations? Your consultation letter (also attached, for convenience) is not explicit about coral presence under the base project expansion area.

USCG has determined to only construct the base project, so we’d like to better understand these discussions.

Thank you,

Brenna

Brenna Hughes | Lead Environmental Scientist
1506 West 36th Avenue, Anchorage, AK 99503

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From: Parks, Jessica E CIV USCG FDCC (USA) <Jessica.E.Parks@uscg.mil>
Sent: Tuesday, December 17, 2024 03:42
To: Brenna Hughes <BHughes@pndengineers.com>
Subject: FW: [Non-DoD Source] Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Good morning Brenna,

Do you have time today to chat about the coral issues? I came onto this project after all of the discussions occurred, so I don't have a good history, but am looking to see what files are available... This is the only email I have from Alex Barkman, but I will continue looking through old files today.

V/r,

Jessica

From: Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov>

Sent: Thursday, June 20, 2024 3:05 PM

To: Parks, Jessica E CIV USCG FDCC (USA) <Jessica.E.Parks@uscg.mil>

Cc: Gerry Davis - NOAA Federal <gerry.davis@noaa.gov>; Malia Chow - NOAA Federal <malia.chow@noaa.gov>; David Delaney - NOAA Federal <david.delaney@noaa.gov>; Sean Hanser - NOAA Federal <sean.hanser@noaa.gov>; Larsson, Ingrid <ingrid.larsson@wsp.com>; Goldschmidt, Aaron <aaron.goldschmidt@wsp.com>; Meisinger, Nick <nick.meisinger@wsp.com>

Subject: [Non-DoD Source] Re: USCG Base Honolulu - Revised Essential Fish Habitat Assessment for Seagoing Buoy Tender Mooring and Structural Pier Upgrades

Aloha Ms. Parks,

The Habitat Conservation Division of the National Marine Fisheries Service, Pacific Islands Regional Office (NMFS) received the U.S. Coast Guard's request for an abbreviated essential fish habitat (EFH) consultation regarding the Seagoing Buoy Tender Mooring and Structural Pier Upgrades at Base Honolulu. We reviewed the submitted EFH Assessment and provided conservation recommendations pursuant to the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act in the attached EFH Consultation letter.

Thank you for your early coordination with NMFS during the planning phase of this important project.

Regards,

Alex

On Tue, May 21, 2024 at 6:59 AM Alexandria Barkman - NOAA Federal <alexandria.barkman@noaa.gov> wrote:

Aloha Ingrid,

The National Marine Fisheries Service, Habitat Conservation Division has received the revised EFH Assessment and request for an Essential Fish Habitat Consultation for the USCG Base Honolulu Seagoing Buoy Tender Mooring and Structural Pier Upgrades. We appreciate the updated information quantifying coral coverage in the action area and the proposed offset plan. I will let you know if I have questions as I review the documents and prepare our response.

Regards,

Alex

On Mon, May 20, 2024 at 9:24 AM 'Larsson, Ingrid' via _NMFS PIR ESHESA <efhesaconsult@noaa.gov> wrote:

Hello Gerry and Alexandria,

On behalf of the USCG, we are pleased to submit a revised Essential Fish Habitat Assessment to continue consultation on the Seagoing Buoy Tender Mooring and Structural Pier Upgrades Project at Base Honolulu. This document is combined with the Biological Assessment per a

request from NMFS staff, Sections 2 and 5 pertain to ESA species and proposed Critical Habitat and Sections 3 and 6 pertain to EFH. The ESA consultation is complete as the project was issued a Letter of Concurrence on January 12, 2024.

Please find attached:

- Revised combined BA and EFHA
- Appendix C – two benthic survey reports (Appendix A and B are ESA related appendices and do not apply for EFH consultation, although can be provided if needed)

Please note that Mike West is no longer with the USCG; Jessica Parks is his replacement on this project and is included in this email. Thank you for your guidance and we appreciate your review and consideration for concurrence on this project. Please do not hesitate to reach out if there is anything we can do to assist you with your review.

Best regards,

Ingrid

Ingrid Larsson

Lead Consultant, Biologist

M.E.M.

She/her

T+ 1 503-803-8326

WSP USA

[15862 SW 72nd Ave.](#), Suite 150

Portland, OR, 97224

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Spill Prevention, Control and Countermeasures Plan

WLB Mooring & Structural Pier Upgrades- Berth G Honolulu, HI



Prepared By:

Duwamish-Pacific Joint Venture
7421 5th Avenue South
Seattle, WA 98108

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1.0 Objective

This Spill Prevention, Control and Countermeasures Plan (Spill Plan) has been developed specifically for the WLB Mooring & Structural Pier Upgrades- Berth G Project. The purpose of the spill plan is to protect human health and the environment from the spill and release of oil and other hazardous materials and detail the applicable notification, response, and reporting procedures in the event of a spill or release.

The Duwamish-Pacific Joint Venture (DPJV) will update this plan throughout the project, as necessary, to ensure the written plan reflects actual site conditions and practices.

2.0 Project Summary

2.1 Scope of Work

The purpose of WLB Mooring & Structural Upgrades- Berth G project is to extend the existing Berth G at the U.S. Coast Guard (USCG) Base Honolulu to accommodate the anticipated return of a second 225' Seagoing Buoy Tender (WLB). The existing Berth G fixed pier does not have the capacity to support the larger WLB's, so this project will provide the needed facility size for the longer and larger vessels.

The scope of work associated with this project will consist of the installation of an expanded pile-supported pier, extending approximately 110' to the east of the existing Berth G. Work will also include demolition of an existing floating pier, the installation of a mooring dolphin and other updated mooring appurtenances and the installation of new mechanical and electrical utilities.

2.2 Site Description & Layout

Work under this project will occur within USCG Base Honolulu, located on Sand Island in Honolulu Harbor. Specifically, work will be conducted at the existing Berth G.

A preliminary site layout map has been provided within this plan as Attachment A. This site map shall be updated throughout the project such that the map reflects the actual site layout.

3.0 Responsible Personnel & Emergency Contacts

The name, title, and contact information for all DPJV project management personnel have been provided in Table 1, below:

Name	Title	Phone No.	Email
Stewart Willis	Project Manager	(253) 549-3257	stewartw@duwamishservices.com
Shane Hautanen	Quality Control Manager / Spill Prevention Manager	(907) 231-1915	shaneh@pacificpile.com
Dan Westby	Superintendent	(206) 702-3679	danw@pacificpile.com
TBD	Project Engineer	TBD	TBD

Table 1- Duwamish-Pacific Joint Venture Emergency Contacts

DPJV’s Quality Control Manager, Shane Hautanen, will be the designated Spill Prevention Manager throughout the performance of the project responsible for enacting this plan in the event of a spill or release of other hazardous materials.

4.0 Notification & Reporting Procedures

4.1 Notification Requirements

In the event of the release of hazardous materials, the Spill Prevention Manager or Superintendent will notify all applicable State and/or Federal spill response contacts outlined in Table 2, below, informing the departments about any discharge or release of hazardous materials to the waters of the state or the land.

Type of Spill	Reporting Requirements	Spill Reporting Contacts
Release of hazardous substance to land or water.	<u>Report Immediately</u>	Hawaii State Emergency Response Commission (808) 586-4249 <u>After hours number:</u> (808) 236-8200 (ask to speak with a State On-Scene Coordinator)
		Local Emergency Planning Committee- Honolulu County (808) 723-8960

		<p>National Response Center (800) 424-8802</p> <p>Call 911 if there is an immediate threat to health or human safety posed by the release.</p>
--	--	--

Table 2- State & Federal Spill Notification Contacts

DPJV’s Spill Prevention Manager will be designated as the emergency response lead in the event of a spill or release of hazardous materials. This individual will report the event and interact with the local emergency response providers, if necessary.

While Hawaii State regulations outline that formal notification to the contacts listed in Table 2, above, are only required if the release exceeds a Reportable Quantity, DPJV will take the approach of immediate notification upon the spill or release of any quantity of hazardous material.

As the majority of the hazardous materials anticipated to be present on site (See Table 3, below) are oil/petroleum-based products, which have the potential to create a visible film/sheen on water and/or has the potential to escape into state waters, any spill or release will require reporting, regardless of the amount spilled.

In addition to the above contacts, the following USCG individuals will also be notified in the event of a spill or release of hazardous materials.

- 1) TBD
USCG On-Site Inspector

- 2) Edward Wieland
USCG Contracting Officer
edward.a.wieland@uscg.mil
(757) 667-1120

- 3) LCDR Elizabeth Simione
USCG Base Honolulu Facilities Engineer
Elizabeth.m.simione@uscg.mil

4.2 Reporting Procedures

The Spill Prevention Manager will notify all applicable State/Federal spill response contacts from the table in the above section, informing the various departments about a discharge

or release of a hazardous substance to waters of the state or to land. This initial verbal notice will occur as soon as possible following the release of a hazardous substance.

The following specific information is required when reporting the release of a hazardous substance. To the best of your ability, be ready with the following information when making initial verbal notification:

- Name and telephone number.
- Name of hazardous substance spilled.
- Approximate quantity spilled.
- Location of the spill.
- Date and time of the spill.
- Description of how the spill occurred.
- Immediate danger or threat posed by the release.
- Contact information for the responsible party.
- Measures taken or proposed measures to be taken to clean up the spill.
- Any known injuries resulting from the exposure.
- Other county, state, or federal officials that were also notified.

As soon as possible, but within 30 days of the release of a hazardous substance, a written follow-up notification will be provided. A copy of the Hawaii Hazardous Substance Written Follow-up Notification Form has been included within Attachment B of this plan.

5.0 Hazardous Materials Control

5.1 Locations & Estimated Quantities of Hazardous Materials

Table 3, below, outlines the type, quantity and location of hazardous materials which are anticipated to be on site throughout the execution of the project.

Hazardous Material	Intended Use	Estimated Quantity	Location	Secondary Containment
Gasoline	Work Skiff Fuel, Vehicle Fuel, Misc. Small Tool Fuel	25 Gallons	Slip tanks in project vehicles or within tools connex located in project staging area.	Safety Cans Collapsible berm or equivalent.
Diesel	Heavy Equipment Fuel	2,000 Gallons	Within on-site equipment and in double-walled fuel tank located in project staging area	Double-walled fuel tank. Equipment will be inspected for leaks daily.

Motor Oil	Motor Oil for Heavy Machinery	25 Gallons	Within on-site equipment or within tools connex located in project staging area.	Equipment will be inspected for leaks daily. Collapsible berm, or equivalent.
Biodegradable Hydraulic Fluid	Hydraulic Fluid for Heavy Machinery	250 Gallons	Within on-site equipment.	N/A Equipment will be inspected for leaks daily.
Antifreeze/Engine Coolant	Engine Coolant	25 Gallons	Within on-site equipment.	N/A Equipment will be inspected for leaks daily.
Paints, Solvents, etc.	Miscellaneous	5 Gallons	Within tools connex located at project staging area.	Collapsible berm, or equivalent.

Table 3- Type, Location & Amount of Anticipated Hazardous Materials

5.2 Likelihood for Release

The likelihood of a large release of hazardous materials is considered low due to the minimal quantities of oil, fuel, and other hazardous materials that are anticipated to be present on site. The two most likely scenarios for a release would be related to fueling or maintenance or heavy equipment or equipment failure (i.e. hydraulic hose rupture).

DPJV will take all appropriate measures to prevent spills during the transfer of fuel or other hazardous materials. As illustrated on the Site Layout Map included within Attachment A, a designated equipment fueling and maintenance area will be established, located at least 50' away from the water and any drains. Secondary containment and spill prevention measures, such as drip pans and/or oil absorbent pads and booms will be utilized when maintenance, fueling or repair of heavy equipment is performed on site.

Equipment failure is considered the second most likely scenario for a spill. All equipment will be inspected daily for leaks following the procedures outlined within Section 5.5 of this plan. Should equipment failure occur and cause a spill or discharge, the discharged amount would be relatively small. A fully stocked spill kit shall be located adjacent to all areas of active work should a spill occur as a result of equipment failure or the active work.

In accordance with the anticipated requirements of the project's Section 401 Water Quality Certification, DPJV will perform regular water quality monitoring throughout the duration of in-water work associated with the project. In addition to monitoring standard water quality parameters (pH, Turbidity, TSS), DPVJ will continually monitor water quality for the

presence of a sheen throughout the in-water construction process. Sheen will be reported and cleaned up immediately, if encountered.

5.3 Safety Data Sheets

Safety Data Sheets (SDS) will be available for all hazardous materials anticipated to be on site, as identified in Table 3, as well as other common hazardous materials.

SDSs will be available within a prominently labeled and brightly colored notebook within the project's on-site field office. SDSs will be available to all employees for review during the work shift.

5.4 Container Labeling

All chemicals or hazardous materials containers present on site will have proper container labeling per the Hazard Communication Standards to ensure that workers are aware of the chemicals that they are exposed to.

Label Requirements:

Each container of hazardous materials in the workplace shall be labeled, tagged, or marked with either of the following:

1. All the information specified for the labels on shipped containers (shipping label)
2. The product identifier and words, pictures, symbols, or a combination that provide general information on the hazards of the chemicals.

Things that must be labeled include:

- Storage bottles created for the distribution of small amounts of a material.
- Storage bottles for solutions or dilutions of a chemical.
- Sample vials or sealable tubes.
- Large batches of the same compound may be labeled collectively, if they are stored and handled as a group.

5.5 Site Inspection

Preventative and routine inspections of the project site will be conducted daily throughout the execution of the project to ensure that a) there has been no spill or release of hazardous materials, b) the Spill Plan controls are functioning properly, and c) that each control performs in the event of a spill.

Daily inspections will be carried out as follows:

- 1) Inspect all hazardous materials storage locations for defects and maintenance needs.
- 2) Inspect all storage containers for damage or leaks.
- 3) Inspect all equipment and vehicles for leaks.
- 4) Inventory spill kits and cleanup supplies to ensure adequate on-hand quantities.
- 5) Inspect all potential areas/receptors, including surface water, for evidence of impacts.

These inspections do not need to be logged unless a spill or leak is detected or a non-conformance is noted. If maintenance is needed or supplies are deficient, DPJV shall promptly remedy any non-conformance.

5.6 Best Management Practices

The following Best Management Practices (BMPs) will be utilized throughout the project to prevent discharges of hazardous materials:

- 1) Secondary containment and spill prevention measures, such as drip pans and oil absorbent pads will be used when fueling or performing maintenance or repair of vehicles or equipment.
- 2) Construction equipment will be kept in good repair without leaks of hydraulic or lubricated fluids. Equipment will be checked daily.
- 3) A dedicated equipment fueling, maintenance, and repair area will be established and will be located at least 50' away from the water and any drains. Runoff from this area will be controlled to prevent contamination of soils and water.
- 4) Emergency repairs will be completed with plastic sheeting placed beneath and, if necessary, over the equipment.
- 5) Work skiffs and other water-based job equipment will be refueled within secondary containment, whenever possible.
- 6) Leaking connections, pipes, hoses, vales, etc. will be promptly repaired or replaced.
- 7) Emergency spill containment and cleanup kits will be maintained on site wherever there is a potential for spills. Kits will be appropriate for the materials being handled and adequately sized for the potential spill.
- 8) All portable equipment will be placed in secondary containment when not in use to capture any leaks or spills.
- 9) All parked or unused equipment will have drip pans placed beneath to capture any leaks or spills.
- 10) Incoming vehicles, parts and equipment will be inspected for leaks.
- 11) Empty containers will be promptly removed and properly disposed.

- 12) An individual will be designated to keep a running inventory of on-site chemical substances and SDS.
- 13) Inspections will be performed daily.

7.0 Spill Response

7.1 Containment & Cleanup

Immediately after receiving notice from a person of a discharge or release of a hazardous substance to the land or water, the Spill Prevention Manager and/or Superintendent will be notified immediately, and the appropriate State/Federal notifications will be made. The Spill Prevention Manager and/or Superintendent will notify all crew members and direct them, accordingly, depending on the severity of the incident.

Immediately after receiving notice the Spill Prevention Manager, Superintendent, or a properly trained employee will:

- Assess the area for any immediate dangers to health or safety. If any dangers are present, move away from the area and call **911**.
- Shutoff any potential ignition sources.
- Immediately investigate, contain, and control the discharge or release.
 - Upon notification or observation of a discharge or release.
 - In a manner that does not result in a significantly greater overall threat or damage to human health, safety or welfare, or to the environment than another alternative, including taking no action.
 - Until the lowest practicable level of contamination is achieved.

Spill to Water:

- Immediately contain any visible floating oils, sheens, or hazardous materials with oil-absorbent boom. Absorb all materials utilizing a combination of floating booms and oil absorbent pads.

Spill to Land:

- Immediately contain any visible oils or hazardous materials using berms, plastic sheeting, or oil absorbent boom. Absorb all materials using a combination of kitty litter, saw dust, or oil absorbent pads.

All materials used in the cleanup of a spill or discharge shall be properly disposed of per the details outlined in the Disposal section of this plan, below.

7.2 Spill Kit Contents & Location

DPJV will have multiple stocked spill kits present at the project site. At a minimum, spill kits will be present in the following locations:

- 1) Within the designated equipment fueling and maintenance area.
- 2) Within the project staging area, adjacent to the region of active construction.
 - a. This spill kit will be moved as the work progresses such that it is always readily available and adjacent to active work.

At a minimum spill kits will contain the following:

- 55-gallon plastic recovery drum.
- 50' oil absorbent boom.
- Oil absorbent pads- adequate for coverage of 200 sqft.
- Oil absorbent material.
- Oily waste bags.
- 1 roll plastic visqueen sheeting, 6-mil minimum
- Rubber Gloves
- Safety Glasses

In addition to the above-listed materials, additional oil absorbent materials and plastic sheeting will be available within a connex located within the project staging area and will be replenished, as needed.

7.3 Disposal

All waste materials used for the cleanup of any hazardous materials on land or in the water will be placed within an empty 55-gallon drum stored within the uplands project staging area. The drum will be labeled, covered, and placed within secondary containment. This drum will be disposed of, as needed, according to all applicable regulations at an approved waste facility.

Copies of all transportation and disposal records will be maintained throughout the life of the project.

8.0 Training

DPJV will provide regular informational training for all employees associated with the project, designed to ensure that all personnel with applicable job duties are appropriately and regularly trained regarding hazardous materials pollution prevention measures applicable to each position's duty. DPJV will ensure that each person directly responsible

for an activity that may result in a hazardous materials release is free of substance abuse, or a medical condition that would impair that person's ability to do the job.

Prior to the start of on-site construction efforts, each project employee will attend a Spill Prevention and Hazardous Materials Control training session to receive project-specific information and training on the hazardous materials that will be present on this project. This training will be held at the project site.

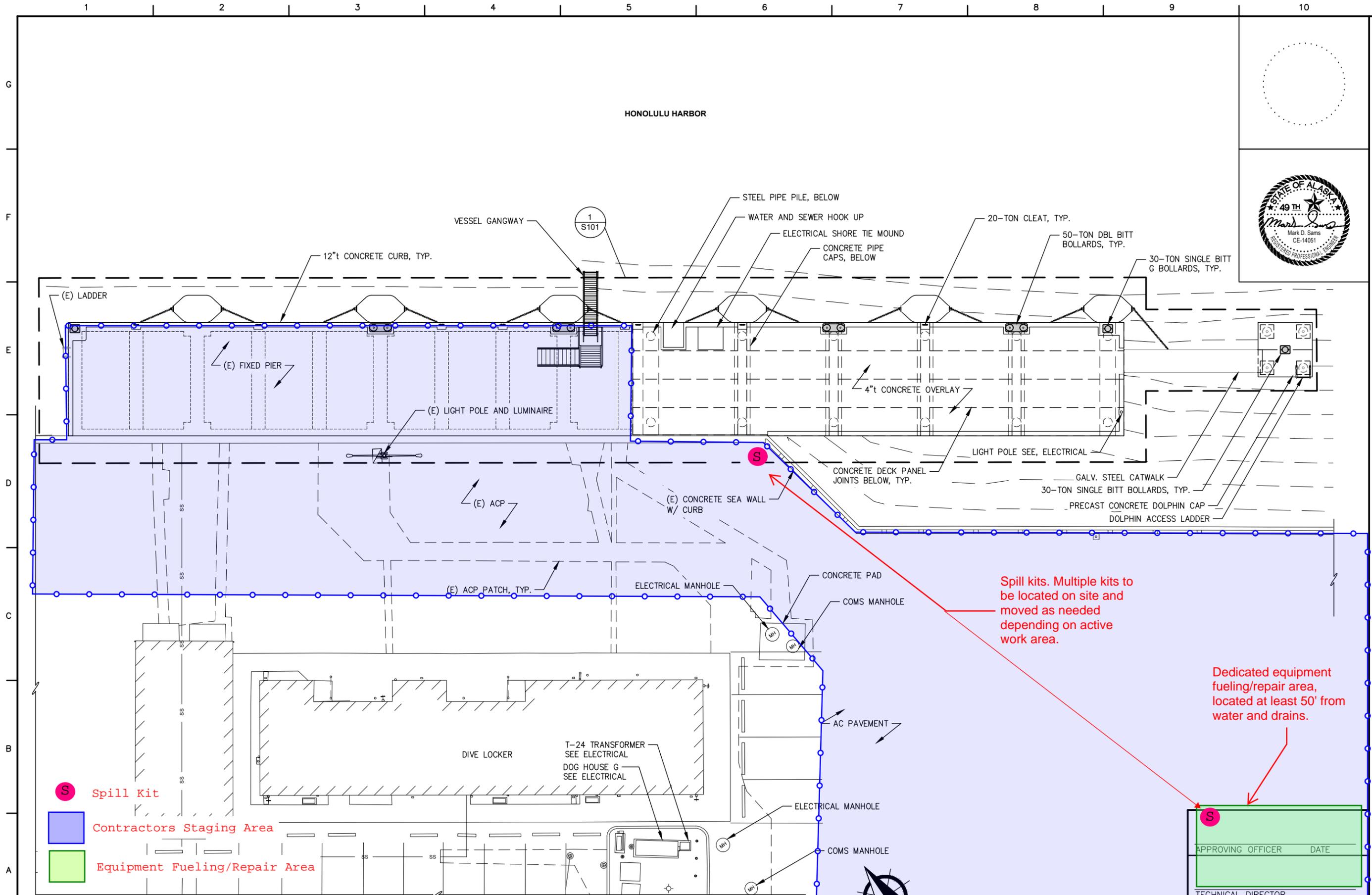
Training will include the following topics, at a minimum:

- Job duties and required training, certifications, licenses, knowledge and other pre-requisites necessary for the position.
- Overview of project-specific hazardous materials including locations and amounts.
- Physical and health effects of the hazardous materials present.
- Spill cleanup and containment methods.
- Locations of spill response supplies and equipment.
- Methods of preventing or eliminating exposure to hazardous materials.
- Emergency procedures to follow if exposed to hazardous materials.
- How to read labels and review Safety Data Sheets (SDS) to obtain information.
- Location of SDS Binder
- Applicable pollution control laws
- Reporting and notification requirements in the event of the release of hazardous material.

Completion of training shall be verified via completion of the Training Log, included within this plan as Attachment C.



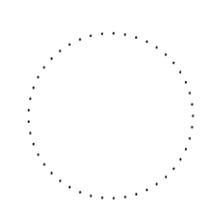
Attachment A- Site Layout Map



Site Layout Map

1 SITE PLAN
SCALE IN FEET
0 10 20 FT.

1234-5267-0003 for Design Build Projects 6789-9287-1200 for Design Build Projects



U.S.C.G.
US COAST GUARD
CIVIL ENGINEERING

NO.	DESCRIPTION	DATE	SCALE
4	CORRECTED FINAL DESIGN	07/30/25	AS SHOWN
3	FINAL SUBMITTAL	06/23/25	
2	65% SUBMITTAL	04/18/25	
1	35% SUBMITTAL	11/18/24	
	MARK DESCRIPTION		

A/E COMPANY:
A/E ENGINEERS, INC.
JUNEAU, AK
907-586-2093
A/E PROJECT NO.:
242075
CONSULTING A/E:
RESPEC
JUNEAU, AK

USCG PROJECT NO.:
19909923
USCG DRAWING NO.:
19909232C102
USCG FILENAME:
19909232C102.DWG
SHEET 7 OF 47

DESIGNED BY: MDS
DRAWN BY: KL
CHECKED BY: MDS
EDITED BY: MH

WLB MOORING & STRUCTURAL UPGRADES
USCG BASE HONOLULU
HONOLULU HI
CIVIL
PARTIAL SITE PLAN

APPROVING OFFICER	DATE
TECHNICAL DIRECTOR	
BRANCH CHIEF	

SHEET ID
BERTH G
C102



Attachment B- Spill Report Form

Interim Final

Hawaii Hazardous Substance Written Follow-Up Notification Form

PLEASE PROVIDE THE FOLLOWING INFORMATION

Incident Case No.: _____

Contact Information

Caller's Information

Name: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Owner's Information

Name: _____

Title: _____

Company: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Operator's Information

Name: _____

Title: _____

Company: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Name of a contact person at the facility or vessel where the release has occurred: _____

Telephone number: _____

Interim Final

Hazardous Substance Released:

Name (trade and chemical) of the hazardous substance which has been released: _____

Chemical Abstract Service (CAS) Number (if applicable): _____

Approximate quantity of the hazardous substance released: _____

Incident Information

Location of the release: _____

A brief description of the release: _____

Media into which the release occurred or is likely to occur (Indicate all those that apply):

- Air Soil Groundwater Concrete Asphalt Stream Ocean Other

Cause of the release: _____

Date of the release: _____

Time of the release: _____

Duration of the release: _____

Date: _____

Time that the person in charge of the facility or vessel where the release occurred obtained knowledge of the release: _____

Source of the release: _____

Response Information

Response measures taken thus far: _____

Interim Final

Any appropriate information relating to the ability of the owner or operator of the facility or vessel where the release has occurred to pay for or perform any proposed or required response actions: _____

The names of other federal, state, or local government agencies that have been notified of the release: _____

Health Information

Known or anticipated acute health risks: _____

Known or anticipated chronic health risks: _____

Advice regarding medical attention necessary for exposed individuals: _____

Potential impacts to public health or welfare: _____

Potential impacts to the environment: _____

"I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the submitted info is true, accurate, and complete."

Signature: _____

Date: _____

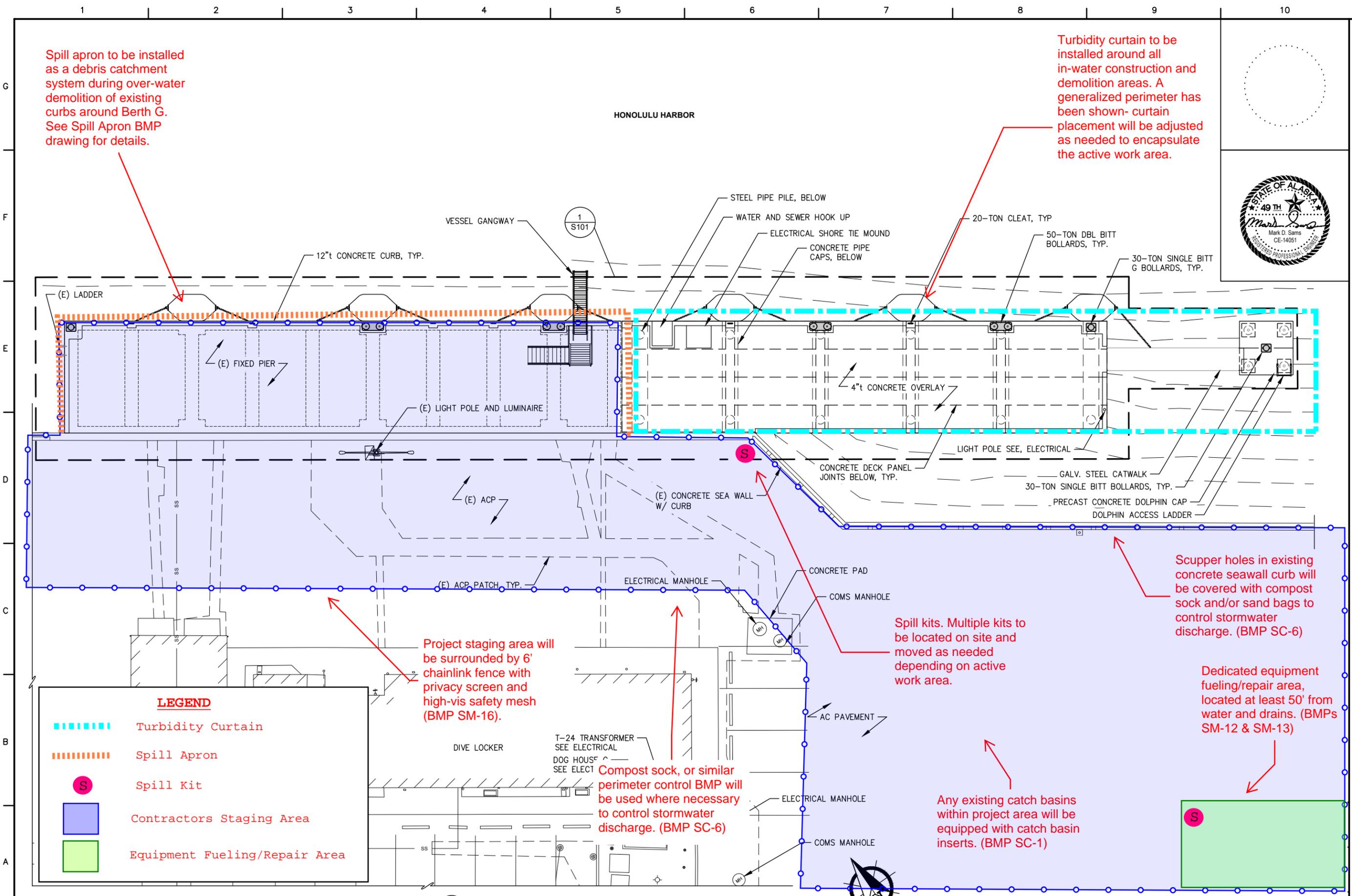
Printed Name: _____

Title: _____

Company: _____



Attachment C- Training Log



Spill apron to be installed as a debris catchment system during over-water demolition of existing curbs around Berth G. See Spill Apron BMP drawing for details.

Turbidity curtain to be installed around all in-water construction and demolition areas. A generalized perimeter has been shown- curtain placement will be adjusted as needed to encapsulate the active work area.

Project staging area will be surrounded by 6' chainlink fence with privacy screen and high-vis safety mesh (BMP SM-16).

Spill kits. Multiple kits to be located on site and moved as needed depending on active work area.

Scupper holes in existing concrete seawall curb will be covered with compost sock and/or sand bags to control stormwater discharge. (BMP SC-6)

Compost sock, or similar perimeter control BMP will be used where necessary to control stormwater discharge. (BMP SC-6)

Any existing catch basins within project area will be equipped with catch basin inserts. (BMP SC-1)

Dedicated equipment fueling/repair area, located at least 50' from water and drains. (BMPs SM-12 & SM-13)

LEGEND

- - - - - Turbidity Curtain
- - - - - Spill Apron
- S Spill Kit
- Contractors Staging Area
- Equipment Fueling/Repair Area

1 SITE PLAN
SCALE IN FEET
0 10 20 FT.

BMP Map



4	CORRECTED FINAL DESIGN	07/30/25	SCALE: AS SHOWN
3	FINAL SUBMITTAL	06/23/25	
2	65% SUBMITTAL	04/18/25	
1	35% SUBMITTAL	11/18/24	
	MARK DESCRIPTION	DATE	



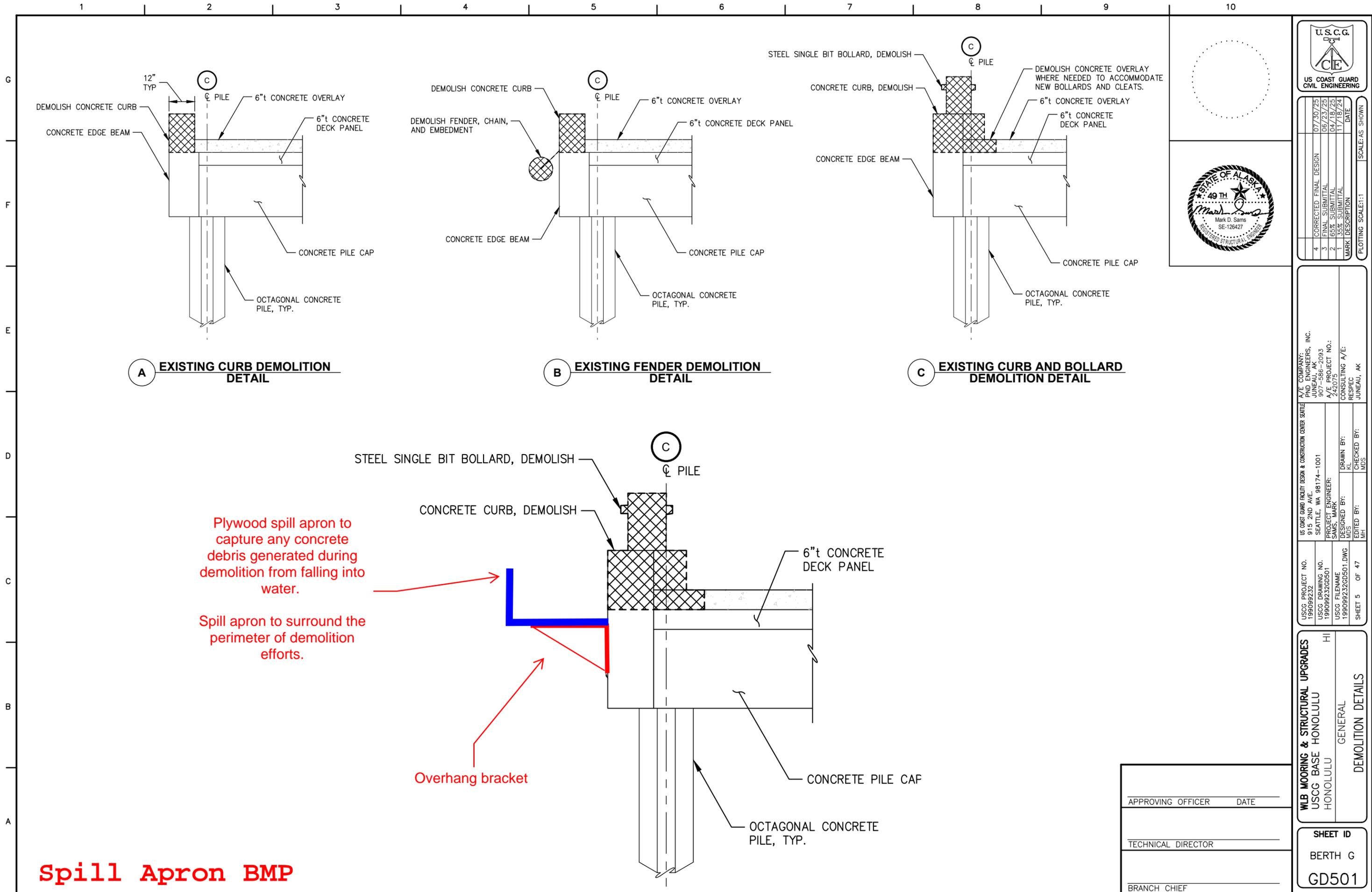
A/E COMPANY:
ENGINEERS, INC.
 915 2ND AVE.
 SEATTLE, WA 98174-1001
 A/E PROJECT NO.:
 242075
 CONSULTING A/E:
 RESPEC
 JUNEAU, AK

USCG PROJECT NO.:
 19909923
 USCG DRAWING NO.:
 19909923C102
 USCG FILENAME:
 19909923C102.DWG
 SHEET 7 OF 47

DESIGNED BY:
 MDS
 DRAWN BY:
 KL
 CHECKED BY:
 MDS

WLB MOORING & STRUCTURAL UPGRADES
 USCG BASE HONOLULU
 HONOLULU HI
 CIVIL
PARTIAL SITE PLAN

SHEET ID
BERTH G
C102



A EXISTING CURB DEMOLITION
DETAIL

B EXISTING FENDER DEMOLITION
DETAIL

C EXISTING CURB AND BOLLARD
DEMOLITION DETAIL

Plywood spill apron to capture any concrete debris generated during demolition from falling into water.

Spill apron to surround the perimeter of demolition efforts.

Overhang bracket

Spill Apron BMP

APPROVING OFFICER	DATE
TECHNICAL DIRECTOR	
BRANCH CHIEF	



4	CORRECTED FINAL DESIGN	07/30/25	DATE
3	FINAL SUBMITTAL	06/23/25	DATE
2	65% SUBMITTAL	04/18/25	DATE
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	MARK DESCRIPTION		

A/E COMPANY:
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JUNEAU, AK
907-586-2093
A/E PROJECT NO.:
242075
CONSULTING A/E:
RESPEC
JUNEAU, AK

USCG PROJECT NO.
199099232
USCG DRAWING NO.
199099232GD501
USCG FILENAME
199099232GD501.DWG
SHEET 5 OF 47

USCG FACILITY DESIGN & CONSTRUCTION CENTER Seattle
915 2ND AVE.
SEATTLE, WA 98174-1001
PROJECT ENGINEER:
SAMS, MARK
DESIGNED BY:
MDS
DRAWN BY:
KL
CHECKED BY:
MDS

WLB MOORING & STRUCTURAL UPGRADES
USCG BASE HONOLULU
HONOLULU
GENERAL
DEMOLITION DETAILS

SHEET ID
BERTH G
GD501



Description

An approved location, designated in the *Storm Water Pollution Prevention Plan (SWPPP)*, where construction equipment, vehicles, materials, and other construction-related materials are stored. Staging areas can be a significant point source for pollution, so BMPs are necessary to ensure no contaminated storm water exits the site.

Applications

- Flat areas with ample space for equipment and materials to be stored.
- Paved areas and/or land already disturbed within project boundaries.

Installation and Implementation Requirements

- Staging areas must be defined in the plans of the project's *SWPPP* and approved prior to using the area. The approved locations and layout/detailing of the staging area must be included in the *SWPPP* or included by amendment process. In the case of roadside staging areas for paving equipment, a generic layout may be provided for multiple roadside identified locations. The approved staging area plan shall designate the locations of the equipment/material to be stored within the staging area, as well as, any BMPs to be implemented for the staging area.
- BMPs must be in place prior to using the staging area.
- Drip pans can be used to catch potential leaks from idle vehicles and equipment.
- Place drip protection/pads with absorbent and impermeable materials under all vehicles and equipment with the potential to leak/spill when not in use.

Installation and Implementation Requirements *(continued)*

- Perimeter controls must be placed along the perimeter of the staging area and underneath the impermeable material, to create a berm able to contain any possible spills and/or leaks.
- Perimeter control devices installed along the perimeter of the staging area diverts storm water run-on and runoff. For sloping areas where storm water can run onto the project site, consider installing a diversion to prevent off-site storm water from entering the project site.
- Do not store materials or equipment on perimeter controls. Material and equipment must be stored away from the perimeter controls to allow access for inspection and maintenance of the controls.
 - Commonly used BMPs include:
 - Silt fences
 - Compost filter socks or berms
 - Berms
- Consider phasing construction staging areas to minimize the duration of exposed soil. Dust control must be used on all exposed soils or any construction activity generating soil. *See* section SM-19 Dust Control for more information.
- When a phase of the project is complete and the staging area for the site is no longer required, immediately initiate stabilization at the disturbed areas. Once the area is deemed stabilized, the BMP devices can be removed. *See* section EC-12 Seeding and Planting for more information.
- Install a stabilized construction entrance/exit at the entrance of the staging area to prevent tracking onto adjacent paved roads and sidewalks. *See* section SC-11 Stabilized Construction Entrance/Exit for more information.
- All storm drain inlets that may intercept sediment-laden runoff from staging areas must be protected. *See* section SC-1 Storm Drain Inlet Protection for more information.
- Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks. *See* sections SM-10 Spill Prevention and Control and SM-12 Vehicle and Equipment Maintenance for more information.
- Store paving equipment and vehicles that are idle in a designated staging area on a layer of geotextile filter fabric on top of 10 mil plastic sheeting. Place drip pads/pans under paving equipment to contain leaks and spills. Drip protection is required under asphalt hopper and roller assembly. *See* section SM-20 Paving Operations for more information.



Aerial view of a construction staging area.

Installation and Implementation Requirements *(continued)*

- Ensure that construction vehicles and equipment are not stored under tree drip lines or on top of existing tree roots. *See* section SM-17 Preservation of Existing Vegetation for more information.
- Metal (galvanized and ungalvanized) and rebar must be stored off of the ground on proper dunnage, pallet, or similar material and covered with 10 mil plastic sheeting to prevent material from coming into contact with storm water. *See* section SM-2 Material Storage and Handling for more information.
- Locate stockpiles a minimum of 50 feet, or as far as practicable, from concentrated runoff, drainage systems, or open waterbodies. Stockpiles must be entirely covered with an impermeable material and surrounded by a perimeter control device installed around the base of the pile. Staging area perimeter protection cannot be used as perimeter protection for stock/spoil piles. *See* section SM-3 Stockpile Management for more information.
- Sanitary facilities must be secured and located away from drainage systems and open waterbodies. *See* section SM-7 Sanitary Waste Management for more information.
- Waste bins must be covered by the end of each work day and emptied when they reach two-thirds capacity. *See* section SM-6 Solid Waste Management for more information.
- Hazardous materials and waste such as: creosote pipes, waste asphalt, contaminated soil and transite pipes must be properly stored and covered. *See* section SM-9 Hazardous Materials and Waste Management for more information.
- Concrete wash areas must be lined with an impervious material and disposed of in compliance with federal, state, and local standards. *See* section SM-4 Concrete Wash and Waste Management for more information.
- For shared staging areas, responsibilities must be clearly defined. If the staging area is divided by well-defined boundaries for each project, each area can be covered under its respective Notice of General Permit Coverage (NGPC)/National Pollutant Discharge Elimination System (NPDES) permit. If a staging area is shared in its entirety, a separate NGPC/NPDES permit may be obtained for the staging area.
 - All areas within a shared staging area must be accounted for and there should be no overlapping areas for which responsibilities are shared by more than 1 contractor. Consult with the Engineer for review/approval.



Store vehicles and equipment on a layer of geotextile filter fabric on top of 10 mil plastic sheeting when not being used.



Staging Area

Installation and Implementation Requirements *(continued)*

- Off-site staging areas need to be included in the project's *SWPPP* and are subject to NPDES requirements.

Considerations

- Staging area may have a limited amount of space to store vehicles and equipment due to local traffic and existing vegetation.
- Storm water run-on from a point source upgradient becomes the contractor's responsibility to manage if it enters the staging area.
- Contractor may need to implement dust control measures if staging area is not stabilized.
- Runoff flows increase on paved and graded areas. Special attention will be needed during heavier rain events. Staging areas need to be secured prior to a severe storm event.
- Staging areas must be approved before storing materials and equipment in the area.
- Additional staging areas added to the project, outside of the project limits, may require a separate NPDES permit.

What to Inspect

- Are approved staging areas identified in the project's *SWPPP*?
- Are BMPs installed prior to vehicles and equipment being stored in the staging area?
- Are there leaks and/or spills evident around construction vehicles, equipment or materials?
- Is the correct size aggregate being used in staging area for construction roads and entrances?
- Are waste bins covered when not in use?
- Are portable toilets secured to prevent tipping or knocking over?
- Is rebar and steel under cover/covered with 10 mil plastic sheeting and properly stored on dunnage, pallet, or similar material?
- Are construction vehicles stored under existing tree drip lines or on top of tree roots?
- Are vehicles tracking sediment onto public roads?
- Are there traces of run-on or runoff around the perimeter of the staging area?
- Has the contractor initiated stabilization in disturbed areas no longer required for staging?

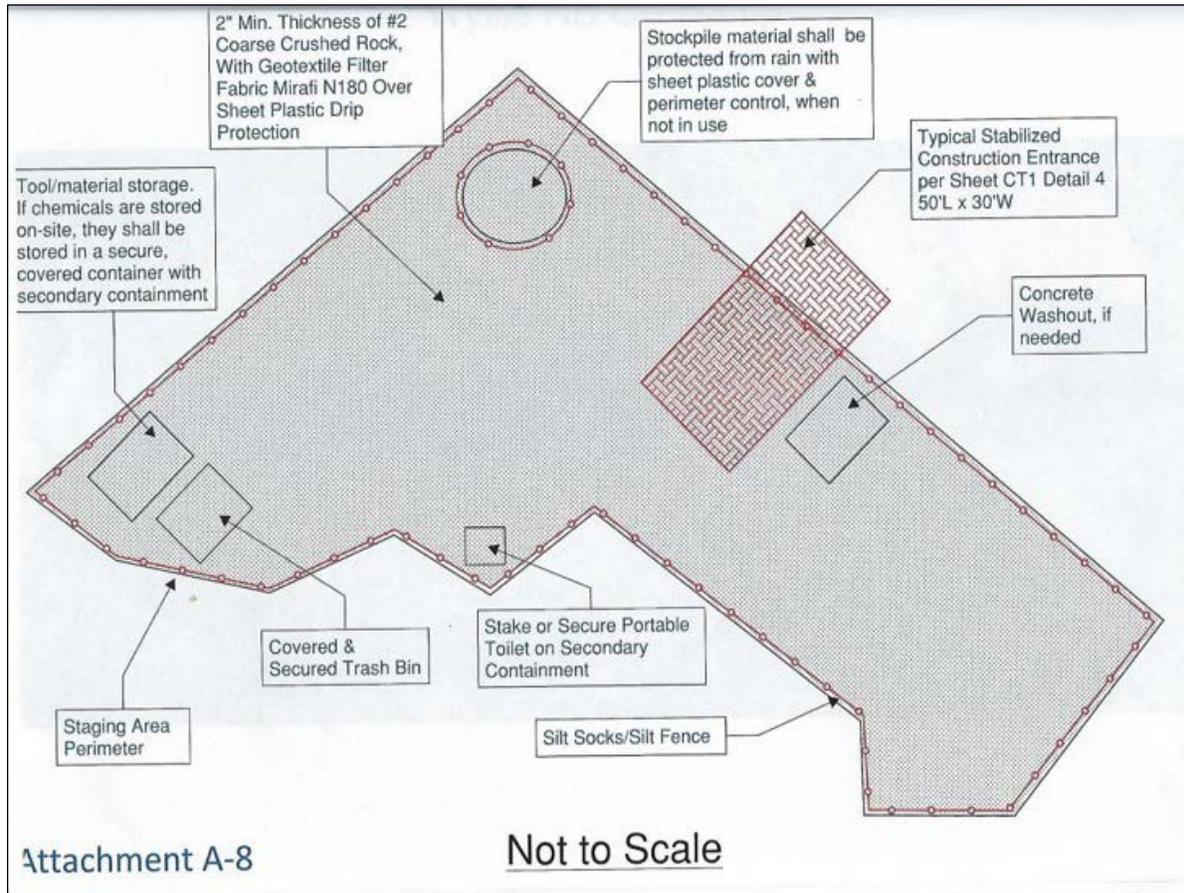


Staging Area

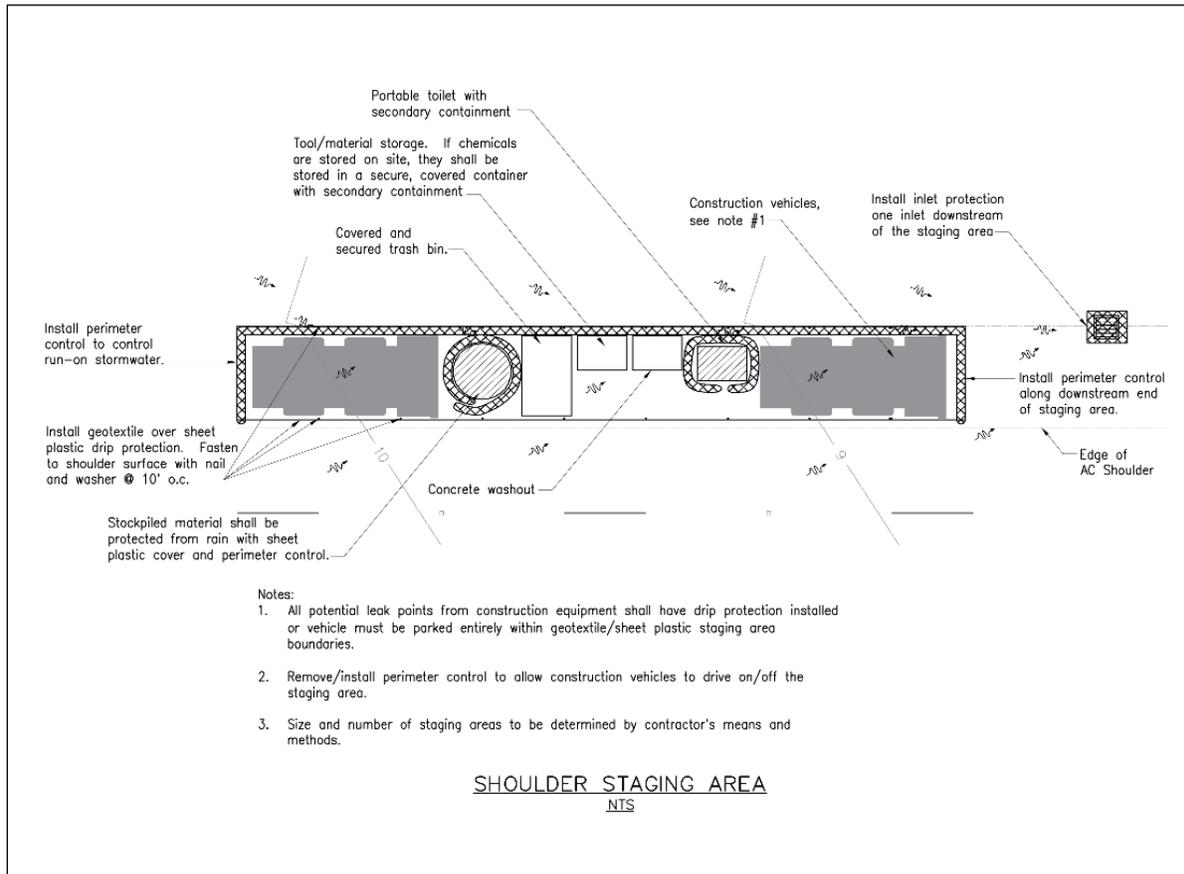
Maintenance

- Immediately clean up spills using dry cleanup methods where possible, and dispose of used materials properly.
- Clean up leaks and spills with an absorbent material. Do not clean surfaces or spills by hosing the area down.
- Provide an ample supply of readily available spill cleanup materials.
- Repair/replace plastic sheeting and/or geotextile filter fabric when torn or ripped.
- Replenish surface and construction entrance aggregate periodically.
- Repair/replace perimeter control devices that are tampered with and not functioning as designed.
- Place drip pans under idle construction vehicles.
- Adjust, repair, and/or reinstall inlet protection devices that are damaged, out of position, or not fully functional according to manufacturer's specifications.
- Regularly dispose of garbage and waste material.
- Amend the project's *SWPPP* when additional staging areas are needed or existing staging areas are no longer required.

Staging Area



Example of a typical staging area.



Example of a typical shoulder staging area.



Description

Practices and procedures to prevent or reduce the discharge of pollutants to storm water from vehicle and equipment fuel leaks or spills.

Applications

- Construction or maintenance activities involving fueling of vehicles or equipment.

Installation and Implementation Requirements

- Use off-site fueling sites when practical. Off-site fueling sites may be better equipped to service and handle spills due to multiple vehicles or pieces of equipment.
- If on-site fueling is necessary, locate designated fuel areas away from storm water run-on and runoff, and locate fueling areas at least 50 feet, or as far as practicable, from downstream drainage facilities and watercourses to prevent contamination of storm water. If impracticable, consider implementing additional BMPs or secondary containment when fueling.
- Avoid “topping-off” of fuel tanks.
- Drip pans or absorbent pads shall be used to absorb leaks or spills during fueling.



Protect on-site fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.

Installation and Implementation Requirements *(continued)*

- Fueling must be performed on a leveled area.
- Protect fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.
- Have absorbent spill cleanup materials located in fueling areas.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Promptly remove and properly dispose the absorbent materials. *See* section SM-10 Spill Prevention and Control for more information.
- Clean up spills or contaminated surfaces immediately, using dry cleanup measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge. Store hazardous materials and fluids under cover and in secondary containment. *See* section SM-9 Hazardous Materials and Waste Management for more information.
- Minimize mobile fueling of construction equipment by transporting equipment to designated areas for fueling.
- Train employees on proper fueling and cleanup procedures.
- Put fuel pods and hoses in secondary containment to prevent hoses/nozzles from leaking.
- Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in watertight containers and provide cover or secondary containment. If container is metal, cover is required.
- Containers shall be properly labeled.
- Comply with federal and state requirements regarding stationary, above ground storage tanks.
- Comply with the Spill Prevention Control Countermeasures (SPCC) requirements in 40 CFR 112 and section 311 of the Clean Water Act (CWA).



There must be drip protection under vehicles and equipment that are being refueled on-site.

What to Inspect

- Is there evidence of fuel spills or leaks on the ground?
- Are any vehicles and/or equipment leaking fuel?
- Are hoses/nozzles in secondary containment?
- Are berms and absorbent pads well-maintained and effective?

What to Inspect *(continued)*

- Is there an ample amount of spill cleanup materials on-site?
- Are hazardous fluids properly stored?

Maintenance

- Keep an ample supply of materials for fuel spill control and cleanup located on-site near fueling areas available at all times.
- Properly dispose of absorbent pads, hazardous material and contaminated soil.



Ensure that drip protection is adequate enough to capture any potential vehicle or equipment leaks.



Description

Practices and procedures to prevent or reduce the discharge of pollutants from vehicle and equipment maintenance. When vehicles and equipment need maintenance, the best option is to perform these activities off-site to avoid spills and leaks on-site. If on-site maintenance activities are necessary, they should be conducted in an approved designated area.

Applications

- Construction sites with vehicle and equipment maintenance areas.
- Construction sites where vehicle and equipment are stored when not in use.
- Construction sites where vehicle and equipment are idle, but intermittent use is occurring.

Installation and Implementation Requirements

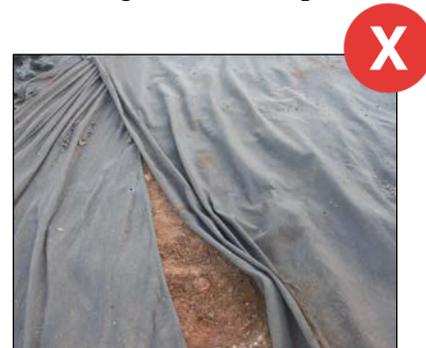
- Prevent excessive accumulation of oil and grease by keeping vehicles and equipment clean.
- Use off-site repair and maintenance facilities where practical.
- Repair oil and fluid leaks immediately.
- Immediately place a drip pan or drip pad under the vehicle once a leak is observed until repairs can be made.

Installation and Implementation Requirements *(continued)*

- Designate a leveled maintenance area away from drainage courses and inlets to prevent pollutants from entering the drainage system.
- Store vehicles and equipment that need maintenance on a layer of geotextile filter fabric on top of 10 mil plastic sheeting before conducting maintenance activities. Perimeter controls must be placed along the perimeter of the maintenance area and underneath the impermeable material, to create a berm able to contain any possible spills and/or leaks.
- Have an ample supply of readily accessible spill cleanup materials on-site, at all times.
- Use absorbent materials on small spills. Promptly remove and properly dispose of absorbent materials. Do not hose down or bury small spills. *See* section SM-10 Spill Prevention and Control for more information.
- Check vehicles and equipment regularly for leaks. Leaking vehicles and equipment shall not be allowed on-site.
- Keep maintenance areas clean and orderly to minimize oil and grease buildup.
- Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil, oil filters, greases, hydraulic and transmission fluids, cleaning solutions, antifreeze, and automotive batteries.
- Oil, fuels, fluids and lubricants should be recycled whenever possible. Do not dump on the ground or pour into storm drains.
- Properly dispose of wastes generated by vehicle/equipment maintenance activities.
- Provide employee training on proper maintenance and spill cleanup practices and procedures.



If a leak is observed, immediately place a drip pan or drip pad under the vehicle until repairs can be made.



Geotextile filter fabric must have 10 mil plastic sheeting underneath it to contain leaks and spills.

Considerations

- Off-site maintenance facility may not be easily accessible.
- Vehicle and equipment maintenance should only be used when off-site maintenance is impractical.



Vehicle and Equipment Maintenance

What to Inspect

- Are leaks and/or spills coming from vehicles and/or equipment?
- Is there evidence of oil, grease, fluids, lubricants, etc. on the ground?
- Are spill cleanup materials available on-site?
- Are vehicles and equipment properly stored on a layer of geotextile filter fabric on top of 10 mil plastic sheeting?
- Are berms properly aligned along the perimeter of the maintenance area?
- Is the maintenance area on leveled ground away from drainage courses?
- Are maintenance areas kept clean and orderly?
- Are vehicles being taken off-site for maintenance?

Maintenance

- Maintain an adequate supply of spill cleanup materials on-site.
- Remove used oils, antifreeze, grease, lubricants, etc. routinely.
- Do not allow used oils to accumulate on-site.
- Maintain adequate supplies of spill cleanup materials on-site.
- Leaking vehicles and equipment shall be repaired promptly.
- Leaks and spills shall be cleaned up immediately.
- Maintain impermeable material/plastic sheeting, geotextile filter fabric, and perimeter control to ensure proper effectiveness.



Description

Berms consisting of compost material placed perpendicular to runoff to reduce flow velocity and retain sediment and other pollutants. A fiber roll may consist of straw, flax, mulch, or other similar materials bound into a tight tubular roll.

Applications

- Along the site perimeter.
- Along the slope face and toe of slope (*See* section EC-5 Earth Dikes, Swales, and Ditches).
- Check dam in small drainage ditches (*See* section SC-3 Check Dams).
- Inlet protection for storm drains (*See* section SC-1 Storm Drain Inlet Protection).
- Surrounding base of temporary stockpiles (*See* section SM-3 Stockpile Management).
- Appropriate for small drainage areas and low surface velocity flows (less than 1 cubic feet per second (cfs)).
- Vegetative filtering system.
- Applied as a comprehensive system to storm water management.
- Used as perimeter control for disturbed/bare areas.

Installation and Implementation Requirements

- Usually located at the base of slopes, however, additional berms may be used for velocity dissipation devices mid-slope to increase erosion protection. *See* section EC-9 Slope Interceptor or Diversion Ditches/Berms for more information.
- Compost quality shall comply with all local, state, and federal requirements. Installation of a compost filter sock, which consists of a mesh tube filled with composted material, as a type of compost filter berm shall comply with the following:
 - Assemble by tying a knot at the end of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.
 - Socks shall be 8 inches in diameter, minimum.
 - If more than 1 compost filter sock is placed in a row, the compost filter socks must be overlapped, not abutted. The overlap shall be 6 inches, minimum (or in accordance with the manufacturer's recommendations), and shall be horizontal, side-by-side. The overlap shall not be vertical, top-to-bottom.
 - Compost filter socks used on concrete or other hard surfaces that make staking non-applicable should be weighed down so it does not become displaced during heavy rain/runoff.
 - Turn ends of filter sock up slope, a minimum of 3 feet, to prevent flow around ends.
 - Compost filter socks must be in continuous contact with the ground. There should be no gaps between the sock and the ground beneath it.
- Compost filter socks may also be used for areas of concentrated flow such as near, but not at or in, streams or shorelines. Compost filter socks cannot be used in-water and must be installed above the high water mark for streams/shorelines.
- Material and equipment must not be stored on top of the compost filter socks while in place. The compost filter sock must always be accessible for inspection and maintenance.



Compost filter socks must be overlapped 6 inches minimum (or in accordance with the manufacturer's recommendations), not abutted, when more than 1 compost filter sock is placed in a row.



Follow manufacturer's specifications on proper use for fiber rolls used as velocity dissipation devices on steep slopes.

Installation and Implementation Requirements *(continued)*

- When used as velocity dissipation devices on steep slopes, stake compost filter socks into a 2- to 4-inch-deep trench with a width equal to the diameter of the compost filter sock. Stakes must be driven at least 12 inches into the ground, while leaving a minimum stake height of 2 inches above the compost filter sock. Drive stakes through the center at the end of each compost filter sock and space apart 4 feet maximum on center.
- Follow manufacturer's specifications on proper use.
- At the completion of project, filter sock material, including the compost, shall be removed from the site and disposed of/reused properly. Fill and compact trenches once compost filter socks are removed.
- Material for compost berm/filter sock may be left at the site and used as a soil amendment, if approved by the Engineer. Material should be spread, not left in a clump or pile. The geotextile netting must be disposed of properly.

Considerations

- Do not install below the high water mark of streams/shorelines or in-water.
- Unsuitable for areas with concentrated runoff unless a low flow rate and small drainage area warrants use of a filter berm/sock. Compost filter socks should be installed per manufacturer's recommendations.
- Heavy vegetation must be removed to ensure close contact of compost with the ground surface.
- Difficult to move once saturated.
- Uneven terrain may restrict use of BMP.
- Heavy construction equipment and/or vehicles that run over compost filter socks can easily damage or impair the performance of the device.
- Soil may harden on the geotextile filter fabric, which will inhibit infiltration and proper effectiveness.
- Efficiency quickly decreases as sediment accumulates. Frequent maintenance is needed.
- Berms/socks cannot be staked or trenched when used on concrete and rocky surfaces.

What to Inspect

- Does the filter sock have rips or tears exposing the filter media?

What to Inspect *(continued)*

- Does the filter sock need to be trenched and staked?
- Has sediment accumulated to one-half the height of the berm? Are compost filter socks positioned in the correct orientation to effectively manage storm water? Is there evidence of rills or gullies forming under the compost berm?
- Is there vehicles or equipment stored on top of the berm?
- Are compost filter socks properly installed according to manufacturer’s specifications?

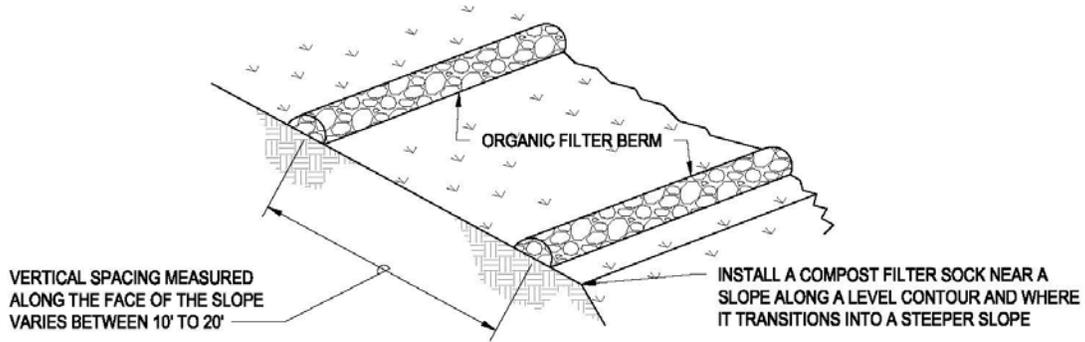
Maintenance

- Remove sediment which has accumulated to within one-half of the berm height.
- Replace disturbed or damaged areas of the berm.
- Repair/replace split, torn or slumping compost filter socks.
- Repairs to damaged compost filter socks must preserve filtration capabilities. Do not use duct tape, glue, or any material that will diminish the effectiveness of the compost filter sock.
- Maintain BMP until the disturbed area above the device is permanently stabilized.
- Reorient compost filter socks that have been disturbed.
- Clean hardened soil on geotextile filter fabric to ensure proper filtration can occur.
- Fix berms/socks that have been driven over and flattened.

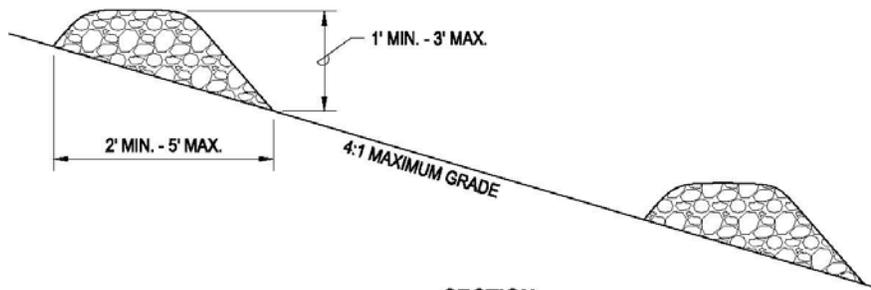


Repair/replace split, torn, or slumping compost filter socks to preserve filtration capabilities.

Compost Filter Berm/Sock



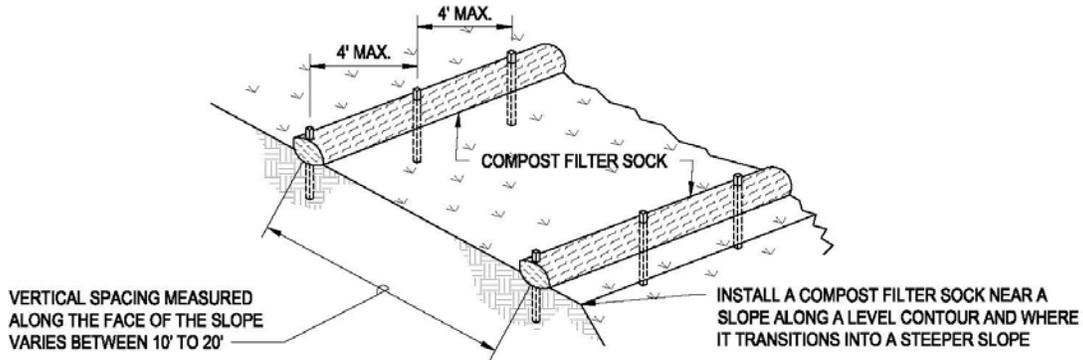
PERSPECTIVE
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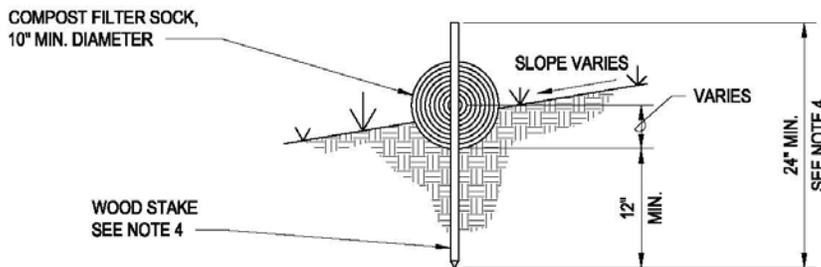
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COMPOST FILTER BERM

Compost Filter Berm/Sock



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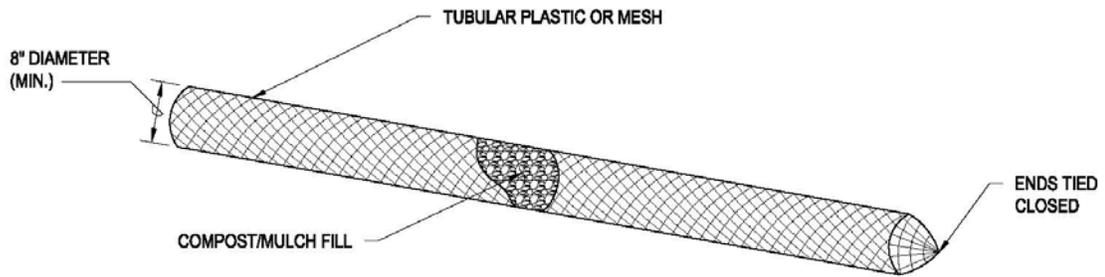
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NOTES:

1. COMPOST FILTER SOCKS SHOULD BE EITHER PREFABRICATED OR ASSEMBLED AT SITE.
2. LOCATE COMPOST FILTER SOCKS ON LEVEL CONTOURS SPACED AS FOLLOWS:
 - a. SLOPE INCLINATION OF 4:1 (H:V) OR FLATTER: COMPOST FILTER SOCKS AND/OR BERMS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 20 FT.
 - b. SLOPE INCLINATION BETWEEN 4:1 AND 2:1 (H:V): COMPOST FILTER SOCKS (USE OF BERMS NOT RECOMMENDED) SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 15 FT. (A CLOSER SPACING IS MORE EFFECTIVE).
 - c. SLOPE INCLINATION OF 2:1 (H:V) OR GREATER: COMPOST FILTER SOCKS SHOULD BE PLACED AT MAXIMUM INTERVAL OF 10 FT.
3. TURN THE ENDS OF THE COMPOST FILTER SOCKS UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE ROLL.
4. STAKE COMPOST FILTER SOCKS WITH STAKES WITH A MINIMUM LENGTH OF 14 IN. AND SPACED 4 FT. ON CENTER, OR AS RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS GREATER.
5. IF MORE THAN ONE COMPOST FILTER SOCKS IS PLACED IN A ROW, THE ROLLS SHOULD BE OVERLAPPED, NOT ABUTTED.

COMPOST FILTER BERM (FILTER SOCK)

Compost Filter Berm/Sock



COMPOST FILTER BERM (FILTER SOCK)
NOT TO SCALE



Description

Devices installed at storm drain inlets that detain large objects and sediment-laden runoff prior to entering the storm drain system. These devices are often the last treatment measure, so a layered BMP approach is crucial to mitigating sediment-laden runoff from entering the State of Hawaii Department of Transportation (HDOT) Highways MS4 or storm drainage system, including surface waters.

Applications

- All storm drain inlets, both within the project limits and beyond the project limits, that may intercept sediment-laden runoff from the construction site shall be protected prior to commencing land-disturbing activity.
- Where disturbed areas have not been stabilized.

Installation and Implementation Requirements

- Install inlet protection devices prior to upgradient land-disturbing activity.
- Inlet protection causes ponding, which is necessary to allow the sediment to settle. The storm drain inlet must not be completely blocked when public safety is of concern.
- The contractor shall monitor the weather for rainfall events and coordinate with the Engineer to adjust inlet protection to prevent hazardous conditions and flooding.
- For maximum effectiveness, minimize the demand on inlet protection devices by installing and maintaining erosion and sediment control devices upslope of the inlet.

Installation and Implementation Requirements *(continued)*

- Immediately stabilize slopes and disturbed areas that are no longer active to reduce potential runoff. Inlet protection shall only be removed once disturbed areas upgradient of the catch basin has been stabilized.
- Grated drop inlets and curb inlets/catch basins are the 2 types of inlets most present on construction sites. There are various types of BMP devices that are applicable in protecting these inlets from accepting sediment-laden runoff.



Properly installed geotextile filter fabric is placed underneath the grate and extends 6 inches past the grate on all sides.

GRATED DROP INLET (GDI)

- Installing a geotextile filter fabric under the grate to cover the insert is a common inexpensive practice to prevent sediment from entering the GDI. The fabric should be placed fully under the grate to completely shield the inlet. Allow 6 inches, minimum, of excess fabric to extend past the grate on all sides. The fabric is easily clogged by sediment. Other methods are preferred such as a witch's hat, which will facilitate drainage while filtering sediment.
- Compost filter socks or sand bags can be placed around the perimeter of the GDI, to divert and/or detain storm water before it enters the inlet. *See* section SC-6 Compost Filter Berm/Sock and section SC-8 Sandbag Barrier for more information.
- The following list below are applicable devices for GDI's:
 - Geotextile filter fabric fence.
 - Geotextile filter fabric under grate.
 - Witch's hat
 - Inbox protection.
 - Fiber roll with additional in box protection.
 - Sand bag, rock bag, or snake bag.

CURB INLET/CATCH BASIN

- Devices installed at curb inlets are in place to prevent sediment-laden runoff from entering the storm drain. An ample amount of space must be provided to allow water to pond around the inlet. This allows the sediment to settle, as the storm water slowly enters the MS4.



Properly installed curb inlet guards are placed tight to the drain opening and anchored per manufacturer's specifications.



Storm Drain Inlet Protection

Installation and Implementation Requirements *(continued)*

- Devices must extend at least 1 foot past the inlet insert on both sides, unless manufacturer's specifications differ.
- Non-destructive supporting brackets may be used to prevent inlet protection devices from falling into the curb inlet/catch basin.
- Ensure flooding of nearby properties or impeding traffic is avoided.
- Use check dams to reduce the demand of sediment-laden runoff flowing towards a curb inlet. *See* section SC-3 Check Dams for more information.
- In addition to the methods of inlet protection described above, there are other effective methods and proprietary devices, which may also be used. These are limited to drainage areas that are less than 1 acre, unless a sediment trap intercepts the runoff prior to reaching the inlet protection device.
- Other proprietary devices may be used and shall be installed per manufacturer's recommendations.

Considerations

- Short-term flooding at a protected inlet will occur but must not become a traffic or pedestrian hazard.
- Drainage area is limited to 1 acre or less.
- Straw bales shall not be used for inlet protection.
- Runoff on slopes may bypass protected inlets.
- In the event of a severe storm event where flooding conditions will likely be an issue; the contractor may be directed by the Engineer to remove inlet protection. The inlet protection must be reinstalled immediately following the event.
- Geotextile filter fabric used to protect GDI inserts must be cleaned or replaced often due to the limited capacity of sediment the device can hold.
- Inlet protection devices can be tedious to maintain and become ineffective when sediment accumulates. Regular maintenance is required.
- Inlet protection is the last line of defense, which requires proper erosion and sediment controls in place upgradient.
- Inlet protection BMPs that completely block the insert will cause ponding that could create a traffic and pedestrian hazard or cause damage to nearby properties.
- Some GDI grates require heavy machinery to remove the grate to install geotextile filter fabric.

What to Inspect

- Is proper contact made against curb and gutter to prevent water from undercutting or bypassing inlet protection?
- Can sediment enter catch basin from the top or backside of the structure?
- Is sediment accumulated in front or inside of the inlet protection?
- Is the catch basin insert installed properly and being maintained per manufacturers guidelines?
- Is BMP falling into the inlet?
- Does sediment need to be removed?
- Are there rips/tears in BMP that will allow sediment to bypass it?
- Are compost filter socks damaged with rips/tears that expose the compost media?
- Is there evidence of sediment settling in front of the storm drain following a rain event?

Maintenance

- Routine maintenance should be initiated the same day the deficiency is identified and completed by the end of the same business day.
- Installation of a new erosion or sediment control device or a significant repair to a device shall be completed within 7 calendar days.
- Immediately replace clogged geotextile filter fabric or stone filters.
- Devices must be inspected, and all accumulated sediment removed before and after each rainfall event.
- During prolonged rainfall events, remove accumulated sediment when depth reaches one-half of the filter height or one-half of the sediment trap depth.
- Remove inlet protection only after stabilization of upstream soils and sweeping of streets is completed. Properly dispose of trapped sediment.
- Clean, remove, or replace protection measures as sediment accumulates, filter becomes clogged, and/or performance is compromised.
- When there is evidence of sediment accumulation adjacent to the inlet protection measures, remove deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not possible.



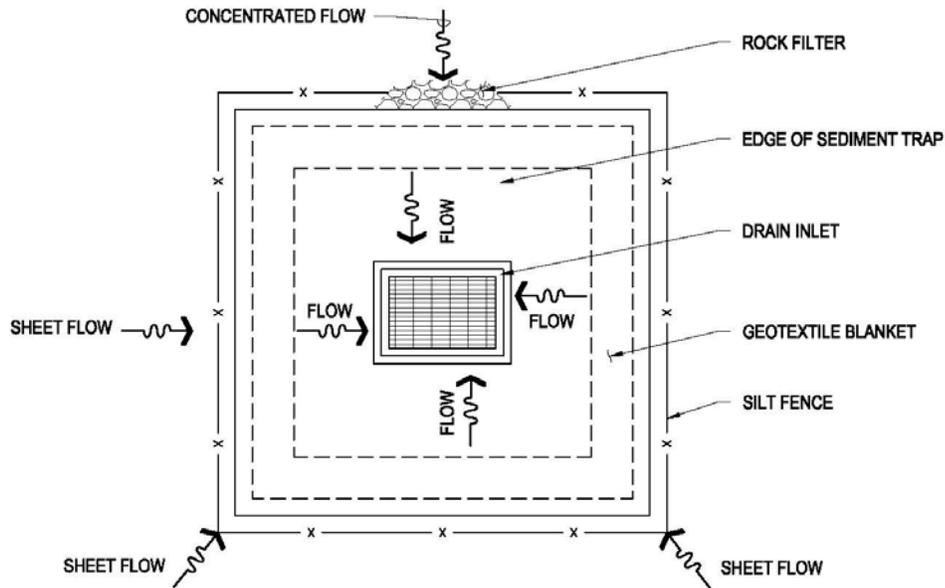
If inlet protection BMPs are falling into the inlet, they must be pulled out and repositioned, per manufacturer's specifications.



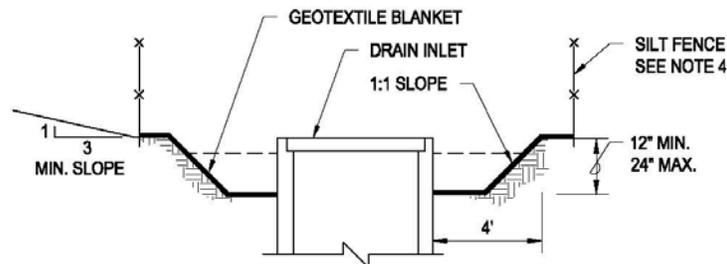
Storm Drain Inlet Protection

Maintenance *(continued)*

- Devices that fall into inlets must be pulled out and repositioned. Devices must be installed per the manufacturer's specifications and procedures for proper effectiveness.
- Address devices experiencing flow bypasses over, underneath, or around the sides of the BMP.
- Regularly maintain inlet protection devices to abide by manufacturer's specifications.



PLAN
NOT TO SCALE



SECTION
NOT TO SCALE

NOTE:

1. FOR USE IN CLEARED AND GRUBBED AND IN GRADED AREAS.
2. FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 (L:W) RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SIZE EXCAVATED TRAP TO PROVIDE A MINIMUM STORAGE CAPACITY CALCULATED AT THE RATE 67 YD³/ACRE OF DRAINAGE AREA.
4. REFER TO BMP SC-7, SILT FENCE OR FILTER FABRIC FENCE.

EXCAVATED DROP INLET SEDIMENT TRAP



Description

Practices and procedures to reduce the discharge of pollutants from construction and demolition (C&D) waste from entering the drainage system or adjacent waterbodies.

Applications

- Construction projects generating non-hazardous solid wastes from C&D activities. These wastes include C&D waste, inert fill material, litter and recycle/reuse material.
 - C&D wastes include materials originating from the construction, demolition, and repair of roads, buildings, or other structures.
 - Inert fill materials are defined as earth, soils, rocks, rock-like material, such as cured asphalt, brick, and clean concrete less than 8 inches in diameter, except as specified by a licensed Engineer with no exposed steel reinforced rod. The inert fill material shall not contain vegetation, organic material, or other solid waste. It shall not be contaminated with asbestos or lead-based paint. In addition, inert fill materials do not decompose or produce leachate or products harmful to the environment.

Installation and Implementation Requirements

- Separate contaminated cleanup materials from C&D wastes. Contamination may be from hazardous substances, friable asbestos, waste paint, solvents, sealers, or adhesives.

Installation and Implementation Requirements *(continued)*

- Dispose of waste in designated waste containers.
- Solid waste bins must be watertight and placed away from drainage facilities and open bodies of water.
- Most C&D wastes can be reused or salvaged for recycling. Inert fill materials shall not be mixed with other C&D waste.
- Solid waste is generally any material that leaves a project that is no longer usable on the project. If any material is intended to be characterized as inert fill or soil for reuse, the material shall be tested and determined clean.
- Ensure inert fill material does not contain vegetation, organic material, or other solid waste.
- The Department of Health, Hazard Evaluation and Emergency Response Office (HEER) refers to *Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material*, to define "acceptable fill material" as:
 - Natural materials consisting of soil, clay, sand, volcanic cinder and ash, and rock; or a mixture/combination of such materials.
 - C&D materials exclusive of soil that are known or tested to be free of hazardous substances.
- The fill determination process, defined by HEER, is to determine if proposed fill material meets the definition of acceptable fill material. Options to complete the fill determination process include:
 - An environmental due diligence review of the fill source property that concludes there is no evidence of past releases that could pose an environmental hazard or contain chemical contaminants above applicable State of Hawaii Department of Health (DOH) Tier 1 Environmental Action Levels (EALs).
 - A fill material characterization report that summarizes representative analytical data for the proposed fill material from the fill source operator, fill importer, or fill exporter.
- The contractor shall obtain approval from the Engineer to take any material off-site from an HDOT construction site.
- Provide waste containers of sufficient size and number to contain construction and domestic waste. Dumpsters must be watertight and securely lidded. Roll off containers must be watertight and have a cover to keep rain out and prevent loss of waste during windy conditions.



Waste containers must be covered with an impermeable material at the end of the day and when it is not in use.

Installation and Implementation Requirements *(continued)*

- Waste containers may be covered with 10 mil plastic sheeting/Visqueen, tarpaulin, manufactured lid, or other impermeable material.
- Waste containers shall meet all local and state solid waste management regulations.
- Littering on-site is prohibited.
- Ensure construction waste is collected, removed, and disposed of only at authorized disposal areas. Any site not contiguous with the project site may need a permit to receive solid waste. This includes any site or facility that receives solid waste, landowners who want to accept and process solid waste, and contractors who have to take solid waste to their Baseyard.
- The contractor's supervisory personnel shall be instructed regarding the correct practices for waste disposal. Post notices detailing these practices in the office trailer. The contractor shall ensure that these practices are followed.
- Follow all contract requirements regarding handling and disposal of solid waste.
- Fill out the *Solid Waste Disclosure Form for Construction Sites* at <https://health.hawaii.gov/shwb/sw-permits/>. Inform HDOT of disposal destinations and obtain all permits/approvals relating to stockpiling and disposal of material.
- Do not allow containers to overflow. Plan for waste and recyclable materials to be collected weekly or when containers are two-thirds full, whichever is sooner.
- Minimize production of solid waste materials wherever possible.
- It is highly recommended to reuse C&D waste when possible. For criteria for reuse, refer to DOH Tier 1 EALs for unrestricted land use. Refer to DOH *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater* for more information on EALs.
- Consideration of soil that exceeds Tier 1 EALs for unrestricted land use, but meets the DOH environmental action levels for commercial use (Refer to DOH *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*, Appendix 1, Table I-2) for off-site reuse at such sites must be approved by HEER in consultation with the State of Hawaii Department of Health, Solid and Hazardous Waste Branch (SHWB).
- Notify the Resident/Construction Engineer of any illegal connections, illicit discharges, or illegal dumping not generated by the contractor. Fill out the *Report a Violation Form* at website – <https://www.stormwaterhawaii.com/report-a-violation/> at the time of discovery.



Water is able to get into uncovered waste containers, potentially leading to leaking. Windy conditions may also cause loss of waste from waste containers.

Considerations

- Must sort waste material accordingly.
- Some types of solid waste can easily be washed away by storm water if not properly disposed of.
- The Engineer may reject imported fill from sources known to contain hazardous material.
- The import of fill material from a source that has not been evaluated could inadvertently recontaminate a remediated property, and may be considered illegal dumping. Contaminated fill material can also pose direct exposure hazards to workers and the public.
- Understanding the source of the fill material and the potential for contamination is very important.
- Construction vehicles may be necessary to put C&D waste in the correct bin.
- Construction personnel should not hose out containers on-site. Leave dumpster cleaning to the trash hauling contractor.

What to Inspect

- Are waste containers properly covered?
- Do waste containers exceed two-thirds capacity?
- Is there evidence of leaks or spills around waste containers?
- Is site neat and free of litter?
- Is waste being separated and placed in the appropriate bin?
- Are waste bins located away from drainage facilities, inlets, and open bodies of water?
- Is there evidence of illegal dumping on-site?
- Is trash removed regularly?



Solid waste should be removed regularly so waste containers do not exceed two-thirds capacity.

Maintenance

- Schedule solid waste collection regularly.
- Empty waste containers when they are two-thirds full.
- Schedule recycling activities based on construction/demolition phases.
- Do not allow containers to overflow.



Solid Waste Management

Maintenance (*continued*)

- Repair/replace leaking or damaged dumpsters.
- Clean up site and dispose of waste in designated waste containers by the end of each work day.
- Keep disposal receipts and provide a copy to HDOT to document that the waste is disposed of at the facility permitted on the *Solid Waste Disclosure Form for Construction Sites*.
- Solid waste shall be taken directly from the project site to the facility permitted on the *Solid Waste Disclosure Form for Construction Sites*.

Concrete Wash and Waste Management



Description

Practices and procedures to manage concrete/cementitious products, washout, and waste to prevent discharges to the ground, the drainage system, or adjacent waterbodies.

Applications

- Projects involving the use of concrete/cementitious products as construction materials.
- Demolition activities generating dust and debris.
- On-site wash areas used for concrete-coated vehicles or equipment.
- Activities such as sawcutting and grinding which result in the formation of slurries containing Portland cement.
- Activities generating fines from sawcutting, grinding, and demolition.

Concrete Wash and Waste Management

Table SM-4.1 Commonly used cementitious products.

Commonly Used Cementitious Products
<ul style="list-style-type: none"> • Concrete • Mortar • Plaster • Stucco • Grout • Cement-Treated Base (CTB)

Installation and Implementation Requirements

- Properly store cement-based materials under cover to prevent contact with storm water. The materials can be classified as waste if improperly stored.
- Designate areas for concrete wash and washout a minimum of 50 feet away, if practicable, from storm drain inlets, open drainage facilities, and waterbodies. If impracticable, per Hawaii Administrative Rules (HAR) Title 11, Chapter 55, Appendix C, 5.1.2.1.1.2, other measures, such as double sediment control (e.g., double perimeter control), must be employed to prevent wash water/waste concrete from reaching the storm drain inlets, open drainage facilities, and waterbodies.
- Avoid mixing excess concrete, if possible. Discard excess concrete in the designated area.
- Disposal of concrete washout via percolation is prohibited. Wash concrete-coated vehicles or equipment in the designated wash area or off-site.
- The designated concrete washout area shall be a temporary pit (below grade), a level bermed area (above grade), or a commercially available system approved to capture concrete wash water.
- The washout should be sufficiently sized so that no overflow can occur due to inadequate sizing or precipitation.
- The washout area shall be lined with an impermeable material (i.e., plastic sheeting, Visqueen, polypropylene, etc.) to prevent seepage of washout into the ground. If plastic is used, it must be a minimum of 10 mil thick. The lining shall be seamless.



Concrete washout area must be lined with an impermeable material. Secondary containment under washout catches any leaks or splashes from the washout area.

Concrete Wash and Waste Management

Installation and Implementation Requirements *(continued)*

- Allow wash water to evaporate or contain the washout in an approved concrete washout system. Provide a minimum freeboard (height above the water mark) of 4 inches for concrete washouts to account for rain events. Washouts must be changed or not used after reaching 75% capacity or 4-inch freeboard, whichever is more stringent.
- If secondary containment is placed under the washout (recommended), it should be bermed under the plastic sheeting to create a secondary pooling area to catch any leaks or splashes.
- Waste concrete shall not be allowed to harden on the bare ground and shall be removed while wet. Materials from the contractor's spill kit can be used to clean up waste concrete.
- Break up and store hardened concrete in the designated area.
- Saw cut slurry shall be removed from the site by vacuuming.
- Provide storm drain inlet protection during sawcutting operations.
- When placing concrete in water environments or tremie pours and drill shafts, any water which is displaced or in contact with wet concrete, mortar, or grout is considered contaminated/concrete impacted.
 - Remove concrete impacted water to a sealed containment area where it cannot contact or percolate into the ground. Holding tanks can be used where water is treated pending release/removal and concrete waste collected for disposal. If a pit is used, it must be sealed against possible leaks to the ground until the water evaporates. Overlapped plastic sheeting in the pit is not permitted.
 - Concrete placement in drill shafts often result in water displacement and requires an over pour of concrete in the shaft. Displaced water must be considered contaminated/concrete impacted and treated as you would above. Any over pour of concrete in contact with the ground must be cleaned up while wet and placed in containment. Plastic sheeting lined pit areas at the drill shaft may also be constructed to catch over pour if adhered to the drill shaft.
- Do not allow concrete liquid wastes onto the ground, into the storm drainage systems, or into waterbodies.



Concrete washouts must be changed or not used after reaching 75% capacity or 4-inch freeboard, whichever is more stringent. Hardened concrete should be removed frequently to avoid overcapacity of washout area.



Concrete Wash and Waste Management

Installation and Implementation Requirements *(continued)*

- Collect and properly dispose of all concrete waste material at a HDOT approved solid waste permitted facility. Dispose of liquid and solid concrete wastes in accordance with solid waste regulations and HDOT policy, as well as other applicable federal, state, and local regulations.
- Provide concrete waste management training for employees and contractors.

Considerations

- Off-site concrete wash areas may be impracticable.
- Locating concrete washout areas a minimum of 50 feet away from drainage systems and open waterbodies may not be practicable.
- May need to allow washout to evaporate.
- Constructing washout areas may not be practicable. Manufactured concrete washout bins may be the only option.
- Rainwater can cause uncovered washout pits and containers to overflow.

What to Inspect

- Has the concrete washout been damaged?
- Is liner a continuous and seamless piece?
- Is the concrete washout area exceeding 75% capacity limits or minimum freeboard of 4 inches?
- Are leaks observed from the designated concrete washout area?
- Is there evidence of concrete waste on ground?
- Are contractors implementing proper concrete waste management measures?

Maintenance

- Regularly remove and dispose of hardened concrete in accordance with solid waste regulations and HDOT policy.
- Remove accumulated concrete washout materials when it reaches 75% capacity or exceeds the minimum 4-inch freeboard requirement.
- Cover temporary concrete washout, when not in use and at the end of the work day, to avoid overflow.

Concrete Wash and Waste Management

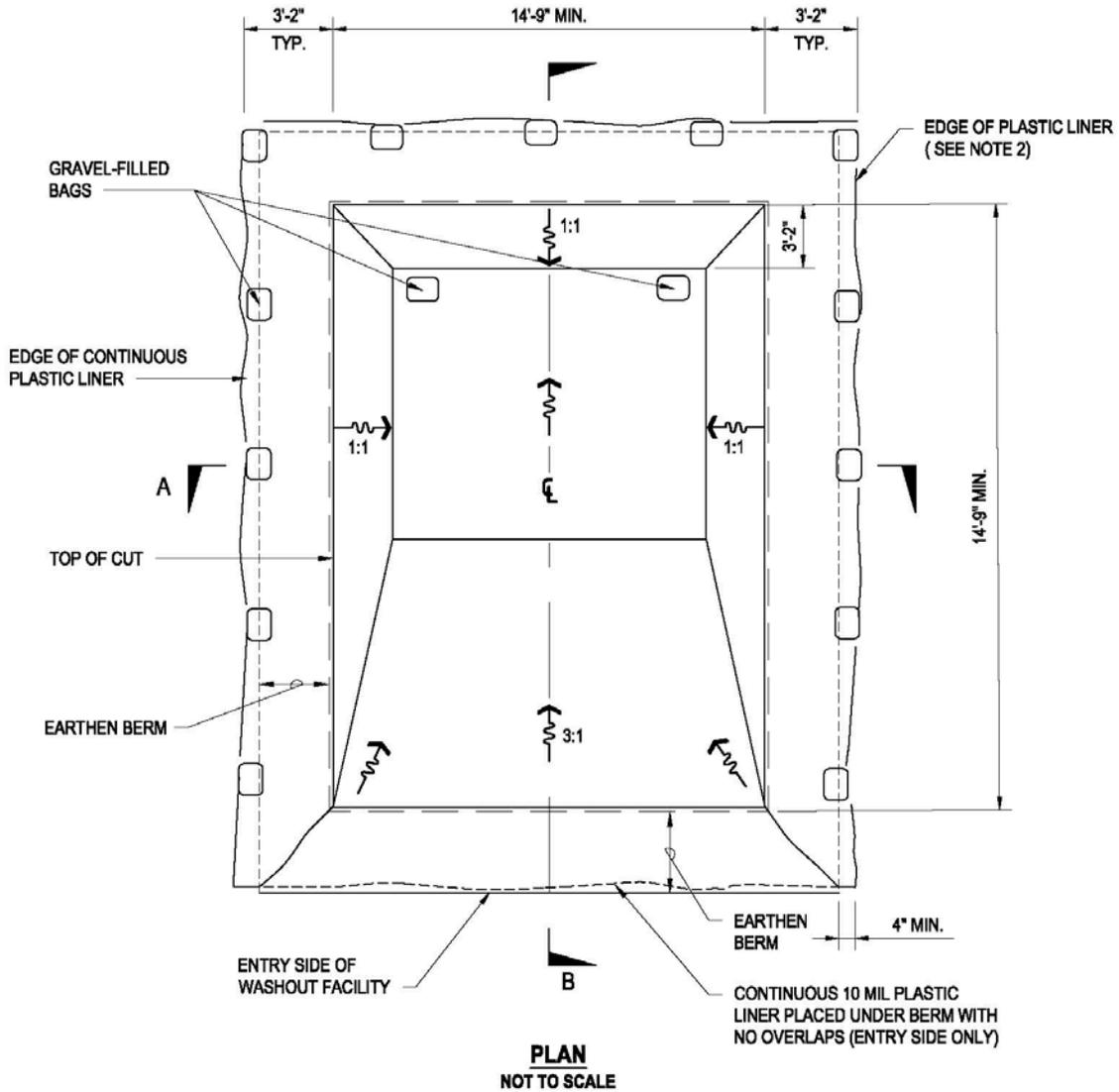
Maintenance *(continued)*

- Inspect concrete washout facilities daily and after heavy rains. Replace lining if damaged (i.e., torn, brittle, uv-degraded) before use.
- Immediately clean up concrete waste on bare ground or paved areas before it hardens.
- Vacuum concrete dust and slurry during and immediately after sawcutting activities with proper equipment to prevent/minimize concrete stains. Hosing or washing the area is not allowed.
- Sweep up debris when concrete work is completed for the day.



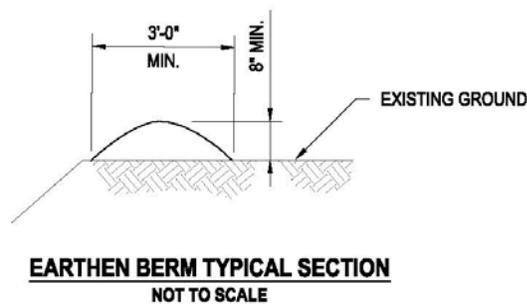
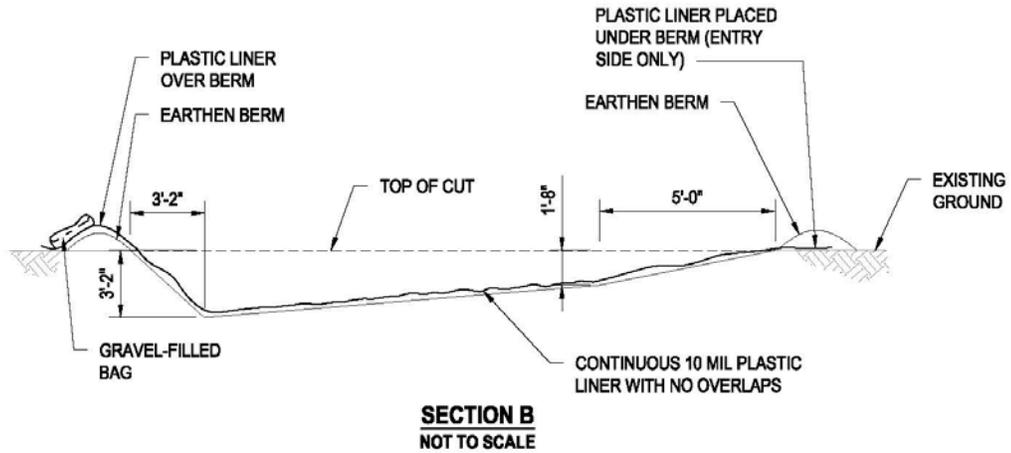
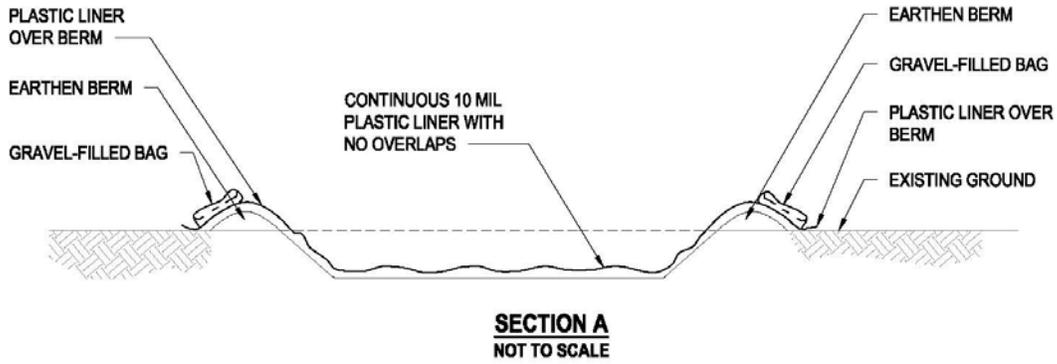
Clean up concrete waste before it hardens and sweep up debris when concrete work is completed for the day.

Concrete Wash and Waste Management

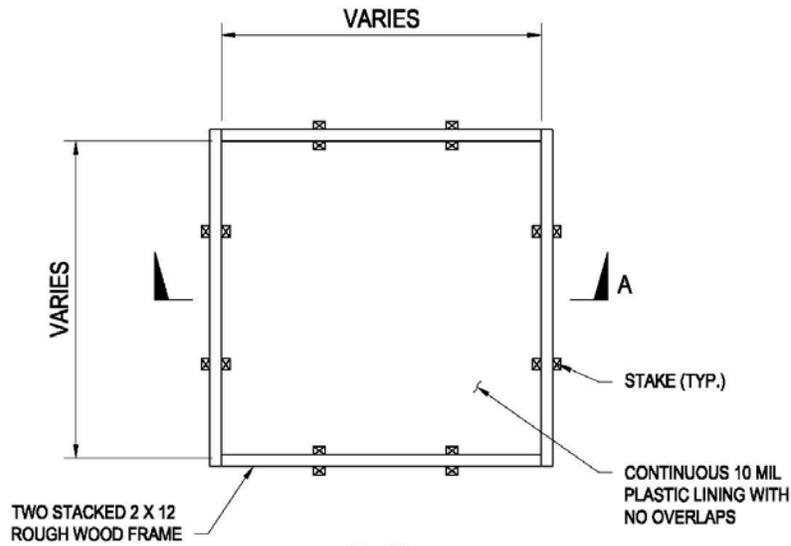


CONCRETE WASHOUT FACILITY (BELOW GRADE)

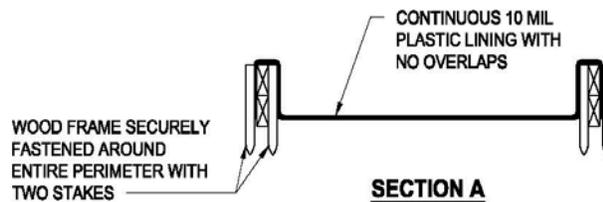
Concrete Wash and Waste Management



Concrete Wash and Waste Management



PLAN
NOT TO SCALE

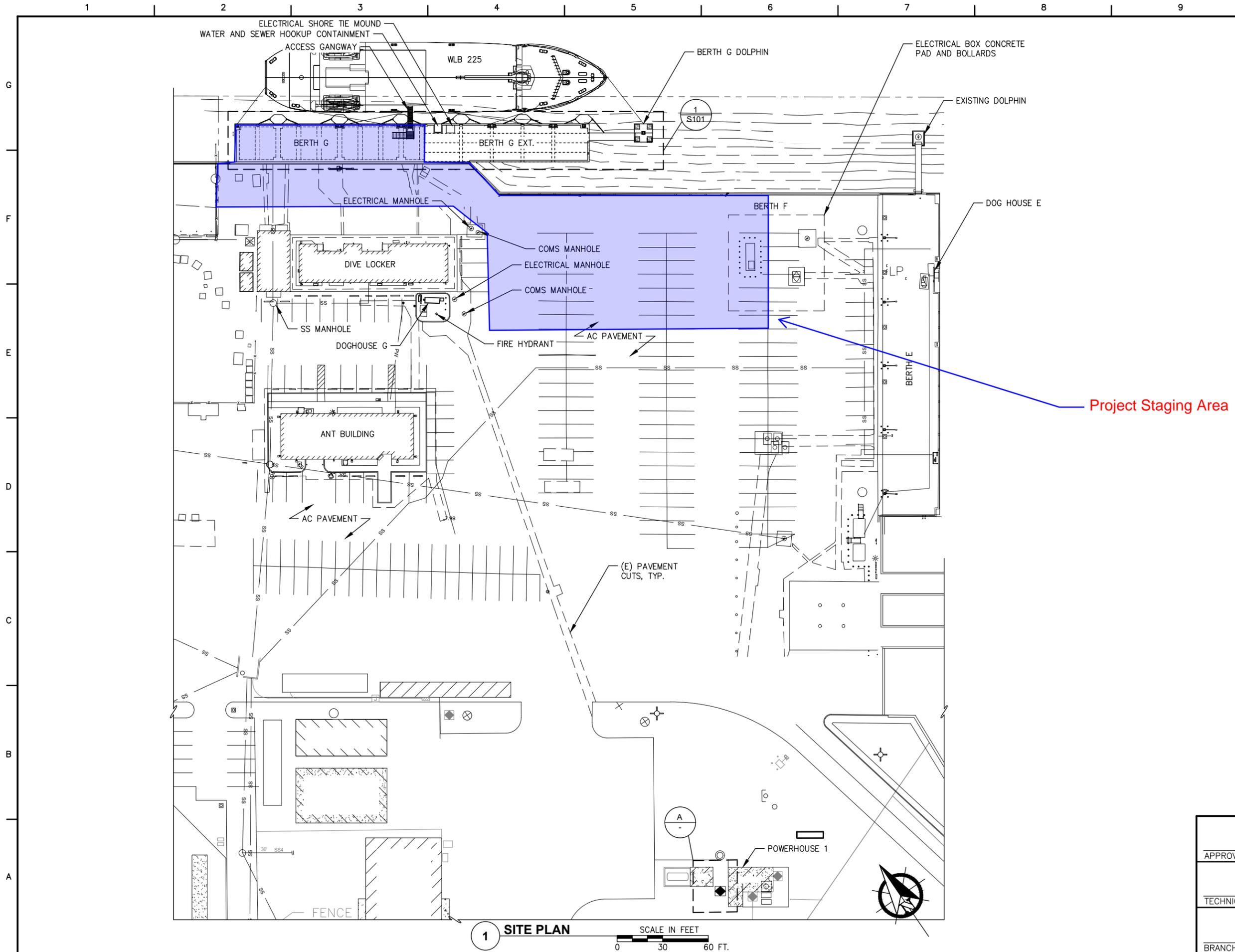


SECTION A
NOT TO SCALE

WASH AREA (ABOVE GRADE)

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE SIZE OF THE CONCRETE WASHOUT SHALL BE DETERMINED BY THE ANTICIPATED AMOUNT OF CONCRETE WASTE TO BE STORED.
3. THE PLASTIC LINING MUST BE A CONTINUOUS SHEET WITH NO OVERLAPS.

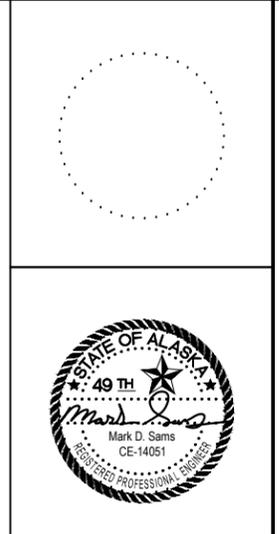


G
F
E
D
C
B
A

ELECTRICAL SHORE TIE MOUND
WATER AND SEWER HOOKUP CONTAINMENT
ACCESS GANGWAY
WLB 225
BERTH G DOLPHIN
ELECTRICAL BOX CONCRETE PAD AND BOLLARDS
EXISTING DOLPHIN
BERTH G
BERTH G EXT.
1 S101
ELECTRICAL MANHOLE
BERTH F
DOG HOUSE E
DIVE LOCKER
COMS MANHOLE
ELECTRICAL MANHOLE
COMS MANHOLE
SS MANHOLE
DOGHOUSE G
FIRE HYDRANT
AC PAVEMENT
ANT BUILDING
AC PAVEMENT
(E) PAVEMENT CUTS, TYP.
POWERHOUSE 1
FENCE

Project Staging Area

1 SITE PLAN
SCALE IN FEET
0 30 60 FT.



MARK DESCRIPTION	DATE	SCALE: AS SHOWN
4 CORRECTED FINAL DESIGN	07/30/25	
3 FINAL SUBMITTAL	06/23/25	
2 65% SUBMITTAL	04/18/25	
1 35% SUBMITTAL	11/18/24	

A/E COMPANY:
A/E ENGINEERS, INC.
JUNEAU, AK
907-586-2093
A/E PROJECT NO.:
242075
CONSULTING A/E:
RESPEC
JUNEAU, AK

USCG FACILITY DESIGN & CONSTRUCTION CENTER Seattle
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SEATTLE, WA 98174-1001
PROJECT ENGINEER:
SAMS, MARK
DESIGNED BY:
MDS
DRAWN BY:
KL
CHECKED BY:
MDS

USCG PROJECT NO.
19909232
USCG DRAWING NO.
19909232C101
USCG FILENAME
19909232C101.DWG
SHEET 6 OF 47

WLB MOORING & STRUCTURAL UPGRADES
USCG BASE HONOLULU
HONOLULU HI
CIVIL
SITE PLAN

APPROVING OFFICER _____ DATE _____
TECHNICAL DIRECTOR _____
BRANCH CHIEF _____

SHEET ID
BERTH G
C101

Spill Prevention, Control and Countermeasures Plan

WLB Mooring & Structural Pier Upgrades- Berth G Honolulu, HI



Prepared By:

Duwamish-Pacific Joint Venture
7421 5th Avenue South
Seattle, WA 98108

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1.0 Objective

This Spill Prevention, Control and Countermeasures Plan (Spill Plan) has been developed specifically for the WLB Mooring & Structural Pier Upgrades- Berth G Project. The purpose of the spill plan is to protect human health and the environment from the spill and release of oil and other hazardous materials and detail the applicable notification, response, and reporting procedures in the event of a spill or release.

The Duwamish-Pacific Joint Venture (DPJV) will update this plan throughout the project, as necessary, to ensure the written plan reflects actual site conditions and practices.

2.0 Project Summary

2.1 Scope of Work

The purpose of WLB Mooring & Structural Upgrades- Berth G project is to extend the existing Berth G at the U.S. Coast Guard (USCG) Base Honolulu to accommodate the anticipated return of a second 225' Seagoing Buoy Tender (WLB). The existing Berth G fixed pier does not have the capacity to support the larger WLB's, so this project will provide the needed facility size for the longer and larger vessels.

The scope of work associated with this project will consist of the installation of an expanded pile-supported pier, extending approximately 110' to the east of the existing Berth G. Work will also include demolition of an existing floating pier, the installation of a mooring dolphin and other updated mooring appurtenances and the installation of new mechanical and electrical utilities.

2.2 Site Description & Layout

Work under this project will occur within USCG Base Honolulu, located on Sand Island in Honolulu Harbor. Specifically, work will be conducted at the existing Berth G.

A preliminary site layout map has been provided within this plan as Attachment A. This site map shall be updated throughout the project such that the map reflects the actual site layout.

3.0 Responsible Personnel & Emergency Contacts

The name, title, and contact information for all DPJV project management personnel have been provided in Table 1, below:

Name	Title	Phone No.	Email
Stewart Willis	Project Manager	(253) 549-3257	stewartw@duwamishservices.com
Shane Hautanen	Quality Control Manager / Spill Prevention Manager	(907) 231-1915	shaneh@pacificpile.com
Dan Westby	Superintendent	(206) 702-3679	danw@pacificpile.com
TBD	Project Engineer	TBD	TBD

Table 1- Duwamish-Pacific Joint Venture Emergency Contacts

DPJV’s Quality Control Manager, Shane Hautanen, will be the designated Spill Prevention Manager throughout the performance of the project responsible for enacting this plan in the event of a spill or release of other hazardous materials.

4.0 Notification & Reporting Procedures

4.1 Notification Requirements

In the event of the release of hazardous materials, the Spill Prevention Manager or Superintendent will notify all applicable State and/or Federal spill response contacts outlined in Table 2, below, informing the departments about any discharge or release of hazardous materials to the waters of the state or the land.

Type of Spill	Reporting Requirements	Spill Reporting Contacts
Release of hazardous substance to land or water.	<u>Report Immediately</u>	Hawaii State Emergency Response Commission (808) 586-4249 <u>After hours number:</u> (808) 236-8200 (ask to speak with a State On-Scene Coordinator)
		Local Emergency Planning Committee- Honolulu County (808) 723-8960

		<p>National Response Center (800) 424-8802</p> <p>Call 911 if there is an immediate threat to health or human safety posed by the release.</p>
--	--	--

Table 2- State & Federal Spill Notification Contacts

DPJV’s Spill Prevention Manager will be designated as the emergency response lead in the event of a spill or release of hazardous materials. This individual will report the event and interact with the local emergency response providers, if necessary.

While Hawaii State regulations outline that formal notification to the contacts listed in Table 2, above, are only required if the release exceeds a Reportable Quantity, DPJV will take the approach of immediate notification upon the spill or release of any quantity of hazardous material.

As the majority of the hazardous materials anticipated to be present on site (See Table 3, below) are oil/petroleum-based products, which have the potential to create a visible film/sheen on water and/or has the potential to escape into state waters, any spill or release will require reporting, regardless of the amount spilled.

In addition to the above contacts, the following USCG individuals will also be notified in the event of a spill or release of hazardous materials.

- 1) TBD
USCG On-Site Inspector

- 2) Edward Wieland
USCG Contracting Officer
edward.a.wieland@uscg.mil
(757) 667-1120

- 3) LCDR Elizabeth Simione
USCG Base Honolulu Facilities Engineer
Elizabeth.m.simione@uscg.mil

4.2 Reporting Procedures

The Spill Prevention Manager will notify all applicable State/Federal spill response contacts from the table in the above section, informing the various departments about a discharge

or release of a hazardous substance to waters of the state or to land. This initial verbal notice will occur as soon as possible following the release of a hazardous substance.

The following specific information is required when reporting the release of a hazardous substance. To the best of your ability, be ready with the following information when making initial verbal notification:

- Name and telephone number.
- Name of hazardous substance spilled.
- Approximate quantity spilled.
- Location of the spill.
- Date and time of the spill.
- Description of how the spill occurred.
- Immediate danger or threat posed by the release.
- Contact information for the responsible party.
- Measures taken or proposed measures to be taken to clean up the spill.
- Any known injuries resulting from the exposure.
- Other county, state, or federal officials that were also notified.

As soon as possible, but within 30 days of the release of a hazardous substance, a written follow-up notification will be provided. A copy of the Hawaii Hazardous Substance Written Follow-up Notification Form has been included within Attachment B of this plan.

5.0 Hazardous Materials Control

5.1 Locations & Estimated Quantities of Hazardous Materials

Table 3, below, outlines the type, quantity and location of hazardous materials which are anticipated to be on site throughout the execution of the project.

Hazardous Material	Intended Use	Estimated Quantity	Location	Secondary Containment
Gasoline	Work Skiff Fuel, Vehicle Fuel, Misc. Small Tool Fuel	25 Gallons	Slip tanks in project vehicles or within tools connex located in project staging area.	Safety Cans Collapsible berm or equivalent.
Diesel	Heavy Equipment Fuel	2,000 Gallons	Within on-site equipment and in double-walled fuel tank located in project staging area	Double-walled fuel tank. Equipment will be inspected for leaks daily.

Motor Oil	Motor Oil for Heavy Machinery	25 Gallons	Within on-site equipment or within tools connex located in project staging area.	Equipment will be inspected for leaks daily. Collapsible berm, or equivalent.
Biodegradable Hydraulic Fluid	Hydraulic Fluid for Heavy Machinery	250 Gallons	Within on-site equipment.	N/A Equipment will be inspected for leaks daily.
Antifreeze/Engine Coolant	Engine Coolant	25 Gallons	Within on-site equipment.	N/A Equipment will be inspected for leaks daily.
Paints, Solvents, etc.	Miscellaneous	5 Gallons	Within tools connex located at project staging area.	Collapsible berm, or equivalent.

Table 3- Type, Location & Amount of Anticipated Hazardous Materials

5.2 Likelihood for Release

The likelihood of a large release of hazardous materials is considered low due to the minimal quantities of oil, fuel, and other hazardous materials that are anticipated to be present on site. The two most likely scenarios for a release would be related to fueling or maintenance or heavy equipment or equipment failure (i.e. hydraulic hose rupture).

DPJV will take all appropriate measures to prevent spills during the transfer of fuel or other hazardous materials. As illustrated on the Site Layout Map included within Attachment A, a designated equipment fueling and maintenance area will be established, located at least 50' away from the water and any drains. Secondary containment and spill prevention measures, such as drip pans and/or oil absorbent pads and booms will be utilized when maintenance, fueling or repair of heavy equipment is performed on site.

Equipment failure is considered the second most likely scenario for a spill. All equipment will be inspected daily for leaks following the procedures outlined within Section 5.5 of this plan. Should equipment failure occur and cause a spill or discharge, the discharged amount would be relatively small. A fully stocked spill kit shall be located adjacent to all areas of active work should a spill occur as a result of equipment failure or the active work.

In accordance with the anticipated requirements of the project's Section 401 Water Quality Certification, DPJV will perform regular water quality monitoring throughout the duration of in-water work associated with the project. In addition to monitoring standard water quality parameters (pH, Turbidity, TSS), DPVJ will continually monitor water quality for the

presence of a sheen throughout the in-water construction process. Sheen will be reported and cleaned up immediately, if encountered.

5.3 Safety Data Sheets

Safety Data Sheets (SDS) will be available for all hazardous materials anticipated to be on site, as identified in Table 3, as well as other common hazardous materials.

SDSs will be available within a prominently labeled and brightly colored notebook within the project's on-site field office. SDSs will be available to all employees for review during the work shift.

5.4 Container Labeling

All chemicals or hazardous materials containers present on site will have proper container labeling per the Hazard Communication Standards to ensure that workers are aware of the chemicals that they are exposed to.

Label Requirements:

Each container of hazardous materials in the workplace shall be labeled, tagged, or marked with either of the following:

1. All the information specified for the labels on shipped containers (shipping label)
2. The product identifier and words, pictures, symbols, or a combination that provide general information on the hazards of the chemicals.

Things that must be labeled include:

- Storage bottles created for the distribution of small amounts of a material.
- Storage bottles for solutions or dilutions of a chemical.
- Sample vials or sealable tubes.
- Large batches of the same compound may be labeled collectively, if they are stored and handled as a group.

5.5 Site Inspection

Preventative and routine inspections of the project site will be conducted daily throughout the execution of the project to ensure that a) there has been no spill or release of hazardous materials, b) the Spill Plan controls are functioning properly, and c) that each control performs in the event of a spill.

Daily inspections will be carried out as follows:

- 1) Inspect all hazardous materials storage locations for defects and maintenance needs.
- 2) Inspect all storage containers for damage or leaks.
- 3) Inspect all equipment and vehicles for leaks.
- 4) Inventory spill kits and cleanup supplies to ensure adequate on-hand quantities.
- 5) Inspect all potential areas/receptors, including surface water, for evidence of impacts.

These inspections do not need to be logged unless a spill or leak is detected or a non-conformance is noted. If maintenance is needed or supplies are deficient, DPJV shall promptly remedy any non-conformance.

5.6 Best Management Practices

The following Best Management Practices (BMPs) will be utilized throughout the project to prevent discharges of hazardous materials:

- 1) Secondary containment and spill prevention measures, such as drip pans and oil absorbent pads will be used when fueling or performing maintenance or repair of vehicles or equipment.
- 2) Construction equipment will be kept in good repair without leaks of hydraulic or lubricated fluids. Equipment will be checked daily.
- 3) A dedicated equipment fueling, maintenance, and repair area will be established and will be located at least 50' away from the water and any drains. Runoff from this area will be controlled to prevent contamination of soils and water.
- 4) Emergency repairs will be completed with plastic sheeting placed beneath and, if necessary, over the equipment.
- 5) Work skiffs and other water-based job equipment will be refueled within secondary containment, whenever possible.
- 6) Leaking connections, pipes, hoses, vales, etc. will be promptly repaired or replaced.
- 7) Emergency spill containment and cleanup kits will be maintained on site wherever there is a potential for spills. Kits will be appropriate for the materials being handled and adequately sized for the potential spill.
- 8) All portable equipment will be placed in secondary containment when not in use to capture any leaks or spills.
- 9) All parked or unused equipment will have drip pans placed beneath to capture any leaks or spills.
- 10) Incoming vehicles, parts and equipment will be inspected for leaks.
- 11) Empty containers will be promptly removed and properly disposed.

- 12) An individual will be designated to keep a running inventory of on-site chemical substances and SDS.
- 13) Inspections will be performed daily.

7.0 Spill Response

7.1 Containment & Cleanup

Immediately after receiving notice from a person of a discharge or release of a hazardous substance to the land or water, the Spill Prevention Manager and/or Superintendent will be notified immediately, and the appropriate State/Federal notifications will be made. The Spill Prevention Manager and/or Superintendent will notify all crew members and direct them, accordingly, depending on the severity of the incident.

Immediately after receiving notice the Spill Prevention Manager, Superintendent, or a properly trained employee will:

- Assess the area for any immediate dangers to health or safety. If any dangers are present, move away from the area and call **911**.
- Shutoff any potential ignition sources.
- Immediately investigate, contain, and control the discharge or release.
 - Upon notification or observation of a discharge or release.
 - In a manner that does not result in a significantly greater overall threat or damage to human health, safety or welfare, or to the environment than another alternative, including taking no action.
 - Until the lowest practicable level of contamination is achieved.

Spill to Water:

- Immediately contain any visible floating oils, sheens, or hazardous materials with oil-absorbent boom. Absorb all materials utilizing a combination of floating booms and oil absorbent pads.

Spill to Land:

- Immediately contain any visible oils or hazardous materials using berms, plastic sheeting, or oil absorbent boom. Absorb all materials using a combination of kitty litter, saw dust, or oil absorbent pads.

All materials used in the cleanup of a spill or discharge shall be properly disposed of per the details outlined in the Disposal section of this plan, below.

7.2 Spill Kit Contents & Location

DPJV will have multiple stocked spill kits present at the project site. At a minimum, spill kits will be present in the following locations:

- 1) Within the designated equipment fueling and maintenance area.
- 2) Within the project staging area, adjacent to the region of active construction.
 - a. This spill kit will be moved as the work progresses such that it is always readily available and adjacent to active work.

At a minimum spill kits will contain the following:

- 55-gallon plastic recovery drum.
- 50' oil absorbent boom.
- Oil absorbent pads- adequate for coverage of 200 sqft.
- Oil absorbent material.
- Oily waste bags.
- 1 roll plastic visqueen sheeting, 6-mil minimum
- Rubber Gloves
- Safety Glasses

In addition to the above-listed materials, additional oil absorbent materials and plastic sheeting will be available within a connex located within the project staging area and will be replenished, as needed.

7.3 Disposal

All waste materials used for the cleanup of any hazardous materials on land or in the water will be placed within an empty 55-gallon drum stored within the uplands project staging area. The drum will be labeled, covered, and placed within secondary containment. This drum will be disposed of, as needed, according to all applicable regulations at an approved waste facility.

Copies of all transportation and disposal records will be maintained throughout the life of the project.

8.0 Concrete Washout Management

This project will necessitate the placement of the following cast-in-place (CIP) concrete elements:

- 1) Permanent Pile Concrete Infill
- 2) Precast Second Stage Concrete

- 3) Cast-In Place Wharf Curb
- 4) Wharf Topping Slab

Throughout the execution of project work, great care will be taken to prevent the release of concrete contaminated water. Primarily, this will be accomplished via the use of watertight concrete formwork and Concrete Washout Pans (CWP). CWPs will be used to manage concrete washout and waste to prevent discharges to the ground, drainage system, or adjacent waterbodies. CWPs will be utilized to discard any excess concrete following a concrete pour, collect any concrete-contaminated water, and to allow for concrete washout operations to occur.

Throughout the execution of CIP concrete work, DPJV will have an adequate number of CWPs on site to accommodate the anticipated volume of concrete debris and washout water. The following BMPs will be utilized during CWP use:

- The washout area around a CWP will be lined with impermeable plastic to prevent seepage of washout into the ground and prevent any splatter or drips.
- Once full, CWP will be removed from site and disposed of at a licensed facility.
- Care will be taken when using a CWP to ensure it is not overfilled beyond capacity. Sufficient space must be left within CWP to ensure no spillage/overflow during use or handling (i.e. minimum freeboard of 4-inches).
- When not in use, CWP is to be kept covered to prevent the loss/spillage of CWP contents and to prevent the collection of stormwater.
- CWPs are to be located a minimum of 50' from the water or storm drain inlets.

Any water within permanent piles or concrete formwork displaced by cast-in-place concrete will be considered concrete contaminated water and will be collected and placed within a CWP for disposal.

9.0 Training

DPJV will provide regular informational training for all employees associated with the project, designed to ensure that all personnel with applicable job duties are appropriately and regularly trained regarding hazardous materials pollution prevention measures applicable to each position's duty. DPJV will ensure that each person directly responsible for an activity that may result in a hazardous materials release is free of substance abuse, or a medical condition that would impair that person's ability to do the job.

Prior to the start of on-site construction efforts, each project employee will attend a Spill Prevention and Hazardous Materials Control training session to receive project-specific



information and training on the hazardous materials that will be present on this project. This training will be held at the project site.

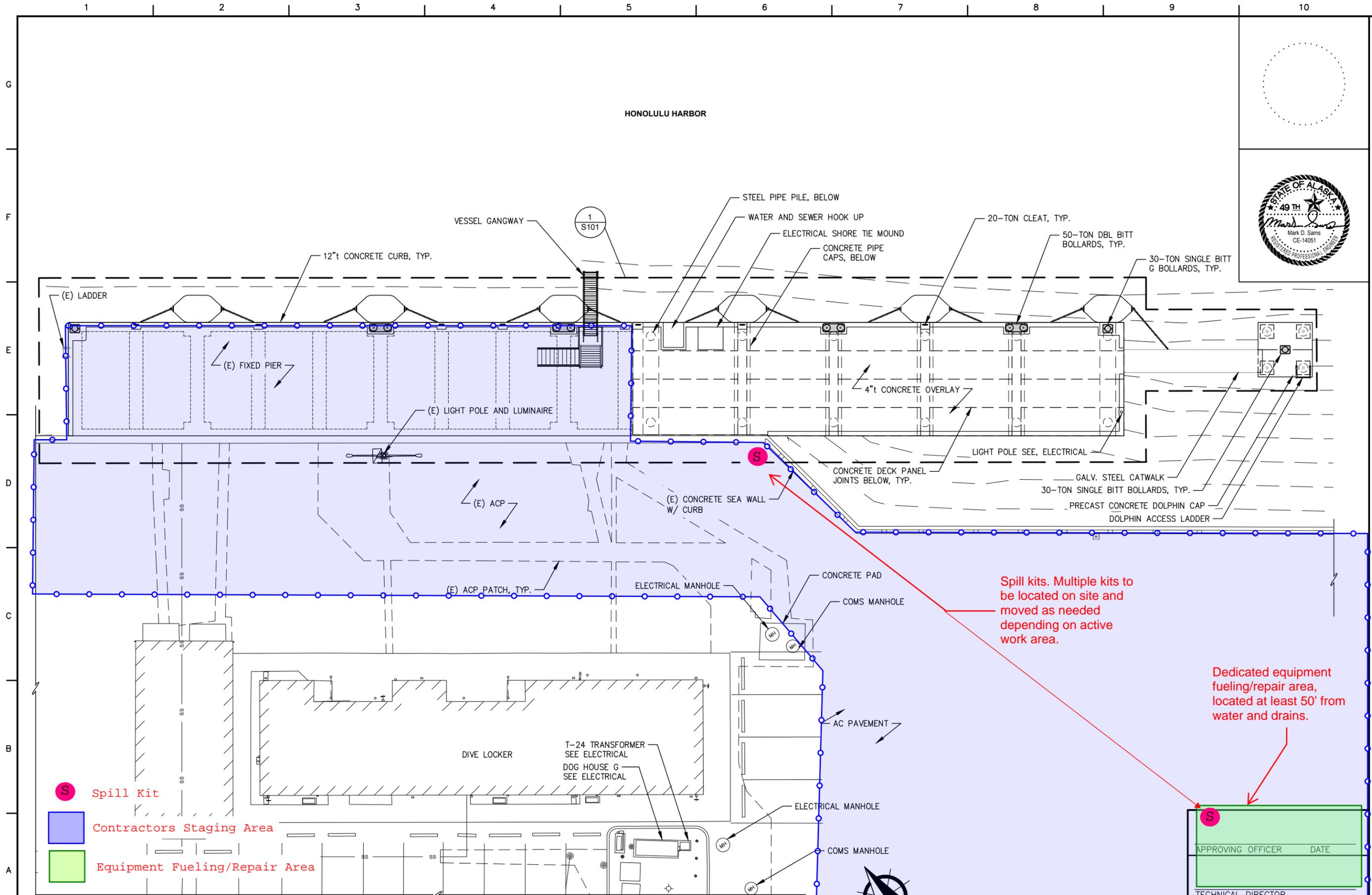
Training will include the following topics, at a minimum:

- Job duties and required training, certifications, licenses, knowledge and other pre-requisites necessary for the position.
- Overview of project-specific hazardous materials including locations and amounts.
- Physical and health effects of the hazardous materials present.
- Spill cleanup and containment methods.
- Locations of spill response supplies and equipment.
- Methods of preventing or eliminating exposure to hazardous materials.
- Emergency procedures to follow if exposed to hazardous materials.
- How to read labels and review Safety Data Sheets (SDS) to obtain information.
- Location of SDS Binder
- Applicable pollution control laws
- Reporting and notification requirements in the event of the release of hazardous material.

Completion of training shall be verified via completion of the Training Log, included within this plan as Attachment C.



Attachment A- Site Layout Map



HONOLULU HARBOR



NO.	DESCRIPTION	DATE	SCALE
4	CORRECTED FINAL DESIGN	07/30/25	AS SHOWN
3	FINAL SUBMITTAL	06/23/25	
2	65% SUBMITTAL	04/18/25	
1	35% SUBMITTAL	11/18/24	
	MARK DESCRIPTION		

A/E COMPANY: A/E ENGINEERS, INC. JUNEAU, AK 907-586-2093 A/E PROJECT NO.: 242075 CONSULTING A/E: RESPEC JUNEAU, AK	USCGG PROJECT NO. 19909923 USCGG DRAWING NO. 19909923C102 USCGG FILENAME 19909923C102.DWG SHEET 7 OF 47	USCGG FACILITY DESIGN & CONSTRUCTION CENTER Seattle 915 2ND AVE. SEATTLE, WA 98174-1001 PROJECT ENGINEER: SAMS, MARK DESIGNED BY: MDS EDITED BY: MH	DRAWN BY: KL CHECKED BY: MDS
--	---	---	---------------------------------------

WLB MOORING & STRUCTURAL UPGRADES USCG BASE HONOLULU HONOLULU CIVIL PARTIAL SITE PLAN	HI
---	----

APPROVING OFFICER	DATE
TECHNICAL DIRECTOR	
BRANCH CHIEF	

Site Layout Map

1 SITE PLAN SCALE IN FEET 0 10 20 FT.



Attachment B- Spill Report Form

Interim Final

Hawaii Hazardous Substance Written Follow-Up Notification Form

PLEASE PROVIDE THE FOLLOWING INFORMATION

Incident Case No.: _____

Contact Information

Caller's Information

Name: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Owner's Information

Name: _____

Title: _____

Company: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Operator's Information

Name: _____

Title: _____

Company: _____

Address: _____

City: _____ State _____ Zip _____

Telephone number: _____

Name of a contact person at the facility or vessel where the release has occurred: _____

Telephone number: _____

Interim Final

Hazardous Substance Released:

Name (trade and chemical) of the hazardous substance which has been released: _____

Chemical Abstract Service (CAS) Number (if applicable): _____

Approximate quantity of the hazardous substance released: _____

Incident Information

Location of the release: _____

A brief description of the release: _____

Media into which the release occurred or is likely to occur (Indicate all those that apply):

- Air Soil Groundwater Concrete Asphalt Stream Ocean Other

Cause of the release: _____

Date of the release: _____

Time of the release: _____

Duration of the release: _____

Date: _____

Time that the person in charge of the facility or vessel where the release occurred obtained knowledge of the release: _____

Source of the release: _____

Response Information

Response measures taken thus far: _____

Interim Final

Any appropriate information relating to the ability of the owner or operator of the facility or vessel where the release has occurred to pay for or perform any proposed or required response actions: _____

The names of other federal, state, or local government agencies that have been notified of the release: _____

Health Information

Known or anticipated acute health risks: _____

Known or anticipated chronic health risks: _____

Advice regarding medical attention necessary for exposed individuals: _____

Potential impacts to public health or welfare: _____

Potential impacts to the environment: _____

"I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the submitted info is true, accurate, and complete."

Signature: _____

Date: _____

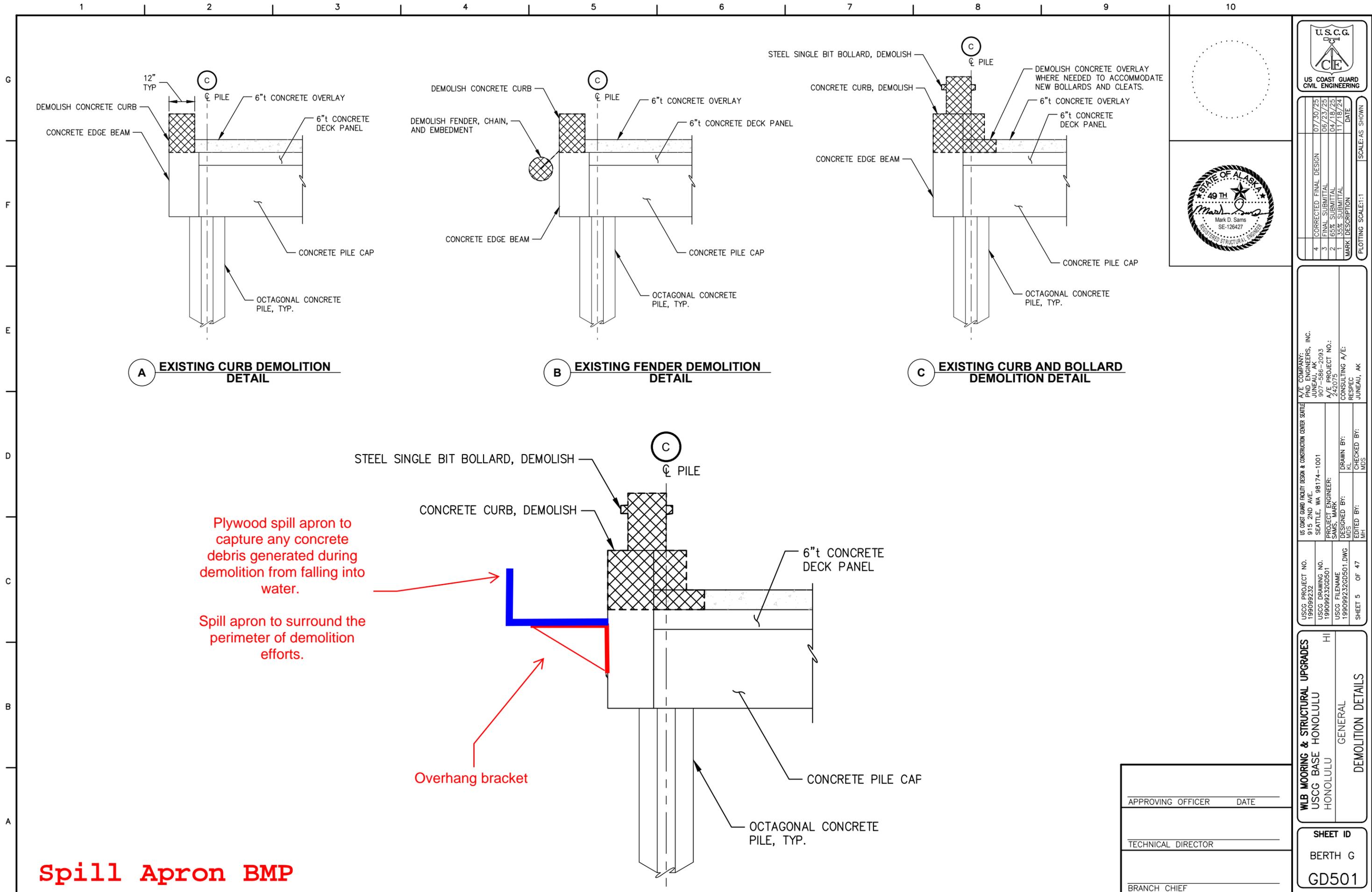
Printed Name: _____

Title: _____

Company: _____



Attachment C- Training Log



A EXISTING CURB DEMOLITION
DETAIL

B EXISTING FENDER DEMOLITION
DETAIL

C EXISTING CURB AND BOLLARD
DEMOLITION DETAIL

Plywood spill apron to capture any concrete debris generated during demolition from falling into water.

Spill apron to surround the perimeter of demolition efforts.

Overhang bracket

Spill Apron BMP

APPROVING OFFICER	DATE
TECHNICAL DIRECTOR	
BRANCH CHIEF	



4	CORRECTED FINAL DESIGN	07/30/25	
3	FINAL SUBMITTAL	06/23/25	
2	65% SUBMITTAL	04/18/25	
1	35% SUBMITTAL	11/18/24	
	MARK DESCRIPTION		DATE

A/E COMPANY:
A/E ENGINEERS, INC.
JUNEAU, AK
907-586-2093
A/E PROJECT NO.:
242075
CONSULTING A/E:
RESPEC
JUNEAU, AK

USCG PROJECT NO.
199099232
USCG DRAWING NO.
199099232GD501
USCG FILENAME
199099232GD501.DWG
SHEET 5 OF 47

USCG PROJECT NO.
199099232
USCG DRAWING NO.
199099232GD501
USCG FILENAME
199099232GD501.DWG
SHEET 5 OF 47

WLB MOORING & STRUCTURAL UPGRADES
USCG BASE HONOLULU
HONOLULU
GENERAL
DEMOLITION DETAILS

SHEET ID
BERTH G
GD501



Description

An approved location, designated in the *Storm Water Pollution Prevention Plan (SWPPP)*, where construction equipment, vehicles, materials, and other construction-related materials are stored. Staging areas can be a significant point source for pollution, so BMPs are necessary to ensure no contaminated storm water exits the site.

Applications

- Flat areas with ample space for equipment and materials to be stored.
- Paved areas and/or land already disturbed within project boundaries.

Installation and Implementation Requirements

- Staging areas must be defined in the plans of the project's *SWPPP* and approved prior to using the area. The approved locations and layout/detailing of the staging area must be included in the *SWPPP* or included by amendment process. In the case of roadside staging areas for paving equipment, a generic layout may be provided for multiple roadside identified locations. The approved staging area plan shall designate the locations of the equipment/material to be stored within the staging area, as well as, any BMPs to be implemented for the staging area.
- BMPs must be in place prior to using the staging area.
- Drip pans can be used to catch potential leaks from idle vehicles and equipment.
- Place drip protection/pads with absorbent and impermeable materials under all vehicles and equipment with the potential to leak/spill when not in use.

Installation and Implementation Requirements *(continued)*

- Perimeter controls must be placed along the perimeter of the staging area and underneath the impermeable material, to create a berm able to contain any possible spills and/or leaks.
- Perimeter control devices installed along the perimeter of the staging area diverts storm water run-on and runoff. For sloping areas where storm water can run onto the project site, consider installing a diversion to prevent off-site storm water from entering the project site.
- Do not store materials or equipment on perimeter controls. Material and equipment must be stored away from the perimeter controls to allow access for inspection and maintenance of the controls.
 - Commonly used BMPs include:
 - Silt fences
 - Compost filter socks or berms
 - Berms
- Consider phasing construction staging areas to minimize the duration of exposed soil. Dust control must be used on all exposed soils or any construction activity generating soil. *See section SM-19 Dust Control for more information.*
- When a phase of the project is complete and the staging area for the site is no longer required, immediately initiate stabilization at the disturbed areas. Once the area is deemed stabilized, the BMP devices can be removed. *See section EC-12 Seeding and Planting for more information.*
- Install a stabilized construction entrance/exit at the entrance of the staging area to prevent tracking onto adjacent paved roads and sidewalks. *See section SC-11 Stabilized Construction Entrance/Exit for more information.*
- All storm drain inlets that may intercept sediment-laden runoff from staging areas must be protected. *See section SC-1 Storm Drain Inlet Protection for more information.*
- Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks. *See sections SM-10 Spill Prevention and Control and SM-12 Vehicle and Equipment Maintenance for more information.*
- Store paving equipment and vehicles that are idle in a designated staging area on a layer of geotextile filter fabric on top of 10 mil plastic sheeting. Place drip pads/pans under paving equipment to contain leaks and spills. Drip protection is required under asphalt hopper and roller assembly. *See section SM-20 Paving Operations for more information.*



Aerial view of a construction staging area.

Installation and Implementation Requirements *(continued)*

- Ensure that construction vehicles and equipment are not stored under tree drip lines or on top of existing tree roots. *See* section SM-17 Preservation of Existing Vegetation for more information.
- Metal (galvanized and ungalvanized) and rebar must be stored off of the ground on proper dunnage, pallet, or similar material and covered with 10 mil plastic sheeting to prevent material from coming into contact with storm water. *See* section SM-2 Material Storage and Handling for more information.
- Locate stockpiles a minimum of 50 feet, or as far as practicable, from concentrated runoff, drainage systems, or open waterbodies. Stockpiles must be entirely covered with an impermeable material and surrounded by a perimeter control device installed around the base of the pile. Staging area perimeter protection cannot be used as perimeter protection for stock/spoil piles. *See* section SM-3 Stockpile Management for more information.
- Sanitary facilities must be secured and located away from drainage systems and open waterbodies. *See* section SM-7 Sanitary Waste Management for more information.
- Waste bins must be covered by the end of each work day and emptied when they reach two-thirds capacity. *See* section SM-6 Solid Waste Management for more information.
- Hazardous materials and waste such as: creosote pipes, waste asphalt, contaminated soil and transite pipes must be properly stored and covered. *See* section SM-9 Hazardous Materials and Waste Management for more information.
- Concrete wash areas must be lined with an impervious material and disposed of in compliance with federal, state, and local standards. *See* section SM-4 Concrete Wash and Waste Management for more information.
- For shared staging areas, responsibilities must be clearly defined. If the staging area is divided by well-defined boundaries for each project, each area can be covered under its respective Notice of General Permit Coverage (NGPC)/National Pollutant Discharge Elimination System (NPDES) permit. If a staging area is shared in its entirety, a separate NGPC/NPDES permit may be obtained for the staging area.
 - All areas within a shared staging area must be accounted for and there should be no overlapping areas for which responsibilities are shared by more than 1 contractor. Consult with the Engineer for review/approval.



Store vehicles and equipment on a layer of geotextile filter fabric on top of 10 mil plastic sheeting when not being used.



Staging Area

Installation and Implementation Requirements *(continued)*

- Off-site staging areas need to be included in the project's *SWPPP* and are subject to NPDES requirements.

Considerations

- Staging area may have a limited amount of space to store vehicles and equipment due to local traffic and existing vegetation.
- Storm water run-on from a point source upgradient becomes the contractor's responsibility to manage if it enters the staging area.
- Contractor may need to implement dust control measures if staging area is not stabilized.
- Runoff flows increase on paved and graded areas. Special attention will be needed during heavier rain events. Staging areas need to be secured prior to a severe storm event.
- Staging areas must be approved before storing materials and equipment in the area.
- Additional staging areas added to the project, outside of the project limits, may require a separate NPDES permit.

What to Inspect

- Are approved staging areas identified in the project's *SWPPP*?
- Are BMPs installed prior to vehicles and equipment being stored in the staging area?
- Are there leaks and/or spills evident around construction vehicles, equipment or materials?
- Is the correct size aggregate being used in staging area for construction roads and entrances?
- Are waste bins covered when not in use?
- Are portable toilets secured to prevent tipping or knocking over?
- Is rebar and steel under cover/covered with 10 mil plastic sheeting and properly stored on dunnage, pallet, or similar material?
- Are construction vehicles stored under existing tree drip lines or on top of tree roots?
- Are vehicles tracking sediment onto public roads?
- Are there traces of run-on or runoff around the perimeter of the staging area?
- Has the contractor initiated stabilization in disturbed areas no longer required for staging?

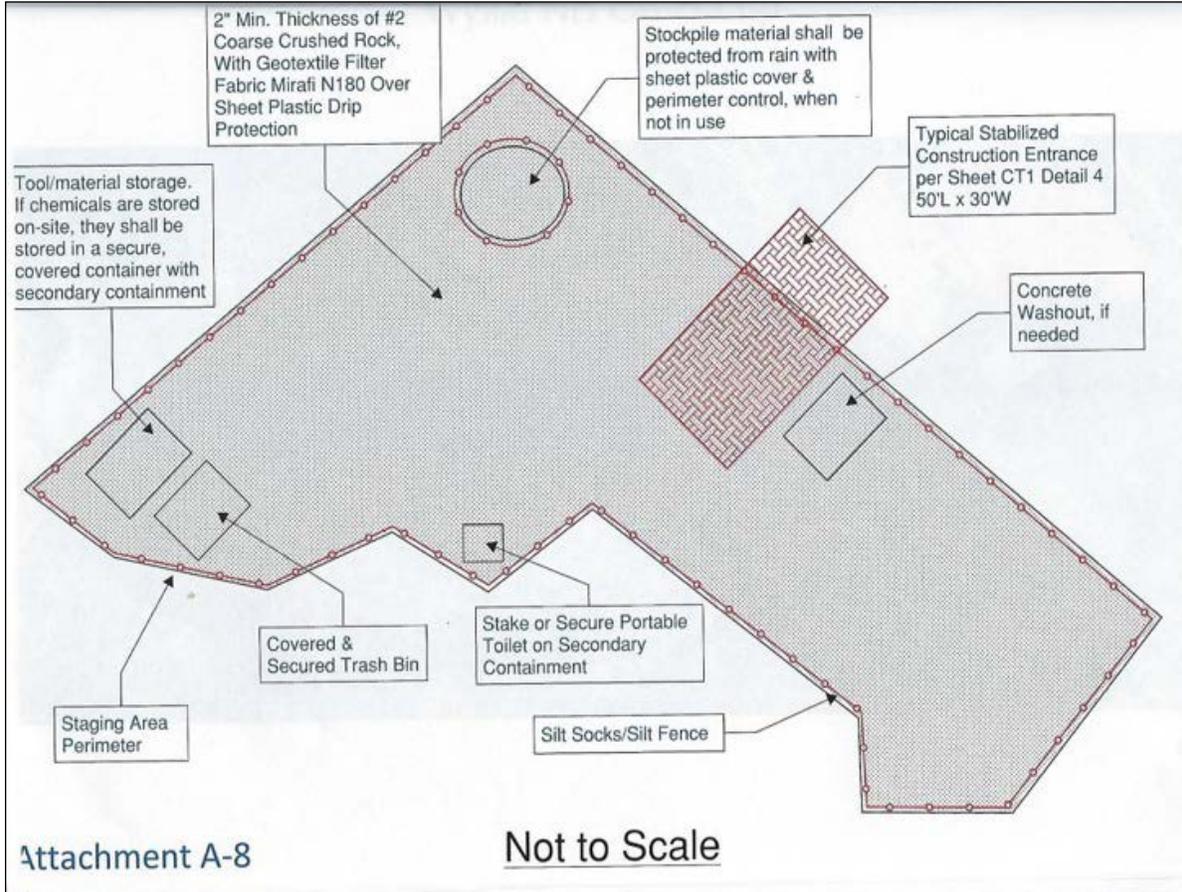


Staging Area

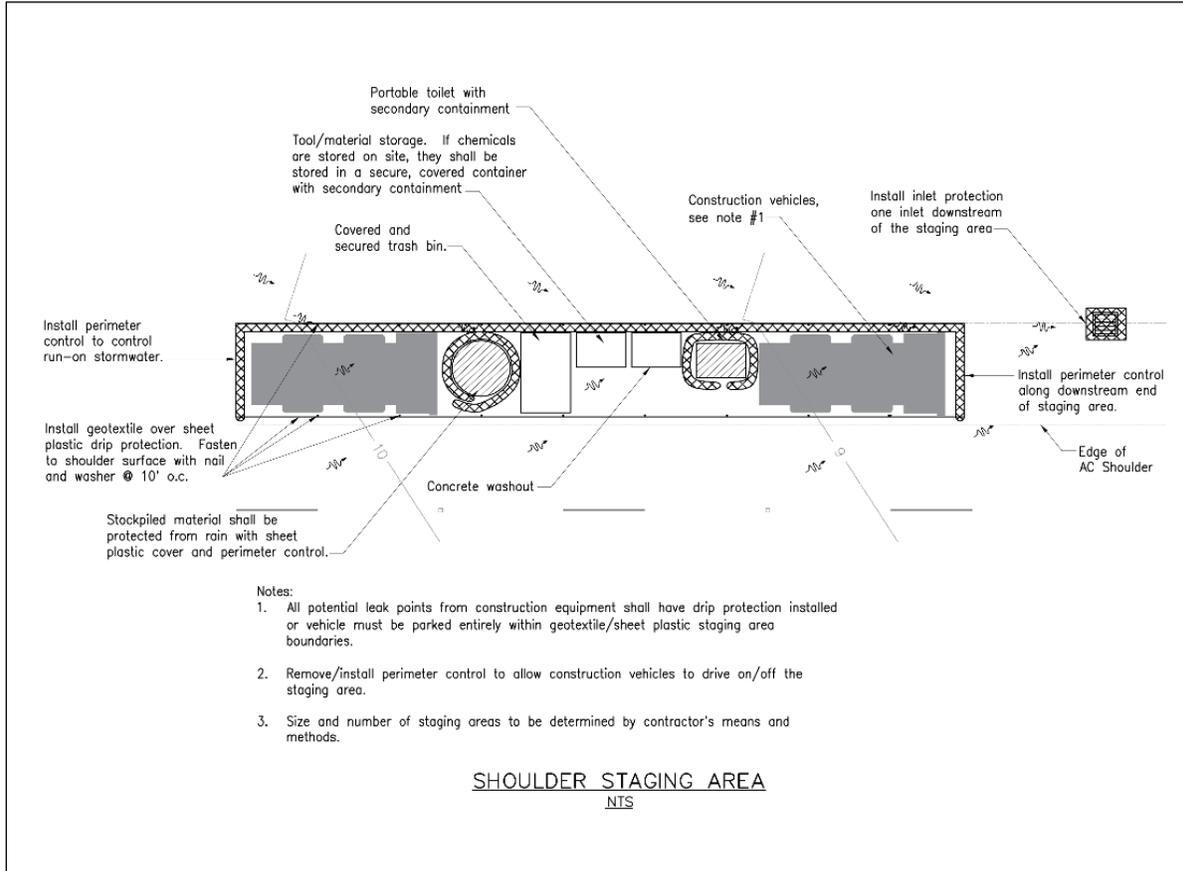
Maintenance

- Immediately clean up spills using dry cleanup methods where possible, and dispose of used materials properly.
- Clean up leaks and spills with an absorbent material. Do not clean surfaces or spills by hosing the area down.
- Provide an ample supply of readily available spill cleanup materials.
- Repair/replace plastic sheeting and/or geotextile filter fabric when torn or ripped.
- Replenish surface and construction entrance aggregate periodically.
- Repair/replace perimeter control devices that are tampered with and not functioning as designed.
- Place drip pans under idle construction vehicles.
- Adjust, repair, and/or reinstall inlet protection devices that are damaged, out of position, or not fully functional according to manufacturer's specifications.
- Regularly dispose of garbage and waste material.
- Amend the project's *SWPPP* when additional staging areas are needed or existing staging areas are no longer required.

Staging Area



Example of a typical staging area.



Example of a typical shoulder staging area.



Description

Practices and procedures to prevent or reduce the discharge of pollutants to storm water from vehicle and equipment fuel leaks or spills.

Applications

- Construction or maintenance activities involving fueling of vehicles or equipment.

Installation and Implementation Requirements

- Use off-site fueling sites when practical. Off-site fueling sites may be better equipped to service and handle spills due to multiple vehicles or pieces of equipment.
- If on-site fueling is necessary, locate designated fuel areas away from storm water run-on and runoff, and locate fueling areas at least 50 feet, or as far as practicable, from downstream drainage facilities and watercourses to prevent contamination of storm water. If impracticable, consider implementing additional BMPs or secondary containment when fueling.
- Avoid “topping-off” of fuel tanks.
- Drip pans or absorbent pads shall be used to absorb leaks or spills during fueling.



Protect on-site fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.

Installation and Implementation Requirements *(continued)*

- Fueling must be performed on a leveled area.
- Protect fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.
- Have absorbent spill cleanup materials located in fueling areas.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Promptly remove and properly dispose the absorbent materials. *See* section SM-10 Spill Prevention and Control for more information.
- Clean up spills or contaminated surfaces immediately, using dry cleanup measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge. Store hazardous materials and fluids under cover and in secondary containment. *See* section SM-9 Hazardous Materials and Waste Management for more information.
- Minimize mobile fueling of construction equipment by transporting equipment to designated areas for fueling.
- Train employees on proper fueling and cleanup procedures.
- Put fuel pods and hoses in secondary containment to prevent hoses/nozzles from leaking.
- Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in watertight containers and provide cover or secondary containment. If container is metal, cover is required.
- Containers shall be properly labeled.
- Comply with federal and state requirements regarding stationary, above ground storage tanks.
- Comply with the Spill Prevention Control Countermeasures (SPCC) requirements in 40 CFR 112 and section 311 of the Clean Water Act (CWA).



There must be drip protection under vehicles and equipment that are being refueled on-site.

What to Inspect

- Is there evidence of fuel spills or leaks on the ground?
- Are any vehicles and/or equipment leaking fuel?
- Are hoses/nozzles in secondary containment?
- Are berms and absorbent pads well-maintained and effective?

What to Inspect *(continued)*

- Is there an ample amount of spill cleanup materials on-site?
- Are hazardous fluids properly stored?

Maintenance

- Keep an ample supply of materials for fuel spill control and cleanup located on-site near fueling areas available at all times.
- Properly dispose of absorbent pads, hazardous material and contaminated soil.



Ensure that drip protection is adequate enough to capture any potential vehicle or equipment leaks.



Description

Practices and procedures to prevent or reduce the discharge of pollutants from vehicle and equipment maintenance. When vehicles and equipment need maintenance, the best option is to perform these activities off-site to avoid spills and leaks on-site. If on-site maintenance activities are necessary, they should be conducted in an approved designated area.

Applications

- Construction sites with vehicle and equipment maintenance areas.
- Construction sites where vehicle and equipment are stored when not in use.
- Construction sites where vehicle and equipment are idle, but intermittent use is occurring.

Installation and Implementation Requirements

- Prevent excessive accumulation of oil and grease by keeping vehicles and equipment clean.
- Use off-site repair and maintenance facilities where practical.
- Repair oil and fluid leaks immediately.
- Immediately place a drip pan or drip pad under the vehicle once a leak is observed until repairs can be made.

Installation and Implementation Requirements *(continued)*

- Designate a leveled maintenance area away from drainage courses and inlets to prevent pollutants from entering the drainage system.
- Store vehicles and equipment that need maintenance on a layer of geotextile filter fabric on top of 10 mil plastic sheeting before conducting maintenance activities. Perimeter controls must be placed along the perimeter of the maintenance area and underneath the impermeable material, to create a berm able to contain any possible spills and/or leaks.
- Have an ample supply of readily accessible spill cleanup materials on-site, at all times.
- Use absorbent materials on small spills. Promptly remove and properly dispose of absorbent materials. Do not hose down or bury small spills. *See* section SM-10 Spill Prevention and Control for more information.
- Check vehicles and equipment regularly for leaks. Leaking vehicles and equipment shall not be allowed on-site.
- Keep maintenance areas clean and orderly to minimize oil and grease buildup.
- Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil, oil filters, greases, hydraulic and transmission fluids, cleaning solutions, antifreeze, and automotive batteries.
- Oil, fuels, fluids and lubricants should be recycled whenever possible. Do not dump on the ground or pour into storm drains.
- Properly dispose of wastes generated by vehicle/equipment maintenance activities.
- Provide employee training on proper maintenance and spill cleanup practices and procedures.



If a leak is observed, immediately place a drip pan or drip pad under the vehicle until repairs can be made.



Geotextile filter fabric must have 10 mil plastic sheeting underneath it to contain leaks and spills.

Considerations

- Off-site maintenance facility may not be easily accessible.
- Vehicle and equipment maintenance should only be used when off-site maintenance is impractical.



Vehicle and Equipment Maintenance

What to Inspect

- Are leaks and/or spills coming from vehicles and/or equipment?
- Is there evidence of oil, grease, fluids, lubricants, etc. on the ground?
- Are spill cleanup materials available on-site?
- Are vehicles and equipment properly stored on a layer of geotextile filter fabric on top of 10 mil plastic sheeting?
- Are berms properly aligned along the perimeter of the maintenance area?
- Is the maintenance area on leveled ground away from drainage courses?
- Are maintenance areas kept clean and orderly?
- Are vehicles being taken off-site for maintenance?

Maintenance

- Maintain an adequate supply of spill cleanup materials on-site.
- Remove used oils, antifreeze, grease, lubricants, etc. routinely.
- Do not allow used oils to accumulate on-site.
- Maintain adequate supplies of spill cleanup materials on-site.
- Leaking vehicles and equipment shall be repaired promptly.
- Leaks and spills shall be cleaned up immediately.
- Maintain impermeable material/plastic sheeting, geotextile filter fabric, and perimeter control to ensure proper effectiveness.



Description

Berms consisting of compost material placed perpendicular to runoff to reduce flow velocity and retain sediment and other pollutants. A fiber roll may consist of straw, flax, mulch, or other similar materials bound into a tight tubular roll.

Applications

- Along the site perimeter.
- Along the slope face and toe of slope (*See* section EC-5 Earth Dikes, Swales, and Ditches).
- Check dam in small drainage ditches (*See* section SC-3 Check Dams).
- Inlet protection for storm drains (*See* section SC-1 Storm Drain Inlet Protection).
- Surrounding base of temporary stockpiles (*See* section SM-3 Stockpile Management).
- Appropriate for small drainage areas and low surface velocity flows (less than 1 cubic feet per second (cfs)).
- Vegetative filtering system.
- Applied as a comprehensive system to storm water management.
- Used as perimeter control for disturbed/bare areas.

Installation and Implementation Requirements

- Usually located at the base of slopes, however, additional berms may be used for velocity dissipation devices mid-slope to increase erosion protection. *See* section EC-9 Slope Interceptor or Diversion Ditches/Berms for more information.
- Compost quality shall comply with all local, state, and federal requirements. Installation of a compost filter sock, which consists of a mesh tube filled with composted material, as a type of compost filter berm shall comply with the following:
 - Assemble by tying a knot at the end of the mesh sock, filling the sock with compost, and knotting the other end of the sock. A pneumatic blower may be used to fill the sock with compost.
 - Socks shall be 8 inches in diameter, minimum.
 - If more than 1 compost filter sock is placed in a row, the compost filter socks must be overlapped, not abutted. The overlap shall be 6 inches, minimum (or in accordance with the manufacturer’s recommendations), and shall be horizontal, side-by-side. The overlap shall not be vertical, top-to-bottom.
 - Compost filter socks used on concrete or other hard surfaces that make staking non-applicable should be weighed down so it does not become displaced during heavy rain/runoff.
 - Turn ends of filter sock up slope, a minimum of 3 feet, to prevent flow around ends.
 - Compost filter socks must be in continuous contact with the ground. There should be no gaps between the sock and the ground beneath it.
- Compost filter socks may also be used for areas of concentrated flow such as near, but not at or in, streams or shorelines. Compost filter socks cannot be used in-water and must be installed above the high water mark for streams/shorelines.
- Material and equipment must not be stored on top of the compost filter socks while in place. The compost filter sock must always be accessible for inspection and maintenance.



Compost filter socks must be overlapped 6 inches minimum (or in accordance with the manufacturer’s recommendations), not abutted, when more than 1 compost filter sock is placed in a row.



Follow manufacturer’s specifications on proper use for fiber rolls used as velocity dissipation devices on steep slopes.

Installation and Implementation Requirements *(continued)*

- When used as velocity dissipation devices on steep slopes, stake compost filter socks into a 2- to 4-inch-deep trench with a width equal to the diameter of the compost filter sock. Stakes must be driven at least 12 inches into the ground, while leaving a minimum stake height of 2 inches above the compost filter sock. Drive stakes through the center at the end of each compost filter sock and space apart 4 feet maximum on center.
- Follow manufacturer's specifications on proper use.
- At the completion of project, filter sock material, including the compost, shall be removed from the site and disposed of/reused properly. Fill and compact trenches once compost filter socks are removed.
- Material for compost berm/filter sock may be left at the site and used as a soil amendment, if approved by the Engineer. Material should be spread, not left in a clump or pile. The geotextile netting must be disposed of properly.

Considerations

- Do not install below the high water mark of streams/shorelines or in-water.
- Unsuitable for areas with concentrated runoff unless a low flow rate and small drainage area warrants use of a filter berm/sock. Compost filter socks should be installed per manufacturer's recommendations.
- Heavy vegetation must be removed to ensure close contact of compost with the ground surface.
- Difficult to move once saturated.
- Uneven terrain may restrict use of BMP.
- Heavy construction equipment and/or vehicles that run over compost filter socks can easily damage or impair the performance of the device.
- Soil may harden on the geotextile filter fabric, which will inhibit infiltration and proper effectiveness.
- Efficiency quickly decreases as sediment accumulates. Frequent maintenance is needed.
- Berms/socks cannot be staked or trenched when used on concrete and rocky surfaces.

What to Inspect

- Does the filter sock have rips or tears exposing the filter media?

What to Inspect *(continued)*

- Does the filter sock need to be trenched and staked?
- Has sediment accumulated to one-half the height of the berm? Are compost filter socks positioned in the correct orientation to effectively manage storm water? Is there evidence of rills or gullies forming under the compost berm?
- Is there vehicles or equipment stored on top of the berm?
- Are compost filter socks properly installed according to manufacturer’s specifications?

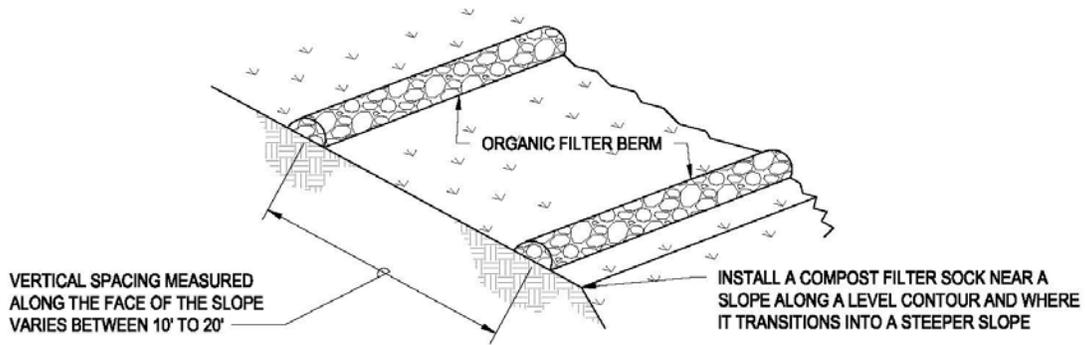
Maintenance

- Remove sediment which has accumulated to within one-half of the berm height.
- Replace disturbed or damaged areas of the berm.
- Repair/replace split, torn or slumping compost filter socks.
- Repairs to damaged compost filter socks must preserve filtration capabilities. Do not use duct tape, glue, or any material that will diminish the effectiveness of the compost filter sock.
- Maintain BMP until the disturbed area above the device is permanently stabilized.
- Reorient compost filter socks that have been disturbed.
- Clean hardened soil on geotextile filter fabric to ensure proper filtration can occur.
- Fix berms/socks that have been driven over and flattened.

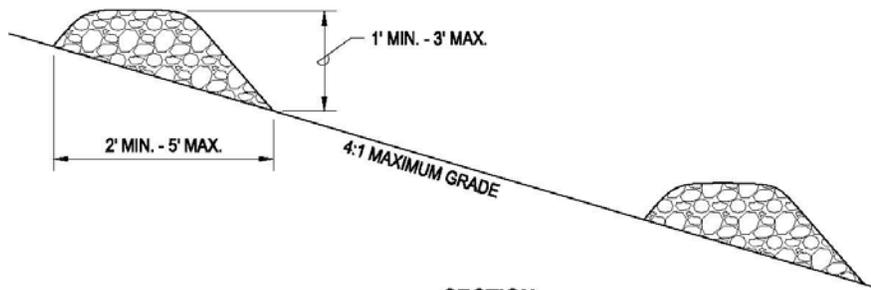


Repair/replace split, torn, or slumping compost filter socks to preserve filtration capabilities.

Compost Filter Berm/Sock



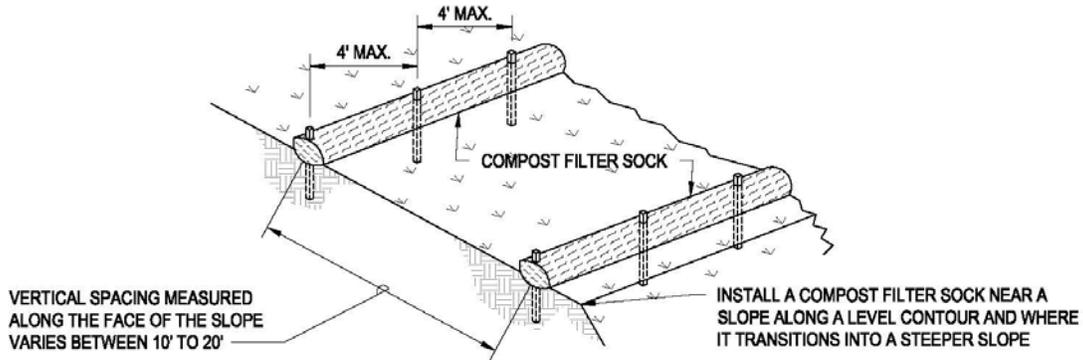
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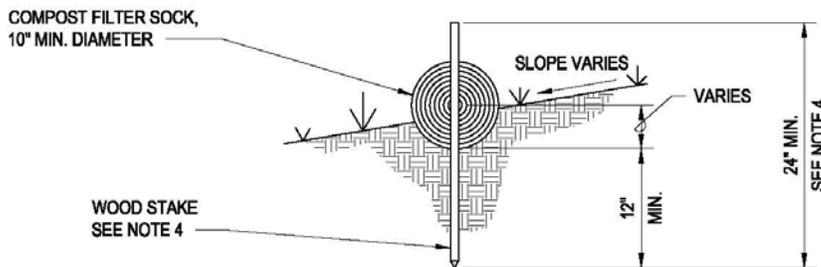
SECTION
NOT TO SCALE

COMPOST FILTER BERM

Compost Filter Berm/Sock



PERSPECTIVE
NOT TO SCALE



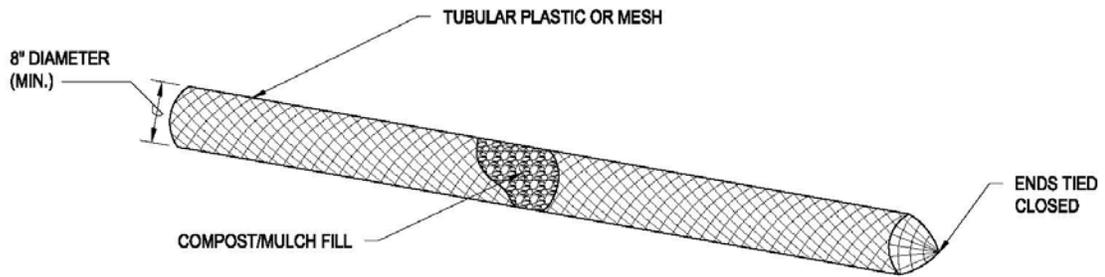
SECTION
NOT TO SCALE

NOTES:

1. COMPOST FILTER SOCKS SHOULD BE EITHER PREFABRICATED OR ASSEMBLED AT SITE.
2. LOCATE COMPOST FILTER SOCKS ON LEVEL CONTOURS SPACED AS FOLLOWS:
 - a. SLOPE INCLINATION OF 4:1 (H:V) OR FLATTER: COMPOST FILTER SOCKS AND/OR BERMS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 20 FT.
 - b. SLOPE INCLINATION BETWEEN 4:1 AND 2:1 (H:V): COMPOST FILTER SOCKS (USE OF BERMS NOT RECOMMENDED) SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 15 FT. (A CLOSER SPACING IS MORE EFFECTIVE).
 - c. SLOPE INCLINATION OF 2:1 (H:V) OR GREATER: COMPOST FILTER SOCKS SHOULD BE PLACED AT MAXIMUM INTERVAL OF 10 FT.
3. TURN THE ENDS OF THE COMPOST FILTER SOCKS UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE ROLL.
4. STAKE COMPOST FILTER SOCKS WITH STAKES WITH A MINIMUM LENGTH OF 14 IN. AND SPACED 4 FT. ON CENTER, OR AS RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS GREATER.
5. IF MORE THAN ONE COMPOST FILTER SOCKS IS PLACED IN A ROW, THE ROLLS SHOULD BE OVERLAPPED, NOT ABUTTED.

COMPOST FILTER BERM (FILTER SOCK)

Compost Filter Berm/Sock



COMPOST FILTER BERM (FILTER SOCK)
NOT TO SCALE



Description

Devices installed at storm drain inlets that detain large objects and sediment-laden runoff prior to entering the storm drain system. These devices are often the last treatment measure, so a layered BMP approach is crucial to mitigating sediment-laden runoff from entering the State of Hawaii Department of Transportation (HDOT) Highways MS4 or storm drainage system, including surface waters.

Applications

- All storm drain inlets, both within the project limits and beyond the project limits, that may intercept sediment-laden runoff from the construction site shall be protected prior to commencing land-disturbing activity.
- Where disturbed areas have not been stabilized.

Installation and Implementation Requirements

- Install inlet protection devices prior to upgradient land-disturbing activity.
- Inlet protection causes ponding, which is necessary to allow the sediment to settle. The storm drain inlet must not be completely blocked when public safety is of concern.
- The contractor shall monitor the weather for rainfall events and coordinate with the Engineer to adjust inlet protection to prevent hazardous conditions and flooding.
- For maximum effectiveness, minimize the demand on inlet protection devices by installing and maintaining erosion and sediment control devices upslope of the inlet.

Installation and Implementation Requirements *(continued)*

- Immediately stabilize slopes and disturbed areas that are no longer active to reduce potential runoff. Inlet protection shall only be removed once disturbed areas upgradient of the catch basin has been stabilized.
- Grated drop inlets and curb inlets/catch basins are the 2 types of inlets most present on construction sites. There are various types of BMP devices that are applicable in protecting these inlets from accepting sediment-laden runoff.



Properly installed geotextile filter fabric is placed underneath the grate and extends 6 inches past the grate on all sides.

GRATED DROP INLET (GDI)

- Installing a geotextile filter fabric under the grate to cover the insert is a common inexpensive practice to prevent sediment from entering the GDI. The fabric should be placed fully under the grate to completely shield the inlet. Allow 6 inches, minimum, of excess fabric to extend past the grate on all sides. The fabric is easily clogged by sediment. Other methods are preferred such as a witch's hat, which will facilitate drainage while filtering sediment.
- Compost filter socks or sand bags can be placed around the perimeter of the GDI, to divert and/or detain storm water before it enters the inlet. *See* section SC-6 Compost Filter Berm/Sock and section SC-8 Sandbag Barrier for more information.
- The following list below are applicable devices for GDI's:
 - Geotextile filter fabric fence.
 - Geotextile filter fabric under grate.
 - Witch's hat
 - Inbox protection.
 - Fiber roll with additional in box protection.
 - Sand bag, rock bag, or snake bag.

CURB INLET/CATCH BASIN

- Devices installed at curb inlets are in place to prevent sediment-laden runoff from entering the storm drain. An ample amount of space must be provided to allow water to pond around the inlet. This allows the sediment to settle, as the storm water slowly enters the MS4.



Properly installed curb inlet guards are placed tight to the drain opening and anchored per manufacturer's specifications.



Storm Drain Inlet Protection

Installation and Implementation Requirements *(continued)*

- Devices must extend at least 1 foot past the inlet insert on both sides, unless manufacturer's specifications differ.
- Non-destructive supporting brackets may be used to prevent inlet protection devices from falling into the curb inlet/catch basin.
- Ensure flooding of nearby properties or impeding traffic is avoided.
- Use check dams to reduce the demand of sediment-laden runoff flowing towards a curb inlet. *See* section SC-3 Check Dams for more information.
- In addition to the methods of inlet protection described above, there are other effective methods and proprietary devices, which may also be used. These are limited to drainage areas that are less than 1 acre, unless a sediment trap intercepts the runoff prior to reaching the inlet protection device.
- Other proprietary devices may be used and shall be installed per manufacturer's recommendations.

Considerations

- Short-term flooding at a protected inlet will occur but must not become a traffic or pedestrian hazard.
- Drainage area is limited to 1 acre or less.
- Straw bales shall not be used for inlet protection.
- Runoff on slopes may bypass protected inlets.
- In the event of a severe storm event where flooding conditions will likely be an issue; the contractor may be directed by the Engineer to remove inlet protection. The inlet protection must be reinstalled immediately following the event.
- Geotextile filter fabric used to protect GDI inserts must be cleaned or replaced often due to the limited capacity of sediment the device can hold.
- Inlet protection devices can be tedious to maintain and become ineffective when sediment accumulates. Regular maintenance is required.
- Inlet protection is the last line of defense, which requires proper erosion and sediment controls in place upgradient.
- Inlet protection BMPs that completely block the insert will cause ponding that could create a traffic and pedestrian hazard or cause damage to nearby properties.
- Some GDI grates require heavy machinery to remove the grate to install geotextile filter fabric.

What to Inspect

- Is proper contact made against curb and gutter to prevent water from undercutting or bypassing inlet protection?
- Can sediment enter catch basin from the top or backside of the structure?
- Is sediment accumulated in front or inside of the inlet protection?
- Is the catch basin insert installed properly and being maintained per manufacturers guidelines?
- Is BMP falling into the inlet?
- Does sediment need to be removed?
- Are there rips/tears in BMP that will allow sediment to bypass it?
- Are compost filter socks damaged with rips/tears that expose the compost media?
- Is there evidence of sediment settling in front of the storm drain following a rain event?

Maintenance

- Routine maintenance should be initiated the same day the deficiency is identified and completed by the end of the same business day.
- Installation of a new erosion or sediment control device or a significant repair to a device shall be completed within 7 calendar days.
- Immediately replace clogged geotextile filter fabric or stone filters.
- Devices must be inspected, and all accumulated sediment removed before and after each rainfall event.
- During prolonged rainfall events, remove accumulated sediment when depth reaches one-half of the filter height or one-half of the sediment trap depth.
- Remove inlet protection only after stabilization of upstream soils and sweeping of streets is completed. Properly dispose of trapped sediment.
- Clean, remove, or replace protection measures as sediment accumulates, filter becomes clogged, and/or performance is compromised.
- When there is evidence of sediment accumulation adjacent to the inlet protection measures, remove deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not possible.



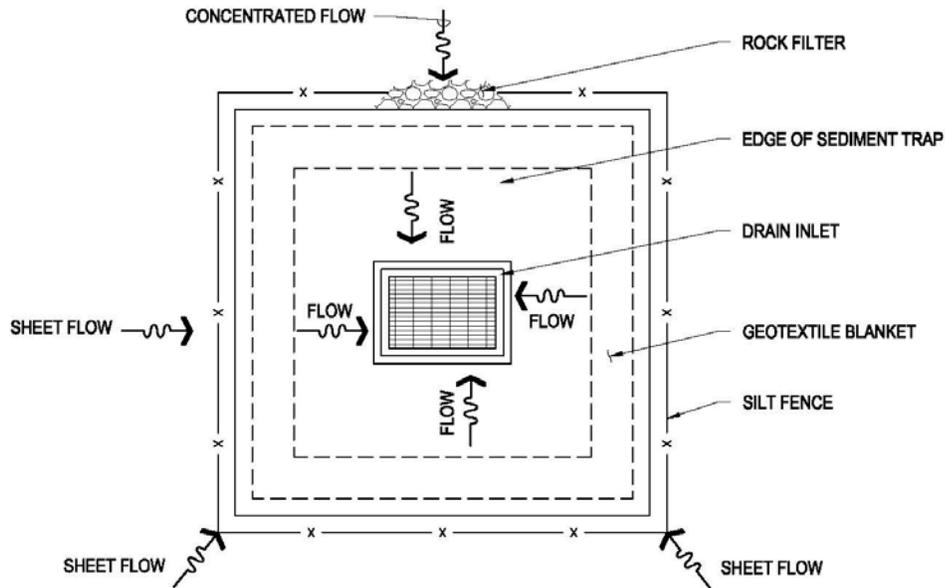
If inlet protection BMPs are falling into the inlet, they must be pulled out and repositioned, per manufacturer's specifications.



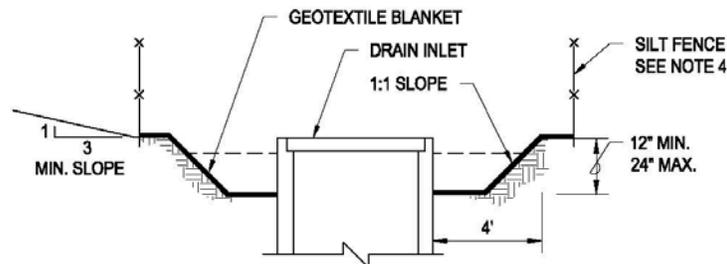
Storm Drain Inlet Protection

Maintenance *(continued)*

- Devices that fall into inlets must be pulled out and repositioned. Devices must be installed per the manufacturer's specifications and procedures for proper effectiveness.
- Address devices experiencing flow bypasses over, underneath, or around the sides of the BMP.
- Regularly maintain inlet protection devices to abide by manufacturer's specifications.



PLAN
NOT TO SCALE



SECTION
NOT TO SCALE

NOTE:

1. FOR USE IN CLEARED AND GRUBBED AND IN GRADED AREAS.
2. FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 (L:W) RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SIZE EXCAVATED TRAP TO PROVIDE A MINIMUM STORAGE CAPACITY CALCULATED AT THE RATE 67 YD³/ACRE OF DRAINAGE AREA.
4. REFER TO BMP SC-7, SILT FENCE OR FILTER FABRIC FENCE.

EXCAVATED DROP INLET SEDIMENT TRAP



Description

Practices and procedures to reduce the discharge of pollutants from construction and demolition (C&D) waste from entering the drainage system or adjacent waterbodies.

Applications

- Construction projects generating non-hazardous solid wastes from C&D activities. These wastes include C&D waste, inert fill material, litter and recycle/reuse material.
 - C&D wastes include materials originating from the construction, demolition, and repair of roads, buildings, or other structures.
 - Inert fill materials are defined as earth, soils, rocks, rock-like material, such as cured asphalt, brick, and clean concrete less than 8 inches in diameter, except as specified by a licensed Engineer with no exposed steel reinforced rod. The inert fill material shall not contain vegetation, organic material, or other solid waste. It shall not be contaminated with asbestos or lead-based paint. In addition, inert fill materials do not decompose or produce leachate or products harmful to the environment.

Installation and Implementation Requirements

- Separate contaminated cleanup materials from C&D wastes. Contamination may be from hazardous substances, friable asbestos, waste paint, solvents, sealers, or adhesives.

Installation and Implementation Requirements *(continued)*

- Dispose of waste in designated waste containers.
- Solid waste bins must be watertight and placed away from drainage facilities and open bodies of water.
- Most C&D wastes can be reused or salvaged for recycling. Inert fill materials shall not be mixed with other C&D waste.
- Solid waste is generally any material that leaves a project that is no longer usable on the project. If any material is intended to be characterized as inert fill or soil for reuse, the material shall be tested and determined clean.
- Ensure inert fill material does not contain vegetation, organic material, or other solid waste.
- The Department of Health, Hazard Evaluation and Emergency Response Office (HEER) refers to *Guidance for Soil Stockpile Characterization and Evaluation of Imported and Exported Fill Material*, to define "acceptable fill material" as:
 - Natural materials consisting of soil, clay, sand, volcanic cinder and ash, and rock; or a mixture/combination of such materials.
 - C&D materials exclusive of soil that are known or tested to be free of hazardous substances.
- The fill determination process, defined by HEER, is to determine if proposed fill material meets the definition of acceptable fill material. Options to complete the fill determination process include:
 - An environmental due diligence review of the fill source property that concludes there is no evidence of past releases that could pose an environmental hazard or contain chemical contaminants above applicable State of Hawaii Department of Health (DOH) Tier 1 Environmental Action Levels (EALs).
 - A fill material characterization report that summarizes representative analytical data for the proposed fill material from the fill source operator, fill importer, or fill exporter.
- The contractor shall obtain approval from the Engineer to take any material off-site from an HDOT construction site.
- Provide waste containers of sufficient size and number to contain construction and domestic waste. Dumpsters must be watertight and securely lidded. Roll off containers must be watertight and have a cover to keep rain out and prevent loss of waste during windy conditions.



Waste containers must be covered with an impermeable material at the end of the day and when it is not in use.

Installation and Implementation Requirements *(continued)*

- Waste containers may be covered with 10 mil plastic sheeting/Visqueen, tarpaulin, manufactured lid, or other impermeable material.
- Waste containers shall meet all local and state solid waste management regulations.
- Littering on-site is prohibited.
- Ensure construction waste is collected, removed, and disposed of only at authorized disposal areas. Any site not contiguous with the project site may need a permit to receive solid waste. This includes any site or facility that receives solid waste, landowners who want to accept and process solid waste, and contractors who have to take solid waste to their Baseyard.
- The contractor's supervisory personnel shall be instructed regarding the correct practices for waste disposal. Post notices detailing these practices in the office trailer. The contractor shall ensure that these practices are followed.
- Follow all contract requirements regarding handling and disposal of solid waste.
- Fill out the *Solid Waste Disclosure Form for Construction Sites* at <https://health.hawaii.gov/shwb/sw-permits/>. Inform HDOT of disposal destinations and obtain all permits/approvals relating to stockpiling and disposal of material.
- Do not allow containers to overflow. Plan for waste and recyclable materials to be collected weekly or when containers are two-thirds full, whichever is sooner.
- Minimize production of solid waste materials wherever possible.
- It is highly recommended to reuse C&D waste when possible. For criteria for reuse, refer to DOH Tier 1 EALs for unrestricted land use. Refer to DOH *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater* for more information on EALs.
- Consideration of soil that exceeds Tier 1 EALs for unrestricted land use, but meets the DOH environmental action levels for commercial use (Refer to DOH *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*, Appendix 1, Table I-2) for off-site reuse at such sites must be approved by HEER in consultation with the State of Hawaii Department of Health, Solid and Hazardous Waste Branch (SHWB).
- Notify the Resident/Construction Engineer of any illegal connections, illicit discharges, or illegal dumping not generated by the contractor. Fill out the *Report a Violation Form* at website – <https://www.stormwaterhawaii.com/report-a-violation/> at the time of discovery.



Water is able to get into uncovered waste containers, potentially leading to leaking. Windy conditions may also cause loss of waste from waste containers.

Considerations

- Must sort waste material accordingly.
- Some types of solid waste can easily be washed away by storm water if not properly disposed of.
- The Engineer may reject imported fill from sources known to contain hazardous material.
- The import of fill material from a source that has not been evaluated could inadvertently recontaminate a remediated property, and may be considered illegal dumping. Contaminated fill material can also pose direct exposure hazards to workers and the public.
- Understanding the source of the fill material and the potential for contamination is very important.
- Construction vehicles may be necessary to put C&D waste in the correct bin.
- Construction personnel should not hose out containers on-site. Leave dumpster cleaning to the trash hauling contractor.

What to Inspect

- Are waste containers properly covered?
- Do waste containers exceed two-thirds capacity?
- Is there evidence of leaks or spills around waste containers?
- Is site neat and free of litter?
- Is waste being separated and placed in the appropriate bin?
- Are waste bins located away from drainage facilities, inlets, and open bodies of water?
- Is there evidence of illegal dumping on-site?
- Is trash removed regularly?



Solid waste should be removed regularly so waste containers do not exceed two-thirds capacity.

Maintenance

- Schedule solid waste collection regularly.
- Empty waste containers when they are two-thirds full.
- Schedule recycling activities based on construction/demolition phases.
- Do not allow containers to overflow.



Solid Waste Management

Maintenance (*continued*)

- Repair/replace leaking or damaged dumpsters.
- Clean up site and dispose of waste in designated waste containers by the end of each work day.
- Keep disposal receipts and provide a copy to HDOT to document that the waste is disposed of at the facility permitted on the *Solid Waste Disclosure Form for Construction Sites*.
- Solid waste shall be taken directly from the project site to the facility permitted on the *Solid Waste Disclosure Form for Construction Sites*.

Concrete Wash and Waste Management



Description

Practices and procedures to manage concrete/cementitious products, washout, and waste to prevent discharges to the ground, the drainage system, or adjacent waterbodies.

Applications

- Projects involving the use of concrete/cementitious products as construction materials.
- Demolition activities generating dust and debris.
- On-site wash areas used for concrete-coated vehicles or equipment.
- Activities such as sawcutting and grinding which result in the formation of slurries containing Portland cement.
- Activities generating fines from sawcutting, grinding, and demolition.

Concrete Wash and Waste Management

Table SM-4.1 Commonly used cementitious products.

Commonly Used Cementitious Products
<ul style="list-style-type: none"> • Concrete • Mortar • Plaster • Stucco • Grout • Cement-Treated Base (CTB)

Installation and Implementation Requirements

- Properly store cement-based materials under cover to prevent contact with storm water. The materials can be classified as waste if improperly stored.
- Designate areas for concrete wash and washout a minimum of 50 feet away, if practicable, from storm drain inlets, open drainage facilities, and waterbodies. If impracticable, per Hawaii Administrative Rules (HAR) Title 11, Chapter 55, Appendix C, 5.1.2.1.1.2, other measures, such as double sediment control (e.g., double perimeter control), must be employed to prevent wash water/waste concrete from reaching the storm drain inlets, open drainage facilities, and waterbodies.
- Avoid mixing excess concrete, if possible. Discard excess concrete in the designated area.
- Disposal of concrete washout via percolation is prohibited. Wash concrete-coated vehicles or equipment in the designated wash area or off-site.
- The designated concrete washout area shall be a temporary pit (below grade), a level bermed area (above grade), or a commercially available system approved to capture concrete wash water.
- The washout should be sufficiently sized so that no overflow can occur due to inadequate sizing or precipitation.
- The washout area shall be lined with an impermeable material (i.e., plastic sheeting, Visqueen, polypropylene, etc.) to prevent seepage of washout into the ground. If plastic is used, it must be a minimum of 10 mil thick. The lining shall be seamless.



Concrete washout area must be lined with an impermeable material. Secondary containment under washout catches any leaks or splashes from the washout area.

Concrete Wash and Waste Management

Installation and Implementation Requirements *(continued)*

- Allow wash water to evaporate or contain the washout in an approved concrete washout system. Provide a minimum freeboard (height above the water mark) of 4 inches for concrete washouts to account for rain events. Washouts must be changed or not used after reaching 75% capacity or 4-inch freeboard, whichever is more stringent.
- If secondary containment is placed under the washout (recommended), it should be bermed under the plastic sheeting to create a secondary pooling area to catch any leaks or splashes.
- Waste concrete shall not be allowed to harden on the bare ground and shall be removed while wet. Materials from the contractor's spill kit can be used to clean up waste concrete.
- Break up and store hardened concrete in the designated area.
- Saw cut slurry shall be removed from the site by vacuuming.
- Provide storm drain inlet protection during sawcutting operations.
- When placing concrete in water environments or tremie pours and drill shafts, any water which is displaced or in contact with wet concrete, mortar, or grout is considered contaminated/concrete impacted.
 - Remove concrete impacted water to a sealed containment area where it cannot contact or percolate into the ground. Holding tanks can be used where water is treated pending release/removal and concrete waste collected for disposal. If a pit is used, it must be sealed against possible leaks to the ground until the water evaporates. Overlapped plastic sheeting in the pit is not permitted.
 - Concrete placement in drill shafts often result in water displacement and requires an over pour of concrete in the shaft. Displaced water must be considered contaminated/concrete impacted and treated as you would above. Any over pour of concrete in contact with the ground must be cleaned up while wet and placed in containment. Plastic sheeting lined pit areas at the drill shaft may also be constructed to catch over pour if adhered to the drill shaft.
- Do not allow concrete liquid wastes onto the ground, into the storm drainage systems, or into waterbodies.



Concrete washouts must be changed or not used after reaching 75% capacity or 4-inch freeboard, whichever is more stringent. Hardened concrete should be removed frequently to avoid overcapacity of washout area.



Concrete Wash and Waste Management

Installation and Implementation Requirements *(continued)*

- Collect and properly dispose of all concrete waste material at a HDOT approved solid waste permitted facility. Dispose of liquid and solid concrete wastes in accordance with solid waste regulations and HDOT policy, as well as other applicable federal, state, and local regulations.
- Provide concrete waste management training for employees and contractors.

Considerations

- Off-site concrete wash areas may be impracticable.
- Locating concrete washout areas a minimum of 50 feet away from drainage systems and open waterbodies may not be practicable.
- May need to allow washout to evaporate.
- Constructing washout areas may not be practicable. Manufactured concrete washout bins may be the only option.
- Rainwater can cause uncovered washout pits and containers to overflow.

What to Inspect

- Has the concrete washout been damaged?
- Is liner a continuous and seamless piece?
- Is the concrete washout area exceeding 75% capacity limits or minimum freeboard of 4 inches?
- Are leaks observed from the designated concrete washout area?
- Is there evidence of concrete waste on ground?
- Are contractors implementing proper concrete waste management measures?

Maintenance

- Regularly remove and dispose of hardened concrete in accordance with solid waste regulations and HDOT policy.
- Remove accumulated concrete washout materials when it reaches 75% capacity or exceeds the minimum 4-inch freeboard requirement.
- Cover temporary concrete washout, when not in use and at the end of the work day, to avoid overflow.

Concrete Wash and Waste Management

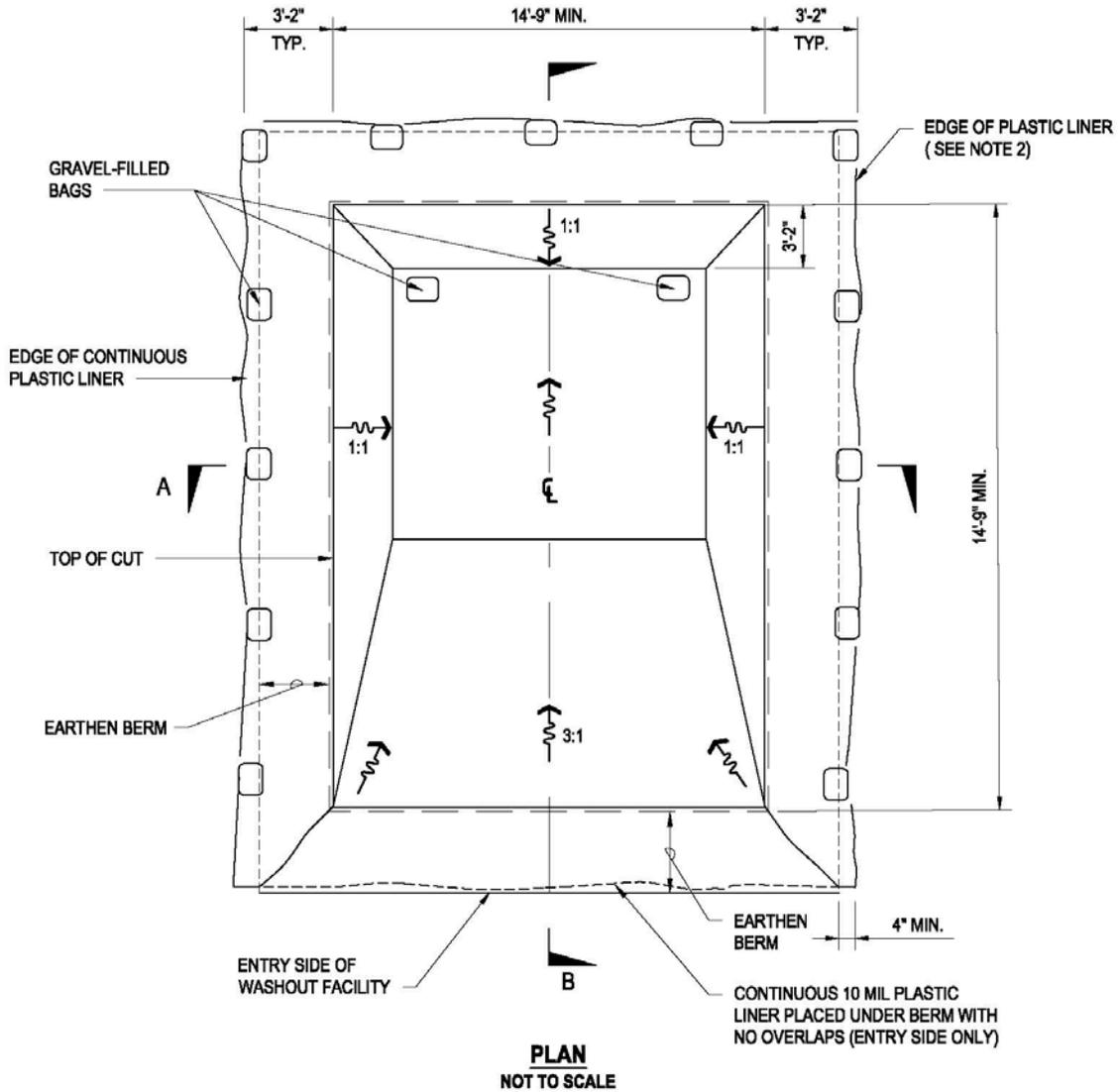
Maintenance *(continued)*

- Inspect concrete washout facilities daily and after heavy rains. Replace lining if damaged (i.e., torn, brittle, uv-degraded) before use.
- Immediately clean up concrete waste on bare ground or paved areas before it hardens.
- Vacuum concrete dust and slurry during and immediately after sawcutting activities with proper equipment to prevent/minimize concrete stains. Hosing or washing the area is not allowed.
- Sweep up debris when concrete work is completed for the day.



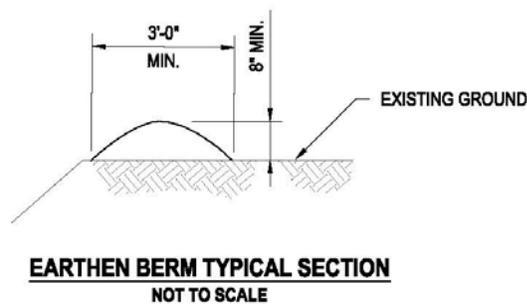
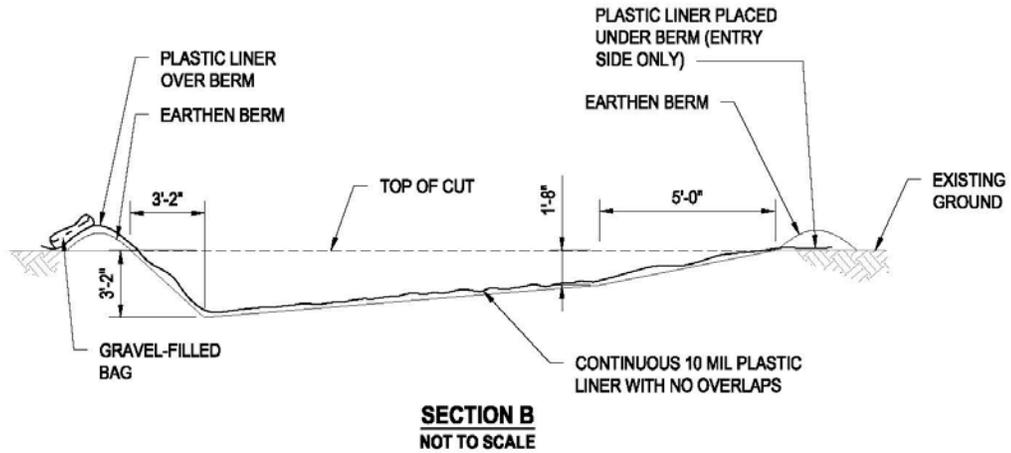
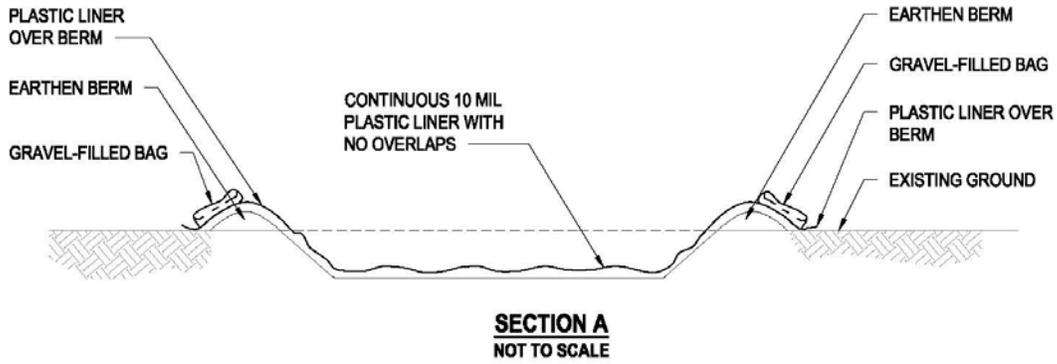
Clean up concrete waste before it hardens and sweep up debris when concrete work is completed for the day.

Concrete Wash and Waste Management

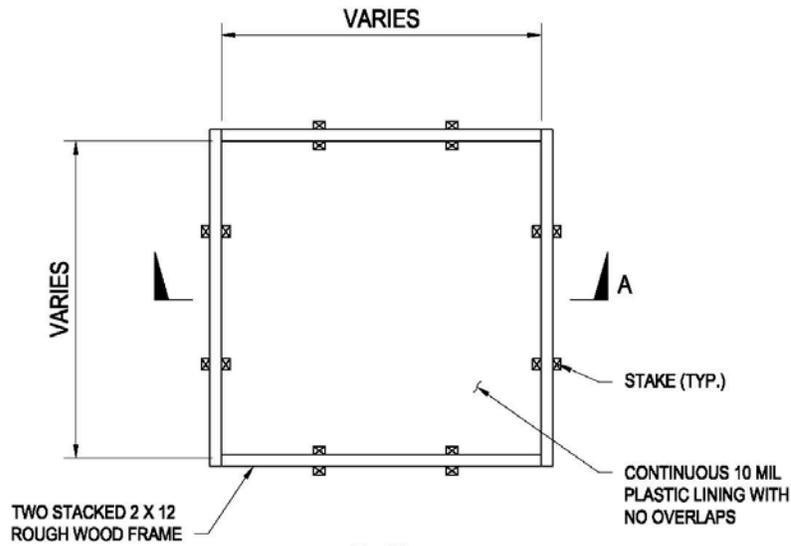


CONCRETE WASHOUT FACILITY (BELOW GRADE)

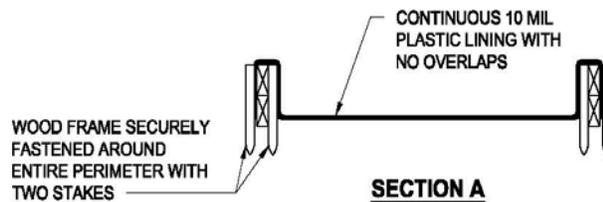
Concrete Wash and Waste Management



Concrete Wash and Waste Management



PLAN
NOT TO SCALE

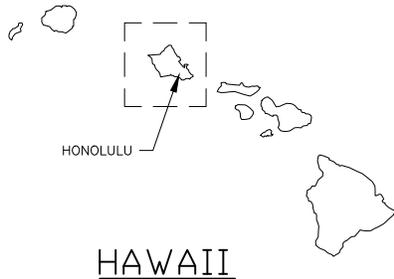


SECTION A
NOT TO SCALE

WASH AREA (ABOVE GRADE)

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE SIZE OF THE CONCRETE WASHOUT SHALL BE DETERMINED BY THE ANTICIPATED AMOUNT OF CONCRETE WASTE TO BE STORED.
3. THE PLASTIC LINING MUST BE A CONTINUOUS SHEET WITH NO OVERLAPS.

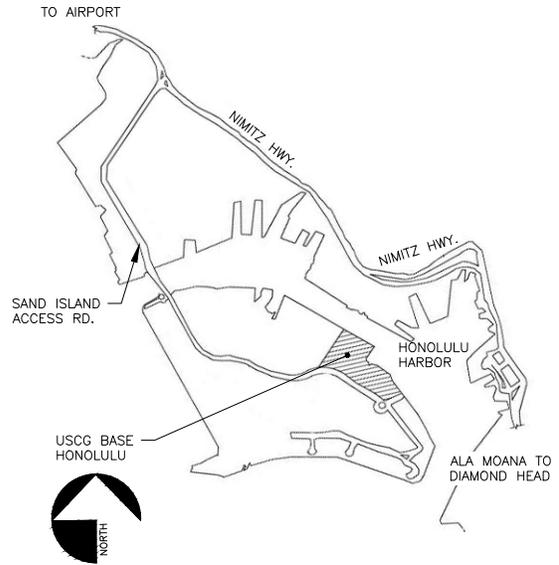


HAWAII



VICINITY MAP

SCALE: NTS



PROJECT LOCATION

SCALE: NTS

TIDAL LEVELS	
HIGH TIDE LINE (HTL)	+2.72 FT
MEAN HIGHER WATER (MHW)	+1.44 FT
MEAN LOWER LOW WATER (MLLW)	+0 FT

PROPOSED ACTIVITY:
DOCK, RESIDENTIAL FILL, ETC.
BERTH EXTENSION

DATUM: MLLW 0'
TMK: 15041042
LAT: 21.307312
LONG: -157.872860

VICINITY MAP

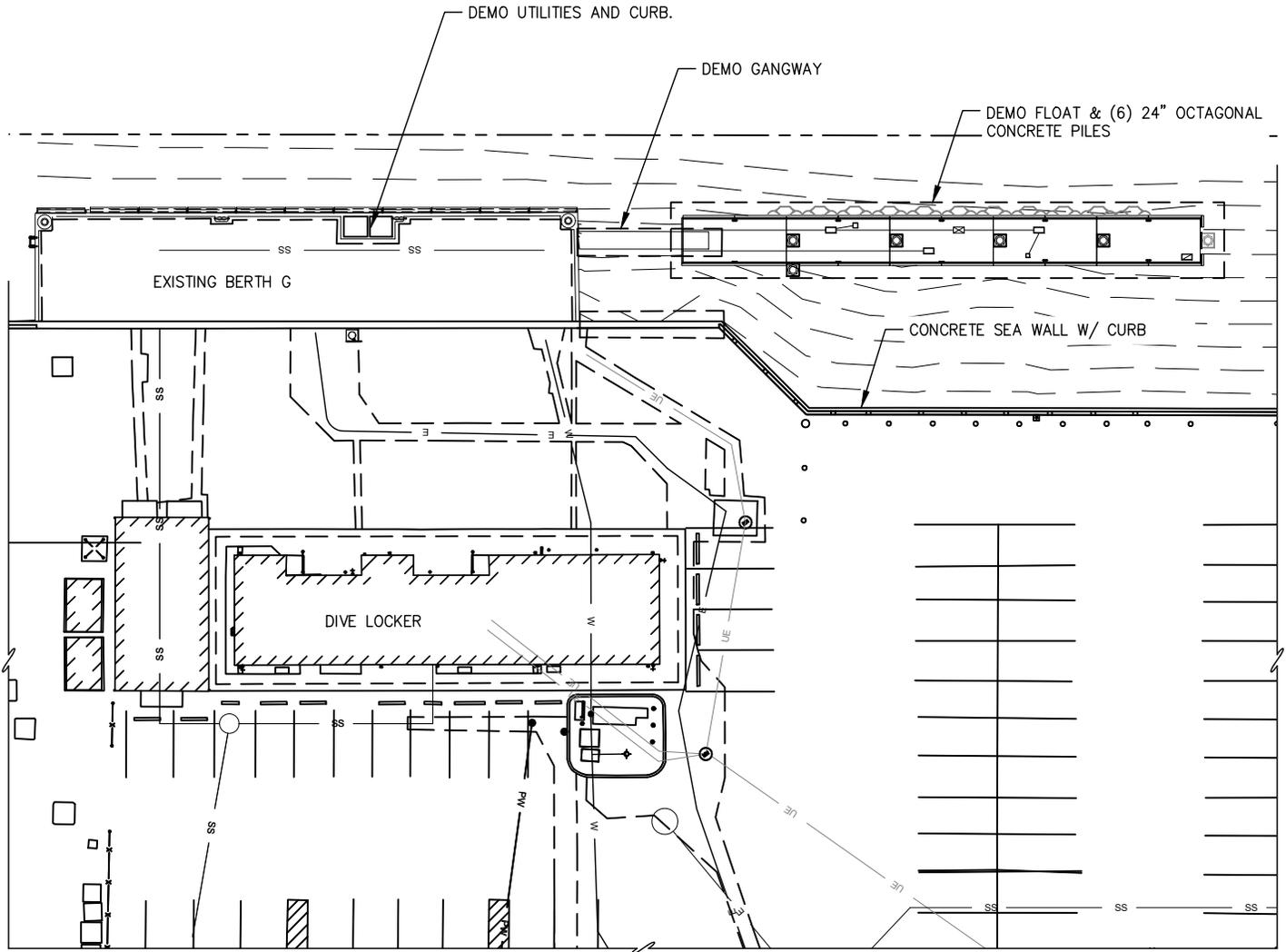
UNITED STATES
COAST GUARD

**USCG BASE HONOLULU
BERTH G
EXTENSION**

POH-XXXX-XXXX

IN: HONOLULU HARBOR

HONOLULU HARBOR



1 EXISTING CONDITIONS AND DEMOLITION PLAN

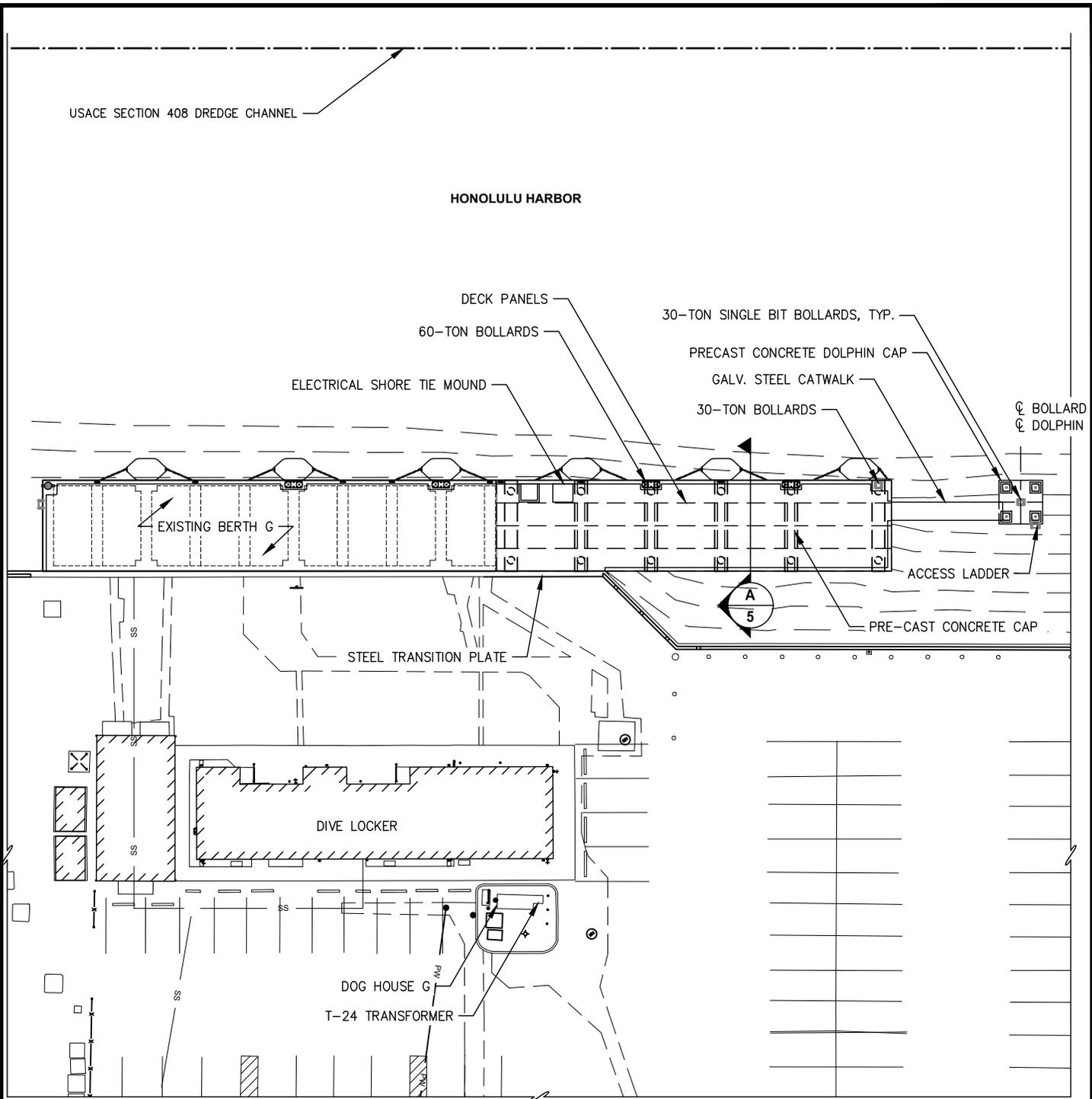
DEMOLITION NOTES:

1. DEMO FLOAT AND PILES COMPLETELY
2. IF PILES CAN NOT BE EXTRACTED CUT OFF AT MUDLINE
3. DEMO GANGWAY AND GANGWAY CONNECTION TO FIXED DOCK.
4. DEMOLISH CURB AROUND FIXED DOCK FLUSH W/ DECK
SALVAGE REBAR EMBEDDED IN CONCRETE DECK
5. DEMOLISH UTILITY CURBS AND UTILITIES ABOVE DECK.
6. DEMOLISH MOORING HARDWARE.
7. DEMOLISH RUBBER FENDERS
8. DEMOLISH ELECTRICAL POWER MOUND, SEE ELECTRICAL FOR DETAILS.

DATUM:

HTL = 2.72'
MHW = 1.44'
MLLW = 0'

APPLICANT: UNITED STATES COAST GUARD
FILE NO.: POH-XXXX-XXXX
WATERWAY: HONOLULU HARBOR
PROPOSED ACTIVITY: BERTH EXTENSION
TMK: 15041042
LAT.: 21.307312 LONG.: -157.872860
DATE: 03/25/2025



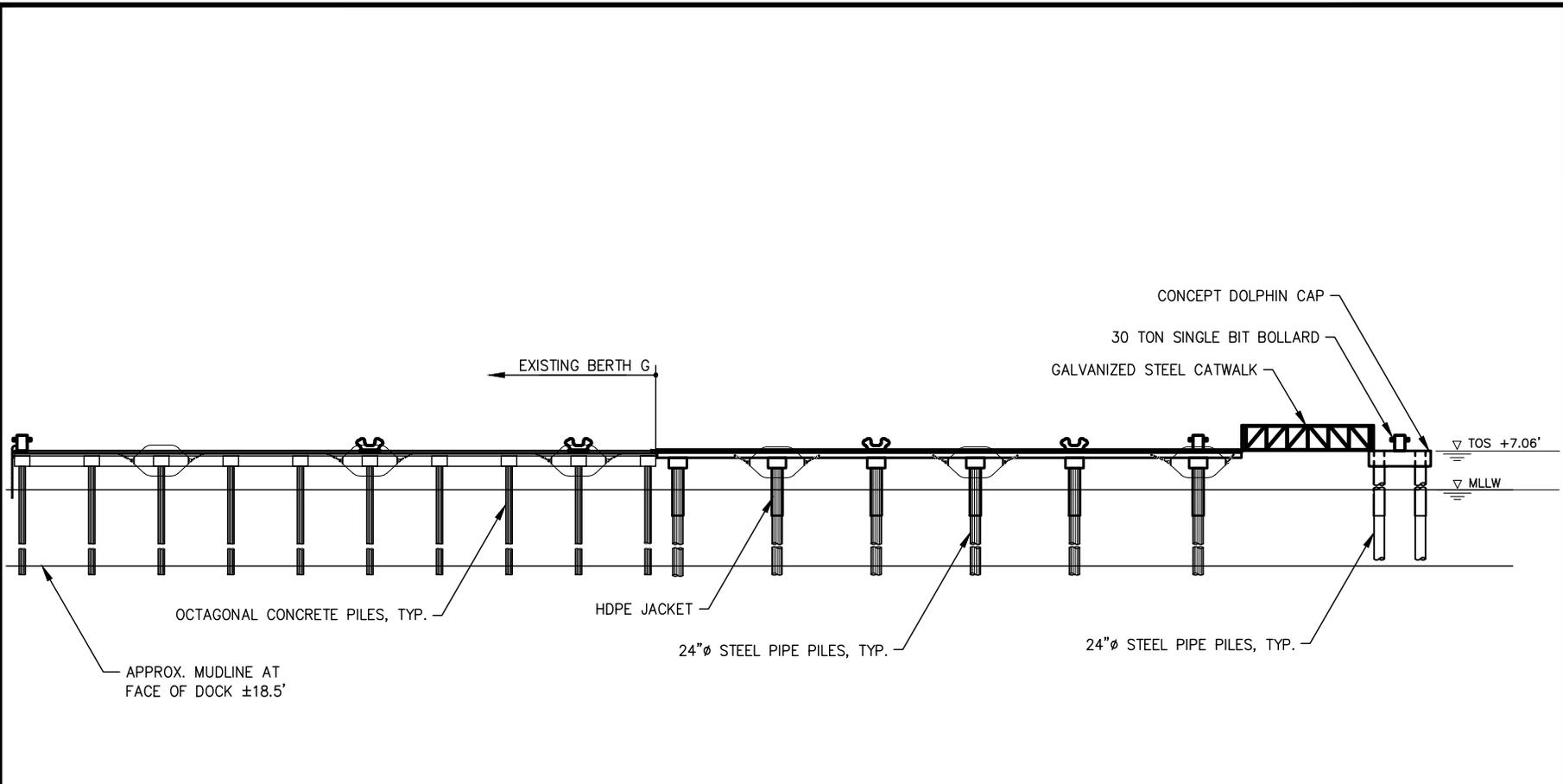
SITE PLAN

DATUM:

HTL = 2.72'
 MHW = 1.44'
 MLLW = 0'

TYP = TYPICAL
 ☉ = CENTERLINE

APPLICANT: UNITED STATES COAST GUARD
 FILE NO.: POH-XXXX-XXXX
 WATERWAY: HONOLULU HARBOR
 PROPOSED ACTIVITY: BERTH EXTENSION
 TMK: 15041042
 LAT.: 21.307312 LONG.: -157.872860
 DATE: 03/25/2025



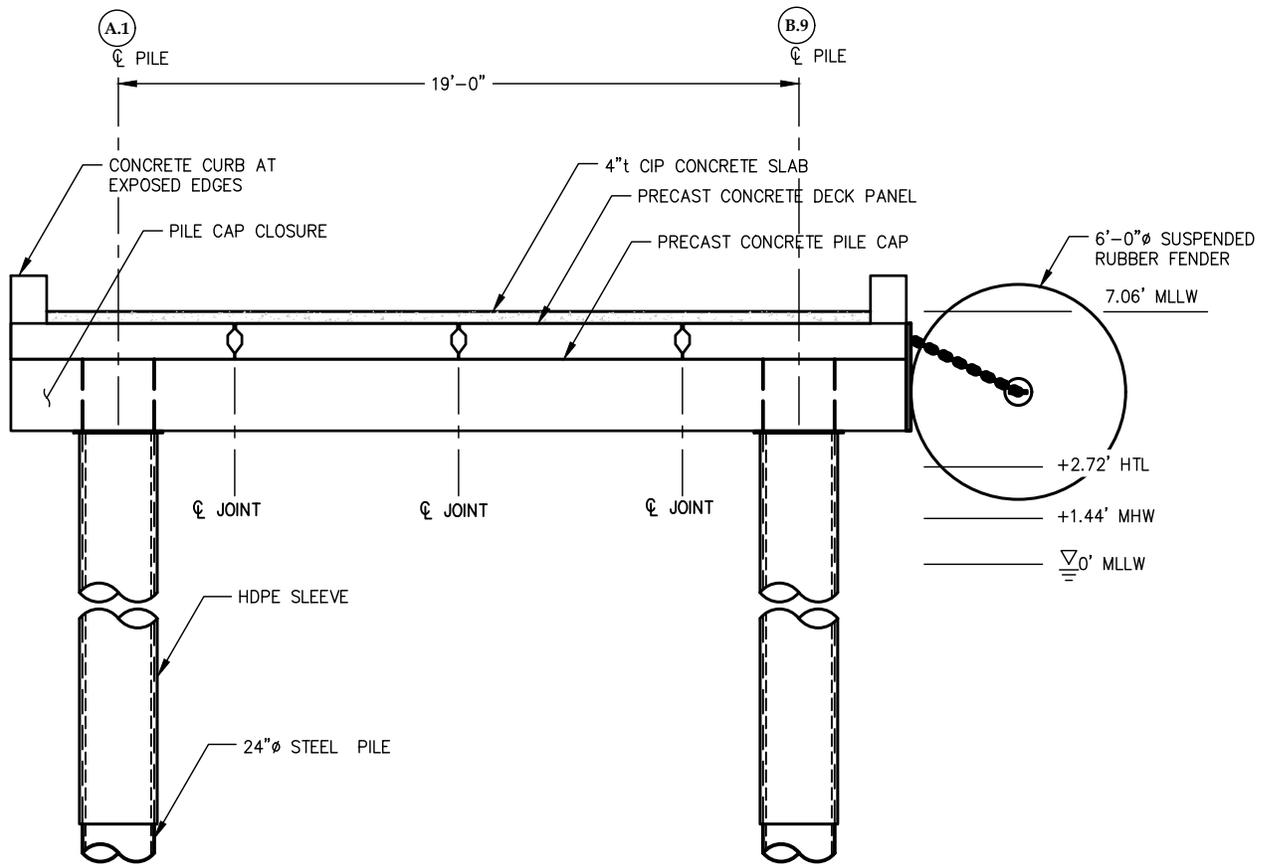
PROPOSED DOCK ELEVATION

DATUM:

HTL = 2.72'
 MHW = 1.44'
 MLLW = 0'

APPLICANT: UNITED STATES COAST GUARD
 FILE NO.: POH-XXXX-XXXX
 WATERWAY: HONOLULU HARBOR
 PROPOSED ACTIVITY: BERTH EXTENSION
 TMK: 15041042
 LAT.: 21.307312 LONG.: -157.872860
 DATE: 03/25/2025

TYP = TYPICAL
 TOS = TOP OF STRUCTURE



BERTH G EXTENSION SECTION

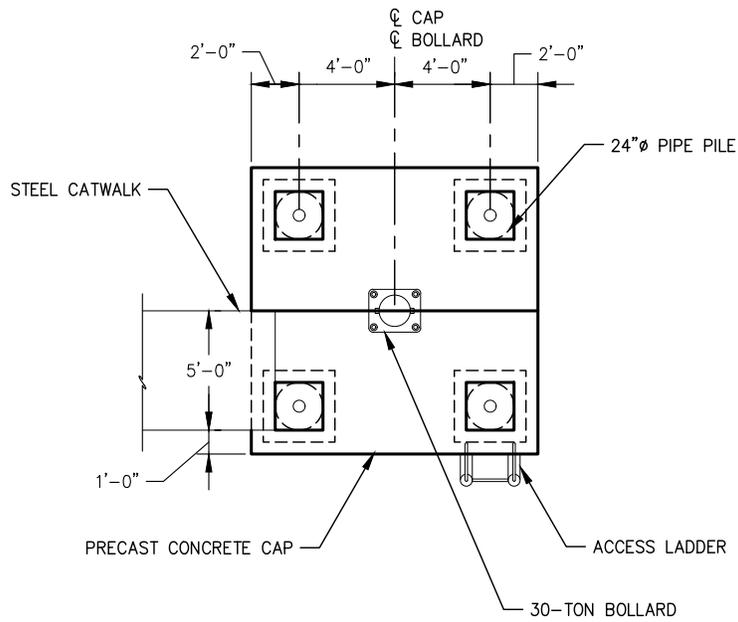


DATUM:

HTL = 2.72'
MHW = 1.44'
MLLW = 0'

CIP = CAST-IN-PLACE

APPLICANT: UNITED STATES COAST GUARD
FILE NO.: POH-XXXX-XXXX
WATERWAY: HONOLULU HARBOR
PROPOSED ACTIVITY: BERTH EXTENSION
TMK: 15041042
LAT.: 21.307312 LONG.: -157.872860
DATE: 03/25/2025



DOLPHIN PLAN

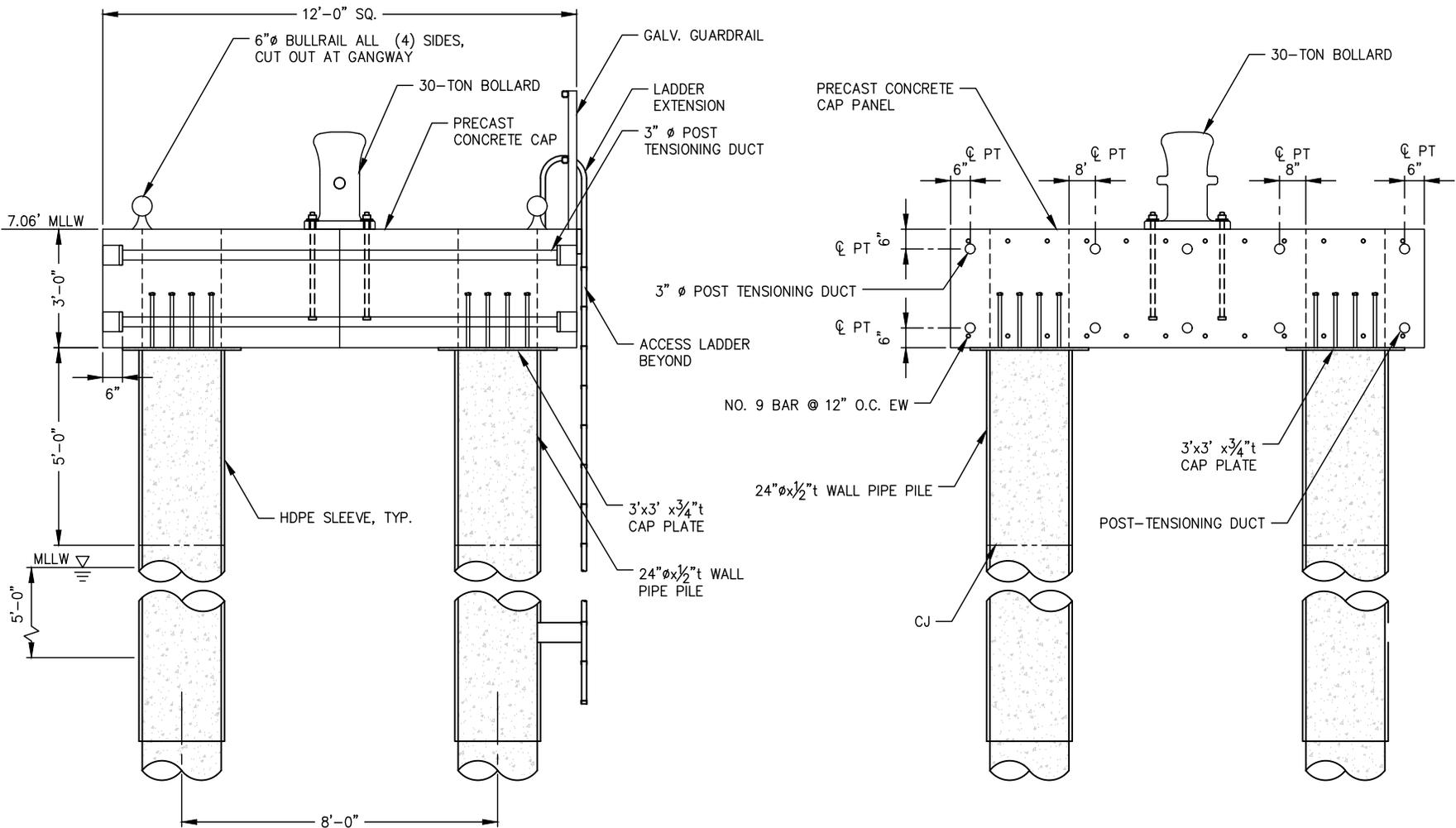
DATUM:

HTL = 2.72'
 MHW = 1.44'
 MLLW = 0'

CL = CENTERLINE

APPLICANT: UNITED STATES COAST GUARD
 FILE NO.: POH-XXXX-XXXX
 WATERWAY: HONOLULU HARBOR
 PROPOSED ACTIVITY: BERTH EXTENSION
 TMK: 15041042
 LAT.: 21.307312 LONG.: -157.872860
 DATE: 03/25/2025

SHEET 6 of 8



DOLPHIN SECTION

DATUM:

HTL = 2.72'
 MHW = 1.44'
 MLLW = 0'

APPLICANT: UNITED STATES COAST GUARD
 FILE NO.: POH-XXXX-XXXX
 WATERWAY: HONOLULU HARBOR
 PROPOSED ACTIVITY: BERTH EXTENSION
 TMK: 15041042
 LAT.: 21.307312 LONG.: -157.872860
 DATE: 03/25/2025

PILE SCHEDULE SUMMARY TABLE

LOCATION		DIA. (INCH)	THICKNESS (INCH)	PILE CUT-OFF ELEVATION (MLLW)	PILE TIP	BATTER	SUPPLY LENGTH (ft)	APPROX. MUDLINE (MLLW)	ESTIMATED TIP ELEVATION (MLLW)	ULTIMATE LOAD (kips)		NO. OF ANODES	
										TENSION	COMPRESSION		
BREASTING MOORING DOLPHIN	16 / D1	VERT	24	0.500	+3.60'	O	V	120	-21.25	-109	20	200	2
	16 / D2	VERT	24	0.500	+3.60'	O	V	120	-17.00	-109	130	200	2
	17 / D1	VERT	24	0.500	+3.60'	O	V	120	-21.25	-109	20	200	2
	17 / D2	VERT	24	0.500	+3.60'	O	V	120	-17.00	-109	130	200	2
FIXED PIER	10.5 / B.9	VERT	24	0.500	+3.94'	O	V	120	-19.60	-106	30	300	2
	10.5 / A.1	VERT	24	0.500	+3.94'	O	V	130	-5.50	-115	30	300	0
	11 / B.9	VERT	24	0.500	+3.94'	O	V	120	-19.25	-106	20	300	2
	11 / A.1	VERT	24	0.500	+3.94'	O	V	130	-8.50	-112	20	300	0
	12 / B.9	VERT	24	0.500	+3.94'	O	V	120	-20.50	-106	20	300	2
	12 / A.1	VERT	24	0.500	+3.94'	O	V	130	-6.50	-112	20	300	0
	13 / B.9	VERT	24	0.500	+3.94'	O	V	120	-20.75	-106	20	300	2
	13 / A.1	VERT	24	0.500	+3.94'	O	V	130	-8.50	-112	20	300	0
	14 / B.9	VERT	24	0.500	+3.94'	O	V	120	-21.00	-106	20	340	2
	14 / A.1	VERT	24	0.500	+3.94'	O	V	130	-10.00	-112	20	340	2
	15 / B.9	VERT	24	0.500	+3.94'	O	V	120	-21.50	-106	30	300	2
15 / A.1	VERT	24	0.500	+3.94'	O	V	130	-11.00	-112	30	300	2	

PILE DRIVING NOTES:

- ALL PILES SHALL BE DRIVEN TO BEDROCK REFUSAL UNLESS NOTED OTHERWISE.
 - FIXED PIER PILES ENCOUNTERING OBSTRUCTIONS AT OR BELOW 70' EMBEDMENT THAT PROVIDE PRACTICAL REFUSAL WITH THE APPROVED IMPACT HAMMER MAY BE CONSIDERED SUFFICIENTLY DRIVEN AT THE ENGINEER'S DISCRETION. NOTIFY CO WHEN CONDITION OCCURS.
 - DOLPHIN PILES ENCOUNTERS OBSTRUCTIONS AT OR BELOW 60' EMBEDMENT THAT PROVIDE PRACTICAL REFUSING WITH APPROVED IMPACT HAMMER MAY BE CONSIDERED SUFFICIENTLY DRIVEN AT THE ENGINEER'S DISCRETION. NOTIFY CO WHEN CONDITION OCCURS.
- PILES ARE ANTICIPATED TO BE ADVANCED BY VIBRATING, IMPACT DRIVING, DRILLING OR SOME COMBINATION TO END BEAR ON BEDROCK.
- ALL PILES SHALL BE SEATED WITH AN IMPACT HAMMER TO VERIFY COMPRESSION CAPACITY HAS BEEN ACHIEVED AND PILES ARE SEATED TO BEDROCK ACCORDING TO PILE DRIVING EQS.
- (24) TOTAL 200# ZINC ANODES ARE ANTICIPATED BASED ON (2) ANODES PER PILE. WHERE MUDLINE DOSE NOT PERMIT ANODE INSTALLATION BETWEEN HDPE SLEEVE AND THE MUDLINE, ANODES SHALL BE OMITTED.
- REPAIR ALL DAMAGED GALVANIZING AT WELDS WITH A SPRAY METALIZED PROCESS, SMALL AREAS OF COATING DAMAGED FROM SHIPPING AND HANDLING MAY BE REPAIRED BY SPRAY METALIZING OR HOT APPLIED ZINC ALLOY WITH (2) COATS OF ZINC RICH PAINT.

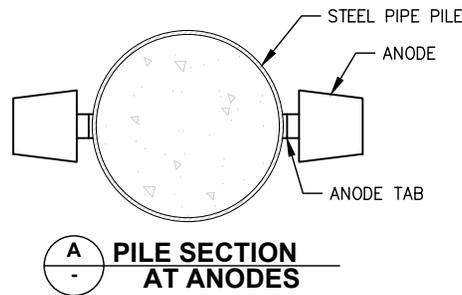
PILE SCHEDULE LEGEND

O - OPEN SHOE H = HORIZONTAL
 V = VERTICAL

DATUM:

HTL = 2.72'
 MHW = 1.44'
 MLLW = 0'

PILE SECTION



APPLICANT: UNITED STATES COAST GUARD
 FILE NO.: POH-XXXX-XXXX
 WATERWAY: HONOLULU HARBOR
 PROPOSED ACTIVITY: BERTH EXTENSION
 TMK: 15041042
 LAT.: 21.307312 LONG.: -157.872860
 DATE: 03/25/2025

