CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING & PERMITTING

650 South King Street, 7th Floor
Honolulu, Hawaii 96813

LAND USE PERMITS DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing." ***PLEASE ASK FOR THESE INSTRUCTIONS.***

All specified materials described in the "Instructions for Filing" and required fees must accompany this form; incomplete applications will delay processing. You are encouraged to consult with Zoning Division staff in completing the application. Please call the appropriate phone number given in the "Instructions for Filing."

Please print legibly or type the required information.

SUBMITTED FEE: $ Not Applicable

PERMIT/APPROVAL REQUESTED (Check one or more as appropriate):

Cluster:
- ☐ Agricultural
- ☐ Country
- ☐ Housing

Conditional Use Permit:
- ☐ Minor ☐ Major

☐ **Existing Use:** _____ (Indicate Type of Use)

Environmental Document:
- ☐ Environmental Impact Statement
- ☐ Environmental Assessment
- ☐ Supplemental

☐ **Minor Shoreline Structure**

☐ **Modify Approved Permit:** _____ (Indicate Reference File No.)

☐ **Plan Review Use**

Planned Development:
- ☐ Housing
- ☐ Commercial (WSD Only)
- ☐ Resort (WSD Only)

☐ **Shoreline Setback Variance**

Special District Permit:
- ☐ Minor ☐ Major

_____ (Indicate District)

☐ **Downtown Height >350 Feet**

Special Management Area Use Permit:
- ☑ Minor ☐ Major

☐ **Temporary Use Approval**

☐ **Variance from LUO Section(s):** _____

☐ **Waiver from LUO Section(s):** _____

☐ **Zoning Adjustment, LUO Section(s):** _____

☐ **HRS Section 201H-38 Project**

TAX MAP KEY(S): Not applicable, Farrington Highway State Right-of-Way.
LOT AREA: Not applicable
ZONING DISTRICT(S): R-5 and B-2 **STATE LAND USE DISTRICT:** Urban
STREET ADDRESS/LOCATION OF PROPERTY: 200 feet north or intersection between Farrington Hwy and Maipalaoa Road

RECORDED FEE OWNER:
Name (& title, if any) State of Hawaii, Dept. of Transportation
Mailing Address Highways Division, 869 Punchbowl Street
Honolulu, Hawaii 96813
Phone Number (808) 587-2150
Signature _____

PRESENT USE(S) OF PROPERTY/BUILDING:
Maipalaoa Bridge

PROJECT NAME (if any): Farrington Highway, Replacement of Maipalaoa Bridge

APPLICANT:
Name Dept. of Transportation, Highways Division
Mailing Address 869 Punchbowl Street
Honolulu, HI 96813
Phone Number (808) 587-2220
Signature _____

AUTHORIZED AGENT/CONTACT PERSON:
Name Jared Chang, SSFM International
Mailing Address 501 Sumner Street, Suite 620
Honolulu, HI 96817
Phone Number (808) 531-1308
Signature _____

REQUEST/PROPOSAL (Briefly describe the nature of the request, proposed activity or project): Replacement of Maipalaoa Bridge on Farrington Highway in the community of Maili in the Waianae District is required because the existing bridge is structurally deficient and nearing the end of its useful life. The bridge is being proactively replaced before any safety or major maintenance issues arise that would either significantly restrict its use or require its closure for repairs or replacement. The new bridge will maintain the existing lanes of traffic in each direction, with no change in its existing traffic carrying capacity. It will be built entirely within the existing ROW. Two temporary, construction-related portions of this project require a SMA permit – a pedestrian walkway bridge and a dewatering treatment operation. These are necessary to maintain adequate public access and coastal water quality during construction. The pedestrian bridge will extend over a 8,000 SF section of the City-owned Maili Stream drainage channel that abuts the mauka side of the bridge right-of-way. The dewatering equipment will be located on a 5,000 SF site that is part of the north segment of the City's Ulehawa Beach Park. Existing terrain will not be altered at either site and will be restored to equal or better than existing condition.

POSSE JOB NO. _____

REPLACEMENT OF MAIPALAOA BRIDGE
Farrington Highway, Maili, Waianae District

Special Management Area (SMA) Minor Permit Application
WRITTEN STATEMENT

PROJECT DESCRIPTION

Overall Bridge Replacement Project

Location – This project involves the replacement of an existing four-lane bridge along Farrington Highway in the community of Maili, which is in the Waianae District of Oahu. The project location is shown on **Figures 1 and 2**. Photos of the existing bridge are provided in **Figure 3**.

Purpose – Replacement of this bridge is required because it is "structurally deficient" and nearing the end of its useful life. It is being proactively replaced before any safety or major maintenance issues arise that would require either significant restrictions on use of the bridge, or its temporary or permanent closure for repairs or replacement. Further details on the purpose and need for this project are provided in Chapter 1 of the separately submitted Final Environmental Assessment.

General Scope – The new bridge will accommodate two lanes of traffic in each direction, as does the existing bridge. There will be no change in traffic carrying capacity. It will be built entirely within the existing highway right-of-way, but will be slightly wider (78'-0", versus the existing 64'-4") than the existing bridge in order to provide for wider shoulders and sidewalks on both sides. The existing bridge has only one sidewalk on the mauka side.

It will also be slightly longer (112'-4", versus the existing 100'-8") because the existing bridge abutments will be retained and the new bridge abutments constructed behind them. This is being done to avoid any construction-related disruptions or permanent alterations to the sides of the existing Maili Stream concrete lined stream channel, and to provide added protection against possible scouring of the abutments by a flood flow in the stream channel.

Site – The total bridge replacement project site is shown on **Figure 4**. It consists of four separate areas:

1. A 50,600 SF site that encompasses the bridge area and highway approaches that will be reconstructed at each end of the bridge. This area is entirely within the existing highway right-of-way and is owned by the State of Hawaii. Its total length is 550 feet, and the right-of-way width is just under 92 feet. The area to be occupied by the replacement bridge is 10,300 SF in size, and the two reconstructed highway approach areas total 40,300 SF.

2. A 300' x 50' = 15,000 SF makai construction access area. This area is owned by the State of Hawaii. It consists of shoreline land on each side of the bridge and the Maili Stream drainage channel ocean outlet. It will only be used for access to the bridge construction site while the replacement bridge is under construction. No temporary or permanent structures will be constructed within this area.

3. A 160' x 50' = 8,000 SF mauka construction access and temporary pedestrian walkway bridge area. This area consists of a portion of the Maili Stream concrete lined drainage channel and maintenance access areas along each side. All but a 10-feet wide strip along the north side of the channel is owned by the City and County of Honolulu. This narrow strip is privately owned

land with a City and County maintenance access easement over it. The temporary walkway bridge will be erected entirely on the City owned portion of this area. The total area (including the privately owned strip) will also be used as needed for access to erect and remove the temporary bridge, and for access to the highway bridge construction site. No permanent structures will be constructed within this area.

4. A 100' x 50' = 5,000 SF dewatering equipment area. This site is on land owned by the City and County of Honolulu and is part of the north segment of Ulehawa Beach Park. It is a grassed area located between the parking lot and the existing bridge and stream outlet. Equipment will be placed on the site during the bridge construction and removed once construction is completed. There will be no alteration of the existing terrain, other than destruction of the existing landscaping. The area will be re-landscaped to equal or better than existing condition upon removal of the dewatering equipment.

The State Department of Transportation (DOT) will obtain the necessary access and use easements for construction activities that will occur on the parcels outside of the highway right-of-way prior to commencement of construction.

Bridge Construction Phasing and Traffic Control Plan – As noted, demolition of the existing bridge and construction of the replacement bridge will be done entirely within the existing highway right of way. Work will be done in four phases, with the 1st phase involving site preparation and construction of the temporary pedestrian walkway bridge. Bridge replacement will be done in three phases, or during the overall project's 2nd, 3rd, and 4th phases. The total length of the construction period is estimated to be 28 months.

The traffic control plan for the new bridge construction is shown on **Figure 5**. As indicated, this phased approach will allow for the maintenance of the existing four traffic lanes throughout the construction period. (There will be occasional single lane closures in one or both directions, but these will be restricted to non-peak traffic times and directions.) It will also avoid the need to construct a temporary bridge structure outside of the highway right-of-way, or to detour traffic around the construction site over existing two-lane residential streets. Details on the alternatives analysis, traffic impacts, and maintenance of traffic capacity are provided in Chapter 2, Section 3.2, and Sections 4.5 and 4.7 of the separately submitted Final Environmental Assessment.

Portions of Bridge Replacement Project Requiring a SMA Minor Permit

Authority for the establishment of special controls on development within the Special Management Area (SMA), including the review and approval of proposed new development or redevelopment, is established in Chapter 25 of the Revised Ordinances of Honolulu (ROH). Per Section 25-1.3, "development" that is subject to Chapter 25 does not include repair or maintenance of roads and highways within existing rights-of-way. Therefore, the bridge replacement itself does not require a SMA Permit.

However, two portions of the overall bridge replacement project that will occur within the SMA and outside of the existing highway right-of-way do require a SMA Permit. These are the temporary pedestrian walkway bridge and the equipment site for the dewatering treatment process. As documented in the attached Detailed Project Valuation and discussed below, the cumulative value of these two "developments" is less than $0.5 million, and they will have no substantial direct or cumulative adverse environmental or ecological effects. Therefore, this application is for issuance a SMA Minor Permit.

Temporary Pedestrian Walkway Bridge – As noted, the existing bridge includes a pedestrian walkway along the mauka side. This will need to be closed when demolition of the existing bridge is initiated. Therefore, a temporary walkway bridge will be constructed during the first/site preparation phase of the overall project, so that pedestrians will be able to travel between the two sides of the bridge throughout the construction period.

This walkway bridge will be located on a 160' x 50' = 8,000 SF area abutting the mauka side of the highway right-of-way (see **Figure 4** and **Site 3** described above). A site plan, foundation construction details and photo illustration of the bridge structure are provided on **Figure 6**. The walkway will be eight feet wide, and its total length will be about 250 feet, with a span of slightly over 150 feet extending over the Maili Stream drainage channel and 50 feet long approaches on each side. All of the bridge footings will be built on fast land behind the channel walls, within the City owned drainage channel right-of-way. No part of the bridge will obstruct or interfere in any way with stream flow within the channel.

The two approaches to the bridge span will be slightly elevated above existing grade in order meet ADA standards for maximum grade with no steps. Sections of the existing paved walkways leading up to each end of the pedestrian bridge will be reconstructed and realigned slightly in order to route the connections with the pedestrian bridge outside of the highway bridge construction zone.

The temporary pedestrian bridge should be completed by the start of the 4th month of the 28-month bridge replacement project construction period, and is slated for demolition in the 27th month. Demolition will include removal of the footings and restoration of the affected land areas to existing or better condition. The estimated cost of its construction and removal is $99,250. See the attached Detailed Project Valuation for further details.

Dewatering Operation – Dewatering will be required in connection with one element, and may be required for a second element, of the bridge replacement construction:

- Removal of 21 existing bridge central piles, and patching the stream channel lining where the piles are removed. The replacement bridge will be a clear span with no central supporting piles.

- Construction of the abutment foundations at each end of the new bridge. The existing bridge abutments will be retained and the new bridge abutments will be built behind them. It is not currently known whether or not dewatering will be required; this can only be determined when excavation for construction of the new abutments is done.

Water pumped out of the stream in connection with removal of the existing bridge central piles, and any groundwater pumped out of the new bridge abutment excavation pits, will need to be treated before it can be discharged and ultimately returned to the existing coastal waters. Waterproof caissons will be installed around the areas (all within the existing highway right-of-way) to be dewatered, and the water will be pumped to pre-manufactured equipment that will be used for treatment. This equipment will be installed on a 100' x 50' = 5,000 SF grassed area in the north segment of Ulehawa Beach Park, between the parking lot and the Maili Stream drainage channel ocean outlet (see **Figure 4** and **Site 4** described above).

The water flow and siting of the required treatment equipment are diagrammatically shown on **Figure 7**. The dewatering and treatment process is also illustrated on **Figure 8**. Details of the type of roll-off dewatering tank that will be used are provided on **Figure 9**.

The size and extent of dewatering equipment shown on Figure 7 assume a "worst case" scenario, where dewatering will be required for the new bridge abutment construction as well as for the removal of the existing bridge central piles. It is anticipated that the dewatering treatment equipment will be installed on the park site during the 5th month of the 28-month construction period, and removed during the 21st month. The site, which is currently an irrigated grassed area, will be restored to existing or better condition.

The estimated cost for the dewatering process, including leasing the equipment and restoration of the park site, is $150,000. See the attached Detailed Project Valuation for further details.

CERTIFIED SHORELINE

The location of the certified shoreline in the vicinity of the bridge replacement project is shown on **Figure 10**. A copy of the entire Shoreline Survey Map is separately submitted as part of this SMA application package. The shoreline shown on this map is certified as of March 2, 2011.

POTENTIAL ENVIRONMENTAL AND ECOLOGICAL EFFECTS

The potential effects on the environment of the overall bridge replacement project, and proposed mitigation measures, are documented in Chapter 3 of the separately submitted Final Environmental Assessment.

As documented therein, the impacts of the overall project, and of the actions on the two abutting parcels that are the subject of this SMA Minor Permit application, will be temporary and minimal. There are no significant archaeological, cultural, or ecological resources on or in the vicinity of either the bridge site or the abutting parcels that will be used during construction. Visual impacts of the new bridge on coastal and inland views will be virtually unchanged from those of the existing bridge.

The temporary pedestrian walkway bridge and the dewatering equipment on the park site will encroach on existing coastal and inland views. However, this encroachment will be minimal and temporary since,

as noted, these sites will be restored to their existing use and condition upon completion of bridge construction.

SUMMARY AND CONCLUSION

The replacement of Maipalaoa Bridge is required to maintain Farrington Highway as the primary travel corridor and access route along the Waianae Coast for all modes of travel – cars, buses, bicycles and pedestrians – and for civil defense and emergency response travel and evacuations when needed. The portions of this project that require a SMA permit – a temporary pedestrian walkway bridge and a dewatering treatment operation – are necessary to maintain adequate public access and coastal water quality during bridge construction.

This project will only temporarily encroach on the use of a 5,000 SF area within Ulehawa Beach Park, and will permanently improve public access between the two portions of this shoreline park that extend beyond the north and south ends of the bridge.

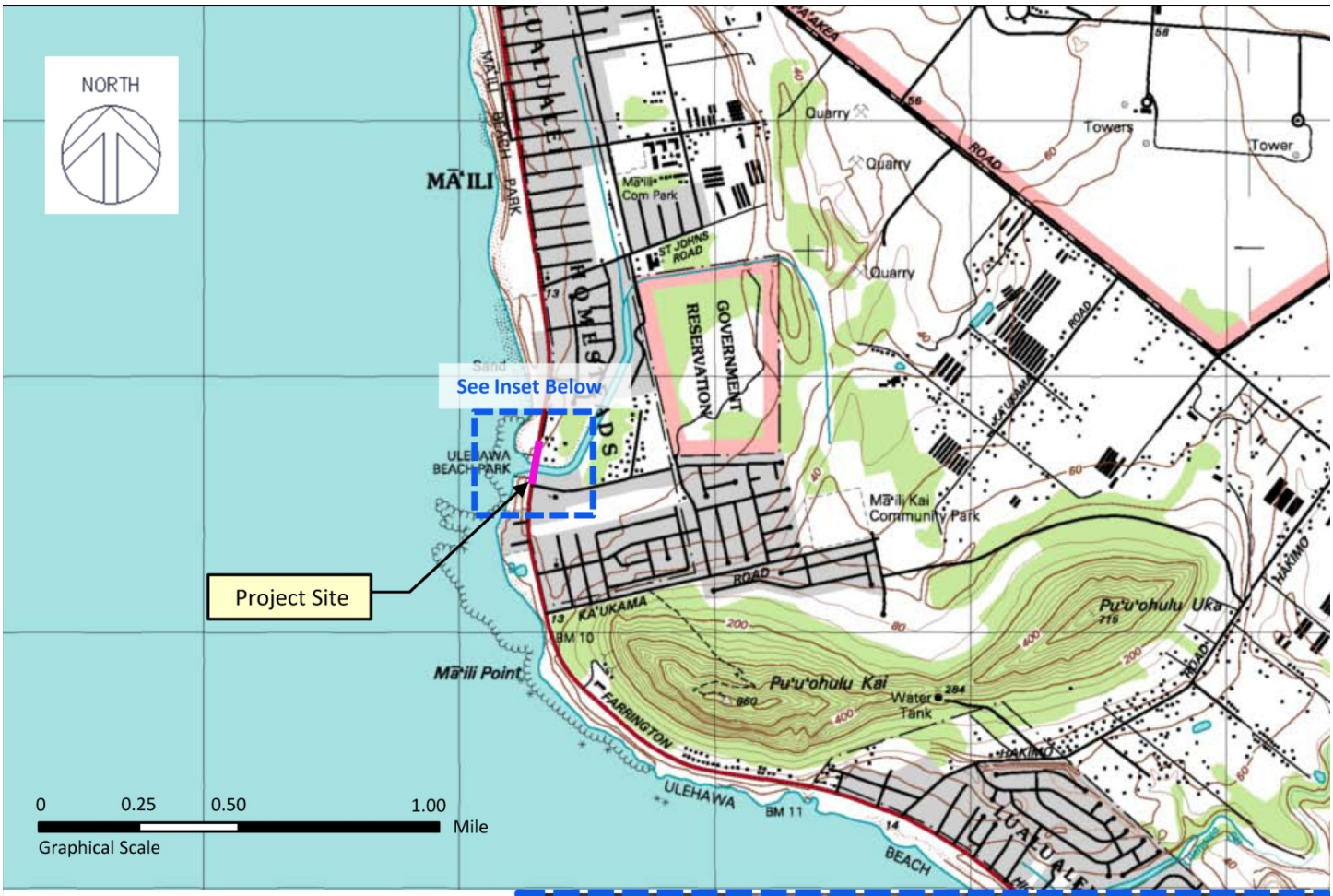
As noted, water pumped from the dewatered portions of the construction site will be treated as required to meet water quality standards before it is returned to the ocean.

There will be no substantive alterations to existing land forms and vegetation. The only change to existing conditions will be the relocation of existing drainage outlets in order to accommodate the widening by ~13 feet of the bridge. These outlets will remain within the existing highway right-of-way.

The analysis of impacts provided in the Final Environmental Assessment and summarized above demonstrates that the neither the overall bridge replacement project nor the "development" that is the subject of this SMA Minor Permit application will have any substantial, adverse environmental or ecological effects. In addition, impacts on coastal and inland views will be minimal and limited to the bridge construction period.

Also documented in Chapter 3 of the Final Environmental Assessment is the consistency of overall bridge replacement project, including all temporary construction-related actions, with the objectives and policies set forth in Section 25-3.1 ROH, the area guidelines contained in HRS Section 205A-26, the City and County of Honolulu General Plan, the Waianae Sustainable Communities Plan, and existing zoning.

FIGURE 1: Location Map



LEGEND:

- Project Site
- Inlet / Outlet
- Direction of Runoff

1	Maili Stream Discharge Point	Lat. 21° 24' 33.54" Long. 158° 10' 37.80"
2	Maili Stream Discharge Point	Lat. 21° 24' 32.14" Long. 158° 10' 38.08"
3	Inlet 1 Proposed Drain Inlet	Lat. 21° 24' 33.18" Long. 158° 10' 37.15"
4	Inlet 2 Proposed Drain Inlet	Lat. 21° 24' 33.52" Long. 158° 10' 37.76"
5	Inlet 3 Proposed Drain Inlet	Lat. 21° 24' 31.58" Long. 158° 10' 37.39"
6	Inlet 4 Proposed Drain Inlet	Lat. 21° 24' 31.70" Long. 158° 10' 38.10"

Source: Topographic Map, 2003 USGS, Oahu Digital Raster Graphics High Resolution Orthoimage, USGS, 2005

FIGURE 2: Project Site and Surrounding Area

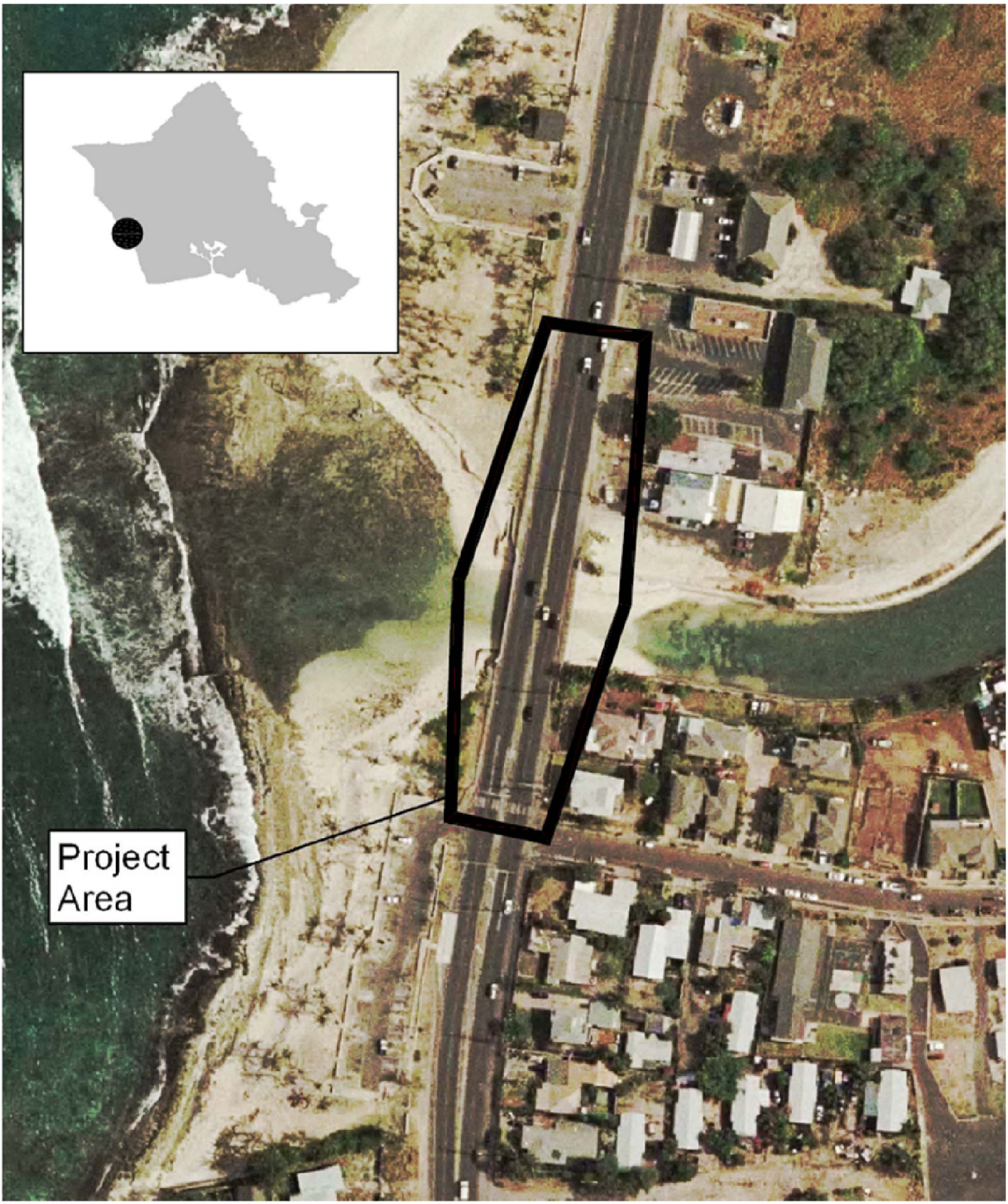


FIGURE 3: Existing Bridge Photos

Makai Side of Bridge

Makai Edge of Bridge

Mauka Side of Bridge

Mauka Edge of Bridge

Bridge Abutment

Bridge Beams and Abutment

FIGURE 4: Site Plan

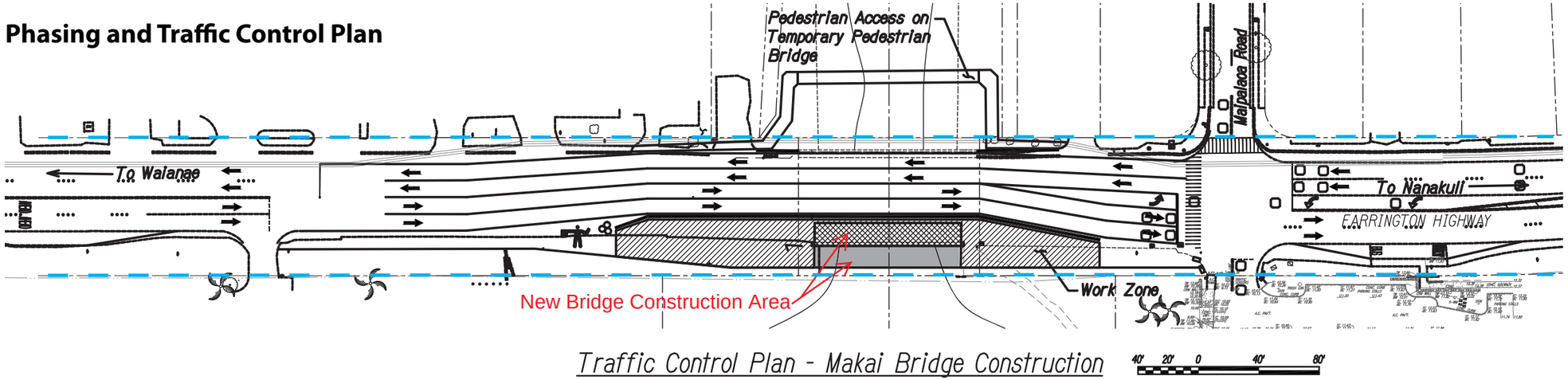
REPLACEMENT OF MAIPALAOA BRIDGE
FEDERAL AID PROJECT NO. BR-093-1(21)
DISTRICT OF WAIANAE
ISLAND OF OAHU, HAWAII

GRAPHICAL SCALE:

20' 10' 0 20' 40'

FIGURE 5: Bridge Construction Phasing and Traffic Control Plan

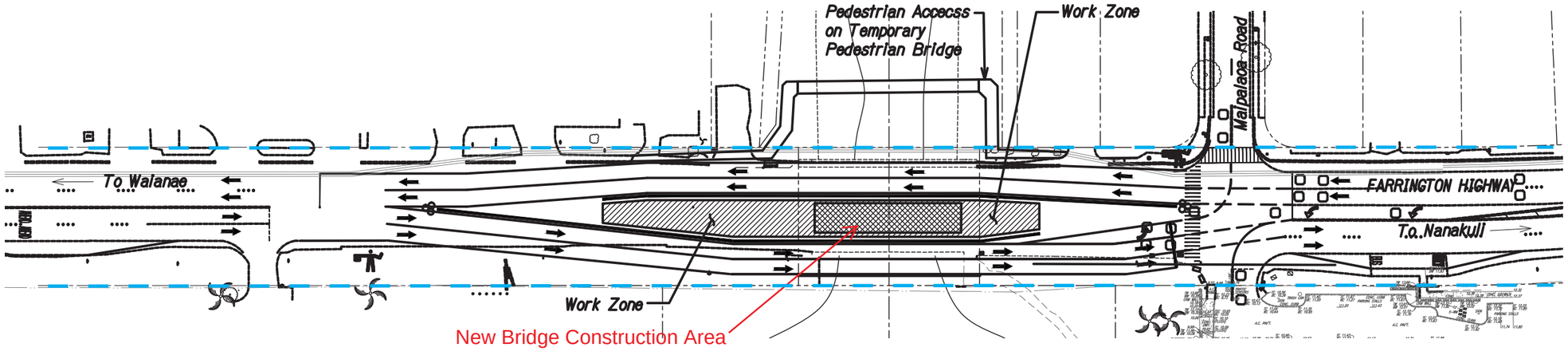
PHASE 2 -



Traffic Control Plan - Makai Bridge Construction

40' 20' 0 40' 80'

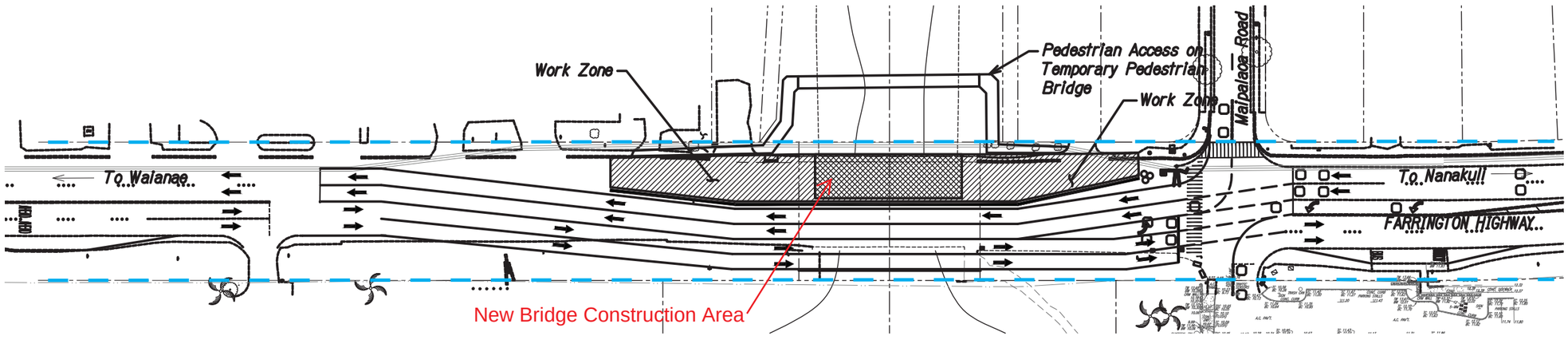
PHASE 3 -



Traffic Control Plan - Center Bridge Construction

40' 20' 0 40' 80'

PHASE 4 -



Traffic Control Plan - Mauka Bridge Construction

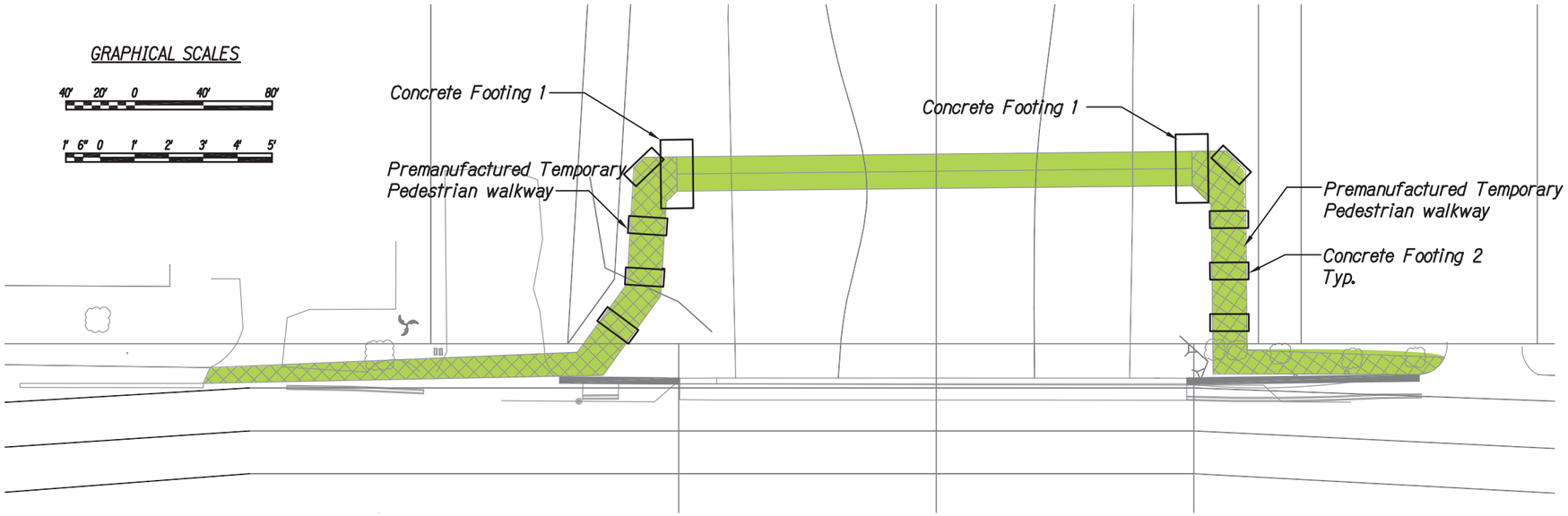
40' 20' 0 40' 80'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(21)	2011	65	92

GRAPHICAL SCALES

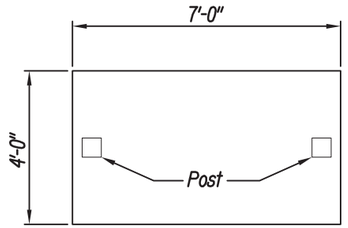
40' 20' 0 40' 80'

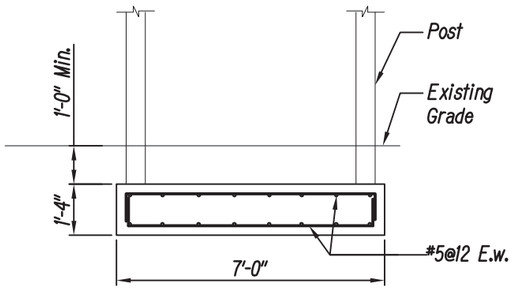
1" 6" 0 1' 2' 3' 4' 5'



Temporary Walkway Site Plan and Pedestrian Bridge Foundation Plan

A S-25 | S-25

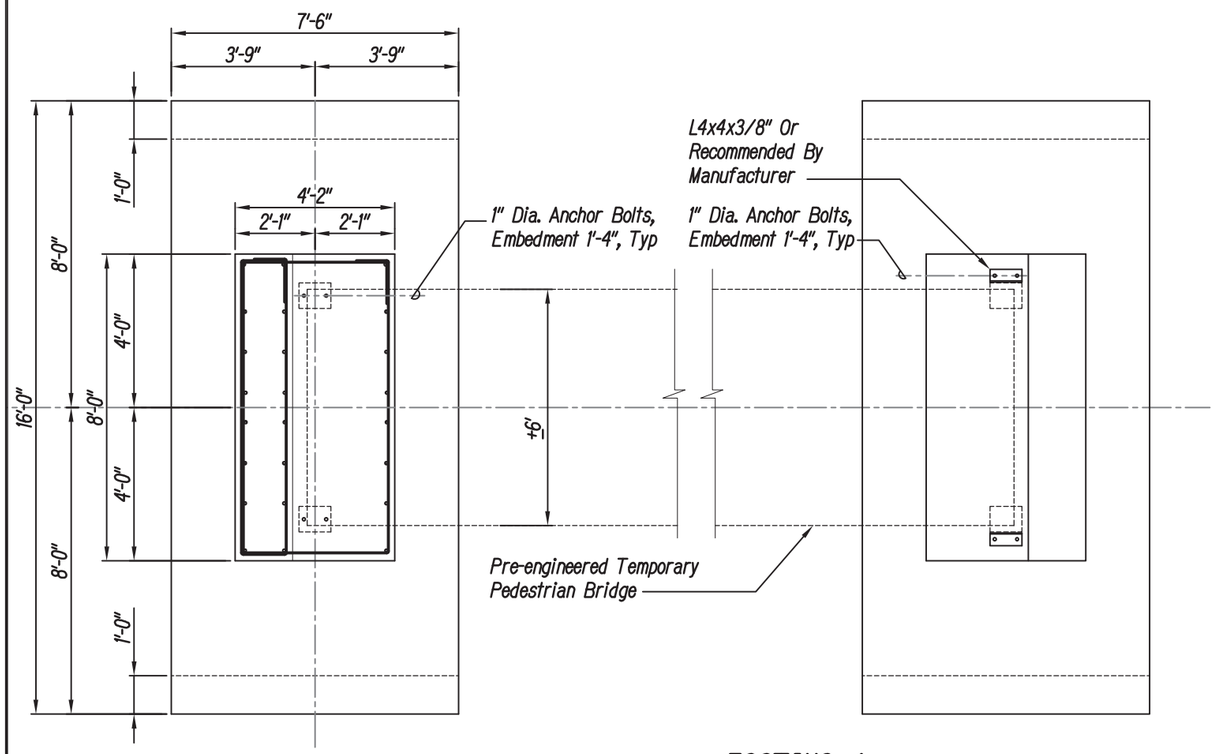




Pathway Foundation 12' O.C. Max

FOOTING -2 C S-25 | S-25

TRUE NORTH



FOOTING -1 B S-25 | S-25

Pedestrian Bridge Photoview - Typical

FIGURE 6: Temporary Pedestrian Walkway Plan

FARRINGTON HIGHWAY
REPLACEMENT OF MAIPALAOA BRIDGE
PROJECT NO. BR-093-1(21)

Scale: AS NOTED Date: July, 2011

SHEET No. S-25 OF 25 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(21)	2011	14	92

TRUE NORTH

TMK 8-7-23: 39

BEGIN PROJECT
Project No. BR-093-1(21)
Baseline Sta 160+50

TMK 8-7-23: 59

MAILI STREAM
TMK: 8-7-23:58

TMK 8-7-23: 1

TMK 8-7-23: 2

r.o.w.

To Waianae

℄ STA. 160+00

160+00

161+00

162+00

62+00
FARRINGTON HIGHWAY

163+00

63+00

91.87' row

164+00

64+00

165+00

65+00

166+00

66+00

℄ STA. 166+00

To Nanakuli

M.L.

DISCHARGE TO STATE DRAIN MANHOLE

DISCHARGE TO CARBON VESSEL (FILTRATION)

PUMP TO WEIR TANK AND/OR PHASED SEPARATOR

50' x 100' Dewatering Equipment Area

PUMP SAND AND SEAWATER FROM CAISONS

DISCHARGE TO FRAC TANK FOR TESTING AND STORAGE

SECURITY FENCING AROUND CONSTRUCTION WORK AREA

TMK 8-7-05: 5

TMK 8-7-05: 4

Dewatering Plan

Figure 7: Dewatering Plan

LEGEND:

- PUMP TRUCK
- WEIR TANK AND/OR PHASED SEPARATOR
- FRAC TANK (STORAGE/TESTING)
- CARBON VESSEL (FILTRATION)

GRAPHICAL SCALE:

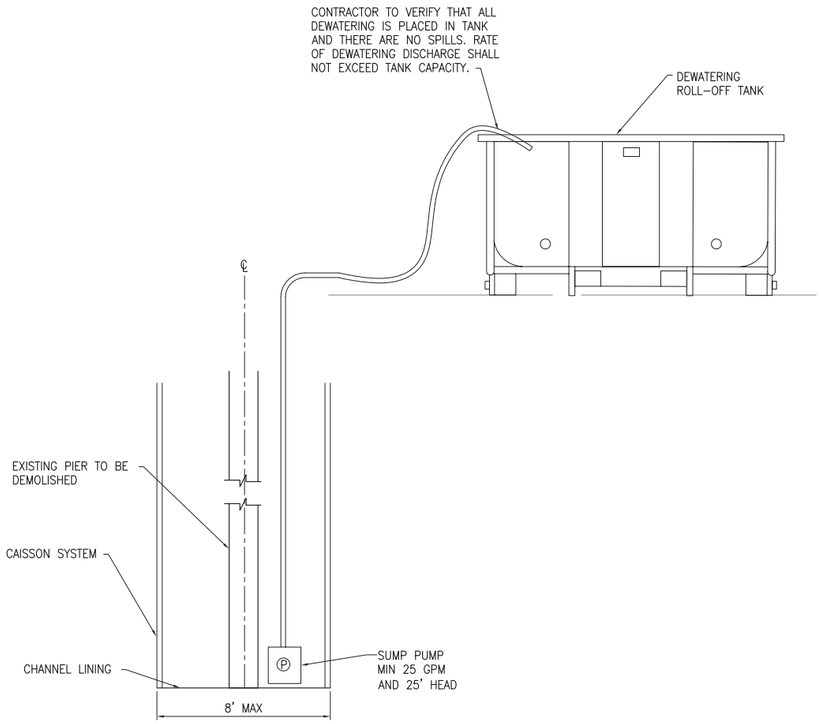
20' 10' 0 20' 40'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEWATERING PLAN

FARRINGTON HIGHWAY
REPLACEMENT OF MAIPALAOA BRIDGE
FEDERAL AID PROJECT NO. BR-093-1(21)

Scale: AS NOTED Date: JULY 2011



1 CAISSON DEWATERING DETAIL
§12a(ii) NOT TO SCALE

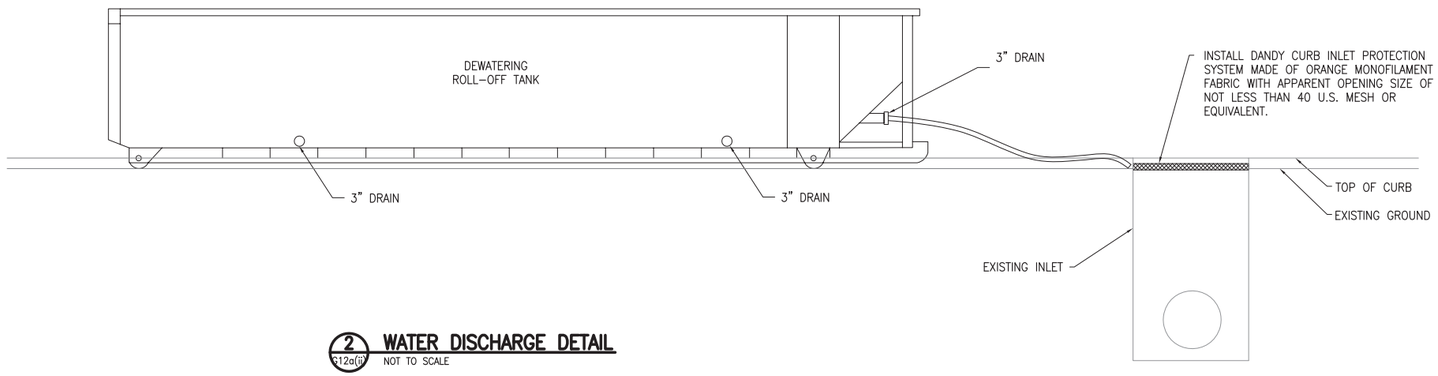
NOTES:

1. CONTRACTOR SHALL VERIFY THAT ALL WATER REMOVED FROM CAISSON OR OTHER EXCAVATION FOR DEWATERING PURPOSES IS DISCHARGED INTO THE DEWATERING ROLL-OFF TANK.
2. CONTRACTOR SHALL PROVIDE SUFFICIENT NUMBER OF STORAGE CONTAINERS TO HANDLE DEWATERING PUMPING OPERATIONS DURING EACH DAY. DEWATERING EFFLUENT SHALL BE TESTED PRIOR TO DISCHARGING INTO STATE WATERS, AND MEET EPA WATER QUALITY STANDERS.
3. CONTRACTOR SHALL VERIFY THAT ALL WATER TO BE DISCHARGED INTO CITY STORM DRAIN PASSES THROUGH THE DEWATERING ROLL-OFF TANK.
4. IF FILTER FABRIC BECOMES VISUALLY SATURATED WITH SEDIMENT, CONTRACTOR IS TO REPLACE FILTER FABRIC OR EQUIVALENT PRODUCT BEFORE CONTINUING DISCHARGE.
5. CONTRACTOR MAY USE A SUMP PUMP TO INCREASE DISCHARGE WATER FROM THE TANK TO THE INLET, BUT SHALL TEST AND CONFIRM WATER QUALITY MEETS EPA REQUIREMENTS PRIOR TO DISCHARGE.
6. CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF FILTER FABRIC PRODUCT AFTER USE AND ALL SEDIMENT REMOVED FROM DEWATERING PROCESS. CONTRACTOR IS TO TRANSPORT ALL DEWATERING MATERIALS AND SEDIMENT TO AN OFF SITE LOCATION WHERE SEDIMENT WILL BE PLACED ON A NON-PERMEABLE SURFACE AND WATER ALLOWED TO EVAPORATE BEFORE DISPOSAL OF FILTER FABRIC AND SEDIMENT INTO AN APPROVED LANDFILL.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL REMAINING SEDIMENT WITHIN ROLL-OFF TANK PRIOR TO REUSE FOR DEWATERING.

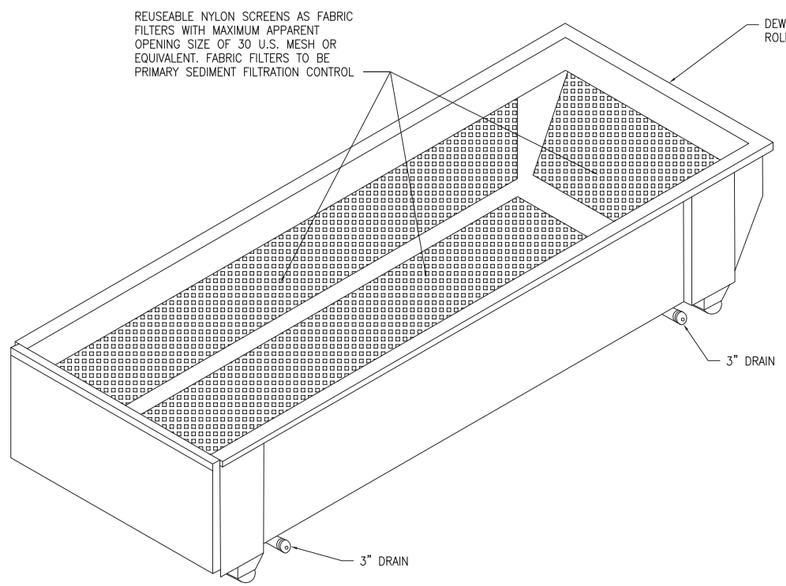
   CONTRACTOR SHALL ENSURE THE TOTAL SUSPENDED SOLIDS IN THE DEWATERING EFFLUENT MEET THE HAWAII ADMINISTRATIVE RULES (HAR) CHAPTER 11-54 WATER QUALITY STANDARDS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FULFILL THE REQUIREMENTS SET FORTH BY THE HAWAII STATE DEPARTMENT OF HEALTH FOR THE NPDES PERMITS FORMS, C AND G, AND THE EPA GENERAL PERMIT DURING CONSTRUCTION.

NOTES:

1. THEORETICAL SAMPLE DEWATERING AND SEDIMENT REMOVAL PROCESS IS BASED ON THE MINIMUM DISCHARGE REQUIREMENTS FROM INITIAL INFORMATION.
2. CONTRACTOR SHALL DETERMINE PUMP REQUIREMENTS AND TREATMENT OF DEWATERING DISCHARGES BASED ON ACTUAL SITE CONDITIONS WHICH ARE TO BE IMPLEMENTED DURING CONSTRUCTION.



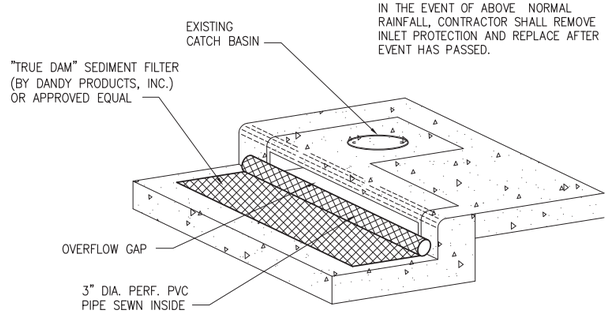
2 WATER DISCHARGE DETAIL
§12a(ii) NOT TO SCALE



3 DEWATERING ROLL-OFF TANK
§12a(ii) NOT TO SCALE

NOTE:

IN THE EVENT OF ABOVE NORMAL RAINFALL, CONTRACTOR SHALL REMOVE INLET PROTECTION AND REPLACE AFTER EVENT HAS PASSED.



4 TEMPORARY CATCH BASIN PROTECTION DETAIL
§12a(ii) NOT TO SCALE

FIGURE 8: Sample Dewatering, Sediment, Oil, and Grease Removal Operations

SSFM INTERNATIONAL
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FARRINGTON HIGHWAY: REPLACEMENT OF MAIPALAOA BRIDGE
NPDES NOI FORM G
Item G.12.a(ii)

FIGURE 9: Dewatering Roll-Off Tank Details

Roll-Off Container Filter

Designed to Dewater

The Roll-Off Container Filter is engineered to dewater various types of wastes. The design of the Container Filter includes three components: the container, porous support plates, and a filter media. The space between the support plates, the container walls, and the floor, is the drainage field for the liquid. Outlets on the bottom and side walls allow for gravity drainage or pump suction of liquid from the Container Filter. Once the waste has had ample time to dewater, it will be ready for disposal.

Roll-Off units have a round bottom with 3" drainage ports, gasketed watertight doors, 1/4" floor, and 3/16" side walls. These units are sandblasted with a commercial-blast, coated with a two-part epoxy primer, and painted with a two-part epoxy top coat. Each unit can be equipped with a closed roof, a tarp, or an open top. As an option, a center panel can be added to increase the drainage surface area. Roll-Off Container Filters are available in 20, 25, 30, and 40 cubic yard capacities.

- Screened Materials
- Storm & Basin Waste
- Various Waste Streams
- Primary & Secondary Grit
- Lagoons
- Aeration Basins
- Sumps
- Wash Station Waste

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ITEM	DESCRIPTION
1	3/16 WALL PLATE
2	1/4 FLOOR PLATE
3	TOP RAIL 4 X 3 X 3/16 TUBING
4	SBR NEOPRENE 50/50 BLEND GASKET
5	3/16-A36 DOOR PLATE
6	3 X 3 X 3/16 DOOR TUBING
7	A36 CARBON STEEL SIDE & FRONT PLATES
8	3 RACHET BINDERS
9	3" DRAINS w/CAMS & CAPS (6)
10	8" DIA., 8" WIDE WHEELS
11	4" DIA., 6" WIDE TRACKING WHEELS
12	TARP HOOKS
13	6" CLEANOUT PORTS (2)

MODEL #	VOLUME	A	B	C	D	E	F	G	H	WEIGHT (APPROX)	DRAINS
RB-20-XX	20 YD³	41"	53"	28 1/2"	38"	277 1/2"	260"	102"	83 3/4"	7390 LB	6
RB-25-XX	25 YD³	53"	65"	36 1/2"	46"	277 1/2"	260"	102"	83 3/4"	8615 LB	6
RB-30-XX	30 YD³	65"	74"	40 1/2"	50"	277 1/2"	260"	102"	83 3/4"	9500 LB	6
RB-40-XX	40 YD³	81"	93"	65 1/2"	75"	277 1/2"	260"	102"	83 3/4"	11870 LB	6

CENTERWALL SCREENS (OPTIONAL FOR G/V & STANDARD)

WALL SCREENS (STANDARD & G/V)

FLOOR SCREENS (STANDARD, G/V) & BASIC)

TYP CROSS SEC

SIDE VIEW

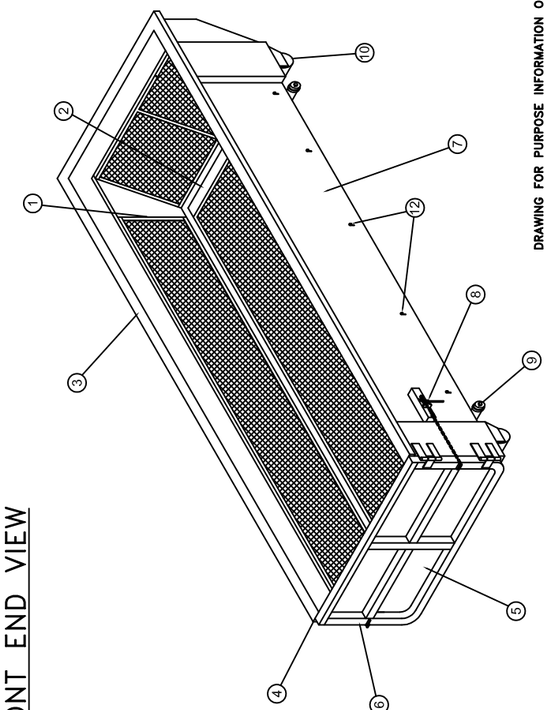
F (inside container)

E

FRONT END VIEW

H (is container)

G



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PATENT NO. 4,871,454 AND PATENT PENDING

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DESCRIPTION	
GENERAL ARRANGEMENT	
TITLE	DRAWING NUMBER
FLO TREND SYSTEMS ROLL-OFF BOXES	RB-DATA01

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FIGURE 10: Portion of Shoreline Survey Map Certified on March 2, 2011