Attachment H – Emergency Related Projects, Departures from Manufacturer's Specifications for Fertilizers Containing Nitrogen or Phosphorus, Buffer Documentation, Documentation of Compliance with UIC Requirements, Other State/Federal/County Permits, Fugitive Dust Control Plan & Other Information as Requested by the Director (SWPPP Sections 7.2.3, 7.2.9, 7.2.14, 7.2.15, and 7.2.16)

### STATE/FEDERAL/COUNTY PERMITS

Surface Runoff from Construction Activities entering into City's Storm Sewer System.

Approved Jurisdictional Determination for Farrington Highway Bridges Expansion, Ewa, Oahu, HI, Department of the Army File No. POH 2020-00071 dated September 18, 2020.

Date: July 23, 2021

Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, HMB, 7th Floor
Honolulu, Hawaii 96813

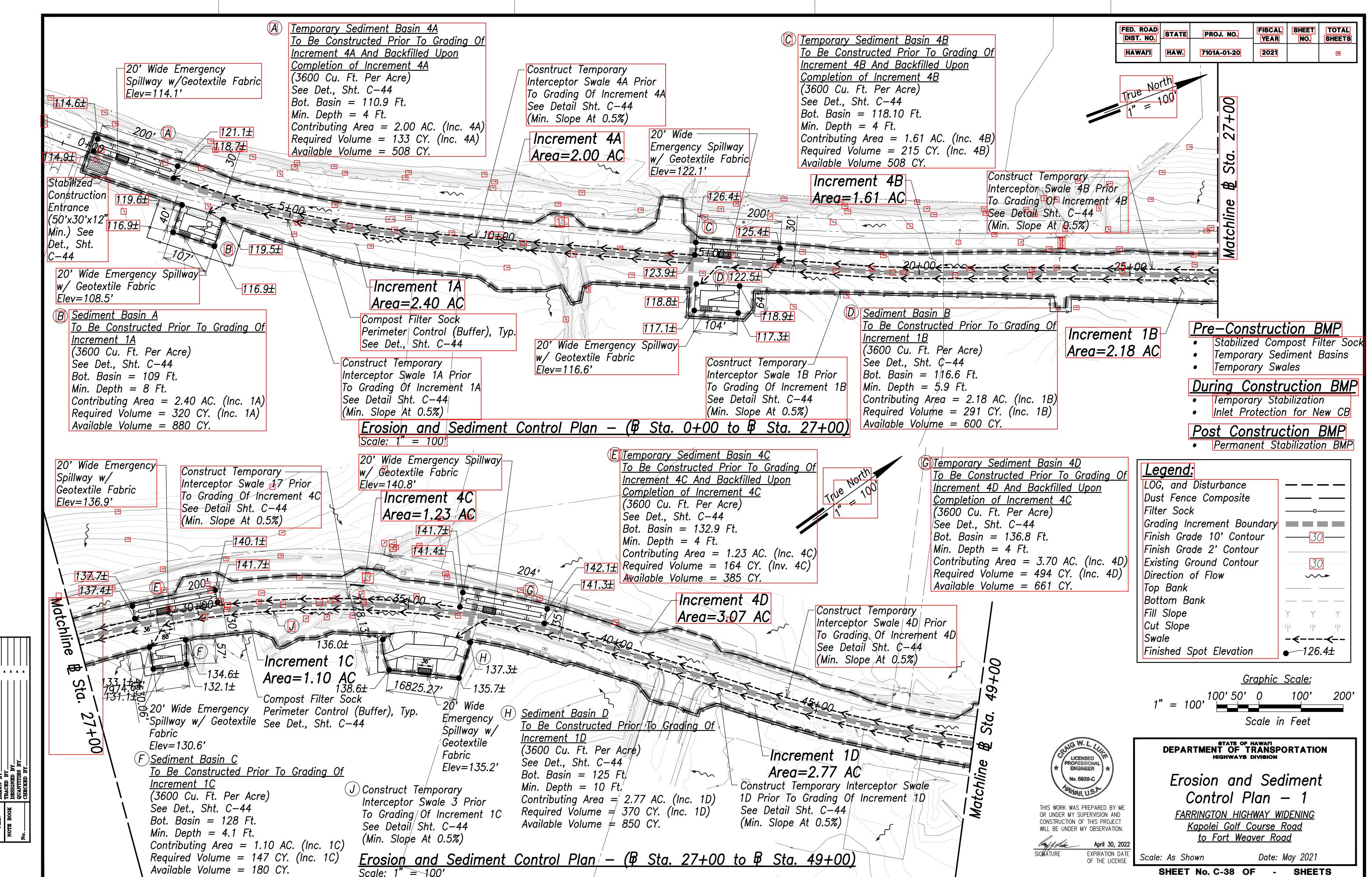
Phone No.: (808) 692-7575

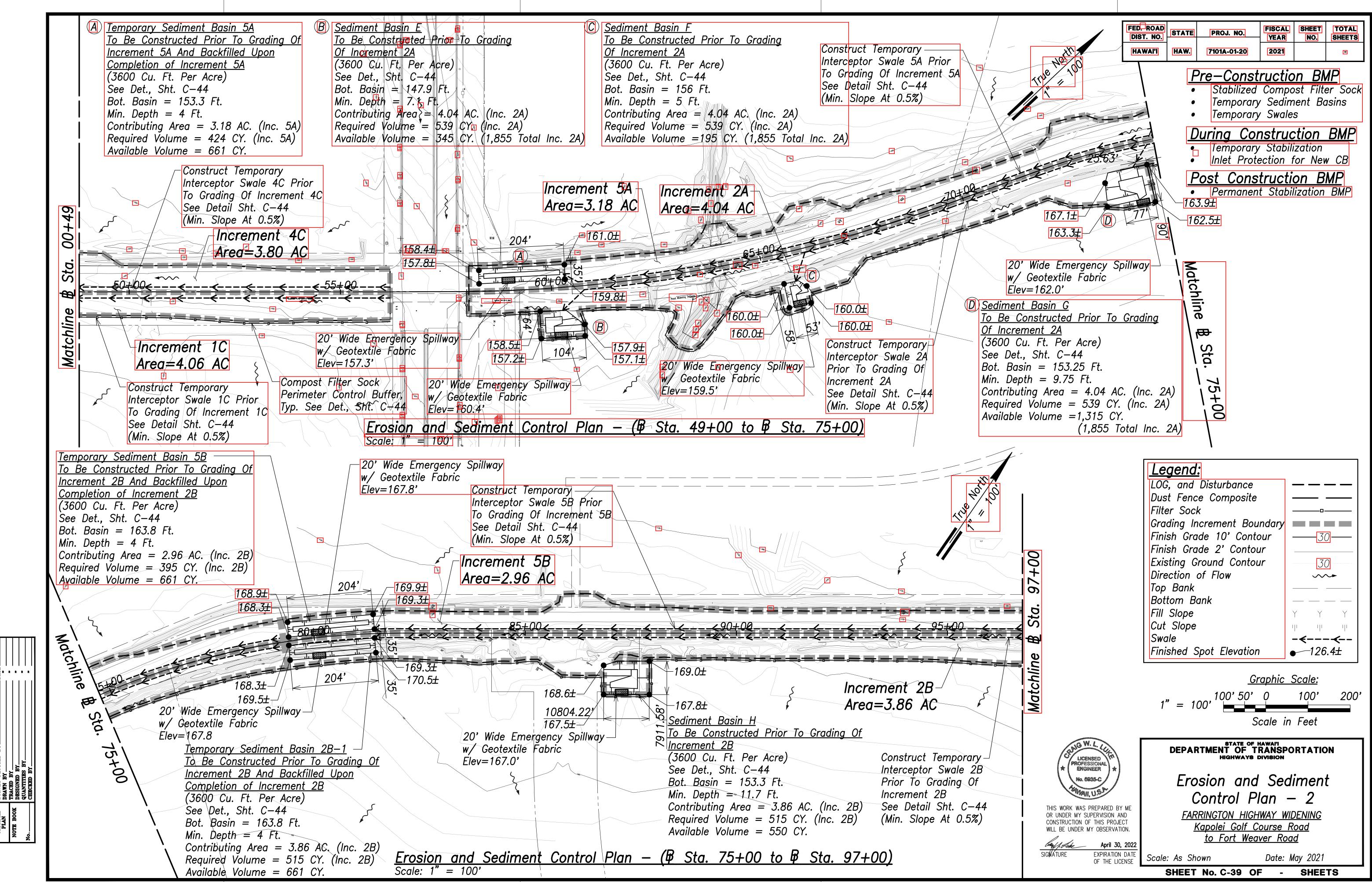
Honolulu, F	Hawaii 96813					
Dear Madaı	m/Sir:					
Subject:	Surface Runoff from Construction Activities entering into City's Storm  Sewer System					
amended, w (NPDES) Powith constru	Section 11-55-04, Chapter 11-55, Water Pollution Control, Hawaii Administrative Rules, as we are required to obtain coverage under National Pollutant Discharge Elimination System thermit Program from State Department of Health (DOH) for storm water discharges associated action activities. Since surface runoff of storm water from above activities will enter into sewer system, we are providing the following information for your use:					
1. Owner/L	essee Information (owner of facility or activity):					
Leg	gal Name: State of Hawaii, Department of Transportation, Highways Division (HDOT-HWY)					
Stre	eet Address: 869 Punchbowl Street					
City	y, State and Zip Code: Honolulu, Hawaii 96813-5097					
Cor	ntact Person & Title: Jade T. Butay, Director of Transportation					
Pho	one No.: (808) 587-2150 Fax No.: (808) 587-2167					
2. Facility/F	Project Information:					
Foo	Farrington Highway Widening, ility/Project Name: Kapolei Golf Course Road to Fort Weaver Road					
Гас	The project is located on Farrington Highway, between Kapolei Golf Course Road					
Stre	eet Address: and Fort Weaver Road.					
City	y, State and Zip Code: Ewa, Hawaii 96706					
•	(1) 9-1-016:004, 007, 008, 179, 182, 183, 220, 221; (1) 9-1-017:043, 070, 097, 099, Map Key: 172; (1) 9-1-018:006 through 009, 012 through 016, 018; (1) 9-1-081:006 & 022					
Typ	be of Existing/Proposed Facility/Activity: Road Construction and Linear Unity					
City	drainage facility(ies) discharge will be entering: City and County of Honolulu					

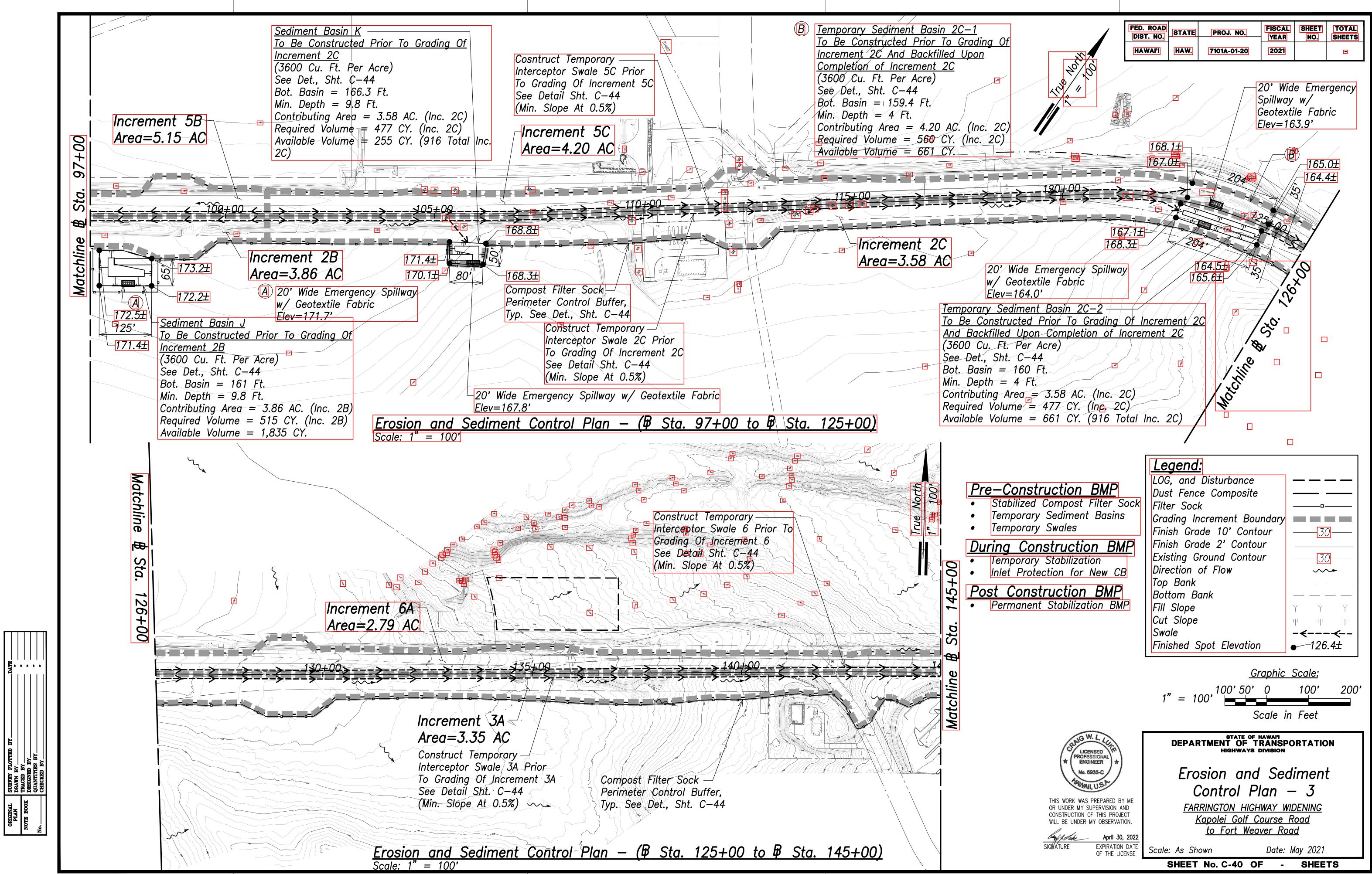
Contact Person & Title: Lawrence Laus, P.E., Design Project Manager

Fax No.: N/A

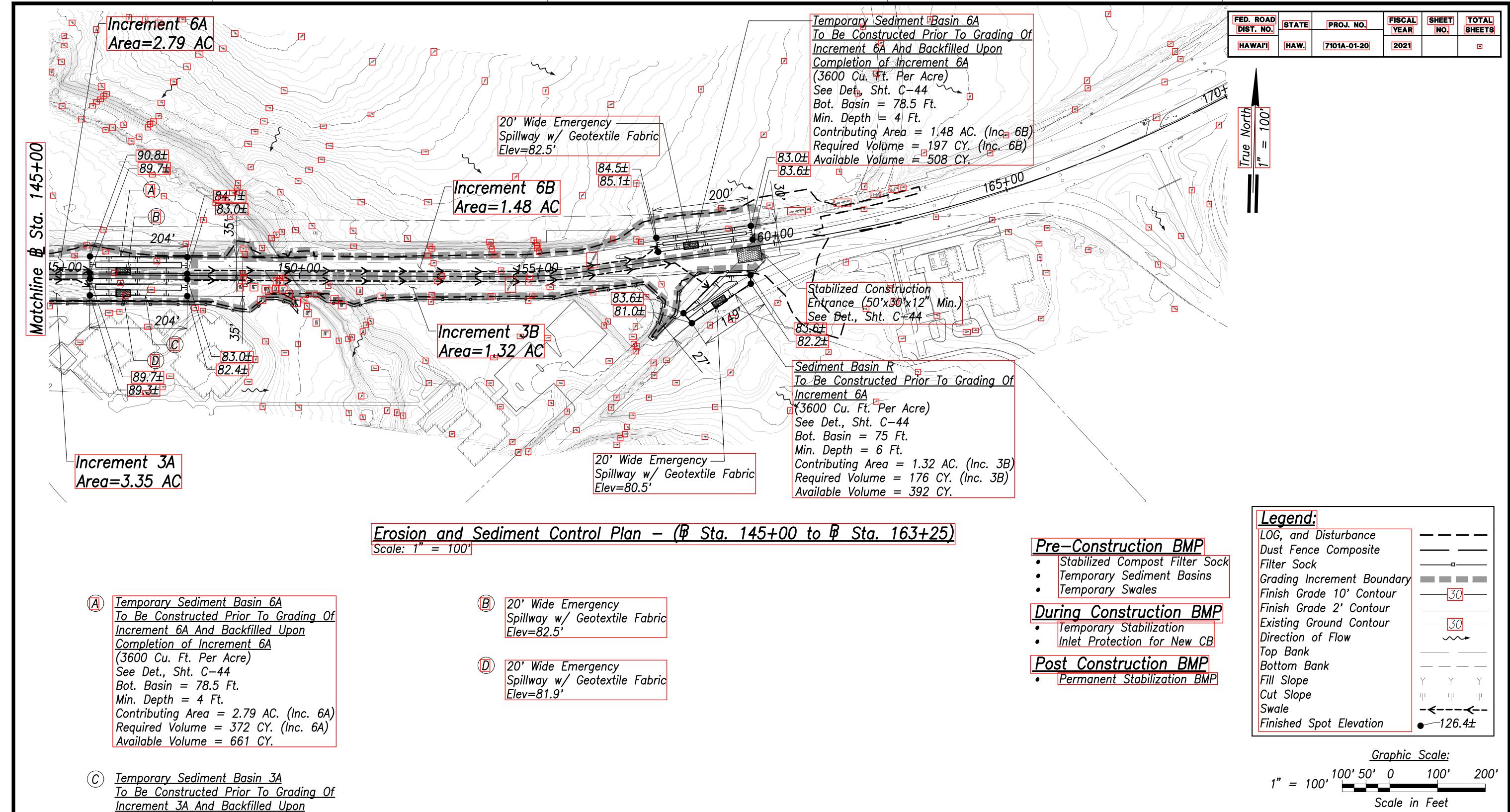
3. Other Information:							
Estimated Rate of Discharge (for 10 yrs, 11	Estimated Rate of Discharge (for 10 yrs, 1 hr storm event): 186.08 cfs						
Estimated Duration of Discharge: 1 hour							
Estimated Size of Disturbed Area 46.50 ac	res						
Has the Dept. of Health NPDES permit bee	n applied: Yes_✓_ No						
Has the Dept. of Health NPDES permit bee (If yes, attach a copy of the permit/NGPC)	on approved: Yes_ ✓ No						
4. The following is attached as required in accordar Relating to Soil Erosion Standards and Guidelin							
✓ Erosion Control Plan (for categories	4 and 5)						
✓ Site Specific BMP's (for categories 1, 2, and 3)							
Other (							
Should you need any clarification or more informat at (808) 587-2150 .	ion, please call <u>Jade T. Butay</u>						
I certify under penalty of law that the information could best of my knowledge and belief.	contained herein is true, accurate, and complete to the						
	Very truly yours,						
	Owner/Lessee (Signature)						
	Jade. T. Butay Print Name						
Attachment(s)							
For Official Use Only:							
DPP Project Reference No. 20CP							
<ul> <li>□ ECP or BMP approved on: / /</li> <li>□ The review, approval, and inspection of the BMP for the OTR project shall be the responsibility of the above City agency.</li> <li>□ The review, approval, and inspection of the BMP</li> </ul>							







<u>L1</u>



ORIGINAL PLAN NOTE BOOK

Completion of Increment 3A (3600 Cu. Ft. Per Acre) See Det., Sht. C-44 Bot. Basin = 77.9 Ft. Min. Depth = 4 Ft.Contributing Area = 3.35 AC. (Inc. 3A) Required Volume = 447 CY. (Inc. 3A) Available Volume = 661 CY.

LICENSED PROFESSIONAL ENGINEER No. 6935-C THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

April 30, 2022

EXPIRATION DATE OF THE LICENSE

SIGNATURE

DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

Erosion and Sediment Control Plan - 4

FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road

Scale: As Shown

Date: May 2021 SHEET No. C-41 OF - SHEETS

## Good Housekeeping BMPs Notes:

Street Sweeping and Vacuuming.

All pollutants discharged from construction site to off-site areas must be swept or vacuumed each day before leaving the job site.

Materials Delivery, Storage and Use Management.

Prevent, reduce, or eliminate the discharge of pollutants from material delivery, storage, and use to the storm water system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, installing secondary containment. Construction materials, waste, toxic and hazardous substances, stockpiles and other sources of pollution shall not be stored in buffer areas, near areas of concentrated flow, or areas abutting the ms4, receiving waters, or drainage improvements that discharge off-site. Primary and secondary containment controls and covers shall be implemented to the maximum extent practical (MEP).

Spill Prevention and Control.

Create and implement spill prevention and response plans to eliminate and minimize the discharge of pollutants to the MS4 and receiving waters from leaks and spills by reducing the chance for spills, absorbing, containing, and cleaning up spills and properly disposing of spill materials. at a minimum, all projects shall cleanup all leaks and spills immediately.

Hazardous Materials.

prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use and waste disposal. in the event that hazardous materials are discharged to the ms4, the property owner or escp coordinator shall immediately notify the department of facilities maintenance, honolulu fire department, and honolulu police department of the discharge by telephone. a written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the director no less than 3 days after notification by phone.

Nonhazardous Materials.

In the event that nonhazardous materials are discharged to the MS4, the property owner or ESCP coordinator shall notify the city department of facilities maintenance by telephone no later than the next business day. A written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the director no less than 3 days after notification by phone.

Vehicle and Equipment Cleaning.

Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment cleaning operations by using off-site facilities when feasible, washing in designated, contained areas only, and eliminating discharges to the storm drain system by evaporating and/or treating wash water, as appropriate or infiltrating wash water for exterior cleaning activities that use water only.

Vehicle and Equipment Fueling.

Prevent fuel spills and leaks by using off-site facilities, fueling only in designated areas, enclosing or covering stored fuel, and implementing spill controls such as secondary containment and active measures using spill response kits.

# Good Housekeeping BMPs Notes (Cont'd)

Vehicle and Equipment Maintenance.

Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment maintenance operations by using off-site facilities when feasible, performing work in designated areas only, using spill pads under vehicles and equipment, checking for leaks and spills, and containing and cleaning up spills immediately.

9. Solid Waste Management.

Prevent or reduce discharge of pollutants to the land, groundwater, and in storm water from solid waste or construction and demolition waste by providing designated waste collection areas, collect site trash daily, and ensuring that construction waste is collected, removed, and disposed of only at authorized disposal areas.

10. Sanitary/Septic Waste Management.

Temporary and portable sanitary and septic waste systems shall be mounted or staked in, well-maintained and scheduled for regular waste disposal and servicing. Sources of sanitary and/or septic waste shall not be stored near the MS4 or receiving waters.

11. Stockpile Management.

Stockpiles shall not be located in drainage ways, within 50 feet from areas of concentrated flows, and are not allowed in the City right-of-way. Sediment barriers or silt fences shall be used around the base of all stockpiles. Stockpiles shall not exceed 15 feet in height. Stockpiles greater than 15 feet in height shall require 8 foot wide benching in accordance with ROH Chapter 14, Article 15. stockpiles must be covered with plastic sheeting or a comparable material if they will not be actively used within 7 days.

12. Liquid Waste Management.

Liquid waste shall be contained in a controlled area such as a holding pit, sediment basin, roll—off bin, or portable tank of sufficient volume and to contain the liquid wastes generated. Containment areas or devices must be impermeable and leak free and should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains.

13. Concrete Waste Management.

Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout offsite or performing onsite washout in a designated area constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 millimeter polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material. Containment areas or devices should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains. Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75 percent full. Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of as solid wastes.

14. Contaminated Soil Management.

At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheeting. Contaminated soil should be disposed of properly in accordance with all applicable regulations.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		•

## Good Housekeeping BMPs Notes (Cont'd)

Dust Control.

The Contractor, at his own expense, shall provide effective measures for the control of dust from the project site and haul roads so it shall not be transported or discharged to off-site areas. The work must be in conformance with air pollution control standards contained in the Hawaii Administrative Rules: Title 11 Chapter 60.1, "Air Pollution Control".

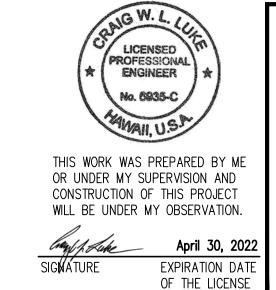
BMP and Site Maintenance.

The contractor shall maintain temporary erosion control measures for the life of the project. The Contractor shall clean trash and debris around the surrounding area on a weekly basis.

## Erosion and Sediment Control Plan Schedule and Rain Response Plan Notes:

Project Sequence:

- Install stabilized construction entrances, perimeter controls, and temporary fencing for protected areas, clearing and grubbing as necessary for the installation of these BMPs.
- 2. Construct temporary sediment basins, stabilize immediately.
- 3. Construct temporary swales to direct runoff into the sediment basins. Stabilize immediately.
- 4. Install permanent drainage system with temporary inlet protection for inlets that do not drain to the sediment basins. Clear and grub as needed for installation.
- Clear, grub and grade the site in 7 phases, sequentially in numerical order beginning with Increment 1. Relocate, Reconstruct and maintain bmps as needed to keep them effective at all times. Stabilization of the current phase is required prior to the start of the subsequent phase. Initiate temporary stabilization immediately once grading is completed in each phase.
- Initiate stabilization of steep slopes (> 15%) with hydroseeding as soon as grading is completed on those areas. Install permanent irrigation system prior to permanent seeding.
- Proceed with construction with least possible disturbance of vegetative areas and temporary structures.



DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Notes - 1

FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road

Scale: As Shown

Date: May 2021

SHEET No. C-42 OF - SHEETS

# Erosion and Sediment Control Plan Schedule and Rain Response Plan Notes (Cont'd)

Project Sequence:

- 8. Plant permanent ground cover according to the landscaping plan as soon as possible.
- Remove or dismantle temporary erosion control structures after full establishment of permanent vegetative cover.
- 10. Practice good housekeeping measures throughout the duration of construction.
- 11. Inspections will be performed weekly.

Rain Response Plan:

The following will be performed when heavy rains, tropical storm or hurricane is imminent or is forecasted in the next 48 hours:

- Temporary suspension of active grading and trenching/construction.
- Inspect all sediment basins, temporary ditches/ swales, perimeter controls, and inlet protection devices, and maintain as needed. Reinstall any perimeter controls that were removed due to active work in the area. If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.
- Cover or relocate material stockpiles and liquid material containers to avoid contact with rainwater.
- Place spill pans or oil—only spill pads under construction vehicles to prevent runoff from contacting any spilled petroleum products. Properly dispose of any accumulated oily water after the rain event.
- Re—inspect after the approaching heavy rains, tropical storm or hurricane and replace or maintain BMPs as needed.

### Sediment Control Notes Erosion Prevention /

- The Contractor shall follow the guidelines in the City and County of Honolulu's "Rules Relating to Water Quality."
- Measures to control erosion and other pollutants shall be in place before any earthwork is initiated.
- Temporary stabilization is required on disturbed areas which are at final grade or when the disturbed area will not be worked for 14 consecutive days or more.
- Permanent Stabilization

All disturbed areas shall be permanently stabilized using vegetative covering, pavement, or equivalent, prior to removing erosion and sediment measures. Trapped sediment and areas of disturbed soil which result from the removal of the temporary measures shall be immediately and permanently stabilized.

Preserve Existing Vegetation

Clearly mark the areas to be preserved with flags or temporary fencing. Where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.

### Sediment Control Notes (Cont'd) Erosion Prevention /

Minimize Soil Compaction

Areas where final stabilization or infiltration practices will be installed shall be protected from excessive compaction during construction. Vehicle and equipment use shall be restricted or techniques to condition the soils to support vegetation shall be implemented in the areas that have been compacted and are designated to remain vegetative or post-construction infiltration areas. Clearly mark the areas to be avoided with flags or temporary fencing. Where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.

### Perimeter Controls

Perimeter controls are required downslope of all disturbed areas. Maintain downstream vegetated buffer area.

- Inlet Protection
  - All storm drain inlets onsite and those offsite which may receive runoff from the site shall use an inlet protection device unless they are directed to a sediment basin.
  - Sediment levels may not exceed one third of the height of a sediment barrier or inlet protection device at any point along the length of the sediment barrier or the inlet protection device.
  - Sediment barriers and inlet protection devices must be unclogged and cleaned when performance is compromised.
  - Torn, weathered or sagging sediment barriers or inlet protection devices must be repaired or replaced immediately.

### Sediment Basins

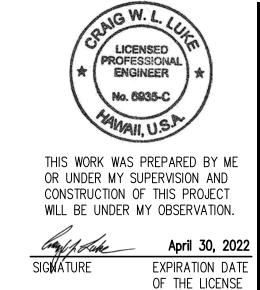
Sediment basins must be kept in effective operating condition and sediment shall be removed to maintain at least one half of the design capacity at all times.

- Tracking Control
  - Minimize sediment track—out onto off—site streets, other paved areas, and sidewalks from vehicles exiting the construction site by restricting vehicle traffic to properly designated areas and using additional controls to remove sediment from vehicle tires prior to exiting the site.
  - Vehicular parking and movements on project sites must be confined to paved surfaces or predefined parking areas and vehicle paths, which shall be marked with flags or boundary fencing.
  - All pollutants and materials that are dropped, washed, tracked, spilled, or otherwise discharged from a project site to off-site streets, other paved areas, sidewalks or the ms4 must be cleaned using dry methods such as sweeping or vacuuming.
  - Washing pollutants and materials that are discharged from the project site to the ms4 into drain inlets or catch basins is prohibited unless the material is sediment and the inlets are directed to a sediment basin or sediment trap.
- Best Management Practices (BMPs) shall not be removed until final stabilization is complete for that phase.
- Refer to City and County of Honolulu Best Management Practices Manual— Construction, for more information on BMPs.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAI'I	HAW.	7101A-01-20	2021		•

### Sediment Control Notes (Cont'd) Erosion Prevention ,

- The following BMPs were determined to be not applicable based on the specific site conditions. As construction progresses, revisions may be necessary and will be provided to DPP inspectors.
  - sediment barriers are not applicable as the proposed BMPs (perimeter control and sediment basins) are sufficient to address any potential sediment runoff.
  - Dewatering practices are not applicable because ground water is not expected to be present, due to the project elevation.
  - Sediment traps are not applicable because this project is larger than 5 acres.
- An ESCP coordinator is required for this project. At the time of obtaining the trenching permit, the owner or authorized agent shall submit the "ESCP coordinator and/or CWPPP Designation Form" from the Appendix A to the "Rules Relating to Water Quality", August 2018, to CEB, to designate the Escp coordinator for this project.
- The contractor shall comply with the project scheduling requirement as specified in the "Administrative Rules, Title 20, Department of Planning and Permitting, Chapter 3, Rules Relating to Water Quality", Section 20-3-28. The scheduled start date shall be submitted to the director in writing 2 weeks prior to commencing any work governed by these rules.



DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Erosion and Sediment Control Notes - 2

FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road

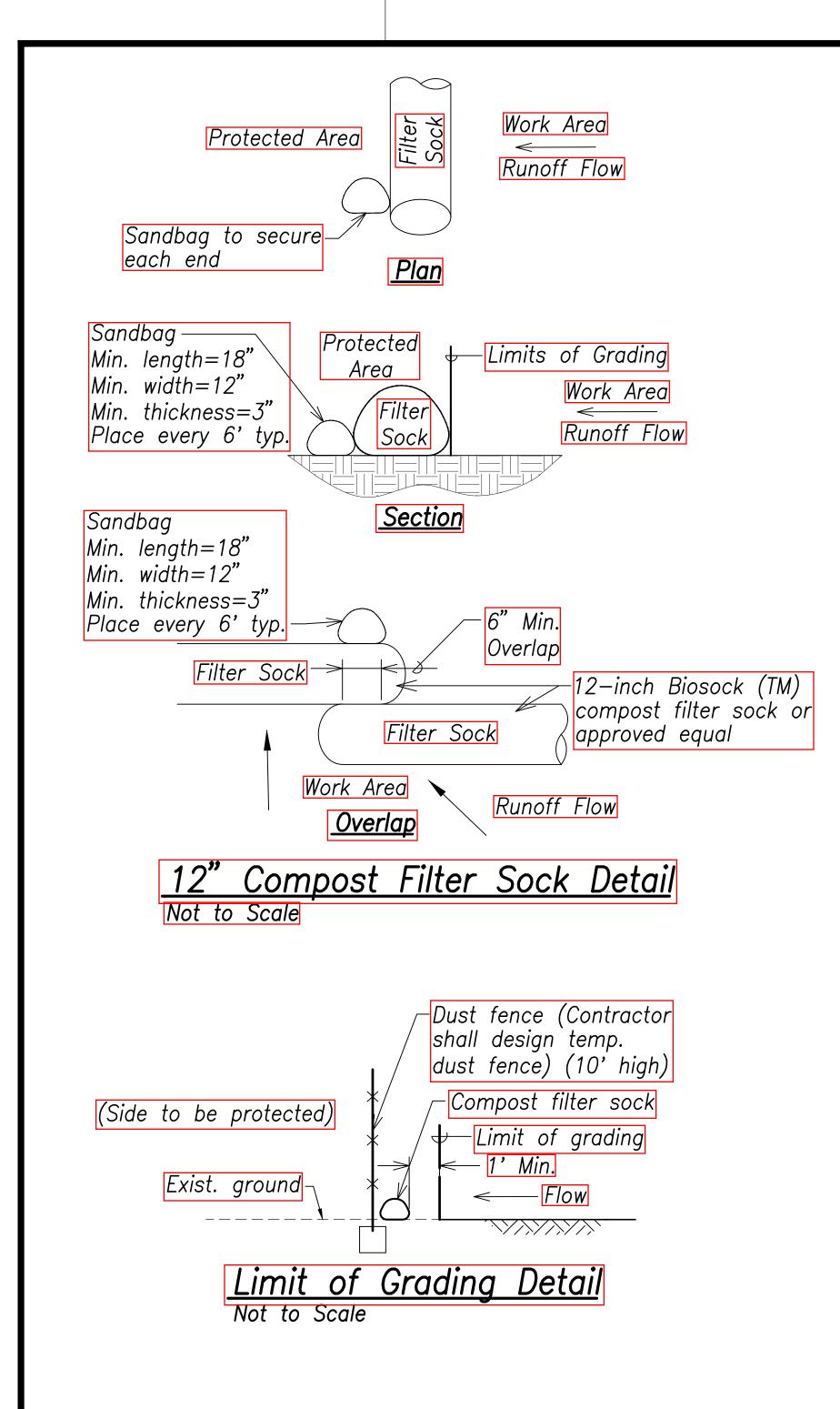
Scale: As Shown

Date: May 2021

SHEET No. C-43 OF - SHEETS







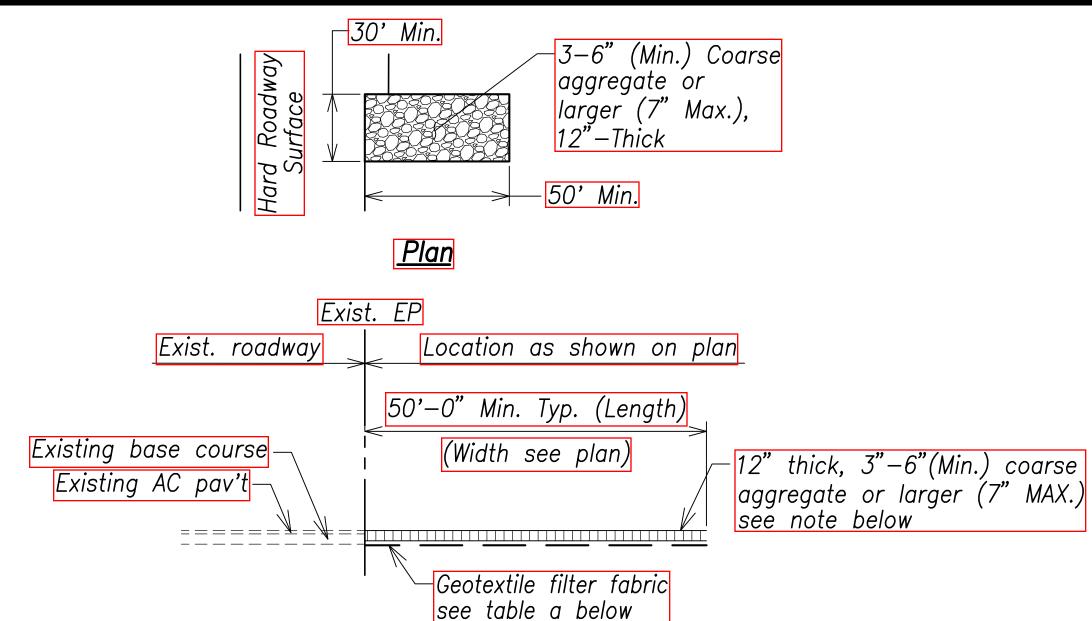
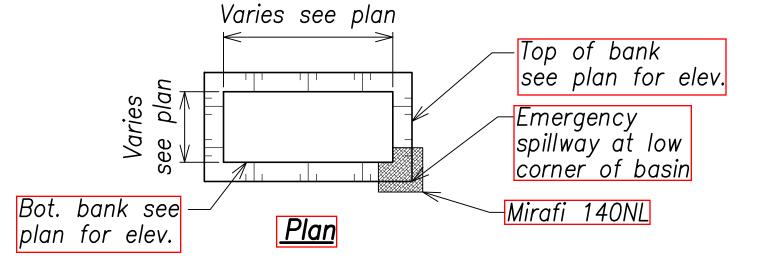


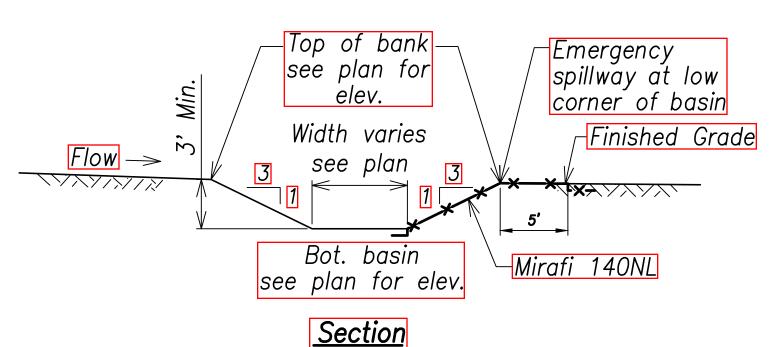
Table A Geotextile Requirements Physical Property Requirements Grab Strength 315 MARV (ASTM D4632) Sewn Seam Strength 285 MARV (ASTM D4884) 115 MARV (ASTM D4533) Trapezoid Tear Strength Puncture Resistance 115 MARV (ASTM D4833) Permittivity  $0.05^{1}(ASTM D4491)$ Apparent Opening Size 40 MARV (ASTM D4751) (Ú.S. Standard Šieve) Ultraviolet Degradation, 50 MARV (ASTM D4355) 500 hours

<u>Section</u>

Note:
12" Coarse aggregate
layer shall be removed
immediately prior to installation of roadway base course.

#### FISCAL SHEET NO. FED. ROAD DIST. NO. TOTAL PROJ. NO. SHEETS 7101A-01-20 2021 HAW.





Note:

- 1. In lieu of providing outlet structures, contractor shall maintain the sediment basin in effective operating condition and provide pumping if any water has been standing for 72 hours, the contractor shall pump out standing water in the sediment basins and dispose of it at the temporary discharge area.
- Double compost filter sock (perimeter control) shall be placed at the downstream side of the temporary discharge area. if the temporary discharge area does not have adequate vegetation, the contractor shall grass the temporary discharge area prior to disposing the water. Double compost filter sock (perimeter control) and grassing shall be maintained during grading operations and use of the discharge area.

Temporary Sediment Basin Not to Scale

# 8' Min. 4' Min. Existing Ground-12" Min.

Stabilized Construction Entrance

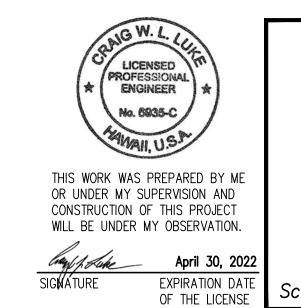
Swale Shall Be-Grassed with Buffel Grass

## *Notes:*

Not to Scale

- 1. temporary interceptor swale shall be removed and graded last upon completion of grading increments.
- 2. Temporary interceptor swale shall be stabilized immediately with hydroseed.

Temporary Interceptor Swale Not to Scale



DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

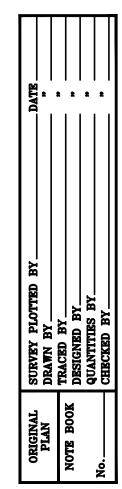
Erosion and Sediment Control Details

FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road

Scale: As Shown Date: May 2021

SHEET No. C-44 OF

SHEETS





### **DEPARTMENT OF THE ARMY**

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

September 18, 2020

SUBJECT: Approved Jurisdictional Determination for Farrington Highway Bridges Expansion, Ewa, Oahu, HI, Department of the Army File No. POH-2020-00071

Hawaii Department of Transportation, Highways c/o Mr. Craig Luke R.M. Towill Corporation 2024 N. King Street Suite 200 Honolulu, HI 96819

Dear Mr. Luke:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Office has received your request for a jurisdictional determination and clarification whether a Department of the Army (DA) permit is required for the expansion of an approximately 3.1-mile portion of Farrington Highway, including widening the bridge over Honouliuli Stream, relocating Honouliuli Stream beneath the bridge, and lengthening four culvert crossings, located 21.374414, - 158.033544, between Fort Weaver Road on the east and Kapolei Golf Course Road on the west, in Ewa, Island of Oahu, Hawaii, Island of Oahu, Hawaii. Your request has been assigned DA file number POH-2020-00071. Please reference this number in all future correspondence with our office relating to this action.

Based on our review of the information you provided and the enclosed approved jurisdictional determination (AJD), dated September 14, 2020, the area identified as the Corps Area of Review (AOR) (Enclosure 1) contains Honouliuli Stream, a water of the U.S. Therefore, a DA permit under Section 404 of the Clean Water Act would be required for the discharge of fill into Honouliuli Stream.

The Corps AOR also contains Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch, four ephemeral features. The Corps has determined that Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch are not tributaries based on the rationale provided in the enclosed AJD Forms. Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch are ephemeral features (b)(3) that do not contribute surface water flow to a water identified as an (a)(1) water in a typical year either directly or through one or more waters identified in (a)(2),(3) or (4) of the NWPR. In accordance with the NWPR, ephemeral, (b)(3), waters are not Waters of the U.S. and therefore not jurisdictional. Therefore, a DA permit under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors

Act of 1899 is not required for activities occurring in Kaloi Gulch, Hunehune Gulch, an existing culvert crossing, and Palehua Gulch.

This letter contains the basis for our jurisdictional determination on the enclosed AJD Forms (Enclosures 2, 3, 4, 5, and 6) for the aforementioned AOR. If you wish to submit new information regarding this jurisdictional determination, please do so within 60 days. We will consider any new information submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. If you object to this determination, you may request an administrative appeal under 33 CFR Part 331. We have enclosed a Notification of Appeal Process and Request for Appeal (NAP/RFA) form (Enclosure 7). If you wish to appeal this determination, you must submit a completed RFA form within 60 days of the date on the NAP to the Corps' Pacific Ocean Division office at the following address:

Kate Bliss
Civil Works and Regulatory Program Manager
U.S. Army Corps of Engineers
Pacific Ocean Division, ATTN: CEPOD-PDC
Building 525
Fort Shafter, Hawaii 96858-5440

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Pacific Ocean Division office within 60 days of the date on the NAP.

While a DA permit is not required for your proposed project, you are responsible for obtaining all other applicable Federal, state, or local authorizations required by law.

Thank you for your cooperation with the Honolulu District Regulatory Program. If you have any questions related to this determination, please contact me at 808-835-4310 or via e-mail at Vera.B.Koskelo@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Office by accessing our web-based customer survey form at http://corpsmapu.usace.army.mil/cm apex/f?p=regulatory survey.

## Fugitive Dust Fact Sheet Prepared by the Department of Health, Clean Air Branch Rev October 2014

Hawaii Administrative-Rules, Section 11-60.1-33, Fugitive Dust-states, in part:

11-60.1-33(a): No person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions.

11-60.1-33(b): ...no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates.

An air permit for a facility may contain additional or more stringent fugitive dust requirements. Failure to comply with the fugitive dust requirements may result in civil and administrative fines of not more than \$25,000 per day per violation.

#### Examples of Reasonable Precautions

The following are examples only, this list is not exclusive nor comprehensive. Reasonable precautions to control fugitive dust are determined on a case-by-case basis. The site topography and surroundings, soil conditions, meteorological conditions, site activities, site equipment, and types of material processed must be considered. The use of any or all of the example measures does not automatically mean compliance with the fugitive dust requirements. The owner, project manager or operator should assess the project activities and conditions daily and make adjustments so that reasonable precautions are taken to prevent fugitive dust from becoming airborne and crossing the property line. Generally, dry and windy conditions will require more control measures than rainy and calm periods.

#### General Measures

- Design, develop and implement a dust control plan.
- Use water or suitable chemical compounds in the demolition of existing structures, construction operations, and grading or clearing of land.
- Apply water, dust suppressants, or suitable compounds on roads and material stockpiles.
- · Pave ingress and egress points to the site.
- Establish and monitor speed limits for on site vehicles.
- · Cover all moving, open-bodied trucks transporting dusty materials.
- Install and use enclosures, screens, hoods, vacuums, and filters to control the handling, sanding or finishing of dusty materials.
- Use trash chutes to direct waste downwards to the ground from upper levels
- Clean up material spills as soon as possible.
- · Promptly remove soil or other "carry out" materials from roads adjacent to the site.
- Install dust screens or wind barriers around construction site.
- Where practical, provide a buffer zone between fugitive dust activities and residential areas.

### **Agricultural Activities**

- · Keep fallow land to a minimum.
- Use cover crops to minimize exposed soil.
- Limit vehicular speed during plowing activities and while traveling onsite.

### Crushing and Screening

- Pre-wet material.
- Monitor crusher's visible dust emissions.
- Apply water to crushed material.
- Apply water at material transfer points.
- Stabilize material immediately after screening.
- Drop material through the screen slowly and minimize drop height.
- · Install wind barrier upwind of screen.

### Earth-moving activities

- Pre-apply and re-apply water as necessary to maintain soils in a damp condition.
- · Limit the amount of exposed areas through planning and timing of project phases.
- Cover temporarily exposed areas with mulch.

#### Stockpiles

- · Stabilize stockpile materials.
- · Keep stockpiles wet or damp as needed
- Cover stockpile when not in use. Use mulch or synthetic cover based on usage of stockpile.
- · Keep drop or pile height as low as possible.
- Install wind barriers
- · Add or remove material from downwind portion of stockpile
- Maintain storage piles to avoid steep sides or faces.

### **Trucking**

- · Provide water while loading and unloading to prevent fugitive dust.
- · Maintain at least six inches of freeboard on haul vehicles. Level the height of load.
- Limit vehicular speed while traveling onsite.
- · Cover your load while travelling.
- Install a gravel pad and grizzly at exit.
- · Reduce carry out with a tire wash or spray system.

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