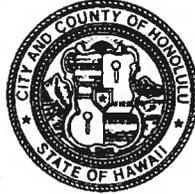


DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.gov](http://www.honolulu.gov) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

PETER B. CARLISLE  
MAYOR



JIRO A. SUMADA  
ACTING DIRECTOR

2012/ED-9 (JL)

November 9, 2012

Mr. Gary Hooser, Director  
Office of Environmental Quality Control  
State Office Tower, Room 702  
235 South Berentania Street  
Honolulu, HI 96813-2437

Dear Mr. Hooser:

Subject: Shoreline Setback Variance (SSV)  
Chapter 343 Hawaii Revised Statutes (HRS)  
Revised Draft Environmental Assessment

Recorded Owner/

Applicant: Philippe and Sonia Kahn  
Agent: Analytical Planning Consultants, Inc.  
Location: 146 Wailupe Circle - Wailupe  
Tax Map Key: 3-6-1: 38  
Request: Shoreline Setback Variance  
Proposal: The revised proposal includes the construction of a new, two-foot high CRM retaining wall mauka (landward) of the seawall, with an approximately three-foot wide planting and/or terraced area between the two walls, including excavation and backfilling to the top of the two-foot high CRM wall (landward) to match the existing grade of the yard.

We respectfully request publication of the revised Draft Environmental Assessment (DEA) in the next edition of The Environmental Notice. Enclosed is the Publication Form, one hardcopy of the revised DEA and a copy in pdf format on a compact disk. The Publication Form, including project summary, was also sent via electronic mail to your office. Should you have any questions, please contact Jenny Lee of our staff at 768-8027.

Very truly yours,

  
for Jiro A. Sumada, Acting Director  
Department of Planning and Permitting

JAS:nw  
Attachments

**APPLICANT ACTIONS  
SECTION 343-5(C), HRS  
PUBLICATION FORM (JULY 2012 REVISION)**

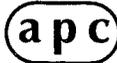
**Project Name: Wailupe Circle Residential Project**  
**Island: Oahu**  
**District: Honolulu**  
**TMK: 3-6-1: 38**  
**Permits: Shoreline Setback Variance (SVV)**  
**Approving Agency: Department of Planning and Permitting**  
**650 South King Street, 7<sup>th</sup> Floor**  
**Honolulu, HI 96813**  
**Contact: Jenny Lee Tel. 768-8027**  
**Applicant: Philippe and Sonia Kahn (Property Owner)**  
**c/o Darcey Builders, Inc.**  
**501 Sumner Street, #605**  
**Honolulu, HI 96817**  
**Consultant: Analytical Planning Consultants, Inc.**  
**928 Nuuanu Avenue, Suite 502**  
**Honolulu, HI 96817**  
**Contact: Lauri Clegg, Tel. 536-5695**  
**Status (check one only):**

- DEA-AFNSI** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)); a 30-day comment period ensues upon publication in the periodic bulletin.
- FEA-FONSI** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)); no comment period ensues upon publication in the periodic bulletin.
- FEA-EISPN** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)); a 30-day consultation period ensues upon publication in the periodic bulletin.
- Act 172-12 EISPN** Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
- DEIS** The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)); a 45-day comment period ensues upon publication in the periodic bulletin.
- FEIS** The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)); no comment period ensues upon publication in the periodic bulletin.
- Section 11-200-23 Determination** The approving agency simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.
- Statutory hammer Acceptance** The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.
- Section 11-200-27 Determination** The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.
- Withdrawal (explain)**

**Summary** (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

**Project Summary:** The Applicant is seeking a shoreline Setback Variance (SSV) for the following work within the shoreline setback area: An increase in the width of the base of the six-foot high concrete rubble masonry (CRM) seawall and/or retaining wall (which was authorized by SSV No. 2010/SV-10) and construction of a new, two-foot high CRM retaining wall mauka (landward) of the seawall, with an approximately three-foot wide planting and/or terraced area between the two walls. The proposed work will also include excavation and backfilling to the top of the two-foot high CRM wall (landward) to match the existing grade of the yard.

On April 28, 2011 the Department of Planning and Permitting (DPP) granted an SSV for partial approval of the applicants request, to allow repair and enlargement of the nonconforming seawall to a maximum height of six feet. The DPP has determined that the revised proposal to increase the width of the seawall base and construct a new two-foot high terraced wall exceeds the scope of the previous project and environmental analysis and requires a new SSV application and additional environmental review.



PHONE (BUS): (808) 536-5695  
FAX: (808) 599-1553

**ANALYTICAL PLANNING CONSULTANTS, INC.**

928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

September 25, 2012

Mr. Jiro Sumada, Acting Director  
City & County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

ATTN: Jenny Lee

**Subject:** 146 WAILUPE CIRCLE SEAWALL - ADDENDUM TO FINAL  
ENVIRONMENTAL ASSESSMENT SHORELINE SETBACK VARIANCE  
APPLICATION FOR A SEAWALL TMK: (1) 3-6-001:038.

Dear Mr. Sumada:

On behalf of the owners of the above referenced property, Philippe and Sonia Kahn, Analytical Planning Consultants is submitting this letter as an addendum to the previously accepted Final Environmental Assessment (FEA) for a Shoreline Setback Variance Application for a Seawall – 146 Wailupe Circle, Honolulu, Hawaii TMK: (1) 3-6-001:038. The new variance will allow the owners to obtain building permits to construct a 2-foot high CMU retaining wall mauka of a 6-foot high retaining/seawall within the 5-foot rear and side yards within the 40-foot shoreline setback area. The terraced retaining wall will protect the existing grade of the rear of the property from continuing erosion and provide a landscape area that will soften the visual impact of the seawall.

#### BACKGROUND

The Final Environmental Assessment investigated the environmental impacts to repair the existing seawall along the makai property line, replacing missing rocks and extending the height of the seawall to match the height of the existing grade of the rear yard and the walls of the adjoining properties. Pictures were included showing the deteriorating condition of the existing seawall with the top of the seawall below the grade of the Kahn property by as much as 5-feet in places. The plans showed the repaired wall to be 8-feet high and 5.5-feet in width at the base.

A Finding of No Significant Impact (FONSI) was issued for the project on June 25, 2010 and a Shoreline Setback Variance (SSV) submitted to the Department of Planning and Permitting (DPP). On April 28, 2011 the DPP granted partial approval of the Variance request to repair and restore the seawall along the seaward boundary of the property to a height of 8-feet (2010/SV-10). In his review of the 2010 SSV application, the Director concluded that the proposed 8-foot height of the seawall was not essential to shoreline protection and thus approved a height of 6-feet for the seawall.

As shown on the plans included in the FEA, this plan would leave 2-feet of the rear yard existing grade exposed to erosion. To address this issue, a new proposal will be submitted to construct a 2-foot high retaining wall mauka of the 6-foot seawall with landscaping in between to protect the

existing grade and provide visual relief. Since the Wailupe Fishpond is of historic and cultural importance and the new design is different from what was reviewed during the processing of the Environmental Assessment, this addendum contains additional information that wasn't available at the time the FEA was reviewed. The intent of this addendum is to ensure that consideration is given to the potential impacts of the proposed action upon the natural and man-made environment. It is anticipated that a FONSI will be issued and a new Shoreline Setback Variance can be submitted so that the property can be protected from erosion.

## REVISED PLANS

Appendix 1 contains the plans to construct a 6-foot high CRM lava rock seawall and a proposed additional 2-foot high 8-inch wide CMU retaining wall set back 1.5-feet behind the seawall. The purpose of the terraced design will be twofold – first to protect the grade and control the erosion and second to provide a landscape area in between the two walls that will both help retain the soil and provide visual relief along the walled shoreline. The base width of the seawall is 5'8" which is the same width approved by the DPP in the 2011 SSV. As shown on plan S-1 prepared by Randal S. Furumoto Structural Engineer, the mauka portion of the wall will include an additional ledge to support the 2-foot high retaining wall and landscaping area. The 3-foot high cable railing will be placed upon the 2-foot high retaining wall instead of the seawall as shown on the FEA plans.

Land Use Ordinance (LUO) Section 21-4.40 requires that heights of terraced walls or combinations of retaining walls shall be measured combining all walls located in the required yard. As such, an application for a Zoning Adjustment to permit the combined total height of the two retaining walls to exceed 6-feet will be also submitted.

### Engineer's Design Justification

The proposed seawall design has been revised to limit the height of the seawall to 6 feet per DPP comments. Since the existing lot grade is approximately 8 feet above the ocean bottom, a 2 feet tall CMU retaining wall has been added landside of the seawall to retain the balance of the lot. The proximity of the added CMU wall causes an increase in active earth pressure imposed upon the seawall (surcharge) and therefore, the CRM wall section required widening to maintain lateral stability (the ledge) The contribution of weight of the CMU wall, which bears on the widened CRM wall, was considered in the seawall structural design in order to minimize the increase in wall cross section. Increasing the wall thickness was the only possible option available as removing any portion of the underlying historic fishpond wall to provide embedment below the ocean bottom was prohibited. The approximate increase in CRM volume is 7.6% with an increase in weight on the foundation of 50 lbs/ft of wall or 1.7%.

The adjacent lots at the north and south property lines are at approximately the same elevation as this lot. Since the CRM seawall was limited to 6 feet tall, right angle returns were provided at each end of the CMU wall. The return at the north end is required to prevent undermining of the neighboring CMU fence wall, and the return at the south end is required to retain the neighboring lot and prevent erosion at that corner. The length of the returns will not project beyond the top of the CRM seawall below.

## Summary of New Information Regarding the Project Plans

- A 2-foot high retaining wall will be placed behind the 6-foot high seawall to protect the rear yard from additional erosion.
- New engineering plans S-1 & S-2.
- Revised architectural plans showing the 2-foot wall and return walls (A-1.1-2, A-2.1-2)
- The plans included in the FEA showed the repaired wall to be 8-feet high and 5.5-feet in width at the base. The new plans show the wall to be 6-feet high and 5'8" in width (as approved by the DPP).
- The mauka portion of the 6-foot high seawall will be increased slightly to accommodate a ledge to support the 2-foot high retaining wall and landscape area.
- The top of the 6-foot seawall will be reduced in width from 1'8" to 1'6".
- The 3-foot high cable railing will be placed upon the 2-foot high retaining wall instead of the seawall.
- A Zoning Adjustment will be applied for from the DPP to permit the combined terraced 8-foot wall height within the rear and side yard.

## ARCHEOLOGICAL INVENTORY SURVEY

In the letter dated August 15, 2011, the DPP added Condition M to the approval of Shoreline Setback Variance No. 2010/SV-10 in response to new concerns of the State Historic Preservation Division (SHPD) regarding the project's potential to adversely affect the fishpond as a historical resource. The lower portion of the seawall contains the remains of the Wailupe Fishpond wall that surrounds the Wailupe residential development. During review of the Shoreline Setback Variance the following concerns were raised by SHPD:

### Condition M

"Prior to the start of any wall-altering activities, the Applicant shall provide the DPP with written documentation from the State Department of Land and Natural Resources, Historic Preservation division confirming its receipt of an acceptable Archeological Inventory Survey (AIS) and mitigation course. The Applicant shall consult with SHPD regarding the AIS and acceptable mitigation measures, including confirmation that the AIS and mitigation measures are the only means to address the concerns of SHPD, or if there are any other alternatives.

Appendix 2 contains the evaluation from SHPD for the AIS undertaken by Archeological Consultants of the Pacific and required mitigation measures. The AIS reviewed impacts to archeological resources based on the revised plan S-1 showing construction of the 2-foot high retaining wall (Appendix 1). The AIS includes excavation of 3 trenches perpendicular to the existing seawall measuring 2m long by 1m wide and 2m deep. The following is taken from the evaluation letter from SHPD:

"Based on the AIS field work and the SHPD visit, only a single wall has been identified within the project area. The existing seawall was constructed atop the earlier Wailupe Fishpond wall or wall remnant (suggested by minimal extant height). Historical data suggests the existing seawall likely correlates in location with the earlier Wailupe Fishpond wall and the initial modification of the wall dates from the 1940's. Historical descriptions and photos indicate variation in wall thickness and overall morphology of the Wailupe Fishpond wall. In addition, they indicate that Wailupe Peninsula was

created in the 1940's by dredging a channel and filling in the fishpond. The draft AIS report states that the walls of Wailupe Fishpond were damaged in the 1946 tsunami and some of the existing seawall is described as being remnants of the original Hawaiian walls.

Based on the archeological data, the proposed construction plans will have an 'effect, with agreed upon mitigation commitments' on the existing post 1940 seawall and the underlying Wailupe Fishpond wall. Both walls are assessed as being significant under Hawaii Register Criterion 'd' (has yielded or is likely to yield information important in prehistory or history). In addition, both walls are assessed as being significant under Criterion 'c' (embodies the distinctive characteristics of a type, period or method of construction; or is the work of a master; or possesses high artistic values; or represents a significant and distinguishable entity).

Based on the AIS data and the proposed construction plans, SHPD concurs with the applicant's proposal to repair the seawall at 146 Wailupe Circle with the following agreed to stipulations.

- (1) Repair using matching stone material the damaged sections of the existing seawall post-1940 addition, to the height and original width of the existing intact sections (~6-6.5' above coral reef). Repaired sections may be mortared on *Mauka* (inland) side only above both the Wailupe Fishpond wall and the water line with the mortar extending no closer than 6' to the *makai* face (seaward side) of the wall, as necessary to preserve structural integrity;
- (2) Construct a 2-foot high and 8-inch wide CMU retaining wall 1.5-feet behind the seawall to correlate with the existing grade of the rear yard. The landscape area between the seawall and the CMU wall to be planted to lessen the visual impact;
- (3) Remove using hand tools, the *naupaka* hedge present between the *mauka* face of the existing sea wall addition and the *makai* edge of the existing rear yard (lawn);
- (4) Remove using hand tools, the sediments below the hedge, approximately -8'±, between the *mauka* face of the existing sea/Fishpond wall and the *makai* edge of the existing rear yard (lawn and pier stairs) to the water line;
- (5) No repairs or modification will be made to the Wailupe Fishpond wall section without prior consultation and written approval by SHPD;
- (6) Install structural materials/rubble fill within the hand-excavated space between the sea/Fishpond wall and the rear yard (as shown on the plans) to allow the surf to flow in and out of this space and to reduce soil erosion into the bay. The new structural materials/rubble fill encased in concrete/mortar will provide the structural integrity of the repaired wall;
- (7) Install drain leaders (pipes) extending from the *mauka* face of the existing sea/Fishpond wall through the new structural materials. These pipes will not extend into either the existing seawall addition or the underlying Fishpond wall;
- (8) Plant a new *naupaka* hedge in the same location as the removed hedge after the repair work is completed;
- (9) Install the metal safety rail on, along, or adjacent to the concrete edging demarking the *makai* extent of the rear yard (lawn) rather than atop the sea wall; and
- (10) Facilitate scheduling SHPD site visits during the hand excavation of the sediments *mauka* (behind) the sea/Fishpond wall and installation of the rubble fill, thereby allowing SHPD staff to document the wall repair work and the Wailupe Fishpond section of the wall."

#### New Information

- The AIS and the evaluation by SHPD had not been done at the time that the previous EA was granted a FONSI determination.
- There is a single wall along the seaward property boundary. The wall constructed in the 1940's was built on top of remnants of the original Fishpond wall.

- Both the Wailupe Fishpond (remnant) and the seawall constructed on top in the 1940's are assessed as being significant under Hawaii Register Criterion 'd' and 'c'.
- SHPD has detailed specific agreed upon conditions to be followed during repair of the seawall and construction of the 2-foot high retaining wall.
- SHPD staff will monitor excavation mauka of the Wailupe sea/Fishpond wall and installation of the rubble fill so that documentation of the wall can be made.

## IMPACTS AND MITIGATION

### Shoreline Impacts

The previous environmental review determined that there would be no significant impact on the shoreline area as a result of repair and construction of an 8-foot high seawall/retaining wall within the 40-foot shoreline setback area. The DPP approved a height of 6-feet and a base of 5'8" as sufficient for shoreline protection; however, leaving 2-feet of the existing rear yard exposed. Construction of the 2-foot retaining wall behind the seawall will protect the rear grade and mitigate any erosion and runoff of debris into the Bay. The landscaping that will be planted in between the two walls will cover the retaining wall and lessen visual impacts along the walled shoreline.

### Historical Impacts

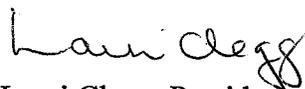
The SHPD has determined that the repair of the 6-foot high seawall and construction of the 2-foot retaining wall can be safely monitored to insure protection of the remnants of the Wailupe Fishpond. The prescribed mitigative measures include monitoring by SHPD staff.

The following are enclosed for your review:

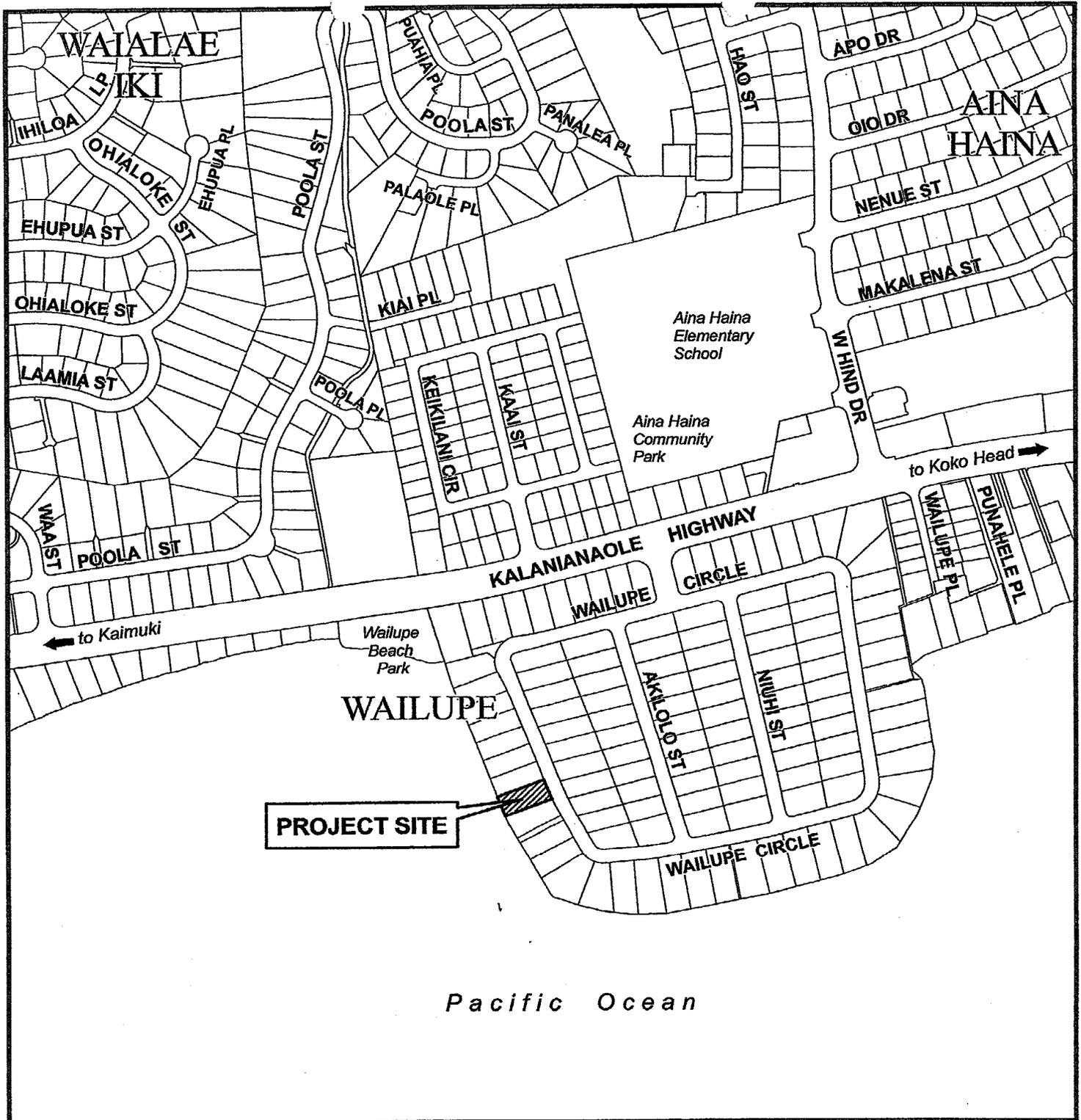
- Appendix 1 Revised engineering plans C-1 and C-2
- Appendix 2 Evaluation of the Archeological Inventory Study by SHPD and proposed mitigation.

If you have any questions or require additional information, please contact me at 536-5695.

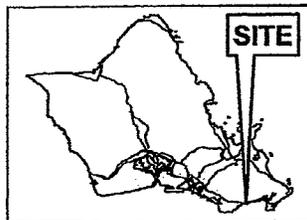
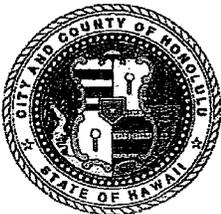
Sincerely,



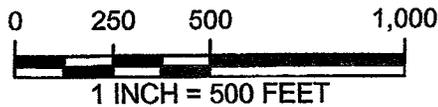
Lauri Clegg, President  
Agent for the Applicant



Pacific Ocean



VICINITY MAP



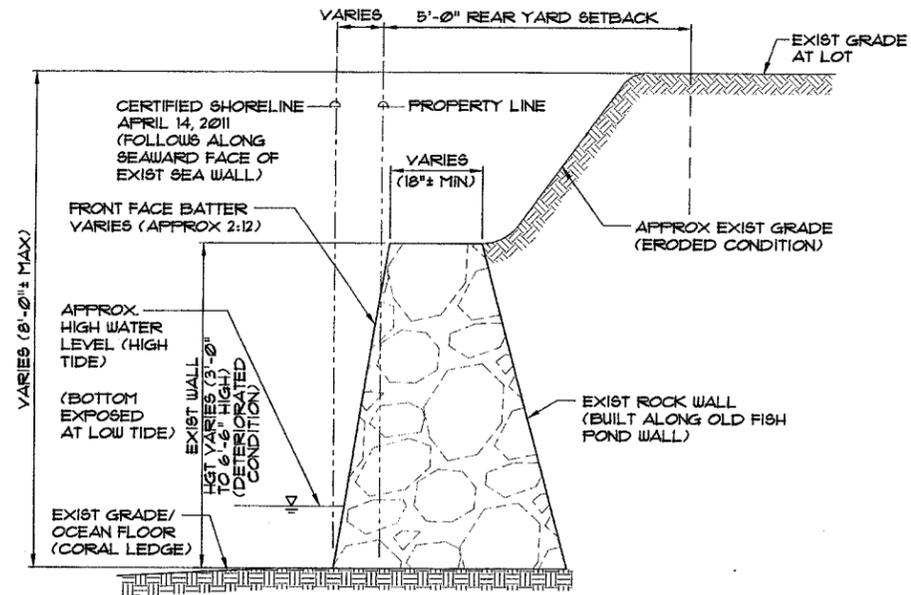
# LOCATION MAP

## WAILUPE

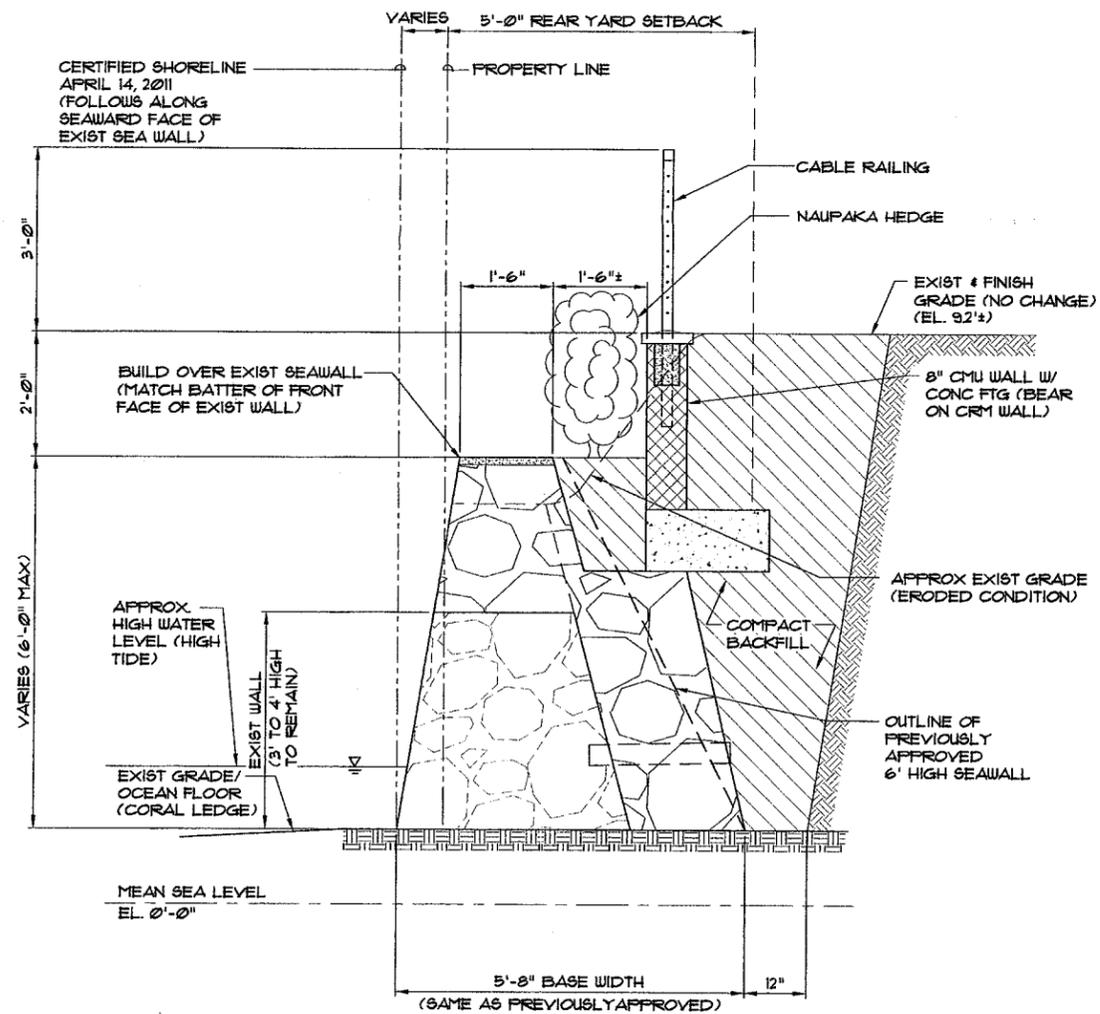
EXHIBIT A-2

 TMK: 3-6-001: 038 (PROJECT SITE)

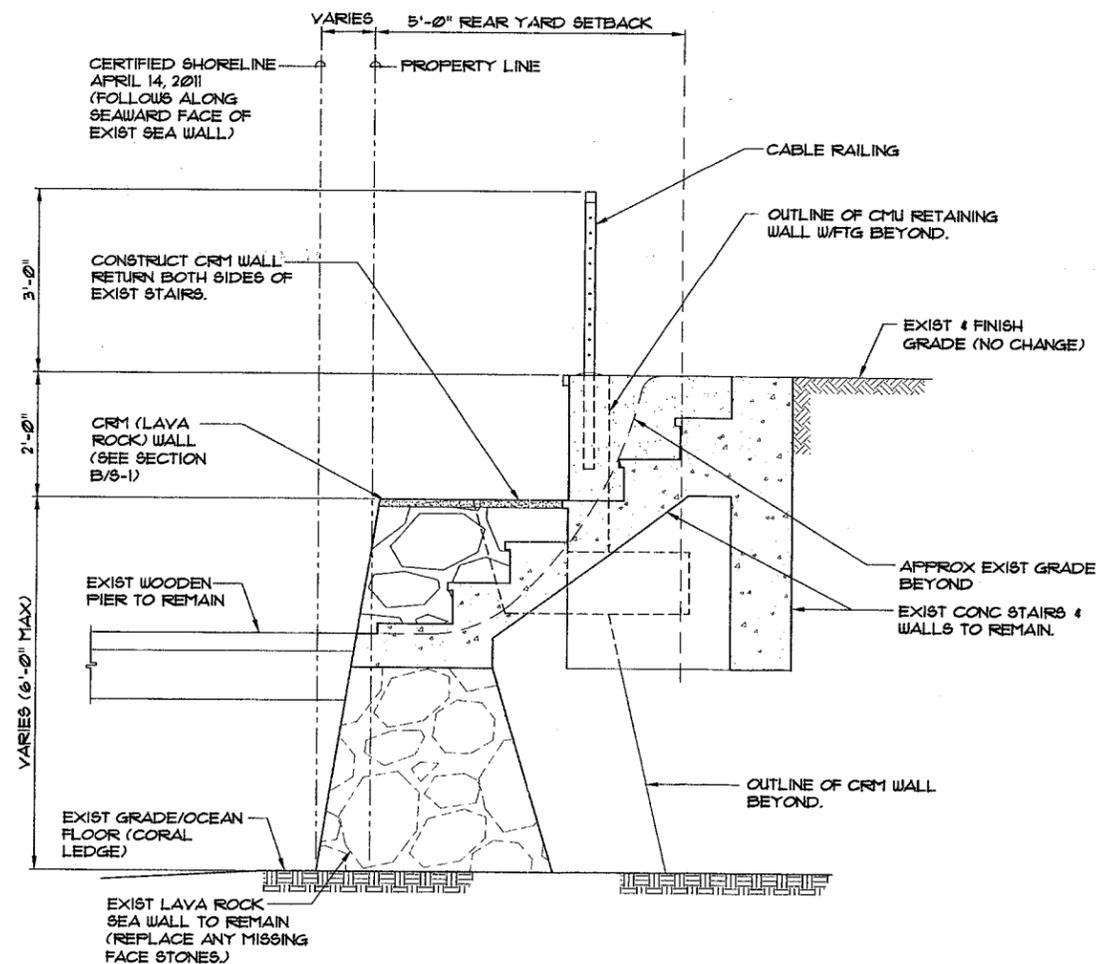
FILE NO.: 2010/SV-10



**A TYP EXISTING WALL SECTION**  
S-1 SCALE: 3/4"=1'-0"



**B TYPICAL NEW WALL SECTION**  
S-1 SCALE: 3/4"=1'-0"

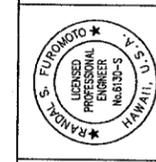


**C SECTION THRU STAIRS**  
S-1 SCALE: 3/4"=1'-0"

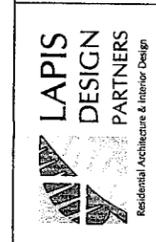


Revision	Date	No.

This work was prepared by me or under my supervision, observation, or direct control and I am a duly Licensed Professional Engineer in the State of Hawaii. License No. 8102-S. License Expiration Date: April 30, 2014.



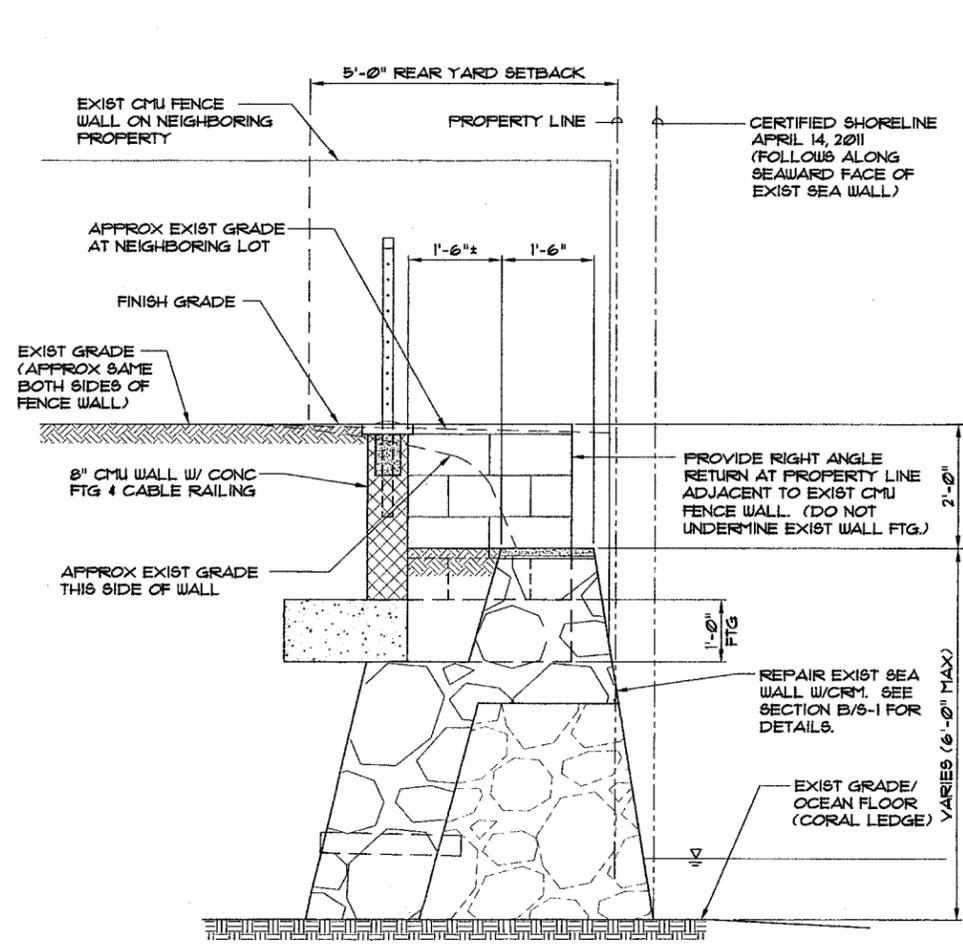
1188 Bishop Street, Suite 1411  
Honolulu, Hawaii 96813-3306  
Tel: 808.545.4000  
Fax: 808.545.4024  
www.lapishawaii.com



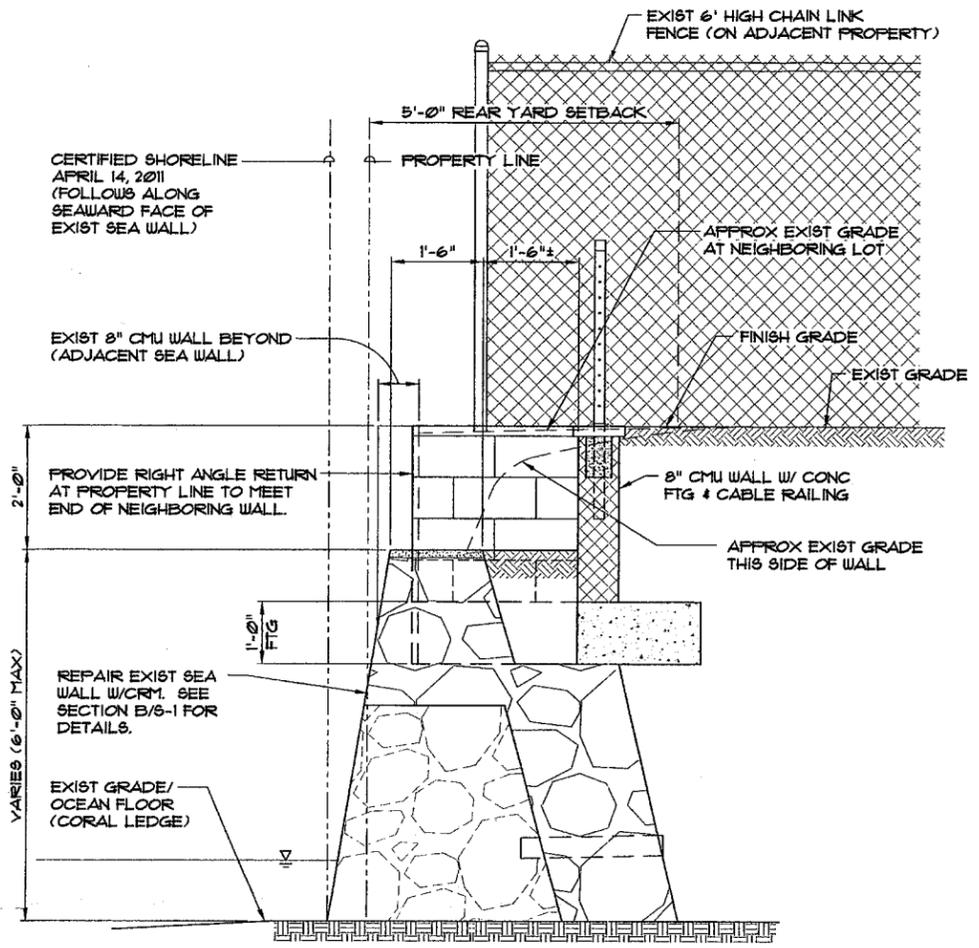
**Kahn Residence**  
Sea Wall Repair  
146 Waiupe Circle, Honolulu, Hawaii  
TMK: 3-6-001-038

Wall Sections  
S-1 Wall Sections Revised 8/14/12

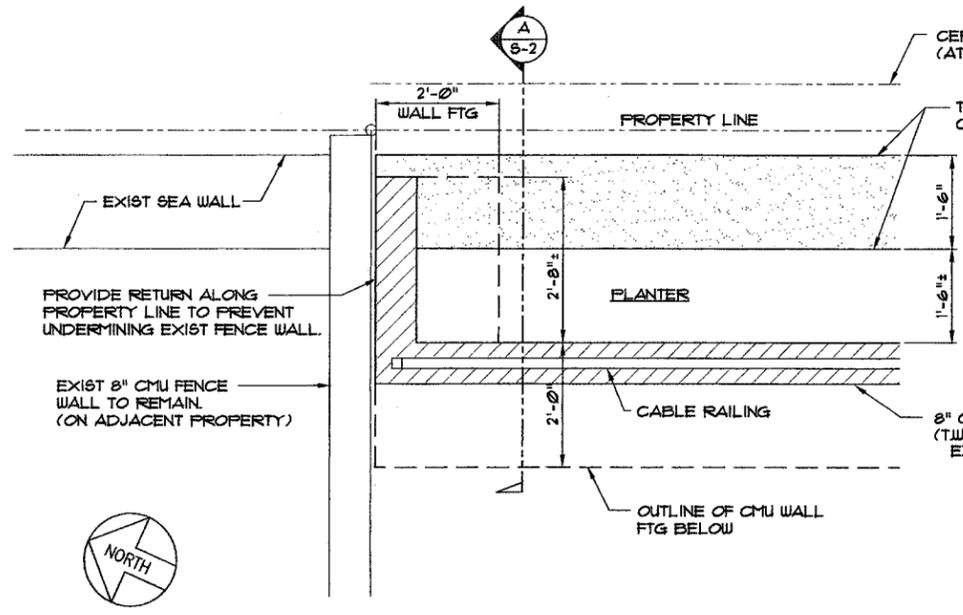
Issue Date: 14 AUG 12  
Job #: 07-KWC  
Sheet Number:  
**S-1**  
Total Sheets:



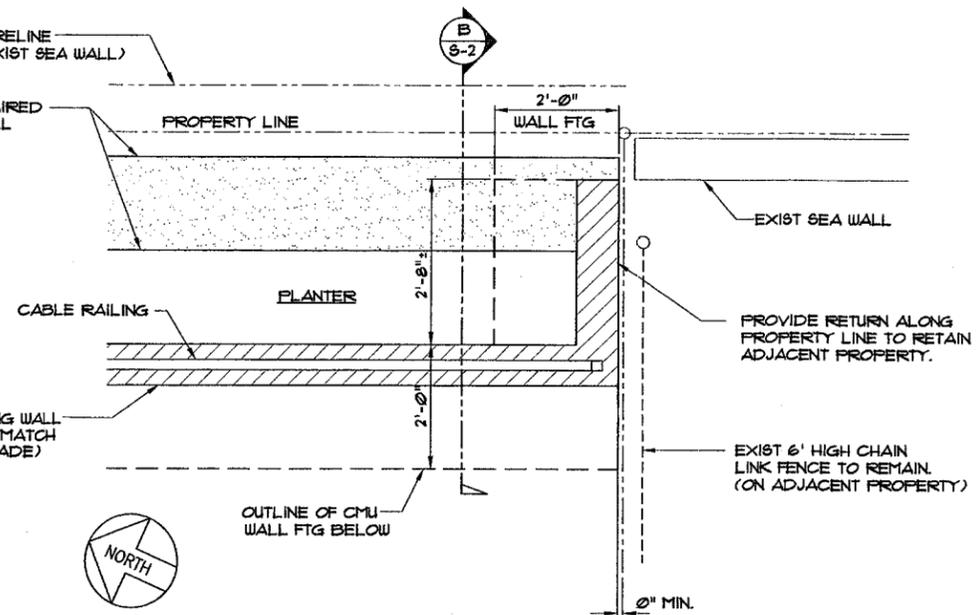
**A ELEVATION AT NORTH END**  
 5-2 SCALE: 3/4"=1'-0" (LOOKING NORTH)



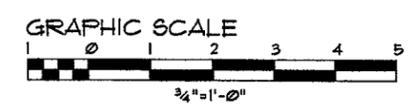
**B ELEVATION AT SOUTH END**  
 5-2 SCALE: 3/4"=1'-0" (LOOKING SOUTH)



**1 DETAIL-PLAN AT NORTH END**  
 5-2 SCALE: 3/4"=1'-0"

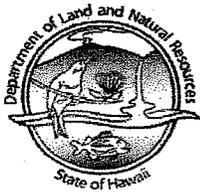


**2 DETAIL-PLAN AT SOUTH END**  
 5-2 SCALE: 3/4"=1'-0"



Revision	
No.	
Date	
This work was prepared by me or under my supervision, and construction of this project will be under my observation. Observation or construction as defined in License Expiration Date: April 30, 2014.	
1188 Bishop Street, Suite 1411 Honolulu, Hawaii 96813-3306 Tel: 808.545.4000 Fax: 808.545.4024 www.lapisdesign.com	
<b>LAPIS DESIGN PARTNERS</b> Residential Architecture & Interior Design	
<b>Kahn Residence Sea Wall Repair</b> 146 Waiupe Circle, Honolulu, Hawaii TMK: 3-5-001-038	
Wall Elevations S2 Revised 08/17/12	
Issue Date:	31 AUG 12
Job #:	07-KWC
Sheet Number:	<b>S-2</b>
Total Sheets:	

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

WILLIAM J. AILA  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

PAUL J. CONRY  
INTERIM FIRST DEPUTY

WILLIAM M. TAM  
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  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

August 21, 2012

Ms. Lauri Clegg, President  
Analytical Planning Consultants, Inc.  
928 Nuananu Avenue, Suite 502  
Honolulu, Hawaii 96817  
[DCleggAPC@hawaii.rr.com](mailto:DCleggAPC@hawaii.rr.com)

LOG NO: 2011.2654  
LOG NO: 2012.1560  
DOC NO: 1208SL02  
Archaeology

Dear Ms. Clegg:

**SUBJECT: Chapter 6E-42 Historic Preservation Review—  
Shoreline Setback Variance Application No. 2010/SV-10 and Zoning Adjustment  
Application Number 2010/ZA-32, Repair of Existing Sea Wall, 146 Wailupe Circle,  
Wailupe Ahupua'a, Kona District, Island of O'ahu  
TMK: (1) 3-6-001:038**

Thank you for the opportunity to review this *Shoreline Setback Variance Application No. 2010/SV-10 and Zoning Adjustment Application Number 2010/ZA-32, Repair of Existing Sea Wall, 146 Wailupe Circle, Wailupe Ahupua'a, Kona District Island of O'ahu TMK: (1) 3-6-001:038*. Your initial submittal was received by SHPD on March 2, 2010; we apologize for the delayed review and thank you for your patience.

On March 2, 2010, SHPD received a draft Environmental Assessment (EA) for review and comment concerning a request for an "After-the-fact Shoreline Setback Variance" to "repair and increase the height of an existing concrete rubble masonry (CRM) seawall along a residential beachfront lot" at TMK: (1) 3-6-001:038. SHPD responded that "we have no comments at this time" because the project "has already taken place" (March 9, 2010; Log No. 2010.0556, Doc. No. 1003NM10).

On March 24, 2011, SHPD received a request to review "Shoreline Setback Variance Application No. 2010/SV-10 and Zoning Adjustment Application Number 2010/ZA-32" pertaining to the same proposed project—reconstruction of an existing sea wall at 146 Wailupe Circle. SHPD reviewed and requested an archaeological inventory survey (AIS) be conducted to identify any remnants of Wailupe Fishpond (SIHP 50-80-15-0056) and to select a proper course of mitigation prior to the commencement of the project. SHPD indicated that the proposed project occurs within the boundaries of the fishpond and that when the pond was filled in for development, the pond wall and the sediments within the pond were preserved beneath the fill. As such, the project has the potential to adversely affect this historic property as the plans involve demolition of portions of the existing sea wall and a possible remnant of the original pond wall, and possible subsurface excavation into the original pond sediments (April 28, 2011; Log No. 2011.0847, Doc. No. 1104MV14).

On September 29, 2011, SHPD received a response to the aforementioned review requesting an archaeological inventory survey, which involved the following project clarifications:

- (1) The seawall will be repaired and restored, not reconstructed as earlier stated;
- (2) The repair will require removal of loose or unsound portions of the existing 1946 section of the seawall; and
- (3) The bottom portion of the wall will not be removed, thus no historic properties below the wall will be affected (Letter from Analytical Planning Consultants, Inc.; Log No. 2011.2654).

On November 11, 2011, SHPD received an additional clarification stating that Analytical Planning Consultants, Inc., would request Department of Planning and Permitting (DPP), City and County of Honolulu, approval for a terraced plan that would allow a 2-foot wall setback from the wall with landscaping in order to protect the

SHPD determines that the draft AIS report exhibits inadequacies, including insufficient documentation of the field methods and findings. The report lacks a project map showing the location and actual dimensions of the test trenches, description of the height of the original fishpond wall, or a description of the interface of the original fishpond wall with the later sea wall additions or with the underlying coral reef. In addition, no investigations were conducted to determine the potential of buried fishpond sediments. No stratigraphic profiles are provided for Trenches 1 and 3, and the profile provided for Trench 2 is incomplete. SHPD determined that a site visit was needed in order to properly review the findings and recommendations presented in the draft AIS.

Susan A. Lebo, SHPD staff archaeologist, conducted a site visit on August 6, 2012 with Randy Uchytel (contractor for client) and Lauri Clegg (agent for client). Mr. Uchytel indicated that he, along with 5-6 construction workers from Suncrete Hawaii, Inc., excavated the three trenches to expose, identify, and describe the Wailupe Fishpond wall. The trenches were excavated using hand equipment and measured more than 3 m in length, not the 2 m indicated in the report. When the excavators reached the concrete edging and the wooden picket fence demarking the *makai* edge of the rear yard and lawn, they extended their trench *makai* by "tunneling" beneath the concrete edging, fence, and the *naupaka* hedge growing between the fence and the existing seawall. They terminated each trench upon exposing dry laid, stacked basalt and/or coral cobbles and boulders. The depth of these wall materials is not recorded in profiles for Trenches 1 or 3. In Trench 2, the top of the rock wall is shown in a profile as being about 45cm below "ground level" (page C-1). However, the "ground level" shown in the profile does not correlate with the rear yard ground level, which is higher than the ground level associated with the *naupaka* hedge, under which the trenches were excavated. This aside, the base of the wall rocks exposed in each of the trenches sit atop the coral reef. The exposed wall sections measured about 0.8-1.0 m in height and 1.0 m in width.

Mr. Uchytel indicated that the rock wall sections exposed by the crew in Trenches 1-3 were the *mauka* (interior) side of the Wailupe Fishpond wall and that they were instructed to terminate excavating upon reaching the wall. He stated that there no visible change in wall construction from top to bottom within the exposed sections or in construction materials from the *makai* (outer) facing of the existing sea wall. The photographs taken during the AIS work (Appendix B), including those provided to SHPD by Ms. Clegg and Mr. Uchytel indicate the exposed sections of the Wailupe Fishpond wall are dry laid and consists of cobbles and boulders. While the *makai* side of the wall consists of many large basalt boulders, some over 1 m in length, it also includes many basalt cobbles and some coral cobbles. The *mauka* exposure in Trench 1 indicates a mixture of coral blocks and coral cobbles, as well as basalt cobbles and boulders. The stones appear loosely stacked. The *mauka* exposure in Trench 2 consists of a mixture of basalt cobbles and boulders, including one possible dressed boulder, and some coral cobbles, while the exposure in Trench 3 indicates a section of mostly waterworn basalt cobbles and boulders and a few coral cobbles. No coral blocks are present. At least one section of rebar extends into each of the trenches adjacent to the *mauka* wall rocks.

Based on the AIS field work and the SHPD site visit, only a single wall has been identified within the project area. The existing sea wall was constructed atop the earlier Wailupe Fishpond wall or wall remnant (suggested by minimal extant height). Historical data (see below) suggests the existing sea wall likely correlates in location with the earlier Wailupe Fishpond wall and the initial modification of the wall dates from the 1940s. Historical descriptions and photos indicate variation in wall thickness and overall morphology of the Wailupe Fishpond wall. In addition, they indicate that Wailupe Peninsula, in which the subject property is located, was created in the 1940s by dredging a channel and filling in the fish pond. The draft AIS report states that the walls of Wailupe Fishpond were damaged in the 1946 tsunami and some of the existing sea wall is described as being remnants of the original Hawaiian walls (pages 14-15).

Based on the above archaeological data, the proposed construction plans will have an "effect, with agreed upon mitigation commitments" on the existing post-1940 sea wall and the underlying Wailupe Fishpond wall. Both walls are assessed as being significant under Hawaii Register Criterion "d" (has yielded or is likely to yield information important in prehistory or history). In addition, both walls are assessed as being significant under Criterion "c" (embodies the distinctive characteristics of a type, period or method of construction; or is the work of a master; or possesses high artistic values; or represents a significant and distinguishable entity). The traditional Hawaiian Wailupe Fishpond wall is dry laid, stacked basalt cobble and boulder construction, with some coral cobbles and coral blocks. Although it consists primarily of water worn stones, some stones are cut or dressed. The overlying post-1940 addition exhibits similar construction materials and methods, but also extensive erosion along its length fronting the subject property.

existing grade of the property (Letter from Analytical Planning Consultants, Inc.; Log 2012.2244). A third clarification received by SHPD on November 16, 2011, states the following:

If the existing fishpond wall is discovered, it is presumed that it will be sufficiently stable to support the new wall and there should be no need to remove it. Any gaps could be either filled in with new rocks or mortar. Since it is advantageous to limit construction to above the water level it is hoped that the old fish pond wall will be found. However, if there is no wall discovered, the new wall will have to be constructed to greater depth. The worst case is that the wall must be constructed on the coral ledge as shown. In this case, since no original fish pond wall is encountered, the archaeological impact is also nil. As subsurface conditions are unknown, a determination of whether or not the existing conditions are unknown, a determination of whether or not the existing condition will adequately support the new wall must be made upon excavation (email from Analytical Planning Consultants, Inc.; Log No. 2012.2245).

SHPD received for review a draft report titled *An Inventory Level Survey for a Property Located at TMK: 003-006-001:038 in Wailupe Circle in Wailupe Ahupua'a, Kona District Island of O'ahu* (Beauchan and Kennedy, May 2012). The report was received by SHPD on May 30, 2012. Due to the recent death of Mr. Kennedy, we have extracted the pertinent details from the draft AIS report to complete without undue delay our review of your permit request.

The draft AIS report (Beauchan and Kennedy 2012) indicates that the project property is 13,056 ft<sup>2</sup> and consists of a single family detached dwelling, a seawall, and a recreational use pier. The subject 1946 seawall extends the entire length of the property line, a total of 75 feet, and adjoins parcel 39 to the north and parcel 37 to the south. The seawall is identified as the "current fishpond wall" (page 1) and is described as being in unstable and poor condition, with some portions of the original stone masonry having fallen into Maunalua Bay (page 4). It states that "current fishpond wall on the Kahn property was originally refurbished in 1948 by developer Robert Hind, Ltd., during the original construction of the peninsula" (page 1). A wooden picket fence has been erected alongside the wall and a hedge of *naupaka* grows atop the wall (page 4); the *naupaka* hedge actually is *mauka* of the seawall, growing in a narrow space between the seawall and the picket fence that extends along the *makai* edge of the rear yard or lawn.

In addition, the draft AIS report states that in consultation with SHPD, a testing strategy was designed and implemented to document the horizontal and vertical extent of the Wailupe Fishpond wall. Three trenches were excavated perpendicular to the existing seawall and sufficiently spaced to obtain a representative sample of wall exposure along the width of the rear yard of the project property. The trenches are described as measuring 2 m long by 1 m wide and 2 m deep, and having been excavated to culturally sterile soils and sand. The exposed stratigraphy consisted of topsoil fill overlying crushed coral fill, including coral heads. No artifacts and no fishpond sediments were identified (page 21). Photographs taken during the AIS work include an overview of the excavation trenches in the rear yard, close-up views of the wall rocks exposed in each trench, of the *makai* (outer) facing of the seawall, and of the *naupaka* hedge growing in the small space between the seawall and the rear yard (Appendix B). The existing seawall is described as being about only 25% the thickness of the original Wailupe Fishpond wall, which was described by McAllister (1930) as having been 12 feet in width (page 22).

Based on the excavation results, the draft AIS report describes the "Wailupe Fishpond wall" as follows within Trenches 1-3 (pages 22-23):

- Trench 1: "the inner portion of the prehistoric fishpond wall was found at the end of the trench, just below the existing property line and seawall;
- Trench 2: "the end of the trench, directly below the existing sea wall, revealed portions of the prehistoric fishpond wall;
- Trench 3: "the inner portion of the prehistoric fishpond wall was found at the end of trench, just below the existing property line and seawall."

In addition, the Wailupe Fishpond (SIHP 56) is assessed as being significant for listing in the Hawaii Register under Criterion "d". No further work is recommended because the wall is described as having been substantially altered from its prehistoric form (during the dredging and filling of the pond in the 1940's) and therefore, has lost its integrity" and the planned work will have "no negative" impact on the fishpond wall" (page 25).

Based on the AIS data and the proposed construction plans, SHPD concurs with the applicant's proposal to repair the sea wall at 146 Wailupe Circle with the following agreed to stipulations:

- (1) Repair using matching stone material the damaged sections of the existing seawall post-1940 addition to the height and original width of the existing intact sections (~6-6.5' above coral reef). Repaired sections may be mortared on *mauka* (inland) side only above both the Wailupe Fishpond wall and the water line with the mortar extending no closer than 6" to the *makai* face (seaward side) of the wall, as necessary to preserve structural integrity;
- (2) Construct a 2-foot high and 8-inch wide CMU retaining wall 1.5-feet behind the seawall to correlate with the existing grade of the rear yard. The landscape area between the seawall and the CMU wall to be planted to lessen the visual impact;
- (3) Remove using hand tools, the *naupaka* hedge present between the *mauka* face of the existing sea wall addition and the *makai* edge of the existing rear yard (lawn);
- (4) Remove using hand tools, the sediments below the hedge, approximately - 8'±, between the *mauka* face of the existing sea/Fishpond wall and the *makai* edge of the existing rear yard (lawn and pier stairs) to the water line;
- (5) No repairs or modification will be made to the Wailupe Fishpond wall section without prior consultation and written approval by SHPD;
- (6) Install structural materials/rubble fill within the hand-excavated space between the sea/Fishpond wall and the rear yard (as shown on the plans) to allow the surf to flow in and out of this space and to reduce soil erosion into the bay. The new structural materials/rubble fill encased in concrete/mortar will provide the structural integrity of the repaired wall;
- (7) Install drain leaders (pipes) extending from the *mauka* face of the existing sea/Fishpond wall through the new structural materials. These pipes will not extend into either the existing sea wall addition or the underlying Fishpond wall;
- (8) Plant a new *naupaka* hedge in the same location as the removed hedge after the repair work is completed;
- (9) Install the metal safety rail on, along, or adjacent to the concrete edging demarking the *makai* extent of the rear yard (lawn) rather than atop the sea wall; and
- (10) Facilitate scheduling SHPD site visits during the hand excavation of the sediments *mauka* (behind) the sea/Fishpond wall and installation of the rubble fill, thereby allowing SHPD staff to document the wall repair work and the Wailupe Fishpond section of the wall.

Please contact Susan A. Lebo at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) if you have any questions or concerns regarding this letter.

Aloha,



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Archaeology Branch Chief

