

**U.S. Army Corps of Engineers
Pre-Construction Notification (PCN)
Nationwide Permit #14 Linear Transportation
(Culvert Extension Under Kuhio Highway)
Corps File No. POH-2007-00280**

(Re-submittal – Previously Approved on March 19, 2014)

**Kuhio Highway Short-Term Improvements
Kuamoo Road to Temporary Bypass Road
Kuhio Highway Culvert Extension,
Federal Aid Project No. NH-56-1(50)
Island of Kauai, Hawaii**



Prospective Permittee :

**State of Hawaii
Department of Transportation
869 Punchbowl Street, Room 509
Honolulu, Hawaii 96813**

Agent:

**Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826**

**May 10, 2018
Revised June 27, 2018**

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PCN Form, Version 2.0 May 2017

PCN Form Additional Information

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Letter dated November 7, 2009
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Attachment B CZM Program Federal Consistency Review, Letter dated
September 11, 2009

Attachment C Section 7 USFWS Letter dated July 16, 2009
(Not included see Supplement 1)

Attachment D Assessment of Impacts to Essential Fish Habitat, October 4, 2013

Attachment E Section 106 Consultation
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Attachment F Water Quality Monitoring and Assessment Plan, April 7, 2009
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Honolulu District

U.S. Army Corps of Engineers



Nationwide Permit Pre-Construction Notification (PCN)

This PCN template integrates requirements of the U.S. Army Corps of Engineers (Corps) Nationwide Permit (NWP) Program with the Honolulu District (POH) NWP Regional Conditions. Boxes 1-10 should be completed to include all information required by NWP General Condition 32. Boxes 11 and 12 (or other sufficient information to show compliance with all NWP General and POH Regional Conditions) is also recommended to be completed for proposed activities seeking verification under the NWP Program. If additional space is needed, please provide as a separate attachment. Please refer to the attached *Instructions for the Honolulu District Nationwide Permit Pre-Construction Notification (PCN)* (Instructions) for instructions on completing the PCN.

| To be completed by the Corps – do not fill-in | | |
|---|-----------------------|---|
| Application Number: | Date Received: | Date Complete: |
| 1. Prospective Permittee and Agent Contact Information (see Instructions) | | |
| a. Prospective Permittee | | |
| First - <u>Jade</u> Middle - _____ Last - <u>Butay</u> | | |
| Company - <u>State of Hawaii Dept of Transportation (HDOT)</u> Email Address - <u>jade.butay@hawaii.gov</u> | | |
| Address - <u>869 Punchbowl Street, Room 509</u> City - <u>Honolulu</u> State/Territory - <u>Hawaii</u> Zip - <u>96813</u> | | |
| Phone (Residence/Mobile) - <u>N/A</u> Phone (Business) - <u>808.587.2150</u> | | |
| b. Agent (if applicable) | | |
| First - <u>Brian</u> Middle - <u>A.</u> Last - <u>Lock</u> | | |
| Company - <u>Wilson Okamoto Corporation</u> Email Address - <u>balock@wilsonokamoto.com</u> | | |
| Address - <u>1907 South Beretania Street, Suite 400</u> City - <u>Honolulu</u> State/Territory - <u>Hawaii</u> Zip - <u>96826</u> | | |
| Phone (Residence/Mobile) - <u>N/A</u> Phone (Business) - <u>808.946.2277</u> | | |
| c. Statement of Authorization: I hereby authorize _____, to act on my behalf as my agent for the proposed activity. (Optional, see instructions) | | |
| | | |
| _____ Signature of Applicant | | _____ Date |
| 2. Name and Location of the Proposed Activity (see Instructions) | | |
| <input checked="" type="checkbox"/> The proposed work would involve multiple-single and complete projects. See attachment for the information required in Boxes 2 through 12, as applicable. | | |
| | | |
| a. Project Name or Title: <u>Kuhio Highway Short-Term Improvements, Kuamoo Road to Temporary Bypass (No. NH-056-1(50))</u> | | b. City, County, Island, State/Territory: <u>Kapaa, Kauai, Hawaii</u> |
| c. Name of Impacted Waterbody(ies): <u>Kaloko Wetlands</u> | | |
| d. Coordinates (in decimal format): Latitude - <u>22.03.14.94 N</u> Longitude - <u>159.19.51.25 W</u> | | |
| <input type="checkbox"/> Unknown (please provide other location descriptions below) | | |
| e. Other Location Description (optional, see instructions): <u>About 5.7 miles north of Lihue on Kuhio Highway to the existing culvert located approximately 400 feet south of the Temporary Bypass Road.</u> | | |

f. Directions to the site (optional, see instructions):

From Lihue drive north along Kuhio Highway for about 5.7 miles, or approximately 0.53 miles north of the Kuamoa Road intersection.

3. Specific NWP(s) you want to use to authorize the proposed activity (see Instructions)

No. 14 Linear Transportation Projects (Notice of Verification, Nov 17, 2009; POH-2007-00280)

4. Description of the Proposed Activity (see Instructions)

a. Complete description of the Proposed Activity:

Extension of an existing drainage culvert located beneath Kuhio Highway, approximately 400 feet south of the Temporary Bypass Road. The existing culvert measures approximately 20 feet wide by 45 feet long and is comprised of five openings, including a 36" x 36" center box drain flanked by two 36"-diameter drainage pipes on either side. The culvert will be extended by approximately 25 feet in the mauka direction.

The extension will include a 36-inch pre-cast box drain and four new 36-inch diameter pre-cast reinforced concrete pipes (RCPs) underlain by pipe cushion. A new concrete headwall will be constructed at the mauka limit of the culvert extension, and a concrete collar will be installed to attach the extension to the existing culvert. Grouted rubble pavement (GRP) will also be constructed (See Sheets 39, 40, 42 and 43). Permanent improvements, including the culvert extension, headwall, and GRP, will be installed within the DOT's ROW. However certain activities including clearing and grubbing, installing the silt curtain, and water quality monitoring will occur outside the ROW. The total volume of fill is 2,510 cubic yards of material, consisting primarily of pre-cast and cast-in-place concrete, compact select granular material, boulders and grout will be placed in the Kaloko Wetlands. Approximately 0.055-acre (2,385 square feet) of Kaloko Wetlands will be affected by the permanent culvert improvements. In addition, during the short-term period, approximately 0.073-acre (3,198 square feet) will be temporarily affected by construction activities and access. The total temporary and permanent estimated impact to the wetland is approximately 0.128-acre (5,583 square feet). Once construction is complete, all in-water BMPs and construction debris will be removed and it is anticipated that this portion of the wetland will revert back to its pre-construction condition.

Structures will be placed in the water, however equipment will not enter and operate in Kaloko Wetland. Construction will be conducted from the roadway shoulder on the land side. The estimated area where the construction equipment will be operated is shown in Figure 4 Approximately Wetland Impact Area Map and Sheet 79.

Source of fill material will be from local suppliers. Fill material will be composed of bed course, pre-cast and cast-in-place concrete, compact select granular material, boulders and grout.

Excavators will be used to dredge material upstream from the existing culvert. Two staging areas will be located to the north and south of the culvert, as shown in Figure 4 and Sheet 79. The anticipated construction schedule for the culvert will span approximately one to two months, of which about 35 days will involve in-water work. Dredging will take approximately 4 weeks. Dredging will occur upstream or immediately mauka of the existing culvert. See Sheets 39, 40, 42 and 43. The dredged material is expected to be soft to very stiff alluvial deposits consisting of clayey silt with sand, and clay. See attached.

Dredged materials will be dewatered in material storage/drying area to the north of the culvert, within the HDOT ROW, as shown in Sheet 79. These materials will then be hauled off to a disposal site off-site.

Impact Quantifications:

For discharges of dredged/fill material (if more than 3 fill activities proposed, include extended table as an attachment):

☐ N/A, no discharge of dredged or fill material in waters of the U.S. proposed.

| Impacted Water Name (e.g. Aloha Stream) | Impacted Water Type (T-Tributary, W-Wetland, N-Navigable water) | Fill Activity (e.g. sandbag berm, temp access, bank stabilization, etc.) | Fill Dimensions in Waters of the U.S. <i>Note: Only record fill placed below Ordinary High Water Mark (OHWM) for Stream/Tributary, Wetland Boundary or High Tide Line (HTL) for Navigable Waters</i> | | | | Impact Duration (T-Temporary, P-Permanent, L-Loss) | Fill Material Type (e.g. boulder, sand, sandbag, soil, etc.) |
|--|--|---|---|------------|--------------|-------------|--|---|
| | | | Length (ft) | Width (ft) | Area (sq ft) | Volume (cy) | | |
| See attached. | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |

For structures (if more than 3 structures proposed, include extended table as an attachment):

☐ N/A, no structures in navigable waters proposed.

| Impacted Navigable Water Name (e.g. Mahalo Bay) | Impacted Water Type (T/W/N) | Type of Structure and Material (e.g. HDPE pipeline, concrete pier, steel cofferdam, etc.) | Structure's Position (I-In/O-Over/ U-Under nav water) | Structure's Dimensions in Navigable Waters | | | Impact Duration (T-Temporary, P-Permanent, L-Loss) |
|--|--|--|--|--|------------|--------------|--|
| | | | | Length (ft) | Width (ft) | Area (sq ft) | |
| See attached. | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | <input type="checkbox"/> I <input type="checkbox"/> O <input type="checkbox"/> U | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | <input type="checkbox"/> I <input type="checkbox"/> O <input type="checkbox"/> U | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | <input type="checkbox"/> I <input type="checkbox"/> O <input type="checkbox"/> U | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L |

For dredging activities (if more than 3 dredge activities proposed, include extended table as an attachment):

☐ New dredging ☐ Maintenance dredging ☐ N/A, no dredging in navigable waters proposed.

| Impacted Navigable Water Name (e.g. Lei Harbor) | Impacted Water Type (T/W/N) | Dredge/Removal Dimensions in Navigable Waters | | | | Impact Duration (T-Temporary, P-Permanent, L-Loss) | Dredged Material Type (e.g. sand, mud, rock, etc.) |
|--|--|---|-------------------------|----------------------|---------------------|--|---|
| | | Dredged Area Length (ft) | Dredged Area Width (ft) | Dredged Area (sq ft) | Dredged Volume (cy) | | |
| See attached. | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |
| | <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> N | | | | | <input type="checkbox"/> T <input type="checkbox"/> P <input type="checkbox"/> L | |

b. Purpose of the Proposed Activity:

The State of Hawaii, Department of Transportation (DOT) proposes to widen Kuhio Highway from three lanes to four lanes by providing an additional through-lane in the southbound direction (mauka side). Extension of an existing drainage culvert is required to support the roadway widening project.

c. Direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure:

1. Physical environment (effects on land, water, air, soil, etc.)

During the short-term construction period, temporary increases in turbidity are anticipated at the project site. A floating boom and silt curtain anchored or weighted at the bottom will be used to mitigate turbidity impacts. A silt fence will also be used on the land side to mitigate surface runoff. Water quality monitoring stations will also be located downstream and upstream of the culvert (See Sheets 79, 82 and 83)

2. Biological environment (effects on plants, animals, and habitats)

Clearing and grubbing will occur at the project site. The Biological and Water Quality Survey prepared for the project did not identify any plant species currently listed as endangered, threatened, or proposed for listing under either the federal or the State of Hawaii endangered species programs.

The wetland does not currently support aquatic biota and none is anticipated to utilize aquatic habitats in the project area. Given the highly overgrown state of the makai portion of this wetland feature, it is unlikely that it is currently usable by native wetland avian species.

3. Special aquatic sites (effects on wetlands, coral reefs, etc.)

Kaloko Marsh is located on the mauka (west) side of Kūhio Highway, approximately 3,700 ft (1.1 km) northeast from the Wailua River Bridge. The waterway under the highway is part of a drainage swale that extends from Papaloa Road to Kaloko Marsh, a distance of about 400 ft (0.12 km). The drainage swale normally drains into the marsh (to the northwest or in the mauka or inland direction), although it is possible that high water level in the marsh would result in flow backing up in the opposite direction. No plant species currently listed as endangered, threatened, or proposed for listing under either the federal or the State of Hawaii's endangered species programs were identified. Therefore it is not expected that the project will result in deleterious impacts to any plant species currently listed under either federal or State of Hawaii endangered species statutes. See attached.

d. Description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity:

During the short-term construction period, temporary increases in turbidity are anticipated at the project site. Two BMPs are to be used to mitigate turbidity effects: 1) floating boom and silt curtain anchored or weighted at the bottom will be used to mitigate turbidity impacts. 2) A silt fence will also be used on the land side to mitigate surface runoff. Water quality monitoring stations will also be located downstream and upstream of the culvert. See Sheets 79, 82 and 83.

e. Any other NWP(s), or Individual Permit(s) used or intended to be used to authorize any part of the proposed activity or any related activity including other separate and distant crossings for linear projects that require Department of the Army authorization:

None.

f. Have sketches been provided containing sufficient detail to show that the activity complies with the terms of the NWP and provide an illustrative description of the proposed activity? ☒ Yes, Attached ☐ No

5. Aquatic Resource Delineation (see Instructions)

a. Has a delineation of aquatic resources(wetlands, other special aquatic sites, and other waters, such as perennial, intermittent, ephemeral streams and navigable waters i.e. harbors, shoreline, ocean) been conducted in accordance with the current method required by the Corps? ☒ Yes ☐ No ☐ N/A, project located entirely in marine waters with no associated upland activities (e.g. buoy, marine bore, etc.)

If yes, please attach a copy of the delineation See PCN attachment #5.

Note: If no, your PCN is not complete. In accordance with General Condition 32, you may request the Corps delineate the special aquatic sites and other waters on the project site, but there may be a delay. In addition, the PCN will not be considered complete until the delineation has either been submitted to or completed by the Corps, as appropriate.

b. If a delineation has been submitted, would you like the Corps to conduct a jurisdictional determination (preliminary or approved)? ☐ Yes ☒ No

If yes, please complete, sign and return the attached *Appendix 1 – Request for Corps Jurisdictional Determination (JD)* sheet or provide a separate attachment with the information identified in Appendix 1.

6. Compensatory Mitigation (see Instructions)

a. Will the proposed activity result in the loss of greater than 1/10-acre of wetlands? ☐ Yes ☒ No

Note: In accordance with Regional Condition 3, permanent losses of waters of the U.S. greater than 1/10-acre are prohibited.

If yes, describe how you propose to compensate for the loss of each type of wetland:

Note: For the loss of less than 1/10 acre of wetlands, or if no compensatory mitigation is proposed, the Corps may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in no more than minimal adverse environmental effects.

b. Will the proposed activity result in the loss of streams or other open waters of the U.S.? ☐ Yes ☒ No

Note: In accordance with Regional Condition 7.2, your PCN must you must provide a written discussion of the on-site design configurations considered to demonstrate avoidance and minimization of impacts was evaluated and that the proposed permanent loss is unavoidable. See Box 12, below.

If yes, provide a description of any proposed compensatory mitigation for the loss of each type of stream or other open water:

The proposed project is avoiding and minimizing impacts to waters of the U.S. Compensatory mitigation is not required for this project (see Attachment H).

Note: If no compensatory mitigation is proposed, the Corps may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in no more than minimal adverse environmental effects.

7. Endangered Species Act (ESA) Compliance (see Instructions)

a. For non-Federal permittees (if Federal permittee, check N/A and skip to 7(b)): ☐ N/A

(1) Are there any Federally-listed or proposed endangered or threatened species known or likely to occur within or near the project area? ☐ Yes, see species list below ☒ No (If unknown, contact your local U.S. Fish & Wildlife Service office and/or National Marine Fisheries Service office.)

(2) Is the activity located in designated critical habitat for Federally-listed endangered or threatened species? ☐ Yes, see species list below ☒ No (If unknown, contact your local U.S. Fish & Wildlife Service office and/or National Marine Fisheries Service office.)

If yes to either (1) or (2), include the name(s) of those endangered or threatened species below:

- | | |
|----------------------------|-----|
| 1. See PCN attachment 7.a. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. |
| 9. | 10. |

If no to both (1) and (2), proceed to Box 8.

Note: If yes to either (1) or (2), note per General Condition 18(c), you shall not begin work on the activity until notified by the Corps that the requirements of the ESA have been satisfied and that the activity is authorized.

b. For Federal permittees, you must provide documentation demonstrating compliance with ESA as a separate attachment. ☒ Enclosed

8. Historic Properties (see Instructions)

a. For non-Federal permittees (if Federal permittee, check N/A and skip to 8(b)): ☐ N/A

(1) Is there a known historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places within or near the project area? ☐ Yes ☒ No (If unknown, contact your local State Historic Preservation Officer.)

If yes to (1), include the name(s) of historic property(ies) below:

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |

OR

☐ A vicinity map indicating the location of the historic property is enclosed

(2) If no to (1), describe the potential for the proposed work to affect a previously unidentified historic property:

- 1) Additional archaeological inventory testing.
- 2) Archaeological monitoring.
- 3) Development of burial treatment plan, in the event burials are encountered.

Note: If yes to (1), note per General Condition 20(c), you shall not begin the activity until notified by the Corps that the activity has no potential to cause effects or that consultation under Section 106 of the National Historic Preservation Act (NHPA) has been completed.

b. For Federal permittees, you must provide documentation demonstrating compliance with NHPA in a separate attachment. ☒ Enclosed

9. National Wild and Scenic Rivers

N/A. There are no designated Wild and Scenic Rivers in any state or territory of the Honolulu District

10. Section 408 Permissions (see Instructions)

a. Will the proposed activity also require permissions from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a Corps federally authorized Civil Works project? ☐ Yes ☒ No

If yes, have you received Section 408 permission to alter, occupy, or use the Corps project? ☐ Yes ☐ No

If yes, please attach the Section 408 permission

Note: If yes, note per General Condition 31, an activity that requires Section 408 permission is not authorized by NWP until the Corps issues the Section 408 permission to alter, occupy, or use the Corps project, and the Corps issues a written NWP verification.

11. Compliance with NWP General Conditions (required)

Instructions: To qualify for NWP authorization, your project must comply with the NWP General Conditions. Read the General Conditions. Indicate below your rationale for compliance with each general condition. Conditions are listed below to reflect each corresponding NWP General Condition number.

| General Condition | Rationale for Compliance with General Condition |
|--|---|
| 1. Navigation | N/A. The culvert extension is not located in navigable waters. |
| 2. Aquatic Life Movements | N/A. No aquatic species were found in the biological survey. |
| 3. Spawning Areas | N/A. No spawning areas were found in the biological survey. |
| 4. Migratory Bird Breeding Areas | N/A. No migratory bird breeding areas were found in the biological survey. |
| 5. Shellfish Beds | N/A. No shellfish beds were found in the biological survey. |
| 6. Suitable Material | Pre-cast and cast-in-place concrete, compact select granular material, boulders and grout to be used for culvert. |
| 7. Water Supply Intakes | N/A. The culvert extension is not located near water supply intakes. |
| 8. Adverse Effects from Impoundments | N/A. The culvert extension will not create an impoundment. |
| 9. Management of Water Flows | N/A. The culvert extension will not require management of water flows. |
| 10. Fills Within 100-Year Floodplains | N/A. The culvert extension is within Zone X, areas determined to be outside the 0.2% annual chance floodplain. |
| 11. Equipment | N/A. Equipment to be placed on landside roadway on either side of the culvert. |
| 12. Soil Erosion and Sediment Controls | N/A. Two BMP to be used (1) floating boom with silt curtain for in water work and (2) silt fence on landside areas. |
| 13. Removal of Temporary Fills | N/A. Once construction complete, in water BMPs to be removed. |
| 14. Proper Maintenance | N/A. Culvert extension located within State ROW and will be properly maintained. |
| 15. Single and Complete Project | This is a single and complete project. |
| 16. Wild and Scenic Rivers | N/A |
| 17. Tribal Rights | N/A |

| | |
|--|--|
| 18. Endangered Species | See Box 7 above. |
| 19. Migratory Bird and Bald and Golden Eagle Permits | N/A |
| 20. Historic Properties | See Box 8 above. |
| 21. Discovery of Previously Unknown Remains and Artifacts | See Box 8 above. |
| 22. Designated Critical Resource Waters | N/A |
| 23. Mitigation | See Boxes 4(d) and 6 above. |
| 24. Safety of Impoundment Structures | N/A |
| 25. Water Quality | <p>State certifying agency contacted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Water quality certification (WQC) status: <input checked="" type="checkbox"/> Pending; application submitted on 7/13/18</p> <p><input type="checkbox"/> Issued on _____; attached to PCN. <input type="checkbox"/> Waived on _____; attached to PCN</p> <p><small>Note: Only the state has the authority to determine whether a WQC is required for your project. You are responsible for obtaining WQC, if required by the state. Contact the appropriate state certifying agency as early as possible. The Corps cannot proceed with NWP authorization without a WQC or waiver.</small></p> |
| 26. Coastal Zone Management (CZM) | <p>State certifying agency contacted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>CZM consistency determination status: <input type="checkbox"/> Pending; application submitted on _____</p> <p><input checked="" type="checkbox"/> Issued on 9/11/09; consistency concurrence attached to PCN.</p> <p><small>Note: Only the state has the authority to determine whether your project is consistent with the state's CZM plan. It is your responsibility to obtain a CZM consistency determination, if required. Contact the appropriate state agency as early as possible. The Corps cannot proceed with NWP authorization without a CZM consistency concurrence.</small></p> |
| 27. Regional and Case-by-Case Conditions | N/A |
| 28. Use of Multiple Nationwide Permits | N/A |
| 29. Transfer of Nationwide Permit Verifications | N/A |
| 30. Compliance Certification | N/A |
| 30. Activities Affecting Structures or Works Built by the U.S. | See Box 10 above. |
| 32. Pre-Construction Notification | Completion of this template complies with this condition and RC 6. |

12. Compliance with NWP Regional Conditions (required)

Instructions: To qualify for NWP authorization, your project must comply with the POH NWP Regional Conditions. Read the Regional Conditions. Complete the sections below to indicate your compliance with each Regional Condition. Conditions are listed below to reflect each corresponding POH NWP Regional Condition number.

| Regional Condition | Rationale for Compliance with Regional Condition |
|--|--|
| 1. Revoked Permits | <input checked="" type="checkbox"/> The NWP(s) specified in Box 3, above is/are not revoked from use in the Honolulu District. |
| 2. Limited Use Areas | <input checked="" type="checkbox"/> There are no limited use areas present within or in the vicinity of the project. <input type="checkbox"/> The following limited use areas are present within or in the vicinity of the project: _____ |
| 3. Acreage Limitation | <input checked="" type="checkbox"/> No permanent discharge of dredged or fill material into waters of the U.S. greater than 0.10 acres proposed |
| 4. Stream Channelization and Impoundment Restriction | <input checked="" type="checkbox"/> No permanent stream channelization proposed. <input type="checkbox"/> No permanent construction of a dam to impound waters of the U.S. proposed |
| 5. NWP Verification | Submission of this template initiates the process to obtain NWP Verification, per RC 5. |
| 6. PCN | Completion of this template complies with RC 6 |

| | |
|-------------------------------|---|
| 7. Additional PCN Information | <p>For Federal permittees, you must provide documentation demonstrating EFH compliance as a separate attachment. <input checked="" type="checkbox"/> Enclosed</p> <p>For non-Federal permittees, please complete Sections 7.1 (a-c), below.</p> <p>7.1(a) <input type="checkbox"/> N/A, no listed species known or likely to occur (see box 7(a)(1), above); skip to 7.1(b). i. See species list: <input checked="" type="checkbox"/> at box 7(a)(2), above; OR <input type="checkbox"/> attached ii. <input checked="" type="checkbox"/> Proposed BMPs to avoid/minimize impacts to listed species are attached. <input type="checkbox"/> No BMPs to avoid/minimize impacts to listed species proposed.</p> <p>7.1(b) <input checked="" type="checkbox"/> N/A, No activity in tidal waters proposed; skip to 7.1(c). i. EFH occurs in the project area for the following Management Unit Species: <input type="checkbox"/> Bottomfish <input type="checkbox"/> Crustaceans <input type="checkbox"/> Pelagics <input type="checkbox"/> Coral Reef Ecosystem <input type="checkbox"/> Seamount Groundfish <input type="checkbox"/> Precious Corals (PC) (If unknown, contact your local National Marine Fisheries Service office) ii. Existing environment: Bottom substrate (sand, cobbles, silt, etc.): _____ Water depth: _____ feet Distance from shore: _____ feet Tidal Range: <input type="checkbox"/> Intertidal <input type="checkbox"/> Subtidal <input type="checkbox"/> Submerged Water Quality (clear, brackish, murky, etc.): _____ iii. <input type="checkbox"/> Proposed BMPs to avoid/minimize impacts to EFH are attached. <input checked="" type="checkbox"/> No BMPs to avoid/minimize impacts to EFH proposed.</p> <p>7.1(c) <input checked="" type="checkbox"/> N/A, no historic properties (see box 8(a)(1), above); skip to 7.2. i. Associated upland activities proposed (staging, stockpiling, temporary access, entry/exit pits, etc.): _____ <input type="checkbox"/> No activities in uplands associated with this project proposed. ii. See historic property(ies) list <input type="checkbox"/> at box 8(a), above OR <input type="checkbox"/> attached iii. The following NHOs, community members or other parties may want to provide comment on this project: _____ <input type="checkbox"/> No knowledge of any NHOs, community members or others interested in providing comment. iv. <input type="checkbox"/> Correspondence with <input type="checkbox"/> SHPO, <input type="checkbox"/> NHO, <input type="checkbox"/> Other _____, attached. <input type="checkbox"/> No parties consulted prior to PCN submittal. v. To meet RC 7.1(c), the following documents, libraries or databases were searched: _____ vi. <input type="checkbox"/> Proposed BMPs to avoid/minimize/mitigate impacts to historic properties are attached <input type="checkbox"/> No BMPs to avoid/minimize/mitigate impacts to historic properties proposed.</p> <p>7.2 <input type="checkbox"/> N/A, No permanent loss of waters of the U.S. proposed; skip to 8.1(a). <input checked="" type="checkbox"/> The proposed permanent loss of waters of the U.S. is unavoidable. The following on-site design configurations were considered and deemed infeasible (rationale provided): _____ See PCN attachment 7.2. <input checked="" type="checkbox"/> See attached sketch depicting other configuration(s) considered (optional)</p> |
| 8. Best Management Practices | <p>8.1 (a) <input checked="" type="checkbox"/> Applicable, will implement or <input type="checkbox"/> Not applicable</p> <p>8.2 (a) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A (b) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A (c) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A (d) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A (e) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A (f) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A</p> <p>8.3 (a) <input type="checkbox"/> Applicable, will implement or <input type="checkbox"/> N/A</p> |
| 9. Bank Stabilization | <p>9.1 <input checked="" type="checkbox"/> N/A, No stream bank stabilization proposed. <input type="checkbox"/> An environmentally-sensitive stabilization technique is proposed. See box 4, above. <input type="checkbox"/> An environmentally-sensitive stabilization technique is not proposed. The following techniques were considered and deemed not practicable (rationale provided): _____ _____</p> <p>9.2 <input checked="" type="checkbox"/> N/A, I am not proposing shoreline stabilization <input type="checkbox"/> I am proposing an environmentally-sensitive stabilization technique. See box 4, above. <input type="checkbox"/> I am not proposing an environmentally-sensitive stabilization technique because I determined the following techniques I considered below, not practicable: _____ _____</p> |

**Honolulu District
U.S. Army Corps of Engineers
Nationwide Permit Pre-Construction Notification (PCN)
PCN Form May 2017**

ATTACHMENT to PCN

4. Description of Proposed Activity

a. Complete description of the Proposed Activity

Construction sequence

The anticipated construction schedule for the culvert will span approximately one to two months, of which about 35 days will involve in-water work. The following table summarizes the sequence of major construction components requiring in-water work and estimated construction durations.

| Construction Sequence | Estimated Duration |
|--|-------------------------------------|
| 1) Installation of BMPs | 1 day |
| 2) Grading and grubbing of immediate work area | 2 days |
| 3) Demolition and removal of existing concrete rubble masonry (CRM) headwall | 2 days |
| 4) Installation of pipe cushion and new 36" x 36" pre-cast box drain and four new 36"-diameter pre-cast RCPs | 6 days |
| 5) Installation of new concrete collar to attach the extension to existing culvert (above OHWM) | 2 days |
| 6) Installation of new, 50-foot cast-in-place headwall at mauka limit | 11 days |
| 7) Backfilling behind new headwall | 4 days (total) (2 days in-water) |
| 8) Installation of new GRP mauka of new headwall | 6 days |
| 9) Removal of BMPs 1 day | 1 day |
| | |

See schedule above. Dredging will take approximately 4 weeks.

Impact Quantifications:

See below

**Honolulu District
U.S. Army Corps of Engineers
Nationwide Permit Pre-Construction Notification (PCN)
PCN Form May 2017**

ATTACHMENT to PCN

b. Direct and indirect adverse environmental effects

SPECIAL AQUATIC SITES

| Special Aquatic Site: | Dredge Site | Discharge Site | Construction Site |
|-----------------------------------|--------------------|-----------------------|--------------------------|
| Wetlands (swamps, marshes, bog) | Yes | Yes | Yes |
| Mudflats | No | No | No |
| Vegetated Shallows/Seagrass beds | No | No | No |
| Coral Reefs | No | No | No |
| Riffle & Pool Complexes (streams) | No | No | No |

| Characteristic | Dredge Site | Discharge Site | Construction Site |
|------------------------------------|--------------------|-----------------------|--------------------------|
| Local fresh water supply | No | No | No |
| Fishing (recreational, commercial) | No | No | No |
| Scenic Areas | Yes | Yes | Yes |
| Agriculture (type) | No | No | No |
| Agriculture (type) | No | No | No |
| Historic sites (type) | No | No | No |
| Other cultural resources (type) | No | No | No |
| Parks, monuments, preserves, etc | No | No | No |
| Other (type) | No | No | No |
| | | | |

**Attachment to PCN
FILL ACTIVITES**

| Impacted Water Name | Impacted Water Type (*) | Fill Activity | Fill Dimension in Waters of the US | | | | Impact Duration (**) | Fill Material Type |
|---------------------|-------------------------|-------------------|------------------------------------|------------|--------------|-------------|----------------------|----------------------------------|
| | | | Length (ft) | Width (ft) | Area (sq ft) | Volume (cy) | | |
| Kaloko Wetland | W | Pipe Cushion | 25 | 25 | 625 | 35 | P | Bed course |
| " " | | Behind headwall | 25 | 50 | 1069 | 143 | P | Compacted selected granular fill |
| " " | | Front of headwall | 167 | 14 | 1308 | 85 | P | |
| " " | | Riprap | 40 | 10 | 400 | 20 | P | Cast in place |
| " " | | Headwall | 50 | 9 | 838 | 39 | P | Cast in place |
| " " | | Box culvert | 25 | 4 | 100 | 16 | P | Reinforced concrete |
| " " | | Pipe culvert | 25 | 4 | 10 | 9 | P | |
| " " | | Pipe culvert | 25 | 4 | 10 | 9 | P | |
| " " | | Pipe culvert | 25 | 4 | 10 | 9 | P | |
| " " | | Pipe culvert | 25 | 4 | 10 | 9 | P | |
| " " | | Collar | 22 | 5 | 110 | 7 | P | Cast in place |
| | | | | | | | | |
| | | | | | | | | |

(*) T: Tributary W: Wetland N; Navigable Water

(**) T: Temporary P: Permanent Loss

STRUCTURE in NAVIGABLE WATERS

| Impacted Navigable Water Name | Impacted Water Type | Type of Structure and Material | Structure's Position | Structure's Dimensions in Navigable Waters | | | Impact Duration |
|-------------------------------|---------------------|--------------------------------|----------------------|--|------------|--------------|-----------------|
| | | | | Length (ft) | Width (ft) | Area (sq ft) | |
| N/A | | | | | | | |

DREDGE in WATERS - New dredging

| Impacted Water Name | Impacted Water Type | Dredge/Removal Dimensions in Navigable Waters | | | | Impact Duration | Dredged Material Type |
|---------------------|---------------------|---|-------------------------|----------------------|---------------------|-----------------|-----------------------|
| | | Dredged Area Length (ft) | Dredged Area Width (ft) | Dredged Area (sq ft) | Dredged Volume (cy) | | |
| Kaloko Wetland | W | 167 | 39 | 2379 | 317 | P | Mud, silty clay |
| | | | | | | | |
| | | | | | | | |

**Honolulu District
U.S. Army Corps of Engineers
Nationwide Permit Pre-Construction Notification (PCN)
PCN Form May 2017**

ATTACHMENT to PCN

Section 5 Aquatic Resources Delineation.

May 31, 2018 e-mail message to Brian Lock, Wilson Okamoto.

On a side note, the original wetlands delineation that was performed by Char & Associates has been expired for quite some time. However, in 2014 we issued a PJD to HDOT for this project, so unless I hear otherwise, I will continue to utilize and rely upon this PJD that determines there are potential wetlands on the Kuhio Highway culvert extension project site (aka, "Kaloko Wetlands"). See Supplement 2.

Section 7 Endangered Species Act (ESA) Compliance

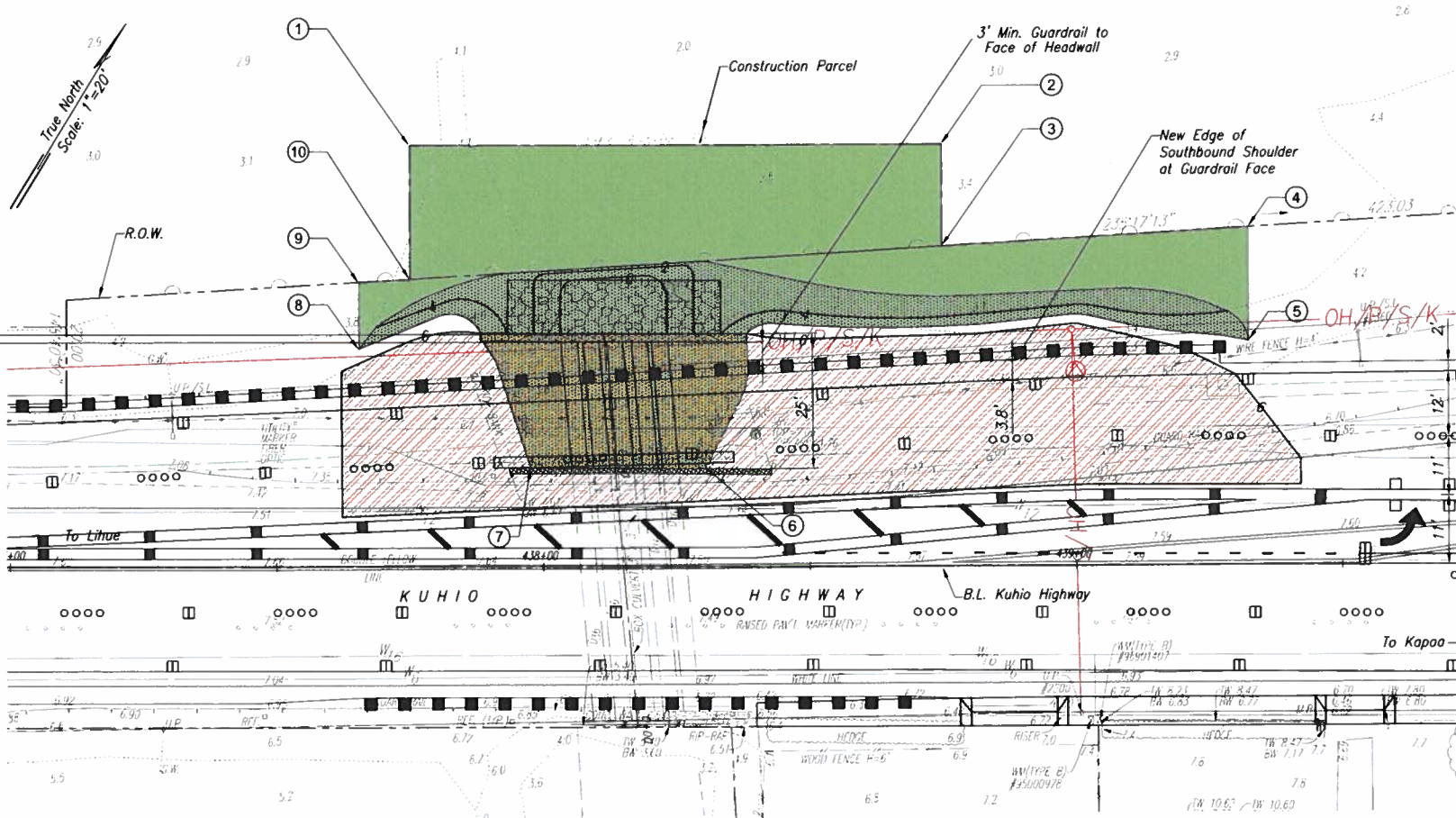
a.

There are no federally listed threatened and/or or endangered species within the ESA action area of the culvert extension. Also, on June 06, 2018, the FHWA in an e-mail to CE stated "Based on the information in the overall project consultation for the Kuhio Highway Short-Term Improvements project, Kuamoo Road to Temporary Bypass Road, and the previous studies, the FHWA believes that there would be no effect to threatened and endangered species for the culvert." See Supplement 2.

7. Additional PCN Information 7.2

Honolulu District 2017 NWP Regional Condition 7.2.

Extending the culvert eastward (makai) would avoid use of the identified wetland. This design was considered. However, analysis showed the makai extension would require re-construction of entire highway in both directions for some distance, not just the 0.64-mile segment. Such a project is not considered feasible given disruption to the adjacent land uses located on the makai side of the highway and the related additional costs related to a possible take, including several commercial uses and a number of residential lots. The 25-foot culvert mauka extension is the minimal extension necessary to meet federal and State of Hawaii design guidelines for use of federal funds. Thus, the 25-foot culvert extension into the adjacent wetland is considered the preferred alternative. See Supplement 2.



APPROXIMATE COORDINATES
OF WETLAND IMPACT AREA

- ① Lot: 159° 19' 52.851" N
Long: 22° 3' 15.422" W
- ② Lot: 159° 19' 51.176" N
Long: 22° 3' 16.139" W
- ③ Lot: 159° 19' 51.305" N
Long: 22° 3' 15.887" W
- ④ Lot: 159° 19' 50.72" N
Long: 22° 3' 16.154" W
- ⑤ Lot: 159° 19' 50.464" N
Long: 22° 3' 15.84" W
- ⑥ Lot: 159° 19' 51.363" N
Long: 22° 3' 14.914" W
- ⑦ Lot: 159° 19' 51.753" N
Long: 22° 3' 14.745" W
- ⑧ Lot: 159° 19' 52.744" N
Long: 22° 3' 14.68" W
- ⑨ Lot: 159° 19' 52.744" N
Long: 22° 3' 14.68" W
- ⑩ Lot: 159° 19' 52.64" N
Long: 22° 3' 15.114" W

LEGEND

- Temporary Wetland Area Affected By New Culvert
- Permanent Wetland Area Affected By New Culvert
- Operation Area for Construction Equipment

EXTENSION OF EXISTING BOX CULVERT
ON KUHIO HIGHWAY

GRAPHIC SCALE:



ATTACHMENT 1



Prepared by:
Wilson Okamoto
Corporation
Engineers - Planners

APPROXIMATE WETLAND AREA
(Temporary and Permanent Impact)

FIGURE 4 REVISIONS

Figures and Plans

Figure 1 – Location Map

Figure 2 – Project Area Vicinity Map

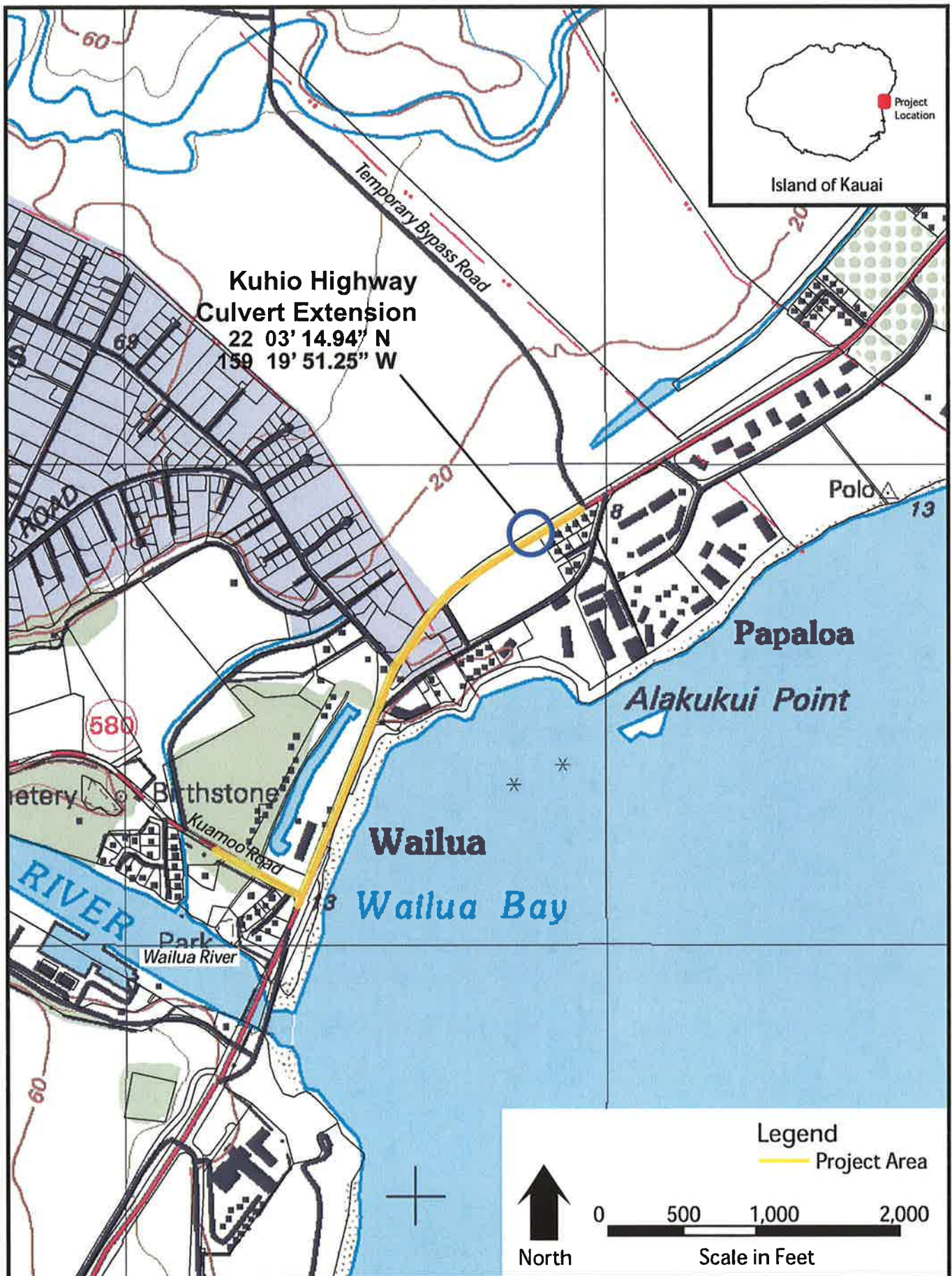
Figure 3A and 3B – Affected Area

Figure 4 – Approximate Wetland Area (Temporary and Permanent Impact)

Figure 5 - Photographs

Sheets 39, 40, 42, and 43 – Plans, Details and Profiles

Sheets 79, 82 and 83 – Erosion Control Plan and Details




KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS
KUAMOO TO TEMPORARY BYPASS ROAD

LOCATION MAP
FIGURE 1

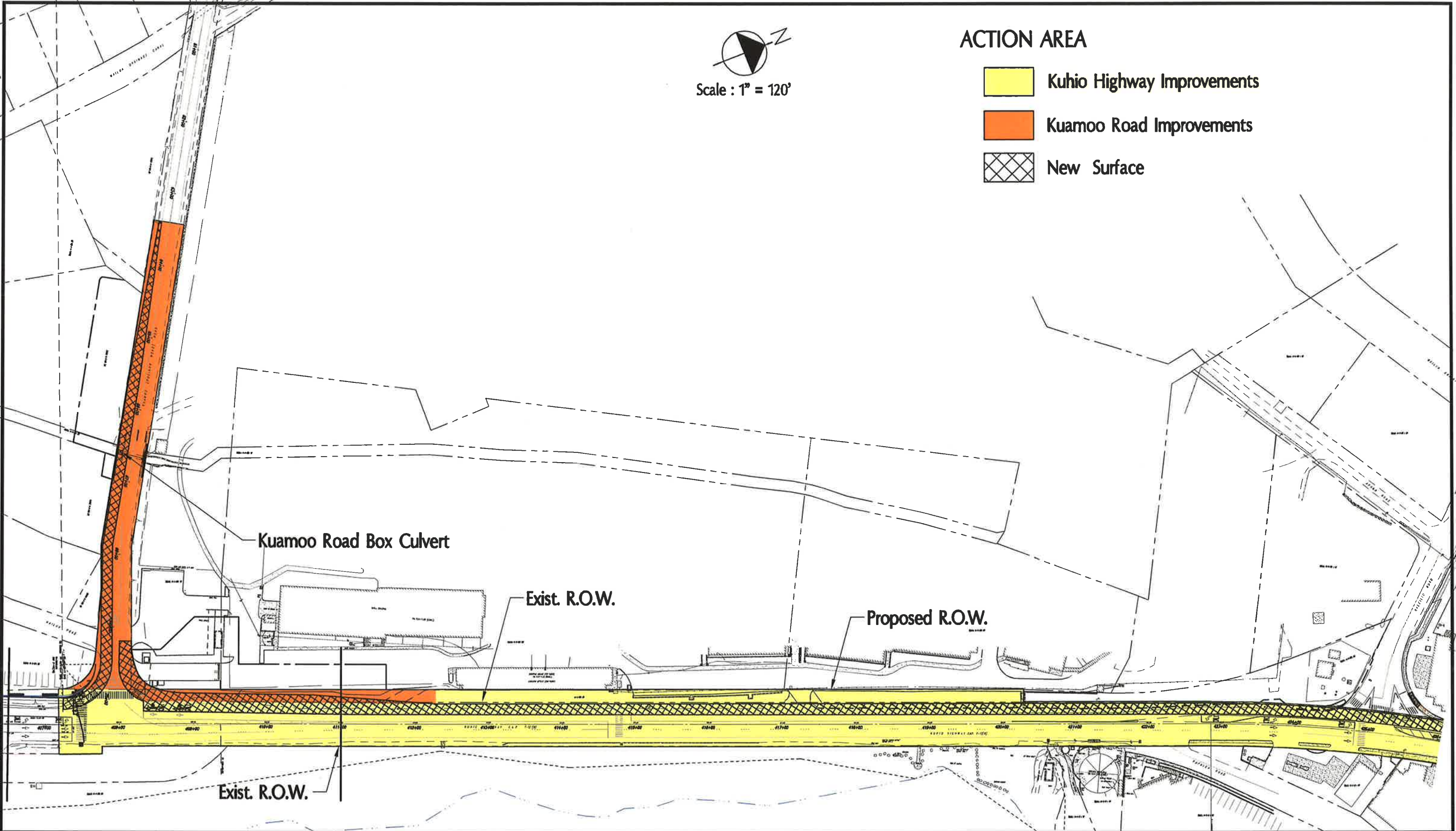


LEGEND

-  Highway and Roadway Improvement Location

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS
KUAMOO TO TEMPORARY BYPASS ROAD

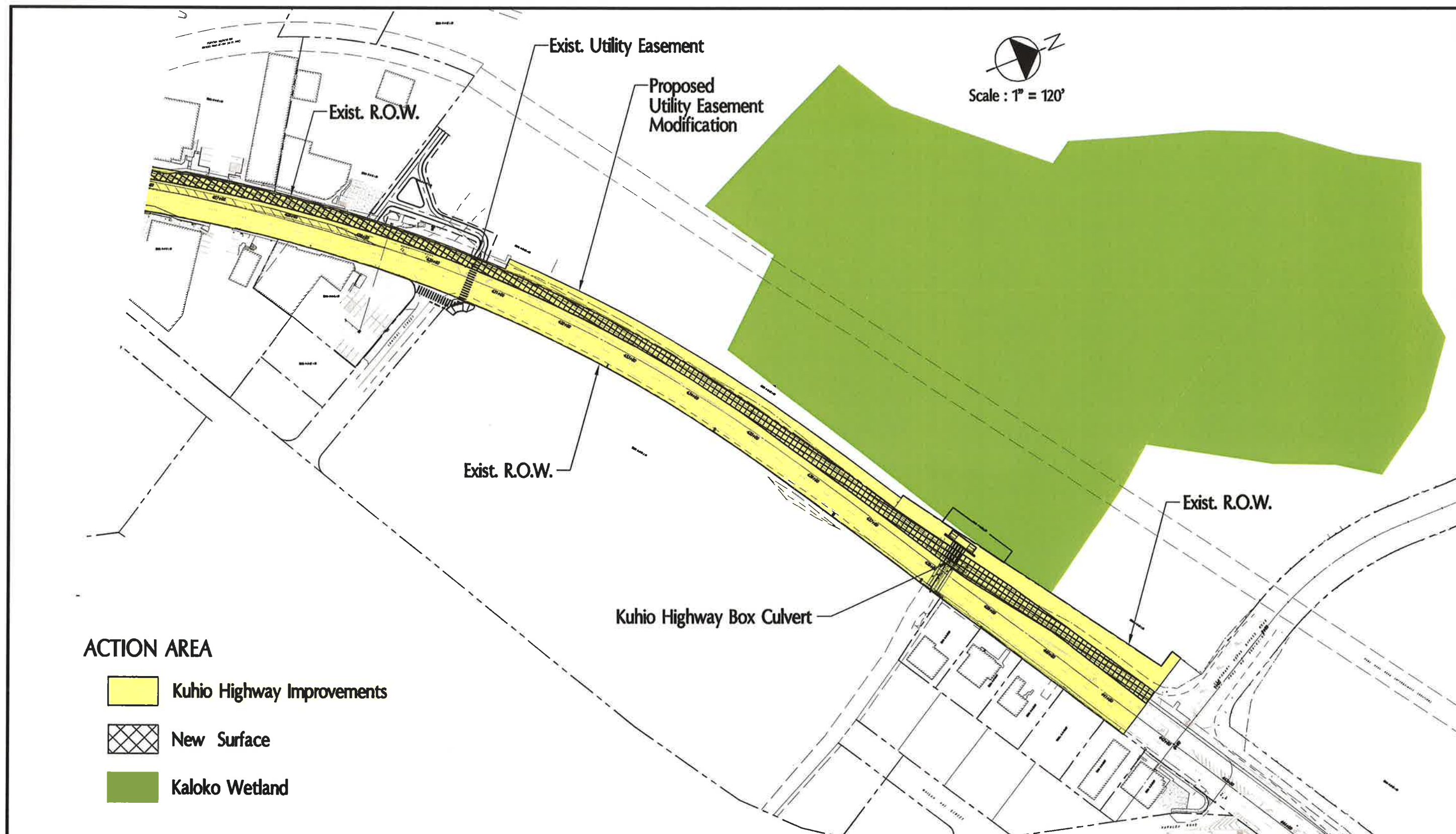
PROJECT AREA VICINITY MAP
FIGURE 2



Prepared by:
Wilson Okamoto
Corporation
Engineers • Planners

KUHIO HIGHWAY
SHORT-TERM IMPROVEMENTS
Kuamoo Road To Temporary Bypass Road

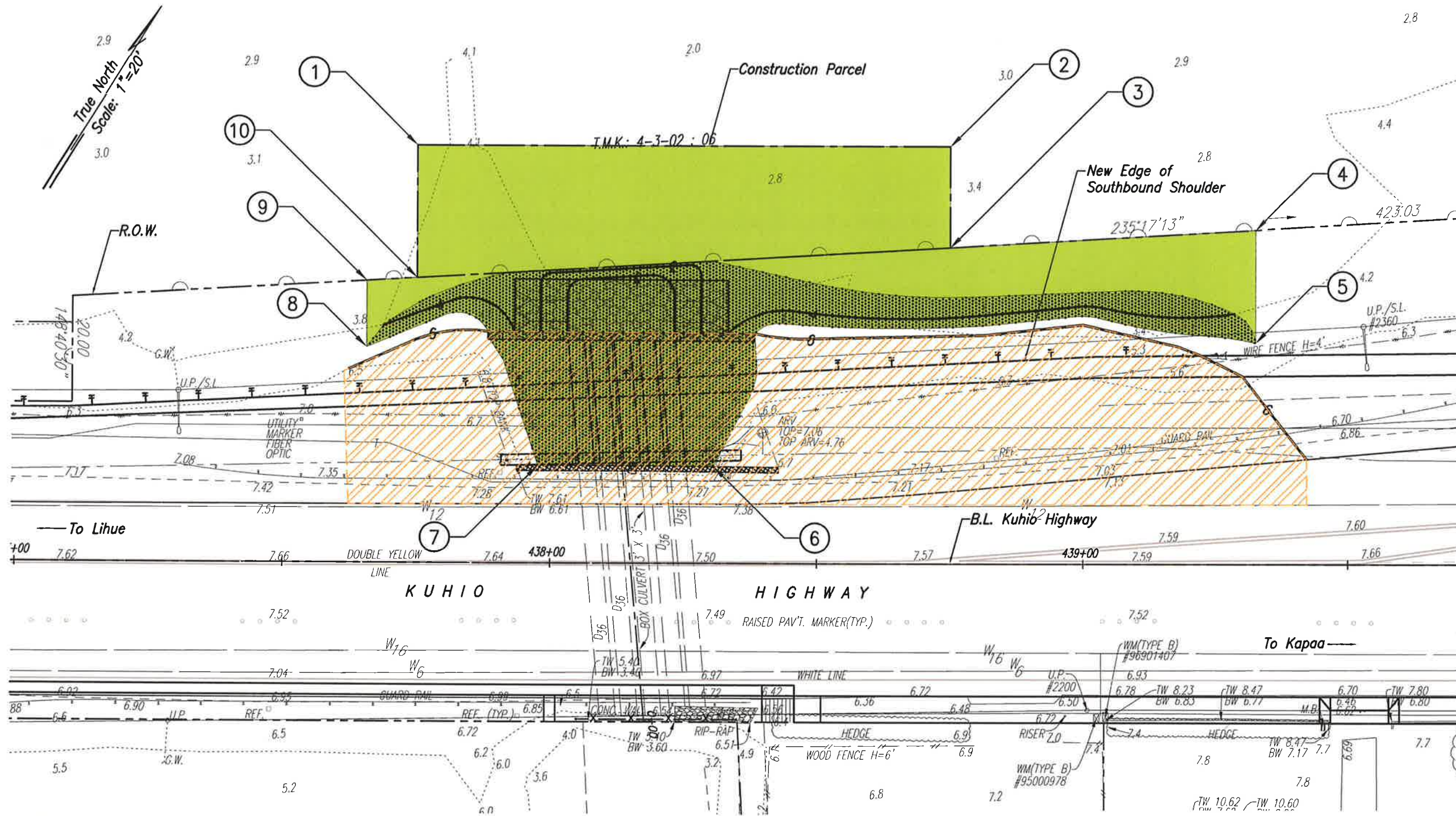
FIGURE 3A



Prepared by:
Wilson Okamoto
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Engineers - Planners

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS Kuamoo Road To Temporary Bypass Road

FIGURE 3B



**APPROXIMATE COORDINATES
OF WETLAND IMPACT AREA**

- ① Lat: 159° 19' 52.851" N
Long: 22° 3' 15.422" W
- ② Lat: 159° 19' 51.576" N
Long: 22° 3' 16.139" W
- ③ Lat: 159° 19' 51.305" N
Long: 22° 3' 15.887" W
- ④ Lat: 159° 19' 50.72" N
Long: 22° 3' 16.154" W
- ⑤ Lat: 159° 19' 50.464" N
Long: 22° 3' 15.84" W
- ⑥ Lat: 159° 19' 51.363" N
Long: 22° 3' 14.914" W
- ⑦ Lat: 159° 19' 51.753" N
Long: 22° 3' 14.745" W
- ⑧ Lat: 159° 19' 52.744" N
Long: 22° 3' 14.68" W
- ⑨ Lat: 159° 19' 52.744" N
Long: 22° 3' 14.68" W
- ⑩ Lat: 159° 19' 52.64" N
Long: 22° 3' 15.114" W

LEGEND

- Temporary Wetland Area Affected By New Culvert
- Permanent Wetland Area Affected By New Culvert
- Operation Area for Construction Equipment

**EXTENSION OF EXISTING BOX CULVERT
ON KUHIO HIGHWAY**

GRAPHIC SCALE:





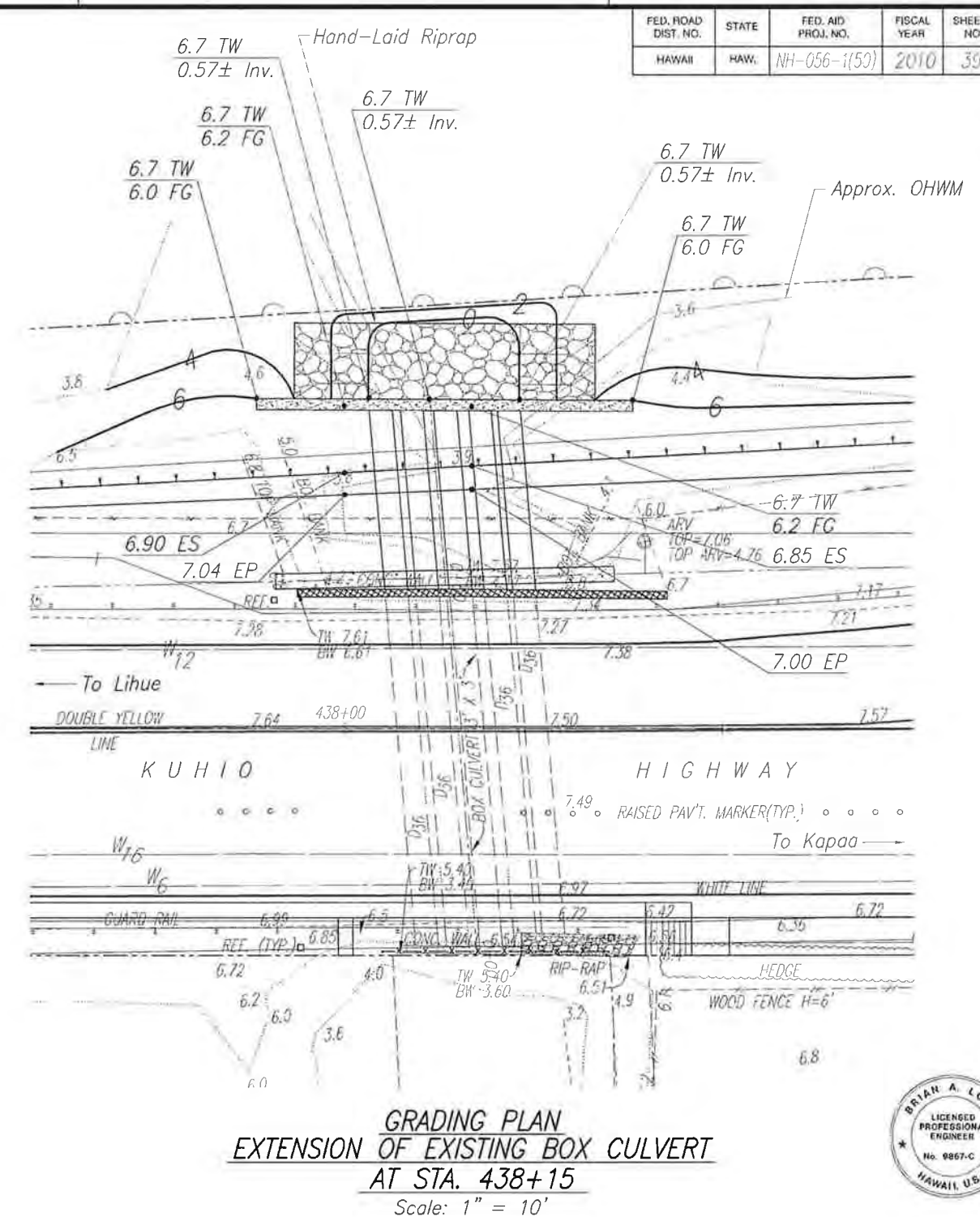
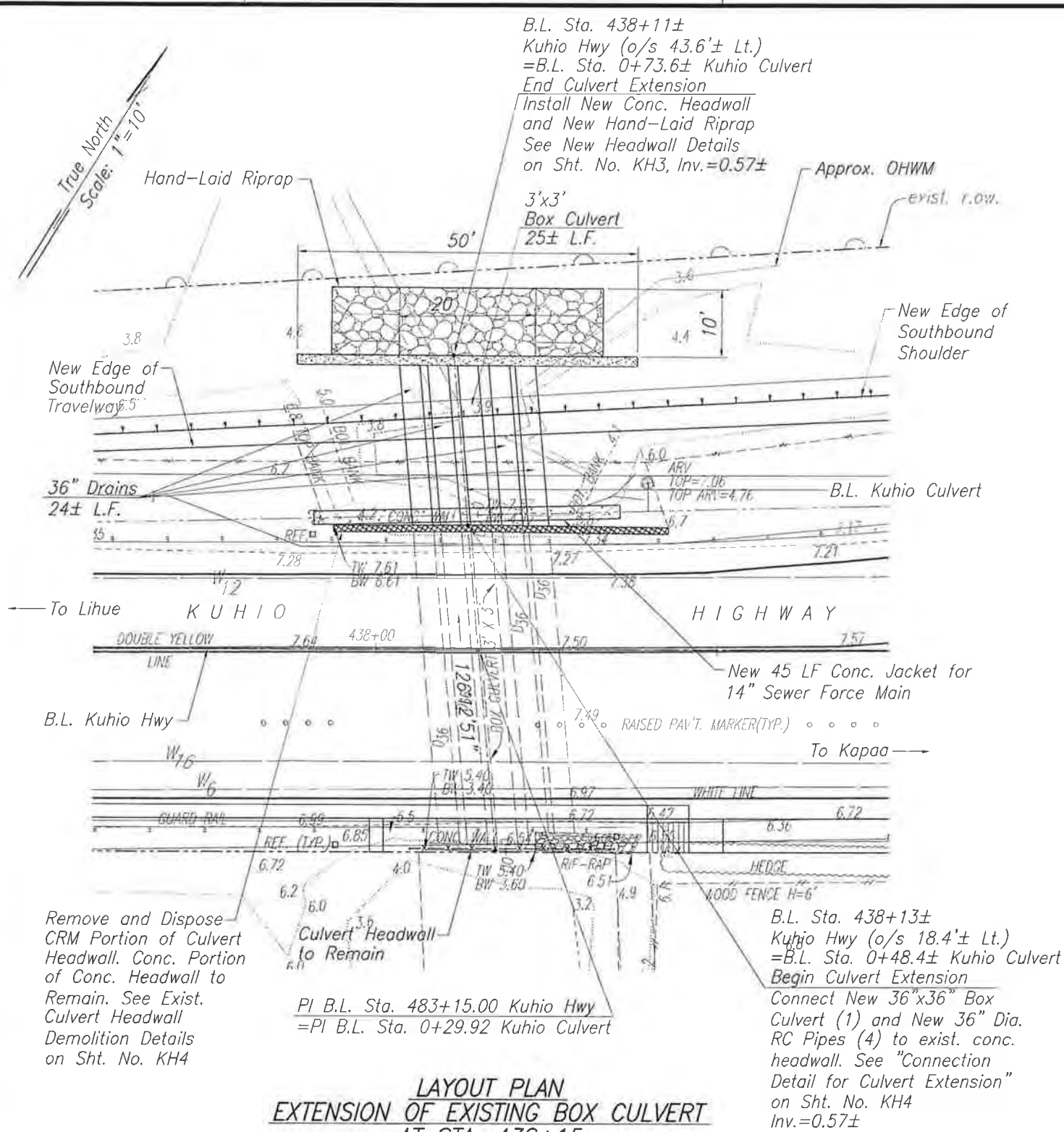
FIGURE 5
MAUKA SIDE OF KUHIO HIGHWAY CULVERT

*Kuhio Highway Short-Term Improvements
Lihue and Kawaihau Districts, Island of Kauai*



**WILSON OKAMOTO
CORPORATION**
ENGINEERS AND ARCHITECTS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 39 | 297 |

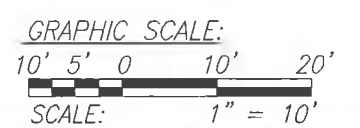


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 APR 30, 2010
 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

- Notes:**
- Concrete or debris from demolition work shall be removed and not allowed to fall into water way.
 - Contractor shall utilize water proof form work for cast-in-place concrete headwall foundation and collar. Contractor shall not use chemical treated wood for waterproof form work. Contractor shall keep foundation dry by draining, bailing, pumping, driving sheathings; or by constructing cofferdams and cribs.
 - Contractor Shall Clean Existing Culverts.
 - Contractor shall protect 14" sewer force main during culvert installation.

APPROVED

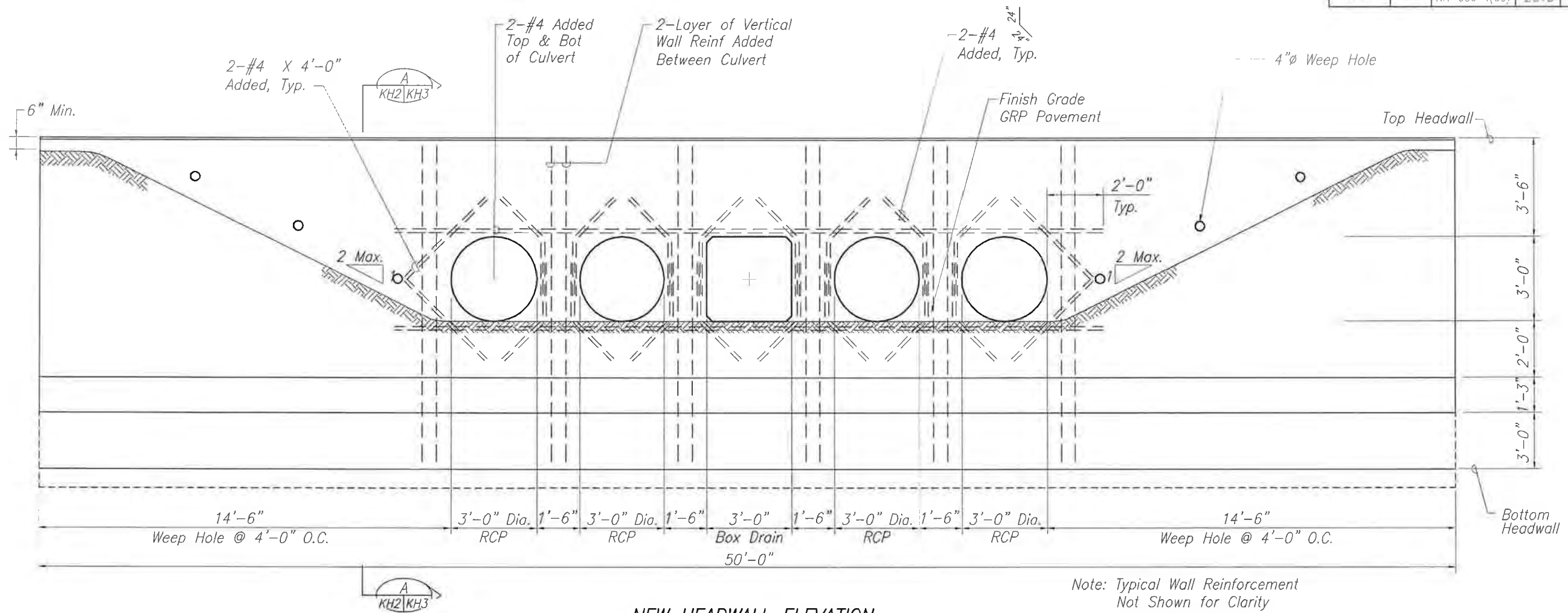
Chief, Division of Wastewater Management Date
 (For Work Involving Sewer Lines and Appurtenances)



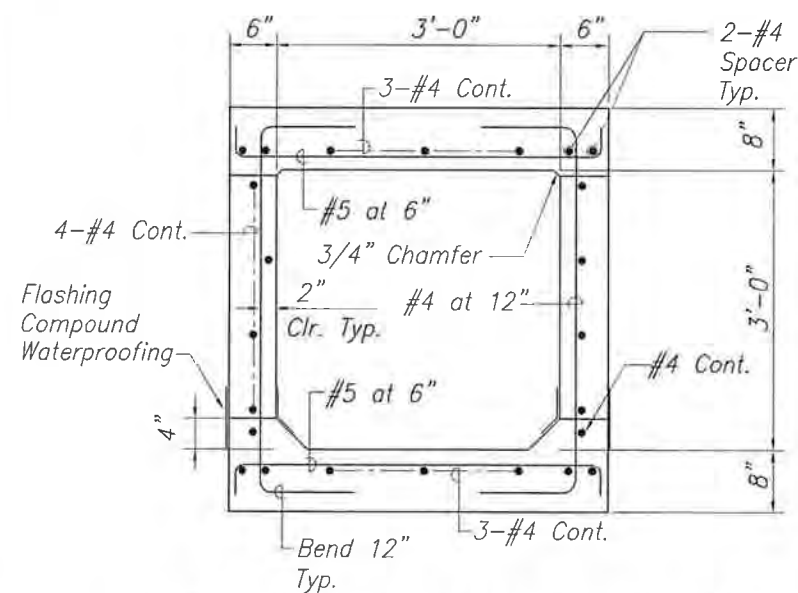
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**KUHIO HIGHWAY
CULVERT EXTENSION**
Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)
Scale: As Noted Date: November 2009
SHEET No. KH1 OF 4 SHEETS

39

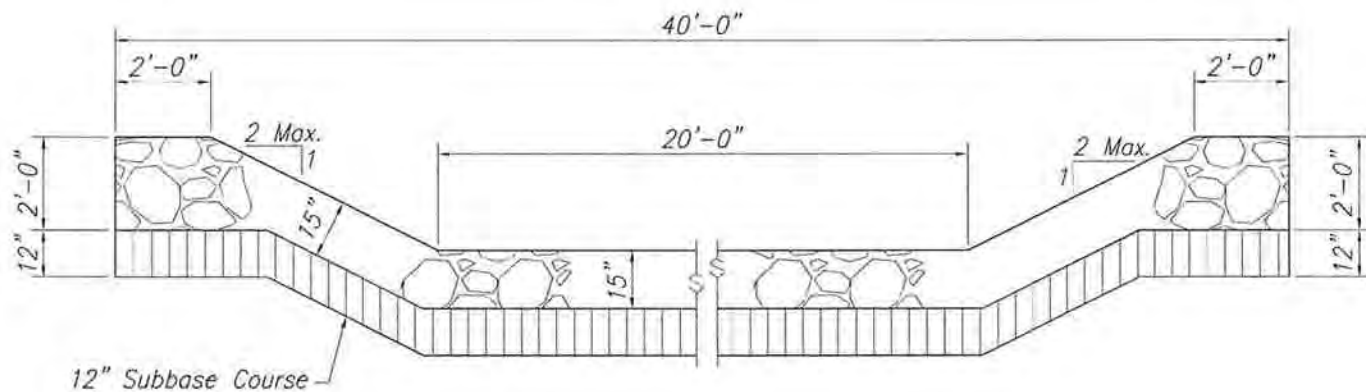
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 40 | 297 |



NEW HEADWALL ELEVATION
Scale: 1/2"=1'-0"



TYPICAL SECTION - 3'x3' BOX CULVERT
Scale: 1/2"=1'-0"



HAND-LAID RIPRAP DETAIL
Not to Scale



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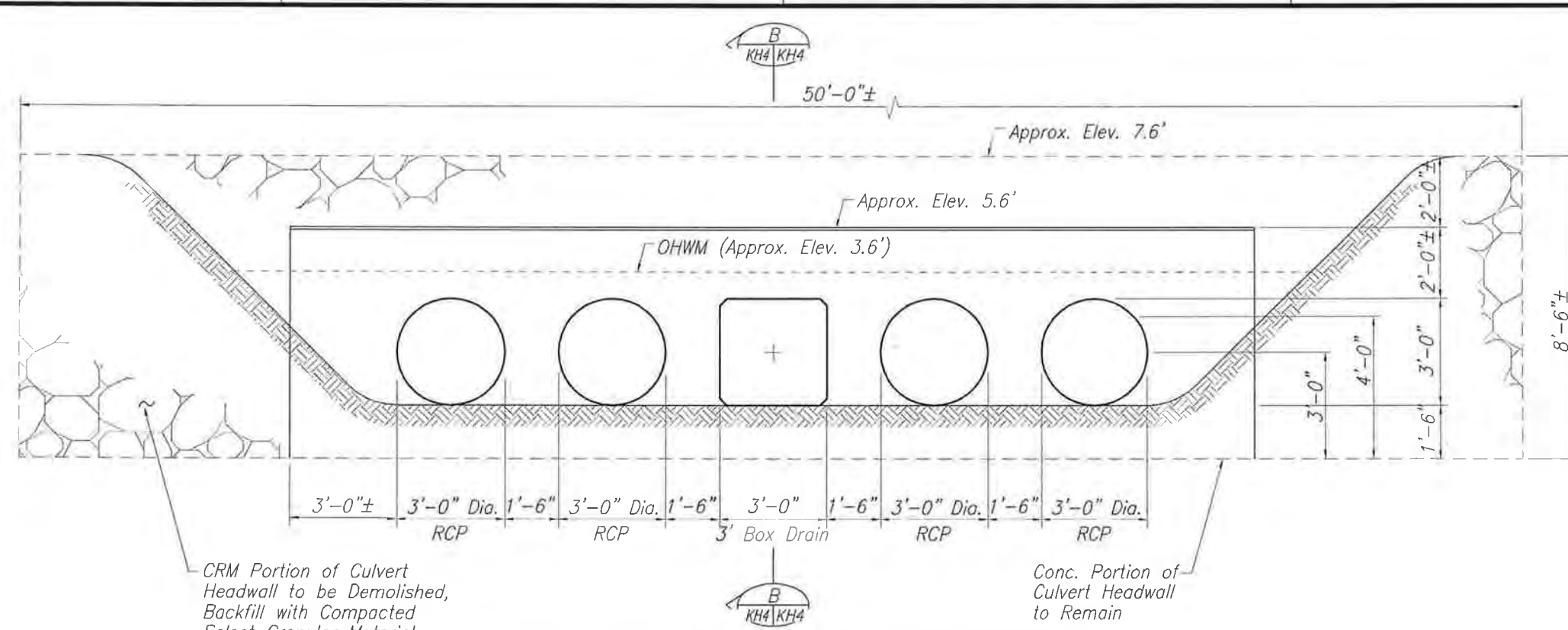
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APRIL 30, 2010 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

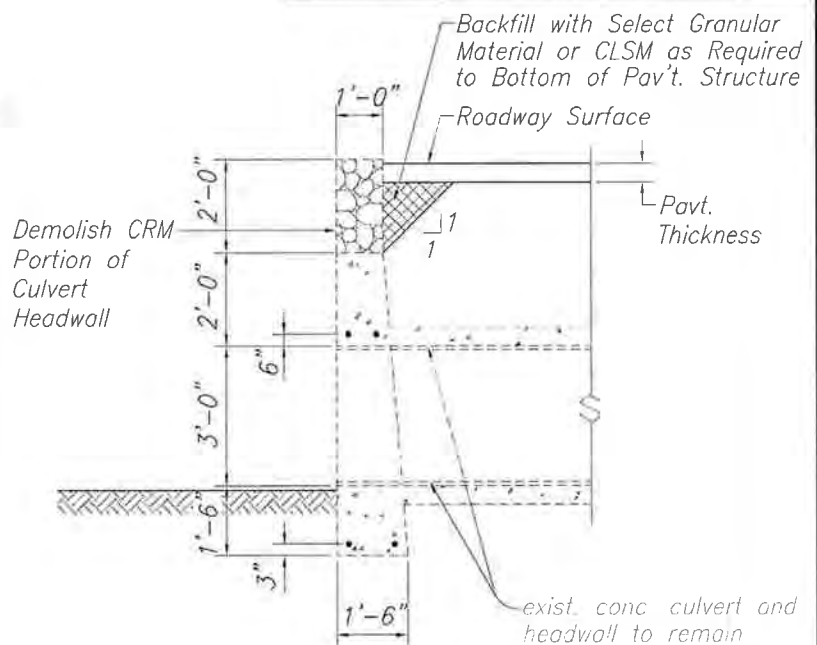
APRIL 30, 2010 WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KUHIO HIGHWAY
CULVERT EXTENSION DETAILS
Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)
Scale: As Noted Date: November 2009
SHEET No. KH2 OF 4 SHEETS

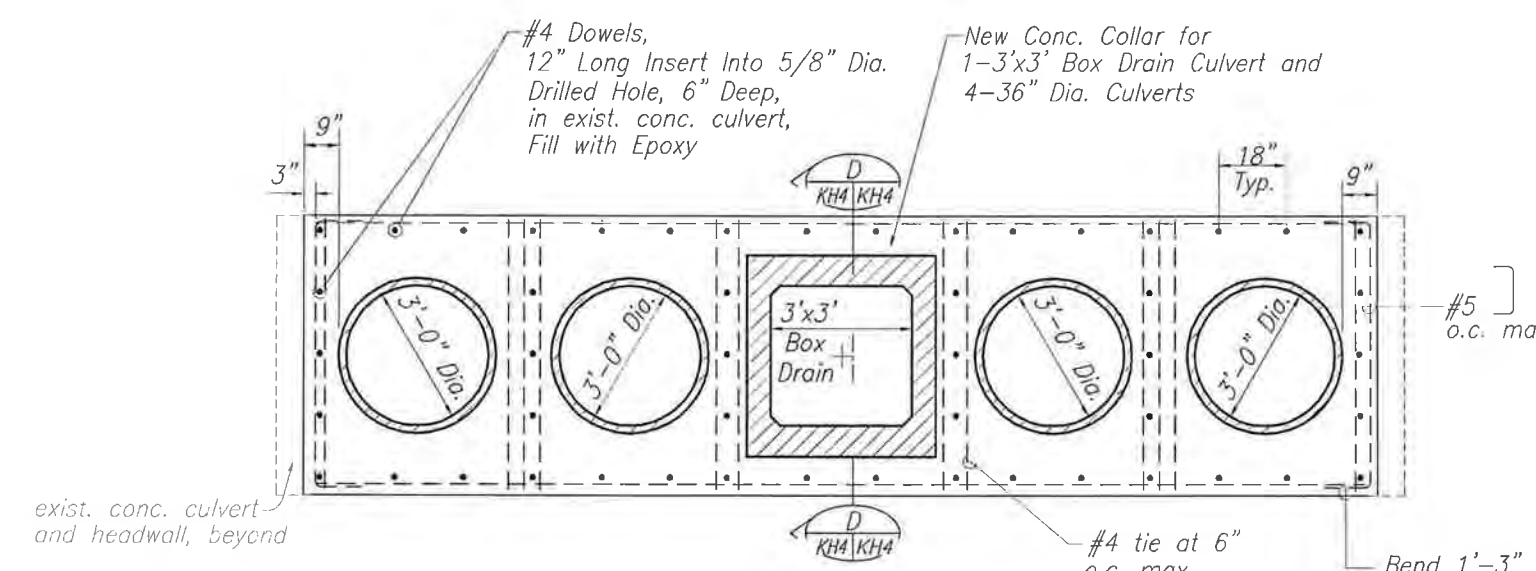
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 42 | 297 |



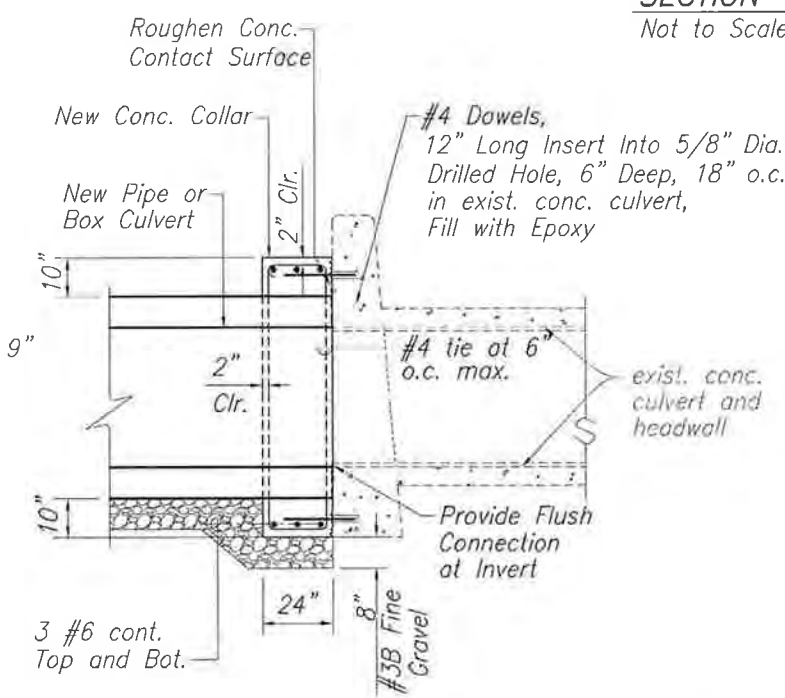
EXISTING CULVERT HEADWALL DEMOLITION ELEVATION
Not to Scale



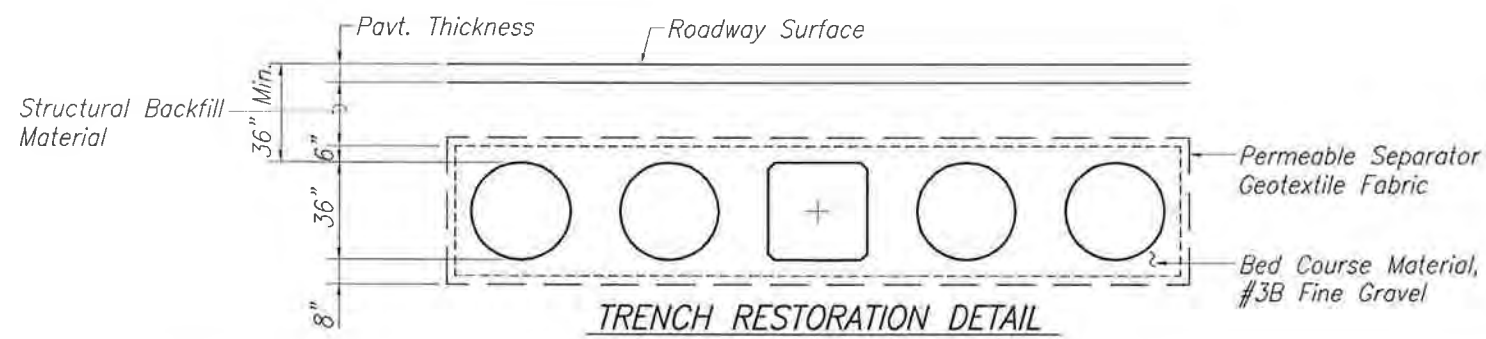
SECTION B
Not to Scale KH4/KH4



CONNECTION DETAIL FOR CULVERT EXTENSION
Not to Scale



SECTION D
Not to Scale KH4/KH4



TRENCH RESTORATION DETAIL
Not to Scale



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WILSON OKAWOTO CORPORATION LIC. EXP. DATE



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APR 30, 2013
WILSON OKAWOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

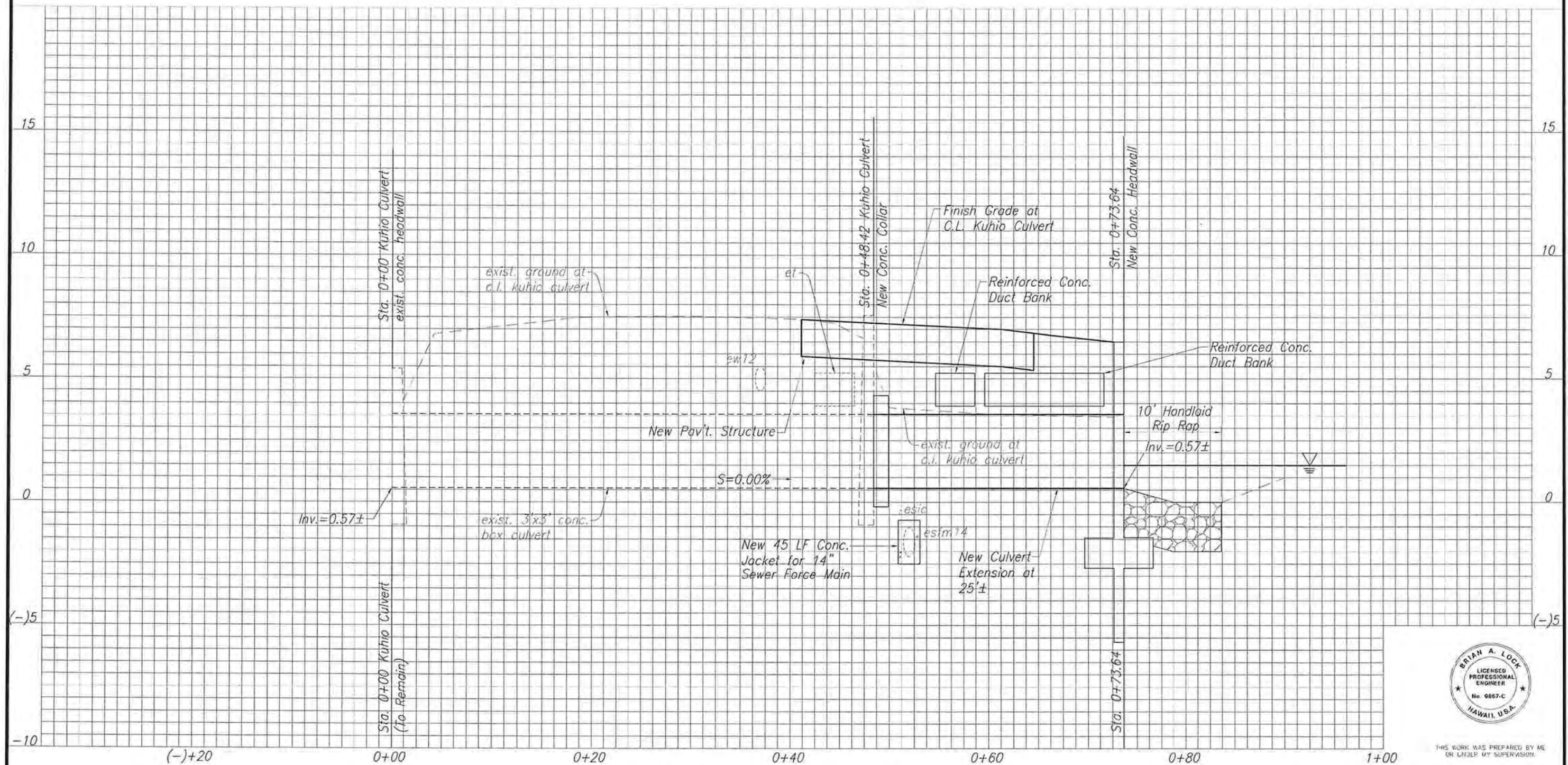
KUHIO HIGHWAY
CULVERT EXTENSION DETAILS

Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: November 2009
SHEET No. KH4 OF 5 SHEETS

| | |
|---------------|--|
| DATE | |
| DESIGNED BY | |
| CHECKED BY | |
| NOTED BY | |
| ORIGINAL PLAN | |

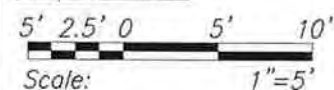
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 43 | 297 |



PROFILE - 3'x3' BOX CULVERT

Scale : Horiz. 1" = 5'
Vert. 1" = 2'

Graphic Scales



APPROVED

Chief, Division of Wastewater Management
(For Work Involving Sewer Lines
and Appurtenances)

Date

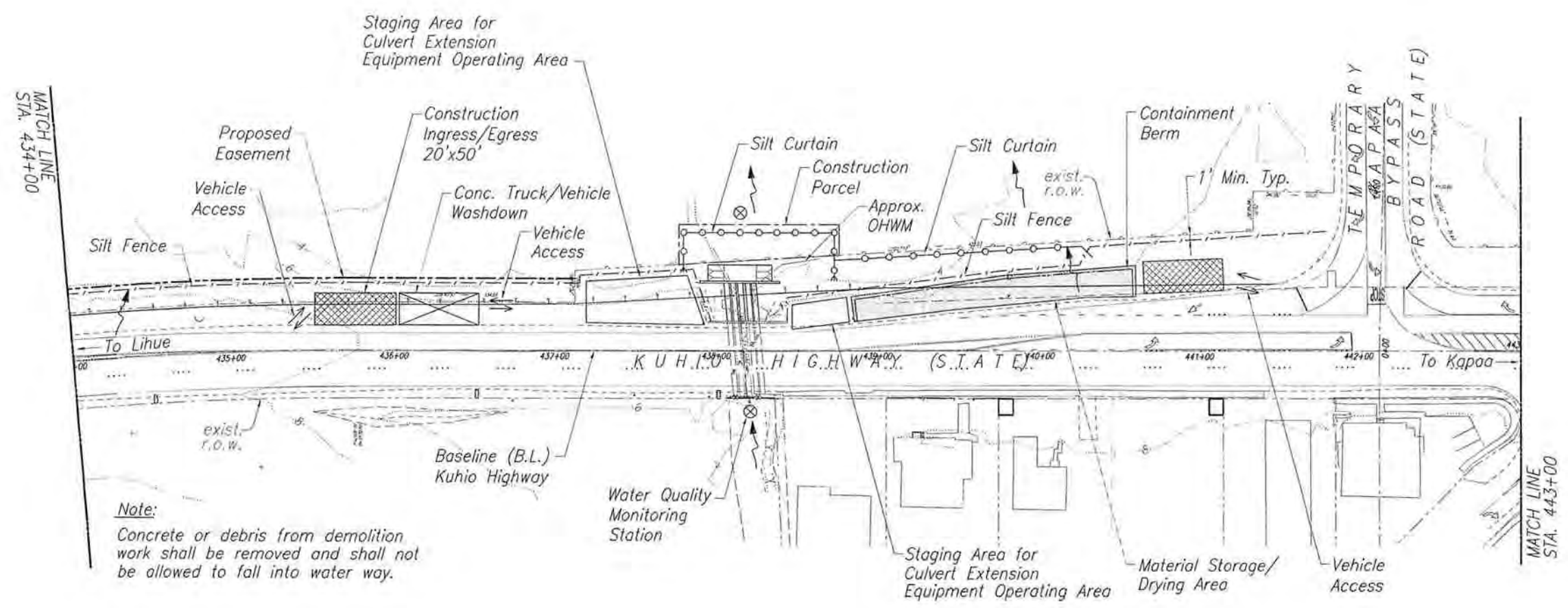


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OR UNDER MY SUPERVISION.

APRIL 30, 2010
WISCONSIN ENGINEERING CORPORATION, LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**PROFILE - KUHIO HIGHWAY
CULVERT EXTENSION**
Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)
Scale: As Noted Date: November 2009
SHEET No. KH5 OF 5 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 79 | 297 |



True North
Scale: 1"=40'

Note:
Concrete or debris from demolition work shall be removed and shall not be allowed to fall into water way.

LEGEND:

- Silt Fence
- Silt Curtain
- ▨ Inlet Protection
- ⊗ Vehicle Washdown
- ▨ Construction Ingress/Egress
- Staging Area
- ⊗ Water Quality Monitoring Station

GRAPHIC SCALE:
40' 20' 0 40' 80'
SCALE: 1" = 40'



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APRIL 30, 2010
WILSON (ORANGE) CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

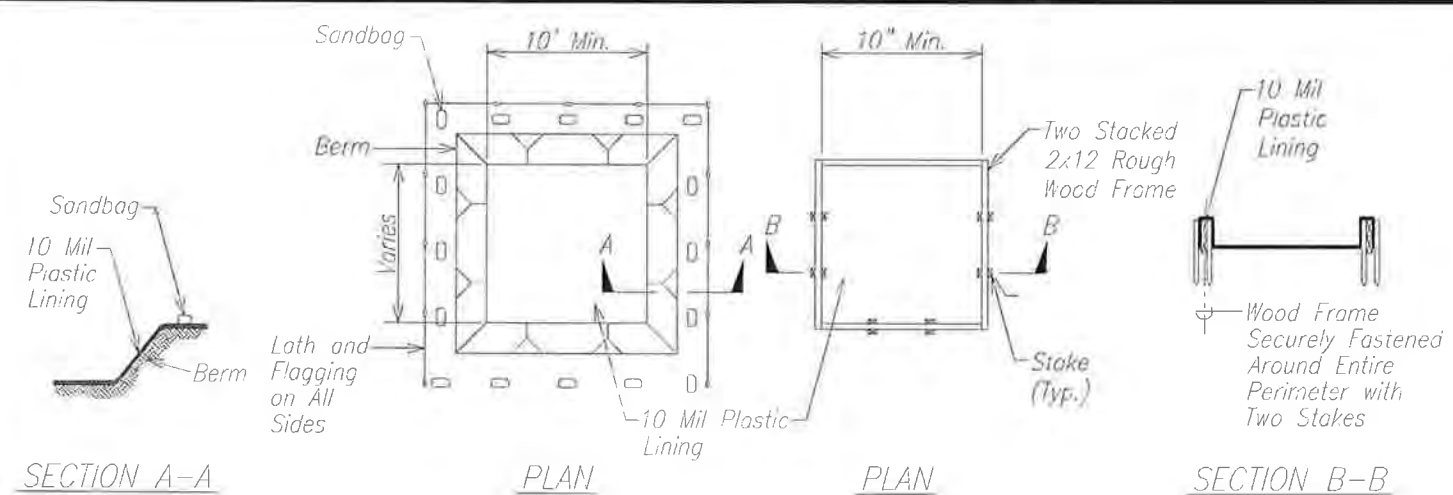
EROSION CONTROL PLAN - 6

Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)
Scale: As Noted Date: November 2009
SHEET No. 6 OF 8 SHEETS

| | |
|-------------|--|
| DATE | |
| DESIGNED BY | |
| DRAWN BY | |
| CHECKED BY | |
| NOTED BY | |
| APPROVED BY | |

| | |
|---------------|------------------------------------|
| ORIGINAL PLAN | SURVEY PLOTTED BY _____ DATE _____ |
| NOTE BOOK | DRAWN BY _____ |
| | TRACED BY _____ |
| | DESIGNED BY _____ |
| | QUANTITIES BY _____ |
| NO. _____ | CHECKED BY _____ |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | NH-056-1(50) | 2010 | 83 | 297 |



Notes:

1. Actual layout determined in field.
2. The concrete washout sign shall be installed within 30 feet of the temporary concrete washout facility.

CONCRETE VEHICLE WASH AREA
(BELOW GRADE)

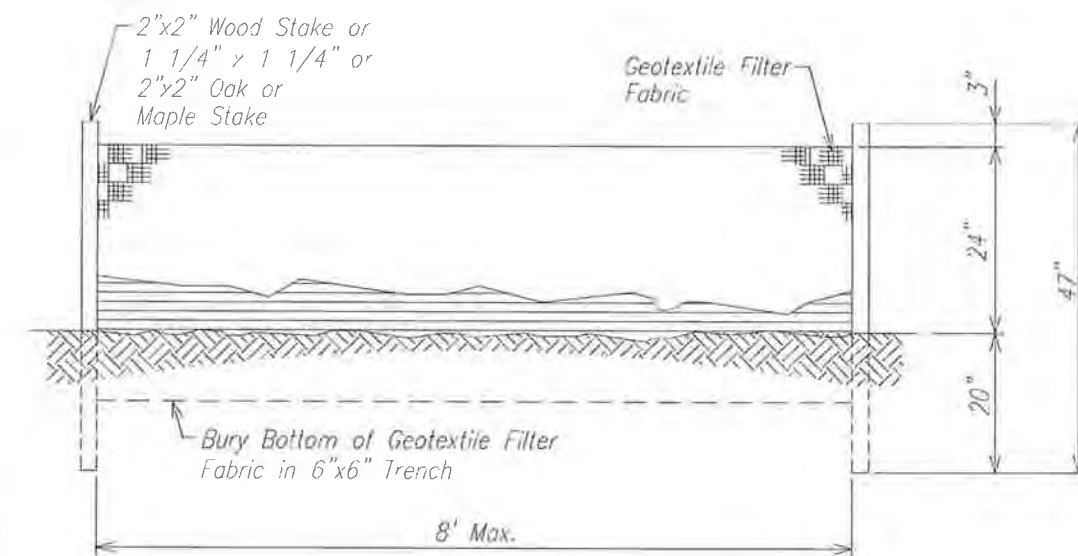
Notes:

1. Actual layout determined in field.
2. The concrete washout sign shall be installed within 30 feet of the temporary concrete washout facility.

CONCRETE VEHICLE WASH AREA
(ABOVE GRADE)

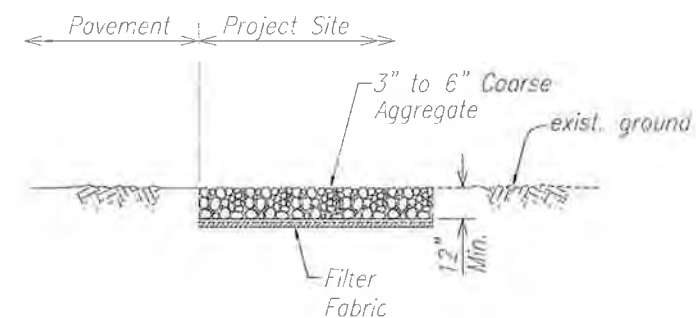
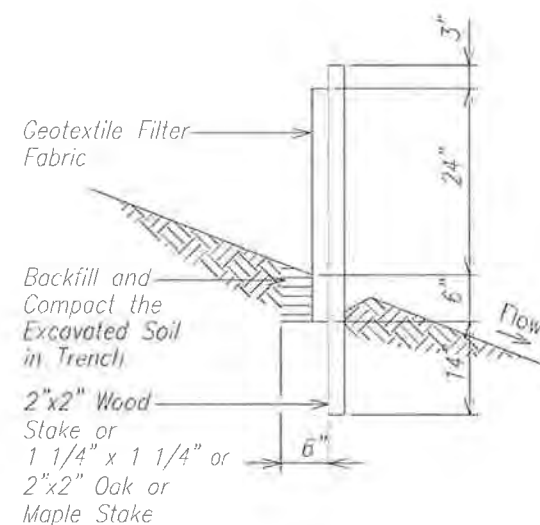
WASHDOWN BASIN DETAIL

Not to Scale



SILT FENCE DETAIL

Not to Scale



TEMPORARY STABILIZED CONSTRUCTION INGRESS/EGRESS

Not to Scale

SILT CURTAIN DETAIL

Not to Scale

NOTES:

1. Fabric shall be high strength²nylon reinforced vinyl high visibility yellow, 22 oz/yd weight.
2. Chain ballast shall 5/16" galvanized chain (min 1.1 lbs/ft)
3. Anchor ballast shall be minimum 50 lbs at 8' o.c.
4. Silt curtain shall be installed prior to start of construction in water which might result in discharges to state waters.
5. The Contractor shall notify the Engineer and water quality monitor two weeks prior to installation of silt curtain.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

APRIL 30, 2010
WLSOH OKAWATO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL DETAILS

Kuhio Highway Short-Term Improvements
South Leho Drive to Aleka Loop
Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: November 2009

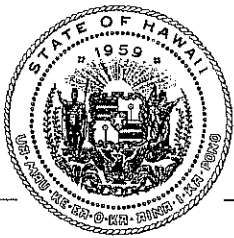
SHEET No. 2 OF 2 SHEETS

Attachment A

NPDES NOI for Construction Stormwater Approval, Letter dated November 17, 2009
(Not included. Re-application NPDES/SWPP/IWPPP pending)

Attachment B

CZM Program Federal Consistency Review, Letter dated September 11, 2009



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
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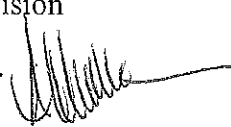
Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-12752

September 11, 2009

To: Brennon T. Morioka, Ph.D., P.E., Director
Department of Transportation

Attention: Glenn Yasui, Highways Division

From: Abbey Seth Mayer, Director 

Subject: Hawaii Coastal Zone Management (CZM) Program Federal Consistency Review
for Kuhio Highway Widening Improvements, Kawaihau District, Kauai

The proposal to use funds from the Federal Highway Administration to construct widening improvements along Kuhio Highway, between Temporary Kapaa Bypass Road and Kuamoo Road, Kauai, has been reviewed for consistency with the Hawaii CZM Program. We concur with your Department's certification that the proposal is consistent with the enforceable policies of the Hawaii CZM Program, based on the following conditions:

1. The project shall be in compliance with State of Hawaii water quality standards and requirements specified in Hawaii Administrative Rules (HAR), Chapter 11-54, including the Section 401 Water Quality Certification and water pollution control requirements specified in HAR, Chapter 11-55, including the NPDES permit. These Administrative Rules are federally-approved enforceable policies of the Hawaii CZM Program.
2. The project shall be in compliance with any requirements specified by the State Historic Preservation Division in accordance with Hawaii Revised Statutes, Chapter 6E - Historic Preservation, which is a federally-approved enforceable policy of the Hawaii CZM Program.
3. The project shall be in compliance with the Special Management Area (SMA) Use Permit (SMA(U)-2008-2) issued by the County of Kauai.

CZM consistency concurrence is not an endorsement of the project nor does it convey approval with any other regulations administered by any State or County agency. Thank you for your cooperation in complying with the Hawaii CZM Program. If you have any questions, please call John Nakagawa of our CZM Program at 587-2878.

Attachment C

Section 7 USFWS Letter dated July 16, 2009
(Not included see Supplement 1)

Attachment D

Assessment of Impacts to Essential Fish Habitat, October 4, 2013

Assessment of impacts to Essential Fish Habitat Kūhiō Highway Short-Term Improvements Project Wailua, Kauaʻi

October 4, 2013

AECOS No. 1364

Chad Linebaugh
AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104
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Introduction

The State of Hawaiʻi, Department of Transportation (DOT), Highways Division is proposing improvements to Kūhiō Highway along an approximately 1-km (0.65-mi) section of highway (herein the “Project”) in the Kawaihau District on the Island of Kauaʻi (Fig. 1). AECOS, Inc. was contracted by Wilson Okamoto Corporation¹ to assess the impacts of the Project on Essential Fish Habitat (EFH)². This report details EFH near the Project site, anticipated impacts of the Project to nearshore waters and fish habitats, and provides a list of fishes recently identified near the Project area.

Project Description

Kūhiō Highway is planned to be widened on the southbound side from three to four lanes between the intersections of the Temporary Kapaʻa Bypass Road and Kuamoʻo Road. Other accessory improvements would be implemented with this highway widening. The existing right-turn storage lane along Kuamoʻo Road would also be extended 200 m (650 ft) from its intersection with Kūhiō

¹ Report prepared for environmental entitlements and to become part of the public record for the Project.

² Magnuson-Stevens Fishery Conservation and Management Act. Public Law 94-265, as amended through October 11, 1996.

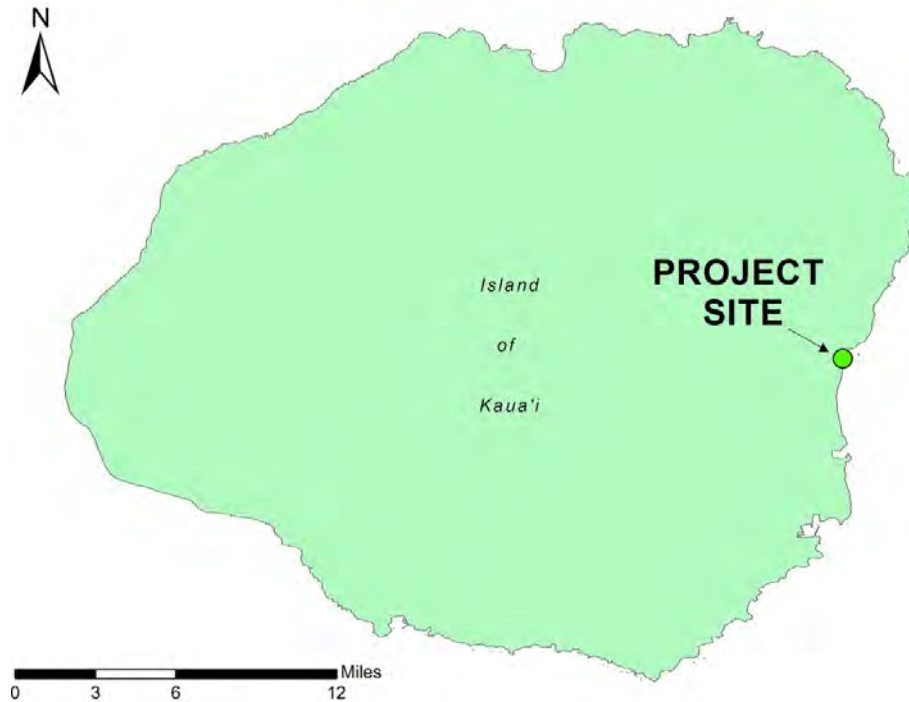


Figure 1. Location of the Project on the Island of Kaua'i.

Highway. This highway project (Federal Aid Project No. 56A-01-06) is collectively referred to as the "Kūhiō Highway Short-Term Improvements; Kuamo'o Road to Temporary Bypass Road Project."

The Project does not propose any in-water work, but includes tunneling under the Wailua River (estuarine reach), and work near the Coco Palms Lagoon, Kaloko Marsh, and Waipouli Canal. Marine waters with the potential to be effected include Wailua Bay. These five water bodies may receive runoff originating from the Project area during construction and may be influenced by any operational impacts from the Project roadway improvements.

Essential Fish Habitat

The 1996 Sustainable Fishery Act amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and subsequent EFH Regulatory Guidelines (NOAA, 2002) describe provisions to identify and protect habitats of federally-managed marine and anadromous fish species. Under the various provisions, federal agencies that fund, permit, or undertake activities

that may adversely affect EFH are required to consult with the National Marine Fisheries Service (NMFS).

Congress defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” EFH is further defined by the existing regulations (MSFCMA, 1996; NOAA, 2002). “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” is defined as required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ life cycle.

EFH provisions in MSFCMA designate that species harvested in sufficient quantities to require fisheries management be subdivided into similar Management Unit Species (MUS). Four MUS are currently managed in Hawaiian waters: bottomfish, precious corals, crustaceans, and coral reef ecosystem. In the waters surrounding the Hawaiian Islands, EFH for coral reef ecosystem MUS as defined by the Final Coral Reef Ecosystem Fishery Management Plan (WPRFMC, 2001) and subsequent Fishery Ecosystem Plan for the Hawaiian Archipelago (WPRFMC, 2005) “includes all waters and habitat at depths from the sea surface to 50 fathoms extending from the shoreline (including state and territorial land and waters) to the outer boundary of the Exclusive Economic Zone (EEZ).”

Aquatic Environment at Project Site

The Project has potential to indirectly impact on aquatic environments found in the Wailua River, Coco Palms Lagoon, Waipouli Canal, and Wailua Bay. The estuarine reach of the Wailua River is a wide slow, brackish-water flow with mangrove (*Rhizophora mangle*) thickets lining much of the banks. The river empties into Wailua Bay just seaward of Kūhiō Highway. The Coco Palms Lagoon is a boulder-lined, enclosed lagoon whose brackish waters do not regularly flow into the Wailua River despite the presence of a small channel connecting the two water bodies. The Waipouli Canal is connected to the man-made channels of the Waiākea watershed and flows north towards its coastal outlet in Kapa‘a about 1.3 mi north of the Wailua Bay.

The benthic substratum of the nearshore marine waters of Wailua Bay, fronting the Project (Fig. 2) consists of a large sand channel extending offshore from the

mouth of the Wailua River with limestone pavement to the north and south of the channel. A patch of fine sediment (“mud”) exists in the immediate vicinity of the river mouth. Benthic coverage of the limestone pavement is mostly turf algae nearshore and macroalgae further offshore (Fig. 3). Though coral colonies are certainly present in nearshore waters, a well-defined coral reef is not.

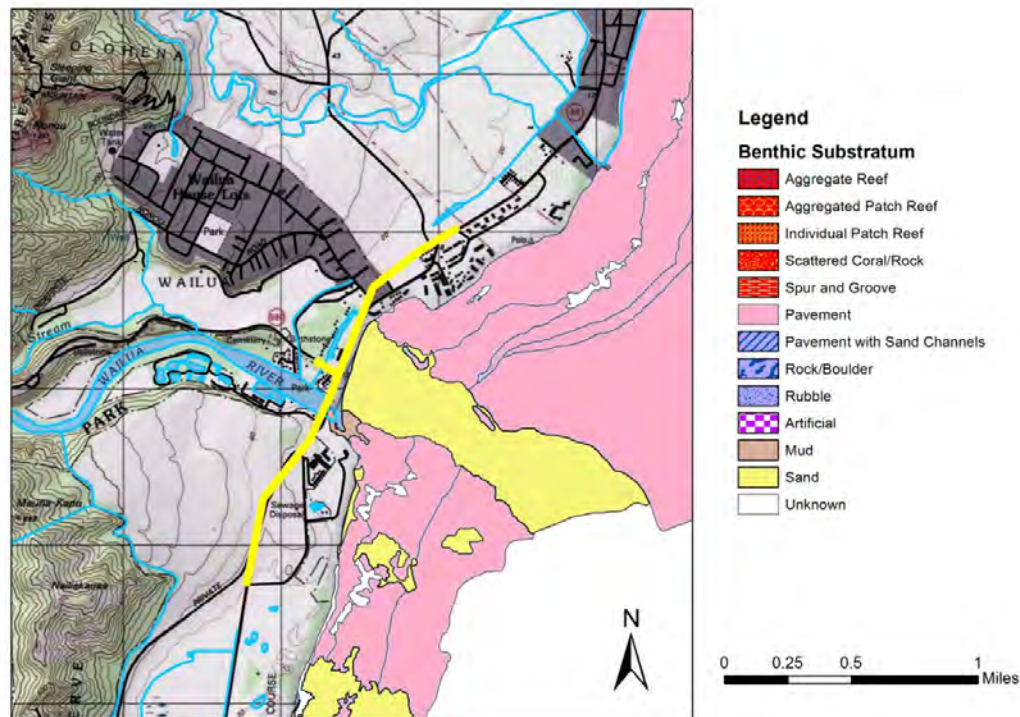


Figure 2. Benthic substratum in the Project vicinity (NOAA, 2007).

Note--yellow lines indicate the location of the Project.

A listing of 122 species of algae, invertebrates, and fish identified from surveys near the Project area is presented in Appendix A. The listing is comprised of biota identified from surveys in Coco Palms Lagoon, Coco Palms Drainage Canal, and Waipouli Canal (AECOS, 2007), Wailua River estuary (AECOS, 2007; Parham et al, 2008), nearshore marine water north of the Project area (AECOS, 2010), and in the coastal estuaries of the Kawaihoa watershed (AECOS, 2013) to the south of the Project area (Fig. 4). The list comprises freshwater, brackish, and marine species inhabiting marine and estuarine waters near the Project area.

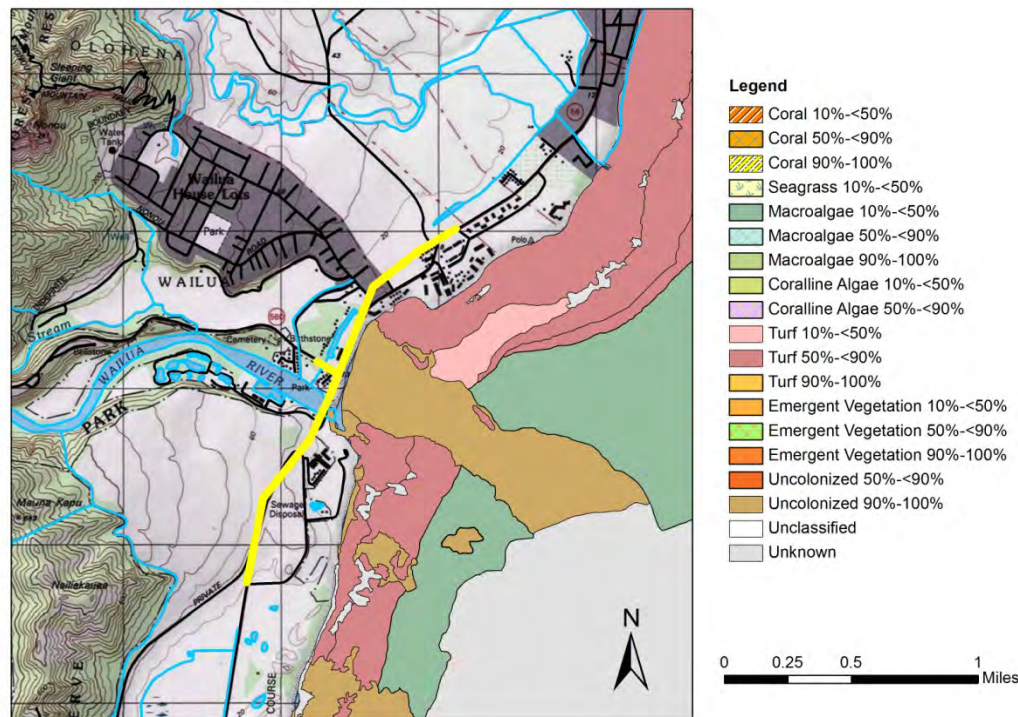


Figure 3. Benthic coverage of substratum in the Project vicinity (NOAA, 2007).
Note--yellow lines indicate the location of the Project.

The biota of the Coco Palms Lagoon and Waipouli Canal comprises mostly naturalized species dominated by tilapia and poeciliid fishes. The estuarine reach of the Wailua River is home to a mix of native and naturalized species including marine fishes that regularly enter the estuary. Wailua Bay is home to a broad assemblage of marine species, most of which are common in nearshore water of all the Hawaiian Islands.

Assessment of Impacts

Direct Construction Impacts

The Project does not propose to add or modify any in-water structures or habitat and proposes no in-water work. The Project will not have any direct impacts on EFH.



Figure 4. Field survey locations for list of species anticipated in Project vicinity.

Indirect Construction Impacts

The only potential for indirect impacts to EFH exists in pollutants carried in runoff from the Project site. Pollutants commonly present in roadway surface runoff include: sediment, heavy metals, bacteria, nutrients, oil, and grease (USEPA, 1995).

A detailed topographical survey and analysis of drainage patterns by Wilson Okamoto Corp. indicates eight distinct flow regimes for runoff in the Project area (Fig. 5). Four drainage areas with discharge rates (2 year, 1 hour storm event calculations) ranging from 0.7 to 3.4 cubic feet per second (cfs) drain towards Wailua Bay. Natural evaporation and percolation in sand will likely diminish and filter runoff heading into Wailua Bay, as the flow must cross the 8 to 33 m (25 to 100 ft) wide beach. Two drainages totaling only 2.8 cfs enter the Wailua River. The Coco Palms Lagoon receive 1.4 cfs, while Kaloko Marsh receives 4.4 cfs; and Waipouli Canal collects up to 1.0 cfs under the calculated scenario.

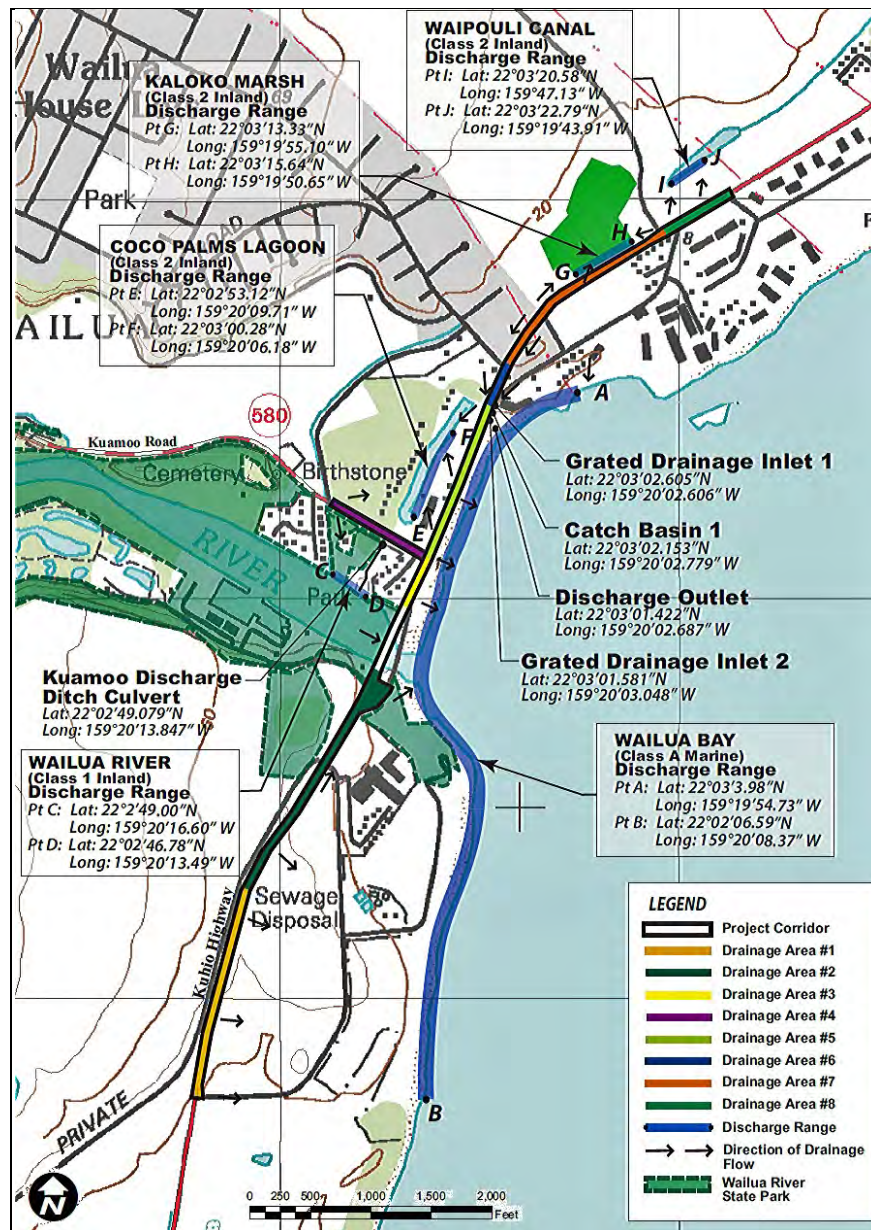


Figure 5. Location of the Project drainage discharge locations into state waters (Source: Wilson Okamoto Corp.).

The low anticipated runoff rates at the Project site indicate that standard dust, erosion, and sediment control methods will be adequate to prevent excessive pollutant loads entering state waters during construction. Silt fencing will be

implemented in all drainages entering Wailua Bay, Kaloko Marsh, Coco Palms Resort, and Waipouli Canal. Runoff entering Wailua River will be controlled by a combination of silt fencing and aggregate filter pouches. Silt curtains will be utilized in the Coco Palms drainage canal (north of side of Kuamo'o Rd.) and in the Kaloko Marsh work area. To prevent the spread of pollutants from work areas, designated ingress/egress corridors and plastic lined vehicle wash down stations will be established in each work area. The material and equipment storage areas will be confined by a plastic-lined earthen containment berm. Additionally, project-specific material waste, hazardous waste, and spill prevention plans have been designed and will be implemented during the Project. Indirect impacts on EFH from construction are not expected if described BMPs are implemented and adhered to.

Operational Impacts

Long term changes in the Project area follow from the widening of the highway and extension of the existing right turn lane on south-bound Kūhiō Highway at Kuamo'o Road. The creation of additional impervious surfaces will increase slightly runoff in the Project area. The bulk of this additional paved area—the new right turn lane—will drain to the Coco Palms Lagoon as a result of crowning of the roadway. As such, the lagoon will continue to serve as a sink for sediments, nutrients, and other pollutants off the highway. As the lagoon does not typically connect across the land to the Wailua River or Wailua Bay, these pollutants will likely not reach coastal waters or EFH.

The highway widening will increase the pavement area and inevitably increase surface runoff. However, based on a 2-year, 1-hour storm event, the total discharge from the highway is estimated to increase from 44.02 cfs to 47.33 cfs; that is, the additional pavement from this project would generate an additional 3.31 cfs (7%) of surface runoff. Drainage patterns would be unchanged. Therefore, the project is not anticipated to have any long-term adverse impact on EFH.

Conclusions

The proposed Kūhiō Highway Short-Term Improvements; Kuamo'o Road to Temporary Bypass Road Project is not expected to have short- or long-term, direct or indirect impacts to the physical, chemical, or biological properties of state waters at the Project site. No effect to soft or hard bottom substrata or attached biological communities is anticipated. Coral reef ecosystems, crustacean fisheries, and associated EFH will not be adversely impacted by the Project.

References

- AECOS, Inc. (AECOS). 2007. Biological survey and water quality analysis for Kuamoo Road culvert extension in Wailua, Kauai. Prep. for Wilson Okamoto Corp. AECOS No. 1161: 11 pp.
- _____. 2010. Marine biological survey for Moanakai Road Seawall Improvements, Kapa'a Kaua'i, Hawai'i. AECOS No. 1238: 17pp.
- _____. 2013. Water quality, biological, and jurisdictional surveys for highway improvements at the Kaua'i Community Correctional Center Wailua, Kaua'i. AECOS No. 1351: 43pp.
- National Oceanic and Atmospheric Administration (NOAA). 2002. Department of Commerce, National Oceanic and Atmospheric Administration. 50 CFR 600. Magnuson-Stevens Act Provisions; Essential Fish Habitat (EFH). *Federal Register* 67 (12 ,Thursday, January 17, 2002) 2343-2483.
- _____. 2007. Benthic Habitat Data for the Hawaiian Islands. Available online at URL: http://ccma.nos.noaa.gov/products/biogeography/hawaii_cd_07/data/. Last accessed on September 2, 2013.
- Parham, J. E., G. R. Higashi, E. K. Lapp, D. G. K. Kuamo'o, R. T. Nishimoto, S. Hau, J. M. Fitzsimmons, D. A. Polhemus and W. S. Devick. 2008. Atlas of Hawaiian Watersheds and their Aquatic Resources. Island of Kaua'i. Bishop Museum and Division of Aquatic Resources. 614 pp.
- U. S. Environmental Protection Agency (USEPA) 1995. Erosion, Sediment and Runoff Control for Roads and Highways. Office of Water. Document No. EPA-841-F-95-008d.
- Western Pacific Regional Fishery Management Council. 2001. Final Management Plan for Coral Reef Ecosystem of the Western Pacific. 327pp. Available online at URL: <http://www.wpcouncil.org/hawaii/coralreef.htm>. Last accessed on September 2, 2013.
- _____. 2005. Fishery Ecosystem Plan for the Hawaiian Archipelago. 279pp. Available online at URL: <http://www.wpcouncil.org/hawaii/HawaiiFEP/December12005HawaiiFEP.pdf>. Last accessed on September 2, 2013.

Appendix A

Aquatic and Marine Species near the Project Site

PHYLUM, CLASS, ORDER

| FAMILY | | Moanakai Rd. Near- shore Reef | Coco Palms Lagoon | Kawailoa Watershed Estuaries | Wailua River Estuary |
|---|----------------------|-------------------------------------|-------------------------|------------------------------------|----------------------------|
| <i>Genus species</i> | Common name | | | | |
| CYANOPHYTA | CYANOBACTERIA | | | | |
| <i>Oscillatoria</i> sp. | | | X | | |
| <i>Schizothrix</i> sp. | | | X | | |
| Undetermined spp. | | X | | | |
| CHLOROPHYTA | GREEN ALGAE | | | | |
| <i>Cladophora catenata</i> | | X | | | |
| <i>Cladophora</i> sp. | | | X | | |
| <i>Dictyosphaeria versluysii</i> | | X | | | |
| <i>Halimeda discoidea</i> | | X | | | |
| <i>Microdictyon</i> sp. | | X | | | |
| <i>Rhizoclonium</i> sp. | | | X | | |
| HETEROKONTOPHYTA | BROWN ALGAE | | | | |
| <i>Dictyota</i> sp. | | X | | | |
| <i>Dictyota ceylanica</i> | | X | | | |
| <i>Dictyota friabilis</i> | | X | | | |
| <i>Padina japonica</i> | | X | | | |
| <i>Ralfsia pangoensis</i> | | X | | | |
| <i>Sargassum echinocarpum</i> | | X | | | |
| <i>Turbinaria ornata</i> | | X | | | |
| RHODOPHYTA | RED ALGAE | | | | |
| <i>Acanthophora spicifera</i> | spiny seaweed | X | | | |
| <i>Ahnfeltiopsis flabelliformis</i> | | X | | | |
| <i>Amansia glomerata</i> | | X | | | |
| <i>Galaxaura rugosa</i> | | X | | | |
| <i>Hydrolithon</i> spp. | | X | | | |
| <i>Laurencia</i> sp. | | X | | | |
| <i>Lithophyllum</i> spp. | | X | | | |
| <i>Martensia fragilis</i> | | X | | | |
| CNIDARIA, ANTHOZOA, ZOANTHIDEA | | | | | |
| ZOANTHIDAE | | | | | |
| <i>Palythoa caesia</i> | blue-gray zoanthid | X | | | |
| CNIDARIA, ANTHOZOA, SCLERACTINIA | | | | | |
| ACROPORIDAE | | | | | |
| <i>Montipora patula</i> | sandpaper rice coral | X | | | |
| FAVIIDAE | | | | | |
| <i>Cyphastrea ocellina</i> | ocellated coral | X | | | |
| POCILLOPORIDAE | | | | | |
| <i>Pocillopora damicornis</i> | lace coral | X | | | |
| <i>Pocillopora meandrina</i> | cauliflower coral | X | | | |
| <i>Pocillopora eydouxi</i> | antler coral | X | | | |
| PORITIDAE | | | | | |
| <i>Porites compressa</i> | finger coral | X | | | |
| <i>Porites lutea</i> | mound coral | X | | | |
| <i>Porites lobata</i> | lobe coral | X | | | |
| SIDERASTREDAE | | | | | |
| <i>Psammocora stellata</i> | stellar coral | X | | | |
| ANELLIDA, POLYCHAETA | WORMS | | | | |
| AMPHINOMIDAE | | | | | |
| <i>Eurythoe complanata</i> | orange fireworm | X | | | |

PHYLUM, CLASS, ORDER

| FAMILY <i>Genus species</i> | Common name | Moanakai Rd. Near- shore Reef | Coco Palms Lagoon | Kawailoa Watershed Estuaries | Wailua River Estuary |
|---|--|-------------------------------------|-------------------------|------------------------------------|----------------------------|
| MOLLUSCA, BIVALVIA | BIVALVES | | | | |
| MYTILIDAE | | | | | |
| <i>Brachidontes crebristriatus</i> | Hawaiian mussel | X | | | |
| MOLLUSCA, GASTROPODA | SNAILS | | | | |
| APLYSIIDAE | | | | | |
| <i>Dolabella auricularia</i> | eared sea hare, <i>kualakai</i> | X | | | |
| CYPRAEIDAE | | | | | |
| <i>Cypraea caputserpentis</i> | Snakehead cowry, <i>leho kupa</i> | X | | | |
| <i>Cypraea mauritiana</i> | humpback cowry, <i>leho ahi</i> or <i>leho pa'a</i> | X | | | |
| LITTORINIDAE | | | | | |
| <i>Nodilittorina hawaiiensis</i> | Hawaiian periwinkle | X | | | |
| <i>Paesiella tantilla</i> | keeled periwinkle | X | | | |
| <i>Littoraria intermedia</i> | dotted periwinkle | X | | | |
| MURICIDAE | | | | | |
| <i>Drupa ricina</i> | spotted drupe | X | | | |
| <i>Morula granulata</i> | granular drupe, <i>maka'awa</i> | X | | | |
| <i>Drupa (drupa) ricinus</i> | white-lipped drupe | X | | | |
| <i>albolabris</i> | | | | | |
| NERITIDAE | | | | | |
| <i>Nerita picea</i> | black nerite, <i>pipipi</i> | X | | | |
| PATELLIDAE | | | | | |
| <i>Cellana exarata</i> | black-foot 'opihi | X | | | |
| <i>Cellana sandwicensis</i> | yellow-foot 'opihi | X | | | |
| SIPHONARIIDAE | | | | | |
| <i>Siphonaria normalis</i> | false 'opihi, 'opihi 'awa | X | | | |
| THIARIDAE | | | | | |
| <i>Melanoides tuberculatus</i> | red-rimmed melania | | X | | |
| <i>Tarebia granifera</i> | quilted melania | | X | | |
| ARTHROPODA, MAXILLOPODA, THORACICA | | | | | |
| CHTHAMALIDAE | | | | | |
| <i>Chthamalus proteus</i> | Caribbean barnacle | X | | | |
| ARTHROPODA, CRUSTACEA, DECAPODA | | | | | |
| ALPHEIDAE | | | | | |
| <i>Alpheus sp.</i> | snapping shrimp | X | | | |
| CALAPPIDAE | | | | | |
| <i>Calappa hepatica</i> | common box crab | X | | | |
| CALLIANASSIDAE | | | | | |
| <i>Corallianassa borradailei</i> | Borradaile's ghost shrimp | X | | | |
| CAMBARIDAE | | | | | |
| <i>Procambarus clarkii</i> | American crayfish | | | | X |
| GRAPSIDAE | | | | | |
| <i>Grapsus tenuicrustatus</i> | 'a'ama | X | | | |

PHYLUM, CLASS, ORDER

| FAMILY | | Moanakai Rd. Near- shore Reef | Coco Palms Lagoon | Kawailoa Watershed Estuaries | Wailua River Estuary |
|--|--|-------------------------------------|-------------------------|------------------------------------|----------------------------|
| <i>Genus species</i> | Common name | | | | |
| GRAPSIDAE cont. | | | | | |
| <i>Metopograpsus thukuhar</i> | <i>kukuau</i> ; purple claw shore crab | | | X | |
| <i>Pachygrapsus plicatus</i> | pleated rock crab | X | X | | |
| PALAEMONIDAE | | | | | |
| <i>Macrobrachium grandimanus</i> (E) | Hawaiian prawn | | | X | X |
| <i>Macrobrachium lar</i> | Tahitian river prawn | | | X | |
| <i>Palaemon debilis</i> | feeble shrimp | | X | | |
| PALINULARIDAE | | | | | |
| <i>Panularis penicillatus</i> | tufted spiny lobster | X | | | |
| PORTUNIDAE | | | | | |
| <i>Scylla serrata</i> | Samoan crab | | X | | |
| XANTHIDAE | | | | | |
| <i>Liomera</i> sp. | liomera | X | | | |
| indet. | xanthid crab | X | | | |
| ECHINODERMATA, ECHINOIDAE | | | | | |
| DIADEMATIDAE | | | | | |
| <i>Echinothrix calamaris</i> | banded urchin | X | | | |
| ECHINOMETRIDAE | | | | | |
| <i>Echinometra mathaei</i> | rock-boring urchin | X | | | |
| <i>Echinometra oblonga</i> | oblong urchin | X | | | |
| ECHINODERMATA, HOLOTHUROIDAE | | | | | |
| HOLOTHURIIDAE | | | | | |
| <i>Actinopyga mauritiana</i> | white-spotted sea cucumber, <i>loli</i> | X | | | |
| <i>Holothuria atra</i> | black sea cucumber | X | | | |
| <i>Holothuria arenicola</i> | sand sea cucumber, <i>kohe lelewa</i> | X | | | |
| <i>Holothuria whitmaei</i> | teated sea cucumber, <i>loli</i> | X | | | |
| VERTEBRATA, PICES | | | | | |
| ACANTHURIDAE | | | | | |
| <i>Acanthurus triostegus</i> | convict tang, <i>manini</i> | X | | | |
| <i>Acanthurus nigrofuscus</i> | lavender tang | X | | | |
| <i>Naso unicornis</i> | bluespine unicornfish, <i>kala</i> | X | | | |
| <i>Zebrasoma flavescens</i> | yellow tang, <i>lau'ipala</i> | X | | | |
| BLENNIDAE | | | | | |
| <i>Cirripectes vanderbilti</i> | scarface blenny, <i>pao'o</i> | X | | | |
| <i>Entomacrodus marmoratus</i> | marbled blenny, <i>pao'o</i> | X | | | |
| <i>Istiblennius zebra</i> (E) | Hawaiian zebra blenny, <i>pao'o</i> | X | | | |
| CENTRARCHIDAE | | | | | |
| <i>Lepomis macrochirus</i> | bluegill | | | | X |

PHYLUM, CLASS, ORDER

| FAMILY | | Moanakai Rd. Near- shore Reef | Coco Palms Lagoon | Kawailoa Watershed Estuaries | Wailua River Estuary |
|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------|------------------------------------|----------------------------|
| <i>Genus species</i> | Common name | | | | |
| CENTRARCHIDAE cont. | | | | | |
| <i>Micropterus dolomieu</i> | small mouth bass | | | | X |
| CHAETODONTIDAE | | | | | |
| <i>Chaetodon lunula</i> | raccoon butterflyfish, | X | | | |
| | <i>kikakapu</i> | | | | |
| <i>Chaetodon auriga</i> | chevron butterflyfish | X | | | |
| CHANIDAE | | | | | |
| <i>Chanos chanos</i> | milkfish; 'awa'awa | | | | X |
| CICHLIDAE | | | | | |
| <i>Oreochromis mossambicus</i> | Mosambique tilapia | | X | | X |
| <i>Sarotherodon melanotheron</i> | blackchin tilapia | X | | X | |
| <i>Tilapia zilli</i> | red belly tilapia | | X | | |
| <i>Tilapia</i> sp. | indet. tilapia | | | | X |
| ELEOTRIDAE | | | | | |
| <i>Eleotris sandwicensis</i> (E) | 'o'opu 'akupa | | | X | X |
| ELOPIDAE | | | | | |
| <i>Elops hawaiiensis</i> | tenpounder | | | | X |
| FISTULARIIDAE | | | | | |
| <i>Fistularia commersonii</i> | cornetfish | X | | | |
| GOBIIDAE | | | | | |
| <i>Awaous guamensis</i> | 'o'opu nākea | | X | | |
| <i>Bathygobius</i> sp. | tide pool goby | X | | | |
| <i>Stenogobius hawaiiensis</i> (E) | 'o'opu naniha | | | X | |
| KUHLIIDAE | | | | | |
| <i>Kuhlia xenura</i> (E) | Hawaiian flagtail, āholehole | X | X | X | X |
| KYPHOSIDAE | | | | | |
| <i>Kyphosus sandvicensis</i> | gray chub, nenuē | X | | | |
| LABRIDAE | | | | | |
| <i>Gomphosus varius</i> | bird wrasse, hinālea 'i'iwi | X | | | |
| <i>Stethojulis balteata</i> (E) | belted wrasse, 'ōmaka | X | | | |
| <i>Thalassoma duperrey</i> (E) | saddle wrasse, hinālea lauwili | X | | | |
| <i>Thalassoma trilobatum</i> | Christmas wrasse, 'āwela | X | | | |
| LUTJANIDAE | | | | | |
| <i>Lutjanus fulvus</i> | blacktail snapper, to'au | X | | | |
| MUGILIDAE | | | | | |
| <i>Mugil cephalus</i> | striped mullet, 'ama'ama | X | X | X | X |
| MULLIDAE | | | | | |
| <i>Mulloidichthys vanicolensis</i> | yellowfin goatfish, weke ula | X | | | |
| <i>Mulloidichthys flavolineatus</i> | yellowstripe goatfish | X | | | |

PHYLUM, CLASS, ORDER

| FAMILY | | Moanakai Rd. Near- shore Reef | Coco Palms Lagoon | Kawailoa Watershed Estuaries | Wailua River Estuary |
|--|---------------------------------------|-------------------------------------|-------------------------|------------------------------------|----------------------------|
| <i>Genus species</i> | Common name | | | | |
| MULLIDAE cont. | | | | | |
| <i>Parupeneus multifasciatus</i> | manybar goatfish, <i>moano</i> | X | | | |
| MURAENIDAE | | | | | |
| <i>Echidna nebulosa</i> | snowflake moray, <i>puhi kappa</i> | X | | | |
| POECILIIDAE | | | | | |
| <i>Gambusia affinis</i> | mosquitofish | | X | | |
| <i>Limia vittata</i> | Cuban molly | | X | | X |
| <i>Poecilia reticulata</i> | rainbow fish | | X | X | |
| <i>Poecilia sp.</i> | indet. mollies | | | X | |
| <i>Xiphophorus helleri</i> | swordtail | | | X | |
| POMOCENTRIDAE | | | | | |
| <i>Abudefduf abdominalis</i> (E) | Hawaiian sergeant, <i>mamo</i> | X | | | |
| <i>Abudefduf sordidus</i> | blackspot sergeant, <i>kupipi</i> | X | | | |
| <i>Plectroglyphidodon imparipennis</i> | bright-eye damsel | X | | | |
| <i>Stegastes marginatus</i> | Hawaiian Gregory | X | | | |
| SERRANIDAE | | | | | |
| <i>Cephalopholis argus</i> | peacock grouper, <i>roi</i> | X | | | |
| SYNODONTIDAE | | | | | |
| <i>Synodus variegatus</i> | reef lizardfish | X | | | |
| TETRAODONTIDAE | | | | | |
| <i>Arothron hispidus</i> | stripebelly puffer | X | | | |
| <i>Canthigaster amboensis</i> | ambon toby | X | | | |
| <i>Canthigaster jactator</i> (E) | Hawaiian whitespotted toby | X | | | |
| ZANCLIDAE | | | | | |
| <i>Zanclus cornutus</i> | Moorish idol, <i>kihikihi</i> | X | | | |

KEY TO SYMBOLS USED:

- † - Shell, carapace, or test only (not seen alive).
- E - Endemic - Found in Hawaii and nowhere else.

Attachment E

Section 106 Consultation
Memorandum of Agreement, October 18, 2013



Preserving America's Heritage

October 18, 2013

Abraham Y. Wong
Division Administrator
Federal Highway Administration
300 Ala Moana Blvd., Room 3-306
Box 50206
Honolulu, HI 96850

Dear Mr. Wong:

Ref: *Memorandum of Agreement (MOA) regarding the Kuhio Highway Short-Term Improvements
Kuamoo Road to Temporary Bypass Road, Kaua'i, Hawaii*

Dear Mr. Wong:

Enclosed please find the fully executed Memorandum of Agreement (MOA) for the Kuhio Highway Short-term Improvements Project, Kauai'i, Hawaii. By carrying out the terms of this agreement, FHWA will fulfill its responsibilities under Section 106 of the National Historic Preservation Act and the regulations of Advisory Council on Historic Preservation (ACHP). We are returning four copies of the signed original to FHWA so that you may obtain additional signatures from the consulting parties that have decided to concur in the Agreement. Once all signatures are obtained, please provide copies of the fully executed MOA to all signatories and concurring parties, and return copies of the concurring signatures to the ACHP for our files.

We wish to thank you and your staff for working with the Hawaii State Historic Preservation Officer, the ACHP, and other consulting parties to resolve the adverse effects of this undertaking on historic properties. We appreciate the hard work of staff at both Hawaii Division FHWA and Hawaii Department of Transportation in reaching a successful conclusion to consultation.

If we may be of further assistance as the agreement is implemented, please contact Carol Legard, the ACHP's FHWA Liaison at (202) 606-8522, or via e-mail at clegard@achp.gov.

Sincerely,

Charlene Dwin Vaughn, AICP
Assistant Director, FPLAS Section
Office of Federal Agency Programs

Enclosure

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

MEMORANDUM OF AGREEMENT
Among the
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND THE
STATE OF HAWAII
STATE HISTORIC PRESERVATION OFFICER

Regarding the Kūhiō Highway Short-Term Improvements:
Kuamo'o Road to Temporary Bypass Road Project
(Also referred to as South Leho Drive to Aleka Loop)
Districts of Līhu'e and Kawaihau, Island of Kaua'i, State of Hawai'i

WHEREAS, the Federal Highway Administration (FHWA) in coordination with the State of Hawai'i Department of Transportation (HDOT) proposes the Kūhiō Highway Short-Term Improvements, Kuamo'o Road to Temporary Bypass Road (also referred to as South Leho Drive to Aleka Loop) Project (Project); and

WHEREAS, pursuant to 36 Code of Federal Regulations (CFR) Part 800, regulations implementing Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470 (f)), the Project is an undertaking and the FHWA has consulted with the Advisory Council on Historic Preservation (ACHP), Hawai'i State Historic Preservation Officer (SHPO), HDOT, State of Hawai'i Office of Hawaiian Affairs (OHA), Kaua'i/Ni'ihau Islands Burial Council (KNIBC), Kaua'i Historic Preservation Review Commission (KHPRC) and other Native Hawaiian organizations (NHOs); and

WHEREAS, in accordance with 36 CFR §800.6(a)(1), the FHWA has notified the ACHP of its adverse effect determination with specified documentation and ACHP has accepted the FHWA's invitation to participate in the consultation pursuant to 36 CFR §800.6(a)(1)(iii) (see Attachment 1); and

WHEREAS, the Project is located within portions of the ahupua'a of Wailua and South Olohena, which lie within the districts of Līhu'e and Kawaihau on the island of Kaua'i; and

WHEREAS, the Project Area encompasses a 1.75-mile section of Kūhiō Highway from South Leho Drive to Aleka Loop, approximately 700 feet north of Temporary Bypass Road, and approximately 600 feet of Kuamo'o Road extending mauka (inland) from its intersection with Kūhiō Highway; and

WHEREAS, the Project proposes to widen approximately 0.65 miles on the southbound (mauka) side of Kūhiō Highway from three to four lanes between Kuamo'o Road and Temporary Bypass Road, underground overhead utility lines from South Leho Drive to Aleka Loop, and extend the existing right-turn storage lane along Kuamo'o Road in the mauka (inland) direction from its intersection with the highway by approximately 200 feet (see Attachment 2); and

WHEREAS, the purpose and need for the Project is to alleviate existing traffic congestion occurring on Kūhiō Highway along the Project corridor within the Wailua area and improve safety along the Project corridor for pedestrians, and bicyclists; and

WHEREAS, based upon Archaeological Assessments prepared for the Project in June 2007 and July 2009 and consultation with the SHPO, OHA, KNIBC, DHHL, Hui Mālama I Na Kupuna O Hawai'i, Na Kahu Hininaakalā, KHPRC, Kaua'i Historical Society, and the County of Kaua'i Planning Department, the FHWA determined that the Project would have "no adverse effect"

and received concurrence from the SHPO by letters dated October 13, 2009 and October 22, 2009, respectively (see Attachments 3 and 4); and

WHEREAS, in January 2010, based upon additional information and comments received from NHOs, Section 106 consultation was re-opened for the Project and the FHWA and HDOT have since conducted extensive outreach with NHOs including numerous meetings with and presentations to the SHPO, OHA, Department of Hawaiian Home Lands (DHHL), KNIBC, and KHPRC, as well as descendants and cultural practitioners with lineal and cultural ties to Wailuanuiaho'ano and the ahupua'a of Wailua, South Oloheua and Hanamā'ulu (see Attachments 5 and 6); and

WHEREAS, in response to concerns raised during the consultation process, HDOT commissioned an Archaeological Inventory Survey (AIS) which was prepared in close consultation with NHOs, and completed and distributed to NHOs in March 2012; and

WHEREAS, the AIS identified the Project Area as the Area of Potential Effect (APE) (see Attachment 7); and

WHEREAS, the AIS identified three historic properties within the APE, including: 1) State Inventory of Historic Places (SIHP) #50-30-08-1711 identified as a cultural layer; 2) SIHP #50-30-08-3962 identified as a cultural layer; and 3) SIHP #50-30-08-2158 identified as an 'auwai (ditch) that would be adversely affected by the Project (see Attachment 8); and

WHEREAS, the FHWA has determined pursuant to 36 CFR §60.4 that SIHPs #50-30-08-1711, -3962, and -2158 meet the following significance criteria under the National Register of Historic Places (NRHP) for evaluation: (a) Association with events that have made a significant contribution to the broad patterns of our history; and (d) Yield, or may be likely to yield, information important in prehistory or history; and

WHEREAS, the HDOT commissioned a report titled, *Section 106 Consultation and Survey of Potentially Eligible Traditional Cultural Properties in Wailua Kai, Kaua'i*, dated February 2012, which identified an area encompassing Wailua ahupua'a and portions of South Oloheua and Hanamā'ulu ahupua'a; as being eligible for listing in the NRHP as a historic district, and that the APE lies within a small portion of this district (see Attachment 9); and

WHEREAS, the Wailua historic district is comprised of multiple traditional cultural properties which contribute to the significance of the district and are of traditional religious and cultural importance to Native Hawaiians individually and collectively as listed in Attachment 10; and

WHEREAS, the Wailua historic district retains sufficient integrity to convey the general setting of these contributing properties and to maintain those cultural and religious associations that unify these historic properties and thereby make the district a distinct, culturally significant entity, and do so despite encompassing modern, non-contributing structures and improvements within its boundaries; and

WHEREAS, the makai portion of Wailua described as Wailuanuiaho'ano, and also known as Wailua Kai, is a highly important spiritual place for many Hawaiians due to its association with a wealth of mo'olelo (history, story legend), oli (chant), and other Native Hawaiian folklore genres related to the area, and is eligible for inclusion in the NRHP as a historic district individually as well as contributing to the significance and associations of the broader Wailua traditional cultural property district; and

WHEREAS, the FHWA has determined, with ACHP and SHPO concurring, that the Project will have an "adverse effect" on the Wailua Traditional Cultural Properties (TCP) District including SIHPs #50-30-08-1711, #50-30-08-3962, and #50-30-08-2158 that contribute to the eligibility of the District; and

WHEREAS, the FHWA has notified the ACHP and SHPO of their determination by letters dated July 2, 2012 and July 25, 2012, respectively (see Attachments 11 and 12); and

WHEREAS, the Project will affect the historical properties of the Wailua TCP district that contribute to its eligibility for the NRHP; and

WHEREAS, the FHWA and HDOT acknowledge and agree that historic properties will be impacted as a result of the Project; and

NOW, THEREFORE, the FHWA, SHPO, ACHP, Department of Land and Natural Resources, Division of State Parks (State Parks), and HDOT, agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the effects on historic properties:

STIPULATIONS

The FHWA will ensure that the following measures are carried out:

- A. **ON SITE POINT OF CONTACT (POC).** The FHWA in coordination with the HDOT shall designate an on-site point of contact (POC) within 90 days of the execution of this MOA. This on-site POC shall maintain hardcopies of all documents relative to this MOA and provide copies of them upon request by any party to this MOA. The on-site POC shall be responsible for receiving and distributing any daily archaeological or cultural monitoring reports to the other parties to this MOA on a weekly basis. All signatories and concurring parties to this MOA shall identify a POC for their respective organizations and transmit contact information to the FHWA and HDOT who shall maintain a current POC list.
- B. **MITIGATION MEASURES.** HDOT shall complete the following mitigation actions within five years of the date of this MOA:
 1. **Reduce Signage Along Kūhiō Highway** - To improve the cultural sensitivity of the Project area, HDOT shall conduct a visual inspection of existing roadway signage and will reduce or modify roadway signage in order to minimize the visual impact of roadway signs on the Wailua TCP District. Such changes will be made only to the extent that they will not interfere with or reduce traffic safety for motorists.
 2. **Minimize Street Lights by Mālaeha'akoa Heiau and Hikinaakalā Heiau** - HDOT shall conduct a site inspection of the existing roadway within the Project area in proximity to the heiau of Mālaeha'akoa and Hikinaakalā to minimize street lights or install shielded or full cutoff street light fixtures.
 3. **Prepare Ethnographic Study, Review Wailua Complex of Heiau and Revise National Historic Landmark Description, and Prepare Wailua Documentary**

The following three items shall be prepared by qualified archaeologist(s), ethnographer(s), and/or historian(s), as defined in Hawai'i Revised Statutes (HRS) §13-281-3, -6, and -7, respectively, and/or recognized Hawaiian cultural expert(s). The items are not interdependent, and may be completed separately or in conjunction with the other. However, close coordination shall be conducted between preparers to ensure the accuracy and consistency of information and to minimize duplication of efforts.

 - a. **Prepare Ethnographic Study of Wailua TCP** – In consultation with the SHPO, State Parks, and OHA, as well as other NHOs as may be necessary, an ethnographic survey of the Wailua TCP shall be conducted to gather information on Native Hawaiian culture, practices, history, beliefs and religion. The study will

include the Wailua Complex of Heiau and will generate information to revise the National Historic Landmark (NHL) description.

- b. **Coordinate with NHL Program.** Prior to initiating the survey, HDOT or the responsible qualified professional completing the survey will contact the NHL Program, Pacific West Regional Office to determine documentation requirements and the appropriate NPS protocol for revising the NHL nomination. HDOT or the qualified professional will continue to coordinate with the NHL Program in carrying out the provisions of Stipulation B.3.c. below.
 - c. **Review the Wailua Complex of Heiau and Revise the National Historic Landmark (NHL) Description** – In consultation with SHPO, State Parks and OHA, as well as other NHOs as may be necessary, the qualified preparer(s) shall review the Wailua Complex of Heiau NHL description to describe and explain the connections and alignment between the current Wailua Complex of Heiau (including Poliahu Heiau, Mālaeha'akoa Heiau, Hikinaakalā Heiau and Kalaeokamanu Heiau also known as Holoholokū), to other heiau within the TCP. Based on this information, a revised NHL nomination form shall be submitted to NPS for review and approval.
 - d. **Complete Wailua Documentary** – Funding not to exceed \$250,000.00 shall be provided for a video documentary of Wailua to document the historical and cultural significance of the Wailua TCP. The documentary shall be prepared by a qualified production company with knowledge in Hawaiian cultural practices. The scope of the documentary shall be developed in consultation with the SHPO, State Parks, and OHA as well as other NHOs as may be necessary. The documentary shall include interviews of recognized historian(s) and kūpuna with knowledge of the area. The video documentary shall be distributed as part of education outreach.
 - e. **Conduct Coordination Meeting** – HDOT shall schedule and conduct a meeting to coordinate the scopes of work between the respective preparers of Items 4a, 4b, and 4c, and consider opportunities for NHOs to provide input during their development.
4. **Provide NHO-FHWA-HDOT Training** - The FHWA and HDOT acknowledge the need to build upon existing and develop new relationships with NHOs and communities on Kaua'i. The FHWA and HDOT shall commit to sponsoring an initial relationship building workshop to provide a forum where discussion and knowledge exchange can occur between the FHWA, HDOT, NHOs, and community representatives in a non-project specific context. Other agencies may be invited to participate in this forum as deemed appropriate by a consensus decision between the FHWA and HDOT, with the SHPO and OHA, advocating on behalf of NHO interests. This workshop shall be held within three years of the execution of this MOA.

The subject of the workshop may cover topics such as: 1) identification of issues, challenges or problems that NHOs, the FHWA, and HDOT have experienced in consultation with each other; 2) technical training about NHPA Section 106, HRS Chapters 343 and 6E, Department of Transportation Act Section 4(f), National Environmental Policy Act (NEPA), NHO protocols, relevant Hawaiian history or cultural practices, or other relevant laws and practices (mutually sharing information); 3) problem-solving session to share knowledge about best practices that would assist NHOs, HDOT and the FHWA to have productive and effective consultation; and 4) identification of NHOs and community representatives interested in participating in the next stage of relationship building that may involve a training course sponsored by the

FHWA/HDOT that integrates the NEPA/NHPA/U.S. Department of Transportation Act, Section 4(f) decision making processes for transportation projects in Hawai'i.

The FHWA and HDOT may sponsor additional phases of the relationship building process and will decide within one year after the conclusion of the first workshop as appropriate and/or necessary.

5. **Wailua Beach Coastal Assessment** –FHWA and HDOT shall conduct a two-year shoreline review and monitoring program to analyze coastal processes and shoreline changes along Wailua Beach from Wailua River to the vicinity of the former Sea Shell Restaurant. Work shall consist of the following:
 - Thorough research and review of existing information shall be conducted to help define historical shoreline trends, and natural and man-made events which affected the shoreline;
 - Oceanographic parameters pertinent to the project area shall be investigated, and their effects evaluated. Detailed investigation of the shoreline shall be conducted over a two-year period, including periodic site visits to obtain shoreline surveys and to note changes in the beach characteristics and condition. During this two-year period, records shall be kept of weather and oceanographic conditions, and this information coupled with the site visit data shall be correlated to help define cause and effect relationships between oceanographic conditions and beach change;
 - An evaluation and assessment report shall be prepared following the two-year study, to help guide future planning and design for the project area; and
 - The evaluation and assessment report shall be provided to all parties to the MOA within six months of its completion, and posted to HDOT's website for availability to all consulting parties.
6. **Data Recovery** - Three historic properties identified within the project area include: 1) SIHP # 50-30-08-1711 identified as a cultural layer; 2) SIHP #50-30-08-3962 identified as a cultural layer; and 3) SIHP # 50-30-08-2158 identified as a ditch/auwai. Due to the determination of adverse effect for the proposed undertaking, in order to mitigate the potential damage to these historic properties within the project area, archaeological data recovery shall be conducted according to a data recovery plan to be reviewed and approved by the SHPO.
7. **Implement Archaeological and Cultural Monitoring During Construction**
 - a. The Archaeological Monitoring Plan (AMP) shall be approved by the SHPO and implemented pursuant to Hawai'i Administrative Rules (HAR) §13-279, Rules Governing Standards for Archaeological Monitoring Studies and Reports, by letters dated March 16, 2009, April 6, 2009, and March 10, 2010 (see Attachment 13).
 - b. HDOT will insure that whenever ground disturbing activities associated with construction occur a qualified cultural monitor is present. HDOT shall prepare a Cultural Monitoring Scope of Work in consultation with OHA and the SHPO to describe the minimum qualifications and requirements for cultural monitor(s). The Scope of Work will be subject to approval by the FHWA. The role of the cultural monitor(s) shall include but not be limited to:
 - i. Serve as a liaison with the community to assist in the interpretation of cultural resources during construction work involving ground disturbance;
 - ii. Provide cultural education for construction workers and authorized job-site visitors; and

- iii. Assist in the identification and interpretation of cultural properties.

HDOT shall provide signatories and concurring parties to the MOA an opportunity to review and comment on the draft Cultural Monitoring scope of work. The HDOT shall select a cultural monitor(s) from a list of qualified applicants based on the objectives identified above. Participating NHOs shall be afforded the opportunity to identify the potential cultural monitor candidates.

8. **Prepare Consultation Protocol (CP)** for human skeletal remains and associated materials to determine how consultation will be conducted with descendants to gather their input in compliance with HRS §6E-43.6 and HAR §13-300.
 - a. The CP shall be finalized prior to construction;
 - b. The CP shall include consultation with the SHPO, OHA, KNIBC (up to two requests), lineal and cultural descendants, and landowners in the development of the CP;
 - c. Landowners may request that SHPO extend the consultation process to determine the appropriate treatment of inadvertent discoveries;
 - d. Once the CP is finalized, the HDOT shall request up to two times to be placed on the KNIBC agenda for an informational presentation; and
 - e. Pursuant to HAR §13-300, SHPO shall determine the appropriate treatment of the inadvertent discoveries within three working days of completion of the consultation.
- C. **DISPUTE RESOLUTION.** Should any party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, the FHWA shall consult with such party to resolve the objection. If the FHWA determines that such objection cannot be resolved, the FHWA will:
 1. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide the FHWA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories, invited signatories, and concurring parties, and provide them with a copy of this written response. The FHWA will then proceed according to its final decision.
 2. Make a final decision on the dispute and proceed accordingly, if the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period. Prior to reaching such a final decision, the FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories, invited signatories, and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
 3. Carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.
- D. **MONITORING AND REPORTING.** At the end of each calendar year following the execution of this MOA until it expires or is terminated, the FHWA and HDOT shall coordinate to provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. Such a report shall also include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the HDOT's and the FHWA's efforts to carry out the terms of this MOA. A Final Report shall be prepared at

the expiration of the MOA. Annual reports will be transmitted to the parties to the MOA and posted on the HDOT website each year the MOA is in effect.

- E. **DURATION.** The term of this MOA shall apply for a period of five (5) years from the execution of the MOA, unless amended pursuant to Stipulation F of this MOA below.
- F. **AMENDMENTS.** Any signatory or to this MOA may request that it be amended, whereupon the parties shall consult to consider such amendment. HDOT will seek input from the concurring parties on any proposed amendments. Any amendment to this MOA must be signed by all signatories.
- G. **TERMINATION.** Any signatory to this MOA may terminate it by providing a 30-calendar-day written notice to the other parties, provided that the signatories and concurring parties will consult during the 30-day period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, FHWA shall comply with 36 CFR Part 800 for all remaining actions under this MOA.
- H. **COUNTERPART SIGNATURES.** This MOA may be executed in counterparts. Each signature page shall be incorporated into the MOA and considered a part of this MOA.

APPROVAL

Execution of this MOA by the parties below and implementation of its terms is evidence that the FHWA has afforded the ACHP an opportunity to comment on the Project and its effects on historic properties, and that the FHWA has taken into account the effects of the Project on historic properties. The following organizations are identified as parties to this MOA:

Signatories:

Advisory Council on Historic Preservation

U.S. Department of Transportation, Federal Highway Administration

State Historic Preservation Officer

Invited Signatories:

State of Hawai'i, Department of Transportation

Concurring Parties:

State of Hawai'i, Department of Land and Natural Resources, Division of State Parks

Dr. Kamana'opono M. Crabbe, Office of Hawaiian Affairs

Mr. Keith R. Yap, Kaua'i Ni'ihau Island Burial Council

Mr. Sy Shim, Mr. Kaimi Hermosura, Mr. Ed Kaiwi, Mr. Ed Taniguchi and Mr. Walter Apana, Konohiki of Kaua'i

Ms. Liberta Albao, Queen Deborah Kapule Hawaiian Civic Club

Ms. Leilani Kaleiohi

Ms. Cheryl Lovell-Obatake, Cultural Monitor and Aha Kiole (Puna District)

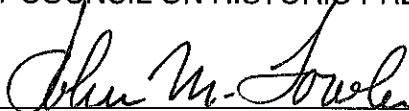
Ms. Puanani Rogers, Ho'okipa Network

Ms. Mahelani Sylva, Ni'ihau/Kaua'i Aha Moku, Aha Pua'a Community Coordinator

SIGNATORY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By:



John M. Fowler, Executive Director

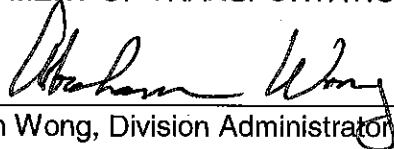
Date:

10/22/13

SIGNATORY:

U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

By:


Abraham Wong, Division Administrator

Date:

9/10/13


SIGNATORY:

STATE HISTORIC PRESERVATION OFFICER (State of Hawai'i)

By:  Date: 8/17/13
William J. Alla, Jr., State of Hawai'i Historic Preservation Officer

INVITED SIGNATORY:

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

By: 
Glenn M. Okimoto, Ph.D., Director of Transportation

Date: AUG 30 2013

CONCURRING PARTY:

DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF STATE PARKS
(STATE OF HAWAII)

By: _____
Daniel S. Quinn, State Parks Administrator

Date: _____

CONCURRING PARTY:

OFFICE OF HAWAIIAN AFFAIRS

By: _____

Dr. Kamana'o pono M. Crabbe
Ka Pouhana Chief Executive Officer

Date: _____

CONCURRING PARTY:

KAUA'I NI'HAU ISLAND BURIAL COUNCIL

By: _____
Keith R. Yap, Vice Chair

Date: _____

CONCURRING PARTY:

KONOHIKI OF KAUA'I

By: _____
Sy Shim

Date: _____

By: _____
Kaimi Hermosura

Date: _____

By: _____
Ed Kaiwi

Date: _____

By: _____
Ed Taniguchi

Date: _____

By: _____
Walter Apana

Date: _____

CONCURRING PARTY:

QUEEN DEBORAH KAPULE HAWAIIAN CIVIC CLUB

By: _____
Liberta Albao

Date: _____

CONCURRING PARTY:

By: _____
Leilani Kaleiohi

Date: _____

CONCURRING PARTY:

CULTURAL MONITOR AND AHA KIOLE (PUNA DISTRICT)

By: _____
Cheryl Lovell-Obatake

Date: _____

CONCURRING PARTY:

HO'OKIPA NETWORK

By: _____
Puanani Rogers

Date: _____

CONCURRING PARTY:

NI'HAU/KAUA'I AHA MOKU, AHA PUA'A COMMUNITY COORDINATOR

By: _____
Mahelani Sylva

Date: _____

LIST OF ATTACHMENTS

1. Letter dated August 12, 2012 from the ACHP to the FHWA regarding participation in Section 106 consultation and MOA
2. Location Map and Design Plans
3. Letter dated October 13, 2009 from the FHWA to the DLNR regarding "no adverse effect" determination
4. Letter dated October 22, 2009 from the DLNR to the FHWA concurring with "no adverse determination"
5. Summary of Section 106 Consultation
6. Section 106 Consultation - List of NHO Participants as of February 2013
7. Area of Potential Effect (APE) Map
8. Wailuanuiaho'ano Map - Affected Sites SIHP #50-30-08-1711, #-3962 and #50-30-08-2158
9. Wailua Traditional Cultural Property (TCP) Map
10. Table of Sites and TCP Elements in Wailuanuiaho'ano Area Map and Wailua TCP District
11. Letter dated July 2, 2012 from the FHWA to the SHPO regarding "adverse effect" determination
12. Letter dated July 25, 2012 from the FHWA to the ACHP regarding "adverse effect" determination
13. Letters dated March 16, 2009, April 6, 2009, and March 10, 2010 from SHPO accepting the Archaeological Monitoring Plan

Milford Wayne Donaldson, FAIA
Chairman

Clement A. Price Ph.D.
Vice Chairman

John M. Fowler
Executive Director



Preserving America's Heritage

August 14, 2012

Victor Mendez
Administrator
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

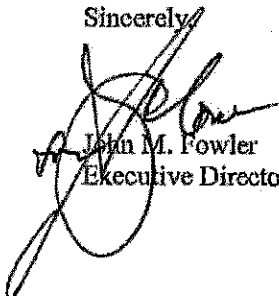
Dear Mr. Mendez:

In response to an invitation from the Hawaii Division, Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation (ACHP) will participate in consultation pursuant to Section 106 of the National Historic Preservation Act (16 USC 470[f]) regarding proposed short term improvements to Kuhio Highway, Kuamo'o Road to Temporary Bypass Road, Puna and Ko'olau Districts, on the Island of Kauai. Our decision to participate in this consultation is based on the *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, contained in Appendix A of our regulations. The criteria are met because the proposed work will occur within the boundaries of Wailuanuiaho'ano, a traditional cultural property that is eligible for inclusion in the National Register of Historic Places because of its spiritual and historic significance to native Hawaiians.

Section 800.6(a)(1)(iii) of our regulations requires that we notify you, as the head of the agency, of our decision to participate in consultation. By copy of this letter, we are also notifying Abraham Wong, Division Administrator, of this decision.

The ACHP has worked closely with the Hawaii Division in earlier steps of Section 106 review for this undertaking. Our continued participation in this consultation will be handled by Carol Legard, the ACHP's FHWA Liaison, who can be reached at 202-606-8522 or via email at elegard@achp.gov. We look forward to working with FHWA and the other consulting parties to develop a Memorandum of Agreement for the resolution of adverse effects to this important historic property.

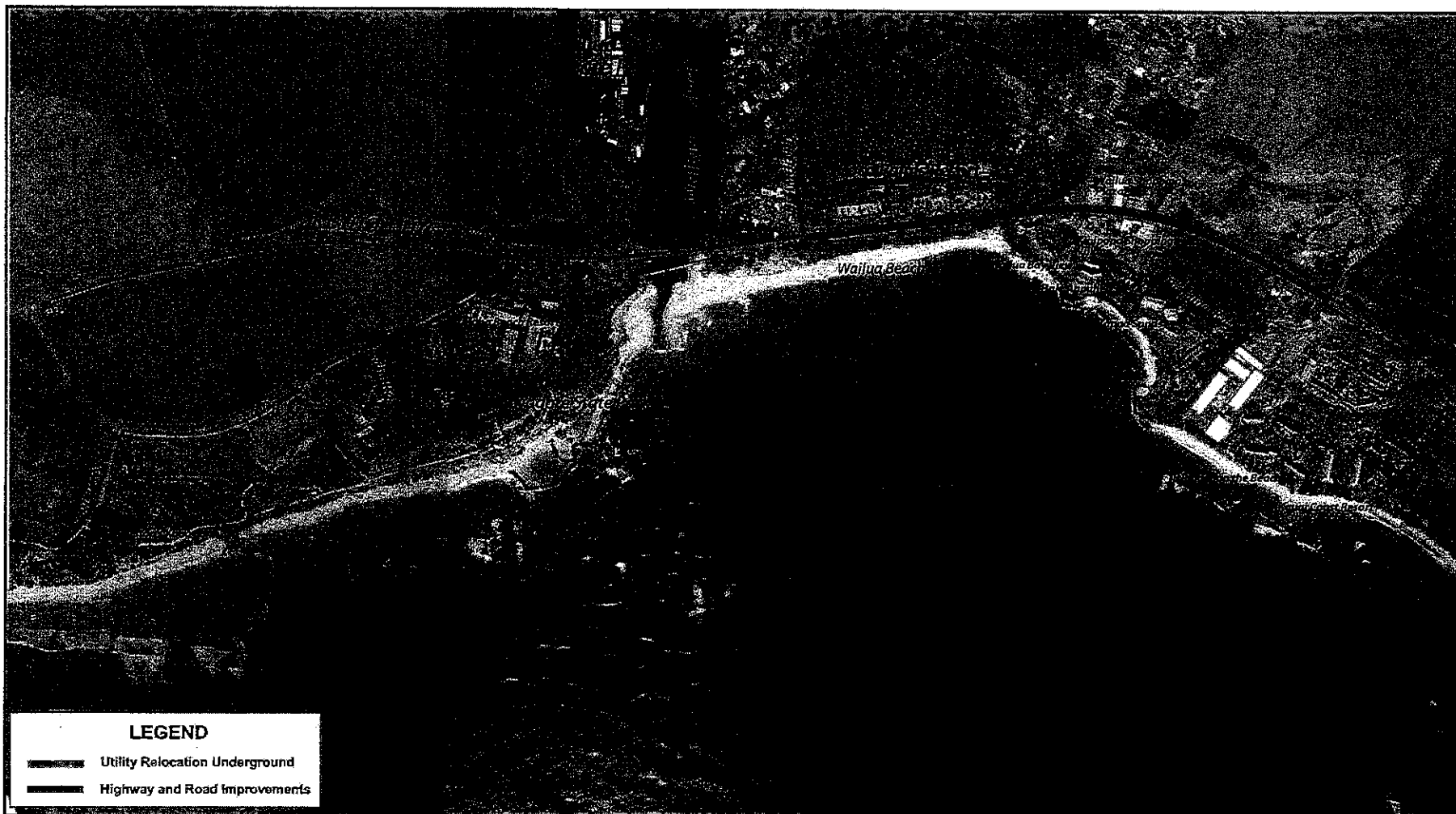
Sincerely,


John M. Fowler
Executive Director

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

ATTACHMENT 1



LEGEND

- Utility Relocation Underground
- Highway and Road Improvements



NOT TO SCALE

**EXHIBIT 1
PROJECT VICINITY MAP**

*Kuhio Highway Short-Term Improvements;
Kuamoo Road to Temporary Bypass Road*



**WILSON OKAMOTO
CORPORATION**
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTALISTS



U.S. Department
of Transportation
**Federal Highway
Administration**

Hawaii Federal-Aid Division

October 13, 2009

300 Ala Moana Blvd., Rm 3-306
Box 50206
Honolulu, HI 96850
Phone: (808) 541-2700
Fax: (808) 541-2704
<http://www.fhwa.dot.gov/hidiv>

In Reply Refer To:
HDA-HI

CERTIFIED MAIL RETURN RECEIPT
7002 0860 0007 4381 1308

Ms. Laura Thielen, Chairperson
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Dear Ms. Thielen:

Subject: Kūhiō Highway Short-Term Improvements; Kuamo'o Road to Kapa'a Temporary
Bypass Road Project (FAP No. NH-056-1(50))
Wailua, Island of Kaua'i
Section 106 Consultation

The State of Hawaii, Department of Transportation (DOT), Highways Division is proposing to implement the Kūhiō Highway Short-Term Improvements Project that is located in Wailuā of the Island of Kaua'i. The Federal Highway Administration (FHWA) is proposing to authorize construction of this undertaking.

This letter with attachments is being submitted to document consultation efforts conducted for this undertaking pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's regulations for Protection of Historic Properties (36 CFR, Part 800). We have applied the criteria of effect based upon 36 CFR §800 for the proposed undertaking, and have determined that it will have "no adverse effect" on historic properties.

Based upon consultations efforts and studies conducted, there are no known historic properties within the area of potential effect and no known historic properties that would be negatively affected by the project improvements. However, there is a potential for subsurface sites being encountered during construction activities, and the general project area is culturally sensitive. Therefore, in making our determination, we are proposing to carry out the following actions to avoid adverse effects on potential subsurface sites.



Proposed Measures

1. Additional subsurface testing would be conducted within the project corridor. Any burials found during this process will be treated as a known burial.
 - a. Testing would occur during the construction phase of the project and include the following areas:
 - 1) A State-owned strip parcel (TMK 4-1-03: 039) situated between the Coco Palms Resort and Kūhiō Highway.
 - 2) A section along the mauka side of the highway from the intersection of the Temporary Kapa'a Bypass Road northbound to a proposed electrical riser pole near Aleka Loop.
 - 3) Along undeveloped areas of the mauka side of the highway where underground utilities are planned within a privately-owned parcel identified as TMK 4-3-10: 001 located north of Haleilio Road.
 - b. A plan covering the additional testing scope of work will be prepared and submitted to the State Historic Preservation Division (SHPD) for review and approval.
 - c. A new inventory survey report would be prepared documenting the results of this additional testing.
 - This report will be submitted to SHPD for review and approval.
2. Construction of the project will proceed under an archaeological monitoring program.
 - a. The SHPD approved Archaeological Monitoring Plan (March 2009) for the highway widening improvements (DOC: 0903WT117) will be amended to incorporate on-site monitoring for the relocation of existing overhead utilities underground.
 - b. The amended monitoring plan will be submitted to SHPD for review and approval.
3. Develop a plan addressing burial treatment protocols in the event burials are encountered.
 - a. Procedures for "previously identified" and "inadvertent discovery" burials should be addressed.
 - The intent is to identify procedures to ensure burials are properly protected and cared for while formal decisions regarding treatment are developed.
 - b. The plan would be developed in consultation with the Office of Hawaiian Affairs (OHA), SHPD, the Kaua'i / Ni'ihau Islands Burial Council, and pertinent Native Hawaiian organizations.
 - c. The protocols plan would be submitted to OHA, SHPD, and the island burial council for concurrent review.
 - d. The plan's preparation, review, and revision will be completed within a total timeframe of four (4) months.
 - Written notification to OHA and SHPD would be provided to document initiation of this process and completion date.

4. OHA will develop a framework for their selection and management of a cultural monitor assisting on this project to serve as a liaison between the contractor and concerned community to provide increased level of communication.
 - a. The cultural monitor will be hired by OHA and serve under OHA's management and responsibility.
 - OHA will provide a written job description and framework for this monitor's responsibilities and duties to the State DOT and FHWA.
 - b. The monitor will either be on-site or on-call for monitoring subsurface construction work (ex. trench digging).
 - The cultural monitor should coordinate one's activities with the contractor and archaeologist who are responsible for on-site decisions.
 - The monitor should follow all construction safety procedures and be equipped with personal protective equipment.
 - c. The State DOT will reimburse OHA for compensation associated with this monitor.
 - d. A report documenting the monitor's activities will be submitted from OHA to the State DOT and FHWA.
 - 1) Daily monitoring data logs will be prepared by the monitor.
 - 2) The report should include a qualitative narrative of monitoring activities, data logs, and recommendations that could be applied to future projects.

We request your concurrence with the proposed no adverse effect determination for this project. Enclosed is documentation supporting this determination for your review. This documentation was prepared based upon your department's guidelines for Section 106 submissions.

We would greatly appreciate your response within 30 days of receipt of this letter. If you have any questions, please contact me at 541-2700, ext. 2305 if have any questions regarding this consultation request.

Sincerely yours,



Pat V. Phung, P.E.
Transportation Engineer

Enclosure: Documentation

cc: Darell Young, HDOT, HWY-P
Ronald Sato, Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

L. AURA B. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAOLOAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 22, 2009

Mr. Pat Phung, P.E.
Transportation Engineer
US DOT- FHWA
300 Ala Moana Blvd, Room 3-306
Honolulu, Hawai'i 96850

LOG NO: 2009.4462
DOC NO: 0910NM34
Archaeology

Dear Mr. Phung:

**SUBJECT: National Historic Preservation Act – Section 106 Review—
Proposed Kūhiō Highway Short Term Improvements – (FAP No NH-056-1(50))
Wailua Ahupua'a, Puna District, Kaua'i
TMK: (4) 4-1-003: 017, 039, 044 and 4-3-002: 006 por.**

Thank you for providing the opportunity to review your documentation on your determination that the Kūhiō Highway Short-Term Improvement Projects have a "no adverse effect" determination. This project is the creation of short-term improvements to the Kūhiō Highway between Kuamo'o Road on the south and the Temporary Kapa'a Bypass Road on the north. We concur that there are no known historic properties within the APE but there is certainly the potential for subsurface sites or human remains. The project area is located in an archaeologically sensitive area fronting the Coco Palms Resort where previous archaeological inventory surveys recorded a widely dispersed buried cultural layer and numerous human burials on the grounds of the resort.

To address the possibilities of finding historic properties or human remains, the FHWA is proposing additional archaeological inventory testing, archaeological monitoring (AMP approved March 2009 DOC:0903WT117), developing a burial treatment plan and hiring a cultural monitor under OHA's directions. Based on the documentation and the stated FHWA proposal, we concur with your determination that this project will have "no adverse effect" on historic properties.

If you have any questions please call me at 692-8015.

Aloha,

Nancy A. McMahon (Deputy SHPO)
State Historic Preservation Officer

Cc: Doug Haigh, County of Kauai
Ron Sato, Wilson Okamoto Corp.
Darrell Young, DOT

**Kūhiō Highway Short-Term Improvements
Kuamo'o Road to Temporary Bypass Road Project
(Also referred to as South Leho Drive to Aleka Loop)
District of Kawaihau, Island of Kaua'i, State of Hawai'i**

SUMMARY OF SECTION 106 CONSULTATION

The Federal Highway Administration (FHWA) and State of Hawaii Department of Transportation (HDOT) conducted extensive consultation under Section 106 of the National Historic Preservation Act (NHPA), including numerous meetings with Native Hawaiian organizations (NHO), including: State Historic Preservation Officer, (SHPO), Office of Hawaiian Affairs (OHA), Department of Hawaiian Home Lands (DHHL), as well as descendants and cultural practitioners with lineal and cultural ties to Wailuanuiho'ano and the ahupua'a of Wailuā and South Oloheua. Also included as part of the outreach efforts were several presentations to the Kauai Historic Preservation Review Commission (KHPRC), Kauai/Niihau Island Burial Council (KNIBC), and Board of Land and Natural Resources (BLNR). Furthermore, the Advisory Council on Historic Preservation (ACHP), which oversees NHPA requirements, has been involved throughout the consultation process. The following is a chronological summary of outreach that has been completed by FHWA and HDOT to date for the project:

2007

1. Jan. 30 – Meeting with SHPO

2009

1. Jan. 30 – Meeting with SHPO
2. Mar. 5 – Presentation to KHPRC
3. Mar. 5 – Presentation to KNIBC
4. Mar. 5 - Public Information Meeting and Section 106 consultation
5. Mar. 24 – Meeting with DHHL
6. Aug. 3 – Meeting with OHA
7. Aug. 5 – Distribution of Section 106 consultation package to NHOs
8. Aug. 9 - Meeting with SHPO
9. Aug. 10 - Meeting with OHA
10. Sept. 17 – Meeting with OHA
11. Sept. 29 - Meeting with SHPO

2010

1. Jan. 8 – Presentation to BLNR
2. Feb. 12 - Meeting with NHOs #1
3. June 24 - Meeting with NHOs #2
4. July 29 - Meeting with NHOs #3
5. Aug. 5 – Presentation to KHPRC
6. Aug. 12 – Presentation to KNIBC
7. Aug. 23 – Conference call with NHOs
8. Sept. 9 and 10 - Meeting with NHOs #4

2011

1. Apr. 6 - Meeting with NHOs #5
2. May 18 - Presentation to KNIBC
3. May 24 – Conference call with NHOs
4. July 14 – Meeting with NHOs
5. July 27 – Meeting with NHOs #6
6. Dec. 7 and 8 - Meeting with NHOs #7

2012

1. Aug. 21 and 22 - Meeting with NHOs #8
2. Oct. 2 – Meeting with SHPO
3. Oct. 5 – Meeting with OHA
4. Nov. 7 – Meeting with ACHP, SHPO, and OHA (Also attended: DLNR State Parks)
5. Nov. 20 – Meeting with SHPO and DLNR State Parks
6. Dec. 18 – Meeting with SHPO, Nā Kahu Hikina'aka'lā (Also attended: DLNR State Parks)

2013

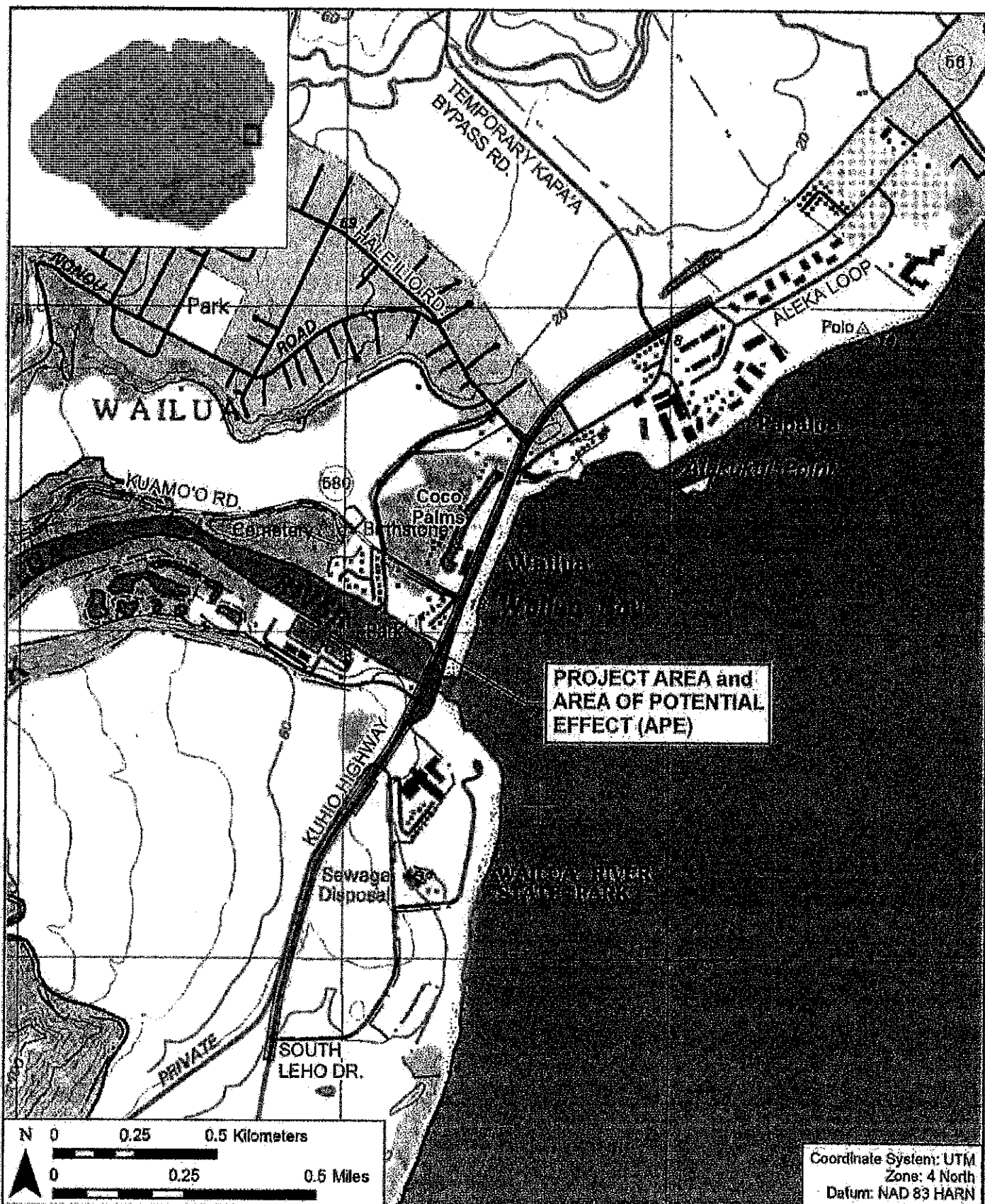
1. Feb. 7 - Meeting with NHOs #9







Kuhio Highway Short-Term Improvements – Kuamoo Road to Temporary Bypass Road
Section 106 Consultation
List of NHO Participants as of February 2013

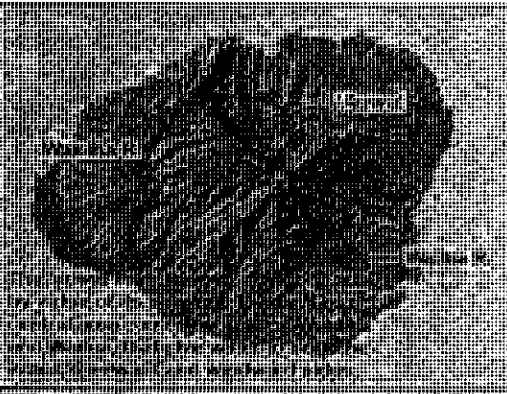
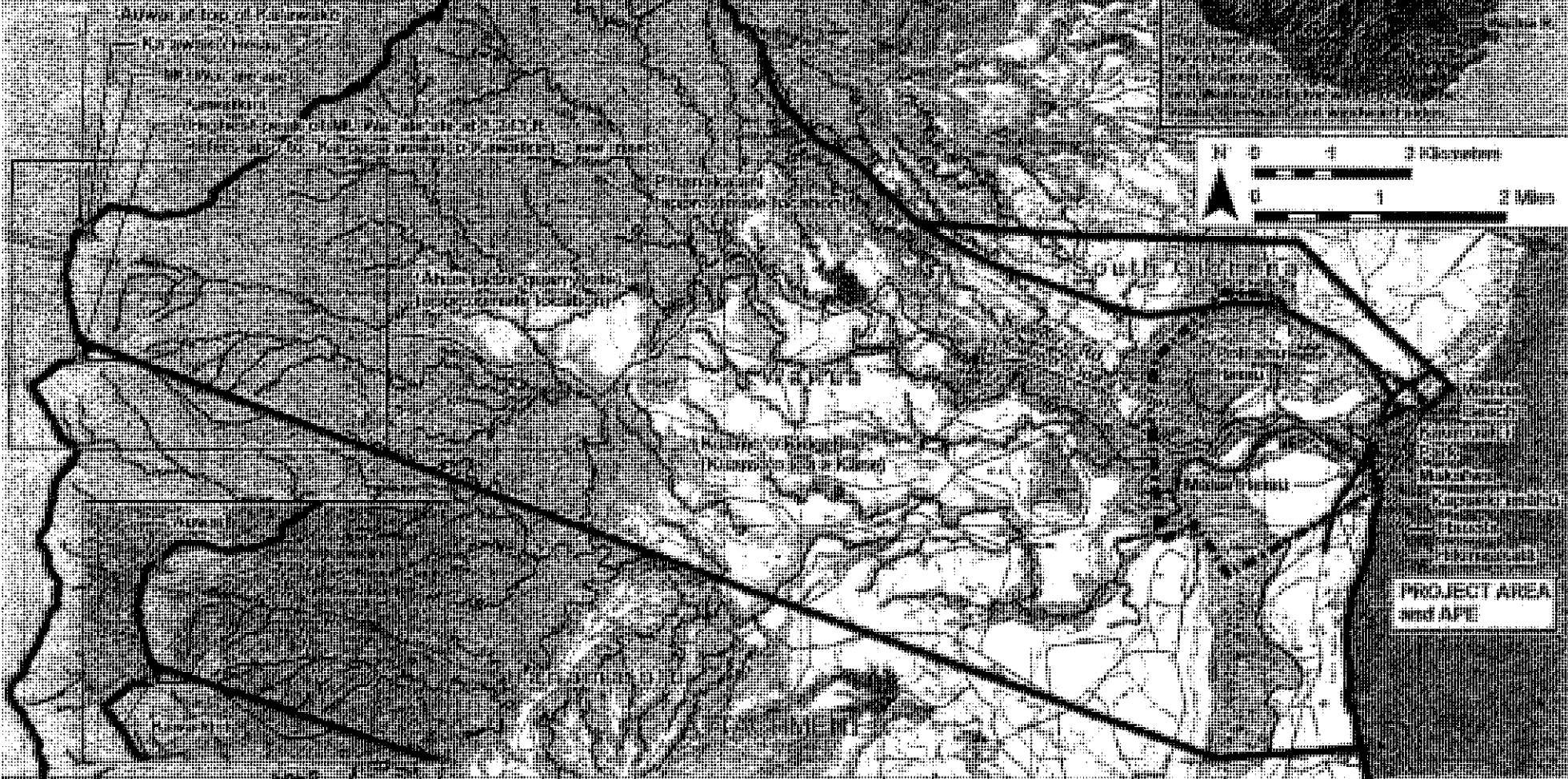
| First and Last Name | Organizational Affiliation |
|----------------------------|---|
| Liberta Albao | Queen Deborah Kapule HCC |
| Elizabeth Ako | |
| Valentine Ako | |
| James Alalem | Caretaker Wailua |
| Walter Apana | Konohiki of Kauai |
| Kauiulani Edens Huff | Hawaiian National Private Citizen |
| Devin Forrest | Konohiki of Kauai |
| Jimmy Fujita | Kauai Niihau Island Burial Council |
| Kaiohua Fyfe | |
| Kalmi Hermosura | Konohiki of Kauai |
| Wilma Holi | Hui Malama |
| Canen Hookano | |
| Valetta Jeremiah | Guest of Beverly Muraoka |
| Leilani Josselin | Lineal descendant |
| Noelani Josselin | Lineal descendant |
| Elizabeth Kahele | Hawaiian Kingdom |
| Gilbert Kahele | Hawaiian Kingdom |
| Lehua Kahele | |
| GW Naliko Kahualii | Hawaii Kingdom Dept. of Interior |
| Ed Kaiwi | Konohiki of Kauai |
| Nathan Kalama | |
| Leilani Kalelohi | |
| Nau Kamalii | Papa Ola Lokahi |
| Sabra Kauka | Na Kahu Hikinaakala |
| Kehaulani Kekua | Kaieie Foundation, Halau Palaihiwa O Kaipuwai, Na Kahu Hikinaakala |
| Susan Lebo | DLNR SHPD |
| Keola Lindsey | Office of Hawaiian Affairs |
| Cheryl Lovell-Obatake | Cultural monitor Aha Kiole (Puna District) |
| Punilei "Uncle Joe" Manini | Kanaka Hui |
| Liko Kalani Martin | Native Inhabitant |
| Harry K. Mawae | |
| Beverly Muraoka | |

**Kuhio Highway Short-Term Improvements – Kuamoo Road to Temporary Bypass Road
Section 106 Consultation
List of NHO Participants as of February 2013**

| First and Last Name | Organizational Affiliation |
|--|--|
| Waldeen K. Palmeira | Hui Na Makaiwa o Wailuanuiahoano |
| Pat & Leah Pereira | Q. Deborah Kapule Hawaiian Civic Club |
| Sharon Pomroy | Aha Kiole |
| Anne Punohu | Cultural practitioner & historian |
| Kupuna Hannah Wahinemaikai o Kaahumanu Keliulananiolo o Kalama Kane Reeves | Lineal descendant |
| Pua Nani Rogers | Hookipa Network |
| Rupert Rowe | Hui Malamo o Kaneiolouma |
| D. Kaliko Santos | Office of Hawaiian Affairs |
| Barbara Say | Kauai Niihau Burial Council |
| Sy Shim | Konohiki of Kauai |
| Alicia K. Smith | Makawalu Foundation |
| Piilani Smith | Papa Ola Lokahi |
| Mahelani Sylva | Niihau/Kauai Ahamoku, Aha Puaa Community Coordinator |
| Ed Taniguchi | Konohiki of Kauai |
| Victoria Wichman | Na Kahu Hikinaakala |
| Keith Yap | Kauai Niihau Burial Council |



 Project Area and Area of Potential Effect (APE)
 Adgeestee Boundary
 Traditional Cultural Property (TCP) Boundary
 General Area of Traditional Cultural Property
 Yellow River
 Well Pans



PROJECT AREA and APE

4.8 Table of Sites and TCP-elements in Wailuanuiho'āno Area Map and Wailua TCP District

| | A | B | C | D | E | F | G | H | I |
|---|-----------------------------|---|---|-------------------------------|--|--|---|--|---|
| | Site name and/or SHP number | Brief Description | Cultural Values | Integrity / Condition | Eligible or Potentially Eligible Historic Property/TCP/HR HP | Location / Distance from Project Area | Valuation of Significance / National Register (NR) and Hawai'i Register (HR) Criteria | Eligible to be listed in NRHP and HRHP | Adverse Effect to : 1) location 2) design 3) setting 4) materials 5) workmanship 6) feeling 7) association |
| 1 | Wailuanuiho'āno | TCP of Wailua. Known also as Wailua Kai, the area extends <i>makai</i> of Maunakapu and Nounou ridges | Spiritual and political center of Kaua'i for centuries. Former residence of royalty and associated with numerous historic and legendary events. An area filled with historic properties including the National Historic Landmark, Wailua Complex of Heiau | Geologic and Cultural Feature | Wailuanuiho'āno | Wailua Kai, the area from Manna Kapu and Nounou to the ocean | A, B, C, D for NR and A, B, C, D and E for HR | Yes. Eligible as a TCP | Setting, Feeling and Association |

| | A | B | C | D | E | F | G | H | I |
|---|--|---|--|---|---|---|--|-----|---|
| 2 | 50-30-08-3962, Cultural Layer found south of Kuamo'o Road | Intermittent traditional cultural layer | Valued by living community and historically and culturally significant | Preserved subsurface, not continuous | Could contain significant information on early pre-Contact and post-Contact occupation. | Occurs south of Kuamo'o Road and possibly extending south to Wailua River | A, B, D for NR A, B, D and E for HR | Yes | Direct Adverse Effect: widening of south side of Kuamo'o Road will directly impact portions of this cultural layer within the right of way |
| 3 | 50-30-08-1711, Cultural Layer in Coco Palms Resort | Intermittent traditional cultural layer | Valued by living community and historically and culturally significant | Preserved subsurface, not continuous | Could contain significant information on early pre-Contact and post-Contact occupation | Throughout Coco Palms resort and occurs adjacent to Kūhiō Highway, not continuous | A, B, D for NR A, B, D and E for HR | Yes | Direct Adverse Effect: widening of the highway adjacent to Coco Palms will directly impact portions of this cultural layer |
| 4 | Wailua Coconut Grove Drainage ('Auwai), consisting of two features, a northern section existing before 1930 and a southern 'auwai constructed with the fishponds. 'Auwai is associated with retaining wall remnant | The Wailua Coconut Grove Drainage is located within the 15 ft right-of-way along western/ <i>mauka</i> side of fishponds, reaching Wailua River. It consists of two features: a northern section parallel to fishponds dating before 1930 and a southern section, an 'auwai that connects the southwest corner of the fishpond to the river, likely constructed along with the fishponds (see Flores2000) | Associated with the fishponds' history and valued by living community. Also associated with traditional taro cultivation <i>mauka</i> | Modified for Kuamo'o Road, still functioning in modified form | Wailua Coconut Grove Drainage Ditch | Located in the 15' right of way along western/ <i>mauka</i> side of fishponds, and extends to Wailua River | A, B, D for NR A, B, D and E for HR | Yes | Direct Adverse Effect: improvements on the south side of Kuamo'o Road could impact the sediment within this drainage and the sediments within it. It will also directly impact the wall remnant associated with this drainage |
| 5 | Coco Palms Resort | Former resort associated with Coconut Grove | Coco Palms and the Seashell Restaurant is located in Waiʻuanuiho'āno, the spiritual and political center of Kaua'i for centuries. At its zenith, the hotel itself was arguably the most famous | Resort buildings unoccupied since the early 1990s, buildings derelict and unmaintained. | Important landmark in early Hawai'i tourism | Coco Palms Resort (TMK: 4-1-03.7) is surrounded on the north by Haleliʻo Road and east by Kūhiō Highway and shoreline. The south and west border of the property is next to the Coconut | A, B, D for NR A, B, D and E for HR | Yes | |

| | A | B | C | D | E | F | G | H | I |
|---|---|--|---|---|--|---|--|---|---|
| | | | resort in Hawai'i, associated with royalty and famous individuals as well as beloved by the general public | | | Grove. Seashell Restaurant is across Coco Palms, on the beachfront | | | |
| 6 | Coconut Grove | The historic 2,000-tree Coconut Grove was first planted by Ernst Lindeman in the mid-1890s. During Grace Guslander's time, more trees were planted by famous visitors. | The Coconut Grove is associated with the Coco Palms Hotel and its unique presence contributes to the area's special nature. There is cultural attachment for the place. | Fairly intact; unmaintained since early 1990s. Some plaques with the names of luminaries who planted trees are missing. | Coconut Grove (dating from mid-1890s) | Mauka side of Coco Palms Resort | A, B, D for NR A, B, D and E for HR | Yes | |
| 7 | 50-30-08-680, <i>loka pu'uone</i> or <i>loka hakuone</i> , inland fishponds | The fishpond(s) were once owned by <i>ali'i</i> Deborah Kapule who married King Kaumuali'i in 1817. | Treasured by <i>ali'i</i> most likely even before Deborah Kapule's time and valued by the living community. | Size and condition modified from original state. | Fishpond(s) (also known as Wenwen, Kawaiiki, Kauiki, Kaiwika, Kaiwika) | In Coco Palms Resort | A, B, C, D for NR A, B, C, D for HR | Yes. Already listed in State Register on April 25, 2009. | |
| 8 | 50-30-08-681, Mahunapu'uone | Burying ground | Valued by living community for their cultural attachment to <i>iwi kūpuna</i> and historically and culturally significant. | Site boundaries not defined, intact burials could still be preserved on Grounds. | Mahunapu'uone (area may also include other burials found at Coco Palms, below) | Within Coco Palms Property, in area of low sand dunes between the fishpond and the sea extending north. | A, D for NR A, D, and E for HR | Yes. Eligible also as a TCP. | |
| 9 | 50-30-08-681, in the grounds of Coco Palms | Reinterment Site | Valued by living community for their cultural attachment to <i>iwi kūpuna</i> and historically and culturally significant. | Site is intact and in good condition, plaque marks location. | Burials at Coco Palms, SIHP 50-30-08-681 | Within Coco Palms Property, near entrance. | A, D for NR A, D, and E for HR | Yes. Historically and culturally significant; may qualify as TCPs because of potential to yield information about the past through archaeological | |

| | A | B | C | D | E | F | G | H | I |
|----|--|---|---|--------------------------------------|--|--|-------------------------------------|---|---|
| | | | | | | | | Investigation and the continuing cultural attachment Native Hawaiians have for their <i>iwi kōpuna</i> | |
| 10 | 50-30-08-660, and a burial found on March 21, 1994 | Burials | Valued by living community for their cultural attachment to <i>iwi kōpuna</i> and historically and culturally significant | Site is intact and in good condition | Burial SIHP 50-30-08-660, and a burial found on March 21, 1994 | Burial SIHP 50-30-08-660 is reburied in boulder platform one meter high, north central edge of Coco Palms Property. The 1994 burial was found 100 feet north of Halelio Road beneath Kūhiō Highway | D for NR D and E for IIR | Historically and culturally significant; may qualify as TCPs because of potential to yield information about the past through archaeological investigation and the continuing cultural attachment Native Hawaiians have for their <i>iwi kōpuna</i> | |
| 11 | 50-30-08-330, Cave of Kaluamōkila | Cave was used as secret hiding place by <i>ali'i</i> during times of war and believed to be home of a <i>mo'o</i> | Associated with legendary and historic figures | Unknown | Cave of Kaluamōkila SIHP 50-30-08-330 | Location is north of makai portion of Wailua River within the state park, the cave's south end is just above the water level and sealed with a stone | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |
| 12 | 50-30-08-337, Hihikalahau | Hau tree grove where the first hau tree in Kaua'i grew | Associated with legendary figures and events | Well-preserved and maintained | Hihikalahau (SIHP 50-30-08-337) | Situated north of Mauna Kapu, and south of Polihūhu | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |
| 13 | 50-30-08-5014, Rock Wall | Traditionally constructed rock wall with four features, including | Rock wall is constructed in a traditional manner and is of historic | Unknown | Rock Wall SIHP 50-30-08-5014 | Adjacent to State Park, parallel and <i>mauka</i> to Kūhiō Highway Project | C, D for NR C, D for HR | Yes | |

| | A | B | C | D | E | F | G | H | I |
|----|--|--|---|--|--|--|--|---|---|
| | | rock terrace remnants, and one multi-tiered enclosure complex | value | | | area | | | |
| 14 | 50-30-08-104, Mālaeha'ākoa Heiau | Biggest heiau in Kaunā'i and the only one with buttressed corners. Considered to have been a gathering or assembly site for royal families, starting from A.D. 1200 to the 1800s | Associated with royalty, as well as historic and legendary events and figures | Good condition and well maintained by local cultural group | Heiau of Wailua Mālaeha'ākoa | In the Wailua River State Park mauka of Kāhili Highway on the south side of the river. | A, B, C, D for NR A, B, C, D and E for HR | Yes The Wailua Complex of Heiau and associated sites were designated NHL on December 29, 1962 and subsequently listed in NR. Other heiau are eligible as TCPs | |
| 15 | 50-30-08-105, Hikinaakali / Pu'uhonua o Hauola | Heiau aligned towards the east with long axis and believed to be built by 14th century chief Waiānuiaho'āne Hauola refers to the <i>pu'uhonua</i> (place of refuge) at the north of the complex. | Associated with royalty, as well as historic and legendary events and figures | Good condition, well maintained | Heiau of Wailua Hikinaakali / Pu'uhonua o Hauola | At the mouth of Wailua River on the makai side | A, B, C, D for NR A, B, C, D and E for HR | Yes The Wailua Complex of Heiau and associated sites were designated NHL on December 29, 1962 and subsequently listed in NR. Other heiau are eligible as TCPs | |
| 16 | 50-30-08-107, Poli'ahu | Poli'ahu Heiau had a line of communication with Mālaeha'ākoa. Its viewplane of Kālepa, Nounou, and 'A'ahoaka along with Wailua Bay and its size of over an acre possibly | Associated with royalty, as well as historic and legendary events and figures | Good condition, well-maintained | Heiau of Wailua Poli'ahu | Mauka on the north side of Wailua River just makai of Nounou Ridge | A, B, C, D for NR A, B, C, D and E for HR | Yes. The Wailua Complex of Heiau and associated sites were designated NHL on December 29, 1962 and | |

| | A | B | C | D | E | F | G | H | I |
|----|--|---|---|--|--|---|--|--|---|
| | | indicates this site was a <i>luakini</i> (sacrificial) <i>heiau</i> in use since the 1600s or earlier | | | | | | subsequently listed in NR. Other <i>heiau</i> are eligible as TCPs | |
| 17 | 50-30-08-108, Kukui Heiau | Built with extremely large stones, suggesting its early construction, Kukui Heiau was a navigational <i>heiau</i> that worked in tandem with Hikinaakala Heiau at the south end of Wailua Bay | Associated with historic and legendary events and figures | Good condition, well maintained | Kakui Heiau (Kohua Heiau) | Alakukui Point, near the border of North Wailua in the Oloheua Ahupua'a | A, B, C, D for NR A, B, C, D and E for HR | Already listed on June 13, 1986 in HRHP and on May 18, 1987 in NR | |
| 18 | 50-30-08-105A, Petroglyphs or Ka pae ki'i mahu, Na Ki'i Pohaku | Petroglyphs in a field of boulders depicting human forms as well as the only spiral form found in Iiawai'i | Associated with historic and legendary events and figures | Reported by Kikuchi in good condition, present condition unknown, could be covered by sand | Petroglyphs in Wailua River (Ka pae ki'i mahu, Na Ki'i Pohaku, Pae-ki'i-mahu-o-Wailua) | Underwater in Wailua River near Hikinaakala and Hanola | A, B, C, D for NR A, B, C, D and E for HR | Already listed in NR as part of Wailua Complex | |
| 19 | 50-30-08-106, Pohaku Ho'ohānau/ Holoholokū Heiau, also known as Ka Lae o Ka Manu | Holoholokū Heiau was considered a place of refuge and a <i>heiau</i> where royal children were birthed. The <i>heiau</i> conferred a special status to a child born there, while <i>pohaku ho'ohānau</i> (birthing stone) consists of two rocks where the birthing mother would give birth. | Associated with royalty, as well as historic and legendary events and figures | Condition Good, well maintained | Pohaku Ho'ohānau/ Holoholokū Heiau/ Kalaeokamanu | Within Holoholokū (50-30-08-106) or Ka Lae o Ka Manu Heiau | A, B, D for NR A, B, D and E for NR | Already listed in NR as part of Wailua Complex | |
| 20 | 50-30-08-335, Pohaku-kani (Bellstone) | Large boulders that made a ringing sound when struck with a smaller rock or <i>ki</i> leaf which echoed throughout Wailua Valley | Associated with royalty, as well as historic and legendary events and figures | Condition good | Pohaku-kani (Bellstone) | Part of the Wailua Complex | A, B, D for NR A, B, D, and E for HR | Already listed in NR as part of Wailua Complex | |

| | A | B | C | D | E | F | G | H | I |
|----|--|---|---|--|---|---|--|------------------------|---|
| 21 | "King's Highway" or Kuamo'o Road, also traditionally known as "Kuamo'o loa a Kāne" | Traditional route of <i>ali'i</i> , during events such as processions to <i>heiau</i> | Associated with royalty, as well as historic and legendary events and figures | Original integrity extremely compromised by Kuamo'o Road | "King's Highway" or Kuamo'o Road | Begins close to the mouth of the Wailua River and goes upland. Some sources say that "Kuamo'o loa a Kāne" begins two miles from the sea, following the north fork of Wailua River (Joesting 1988:2) | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |
| 22 | Makaīwa surf | A special curving wave rode by royalty | Associated with royalty, as well as historic and legendary events and figures | Surf spot | Makaīwa | Near mouth of Wailua River, or outside Kukui Heiau | A, B for NR A, B and E for HR | Yes. Eligible as a TCP | |
| 23 | Kalehuawehe | Traditional name for Wailua Bay as well as special wave | Associated with royalty, as well as historic and legendary events and figures | Surf spot | Kalehuawehe (Wailua Bay and surf site) | Wailua Bay and surf site is located on the river mouth side of Wailua Bay | A, B for NR A, B and E for HR | Yes. Eligible as a TCP | |
| 24 | 50-30-08-331, Rice Mill | Rice Mill | Historic | Unknown | Rice Mill SHP 50-30-08-331 | North of mouth of Wailua River, <i>maka</i> of Smith's old boat landing | A, D for NR A and D for HR | Yes | |
| 25 | Burial at 310 Apana Road | Burial | Valued by living community for their cultural attachment to <i>iwi kūpuna</i> and historically and culturally significant | Unknown | Burial (according to Mrs Muraoka's interview) | 310 Apana Road, Wailua, Kaua'i | Yes. May qualify as a TCP because of potential to yield information about the past through archaeological investigation and the continuing cultural attachment Native Hawaiians have for their <i>iwi kūpuna</i> | | |
| 26 | Mount Nounou, also known as Sleeping Giant | Mountain | Associated with historic and legendary events and figures | Geologic Feature | Mount Nounou (Ridge) | Kawaihau District, Kaua'i | A, B for NR A, B and E for HR | Yes | |

| | A | B | C | D | E | F | G | H | I |
|----|--|--|---|---|--|---|--|------------------------|---|
| 27 | 50-30-08-761, Burial found in north bank of Wailua River | Burial | Valued by living community for their cultural attachment to <i>iwi kīpuna</i> and historically and culturally significant | Burial was relocated from original site | Burial found in north bank of Wailua River | 4-500' south of Kuamo'o Road | D for NR and D and E for HR | Yes | |
| 28 | 50-30-08-675, Poli'ahu Japanese Cemetery | Cemetery | Valued by living community for their cultural attachment to <i>iwi kīpuna</i> and historically and culturally significant | Moderate condition | Poli'ahu Japanese Cemetery (Buddhist Cemetery) SIHP 50-30-08-675 | Located at east end of Pu'u Ki Ridge above Pōhaku Ho'ehānau and Holoholokā Heiau, southside of Kuamo'o Road | A, C, D for NR A, C, D and E for HR | Yes | |
| 29 | Mauna Kapu or Mount Kapu | Mountain | Associated with historic and legendary events and figures | Geologic Feature | Kūlepa Ridge (Mauna Kapu) | Kawahau District, Kaua'i, Prominent Ridge on the south side of the River | A, B for NR and A, B, D for HR | Yes. Eligible as a TCP | |
| 30 | Wailua River | River, 11.8 miles in length | Associated with royalty, as well as historic and legendary events and figures | Geologic Feature | Wailua River | Starts at Wai'ale'ale crater and ends at the Pacific Ocean, next to Wailua River State Park | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |
| 31 | Kuamo'o Ridge | The ridgeline is associated with the spine of the <i>mo'o</i> , with the head of the <i>mo'o</i> toward Wai'ale'ale and the tail being Wailua Beach. This ridge led <i>ali'i</i> and others on their spiritual journey to honor Kāne on Mt. Wai'ale'ale, where offerings were left on Ka'awakō Heiau | Associated with royalty, as well as historic and legendary events and figures | Geologic and Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | Parallel to Kuamo'o Road, going <i>maka</i> | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |
| 32 | Wailua Beach and Heiau | | Associated with royalty, as well as historic and | Geologic and Cultural Feature | Could contain significant information on early pre-Contact and post-Contact | Near the rivermouth of Wailua River | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |

| | A | B | C | D | E | F | G | H | I |
|----|--------------------------------------|---|---|---------------------------------|--|---|--|-----------------------|---|
| | | | legendary events and figures | | occupation | | | | |
| 33 | Mount Wai'ale'ale and Ka'awakō Heiau | Mount Wai'ale'ale, with its summit Kawaikini, is the highest spot on Kaua'i and literally means "rippling water." On the summit is Ka'awakō Heiau which is traditionally connected and spiritually aligned with the other <i>heiau</i> below, located in Wailuanuiho'āno. Ali'i and their companions visited the <i>heiau</i> on regular occasions, beginning their pilgrimage from the mouth of Wailua River and then onward up a trail known as King's Highway or Kuamo'o Ima a Kane. A gift like <i>'awa</i> (<i>Piper methysticum</i>) was borne and dragged up the steep cliff and placed on Ka'awakō Heiau as an offering | Associated with royalty, as well as historic and legendary events and figures | Geographic and Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | Mount Wai'ale'ale is the location of the highest peak in Kaua'i. The <i>heiau</i> is on the summit of Mt. Wai'ale'ale | A, B, D for NR A, B, D and E for HR | Yes Eligible as a TCP | |

| | A | B | C | D | E | F | G | H | I |
|----|--|--|---|---------------------------------|--|--|---|-----------------------------|---|
| 34 | Kamuali'i Park | Once owned by King Kamuali'i | Treasured by <i>ali'i</i> most likely even before King Kamuali'i's reign and valued by the living community | Geographic and Cultural feature | Could contain significant information on early pre-Contact and post-Contact occupation | Across Coco Palms Resort, along Kuamo'o Road, on Wailua State Park | A, B, C, D for NR A, B, D and E for HR | Yes. Also eligible as a TCP | |
| 35 | 50-30-08-104A Adze Workshop/Flake Scatter | Located within the heiau area | Valued by living community and historically and culturally significant | Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | In cane field north and northeast of Mālae Heiau to road to marina. Within 9.49 acre Mālae Heiau and buffer parcel in State Park | A, B, D for NR A, B, D and E for HR | Yes | |
| 36 | 50-30-08-677 Two Lava Tubes | No cultural material observed but traditional use likely | Valued by living community and historically and culturally significant | Geologic and Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | Just S of Kuamo'o Road in the north side of Pu'u KI 100 m west of Pōhaku He'ohānau | A, B, D for NR A, B, D and E for HR | Yes | |
| 37 | 50-30-08-678 Terrace | Modest alignment on top of ridge | Valued by living community and historically and culturally significant | Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | Central Pu'u KI summit ridge | A, B, D for NR A, B, D and E for HR | Yes | |
| 38 | 50-30-08-756 Terrace | In State Park, 30 m by 12 m-further archaeological work indicated | Valued by living community and historically and culturally significant | Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | North bank of Wailua River | A, B, D for NR A, B, D and E for HR | Yes | |
| 39 | 50-30-08-343 Kula | Virtually no data, size unclear, further work in area indicated; in State Park | Valued by living community and historically and culturally significant | Geologic and Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | South side of <i>makai</i> portion of Wailua River | | Yes | |
| 40 | 50-30-08-342 Agricultural Flat | Agricultural flat "appears as rice land on Monsarrat's map of 1900 and Wall's map of 1923". Virtually no data. | Valued by living community and historically and culturally significant | Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | North of <i>makai</i> portion of Wailua River | | Yes | |

| | A | B | C | D | E | F | G | H | I |
|----|---|--|---|------------------|--|--|--|------------------------|---|
| | | size unclear, further work in area indicated; in State Park | | | | | | | |
| 41 | 50-30-08-676 Alignments and Enclosures | Greatly modified as a contemporary sacred site – possibly former <i>heiau</i> | Valued by living community and historically and culturally significant | Cultural Feature | Could contain significant information on early pre-Contact and post-Contact occupation | | A, B, D for NR A, B, D and E for HR | Yes | |
| 42 | Trail Remnant | Possible extension of King's Highway. Trail obscured by Kāhio Highway and bike path wall | Associated with royalty, as well as historic and legendary events and figures | Integrity is low | "King's Highway" or Kuamo'o Road | Close to the Kāhio Highway on the south side of Wailua River | A, B, D for NR A, B, D and E for HR | Yes. Eligible as a TCP | |



U.S. Department
of Transportation
**Federal Highway
Administration**

Hawaii Federal-Aid Division

July 2, 2012

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Honolulu, HI 96850
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In Reply Refer To:
HDA-HI

Mr. William J. Aila, Jr.
Chairperson and State Historic Preservation Officer
State of Hawaii, Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, HI 96707

Dear Mr. Aila:

**Subject: Kuhio Highway Short Term Improvements, Kuamo'o Road to Temporary Bypass Road
Section 106 of the National Historic Preservation Act
Identification of Historic Properties Affected and Notification of Adverse Effect
Wailua and South Olohena Ahupuaa
Puna and Ko'olau Districts, Island of Kauai
Federal Aid Project No.: NH-056-1(50)**

The State of Hawaii, Department of Transportation (DOT), Highways Division is proposing to implement the Kuhio Highway Short-Term Improvements Project which is located in Wailua on the Island of Kauai. The Federal Highway Administration (FHWA) is proposing to authorize construction of this undertaking.

This letter with attachments is being submitted to document consultation efforts conducted for this undertaking pursuant to Section 106 of the National Historic Preservation Act (NHPA) and the Advisory Council on Historic Preservation's (ACHP) regulations for Protection of Historic Properties (36 CFR, Part 800). We have identified historic properties in the subject project's Area of Potential Effect (APE) and applied the criteria of effect based upon 36 CFR §800 for the proposed undertaking, and have determined that it will have an "adverse effect" on historic properties. We have outlined our reasoning in the following paragraphs and request your concurrence with the proposed "adverse effect" determinations for this project.

The §106 process identified Wailuanuiho'ano as a traditional cultural property (TCP); Wailuanuiho'ano is described in the *Section 106 Consultation and Survey of Potentially Eligible Traditional Cultural Properties in Wailua Kai, Kauai* prepared for this project by Cultural Surveys Hawaii (enclosed). We have identified the project APE as being within and a portion of Wailuanuiho'ano. Consultation efforts and studies conducted in accordance with 36 CFR §800 resulted also in the identification of three known archeological resources within the APE that would be negatively affected by the project improvements. The historic resources

identified within the APE are:

1. SIHP #50-30-08-1711 Cultural Layer
2. SIHP #50-30-08-3962 Cultural Layer
3. SIHP #50-30-08-2158 Ditch/Auwai

These resources are identified and described in the *Archaeological Inventory Survey for the State DOT Kuhio Highway Short-Term Improvement Project, Wailua Ahupua'a, Kawaihau District, Island of Kaua'i* (enclosed) prepared for this project by Cultural Surveys Hawaii. The subsurface impacts associated with the current project will have an "adverse affect" on these properties.

Wailuanuiāho'āno, also known as Wailua Kai, is a highly important spiritual place for many Hawaiians. As a testament to the significance of Wailua, there is a wealth of mo'olelo (history, story, legend, myth), oli (chant), and other Native Hawaiian folklore genres related to the area. Wailuanuiāho'āno is eligible for inclusion in the National Register because it meets the criteria for inclusion in the National Register as a property of religious and cultural significance to Native Hawaiian Organizations.

In regards to integrity, the numerous individual elements, especially the Wailua Complex of Heiau National Historic Landmark, which consist of five discontinuous properties, constitute a cultural and religious setting, that despite the development within the TCP, still retain the character of the place in which the TCP played its historic role. Nowhere else in the Hawaiian islands are there four major religious monuments (Mālaeha'akoa Heiau, Hikinaakalā Heiau/Pu'uhonuo o Hauola, Poli'ahu Heiau, and Pohakū Ho'ohānau/Holoholokū Heiau) that are preserved, visually integrated in the landscape, and are all tied together by a common geographical feature, the Wailua River.

FHWA has determined that this project will have an "adverse effect" on the Wailuanuiāho'āno TCP. This project will have direct impacts on the three archeological sites that are within the APE of the project and contribute to the TCP. However, the adverse impacts to the archeological resources will not diminish the integrity of the TCP's location, design, setting, materials, workmanship, feeling, or association beyond the impacts to the archeological elements. The project will not increase traffic demand in the area but relieve roadway congestion. The details of the adverse effect to the archeological resources are as follows:

1. Impact to SIHPs #50-30-08-1711, #50-30-08-3962, and #50-30-08-2158. The project has a direct physical impact to the above three archeological resources. Widening of Kuhio Highway will directly impact the cultural layers of the first two sites while improvement of Kuamo'o Road will impact both the sediments and wall remnant of the third site. FHWA has concluded that these identified resources are important chiefly because of what can be learned by data recovery and they have minimal value for preservation in place. Because these three sites are elements that contribute to the TCP, the adverse effect on these sites is also an adverse effect on the TCP.
2. "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design,

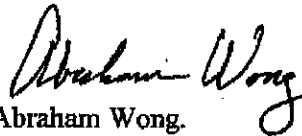
setting, materials, workmanship, feeling, or association."¹ The project is altering archeological resources of the TCP that contribute to its eligibility for the National Register. While it can be argued that the project is altering both the characteristics and integrity of the TCP, the project is impacting a small and limited part of an already compromised area within the APE. However, per 36 CFR 800.5(a)(1), this is considered an adverse effect on the TCP.

In summary, the project will have an adverse effect on the three archeological elements discussed above with a resultant adverse effect on the Wailuanuiaho'āno TCP.

We request your concurrence with the proposed "adverse effect" determinations for this project. Enclosed for your review is documentation supporting this determination. This documentation was prepared based in part upon your department's guidelines for Section 106 submissions.

We would greatly appreciate your response within 30 days of receipt of this letter. If you have any questions or comment regarding this consultation request, please contact John Nickelson at 541-2304.

Sincerely yours,


Abraham Wong.
Division Administrator

Enclosure: Kuhio Highways Short Term Improvements Project – Consultation Under Section 106 of the National Historic Preservation Act
NHO Consultation Appendices
Archaeological Inventory Survey for the State DOT Kuhio Highway Short-Term Improvement Project, Wailua Ahupua'a, Kawaihau District, Island of Kaua'i
Section 106 Consultation and Survey of Potentially Eligible Traditional Cultural Properties in Wailua Kai, Kaua'i.

cc: Advisory Council on Historic Preservation
NHOs

¹ 36 CFR 800.5(a)(1)



U.S. Department
of Transportation
**Federal Highway
Administration**

Hawaii Federal-Aid Division

July 25, 2012

FILE COPY

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In Reply Refer To:
HDA-HI

Ms. Carol Legard
Advisory Council on Historic Preservation (ACHP)
Old Post Office Building
1100 Pennsylvania Avenue, NW, Suite 809
Washington, D.C. 20004

Subject: Kuhio Highway Short-Term Improvements, Kuamo'o Road to Temporary Bypass Road
Section 106 of the National Historic Preservation Act (NHPA)
Identification of Historic Properties Affected and Notification of Adverse Effect
Wailua and South Olohena Ahupuaa
Puna and Ko'olau Districts, Island of Kauai
Federal Aid Project No.: NH-056-1(50)

Dear Ms. Legard:

The Federal Highway Administration (FHWA) requests your participation in consultation regarding a Traditional Cultural Property (TCP) that we have determined may be eligible for the National Register of Historic Places (National Register) and will be adversely affected by the planned Kuhio Highway Short-Term Improvements Project (Project), which is located in Wailua on the Island of Kaua'i. The Hawaii Department of Transportation, Highways Division (HDOT), is proposing to implement the Project. The FHWA is proposing to authorize construction of this undertaking.

This letter with enclosures is provided to document consultation efforts conducted for this undertaking pursuant to Section 106 of the NHPA and the Advisory Council on Historic Preservation's (ACHP) regulations for Protection of Historic Properties (36 CFR, Part 800). We have identified historic properties in the subject project's area of potential effects (APE), applied the criteria of effects based upon 36 CFR §800 for the proposed undertaking, and have determined that it will have an "adverse effect" on historic properties, including the TCP. We have outlined our reasoning in the following paragraphs and wish to know your interest in consultation concerning this project.

Through the Section 106 consultation process, Wailuanuiho'āno was identified as a TCP. Wailuanuiho'āno is described in the *Section 106 Consultation and Survey of Potentially Eligible Traditional Cultural Properties in Wailua Kai, Kaua'i* prepared for this project by Cultural Surveys Hawaii (enclosed). We have identified the project APE as being within and a portion of Wailuanuiho'āno. Consultation efforts and studies conducted in accordance with 36 CFR §800 also resulted in the identification of three known archeological resources within the

APE that would be negatively affected by the project improvements. The historic resources identified within the APE are:

1. SIHP #50-30-08-1711 Cultural Layer
2. SIHP #50-30-08-3962 Cultural Layer
3. SIHP #50-30-08-2158 Ditch/Auwai

These resources are identified and described in the *Archaeological Inventory Survey for the State DOT Kuhio Highway Short-Term Improvement Project, Wailua Ahupua'a, Kawaihau District, Island of Kaua'i* (enclosed) prepared for this project by Cultural Surveys Hawaii. The subsurface impacts associated with the current project will have an "adverse affect" on these properties.

Wailuanuiaho'āno, also known as Wailua Kai, is a highly important spiritual place for many Hawaiians. As a testament to the significance of Wailua, there is a wealth of mo'olelo (history, story, legend, myth), oli (chant), and other Native Hawaiian folklore genres related to the area. Wailuanuiaho'āno is eligible for inclusion in the National Register because it meets the criteria for inclusion as a property of religious and cultural significance to Native Hawaiian organizations.

In regards to integrity, the numerous individual elements, especially the Wailua Complex of Heiau National Historic Landmark, which consist of five discontinuous properties, constitute a cultural and religious setting, that despite the development within the TCP, still retain the character of the place in which the TCP played its historic role. Nowhere else in the Hawaiian islands are there four major religious monuments (Mālaeha'akoa Heiau, Hikinaakalā Heiau/Pu'uhonuo o Hauola, Poli'ahu Heiau, and Pohakū Ho'ohānau/Holoholokū Heiau) that are preserved, visually integrated in the landscape, and are all tied together by a common geographical feature, the Wailua River.

The FHWA has determined that this project will have an "adverse effect" on the Wailuanuiaho'āno TCP. This project will have direct impacts on the three archeological sites that are within the APE of the project and contribute to the TCP. However, the adverse impacts to the archeological resources will not diminish the integrity of the TCP's location, design, setting, materials, workmanship, feeling, or association beyond the impacts to the archeological elements. The project will not increase traffic demand in the area but relieve roadway congestion. The details of the adverse effect to the archeological resources are as follows:

1. Impact to SIHPs #50-30-08-1711, #50-30-08-3962, and #50-30-08-2158. The project has a direct physical impact to the above three archeological resources. Widening of Kuhio Highway will directly impact the cultural layers of the first two sites, while improvement of Kuamo'o Road will impact both the sediments and wall remnant of the third site. The FHWA has concluded that these identified resources are important mainly because of what can be learned by data recovery and they have minimal value for preservation in place. Because these three sites are elements that contribute to the TCP, the adverse effect on these sites is also an adverse effect on the TCP.
2. "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."¹ The project is altering

¹ 36 CFR 800.5(a)(1)

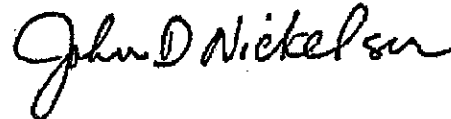
archeological resources of the TCP that contribute to its eligibility for the National Register. While it can be argued that the project is altering both the characteristics and integrity of the TCP, the project is impacting a small and limited part of an already compromised area within the APE. However, per 36 CFR 800.5(a)(1), this is considered an adverse effect on the TCP.

In summary, the project will have an adverse effect on the three archeological elements discussed above with a resultant adverse effect on the Wailuanuiāho'āno TCP. This documentation was prepared based in part upon National Parks Service guidelines for Section 106 submissions. In accordance with 36 CFR 800.6(a)(1), we are inviting the ACHP to participate in the consultation process to resolve the adverse effects of this undertaking on historic properties.

A Memorandum of Agreement (MOA) will be prepared for execution that outlines actions to be taken (mitigation measures) to ensure documentation and protection of historic properties found within the highway corridor. In addition, the MOA shall stipulate specific actions to be taken to mitigate potential impacts to historic properties.

Please advise us within 15 days of receipt of this notice whether the ACHP will participate in the consultation process. Thank you for your consideration. If you have any questions or comment regarding this consultation request, please contact me at 541-2304.

Sincerely Yours,

A handwritten signature in black ink that reads "John D. Nickelson". The signature is written in a cursive, flowing style.

John D. Nickelson, P.E.
Civil Engineer

Enclosures

cc: Hawaii Department of Transportation

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSIONER ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAPOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

March 16, 2009

Mr. David Schideler
Cultural Surveys Hawai'i
P. O. Box 1114
Kailua, Hawai'i 96734

LOG NO: 2009.1329
DOC NO: 0903 WT117
Archaeology

Dear Mr. Shideler:

**SUBJECT: National Historic Preservation Act – Section 106 Review—
FINAL Archaeological Monitoring Plan for the Proposed Kūhiō Highway Short –
Term Improvements – Kuamo'o Road to the Temporary Kapa'a Bypass Road
Project,
Wailua Ahupua'a, Puna District, Kaua'i
TMK: (4) 4-1-003: 017, 039, 044 and 4-3-002: 006 por.**

Thank you for providing the opportunity to review this Final Archaeological Monitoring Plan (AMP) (FINAL *Archaeological Monitoring Plan for the Proposed Kūhiō Highway Short-Term Improvements – Kuamo'o Road to the Temporary Kapa'a Bypass Road Project, Wailua Ahupua'a, Puna District, Kaua'i* TMK: (4) 4-1-003: 017, 039, 044 and 4-3-002: 006 por. [Goza and Schideler MA, March 2009]) which we received on March 10, 2009.

This project is the creation of short-term improvements to the Kūhiō Highway between Kuamo'o Road on the south and the Temporary Kapa'a Bypass Road on the north. The project area is located in an archaeologically sensitive area fronting the Coco Palms Resort where previous archaeological inventory surveys recorded a widely dispersed buried cultural layer and numerous human burials on the grounds of the resort. These findings were the impetus behind the request from this office to develop this AMP (LOG NO: 2007.2373/DOC NO: 0707NM35 and LOG NO: 2007.1399/DOC NO: 0708NM20).

We requested revisions including the checking of references so that all match throughout the body of the report and in the References Cited Section and the revision of the Background Summary and the Predictive Model Section. These revisions have been made.

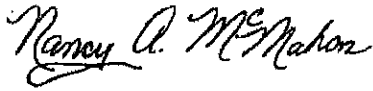
This AMP is accepted and meets the minimum requirements for compliance under HRS and Hawaii Administrative Rules (HAR) §13-13-279: *Rules Governing Standards for Archaeological Monitoring Studies and Reports*.

As this monitoring plan has received final acceptance, and we are in receipt of a hard copy, we will mark this document as FINAL and place in our library. Please send a copy of this review letter and a text-searchable PDF version on CD to the attention of Wendy Tolleson and the "SHPD Library" at the Kapolei SHPD office.

Please contact Wendy Tolleson at (808) 692-8024 if you have any questions or concerns regarding this letter.

Mr. David Schideler
Page 2

Aloha,

A handwritten signature in cursive script that reads "Nancy A. McMahon". The signature is written in dark ink and is positioned above the printed name.

Nancy A. McMahon (Deputy SHPO)
State Historic Preservation Officer

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

LAURA E. THIELER
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RUSSELL Y. TSUJI
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HISTORIC PRESERVATION
KANDOLAWE ISLAND RESERVE COMMISSION
LAND
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April 6, 2009

Mr. David Shideler
Cultural Surveys Hawai'i
P. O. Box 1114
Kailua, Hawai'i 96736

LOG NO: 2009.1375
DOC NO: 0904WT34
Archaeology

Dear Mr. Shideler:

**SUBJECT: Section 106 National Historic Preservation Act (NHPA) Review--
Addendum to: Archaeological Monitoring Plan--
For the Proposed Kūhiō Highway Short-Term Improvements--Kuamo'o Road to
the Temporary Kapa'a Bypass Road Project,
Wailua Ahupua'a, Puna District, Kaua'i, Hawai'i
TMK: (4) 4-1-003: 017, 039, 044 and 4-3-002: por. 006**

Thank you for providing us the opportunity to review this Addendum to the Archaeological Monitoring Plan (AMP), (*Addendum to: Archaeological Monitoring Plan For the Proposed Kūhiō Highway Short-Term Improvements--Kuamo'o Road to the Temporary Kapa'a Bypass Road Project, Wailua Ahupua'a, Puna District, Kaua'i, Hawai'i, TMK: (4) 4-1-003: 017, 039, 044 and 4-3-002: por. 006 [Goza, Shideler and Hammatt, PhD, March 2009]*) which we received on March 13, 2009.

The original AMP (*Archaeological Monitoring Plan for the Proposed Kūhiō Highway Short-Term Improvement--Kuamo'o Road to the Temporary Kapa'a Bypass Road, Wailua Ahupua'a, Puna District, Kaua'i TMK: [4] 4-1-003: 017, 039, 044 and 4-3-002: por. 006 [Goza et al, 2009]*) concerns monitoring recommendations for approximately 0.66 miles (1,066.8) of Kūhiō Highway north of Kuamo'o Road.

This addendum plan for Kaua'i County and the State Department of Transportation contains recommendations for work within an additional 0.84 miles (1,351.8) of Kūhiō Highway south of Kuamo'o Road. The entire current project is a 1.5 miles (2348 meter) section of Kūhiō Highway. The project will involve geotechnical testing via boring approximately every 500 feet for a proposed underground electrical alignment. Testing will be conducted within a narrow strip on either the *mauka* or *makai* side of the highway.

Historic properties recorded north of the Wailua River include a traditional Hawaiian burial ground, an isolated historic burial, and pre-contact Hawaiian and historic cultural deposits adjacent to the Coco Palm Resort grounds. While subsurface archaeological testing within and just *mauka* of this portion of the project area revealed fill soils, human burials or intact cultural materials may be encountered during project activities. Historic properties recorded south of the Wailua River are the Malae Heiau (SIHP #50-30-08-104 and listed on the State and National Registers) which lies approximately 90 meters west of Kūhiō Highway. Some subsurface archeological testing has been conducted within the vicinity of this portion of the project area and indicates fill or clay soils, however, this portion of Kūhiō Highway extends through LCA 3567.

Because of the possibility of disturbing historic properties, on-site monitoring is recommended for all ground disturbance activities north of the Wailua River. On-site monitoring is also recommended for any

Dr. David Shideler

Page 2

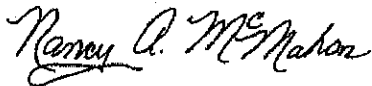
ground disturbance within 100 m. of Malae Heiau to ensure avoidance of SIHP #50-30-08-5014 (the rock wall) mauka of Kūhiō Highway and Malae Heiau. On site monitoring is also recommended within 1,500 feet of the northern portion of Leho Drive. Finally, on-call monitoring is recommended for all ground disturbance activities of the northern portion of Leho Drive.

This DRAFT Addendum AMP is accepted and meets the minimum standards for compliance under the Hawai'i Administrative Rules (HAR) §13-13-279 *Rules Governing Standards for Archaeological Monitoring Studies and Reports*.

Please send a hardcopy clearly marked FINAL, as well as a text-searchable PDF version on CD along with a copy of this review letter to the attention of Wendy Tolleson and "SHPD Library" at the Kapolei SHPD office.

Please contact Wendy Tolleson at (808) 692-8024 if you have any questions or concerns regarding this letter.

Aloha,

A handwritten signature in cursive script that reads "Nancy A. McMahon".

Nancy A. McMahon (Deputy SHPO)
State Historic Preservation Officer

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
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LAURA K. TIDELIN
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CONSERVATION AND RESOURCES INTERAGENCY
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HISTORIC PRESERVATION
KAHOLAWE ISLAND RESERVE COMMISSION
LAND
STATISTICS

March 10, 2010

Mr. David Shideler
Cultural Surveys Hawai'i
P.O. Box 1114
Kailua, Hawai'i 96734

LOG NO: 2010.0392
DOC NO: 1003NM19
Archaeology

Dear Mr. Shideler:

SUBJECT: Chapter 6E-8 Historic Preservation Review -
Second Addendum to Archaeological Monitoring Plan for the Proposed Kuhio Hwy
Short-Term Improvements Kuamo'o Road To Temporary Kapaa Bypass Road
Wailua Ahupua'a, Puna District, O'ahu
TMK: (4) 3-9-002: 000

Thank you for the opportunity to review the above Draft Second Addendum to the *Archaeological Monitoring Plan for the Proposed Kuhio Hwy Short-Term Improvements to Kuamoos Road to Temporary Kapaa Bypass Road, Wailua Ahupuaa, Puna District, Kauai TMK 4-1-003: por and 05; 3-9-002 por & 006 por; 3-001 por 10 (Groza, Shideler and Hammatt, CSH, January 2010)* which we received on February 2, 2010.

This *DRAFT Archaeological Monitoring* sets out protocols for archaeological monitoring of this undertaking as mitigation for possible effects to historic properties. We again suggest trying to address research question in your monitoring work.

This AMP is accepted, and meets the minimum requirements of Hawaii Administrative Rules, §13-279 *Rules Governing Standards for Archaeological Monitoring Studies and Reports*. Please send a bound hardcopy with the word FINAL in the title and a pdf searchable version on CD, with a copy of this letter attached, to the SHPD library at Kapolei,

Aloha,

Nancy McMahon, Deputy SHPO/State Archaeologist
and Historic Preservation Manager

Attachment F

Water Quality Monitoring and Assessment Program for the Proposed
Culvert Extension Kuhio Highway Short-Term Improvements, Kuamoo
Road to Temporary Bypass Road
Wailua, Kauai, Hawaii
Prepared by AECOS, Inc.
April 27, 2009

(Not included- HDOT to use Streamline WQC – part of HDOT SOP)

Attachment G

Biological and Water Quality Surveys of Kaloko Marsh at Kuhio
Highway, Wailua, Kauai
Prepared by AECOS, Inc.
May 12, 2009

Biological and water quality surveys of Kaloko Marsh at Kūhio Highway, Wailua, Kauaʻi



Photo Credit: Laura Mau, WOA

Prepared by:

AECOS Inc.
45-939 Kamehameha Hwy, Suite 104
Kāneʻohe, Hawaiʻi 96744-3221

May 12, 2009

Biological and water quality surveys of Kaloko Marsh at Kūhio Highway, Wailua, Kauaʻi.

May 12, 2009

AECOS No. 1155A

Chad Linebaugh, Eric Guinther, and Reginald David¹
AECOS, Inc.

45-939 Kamehameha Hwy, Suite 104

Kāneʻohe, Hawaiʻi 96744

Phone: (808) 234-7770 Fax: (808) 234-7775 Email: aecos@aecos.com

Introduction

On February 16, March 9, 10, and 11, 2009, AECOS, Inc. biologists conducted water quality and biological reconnaissance surveys of the highway edge of Kaloko Marsh in Wailua, Kauai (Fig. 1). The State Department of Transportation (HDOT) is planning to widen a segment of Kūhio Highway (state Rte. 56) from Kuamoʻo Rd to the Kapaʻa Bypass Road as part of the Kūhio Highway Short Term Improvement Project. This segment of Kūhio Hwy. borders Kaloko Marsh, and connects via culvert under the highway to a drainage swale that originates at nearby Papaloa Road. The culvert crosses under the highway approximately 400 ft (120 m) southwest of the intersection with the Kapaʻa Bypass Road. AECOS, Inc. was contracted by Wilson Okamoto and Associates, Inc. to ascertain biological resources and assess water quality of the waterway for permitting of the construction project. This report details the findings of the surveys.

Waterway Description

The waterway under the highway is part of a drainage swale that extends from Papaloa Road to Kaloko Marsh, a distance of about 400 ft (0.12 km). The drainage swale normally drains into Kaloko Marsh, located on the mauka (west) side of Kūhio Highway. At the proposed project site this ditch or swale is only some 10 ft (3 m) in width and overgrown with grasses and ruderal weeds². It is likely that high water level in the marsh results in water backing up in the opposite direction (mauka to makai) through the culvert structure. Although

¹ Rana Productions, Ltd., Kailua-Kona, Hawaiʻi.

² Because of construction ongoing on the parcel south of the culvert, conditions in the this swale have regularly changed over the period of time of our studies.

not observed, high water could seep seaward (makai direction) since Papaloa Road is on the order of 600-700 ft (0.2 km) inland from the windward shore of Wailua Bay; old dunes may be the reason the land here has a gentle slope downward away from the coast, and dunes are generally highly permeable to groundwater movement.



Figure 1. The proposed project location in Wailua, Kauai.

The marsh itself appears to “naturally” drain to the northeast (roughly parallel to the highway on the mauka side). At least the historical flow was northeast from the project area for some 700 ft (213 m) into the Waipouli Reservoir, and continuing northeast for 2700 ft (820 m), then 1450 ft (440 m) southeast to the Pacific Ocean at Waipouli, some 4250 ft (1.3 km) distant of the project site. However, the culvert pipe beneath Kapa‘a Bypass Road has been filled with concrete, preventing outflow in this direction.

It is possible that another outlet for this wetland exists somewhere, perhaps in the southwest direction as there is a drainage ditch beyond Hale‘ilio Road in this direction (behind the former Coco Palms Resort), but no such connection was found. The drainage pattern in this area is complicated by the fact that the marsh itself is not a single large depressed area, but is divided by a substantial farm road (old cane haul road) that parallels Kūhio Hwy some 200 ft (0.06 km) inland. A culvert beneath this unimproved road permits the interchange of surface water between the two parts of the marsh.

Methods

AECOS, Inc. biologists took water quality field measurements, collected water samples for laboratory analyses, and identified aquatic biota present at the proposed project site. Field measurements for temperature, dissolved oxygen, and pH were measured directly from the project waterway near the culvert opening on the makai side of Kūhio Hwy (Fig. 2). Samples collected for laboratory analysis were shipped to *AECOS*, Inc. laboratory in Kāneʻohe, Oʻahu (*AECOS* Log Nos. 25067, 25095, 25096). The aquatic resource survey area included observations on both sides of Kūhio Hwy.



Figure 2. Water quality sampling site (Station Hwy) on makai side of culvert under Kūhio Hwy.

Water Quality

Only isolated pools of water were present in the project waterway during the survey. No actual flow was evident. The largest pool of water was located on the southeast (makai) side of Kūhio Highway approximately 10 ft (3 m) from the culvert. A single water quality station, “Hwy,” was established and sampled from this pool on March 9, 10, and 11, 2009. Results are displayed in Table 1.

Table 1. Water quality characteristics of a pool in the project waterway on March 9, 10, and 11, 2009.

| Station | Time | Temp. | pH | Dissolved Oxygen | D.O. % Sat. | Cond. |
|-------------------|-----------|-------------|-------------|-------------------|-------------|------------|
| | hhmm | (°C) | (pH units) | (mg/l) | (%) | (µmhos/cm) |
| Hwy. (3-9-09) | 1515 | 21.5 | 6.41 | 1.60 | 18 | 326 |
| Hwy. (3-10-09) | 1701 | 21.9 | 6.73 | 1.42 | 16 | 311 |
| Hwy. (3-11-09) | 1729 | 21.4 | 6.52 | 2.12 | 24 | 331 |
| Arth. Mean | -- | 21.6 | 6.55 | 1.71 | 19 | 323 |
| | TSS | Turbidity | Ammonia | Nitrate + nitrite | Total N | Total P |
| | (mg/l) | (ntu) | (µg N/l) | (µg N/l) | (µg N/l) | (µg P/l) |
| Hwy. (3-9-09) | 38 | 77.0 | 70 | 374 | 1050 | 165 |
| Hwy. (3-10-09) | 25 | 51.5 | 58 | 206 | 862 | 173 |
| Hwy. (3-11-09) | 24 | 39.0 | 80 | 113 | 714 | 118 |
| Geo. Mean | 28 | 54 | 69 | 206 | 866 | 150 |

Conductivity results indicate fresh water with no influence from brackish groundwater. Dissolved oxygen concentrations in the project waterway were low with saturation averaging 19%. Turbidity levels and total suspended solids (TSS) concentrations were high, reflecting the poor underwater visibility at the time of sampling. Elevated ammonia concentrations, like those found at Sta. Hwy, are typical of waterways with sluggish or stagnant flow due to an accumulation and then decomposition of organic matter. Nitrate-nitrite, total nitrogen and total phosphorus levels were also high here.

Aquatic Biota

The culvert under Kūhio Hwy. opens (on the mauka side) into Kaloko Marsh, which in this area is a depression completely covered by the aggressive, introduced grass known as para or California grass (*Urochloa mutica*; see Fig. 3). The marsh itself shows no open water areas other than at the culvert under the highway and the culvert under the old cane haul road.

The Kaloko wetland was previously surveyed by Char (2003a), but included in the general descriptions of the numerous small and large wetlands that dot this part of the Kaua'i coastal plain. Her report discusses the predominance of California grass in the "fresh water influenced" wetlands of this area (other nearby wetlands are "brackish water influenced"). More specific information appears in Char (2003b), which notes that the "wetland is bisected by a dirt road" and "[t]he makai half by the highway is covered by tall, dense mats of California grass..." and with a "dark, black organic soil."



Figure 3. Kaloko Marsh showing the makai portion overgrown with California grass. Houses in background are along the makai side of Kūhio Highway.

The vertebrate zoologist did not conduct any avian or mammalian surveys within either section of the Kaloko wetland. However, one native avian species, Black-crowned Night-Heron (*Nycticorax nycticorax*), was observed to fly out of the inland portion of the wetland. No aquatic organisms (fishes, invertebrates) were observed in the waterway at the project site on any of the several visits to the culvert area.

Given the highly overgrown state of the makai portion of this wetland feature, it is unlikely that it is currently usable by native wetland avian species. The inland section may provide resources that are used by three listed waterbird species, Hawaiian Coot, (*Fulica alai*), Common Moorhen (*Gallinula chloropus sandvicensis*), and occasionally Hawaiian Duck (*Anas wyvilliana*), on a seasonal

basis, as all three of these species have been recorded in wetland areas found to the north of the site. Char (2003b) noted that the inland portion (that part mauka of the cane haul road) was grazed, whereas the makai portion was not grazed, and thus more overgrown, eliminating any open water.

Assessment

The proposed project waterway is an approximately 800 ft (245 m) long ditch (drainage swale) that typically contains little water except for instances following heavy local precipitation. During these events, water may pond in the vicinity of the Kūhio Highway culvert. Nitrogen (total nitrogen and nitrate-nitrite), ammonia, phosphorus (total phosphorus), turbidity and total suspended solids concentrations were all elevated with respect to State of Hawai'i water quality standards for inland waters and do not meet geometric mean criteria (see Table 2), although given the short span of time samples were collected over, the representativeness of the means may be questionable. On the other hand, except during rainy periods, water may be absent from the makai end of the highway culvert.

Table 2. State of Hawai'i water quality criteria for inland waters/streams during wet season (November 1 through April 30) from HAR §11-54-05.2d (HDOH, 2004).

| Parameter units | TSS (mg/l) | Turbidity (NTU) | Total Nitrogen (µg N/l) | Nitrate + Nitrite (µg N/l) | Total Phosphorus (µg P/l) |
|--|---------------|--------------------|-------------------------------|----------------------------------|---------------------------------|
| Geometric mean not to exceed given value | 20 | 5 | 250 | 70 | 50 |
| Value not to be exceeded more than 10% of the time | 50 | 15 | 520 | 180 | 100 |
| Value not to be exceeded more than 2% of the time | 80 | 25 | 800 | 300 | 150 |

- pH – shall not deviate more than 0.5 units from ambient and not be lower than 5.5 nor higher than 8.0.
- Dissolved oxygen – not less than 80% saturation.
- Temperature – shall not vary more than 1 °C from ambient.

The waterway does not currently support aquatic biota, therefore no federally endangered or threatened species (Federal Register, 2005; USFWS, 2005) were

encountered during the surveys, and none is anticipated to utilize aquatic habitats in the project area. A Best Management Practices (BMP) plan should be designed and implemented to minimize environmental impacts to water quality of the project waterway in the vicinity of the project site.

References

- Char, W. P. 2003a. Botanical survey, Kapa'a Relief Route, Kuhio Highway Corridor Improvements: Hanama'ulu to Kapa'a. Prep. for Kimura International, Inc. 9 pp.
- _____. 2003b. Data worksheet dated March 3, 2006 for Kaloko wetland delineation. Prep. for Kimura International, Inc. 9 pp. as provided.
- Federal Register. 2005. Department of the Interior, Fish and Wildlife Service, 50 CFR 17. Endangered and Threatened Wildlife and Plants. Review of Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petition; Annual Description of Progress on Listing Actions. *Federal Register*, 70 No. 90 (Wednesday, May 11, 2005): 24870-24934.
- Hawai'i Department of Health (HDOH). 2004. Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 54, Water Quality Standards. 62 pp.
- U.S. Fish & Wildlife Service (USFWS). 2005. Endangered and Threatened Wildlife and Plants. 50CFR 17:11 and 17:12.

Attachment H

Email dated September 8, 2009 regarding Compensatory Wetland Mitigation

Brian A. Lock

From: Brian A. Lock
Sent: Tuesday, September 08, 2009 4:16 PM
To: 'jiaping.fouse@doh.hawaii.gov'; 'Seto, Joanna L'
Cc: 'Darell.Young@hawaii.gov'; 'Holly.Yamauchi@hawaii.gov'; 'Meyer, Susan A SPL'; Ronald Sato; Laura Mau
Subject: Updated: Kuhio Highway - WQC File No. WQC 0000769
Attachments: 090908 COE WOC Kuhio Hwy No Compensatory Wetland Mitigation.pdf

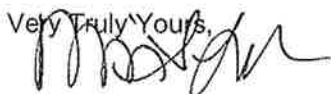
Dear Ms. Fouse and Ms. Seto,

As requested by Ms. Fouse to Ms. Laura Mau during their telephone call on Friday, Sept. 4, we are forwarding the attached email as received today from the Department of the Army Corps of Engineers confirming that compensatory wetland mitigation will not be required for the project. We will submit a signed, dated hard copy of this e-mail. Per Ms. Fouse, a hardcopy of the attachment will suffice and, therefore, precludes the need for a CD with this submittal.

Ms. Fouse has confirmed that there are no other outstanding items required to process the subject application. We appreciate Ms. Fouse's time and attention in processing the WQC approval for the project. Please contact me at 946.2277 or by e-mail should you have any questions or need additional information.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Very Truly Yours,



SEPT. 08, 2009

Brian Lock
Wilson Okamoto Corporation

9/8/2009

Laura Mau

From: Meyer, Susan A SPL [Susan.A.Meyer@usace.army.mil]
Sent: Tuesday, September 08, 2009 9:37 AM
To: Laura Mau
Cc: Phung, Pat; Darell.Young@hawaii.gov
Subject: Kuhio Hwy. Short-Term Improvements Project -- POH-2007-000280

Laura,

This email serves to provide clarification on the need for compensatory mitigation for unavoidable impacts to waters of the United States as a result of the implementation of the subject project. As the Corps works towards issuance of a NWP 14 verification letter, we have determined that compensatory mitigation for the 0.05-acre permanent loss of low quality wetlands located adjacent to the existing highway is not warranted. More specifically, in consideration of the NWP general conditions, our April 2008 Compensatory Mitigation Rule, site-specific biological information, comments received from Federal resource agencies in response to our PCN, and our best professional judgment we have determined that compensatory mitigation is not needed in this case to ensure minimal individual and cumulative adverse impacts to the aquatic environment.

Please do not hesitate to contact me should you have any questions or need additional information.

Susan

Susan A. Meyer

Biologist, Sr. Project Manager
U.S. Army Corps of Engineers, Regulatory Division/Branch
CESPL-RG/CEPOH-EC-R
Bldg. 230 (Bldg. T214)
Ft. Shafter, Hawaii 96858-5440
Tel: 808.438.2137; Fax: 808.438.4060
susan.a.meyer@usace.army.mil
<http://www.poh.usace.army.mil/EC-R/EC-R.htm> (USACE, Honolulu District)
<http://www.spl.usace.army.mil/regulatory> (USACE, Los Angeles District)
<http://www.usace.army.mil/CECW/Pages/Home.aspx> (USACE, Headquarter's)

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9/8/2009