

DAVID Y. IGE  
GOVERNOR



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CRAIG K. HIRAI  
EXECUTIVE DIRECTOR

JUL 08 2016

**STATE OF HAWAII**

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND TOURISM  
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION  
677 QUEEN STREET, SUITE 300  
Honolulu, Hawaii 96813  
FAX: (808) 587-0600

IN REPLY REFER TO:  
16:PEO/45

June 17, 2016

Mr. Scott Glenn, Director  
Office of the Environmental Quality Control  
Department of Health  
235 S. Beretania Street, Room 702  
Honolulu, Hawaii 96813

Dear Mr. Glenn:

Re: Final Environmental Assessment for Ainahau Vista II

With this letter, the Hawaii Housing Finance and Development Corporation hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Ainahau Vista II affordable senior housing project situated at Tax Map Keys 2-6-024:070 and 071, in the Honolulu District on the island of Oahu for publication in the next available edition of the Environmental Notice.

Enclosed are a completed OEQC Publication Form, a hard copy of the FEA-FONSI and a searchable PDF file of the same. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Janice Takahashi, Chief Planner, at 587-0639. Thank you for your assistance.

Sincerely,

for Craig K. Hirai  
Executive Director

Enclosures

c: Hawaii Housing Development Corporation

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QUALITY CONTROL

**APPLICANT  
PUBLICATION FORM**

JUL 08 2016

Project Name:	<b>Ainahau Vista II – 201H - Affordable Senior Housing</b>
Project Short Name:	Ainahau Vista II
HRS §343-5 Trigger(s):	Use within Waikiki Special District
Island(s):	Oahu
Judicial District(s):	First Circuit
TMK(s):	2-6-24: 70 and 71
Permit(s)/Approval(s):	201H Affordable Senior Housing
Approving Agency:	Hawaii Housing Finance and Development Corporation State of Hawaii
<i>Contact Name, Email, Telephone, Address</i>	Stan S. Fujimoto <a href="mailto:stanley.s.fujimoto@hawaii.gov">stanley.s.fujimoto@hawaii.gov</a> (808) 587-0541 Hawaii Housing Finance and Development Corporation State of Hawaii 677 Queen Street, Suite 300 Honolulu, Hawaii 96813
Applicant:	Hawaii Housing Development Corporation
<i>Contact Name, Email, Telephone, Address</i>	Gary Furuta (808) 429-7815 Hawaii Housing Development Corporation 1288 Ala Moana Blvd., Suite 35A Honolulu, Hawaii 96814
Consultant:	Kusao & Kurahashi, Inc.
<i>Contact Name, Email, Telephone, Address</i>	Keith Kurahashi <a href="mailto:kkurahashi@hawaii.rr.com">kkurahashi@hawaii.rr.com</a> (808) 988-2231 Kusao & Kurahashi, Inc 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawaii 96822

**Status (select one)** DEA-AFNSI**Submittal Requirements**

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.

 FEA-FONSI

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.

 FEA-EISPN

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.

 Act 172-12 EISPN  
("Direct to EIS")

Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.

 DEIS

Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.

 FEIS

Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a

searchable PDF of the distribution list; no comment period follows from publication in the Notice.

\_\_\_ FEIS Acceptance  
Determination

The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.

\_\_\_ FEIS Statutory  
Acceptance

The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.

\_\_\_ Supplemental EIS  
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 or is not required; no EA is required and no comment period ensues upon publication in the Notice.

\_\_\_ Withdrawal

Identify the specific document(s) to withdraw and explain in the project summary section.

\_\_\_ Other

Contact the OEQC if your action is not one of the above items.

**Project Summary**

Provide a description of the proposed action and purpose and need in 200 words or less.

Hawaii Housing Development Corporation proposes the Ainahau Vista II, a nine-story, approximately 80-foot high, affordable senior rental apartment building in Waikiki, Honolulu, on Oahu. Ainahau Vista II will have 62 rental units (47 one-bedroom units and 15 studio units), located on the mauka portion of a parcel developed with the existing Ainahau Vista, a 106-unit affordable senior rental apartment.

**FINAL ENVIRONMENTAL ASSESSMENT**  
**AINAHAU VISTA II AFFORDABLE**  
**SENIOR RENTAL PROJECT**  
**WAIKIKI, HONOLULU, OAHU, HAWAII**  
**Tax Map Key 2-6-24: 70 and 71**

**APPLICANT**

**HAWAII HOUSING DEVELOPMENT CORPORATION**  
**1288 ALA MOANA BLVD, SUITE 35A**  
**HONOLULU, HAWAII 96826**

**AGENT**

**Kusao & Kurahashi, Inc.**  
**Planning and Zoning Consultants**  
**2752 Woodlawn Drive, Suite 5-217**  
**Honolulu, Hawaii 96822**

**JUNE 2016**

**FINAL ENVIRONMENTAL ASSESSMENT  
AINAHAU VISTA II AFFORDABLE  
SENIOR RENTAL PROJECT  
WAIKIKI, HONOLULU, OAHU, HAWAII  
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**JUNE 2016**



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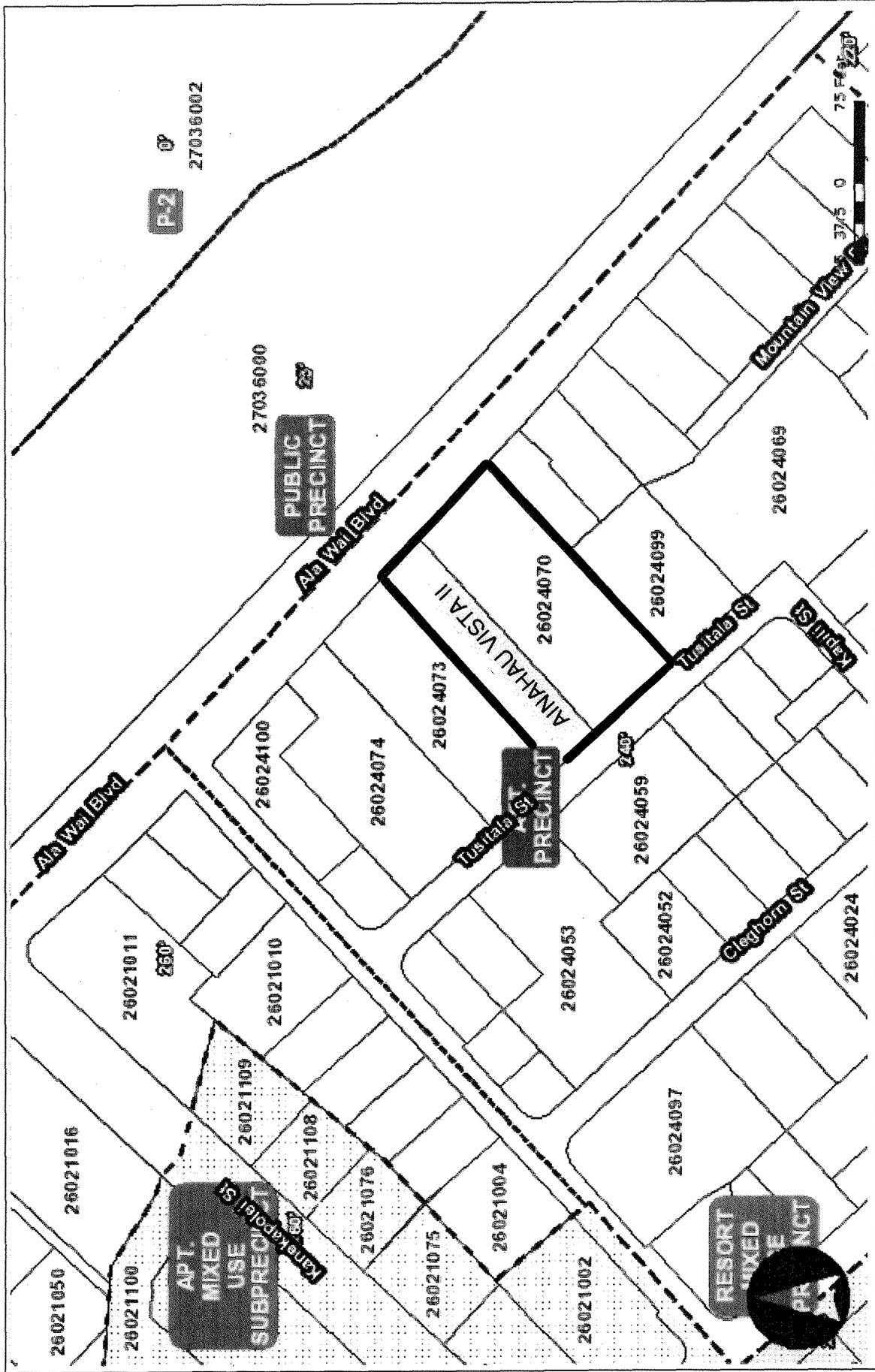
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**FINAL ENVIRONMENTAL ASSESSMENT  
AINAHAU VISTA II AFFORDABLE SENIOR RENTAL PROJECT  
WAIKIKI, HONOLULU, OAHU, HAWAII  
Tax Map Key 2-6-24: 70 and 71**

1. GENERAL INFORMATION

A.	APPLICANT/LESSEE	Hawaii Housing Development Corporation 1288 Ala Moana Blvd, Suite 35A Honolulu, Hawaii 96826 Mr. Gary S. Furuta, Project Manager (808) 429-7815
B.	OWNER	Ainahau Vista II LP c/o GSF LLC 1288 Ala Moana Blvd Apt 35A Honolulu, Hawaii 96814
C.	APPROVING AGENCY	State of Hawaii Hawaii Housing Finance & Development Corporation, Department of Business Economic Development & Tourism 677 Queen Street Honolulu, Hawaii 96813
D.	TAX MAP KEY	2-6-24: 70 and 71
E.	AGENT	Kusao & Kurahashi, Inc. Planning and Zoning Consultants 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawaii 96822
F.	LOCATION	2428 Tusitala Street 2423 and 2429 Ala Wai Boulevard (Figure 1, Location and Zoning Map)
G.	LOT AREA	35,761 sf
H.	ZONING	Apartment Precinct (Figure 1)
I.	STATE LAND USE	Urban
J.	DEVELOPMENT PLAN Land Use Map: Public Infrastructure Map:	Medium & High Density Residential/Mixed Use (Figure 2) No improvements affecting the Project Site (Figure 3)
K.	SPECIAL DISTRICT	Waikiki Special District (Figure 4)
L.	EXISTING USE	Ainahau Vista on the makai side of this property



**AINAHAU VISTA II  
LOCATION AND ZONING MAP**

**FIGURE 1**



RESOLUTION NO.: 2004-246, CD1  
 DATE: OCTOBER 13, 2004

PUBLIC INFRASTRUCTURE MAP  
 PRIMARY  
 URBAN CENTER



LEGEND

PUBLIC FACILITY PROGRAMMED FOR COMMENCEMENT OF LAND ACQUISITION AND/OR CONSTRUCTION

- DRAINAGE SYSTEM
- TRANSPORTATION SYSTEMS
- ARTERIAL ROADWAY
- TRANSIT CORRIDOR
- PUBLIC FACILITY
- CONCEPTUAL LOCATION
- MODIFY EXISTING FACILITY



Example: 024 = SYMBOL NO.

- 024 CONSTRUCTION YARD
- 025 LOCAL WASTEWATER PLANT (COMMERCIAL)
- 026 LOCAL WASTEWATER PLANT (RESIDENTIAL)
- 027 WASTEWATER TREATMENT PLANT
- 028 WASTEWATER TREATMENT PLANT
- 029 WASTEWATER TREATMENT PLANT
- 030 WASTEWATER TREATMENT PLANT
- 031 WASTEWATER TREATMENT PLANT
- 032 WASTEWATER TREATMENT PLANT
- 033 WASTEWATER TREATMENT PLANT
- 034 WASTEWATER TREATMENT PLANT
- 035 WASTEWATER TREATMENT PLANT
- 036 WASTEWATER TREATMENT PLANT
- 037 WASTEWATER TREATMENT PLANT
- 038 WASTEWATER TREATMENT PLANT
- 039 WASTEWATER TREATMENT PLANT
- 040 WASTEWATER TREATMENT PLANT



THE DATA REPRESENTED ON THIS MAP IS NOT INTENDED TO REPLACE A SITE SURVEY. THE DATA IS FOR INFORMATIONAL PURPOSES ONLY. THE CITY OF HONOLULU, HAWAII, IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE CITY OF HONOLULU, HAWAII, IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE CITY OF HONOLULU, HAWAII, IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS.

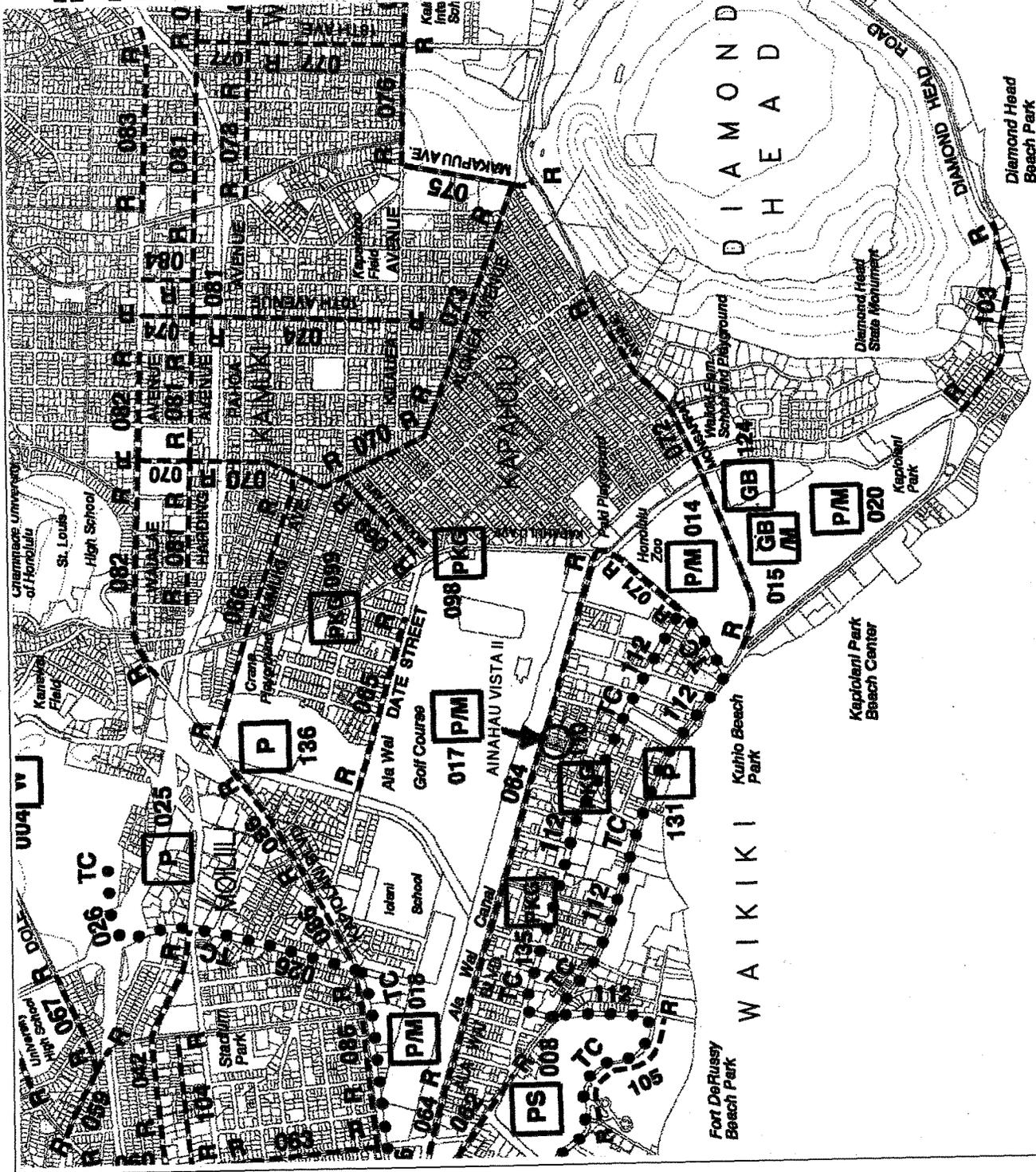
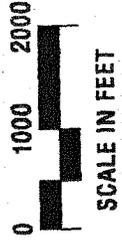
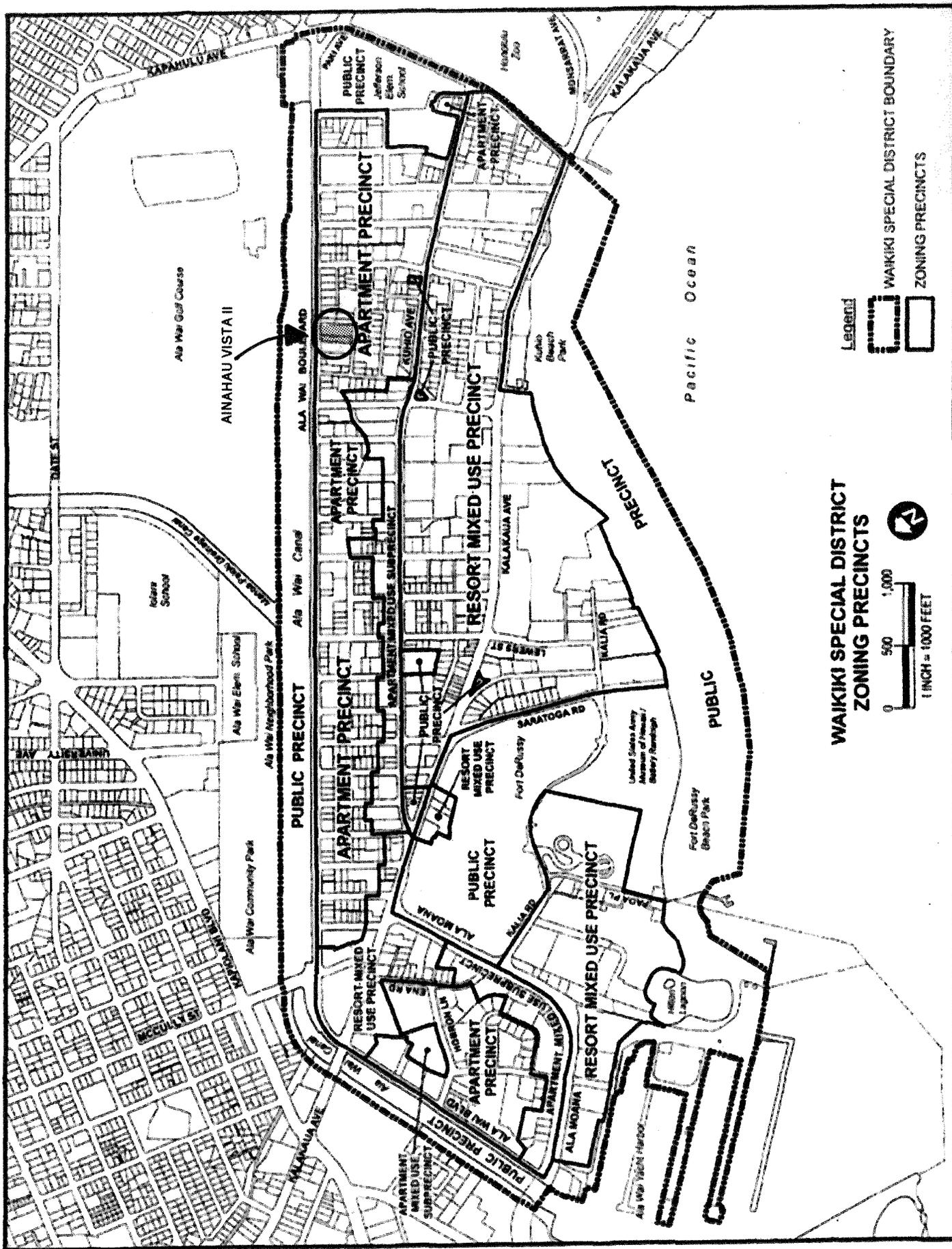


FIGURE 3



**WAIKIKI SPECIAL DISTRICT  
ZONING PRECINCTS**



**EXHIBIT 21-9.13**

**FIGURE 4**

## 2. PROJECT INFORMATION SUMMARY

The applicant, Hawaii Housing Development Corporation (HHDC), proposes the Ainahau Vista II, a nine-story, approximately 80-foot high, affordable senior rental apartment building in Waikiki, Honolulu, on Oahu (the "Project") on the mauka (north) portion of a lot (comprised of two parcels). Ainahau Vista II will have 62 rental units (47 one-bedroom units and 15 studio units). The Project will provide 6 affordable rental units to seniors (age 55 and older) earning at or below 60% of the area median income (AMI); 50 units at 50% and below of the AMI; and 6 units at 30% and below of the AMI. The term of affordability will be at least 62 years. The makai (south) portion of the lot is developed with Ainahau Vista, a 106-unit affordable senior rental apartment development with 29 at grade parking stalls, 5 accessible stalls and one loading stall.

HHDC is submitting this Final Environmental Assessment and has submitted a 201H Permit application for Ainahau Vista II to the Hawaii Housing Finance & Development Corporation, Department of Business, Economic Development & Tourism for processing. HHDC also plans to submit a Waikiki Special District permit application to the Department of Planning and Permitting for the Project. The Project will be located on the mauka portion of a 35,781 square foot site in Waikiki (the "Project Site"). Ainahau Vista II will be developed in accordance with the requirements of Chapter 201H of the Hawaii Revised Statutes (HRS), as amended and the Waikiki Special District.

The Applicant has been awarded federal and state Low Income Housing Tax Credits ("LIHTC") financing of \$822,480 and \$411,240, respectively, for the project by the state HHFDC. Its application to the state for a Rental Housing Revolving Fund ("RHRF") loan of \$8,000,000 is expected to be acted upon in the next month or so. The rental units in the project will remain affordable for a period of 62 years.

Preliminary conceptual plans showing the proposed improvements are provided in **Appendix 1**.

This Final Environmental Assessment ("FEA") for the Project is prepared pursuant to and in accordance with the requirements of Chapter 343, Hawaii Revised Statutes ("HRS"), Chapter 200 of Title 11, Hawaii Administrative Rules - Environmental Impact Statement Rules. The actions that trigger this FEA are the proposed development in the Waikiki Special District ("WSD") and the proposed use of State and City funds for the proposed affordable rental development.

The proposed affordable senior rental apartment use is permitted in the Apartment Precinct in Waikiki.

### 2.1 THE PROJECT

The Project will provide 6 affordable rental units to seniors (age 55 and older) earning at or below 60% of the area median income (AMI); 50 units at 50% and below of the AMI; and 6 units at 30% and below of the AMI. The term of affordability will be at least 62 years. The nine-story building will provide 62 rental units (47 one-bedroom and 15

studio units), 22 at grade parking stalls and one loading stall, on a lot shared with Ainahau Vista. The approximately 80-foot high structure will have surface parking below and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and two studio units. The ninth floor will have five one-bedroom units, one studio unit, a multi-purpose room with adjoining restroom, and two offices.

Ingress and egress to Ainahau Vista II will be via Tusitala Street, through the existing surface parking at Ainahau Vista.

## 2.2 PUBLIC BENEFITS

The primary and most significant benefit is that the Project will provide affordable rental units to seniors earning at or below 60% of the AMI, with most of the units at or below 50% of the AMI for a period of at least 62 years.

Other public benefits being offered are:

Ainahau Vista II will offer an economic and job-creating stimulus for the local economy, during the construction period, and when completed it will offer indirect jobs needed to support the Project.

The proposed affordable project implements the City's vision for the PUC, as referenced in Chapter 3, Page ES-4 In-Town Housing Choices – *“Preserve and Expand the Current Inventory of Affordable Rental Housing Units: The City should assure that the current inventory of affordable rental units, whether owned by the City or not, is preserved and retained as affordable and that the inventory of affordable rental units is expanded as needed by the community”*.

It further implements the City's vision for the PUC, as referenced in Chapter 3, Page ES-4, In-Town Housing Choices – *“Provide incentives and cost savings for affordable housing: This policy promotes exemptions from regulations, on a case-by-case basis, to make ‘affordable’ housing available to those needing it”*.

The Project will comply with the WSD District - Objectives as stated in the LUO Sec. 21-9.80-1, c, as follows: *“Support the retention of a residential sector in order to provide stability to existing neighborhoods, and provide for a variety of compatible land uses which promote the unique character of Waikiki.”*

## 2.3 POTENTIAL ADVERSE IMPACTS

Potential short term adverse impacts include the following:

### 2.3.1 Construction Noise

D.L. Adams Associates has prepared the “Environmental Noise Assessment Report Ainahau Vista II, Honolulu, Hawaii” for the Ainahau Vista II Project,

Waikiki, Oahu, Hawaii” (“Noise Assessment”) dated May 2015. The Noise Assessment in its entirety is provided in **Appendix 2**.

Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential short term noise impacts from the Project that is summarized as follows:

The various construction phases of the project will generate significant amounts of noise and will need to comply with the requirements of the Department of Health (DOH). The project will involve excavation, grading, material handling, concrete mixing, and other typical construction activities. Pile driving activities are not planned for this project.

### 2.3.2 Construction Impact on Air Quality

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines.

### 2.3.3 Construction Impact on Traffic and Pedestrians

During the construction phase there will be impacts to pedestrians and vehicular traffic in the area.

Potential long term adverse impacts include the following:

### 2.3.4 Noise (Acoustical) Long Term Impacts

Noise Assessment, Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential long term noise impacts from the Project that is summarized as follows:

The Ainahau Vista II development is proposed to be a senior rental development, which will likely incorporate stationary mechanical equipment, including air conditioning (HVAC) equipment, emergency generators, etc. Noise from this mechanical equipment and other equipment must meet the DOH noise regulations.

Existing traffic noise level projections at the project’s Ala Wai Boulevard facing façade are expected to approach the FHWA maximum noise limit of 67 dBA Leq(h) at all apartment units up to the 9th floor (“Normally Unacceptable”). Only the 9th floor Leq(h) level is predicted to be below 66 dBA. No noise impacts are expected on the Ewa, Diamond Head, or makai sides of the building (“Acceptable”).

Exterior design elements such as glazing and wall construction should be designed to comply with the U.S. Department of Housing and Urban Development (HUD) Ldn 45 dBA noise criteria inside the units.

The Ewa and Diamond Head sides of the building are projected to have noise levels that also exceed HUD noise criteria. However, there are no exterior unit walls with glazing so these areas do not require noise mitigation.

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

## 2.4 MITIGATION MEASURES

Although impacts from the proposed development are not expected to be significant, the following mitigation measures are planned.

### 2.4.1. Construction Practices

#### 2.4.1.1 Construction Noise

D.L. Adams Associates has prepared the “Environmental Noise Assessment Report Ainahau Vista II, Honolulu, Hawaii” for the Ainahau Vista II Project, Waikiki, Oahu, Hawaii” (“Noise Assessment”) dated May 2015. The Noise Assessment in its entirety is provided in **Appendix 2**.

Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential short noise mitigation for the Project that is summarized as follows:

In cases where construction noise exceeds, or is expected to exceed the State’s “maximum permissible” property line noise levels, a permit must be obtained from DOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the “maximum permissible” levels.

The contractor should use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc.

Compliance with DOH construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

#### 2.4.1.2 Air Quality

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor during construction, including active work areas will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Dirt-hauling trucks will be covered when traveling on roadways. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area.

#### 2.4.1.3 Traffic

HHDC will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

The Department of Transportation (DOT) in a letter dated April 23, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the subject Project is not expected to significantly impact the State highway facility, however a permit from the DOT Highways Division is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

#### 2.4.2 Traffic Improvements

The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation with only 17 vehicle trips during the AM peak hour and 20 vehicle trips during the PM peak hour. As such, no mitigation measures were recommended by the Traffic Impact Assessment. The Project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents' local transportation needs. A full size on-site loading stall will be provided, as recommended by surrounding neighbors.

The Department of Transportation Services (DTS) in a letter dated May 4, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they have no objections or comments on the 201H application. On the DEA, they noted the following:

1. The DEA should discuss traffic impacts due to the project and possible mitigative measures. It should contain a traffic management plan, which should note that during construction, deliveries to the site should be scheduled during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any impacts to pedestrians and traffic at or near the proposed project site driveway.
2. The DEA should also provide a discussion on the transit impacts of the project, especially on the City's paratransit (TheHandi-Van) operations.
3. Accommodations for paratransit pick-up/drop-off should be provided on-site. A pick-up/drop-off area on-site should have adequate turning geometrics to provide for the City's TheHandi-Van vehicles.
4. Waikiki Neighborhood Board No. 9, as well as area residents, businesses, emergency personnel, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.
5. A street usage permit from the City's DTS shall be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street. The 201H Application does not exempt the project from street usage permit fees charged by DTS.
6. Ensure that all access driveways provide safe pedestrian conditions when crossing.

As DTS requested, the FEA does discuss traffic impacts due to the project and possible mitigative measures.

TheHandi-Van will be used on occasion, however the residents will also have access to van/shuttle service through the Catholic Charities which provides transportation for residents, including shopping trips and appointments. The Project driveway is located about three blocks from bus stops traveling in the east and west direction on Kuhio Avenue, providing convenient bus service for the Project.

TheHandi-Van pickups can be accommodated in the aisle of the parking lot with turn around area provided at the entry to the parking area under the Ainahau Vista II building.

HHDC will provide updates to the Waikiki Neighborhood Board No. 9 during construction of potential impacts to the adjoining local street network. HHDC will provide occasional project construction updates to surrounding residents and emergency services personnel, no businesses are located nearby.

A street usage permit from the City's DTS will be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street.

As recommended by DTS, the existing access driveway at Tusitala Street has excellent visibility of the sidewalk and pedestrians with a landscaped 15-foot yard on either side of the driveway providing clear view of pedestrians.

#### 2.4.3 Noise (Acoustical) Long Term Mitigation

Noise Assessment, Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential long term noise mitigation for the Project that is summarized as follows:

The design of the Ainahau Vista II building should give consideration to controlling noise emanating from all stationary mechanical equipment such as air-cooled chillers, cooling towers, air-handling units, condensing units, emergency generators, etc. so as to comply with the State of Hawaii Community Noise Control Rules. Noisy equipment should be located away from neighboring properties and residential units, as much as possible. Enclosed mechanical rooms may be required for some equipment.

Units overlooking Ala Wai Boulevard will experience relatively high noise levels due to traffic on Ala Wai Boulevard. The exterior wall should have a minimum rating of STC 50, which is typical of poured concrete in any thickness greater than 4 inches. HHDC construction will utilize 8-inch thick hollow tile wall with all cells filled in that will have a minimum rating of STC 50 as recommended. A minimum STC 35 rated window assembly, typical of a 1" IGU, should be considered to comply with the HUD interior noise design criteria for all units facing Ala Wai Boulevard. The window assembly typically degrades the STC rating of the glazing by 3 points, therefore STC requirements for the glass itself should be a minimum of STC 38. Smaller window sizes may reduce these STC requirements. HHDC will utilize rated window assemblies as recommended here.

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

## 2.5 UNRESOLVED ISSUES

There will be further action required with respect to the following unresolved issues:

- A 201H Application has been submitted to HHFDC and will need to be processed by HHFDC and approved by the City Council. This request includes the following exemptions:

### **AINAHAU VISTA AND AINAHAU VISTA II – EXEMPTION TO ZONING REQUIRMENTS (LAND USE ORDINANCE)**

1. Exemption from Chapter 21, Article 3, Section 21-9.80-5(c)(2), Land Use Ordinance, as amended, relating to transitional height setback: Ainahau Vista - to allow an encroachment into the transitional height setback of 3.67 feet at the roof level to 4.67 feet at the penthouse level (elevator shaft) along the Tusitala Street side above 40 feet and Ainahau Vista II to allow an encroachment into the transitional height setback of 4.92 feet at the top of the parapet wall on the east face of the building to 0 feet at the 40-foot level of the building wall.
2. Exemption from Chapter 21, Article 6, Section 21-6.20, Land Use Ordinance, Table 21-6.3, as amended, relating to the amount of off-street parking, to allow the provision of 46 parking stalls (for residents) rather than the required 169 parking stalls (1 stall per unit). Although no guest parking is required in the Waikiki Special District, 5 guest parking stalls are provided.
3. Exemption from Chapter 21, Article 3, Section 21-9.80-5, Land Use Ordinance, as amended, Table 9.6(B), relating to maximum density, to allow an FAR of 1.82 with the provision of 35% open space rather than the 50% open space required. This would allow 95,513 square feet of floor area, which exceeds the maximum allowable floor area by about 30,565 square feet (based on allowable FAR with 35% open space).
4. Exemption from Chapter 21, Article 9, Section 21-9.80-5(b) and Table 21-9.6(B) related to side yards to allow an encroachment of a loading stall maneuvering space 12-foot wide by 10-foot deep into the west boundary side yard (120-square foot encroachment).

### **AINAHAU VISTA II – EXEMPTION TO PARK DEDICATION REQUIREMENT**

Exemption from the Park Dedication requirements, Chapter 22, Article 7, ROH, including exemption from the Park Dedication permit process, to allow the provision of about 6,430 square feet for park dedication, portions of which encroach into the required side and rear yards. Proposed park dedication includes a private park (3,586 square feet), “Victory Garden” (1,692 square feet), and two multi-purpose recreation rooms (1,152 square feet). The park dedication requirement is 9,484\_ square feet.

(10% of 94,842 square feet, maximum floor area or 169 units x 110 square feet = 18,590 square feet, whichever is less).

### **AINAHAU VISTA II – OTHER EXEMPTIONS**

#### **FEE EXEMPTIONS:**

1. Exemption from Section 18-6.2, ROH, to allow exemption from building permit fees.
2. Exemption from Section 18-6.1, ROH, to allow exemption from plan review fees.
3. Exemption from Section 14-12.12(f), ROH, to allow exemption from private storm drainage connection permit fees.
4. Exemption from Section 14-14.4, ROH, to allow exemption from grading and grubbing permit fees.

These fee exemptions are expected to total approximately \$120,000.

#### **FEE DEFERRALS:**

1. Exemption from Sections 14-10.1 and 14-10.3, ROH, to allow a deferral of payment of wastewater system facilities charges until funding of a construction loan is available.
  2. Exemption from Sections 1-102, 2-202(2) and 2-202(3) of the Board of Water Supply Rules and Regulations to allow deferral of payment of Board of Water Supply water system facilities charges until funding of a construction loan is available.
- A WSD Permit, Major application will be submitted for review and approval by the City's DPP after the 201H application is processed.
  - Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, Construction Plan Approval, and possibly a Dewatering Permit will be submitted for review and approval by the DPP at a later date.
  - Construction Noise Permit application will be submitted for review and approval by the State Department of Health.

## 2.6 COMPATIBILITY WITH LAND USE PLANS AND POLICIES

### 2.6.1. State Land Use

The Project Site is situated within the State Urban district. Within that district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The Ainahau Vista II planned use as an affordable senior rental development in Waikiki is consistent with this Urban designation.

### 2.6.2 General Plan

The Project will comply with Objectives and Policies of the General Plan as follows:

- a. *Objective A, Policy 1 – Development programs and controls which will provide decent homes at the least possible cost.*
- b. *Objective A, Policy 12 – Encourage the production and maintenance of affordable rental housing.*
- c. *Objective A, Policy 13 – Encourage the provision of affordable housing designed for the elderly and the handicapped.*
- d. *Objective C, Policy 2 – Encourage the fair distribution of low-and-moderate-income housing throughout the Island.*

Development of Ainahau Vista II is consistent with the above Objectives and Policies of the General Plan by offering an affordable senior development that will provide 62 affordable rental units to seniors earning at or below 60% AMI (6 units), with 50 units at or below 50% AMI, and 6 units at or below 30% AMI.

### 2.6.3 Primary Urban Center Development Plan (PUCDP)

- a. The Project is designated as Higher-Density Residential/Mixed Use on the Primary Urban Center (PUC) Development Plan Land Use Map.

The Ainahau II Project is consistent with this higher - density residential/mixed use designation.

- b. Vision, policies and guidelines of the PUCDP:

*“Section 2. The **Vision** of the PUC’s Future – The PUC offers in-town housing choices for people of all ages and incomes.”*

The Ainahau Vista II Project will offer in-town housing to our seniors with limited incomes (those who earn 60% or less of the area median income).

“Section 3.3.2, **Policies** – Provide incentives and cost savings for affordable housing. Provide exemptions from zoning and building codes for housing projects that meet established standards of affordability, on a case-by-case basis.”

HHDC for Ainahau Vista II will follow this policy, requesting exemptions from the zoning code through the processing of a 201H application.

*“Section 3.3.3 **Guidelines** – Review and revise zoning regulations and permitting processes to encourage innovative forms of housing and group living accommodations for people with special needs, such as the elderly or disabled, in all zoning districts that allow dwellings.”*

The 201H process was established by the Hawaii State Legislature to specifically provide the encouragement of innovative forms of affordable housing for those in need of assistance, including the elderly. Ainahau Vista II will follow the 201H process to create affordable elderly/senior housing.

#### 2.6.4 Zoning

- a. The Project will be developed in accordance with development standards of the WSD, with the exception of density, the transitional height setback, and off-street parking. Exemptions will be requested through the 201H process.
- b. The Project Site is zoned Apartment Precinct and is consistent with this zoning designation. It is located in a concentrated urban area where public services are centrally located and infrastructure capacities are adequate, except for an off-site sewer line that the HHDC will upgrade. In order to accommodate the provision of 100% of the rental units at affordable rates, Ainahau Vista II will remain affordable for 62 years, and HHDC will be requesting exemptions from certain design standards of the Apartment Precinct in processing of the 201H permit application.

#### 2.7 REQUIRED GOVERNMENTAL PERMITS AND APPROVALS

- **City:** WSD Permit, Minor; Building Permits; Flood Study; Trenching Permit; Grading Permit; Drain Connection Permit; Street Usage Permit; Construction Plan Approval; and possibly a Dewatering Permit from the City’s DPP.
- **State:** Finding of No Significant Impact (FONSI) on Final EA; 201H (HRS) Application; and Construction Noise Permit.
- **City Council:** 201H Approval by Resolution.

## 2.8 ALTERNATIVES CONSIDERED

### 2.8.1 Alternative I: No Action

This alternative was considered and rejected due to a strong demand for affordable senior rentals in Waikiki and the availability of a vacant portion of the lot for development.

### 2.8.2 Alternative II: Market Rental Project

This alternative was considered but would result in greater impacts to the surrounding neighborhood, primarily related to traffic. The cost of construction makes it infeasible to develop a market rental development, since market rental income will not be able to provide a return that would cover the mortgage on a construction loan and operating expenses.

### 2.8.3 Alternative III: Affordable Senior Rental Development (**Preferred Alternative**)

This preferred alternative would provide for the development of a mid-rise senior affordable apartment rental that is feasible with government assisted financing.

The proposed Ainahau Vista II Project is geared toward achieving the goals of the WSD guidelines, including the following: *“Promote a Hawaiian sense of place at every opportunity”*. A Hawaiian sense of place will be incorporated into the design of the building and landscaping.

The Project will provide affordable rental units to seniors earning at or below 60% of the AMI. Other public benefits being offered include:

Ainahau Vista II will offer an economic and job-creating stimulus for the local economy, during the construction period, and when completed it will offer permanent public benefits with the need for required maintenance personnel, management personnel and security personnel.

The proposed affordable Project implements the City’s vision for the PUC, as referenced in Chapter 3, Page ES-4 In-Town Housing Choices – *“Preserve and Expand the Current Inventory of Affordable Rental Housing Units: The City should assure that the current inventory of affordable rental units, whether owned by the City or not, is preserved and retained as affordable and that the inventory of affordable rental units is expanded as needed by the community”*.

It further implements the City’s vision for the PUC, as referenced in Chapter 3, Page ES-4, In-Town Housing Choices – *“Provide incentives and cost savings for affordable housing: This policy promotes exemptions from regulations, on a case-by-case basis, to make ‘affordable’ housing available to those needing it”*.

It further supports the goals of the WSD guidelines as follows: *“Support the retention of a residential sector in order to provide stability to existing neighborhoods, and provide for a variety of compatible land uses which promote the unique character of Waikiki.”* Ainahau Vista II would meet these visions and goal with the development of an affordable senior rental project on an otherwise vacant lot, therefore providing and adding stability to this neighborhood in Waikiki.

### 3. PURPOSE OF AND NEED FOR THE PROJECT

Ainahau Vista II will service the needs of the seniors in our community by offering them affordable rental units in the Primary Urban Center of the island, more specifically in the Waikiki area of Oahu. The affordable units will be rented to seniors earning at or below 60% AMI (6 units), with 50 units at or below 50% AMI, and with 6 units to seniors earning at or below 30% AMI.

Relative to the current rental market within the City & County of Honolulu, there does not appear to be a significant or meaningful impediment to the prospect for renting out the 62 proposed units for the second building on the Ainahau Vista site, Ainahau Vista II in Waikiki.

The underlying reasons for coming to this conclusion are as follows:

- The location itself is very central to those goods, services and facilities that are considered vital by senior households, particularly medical, with a fire station down the road and also recreational, social and shopping areas within a mile of the Project.
- The units will be newly constructed, meaning the Project and the dwellings will be modern, well designed and not needing a lot of maintenance.
- There are a few similar projects within a five-mile radius that could be considered comparable, as well as competitive. The few that do exist exhibit high occupancy, low vacancies and very long waiting lists.
- The overall demand or need for quality housing at a reasonable rental rate is quite high in general, and very high in the case of this Project. Referencing a recent rental housing study for HHFDC and the city and county of Honolulu, there are over 600 senior households that would qualify for the 6 units targeted on the 30% of AMI units, almost 500 households qualified for the 50 units targeted on the 50% AMI units and over 200 households qualified for the 6 units targeted on the 60% AMI units.

### 4. PROJECT DESCRIPTION

#### 4.1 LOCATION

The Project Site is located in the Primary Urban Center of Honolulu and within the Waikiki Special District. The Project will be developed on the vacant mauka portion of a lot that is comprised of two parcels. As stated above, Ainahau Vista is developed on the makai portion of this 35,761 square foot property.

The Project Site is bound by Ala Wai Boulevard to the north, two four-story, low-rise apartment buildings, Dynasty Apartments and Waikiki Bellevue Apartments, to the east, Tusitala Street to the south, and the Ala Wai Townhouse condominium with three parking levels and 17 residential levels to the west.

## 4.2 GENERAL DESCRIPTION OF THE ACTION

### 4.2.1 Existing Condition

The 35,761 square foot property is comprised of two parcels, Tax Map Key: 2-6-024: 70 and 71. The makai portion of the lot is developed with Ainahau Vista, a 106-unit affordable senior housing rental development. The mauka portion is a vacant lot, running parallel with Ala Wai Boulevard. There is an existing Conditional Use Permit for Joint Development (DPP File No. 2005/CUP-73) on these two parcels of land.

### 4.2.2 Proposed Development

HHDC proposes the Ainahau Vista II, a nine-story, approximately 80-foot high, affordable senior rental apartment building in Waikiki, Honolulu, on Oahu on the mauka portion of a lot (comprised of two parcels). The makai portion of the lot is developed with Ainahau Vista, a 106-unit affordable senior housing rental development with 29 at grade parking stalls, 5 accessible stalls and one loading stall. HHDC has submitted a 201H Permit application for Ainahau Vista II to the HHFDC for processing. HHDC plans to also submit a Waikiki Special District permit application to the Department of Planning and Permitting for the Project. Ainahau Vista II will be developed in accordance with the requirements of Chapter 201H of the Hawaii Revised Statutes (HRS), as amended and the Waikiki Special District.

The Project will provide affordable rental units for seniors earning at or below 60% of the AMI. The nine-story building will provide 62 rental units (47 one-bedroom units and 15 studios), 22 at grade parking stalls, and a loading zone. The 80-foot high structure will have surface parking below and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and two studio units. The ninth floor will have five one-bedroom units, one studio unit, a multi-purpose room with adjoining restroom, and two offices.

## 4.3 USE OF PUBLIC FUNDS OR LANDS

The Applicant has been awarded federal and state Low Income Housing Tax Credits ("LIHTC") financing of \$822,480 and \$411,240, respectively, for the project by the state HHFDC. Its application to the state for a Rental Housing Revolving Fund ("RHRF") loan of \$8,000,000 is expected to be acted upon in the next month or so. The rental units in the project will remain affordable for a period of 62 years.

The Project may involve the upgrade of infrastructure within the existing City right-of-way, including but not limited to about 500± feet for an off-site, 8” sewer line upgrade on Tusitala Street. The potential use of public funds, 201H zoning exemptions and the location of the Project Site in the Waikiki Special District are the triggers for processing this Environmental Assessment.

#### 4.4 PHASING AND TIMING OF ACTION

Development of the Project is estimated to take approximately 18 months to construct.

Construction of the building is anticipated to begin in November 2016, once HHDC receives all required permits and approvals, including acceptance of the Final EA, approval of a 201H application, approval of a WSD from DPP, approval of building permits from DPP, and the securing of project financing. Construction of the off-site sewer line is anticipated to begin in the last quarter of 2016.

#### 4.5 SUMMARY OF TECHNICAL CHARACTERISTICS

##### 4.5.1 Use Characteristics

Ainahau Vista II will share a joint developed property with the existing Ainahau Vista, totaling 35,761 square feet of land in Waikiki. The makai portion of the property is already developed with Ainahau Vista, an elderly affordable rental. Ainahau Vista II is planned for development on the mauka side of the property, bordering Ala Wai Boulevard. Ainahau Vista II will have approximately 33,669 square feet of floor area covering 62 rental units on nine floors. There will be a total of 47 one-bedroom and 15 studio units, 22 at grade parking stalls, and a loading zone, on this lot shared with Ainahau Vista.

Ingress and egress to Ainahau Vista II is expected to be via Tusitala Street, through the existing parking level of Ainahau Vista.

A comparison of the proposed gross rents in relation to the 2016 maximum HUD allowance for rental units at the three AMI categories.

	60% AMI	50% AMI	30% AMI
HUD Max 1-bed	\$1,131	\$942	
Proposed rent	6 units at \$ 975	41 units at \$900	
HUD Max Studio		\$880	\$528
Proposed rent		9 units at \$850	6 units at \$528

Maximum 2016 income by household to qualify for the three AMI categories is provided in the following table:

AMI	1 Person	2 Person
30% AMI	\$21,120	\$24,120
50% AMI	\$35,200	\$40,200
60% AMI	\$42,240	\$48,240

#### 4.5.2 Physical Characteristics

The Project will provide affordable rental units to seniors earning at or below 60% of the AMI. The 80-foot high, nine-story concrete building will provide 62 rental units (47 one-bedroom units and 15 studios) and 22 at grade parking stalls. The 80-foot high structure will have 22 surface parking stalls on the ground floor and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and two studio units. The ninth floor will have five one-bedroom units, one studio unit, a multi-purpose room with adjoining restroom, and two offices. A rendering, site plan, floor plans and elevation plans of the nine-story senior rental apartment building are provided in **Appendix 1**.

The ground floor of Ainahau Vista II will include the 22 parking stalls, one full size loading stall, an entry lobby, a utility room, one elevator and stairways on the east and west wing of the entry lobby. Floors 2 thru 8 will each have six one-bedroom units and two studio units and a shared laundry room. The ninth floor will have five one-bedroom units, one studio unit, a multi-purpose room, a full rest-room, storage, two offices and a shared laundry room. The one-bedroom units will measure approximately 420 square feet and the studio units will measure approximately 377 square feet.

A total open space area of approximately 4,980 square feet will be provided on the development site, to include private park, a picnic area, a victory garden and landscaped open spaces for use by the residents. The concept of a victory garden has been used successfully in similar elderly rental developments built by this developer. The well-being of the residents can be greatly enhanced by offering the residents the amenities of such a garden.

The apartment building will be designed to incorporate energy saving light fixtures, energy efficient window air conditioning (optional), energy efficient hot water heaters, and low flow plumbing fixtures.

Ingress and egress to Ainahau Vista II is expected to be via Tusitala Street, through the existing parking level of Ainahau Vista.

## 4.6 HISTORIC PERSPECTIVE

### 4.6.1 Archaeological

The Project Site is not listed on the State or Federal Register of Historic Places.

An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled "Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments" (now known as Ainahau Vista), Waikiki, Kona District, O'ahu Island and dated December, 2004. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.

The archaeological inventory survey "Recommendations" section states as follows:

"Of the four sites recorded in the project area, SIHP site -6707 is recommended for data recovery, SIHP site -6705 for further monitoring, and SIHP sites -6682 and -6706 for no further work.

1. No Further Work

SIHP site -6682 and -6707 are recommended for no further work. The features were mapped, placed on a plan view map and the immediate vicinity was tested for subsurface deposits. Based on the findings of the subsurface testing in these sites and research of historical documentation, it is believed that the information contained in these historic properties within the project property has been acquired and that no further archaeological documentation is necessary.

2. Monitoring

Results from the archaeological inventory survey indicate that the majority of the project area is free of archaeological resources and constraints. However, the identification of human skeletal fragments in the disturbed sediment of imported fill within the inventory survey fieldwork (SIHP site -6705) indicates possibility that additional fragmented human skeletal remains may be present within the fill material in project area. Based on the findings, an archaeological monitoring program is recommended with on-site and on-call monitoring of initial subsurface impacts.

3. Data Recovery

Archaeological data recovery is recommended for SIHP site -6707. This is a li'i, (or terraced, ponded, field) retaining wall. It is a remnant of the extensive Moilili-Kapahulu-Waikiki network of irrigated taro fields constructed beginning in the fifteenth or sixteenth century and traditionally attributed to the chief Kalamakua, a significant personage in Hawaiian history. This field system, an impressive feat of engineering, took advantage of streams descending from Makiki, Manoa and Palolo valleys which also provided ample fresh water for the Hawaiians living in the ahupua'a.

Tentative research goals for a Data Recovery Plan include additional backhoe trenches to better delineate the horizontal extent of the wall, and hand dug trenches to obtain additional samples for a detailed radiocarbon age sequence and paleoenvironmental reconstruction based on pollen analysis.

The results of this research should be integrated into available previous archaeological and paleoenvironmental research within Waikiki to aid in constructing a comprehensive chronology of Hawaiian settlement and agricultural practices in this important ahupua'a.

Data recovery should be implemented through plans submitted to the Department of Land and Natural Resources, State Historic Preservation Division (DLNR/SHPD) for review and approval.”

Also included in **Appendix 4** is a copy of a letter from the Department of Land and Natural Resources (DLNR) , dated October 18, 2005, indicating their concurrence with Cultural Surveys Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

The SHPD, of the DLNR, in a letter dated June 17, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the submittal will require SHPD review under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. Their letter went on to describe steps that HHDC needs to take to address Section 106 and their other requirements.

HHDC’s archaeological consultant, Cultural Surveys Hawaii will work with SHPD to meet their requirements related to HRS §6E and NHPA Section 106 and SHPD’s other requirements for the Project.

## 5. ALTERNATIVES

The Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment, primarily because of the greater use of this otherwise vacant unused lot. The development of Ainahau Vista II will offer much needed housing to those less fortunate in our community and will operate in an efficient manner, in pleasant surroundings and as a good neighbor to Ainahau Vista that has been extremely well received in the community.

Positive economic impacts are projected with the development of Ainahau Vista II, with increases in construction jobs while being built. The development will benefit existing service contractors, e.g. elevator maintenance companies, security companies, appliance companies etc. as well as business in the area. The Project will also offer a limited amount of long-term employment for security personnel and maintenance personnel. When completed the Ainahau Vista II will offer positive economic impacts to the community by contributing to permanent affordable housing to those less fortunate in our community.

#### 5.1 ALTERNATIVE I: NO ACTION

The possibility of taking no action was considered and rejected. The “no action” alternative is not an economically viable alternative; it would mean the empty lot would continue to attract undesirable activity, a detriment to the surrounding neighbors and to the community at large.

#### 5.2 ALTERNATIVE II: DEVELOPMENT OF A MARKET RENTAL DEVELOPMENT

This alternative was briefly considered, but not fit in the development policy of HHDC, which is a nonprofit entity committed to the provision of affordable rental units in the State of Hawaii.

#### 5.3 ALTERNATIVE III: DEVELOPMENT OF AINAHUA VISTA II (**PREFERRED ALTERNATIVE**)

There is a tremendous demand for affordable rental units in the Waikiki area and in other parts of the island. The property is owned by HHDC and presents a readily available opportunity to increase the number of affordable rental units on the property that will be made available to seniors.

The development of Ainahau Vista II is geared toward achieving the goal of the WSD guidelines. Specific WSD objectives which will be met by the Preferred Alternative, include the following:

*“(a) Promote a Hawaiian sense of place at every opportunity.*

Where possible and appropriate the design and landscaping of Ainahau Vista II will support the WSD’s Hawaiian sense of place.

*“(c) Support the retention of a residential sector in order to provide stability to the neighborhoods of Waikiki.”*

Development of the proposed Ainahau Vista II, and affordable senior apartment units, will meet this Objective of the Waikiki Special District.

*"(g) Enable the city to address concerns that development maintain Waikiki's capacity to support adequately, accommodate comfortably, and enhance the variety of worker, resident and visitor needs."*

Development of the proposed Ainahau Vista II will meet this objective by offering much needed affordable housing to our local residents. In addition, the Project will result in much needed employment during and after completion.

*"(h) Provide opportunities for creative development capable of substantially contributing to rejuvenation and revitalization in the special district, and able to facilitate the desired character of Waikiki for areas susceptible to change."*

Development of Ainahau Vista II, a proposed senior affordable apartment development, on this otherwise vacant property, will enhance and contribute to the rejuvenation of this area of Waikiki.

## 6. ENVIRONMENTAL SETTING

### 6.1 LOCAL AND REGIONAL PERSPECTIVE

The Project will be located on the mauka portion of a 35,761 square foot lot (comprised of two parcels). The makai portion of the lot is already developed with Ainahau Vista, a 106-unit affordable senior housing rental development with 29 at grade parking stalls, 5 accessible stalls and one loading stall. The 80-foot high Ainahau Vista II will provide 62 rental units (47 one-bedroom units and 15 studio units) and 22 at grade parking stalls. The 80-foot building will have surface parking below and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and two studio units. The ninth floor will have five one-bedroom units, one studio unit, a multi-purpose room, and two offices.

The Project Site is located in the Primary Urban Center of Honolulu and within the Waikiki Special District. The Project will be developed on the vacant mauka portion of a lot that is comprised of two parcels. As stated above, Ainahau Vista is developed on the makai portion of this 35,761 square foot property.

The Project Site is bound by Ala Wai Boulevard to the north, two four-story, low-rise apartment buildings, Dynasty Apartments and Waikiki Bellevue Apartments, to the east, Tusitala Street to the south, and the Ala Wai Townhouse condominium with three parking levels and 17 residential levels to the west.

The greater surrounding area includes hotels, commercial centers, condominiums, apartments, the Ala Wai Canal, the Ala Wai Golf Course, the Honolulu Zoo, the Waikiki Shell, Kapiolani Park and Waikiki Beach.

## 6.2 RARE OR UNIQUE ENVIRONMENTAL RESOURCES

### 6.2.1 Flora

This “in-fill” urbanized undeveloped lot does not contain any rare or endangered flora, or a species of concern. Existing landscaping consists of introduced species.

### 6.2.2 Fauna

Common species of cats, rats and mice normally found in urban city environments are probably present on this vacant portion of the property. Further, species common to the area, such as sparrows, mynahs, doves and finches are likely to inhabit the Project Site. The Project Site does not contain any rare or endangered fauna, nor does it contain habitat for rare or endangered fauna.

## 6.3 RELATED PROJECTS IN THE REGION

In addition to the Project, there are several other projects in the area. Some of them are mentioned below.

### 6.3.1 Gray’s Beach Restoration Project

According to the Environmental Assessment/Environmental Impact Statement Preparation Notice for the "Gray’s Beach Restoration Project", Kyo-ya Hotels & Resorts is proposing to restore and stabilize a sandy beach fronting the Sheraton Waikiki Hotel property, approximately 1,500 feet west of the Moana Surfrider Hotel complex. All of the proposed work for this project is located within the State Land Use Conservation District. The proposed work can generally be described as follows:

- Construction of rock T-head groins along the shoreline fronting the Sheraton Waikiki Hotel, with the eastern-most groin replacing the existing Royal Hawaiian groin; and
- Replacement of sand fill between the groins to create a beach with a minimum horizontal crest width of 30-feet at the +5.2 foot elevation extending from the seawall, and a 1V:10H slope from the crest to the sea bottom.

This project is intended to enhance recreational and aesthetic enjoyment of the area and provide protection for the backshore. The restored beach is expected to facilitate lateral access along the shoreline and enhance recreational opportunities. Pending receipt of the required permits and approvals, project construction was expected to begin in early 2011 and be completed by the end of 2011. It is BSC’s general understanding that the Gray’s Beach Restoration Project has been put on hold, but that permitting for this development could begin again this year or next year.

Long term impacts from beach restoration action are not anticipated to result in any cumulative negative impacts with the Project. If anything, along with other neighboring projects, it will serve to continue the revitalization of the core of Waikīkī in significant ways.

#### 6.3.2 Princess Ka`iulani Renovation & Development and the Replacement of the Moana Surfrider Hotel Diamond Head Tower with a New Tower

The Princess Ka`iulani project includes plans for a tower with 210 condo-hotel suites and 61 fee simple residences, a 2-level podium with retail/restaurants, 187 below grade parking spaces, recreational amenities, and other accessory uses, a parking structure with 625 spaces and condo-hotel accessory uses, an energy saving deep well cooling system and the renovation of the existing 666-room Ainahau Tower.

The Diamond Head Tower development will include a tower with 185 condo-hotel rooms and 40 fee simple residences, a 2-level podium with accessory uses to the condo-hotel, auto court, beach access, public surfboard racks and a 3-foot site elevation.

Impacts include encroachment of the Diamond Head Tower into the 40-foot shoreline setback and the 100-foot coastal building and height setback, impact on infrastructure, loss of older hotel/retail buildings and short-term construction impacts.

Mitigation includes improved public ocean views, upgrade of sewer mains, completion of an archaeological inventory survey, an archaeological monitoring plan, traffic improvements, and mitigation of runoff, construction noise and air quality impacts through best management practices.

In the event the construction periods for the Princess Ka`iulani and Diamond Head Tower Redevelopment Projects overlap with the construction period for the Project, HHDC will communicate with Kyo-ya Hotels & Resorts with the goal of minimizing disruption to surrounding streets during the overlapping construction periods.

Long term impacts from Kyo-ya's resort condo-hotel, condominium, and commercial development will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the Project. However, based on Kyo-ya's Final EIS and this Final EA, both projects are anticipated to result in minimal impact on the existing level of service of the intersections, surrounding the projects. Other positive long term impacts of the Kyo-ya Project will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City and County tax revenues).

### 6.3.3 Hilton Hawaiian Village - Village Master Plan

Implementation of the "2010 Village Master Plan" will update and expand the Hilton Hawaiian Village's offering of world class shopping, dining, entertainment and hospitality options. The following improvements are planned:

- Renovation, alteration, and refurbishment (primarily interior and minor exterior projects or above-grade improvements) of existing building facades, common use areas, recreational amenities, and landscaped areas;
- Relocation, realignment, and reallocation of retail and dining areas, recreational amenities, open space, back-of-house space, traffic circulation, pedestrian flow and access within the Hilton Hawaiian Village;
- Construction of two new timeshare towers. The first tower will be located in the mauka corner of the property near Paoa Place and Kalia Road and will be 350 feet tall and include approximately 300 timeshare units, with a portion located above the current bus depot and loading areas. The second tower will be located above the makai corner of the Rainbow Bazaar, will be 260 feet tall, and include approximately 250 timeshare units. Also planned is the reconfiguration of public sidewalk fronting Kalia Road and overall street front improvements that include new landscaping, a new public bus pull-out lane, and trolley pull-out lane, and bus shelter.

The 2010 Village Master Plan is a new plan that carries forward from the existing improvements on the property. Timetable for the major improvements is estimated at roughly ten years, as follows:

- Retail space renovations and improvement of public space amenities are ongoing for projects not requiring land use permitting actions
- The development of the first timeshare tower is planned for 2013-2015
- Expansion of retail and convention space is planned from 2012-2013
- Expansion of the Super Pool and lobby area is planned from 2013-2014
- The development of the second timeshare tower is planned in 2019-2021

This proposed development is located at the far west end of Waikīkī over a mile from the Project Site, thus, the roadways affected by construction at this site should not result in cumulative impacts with the construction occurring at the Project Site. Based on the Hilton schedule, there will not be an overlap in the construction schedules for the Hilton and Ainahau Vista II. Should the first tower be delayed, it's possible that there will be some overlap in construction periods.

Long term impacts from Hilton's proposed timeshare towers will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the Project. The Project's traffic impact assessment indicates there will be no significant impact on traffic. Other positive long term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City and County tax revenues) from the two developments.

#### 6.3.4 Waikiki Landing

The Waikiki Landing project site currently houses a boatyard repair facility, convenience store and fueling station. The project proposes to renovate and upgrade the existing boatyard facility and the redevelopment of the remainder of the existing site. The development is expected to include the following improvements:

- Boat yard Building with 10,694 square feet of retail space; 9,287 square feet of restaurant space; and 1,877 square feet of office space.
- Wharf Building with 6,098 square feet of restaurant space and 1,319 square feet of office space.
- Canoe House with 4,094 square feet of space for wedding ceremonies to be held on-site.
- Diamond Vista Building with 3007 square feet of retail space; 1,583 square feet of office space; 6,048 square feet of space for wedding ceremonies to be held on-site.
- At-grade parking

The proposed wedding facilities within the Canoe House and Diamond Vista Building should accommodate up to 6 small weddings a day (with about 12 guests per wedding). The project originally projected for completion by the year 2013. Project continues through the permitting process and should begin construction soon.

This proposed development is located at the far west end of Waikīkī about 1.5 miles from the Project Site. Construction at this site will not result in cumulative construction impacts with the Project.

Long term impacts from the Waikiki Landing will result in cumulative impacts to infrastructure and traffic. Other positive long term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City tax revenues).

There is some uncertainty that the project will proceed, with the developer filing for bankruptcy and the Department of Land and Natural Resources proposing revocation of their lease.

#### 6.3.5 Royal Hawaiian Market Place

The proposed development is situated on a 7,200 square foot lot at the corner of Royal Hawaiian Avenue and Lauula Street. The Project will replace 20 temporary tarp and plywood retail kiosks about 10 feet by 10 feet in size by a two-story structure with 3,395 square feet on the ground floor and 1,380 square feet on the second floor. This represents a relatively small commercial

development with existing retail, dining and an existing 218-foot concrete masonry structure with a money exchange/take-out food shop that will remain.

The proposed development will support many of the existing tenants. The Project is not expected to have a significant impact since it essentially continues the existing commercial use on the project site in a permanent structure. The applicant plans to begin construction as soon as the applicant receives approval of development permits from the City and the construction is expected to take about four months.

This applicant's schedule should have the project construction completed prior to the anticipated start of construction of the Ainahau Vista II Project and there should be no cumulative construction impacts.

#### 6.3.6 The International Market Place

The International Market Place Redevelopment Project includes the replacement of all existing buildings and structures on the site with a new retail, dining and entertainment center. The redeveloped center will be generally three levels in height, but the mauka end will have a seven-story structure consisting of two levels of retail below five levels of parking.

The Project involves the removal of approximately 213,000 square feet of existing commercial space at the International Market Place and Town Center sites and approximately 286,000 square feet of existing space at the Miramar Hotel site. With a proposed redevelopment of 419,960 square feet of new commercial space across the entire site, the redevelopment will result in a reduction of approximately 79,040 square feet.

Construction recently began, with the first phase being demolition of existing structures. Construction is expected to be completed by spring 2016, with the new International Market Place re-opening at that time.

Construction is expected to be completed before ground breaking occurs on the Ainahau Vista II Project and there should be limited or no overlap in construction.

#### 6.3.7 2121 Kuhio – Ritz Carlton

The applicant, PACREP LLC, proposes to develop the 2121 Kuhio in Waikiki. Although 2100 Kalakaua Avenue and 2139 Kuhio Avenue properties are part of the joint developed lot with 2121 Kuhio Avenue, the area planned for development is on the 2121 Kuhio property, 1.396 acres of vacant land.

The applicant proposes to develop a 37-story, 350-foot structure. The original plan for 2121 Kuhio included a five story podium with the ground floor lobby, three levels of parking and fifth and sixth floor of condo-hotel support uses. The new design is based on an 8-story shared podium with shared resident services,

recreational amenities, vehicular access and off-street parking. Above this podium will be a 29-story tower.

2121 Kuhio will include development of 361 condo-hotel units, based on keys (this may include lock-off units which although are treated as separate units in the 361 unit total may be used as one large unit or used as two separate smaller units, with separate keyed entrances from the corridor).

The ground floor development will include a sundry/retail shop, a concierge space, lobby, breezeway, drop-off, porter valet, loading, administrative and back-of-house offices, entry drive, entry plaza, and lush landscaping.

2121 Kuhio broke ground in August of 2013 and completion is expected by mid-2016. Construction is expected to be completed before ground breaking occurs on the Ainahau Vista II Project and there should be limited or no overlap in construction.

#### 6.3.8 2139 Kuhio – Ritz Carlton

The Applicant, PACREP 2 LLC, proposes to develop a 39-story condo-hotel at 2139 Kūhiō Avenue in Waikīkī. The proposed development consists of a tower on podium building with up to 280 units, related building support facilities, resident services, amenities and public streetscape improvements. The new tower will be a stand-alone building with its own mechanical, electrical, and utility infrastructure, and but will share an 8-story building podium with the adjacent 2121 Kūhiō Tower that is currently in development. The building podium will contain shared resident services, recreational amenities, vehicle access and off-street parking.

The Applicant plans to begin construction this year and projects to complete construction by mid-2016. Construction is expected to be completed a few months after ground breaking occurs on the Ainahau Vista II Project and there should be limited or no overlap in construction.

#### 6.3.9 Waikiki Parc Hotel Renovation

The Applicant, Halekulani Corporation, proposes the Waikiki Parc Hotel Renovation Project in Waikīkī. The Project will be located on a 48,411 square foot site and will involve the renovation of the existing Waikiki Parc Hotel including the following:

1. Provide streetscape enhancements, landscaping and special roadway paving along Kalia and Helumoa Roads.
2. Enhance existing pedestrian hotel entrance and drop off fronting Kalia Road and porte cochere on Helumoa Road.
3. Renovate ground floor lobby, restrooms and back-of-house facilities, and improvements to the existing restaurant.

4. Renovate the 8<sup>th</sup> floor pool deck to include refurbishing of the existing pool, adding a new pool, lounge chairs, poolside dining tables and chairs and renovating the existing pool bar.
5. Renovate the 8<sup>th</sup> floor by removing guest rooms and providing a new restaurant, kitchen, dining room, fitness center and hospitality room.
6. Renovate the 8<sup>th</sup> floor outdoor gathering area with landscaped wind screens and retractable roof awning and create a garden with outdoor dining tables and chairs.
7. Renovating the existing 297 rooms into all 1-bedroom and 2-bedroom rooms (reducing the unit count to 126 rooms).
8. Provide a new roof top open-air terrace.
9. Extend elevator and stairs to the roof top.
10. Provide façade improvements to the face of the parking garage, to enhance existing architectural treatment such as post and beam articulation, trellises and canopy extensions.
11. Replacing the exterior glazing of the building façade and change out all hand rails and guard rails.

Construction is anticipated to begin in the fall of 2016, and be completed by 2018. HHDC expects that there will be an overlap in construction periods. There will be limited cumulative impact over the service roads for each development given the one mile distance between the two Projects.

#### 6.3.10 133 Kaiulani Condo-Hotel

The Applicant, MK Development Consulting, LLC (MK), proposes the 133 Kaiulani Condo-Hotel Development in Waikiki. The Project includes the replacement of all existing buildings and structures on the Project Site with a new commercial and parking podium and a condo-hotel tower above.

The new condo-hotel will provide approximately 238 to 260 condo-hotel units. The new structure is planned to have a 350-foot, 33-story tower.

A basement will consist of back of house spaces and the ground floor will be composed of a retail spaces, condo-hotel lobby and support spaces. The condo-hotel reception area, lobby lounge, bar lounge, full-service restaurant as well as multiple event spaces and executive offices will be located on an amenity deck above the parking floors. The tower above the amenity deck will mostly be condo-hotel units.

The project will provide a porte-cochere for valet drop off with loading, trash and vehicular access on the ground floor. The Kaiulani Avenue and Koa Avenue corner of the Project will provide an open-space plaza to serve as the main pedestrian access to both the condo-hotel and retail functions. A paved and landscaped area will connect the plaza, wrapping around Kaiulani Avenue with access to the retail, and connect to the Prince Edward Street side of the property.

This pathway will continue and connect to a landscaped pocket park for use by condo-hotel guests, Waikiki residents and the general public.

Construction is anticipated to begin in 2016, and be completed by 2018, approximately 30 months. HHDC expects that there will be an overlap in construction periods. There will be limited cumulative impact over the service roads for each development except for the Ala Wai Boulevard which both projects will use.

#### 6.4 POPULATION AND GROWTH CHARACTERISTICS

The Project, when completed, will have an impact on the number of permanent residents in Waikiki, adding about 62 residents, given the typical occupancy of the senior units. However, it will not affect the visitor population, as it is planned as an affordable residential project geared to seniors earning at or below 60% of the AMI.

### 7. RELATIONSHIP TO LAND USE PLANS, POLICIES, AND CONTROLS

#### 7.1 STATE LAND USE

The Project Site lies within the State land use Urban district. Within this district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The Project's planned affordable senior rentals are consistent with this Urban designation.

##### 7.1.1 Hawaii State Plan

###### Goals

*(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.*

Project replaces an underutilized open space with an affordable senior rental development that will fulfill the housing needs of low income seniors. With at least a 62 year term, this affordable rental will serve several generations of senior citizens.

The Project will provide an economic and job-creating stimulus for the local economy with temporary construction jobs and through secondary impact provide jobs for services in support of the affordable senior rental apartment.

The Project provides much needed affordable senior rentals in Waikiki.

*(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.*

- (3) *Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life.*

The Project's overall design will create a new living environment with landscaped open space and a victory garden providing for the mental and physical well-being of the senior citizens living in this affordable rental development.

These affordable senior rentals will provide for the physical, social and economic well-being of the senior residents. The senior residents will become part of a senior community and enjoy companionship and activities in the multi-purpose room.

#### 7.1.2 State Functional Plan – Agriculture

The Project in a developed urban area will not affect the objectives, policies and actions recommended in the Agriculture Plan.

#### 7.1.3 State Functional Plan – Conservation Lands

The Project is situated on Urban land within a built environment and will not affect the policies, goals and implementing actions of the Conservation Lands Plan.

#### 7.1.4 State Functional Plan – Education

The Project will not affect the Policies, Goals and Implementing Actions of the Education Plan.

The proposed affordable senior rental development will not allow school age students to reside in the rental apartments.

#### 7.1.5 State Functional Plan – Higher Education

The Project will not affect the Policies, Goals and Implementing Actions of the Higher Education Plan.

#### 7.1.6 State Functional Plan – Economy

The Economy Plan relies heavily on the State's education system and state agencies in the implementing actions to meet the goals and policies of the Plan.

The Project will, however, help in implementing the objectives and policies for the economy described in Appendix C, "§226-6. Objectives and policies for the economy.", specifically:

- (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.*

The Project will provide an economic and job-creating stimulus for the local economy with temporary local construction jobs and through the indirect jobs created that will support the affordable senior rental development.

- (9) Foster greater cooperation and coordination between the public and private sectors in developing Hawaii's employment and economic growth opportunities.*

The Project requires support from various public agencies in the review and approval of the Project.

#### 7.1.7 State Functional Plan – Energy

The Energy Plan relies heavily on the Department of Business and Economic Development (now Department of Business, Economic Development and Tourism) to take the lead in implementing most action items in support of the objectives and policies of the Energy Plan and encouraging private energy agencies to develop alternate energy systems to reduce dependence on fossil fuels. Other State and County agencies take the lead in remaining action items. In a smaller scale, the Project will support sustainability and energy conservation on-site as follows:

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

#### 7.1.8 State Functional Plan – Health

The Project will not affect the objectives, policies and implementing actions of the Health Plan, which will be implemented by State Agencies and Medical facilities throughout the State.

#### 7.1.9 State Functional Plan – Historic Preservation

In accordance with Implementing Action B.2.c. “*Respond to the discovery of prehistoric/historic burials in a timely and sensitive manner, which takes into consideration cultural concerns.*”

The Project Site is not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled “Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments” (now known as Ainahau Vista), Waikiki, Kona District, O’ahu Island and dated December, 2004. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.

Also included in **Appendix 4** is a copy of a letter from the Department of Land and Natural Resources (DLNR), dated October 18, 2005, indicating their concurrence with Cultural Surveys Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

As mentioned earlier, SHPD of the DLNR indicated that the submittal will require SHPD review under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. Their letter went on to describe steps that HHDC needs to take to address Section 106 and their other requirements.

HHDC’s archaeological consultant, Cultural Surveys Hawaii will work with SHPD to meet their requirements related to HRS §6E and NHPA Section 106 and SHPD’s other requirements for the Project.

#### 7.1.10 State Functional Plan – Housing

The Project will support Objective C, Policy C(1), Implementing Action C(1)(a) and (b) relating to providing rental housing for the elderly and handicapped persons.

#### 7.1.11 State Functional Plan – Human Services

The Project will not affect the Policies, Goals and Implementing Actions of the Human Services Plan, which will primarily be guided by public agencies and private social service agencies.

#### 7.1.12 State Functional Plan – Recreation

The Project will be developed with a victory garden, multi-purpose room and open space areas for on-site recreational opportunities for its residents.

Except for an increase in residents from this Project and an increase in recreational use and facilities on the island, the Project is not expected to affect other Policies, Goals and Implementing Actions of the Recreation Plan.

#### 7.1.13 State Functional Plan – Tourism

The Project with its new affordable senior rental development will not affect the goals, policies and actions of the Tourism Plan.

#### 7.1.14 State Functional Plan – Transportation

The seniors in the affordable rentals are expected to use public transportation and a shuttle service provided by Catholic Charities to minimize use of private automobiles. This will be encouraged by the minimal amount of parking being provided and the requirement that any senior resident that owns a car will have a parking stall on-site. This will be controlled by not allowing new senior residents who own a car to rent in this Project unless there is an available parking stall.

#### 7.1.15 HRS § 226-12 - The Physical Environment – Scenic, Natural Beauty, and Historic Resources

- (1) *Promote the preservation and restoration of significant natural and historic resources.*
- (2) *Provide incentives to maintain and enhance historic, cultural, and scenic amenities.*

The Project Site is not listed on the State or Federal Register of Historic Places.

An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled “Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments” (now known as Ainahau Vista), Waikiki, Kona District, O’ahu Island and dated December, 2004. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.

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encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

- (3) *Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.*

The proposed development will not affect any important views or vistas. Nor will it affect the aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

- (4) *Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.*

Cultural Surveys Hawaii, Inc. prepared a "Cultural Impact Evaluation for the Tusitala Vista Elderly Apartments" (now Ainahau Vista), Waikiki, Kona District, Oahu Island, dated December 2004. Please refer to **Appendix 8** of this report. The following is an excerpt from the Section on "Summary and Recommendations":

"None of the community contacts queried for this cultural impact evaluation identified any ongoing cultural practices within the project area.

It is possible that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project parcel. Other possible deposits may be associated with nineteenth century Hawaiian royalty.

Based on the above findings, it is recommended that no further cultural impact mitigation measures are warranted."

- (5) *Encourage the design of developments and activities that complement the natural beauty of the islands. [L 1978, c 100, pt of §2; am L 1986, c 276, §11]*

The Project has been designed to match the existing Ainahau Vista development and will provide needed affordable senior housing in Waikiki. The Project will follow Waikiki Special District standards to provide a Project enhancing the Hawaiian Sense of Place in Waikiki.

#### 7.1.16 HRS § 226-19 - Socio-Cultural Advancement - Housing

- (a) *Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:*
- (1) *Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through*

*collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.*

- (2) *The orderly development of residential areas sensitive to community needs and other land uses.*
- (3) *The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.*
- (b) *To achieve the housing objectives, it shall be the policy of this State to:*
  - (1) *Effectively accommodate the housing needs of Hawaii's people.*
  - (2) *Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.*
  - (3) *Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.*

Each of these preceding objectives will be met with the development of Ainahau Vista II, including, greater opportunities for Hawaii's seniors to secure reasonably priced rentals in safe, sanitary, livable homes in a suitable environment through collaboration between HHFDC (State) and the applicant, HHDC (non-profit) with low-income rentals ; the continuation of development of affordable senior rentals on this property is sensitive to community needs and other surrounding residential uses; the State is a partner in the affordable rental development; in keeping with State's policy of effectively accommodating the housing needs of Hawaii's people; State's tax credits help to stimulate and promote the increase of affordable rental units in several income brackets, especially of the lower end (most difficult to produce); and Project will increase rental opportunities meeting the criteria of quality, location, cost, densities, style and size of housing, which are all geared to meet the needs of seniors.

- (4) *Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.*

The existing Ainahau Vista will remain on the property and continue to be maintained as an affordable senior rental development.

- (5) *Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.*

The location itself is very central to those goods, services and facilities that are considered vital by senior households, particularly medical, with a fire station down the road and also recreational, social and shopping areas within a mile of the Project.

- (6) *Facilitate the use of available vacant, developable, and underutilized urban lands for housing.*

The Project will use an available vacant, developable portion of the Project site which is underutilized and develop affordable senior rentals, in keeping with this objective.

- (7) *Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.*

The Project will complement the existing affordable senior rental development and maintain the residential nature of the surrounding area.

- (8) *Promote research and development of methods to reduce the cost of housing construction in Hawaii. [L 1978, c 100, pt of §2; am L 1986, c 276, §18; am L 1992, c 27, §2]*

Ainahau Vista II is utilizing the State's tax credit policy to reduce the cost of construction and developing this Project. The applicant is also developing at about 9-stories to help reduce the cost of construction of the midrise structure.

#### 7.1.17 HRS § 226-22 - Socio-Cultural Advancement – Social Services

- (b) *To achieve the social service objective, it shall be the policy of the State to:*

- (1) *Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.*
- (2) *Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.*

Ainahau Vista II will help improve the standard of living by seniors on fixed incomes that are confronted daily by social and economic hardships that will be eased with affordable rental housing and through social services provided by Catholic Charities that will partner with the applicant in providing services for seniors. This will help families help their seniors to live independently in a quality, new rental unit in Waikiki.

- (3) *Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.*

Ainahau Vista II may help relatively new residents and immigrants that can qualify for these senior rental units.

- (4) *Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.*
- (5) *Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.*
- (6) *Promote programs which assist people in need of family planning services to enable them to meet their needs. [L 1978, c 100, pt of §2; am L 1986, c 276, §21; am L 1990, c 67, §8]*

Ainahau Vista II will not address these three objectives.

#### 7.1.18 HRS § 226-106 – The Priority Guidelines on Affordable Housing

- (1) *Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.*

The Project is not on agricultural land or public land.

- (2) *Encourage the use of alternative construction and development methods as a means of reducing production costs.*

The Project will utilize construction methods that reduce production costs available for building of 8-stories or less.

- (3) *Improve information and analysis relative to land availability and suitability for housing.*

Ainahau Vista II is situated on a vacant portion of an existing affordable senior rental owned by the applicant. However, the applicant does utilize various realtors to find other land suitable for affordable rentals.

- (4) *Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs.*

The State's tax credit policy and other available affordable housing grants make this Project feasible. The Project will served seniors, considered residents with special needs.

- (5) *Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner- occupied housing.*

This Project which is an affordable senior rental development does not require low interest mortgages for initial purchase of owner-occupied housing.

- (6) *Encourage public and private sector cooperation in the development of rental housing alternatives.*
- (7) *Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.*
- (8) *Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii. [L 1986, c]*

The State HHFDC has provided much support along with other City and State government agencies in cooperating with the applicant in making this affordable senior rental intended for Hawaii residents.

#### 7.1.19 HRS § 226-12 – The Priority Guidelines on Sustainability

##### **Sustainability.**

*Priority guidelines and principles to promote sustainability shall include:*

- (1) *Encouraging balanced economic, social, community, and environmental priorities;*

The proposed affordable senior rental development represents an effort to balance the social need for this type of housing with other economic, community and environmental priorities. The applicant feels that all priorities will be positively affected by this development, including environmental, with these impacts being mitigated through thoughtful planning.

- (2) *Encouraging planning that respects and promotes living within the natural resources and limits of the State;*

The Project can be accommodated by the existing infrastructure and promotes living within the natural resources and limits of the State.

- (3) *Promoting a diversified and dynamic economy;*

The Project will provide construction jobs and a few long term jobs in support of senior resident needs. Senior housing and related services in a State with excellent climate and health services will support the diversification of our local economy.

- (4) *Encouraging respect for the host culture;*

The Project has provided the necessary archaeological safeguards to ensure that the host culture will be respected. Support for our local kupuna (seniors) is an important part of respecting the host culture.

- (5) *Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;*

The Project will meet the needs of the present and with adequate supporting infrastructure and minimal impact of senior housing on traffic will not compromise the needs of future generations. This senior housing will support generations of seniors over the next 62 years.

- (6) *Considering the principles of the ahupua'a system; and*

The Project within the Waikiki ahupua'a provides an important service to the islands kupuna and as Waikiki provided for housing in ancient times, it will continue to provide housing, more importantly, affordable rental housing for our kupuna.

- (7) *Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii. [L 2011, c 181, §2]*

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

## 7.2 GENERAL PLAN

7.2.1 Compliance of the Project with the General Plan objectives is discussed as follows:

- General Plan Objective A, Policy 1 – Develop programs and controls which will provide decent homes at the least possible cost.
- General Plan Objective A, Policy 12 – Encourage the production and maintenance of affordable rental housing.
- General Plan Objective A, Policy 13 – Encourage the provision of affordable housing designed for the elderly and the handicapped.

- General Plan Objective C, Policy 2 – Encourage the fair distribution of low-and-moderate-income housing throughout the Island.

Development of Ainahau Vista II is consistent with the above Objectives and Policies of the General Plan by offering an affordable senior rental development that will provide 62 rental units to seniors earning at or below 60% of the area median income.

- Policy 3 - Encourage private participation in improvements to facilities in Waikiki.

HHDC will improve and upgrade the existing neighborhood through the development of Ainahau Vista II, providing a new senior affordable rental apartment. The Project will also include an upgrade to the existing sewer line in Tusitala Street.

### 7.2.2 Energy

General Plan Objective A - To maintain an adequate, dependable, and economical supply of energy for Oahu residents.

Policy 3 - Support programs and projects which contribute to the attainment of energy self-sufficiency on Oahu.

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new development will meet or exceed the energy efficiency code requirements. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.

### 7.2.3 Physical Development and Urban Design

General Plan Objective A - To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.

Policy 2 - Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities.

Except for an upgraded sewer line in Tusitala Street, other infrastructure is available and adequate to support the Project.

Policy 3 - Phase the construction of new developments so that they do not require more regional supporting services than are available.

Phasing of the Project will not require more supporting services than are available, with the exception of an upgrade to a Tusitala Street sewer line which will be provided by HHDC.

### 7.3 PUC DEVELOPMENT PLAN

The Project's compliance with the PUC DP is discussed as follows:

#### 7.3.1 "Section 2. The Vision for the PUC's Future

*The PUC offers in-town housing choices for people of all ages and incomes."*

The proposed Ainahau Vista II will offer in-town housing (Waikiki) to our seniors with limited incomes (those who earn 60% of the area median income or less).

*"Section 3.2 Neighborhood Planning and Improvements – In-town Residential Neighborhoods"*

The proposed Ainahau Vista II will be located in the central area of Waikiki, in an area of mixed residential apartments and will be close to major commercial districts and corridors.

#### 7.3.2 Land Use and Transportation

Visitor Industry

*"The need to upgrade Waikiki. Waikiki is competing in the global market and, as a mature destination, needs to be refurbished and improved. In addition to upgrading streets and public spaces, the City and State need to adopt policies that will elicit private reinvestment in Waikiki's physical plant."*

Although not directly related to the visitor industry, HHDC proposes to invest approximately \$21.6 Million to develop Ainahau Vista II. This reinvestment in Waikiki's physical plant will help to implement this important vision statement of the PUC DP.

### 7.4 LAND USE MAP PUC – EAST

The Project is designated as Higher-Density Residential/Mixed Use on the Primary Urban Center (PUC) Development Plan Land Use Map. The Project's proposed development of Ainahau Vista II as an affordable senior rental apartment is consistent with this designation.

## 7.5 LAND USE ORDINANCE (SEC. 21-9.80 WAIKIKI SPECIAL DISTRICT)

The Department of Planning and Permitting (DPP) in a letter dated April 27, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the Project will be subject to the rules and regulations of the Waikiki Special District and will require a Special District Permit Major. DPP further asked that the existing Ainahau Vista be considered in the development standard calculations and tabulations and that the DEA discuss how the project will meet the Waikiki Special District objectives and how it will contribute to a Hawaiian sense of place. Finally DPP asked that the DEA show and discuss building massing relationships between the existing and proposed buildings and any shared facilities and operations.

This FEA discusses the development standard calculations and tabulations for both Ainahau Vista buildings. There are sections in the FEA that discuss the Project's conformance to the Waikiki Special District Guidelines and its contribution to the Hawaiian sense of place. The location of the Ainahau Vista II mauka of the existing Ainahau Vista will help to minimize the perception of the additional mass of the new building when viewed from Ala Wai Boulevard and Tusitala Street. The new building is also a little over half the floor area of the existing building so the mass will be a smaller addition to the existing mass on the property. Shared facilities and operations are discussed in this FEA.

### 7.5.1 Waikiki Special District Objectives (Sec. 21-9.80-1)

The Project will meet the following objectives:

#### 7.5.1.1 (a) - Promote a Hawaiian Sense of Place

Landscaping and articulation to the front façade of the building will support and promote a Hawaiian Sense of Place in Ainahau Vista II. The building will be developed to complement the existing Ainahau Vista Project with articulation provided at the windows, recessing the windows a couple of feet and creating a low wall which adds to the articulation.

#### 7.5.1.2 (b) - Optimum Community Benefits

Seniors earning at or below 60% of the AMI will benefit from the newly developed Ainahau Vista II in Waikiki, with the addition of 62 affordable rentals units on this vacant under-utilized property in the heart of Waikiki.

#### 7.5.1.3 (c) – Support the retention of a residential sector

The development of Ainahau Vista II will meet and support this Objective.

#### 7.5.1.4 (d) - Variety of Compatible Land Uses

The Project will provide 62 rental units (47 one-bedroom units and 15 studios) and 22 at grade parking stalls, a development compatible with surrounding land uses in this Apartment Precinct in Waikiki.

#### 7.5.1.5 (g) - Support Visitor and Resident Needs

As stated above, the Project in Waikiki will provide affordable housing to those residents less fortunate in our community. 62 rental units (47 one-bedroom units and 15 studios) and 22 at grade parking stalls will be offered to seniors earning at or below 60% of the AMI.

#### 7.5.1.6 (h) - Rejuvenation and Revitalization in the Special District

The Project will help to rejuvenate and revitalize this area of Waikiki, and will be built on a vacant portion of the property that is currently underutilized. This area of Waikiki has experienced a normal aging process and a new building at this location will serve to rejuvenate and revitalize this vacant portion of the property.

#### 7.5.1.7 (k) - Diamond Head View from Punchbowl

Ainahau Vista II will be a midrise (9-story) structure located on Ala Wai Boulevard which follows the Ala Wai Canal that will not affect views of Diamond Head from the Punchbowl Lookout.

### 7.5.2 Prominent View Corridors and Historic Properties (Sec. 21-9.80-4)

#### 7.5.2.1 Significant Public Views

- “(1) *Intermittent ocean views from Kalia Road across Fort DeRussy Park and from the Ala Wai Bridge on Ala Moana Boulevard;*
- (2) *Continuous ocean views along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue;*
- (3) *Ocean views from Ala Wai Yacht Harbor;*
- (4) *Ocean views from Kuhio Beach Park;*
- (5) *Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);*
- (6) *Mauka views from the portions of the following streets mauka of Kuhio Avenue:*
  - (A) *Nohonani Street;*
  - (B) *Nahua Street;*
  - (C) *Kanekapolei Street;*
  - (D) *Kaiolu Street;*
  - (E) *Lewers street;*
  - (F) *Walina Street; and*
  - (G) *Seaside Avenue;*

The Project will not affect any of these significant public views, since the Project Site is located east of the easternmost street, Kanekapolei Street and is situated midblock along the Ala Wai Boulevard, where it does not affect any streets that have mauka views from Kuhio Avenue.

*(7) View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue.”*

The Project will not affect this significant public view, as it will fall within the profile of the Monte Vista Condominium, when looking east along the Ala Wai Boulevard.

7.5.2.2 Preserve, Maintain, and Enhance These Views

Due to the Project’s location, none of these significant public views will be affected by Ainahau Vista II.

7.5.2.3 Historic Properties

*“Development should preserve, maintain and enhance historic properties whenever possible. Special district permit applications involving buildings over 50 years old shall be submitted to the state department of land and natural resources for review and comments.”*

Ainahau Vista is only 8 years old and is not listed as historic on either the State or Federal Register of Historic Properties.

7.5.3 General Requirements and Design Controls (Sec. 21-9.80-4)

HHDC plans to develop a residential apartment building that reflects a Hawaiian sense of place by following the general requirements and design controls as enumerated in the Land Use Ordinance of The City and County of Honolulu Sec. 21-9.80-4; which states: The design of buildings and structures in the Waikiki special district should always reflect a Hawaiian sense of place, as outlined in the design controls of this section. HHDC will achieve this goal by:

- Uses and Structures Allowed in Required Yards and Setbacks  
Wrought iron fences for dwelling uses along Ala Wai Boulevard are being considered in this apartment precinct lot, setback not less than 24 inches from the property line and screened with landscaping per Sec. 21-9.80-4(a)(8).
- No additional curb cuts in accordance with Sec. 21-9.80-4(b) are planned for the project which will share the existing curb cut leading to the parking lot for Ainahau Vista.

- Contributing to Hawaiian sense of place through the use of subdued and natural materials per Sec. 21-9.80-4(c)5. The colors and finishes will be absorptive and not highly reflective.
- Providing human scale at the ground level per Sec. 21-9.80-4(c)6. This will be achieved through the use of landscaping.
- Providing architectural features that promote a Hawaiian sense of place per Sec. 21-9.80-4(c)6. These architectural features will include: recessed windows which act as sunshades for the unit below while also serving the purpose of helping to screen the air-conditioning units.
- HHDC will use other architectural elements that promote a Hawaiian sense of place per Sec. 21-9.80-4(c)6, including decorative metal panels with geometric patterns that screen the face of air-conditioning units (if installed), and open concrete masonry units with geometric patterns that provide light and ventilation into the stairways.
- HHDC will provide exterior building colors that contribute to a tropical resort destination which complement and blend with their surroundings by using neutral colors per Sec. 21-9.80-4(c)7
- The design of Ainahau Vista II will promote a close indoor-outdoor relationship per Sec. 21-9.80-4(c)8(A), by providing the entry lobby with full height glass that also provides for natural ventilation and offering views of the mountains and a visual connection to the Ala Wai Canal. This indoor-outdoor relationship is continued on the upper floors with the use of windows that take advantage of views of the mountains and the Ala Wai Canal.

#### 7.5.4 Design Guidelines.

General Guidelines - The general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 240-foot height limit. Ainahau Vista II is proposed as an 80-foot high building, significantly below the maximum permitted height for the Project Site.

Yards - The 15-foot front yards required per the development standards under the LUO Table 21-9.6(B) will be met.

Utility Installations - Except for antennas, utility installations (if developed) will be designed and installed in an aesthetic manner so as to hide or screen wires and equipment completely from view, including views from above; provided, however, that any antenna located at a height of 40 feet or less from existing grade, visible from a public right-of-way, will take full advantage of stealth technologies in order to be adequately screened from view at ground level without adversely affecting operational capabilities.

Building Materials - HHDC will be utilizing concrete masonry units to match the existing Ainahau Vista development.

Building Scale, Features and Articulation - Recessed windows which act as sunshades for the unit below.

Exterior Building Colors. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance. Generally neutral tones are being considered to blend with adjacent buildings.

Ground Level Features.

Outdoor Lighting - Lighting for the Project will be utilized to contribute to public safety and to enhance the nighttime ambiance of the open space areas on the property. Outdoor lighting will be subdued or shielded so as not to provide inappropriate or excessive spillage onto surrounding properties or public rights-of-way.

Landscaping - The landscape planting shall meet the requirements set forth by the WSD and other LUO requirements. All landscape areas will have an adequate irrigation system.

Height Regulations - Ainahau Vista II will be built to a height of 80 feet, well below the 240-foot height limit in this Apartment Precinct.

7.5. 5 Apartment Precinct

7.5.5.1 Permitted Uses

The Apartment Precinct allows as permitted uses the proposed Ainahau Vista II affordable senior rental apartments.

7.5.5.2 Development Standards, Table 21-9.6(B)

<b>Development Standard</b>	<b>Apartment</b>	<b>Ainahau Vista and Ainahau Vista II</b>
Minimum lot area (square feet)	10,000	35,761 sf
Minimum lot width and depth (feet)	50	144 ft/246 ft
Yards - Front (feet) - Side	15 10	15 ft On the ewa side yard, a loading maneuvering area will encroach for a 12' width and a 10' depth
Maximum Density (FAR) apartment precinct only	20,000 sf or more FAR = 1.9 82,268 sf allowed	NA

<b>Development Standard</b>	<b>Apartment</b>	<b>Ainahau Vista and Ainahau Vista II</b>
Minimum open space (percent of zoning lot)	35% open space – FAR = 1.5 64,948 sf allowed	94,617 sf (FAR = 2.19) 60,948 sf/33,669 sf
Maximum Height (feet)	240 per zoning map	85 ft/80 ft
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	A maximum 5' encroachment at the ewa/mauka corner of the building

#### 7.5.5.3 Parking

Based on Chapter 21, Article 6, Section 21-6.20, Land Use Ordinance, Table 21-6.1, Ordinance No. 99-12, as amended, the parking requirement for the proposed Ainahau Vista II, based on 62 rental units (47 one-bedroom units and 15 studio units) is 62 stalls. HHDC will be requesting an exemption through the 201H process to allow 22 parking stalls.

Resolution No. 05-218 for Tusitala Vista (now Ainahau Vista) approved 24 parking stalls for residents and 5 guest stalls, in lieu of the 107 parking stalls required.

HHDC proposed to provide 46 parking stalls with 5 guest stalls in lieu of the 169 parking stalls required by the LUO.

#### 7.5.5.4 Loading

Based on Chapter 21, Article 6, Section 21-6.120(b), Land Use Ordinance No. 99-12, as amended, the loading requirement for the Ainahau Vista and proposed Ainahau Vista II is one full size loading stall and one smaller loading stall. HHDC will provide one full size and one smaller loading stall, eliminating the need for the exemption on loading provided by Resolution No. 05-218.

## 7.6 WAIKIKI SPECIAL DISTRICT GUIDELINES

The existing Ainahau Vista was been designed and constructed to meet the WSD Guidelines. The proposed Ainahau Vista II development will satisfy the objectives and standards of the WSD Guidelines as follows:

### 7.6.1 Hawaiian Sense of Place

The Project's design will reflect a residential apartment building that reflects a "Hawaiian Sense of Place" by following the general requirements and design controls as enumerated in the Land Use Ordinance of the City and County of Honolulu, Sec. 21-9.80-4, which states: "The design of buildings and structures in the Waikiki special district should always reflect a Hawaiian sense of place, as outlined in the design controls of this section."

HHDC plans to develop a residential apartment building that reflects a Hawaiian sense of place by following the general requirements and design controls as enumerated in the Land Use Ordinance of The City and County of Honolulu Sec. 21-9.80-4; which states: The design of buildings and structures in the Waikiki special district should always reflect a Hawaiian sense of place, as outlined in the design controls of this section. HHDC will achieve this goal by:

- **Uses and Structures Allowed in Required Yards and Setbacks**  
Wrought iron fences for dwelling uses are being considered in this apartment precinct lot, setback not less than 24 inches from the property line and screened with landscaping per Sec. 21-9.80-4(a)(8).
- No additional curb cuts, in accordance with Sec. 21-9.80-4(b), are planned for the project which will share the existing curb cut leading to the parking lot for Ainahau Vista.
- Contributing to the Hawaiian sense of place through the use of subdued and natural materials per Sec. 21-9.80-4(c)5. The colors and finishes will be absorptive and not highly reflective.
- Providing human scale at the ground level per Sec. 21-9.80-4(c)6. This will be achieved through the use of landscaping.
- Providing architectural features that promote a Hawaiian sense of place per Sec. 21-9.80-4(c)6. These architectural features will include: recessed windows which act as sunshades for the unit below while also serving the purpose of helping to screen the air-conditioning units.
- HHDC will use other architectural elements that promote a Hawaiian sense of place per Sec. 21-9.80-4(c)6, including decorative metal panels with geometric patterns that screen the face of air-conditioning units, and open concrete masonry units with geometric patterns that provide light and ventilation into the stairways.
- HHDC will provide exterior building colors that contribute to a tropical resort destination which complement and blend with their surroundings by using neutral colors per Sec. 21-9.80-4(c)7.

## 7.6.2 Building Design

### 7.6.2.1 Orientation & Form

The orientation and form of the proposed Ainahau Vista II, due to the shape of the developable portion of the lot, the 80-foot midrise tower is oriented in an Ewa-Diamond Head direction. The tower is also located so that much of the visual impact of the tower is screened by the existing Ainahau Vista development.

#### 7.6.2.2 Open Space

The open space along the perimeter of the property and fronting the Ala Wai Boulevard will be landscaped in order to achieve a Hawaiian sense of place, per Sec. 21-9.80(c)8(G).

#### 7.6.2.3 Parking Facilities

The parking area is a surface parking lot on the ground floor that will be screened from Ala Wai Boulevard by landscaping.

#### 7.6.2.4 Articulation, Scale, Material Color

The building will feature articulated facades to break up the building bulk per Sec. 21-9.8 (c)6.

The building will be designed to provide human scale at the ground level per Section 21.9.80-4(c)6. This is achieved through the use of landscaping and by providing a small lobby that embraces the occupant while at the same time, with two sides fully glazed allows the user to survey the tropical environment they inhabit.

The building will provide architectural features that promote a Hawaiian sense of place with recessed windows which act as sunshades for the units below, while also serving the purpose of screening the air-conditioning units.

Other architectural features will include elements that promote a Hawaiian sense of pace such as metal panels with geometric patterns that screen the face of air-conditioning unit, and open concrete masonry units with geometric patterns that provide light and ventilation into the stairways.

The building will reflect a Hawaiian sense of place through the use of subdued and natural materials. Exterior building colors will contribute to a tropical resort destination that will complement and blend with their surroundings by using neutral colors per Sec. 21-9.80(c)7. The colors and finishes will be absorptive and not highly reflective.

#### 7.6.2.5 Entries, Lobbies & Arcades

A small lobby will embrace the occupant while at the same time, with exterior windows fully glazed allowing the user to survey the tropical environment they inhabit.

#### 7.6.2.6 Visual Links

This is achieved by promoting a close indoor-outdoor relationship per Sec. 21-9.80(c)8(A), by providing two sides of the entry lobby with full height glass that also provides for natural ventilation and offers views of the mountains and a visual connection to the Ala Wai Canal. The indoor-outdoor relationship is continued on the upper floors with the use of corridors that are open to the exterior and offer views of the mountains and the Ala Wai Canal.

#### 7.6.2.7 Features in Required Yards

- Walls & Fences – A wrought iron fence is being considered and will meet design guidelines for setback and screening.
- Shading Devices – Recessed windows provide shading for lower floors.
- Outdoor Dining – No outdoor dining is proposed.
- Rooftop Design and Equipment Screening - Rooftop machinery, equipment and utility installations will not exceed the established height limit and will be screened from view, as needed.

#### 7.6.2.8 Landscaping

Landscaping will promote and create a tropical image for this affordable senior rental development.

#### 7.6.2.9 Water Features and Artwork

No water features or artwork are proposed.

#### 7.6.2.10 Sidewalk & Paving

No new sidewalk or paving is planned.

#### 7.6.2.11 Signage

Signage will be designed to meet the requirements of the LUO.

#### 7.6.2.12 Lighting

Outdoor lighting will be subdued or shielded so as not to provide inappropriate or excessive spillage onto surrounding properties or public rights-of-way.

### 7.6.3 Urban Design Controls

#### 7.6.3.1 Waikiki Gateways and Fort DeRussy

The Project is not situated near any of the five Waikiki Gateways and is located about 0.75 miles away from Fort DeRussy.

#### 7.6.3.2 Major Streets

The Project Site abuts Ala Wai Boulevard on its mauka side.

#### 7.6.3.3 Waikiki Promenade

The Project is situated across the Ala Wai Boulevard from the portion of the Waikiki Promenade that follows the Ala Wai Canal. It will not impact makai views from the Promenade since these views are currently blocked by other buildings, including Ainahau Vista and the Waikiki Townhouse.

#### 7.6.3.4 Coastal Height Setback

The proposed Project is located approximately 0.25 miles from the shoreline and is not subject to a coastal height setback.

#### 7.6.3.5 Mini Parks

No mini parks are planned at the Project.

#### 7.6.3.6 Significant Public Views and Historic Properties (Sec. 21-9.890-3)

*“The following streets and locations identify significant public views of Waikiki landmarks, the ocean, and the mountains from public vantage points:*

- (1) Intermittent ocean views from Kalia Road across Fort DeRussy Park and from the Ala Wai Bridge on Ala Moana Boulevard;*

The Project Site, located along Ala Wai Boulevard, between Kaiulani Avenue and Liliuokalani Avenue will not affect any of these intermittent ocean views.

- (2) Continuous ocean views along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue;*

Given the Project's location along the Ala Wai Boulevard, five blocks mauka of Kalakaua Avenue, it will not affect continuous ocean views along Kalakaua Avenue.

(3) *Ocean views from Ala Wai Yacht Harbor;*

The Project Site located about 1.7 miles east and mauka of the Harbor will not affect this important view.

(4) *Ocean views from Kuhio Beach Park;*

The Project will not affect this view being situated five blocks mauka of Kuhio Beach Park.

(5) *Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);*

The Project is not in the line of sight between Ala Moana Park and Ala Wai Yacht Harbor and will not affect these views.

(6) *Mauka views from the portions of the following streets mauka of Kuhio Avenue:*

- (A) *Nohonani Street;*
- (B) *Nahua Street;*
- (C) *Kanekapolei Street;*
- (D) *Kaiolu Street;*
- (E) *Lewers Street;*
- (F) *Walina Street; and*
- (G) *Seaside Avenue.*

The Project will not affect any of these significant public views, since the Project Site is located east of the easternmost street, Kanekapolei Street and is situated midblock along the Ala Wai Boulevard, where it does not affect any streets that have mauka views from Kuhio Avenue.

(7) *View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue.”*

The Project will not affect this significant public view, as it will fall within the profile of the Monte Vista Condominium, when looking east along the Ala Wai Boulevard.

Historic Structures, Significant Sites and Landmarks - The Project Site is not listed as historic on either the State or Federal Register of Historic Properties.

The Project Site will not affect historic properties and the existing Ainahau Vista is only 8 years old.

#### 7.6.3.7 Public Pedestrian Access

The Project will not provide any public pedestrian access.

## 7.7 LIST OF NECESSARY APPROVALS

The Project will require a “Finding of No Significant Impact” (FONSI) from the State of Hawaii, Dept. of Business, Economic Development and Tourism, Hawaii Housing Finance and Development Corporation (HHFDC). The following is a preliminary list of the anticipated permits, approvals and reviews that are required prior to construction of the Project.

### 7.7.1 City and County of Honolulu

- WSD Permit, Minor, City, Department of Planning and Permitting (DPP)
- Building Permits, City, DPP
- Grading Permit, City, DPP
- Drain Connection, City DPP
- Street Usage, City, DPP
- Construction Plan Approval, City, DPP
- Trenching Permit, City, DPP
- Dewatering Permit, City, DPP, may be required

### 7.7.2 State of Hawaii

- Finding of No Significant Impact (FONSI) on this Final EA, State of Hawaii
- 201H Application, State of Hawaii
- Construction Noise Permit

## 8. PROBABLE IMPACTS

### 8.1 IMPACTS OF THE NATURAL OR HUMAN ENVIRONMENT ON THE PROJECT

Neither the natural nor human environment is anticipated to have an impact on the Project.

### 8.2 DIRECT AND INDIRECT IMPACTS

The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation. The project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents’ local transportation needs.

A short term indirect impact will be increased revenues for construction-related industries providing services and supplies to contractors involved in the construction of the Project.

### 8.3 GENERAL PUBLIC BENEFITS

The Project offers a multitude of public benefits as discussed below:

### 8.3.1 Economic Boost

Positive economic impacts are projected with the development of Ainahau Vista II, with increases in construction jobs while being built. It will benefit existing service contractors, e.g. elevator maintenance companies, security companies, appliance companies etc. as well as business in the area. The Project will also offer a limited amount of long-term employment for security personnel and maintenance personnel. When completed the Ainahau Vista II will offer positive economic impacts to the community by contributing to permanent affordable housing to those less fortunate in our community.

### 8.3.2 Sustainable Strategies

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

### 8.3.3 Waikiki Special District

The Project will achieve several of the key objectives of the WSD guidelines and result in demonstrable contributions that benefit the community and the stability, function and overall ambiance of Waikiki, as follows

#### 8.3.3.1 Sec. 21-9.80-1(a) - Hawaiian Sense of Place

The Ainahau Vista II design will reflect a “Hawaiian Sense of Place” by adding articulation to the exterior face of the building, where possible, and landscaping at the ground level. The 9<sup>th</sup> floor will be developed with a recreational multi-purpose room, that will include full kitchen facilities and a restroom, where the residents can enjoy the views of the mountains, Ala Wai Canal and the Ala Wai Golf Course and the tropical ambiance created by these views.

#### 8.3.3.2 Sec.21-9-80-1(c) (d)

Support the retention of a residential sector in order to provide stability to the neighborhoods of Waikiki

Development of Ainahau Vista II, an affordable senior housing development, will support the retention of a residential sector in this area of Waikiki.

#### 8.3.3.3 Sec.21-9-80-1(h)

Provide opportunities for creative development capable of substantially contributing to rejuvenation and revitalization in the special district, and able to facilitate the desired character of Waikiki for areas susceptible to change.

Development of Ainahau Vista II, a senior affordable rental property, will meet the criteria of a creative development that is capable of contributing to revitalization in this area of Waikiki, by offering affordable apartments to our seniors earning at or below 60% of the AMI.

#### 8.3.3.4 Sec.21-9-80-1(k)

Maintain a substantial view of Diamond Head from the Punchbowl lookout by controlling building heights in Waikiki that would impinge on this view corridor.

Ainahau Vista II is proposed as an 80-foot high building, in this Apartment Precinct with a height limit of 240 feet. Ainahau Vista II will not impinge on the Punchbowl to Diamond Head view.

## 8.4 DEMOGRAPHIC IMPACTS

### 8.4.1 Residential Population

The Project will have a very positive impact on the residential population in Waikiki as it will offer affordable senior housing (62 rental units, 47 one-bedroom and 15 studios) and 22 at grade parking stalls where none exist on this vacant property.

### 8.4.2 Visitor Population

The Project will not affect the visitor population, as the proposed development is planned as an affordable senior rental apartment development.

### 8.4.3 Character or Culture of the Neighborhood

The character and culture of the surrounding neighborhood will not be affected as the proposed affordable rental building will be similar to the many surrounding apartment and condominiums already developed in this "Apartment Precinct" zoned district of Waikiki.

#### 8.4.4 Displacement of Tenants

There will be no displacement of tenants as the proposed Ainahau Vista II will be developed on an existing vacant portion of this property.

### 8.5 HOUSING IMPACTS

The Project will positively affect housing in this area by adding a total of 62 apartments, consisting of 47 one-bedroom units and 15 studio units on this vacant property.

### 8.6 PUBLIC SERVICES

#### 8.6.1 Access and Transportation

The "Traffic Assessment for Ainahau Vista II" ("Traffic Impact Assessment") dated February 19, 2015 was prepared by Julian Ng Incorporated, Transportation Engineering Consultant and is provided in its entirety in **Appendix 5**.

##### 8.6.1.1 Area Roadway System

"The project site is a portion of a lot occupied by the existing Ainahau Vista I affordable senior rental development. The lot is north of Tusitala Street, a City-owned public street, and extends to Ala Wai Boulevard, a City Street in a 72-foot wide right-of-way. A single driveway to Tusitala Street serves the existing parking lot; no vehicular connection exists to Ala Wai Boulevard.

"Tusitala Street is in a 32-foot wide public right-of-way that has been improved to a curbed street (4- to 6-foot wide concrete sidewalks on each side, 26 feet for vehicular traffic between curbs). Tusitala Street is a single block in length, operated one-way in the eastbound direction from Kaiulani Avenue to Kapili Street, with parallel parking allowed between driveways only on the north (project) side of the street. Other 32-foot streets in the area that complete the vehicular circulation include Kaiulani Avenue, Cleghorn Street, and Kapuni Street. A portion of Cleghorn Street is operated two-way, allowing vehicular traffic to exit from the area to the east onto Liliuokalani Avenue.

"Concrete sidewalks are provided for pedestrian use on Tusitala Street, Kaiulani Avenue, and the one-way segment of Cleghorn Street. Street crossings at most intersections with the 32-foot roadways are not marked, but marked crosswalks are provided across Kaiulani Avenue and Kuhio Avenue, across the legs where crossing is permitted at that signalized intersection.

"Bus stops for the City public bus system ("TheBus") are located on both sides of Kuhio Avenue near the intersection with Kaiulani Avenue, approximately 2,000 feet from the site entrance. An on-line review of current bus route information ([www.thebus.org](http://www.thebus.org)) shows that eight local bus routes provide service on Kuhio

Avenue, and that midday service is provided by 20 buses per hour in each direction, which provides a capacity of more than 1,000 seats per hour (more than 1,500 total, including standees) in each direction. Transit users can access the entire island-wide bus system at these bus stops and transfer at locations where bus routes intersect.”

.....

“Vehicular access to the new parking will be through the existing Ainahau Vista I surface parking lot, which has a single driveway to Tusitala Street; stalls provided for residents’ use will all be assigned. An expected condition of project approval is that tenants who do not have an assigned parking stall on the project site will not be able to own a car. Based on the experience at other similar Vista projects, the parking ratio of 0.35 parking spaces per affordable elderly rental unit is not unreasonable.”

#### 8.6.1.2 Traffic Impacts

The projected trips during the AM (morning) peak hour of Tusitala Street will be 17 vehicles with 7 entering and 10 exiting. The projected trips during the PM (afternoon) peak hour of Tusitala Street will be 20 vehicles with 10 entering and 10 exiting.

The Traffic Impact Assessment’s “Conclusion” states:

“The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation. The project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents’ local transportation needs.”

#### 8.6.1.3 Traffic Mitigation Measures

No mitigation measures were recommended in the Traffic Impact Assessment due to the minimal number of trips generated by the Project. However, due to concerns raised by neighboring residents, a full size loading space is being provided, as required by the LUO.

### 8.6.2 Water

The Honolulu Board of Water Supply (BWS) currently provides potable water for the Ainahau Vista II development site. There is an existing 8-inch water line on Tusitala Street and an existing 16-inch main line of Ala Wai Boulevard. No off-site water improvements are needed to service the proposed development.

The design of the development will incorporate water efficient toilet fixtures, low flow shower heads and sink faucets for water conservation.

The average daily water consumption (demand) per day for the 62-unit apartment building will be approximately 18,600 gallons per day, based on an average daily demand of 300 gallons per unit. City standards assume an occupancy of 2.8 persons per unit, although our experience is that most units will be single occupancy. Additional water used for irrigation of landscaping and ground maintenance will be minimal.

The existing water system is adequate to accommodate the proposed development, according to a BWS letter dated June 12, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**). BWS also commented that the final decision on the availability of water will be confirmed when the building permit is submitted for approval and that when water is made available HHDC will be required to pay the BWS Water System Facilities Charge for resource development, transmission and daily storage.

BWS noted that water conservation measures are required for all proposed developments. HHDC will incorporate low flow fixtures and will consider other feasible conservation measures.

Since this will not be a high-rise building, water hammer arrestors or expansion tanks will not be required.

As recommended by BWS, on-site fire protections requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department (HFD).

HHDC appreciates that BWS has no objections to the deferral of the applicable WSFC and/or installation charges until the construction loan is available.

HHDC understands that the Project is subject to BWS Cross-Connection Control and Backflow Prevention requirements, prior to the issuance of a building permit.

### 8.6.3 Wastewater

The average daily wastewater flow is based on 80 gallons per day per person of wastewater. The average daily wastewater flow calculations for the total 62 rental units are as follows:

47 one-bedroom units x 80 gallons/day = 3,760 gallons per day  
(based on 1 person per one-bedroom unit)  
15 studio units x 80 gallons/day = 1,200 gallons per day  
Total: 3,760 + 1,200 = 4,960 gallons per day of wastewater flow.

A sewer connection permit application was approved by the Department of Planning and Permitting on January 8, 2015, subject to upgrading an existing 6-inch line in Tusitala Street to an 8-inch line. (**Appendix 6**)

The Department of Environmental Services (DES) in a letter dated April 23, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they have no comments at this time.

#### 8.6.4 Drainage and Storm Water Quality

The property is relatively flat and covered with mostly grass, with a slight makai up-slope. Existing ground elevations range between 4.5 feet to 7.4 feet mean sea level (MSL). The average slope of the site is approximately 3.6 percent.

Much of this area will become hardscape with the planned parking and building improvements. However, the landscaping will be maintained along the perimeter of the site. Storm runoff will sheet flow onto this perimeter landscaping to encourage infiltration and improve storm water quality. The general distribution of storm runoff leaving the site will be maintained.

The Department of Facility Maintenance in a letter dated June 2, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), provided the following pre-consultation comments on the proposed DEA:

- Once construction phase commence, install approved Best Management Practices (BMP) fronting all drainage facilities that may be affected by construction runoff along Tusitala Street, Ala Wai Boulevard, Kaiulani Avenue, and Kapili Street.
- During construction and upon completion of the Project, any damages/deficiencies to Tusitala Street and Ala Wai Boulevard right-of-ways caused by HHDC or their contractors in the course of construction activities, including deliveries shall be corrected to City standards at the owner's (HHDC) cost.
- The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and remove BMP upon completion of the Project.

HHDC understands and will abide by these comments.

#### 8.6.5 Solid Waste Disposal

The DES, Refuse Collection and Disposal Division manages solid waste disposal facilities for the Island of Oahu. There are two City solid waste disposal facilities: the H-POWER refuse to energy plant at Campbell Industrial Park and Waimānalo Gulch Landfill. PVT Land Company operates a privately owned and operated, licensed, solid waste facility for recovery of recyclable materials and disposal of construction and demolition materials. The PVT Landfill accepts wastes on a pre-arranged basis from haulers and contractors registered with them. Waste loads are screened with recyclable materials removed for sale/reuse and the remaining

wastes land filled. The capacity of the PVT Landfill as currently licensed is about 20 years, with expansion areas available.

The solid waste generated by the proposed development will be collected by a private firm and will not impact municipal refuse services.

#### 8.6.6 Public Schools

The proposed senior affordable rental development will not impact the local school system since no school age students will be living with the seniors.

The Department of Education (DOE) in a letter dated April 22, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they do not anticipate that this project will have a significant impact on their facilities.

#### 8.6.7 Parks

Kapiolani Regional Park is located approximately 0.7 miles east of the Project Site. Kuhio Beach is located approximately 0.4 miles south of the Project Site. Two mini parks are located close by (each about a quarter mile away), the Princess Kaiulani Triangle Park and an un-named mini park located at Kuhio Avenue and Liliuokalani Avenue. The Ala Wai Golf Course is located directly across the Ala Wai Canal, north of the Project Site. However, the entry to the Ala Wai Golf Course is approximately 0.75 miles from the Project Site on Kapahulu Avenue.

The Department of Parks and Recreation (DPR) in a letter dated April 16, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they have no comment on the DEA and has no objection to the approval of the requested 201H Application. They further noted that as the proposed project will have no impact on any program or facility of the DPR, we may remove them as a consulted party to the balance of the environmental review (DEA/FEA) process.

#### 8.6.8 Police

Initial response will be provided by patrol officers assigned to District 6, which operates out of the Police Substation located at 2405 Kalākaua Avenue next to Kūhiō Beach, approximately 0.6 miles away from the Project Site. The administrative offices for District 6 operate out of the Alapai Headquarters.

The Honolulu Police Department (HPD) in a letter dated April 21, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they have no concerns regarding the project at this time.

### 8.6.9 Fire

The Waikiki Fire Station 7 with its engine and ladder company will provide primary response in case of an emergency. The Waikiki Fire Station is located approximately a half mile away and will be able to quickly respond to a fire on the Project Site by traveling directly to the site on Ala Wai Boulevard.

The Honolulu Fire Department (HFD) in a letter dated April 23, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the following shall be met:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building or facility (National Fire Protection Association [NFPA] 1, Uniform Fire Code [UFC]<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.2)

A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and provides access to the interior of the building. (NFPA 1, UFC<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.1)

2. A water supply, approved by the County, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of a facility or building is in excess of 150 feet from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1, UFC<sup>TM</sup>, 2006 Edition, Section 18.2.3.4.1.1, as amended.)
3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1, UFC<sup>TM</sup>, 2006 Edition, Section 18.2.3.4.1.1, as amended.)
4. Submit civil drawings to HFD for review and approval.

HHDC will meet these four requirements.

### 8.6.10 Utilities

#### 8.6.10.1 Electricity

HECO has existing power lines serving this area including the Project Site and HHDC will coordinate the timing of the development with HECO to ensure that

the power lines will be adequate to support the Project and that HECO facilities are not be adversely impacted.

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible.

#### 8.6.10.2 Telephone

Hawaiian Telcom currently serves the Project Site and has existing utility service lines in the area. It is expected that these existing lines will continue to be used to service the Project.

#### 8.6.10.3 Cable/Satellite Television and High-speed Internet Access

Cable/ television and high-speed internet access service is currently provided to Ainahau Vista and will service Ainahau Vista II.

### 8.7 ENVIRONMENTAL IMPACTS

#### 8.7.1 Environmentally Sensitive Area

Since there is no endangered flora or fauna on the Project Site and no other environmentally sensitive features on the Project Site, the Project Site, except for potential burials, is not considered to be environmentally sensitive.

#### 8.7.2 Historical and Archaeological Resources

The Project Site is not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled “Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments” (now known as Ainahau Vista), Waikiki, Kona District, O’ahu Island and dated December, 2004. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.

Also included in **Appendix 4** is a copy of a letter from the Department of Land and Natural Resources (DLNR), dated October 18, 2005, indicating their concurrence with Cultural Surveys Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The

burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

As mentioned earlier, SHPD of the DLNR indicated that the submittal will require SHPD review under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. Their letter went on to describe steps that HHDC needs to take to address Section 106 and their other requirements.

HHDC's archaeological consultant, Cultural Surveys Hawaii will work with SHPD to meet their requirements related to HRS §6E and NHPA Section 106 and SHPD's other requirements for the Project.

### 8.7.3 Natural Resources

#### 8.7.3.1 Water Resources

The Pacific Ocean (Kuhio Beach) is located approximately 1,400 feet south of the subject property. The proposed Ainahau Vista II will have no significant effect on this body of water.

#### 8.7.3.2 Flood Plain Management

According to FEMA Flood Insurance Rate Map (FIRM) Panel 15003C0368G dated January 19, 2011, the Ainahau Vista II property is subject to FEMA Zone AE flooding with flood elevation of 6 feet. All units will be developed above the six foot elevations.

The Department of Land and Natural Resources, Engineering Division in a memo dated April 27, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commented on the proposed DEA noting that the Project must comply with the rules and regulation of the National Flood Insurance Program presented in Title 44 of the Code of Federal Regulations. HHDC will comply with these rules and regulations and confirmed that the Project site is in Zone AE. They further requested that the water demands and infrastructure requirements to meet water demands be included in the DEA and that the water demands and calculations be provided to their division. The DEA provided this information and a copy was submitted to the Engineering Division.

#### 8.7.3.3 Wetlands Protection

The development site is an urbanized lot that contains no wetlands.

#### 8.7.3.4 Coastal Zone Management

The development site is not within the City's Special Management Area, but is within the Coastal Zone Management area. The Project will not affect coastal resources as discussed in Section 8.8 of this FEA.

#### 8.7.3.5 Unique Natural Features

The development site is level with soil suitable to support urban development as can be seen from other high rise structures on nearby lots. There are no unique features such as sand dunes or sloped areas where erosion would be a concern.

#### 8.7.3.6 Sole Source Aquifers

There is no designated "sole source aquifer" within the vicinity of the proposed Ainahau Vista II apartments. The location of our development falls within the Nuuanu aquifer system that has a resource of 15 million gallons per day. The Board of Water Supply provides potable water for the development site and the existing water system is adequate to accommodate the proposed apartment building according to a BWS letter dated January 30, 2015.

#### 8.7.3.7 Wild and Scenic Rivers Act – Federal

According to our discussion with staff at the Federal Commission on Water Resources there are no wild or scenic rivers designated in the State of Hawaii.

#### 8.7.3.8 Agricultural Lands and Federal Farmland Protection Policy

The development site is in an urban area where its use will not impact agricultural lands or lands with the potential for agricultural use. It is zoned Apartment Precinct in the Waikiki Special District.

#### 8.7.3.9 Environmental Justice

The Environmental Protection Agency (EPA) defines Environmental Justice (EJ) as the "fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations and policies." HHDC will adhere to all the required City, State and Federal environmental laws in the development of Ainahau Vista II, an affordable elderly rental apartment building. Furthermore, the development of this Project is intended to improve the living standards and quality of life for those residents who fall within the 60% and below the area medium income (AMI).

#### 8.7.3.10 Open Space

The vacant development site is zoned Apartment Precinct. The proposed development is situated in an urbanized and developed area and development of this site will not affect any important public open space features in the area.

#### 8.7.3.11 Topography and Soils

The subject site is relatively flat with a slight up-slope. Existing Ground elevations range between +4.3 feet (Ewa/mauka corner) and +6.8 (midpoint along Diamond Head boundary).

The U.S. Department of Agriculture Soil Conservation Service Soil Survey Report for the Island of Oahu classifies the soils for this area as Fill Land. This land type consists of areas filled with material from dredging, excavation from adjacent uplands, garbage and bagasse and slurry from sugar mills. The areas are on the islands of Kauai, Maui and Oahu.

Fill land, mixed (FL) – This land type occurs mostly near Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage and general material from other sources. Included in mapping were a few areas that have been excavated.

This soil type is used for urban development including airports, housing areas and industrial facilities.

A geotechnical investigation was performed in May 2015 with two borings additional and testing. As expected pile foundations, similar to the first building, are being recommended. The three borings from the soils report and the foundations used for the first building gives comfort that the new building should not have any unexpected foundation surprises. The site is level and with no extraordinary soil conditions.

#### 8.7.3.12 Noise (Acoustical) – Short Term

D.L. Adams Associates has prepared the “Environmental Noise Assessment Report Ainahau Vista II, Honolulu, Hawaii” for the Ainahau Vista II Project, Waikiki, Oahu, Hawaii” (“Noise Assessment”) dated May 2015. The Noise Assessment in its entirety is provided in **Appendix 2**.

Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential short term noise impacts from the Project that is summarized as follows:

The various construction phases of the project will generate significant amounts of noise and will need to comply with the requirements of the

Department of Health (DOH). The project will involve excavation, grading, material handling, concrete mixing, and other typical construction activities. Pile driving activities are not planned for this project.

Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential short noise mitigation for the Project that is summarized as follows:

In cases where construction noise exceeds, or is expected to exceed the State's "maximum permissible" property line noise levels, a permit must be obtained from DOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the "maximum permissible" levels.

The contractor should use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc.

Compliance with DOH construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

#### 8.7.3.13 Air Quality – Short Term

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor during construction, including active work areas will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Dirt-hauling trucks will be covered when traveling on roadways. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area.

#### 8.7.3.14 Traffic – Short Term

HHDC will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

#### 8.7.3.15 Traffic Improvements – Long Term

The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation with only 17 vehicle trips during the AM peak hour and 20 vehicle trips during the PM peak hour. As such, no

mitigation measures were recommended by the Traffic Impact Assessment. The Project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents' local transportation needs. A full size on-site loading stall will be provided, as recommended by surrounding neighbors.

#### 8.7.3.16 Noise (Acoustical) - Long Term Impacts

Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential long term noise impacts from the Project that is summarized as follows:

The Ainahau Vista II development is proposed to be a senior rental development, which will likely incorporate stationary mechanical equipment, including air conditioning (HVAC) equipment, emergency generators, etc. Noise from this mechanical equipment and other equipment must meet the DOH noise regulations.

Existing traffic noise level projections at the project's Ala Wai Boulevard facing façade are expected to approach the FHWA maximum noise limit of 67 dBA Leq(h) at all apartment units up to the 9th floor ("Normally Unacceptable"). Only the 9th floor Leq(h) level is predicted to be below 66 dBA. No noise impacts are expected on the Ewa, Diamond Head, or makai sides of the building ("Acceptable").

Exterior design elements such as glazing and wall construction should be designed to comply with the U.S. Department of Housing and Urban Development (HUD) Ldn 45 dBA noise criteria inside the units.

The Ewa and Diamond Head sides of the building are projected to have noise levels that also exceed HUD noise criteria. However, there are no exterior unit walls with glazing so these areas do not require noise mitigation. The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential long term noise mitigation for the Project that is summarized as follows:

The design of the Ainahau Vista II building should give consideration to controlling noise emanating from all stationary mechanical equipment such as air-cooled chillers, cooling towers, air-handling units, condensing units, emergency generators, etc. so as to comply with the State of Hawaii

Community Noise Control Rules. Noisy equipment should be located away from neighboring properties and residential units, as much as possible. Enclosed mechanical rooms may be required for some equipment.

Units overlooking Ala Wai Boulevard will experience relatively high noise levels due to traffic on Ala Wai Boulevard. The exterior wall should have a minimum rating of STC 50, which is typical of poured concrete in any thickness greater than 4 inches. HHDC construction will utilize 8-inch thick hollow tile wall with all cells filled in that will have a minimum rating of STC 50 as recommended. A minimum STC 35 rated window assembly, typical of a 1" IGU, should be considered to comply with the HUD interior noise design criteria for all units facing Ala Wai Boulevard. The window assembly typically degrades the STC rating of the glazing by 3 points, therefore STC requirements for the glass itself should be a minimum of STC 38. Smaller window sizes may reduce these STC requirements. HHDC will utilize rated window assemblies as recommended here.

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

#### 8.7.4 Department of Health Standard Comments

The Department of Health (DOH) in a letter dated May 7, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicating that it should include a review of the standard comments and available strategies to support sustainable and healthy design. Our comments on the standard comments are listed in the sections that follow. Our comments on sustainable and healthy design are discussed in Section 8.7.4.8. Sustainability and Healthy Design.

##### 8.7.4.1 Clean Air Branch

###### 1. Construction/Demolition Involving Asbestos.

Since the Project will be built on a vacant portion of the lot, there will be no construction/demolition involving asbestos.

###### 2. Control of Fugitive Dust

The applicant will prepare a dust control management plan and understands that the plan does not require DOH approval.

Activities will comply with the provisions of HAR Section 11-60.1-33 on Fugitive Dust.

The following measures will be considered as appropriate to control fugitive dust:

- a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of least impact;
- b) Providing an adequate water source at the site prior to construction activities;
- c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d) Minimizing dust from shoulders and access roads;
- e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f) Controlling dust from debris being hauled away from the project site.

#### 8.7.4.2 Clean Water Branch

1. The applicant understands and will comply with applicable requirements of HAR Chapter 11-54.
2. Since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project will not require a Department of the Army Permit and is not expected to require a 401 Water Quality Certification (WQC).
3. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance is anticipated to be less than one acre of total land area.
4. The applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.
5. The applicant understands and will comply with the monitoring requirements, if applicable and further understands the enforcement and penalties that could occur.
6. The applicant does not expect this Project to involve polluted runoff control as outlined in the State's Coastal Nonpoint Pollution Control Management Plan or Hawaii's Implementation Plan for Polluted Runoff Control.

#### 8.7.4.3 Hazard Evaluation & Emergency Response Office

1. Phase I Environmental Site Assessment was performed by Global Environmental Services Group, LLC (GESG) on the Project site and a report prepared on January 29, 2004 **Appendix 7**. Based on the investigation of the property for evidence of recognized environmental conditions, GESG had no immediate recommendations for further assessment or investigations. During construction it is recommended that any subsurface soil excavation be monitored for any abnormal objects or substances.
2. The applicant intends to follow the recommendations made by the DOH in its standard comments, and to comply with applicable sections of Chapter 128D, Environmental Response Law, HRS, and Title 11, Chapter 451 of the Hawaii Administrative rules (HAR) State Contingency Plan.
3. The Project site does not involve lands formerly used in the production of sugar cane.
4. The applicant will seek a "no further action" letter if necessary, prior to permit approval.

#### 8.7.4.4 Noise Radiation & Indoor Air Quality Branch Standard Comments

The Project will comply with applicable requirements of the following Administrative Rules of the Department of Health:

- Chapter 11-39 Air Conditioning and Ventilating
- Chapter 11-45 Radiation Control
- Chapter 11-46 Community Noise Control

#### 8.7.4.5 Safe Drinking Water Branch

The Project does not involve development or actions affecting a public water system, except for a water line lateral (connection) for service off the municipal system. The Project does not involve an underground injection well, nor does it involve development of a Golf Course. Therefore, our understanding is that the standard comments of the Safe Drinking Water Branch are not applicable to the Project.

#### 8.7.4.6 Solid and Hazardous Waste Branch

##### Hazardous Waste Program

The applicant does not anticipate the Project to involve the handling of hazardous waste. In the event any hazardous waste is involved in any aspect of the Project,

the applicant will comply with the regulations set forth in Chapters 11-260 to 11-280 HAR.

#### Solid Waste Section

The Project will not involve the development of a solid waste disposal, recycling, reclamation or transfer system. The applicant may have a small on-site recycling program. As a generator of solid waste the applicant will ensure that all wastes are delivered to permitted solid waste management facilities.

#### Office of Solid Waste Management

The applicant will encourage recycling by providing designated trash bins for recycling.

#### Underground Storage Tanks

The applicant is not currently aware of the need to close or remove any underground storage tanks in connection with the development of the Project, nor does the applicant plan to install an underground storage tank.

#### 8.7.4.7 Wastewater Branch

The Project will be connected to the City's municipal sewer system. The applicant understands that the DOH Wastewater Branch has no comments to offer at this time.

#### 8.7.4.8 Sustainability and Healthy Design

HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

#### 8.7.4.9 Visual Impacts

The proposed structure will have a finished height of 80 feet which is well below the 240-foot height limit in this Apartment Precinct. Since the Project Site is

currently a vacant lot, the proposed Ainahau Vista II will block some mauka and Ala Wai Canal views from existing apartment buildings makai of the subject site, including Ainahau Vista. The proposed development will not affect important public views.

## 8.8 COASTAL ZONE MANAGEMENT

The Project Site is within the coastal zone management area, but not within the City's Special Management Area. As such, a Special Management Area Use Permit will not be required, and the Project is not subject to permit requirements under Chapter 25, Revised Ordinances of Honolulu.

The Project is located about 1,500 feet from the shoreline between Tusitala Street and Ala Wai Boulevard. The proposed development will not affect protected coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

The following sections provide a description of how the Project complies with the Coastal Zone Management objectives and policies as detailed in HRS § 205A-2:

### 8.8.1 Objectives

#### 8.8.1.1 Recreational resources

*“Provide coastal recreational opportunities accessible to the public.”*

The Project will not affect coastal recreational opportunities accessible to the public, since the Project Site is located 1,500 feet from the shoreline between Tusitala Street and Ala Wai Boulevard. Extensive public access to the shoreline is provided from the Police Substation on Kalakaua Avenue next to the Diamond Head Tower all the way to the Kaimana Beach Hotel, a distance of about 0.9 miles.

#### 8.8.1.2 Historic resources

*“Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.”*

The existing apartment building on the Project Site is about 8 years old and is not listed on either the State or Federal Register of Historic Properties, nor are they considered potential candidates for either register.

#### 8.8.1.3 Scenic and open space resources

*“Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.”*

The Project will not affect the quality of coastal scenic and open space resources since the Project Site is located 1,500 feet from the shoreline between Tusitala Street and Ala Wai Boulevard.

#### 8.8.1.4 Coastal ecosystems

*“Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.”*

The Project will not affect the coastal ecosystem since the Project Site is located 1,500 feet from the shoreline between Tusitala Street and Ala Wai Boulevard.

#### 8.8.1.5 Economic uses

*“Provide public or private facilities and improvements important to the State's economy in suitable locations.”*

The Project will provide a new affordable senior rental development in an area of condominium and rental apartments on a lot with an existing affordable senior rental development. The Project will generate new construction jobs for the City and State.

#### 8.8.1.6 Coastal hazards

*“Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.”*

According to FEMA Flood Insurance Rate Map (FIRM) Panel 15003C0368G dated January 19, 2011, the Ainahau Vista II property is subject to FEMA Zone AE flooding with flood elevation of 6 feet. All units will be developed above the six foot elevations.

The Project will comply with the rules and regulations of the National Flood Insurance Program presented in Title 44 of the Code of Federal Regulations (44CFR). The Project will also comply with applicable flood ordinances of the City.

#### 8.8.1.7 Managing development

*“Improve the development review process, communication, and public participation in the management of coastal resources and hazards.”*

The DEA process provided an opportunity for public participation in the management of coastal resources and hazards.

#### 8.8.1.8 Public Participation

*“Stimulate public awareness, education, and participation in coastal management.”*

The DEA process provided a stimulus for the public to understand and participate in the management of coastal resources and hazards.

#### 8.8.1.9 Beach protection

*“Protect beaches for public use and recreation.”*

The Project located on Ala Wai Boulevard is located about 1,580 feet mauka of the shoreline will not affect the public’s use of the beaches and ocean recreation areas.

#### 8.8.1.10 Marine resources

*“Promote the protection, use, and development of marine and coastal resources to assure their sustainability.”*

The seniors that are mobile may enjoy the marine resources at Waikiki and their continued use of these resources will help to assure their sustainability.

### 8.8.2 Policies

#### 8.8.2.1 Recreational resources

(A) *“Improve coordination and funding of coastal recreational planning and management; and”*

This represents a State action/function which is well served by the Office of State Planning and the Department of Land and Natural Resources.

(B) *“Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:”*

(i) *“Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;”*

The Project will not affect coastal resources, since it is located 1,580 feet mauka of the shoreline.

(ii) *“Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;”*

The Project will not damage coastal resources and will not trigger this requirement for replacement of such resources or monetary compensation.

- (iii) *“Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;”*

Extensive public access to the shoreline is provided from the Police Substation on Kalakaua Avenue next to the Diamond Head Tower all the way to the Kaimana Beach Hotel, a distance of about 0.9 miles.

- (iv) *“Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;”*

Shoreline parks and other recreation facilities are provided in Waikiki and along Kuhio Beach, extensive access provides continuous access along the shoreline.

- (v) *“Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;”*

The State and City have provided excellent beach access and recreational use along this portion of Kuhio Beach.

- (vi) *“Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;”*

The State and City have such standards in place and have established such standards and does regulate drainage to protect the quality of coastal waters, particularly in areas where water quality is not up to the desired standard.

- (vii) *“Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and”*

The Project located 1,580 feet mauka of the shoreline will not provide new shoreline recreational opportunities.

- (viii) *“Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6;”*

It would not be reasonable to require dedication of a shoreline area for this Project and dedication requirements of section 46-6 would not be triggered in this action.

#### 8.8.2.2 Historic resources

- (A) *“Identify and analyze significant archaeological resources;”*

The Project Site is not listed on the State or Federal Register of Historic Places.

An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled “Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments” (now known as Ainahau Vista), Waikiki, Kona District, O’ahu Island and dated December, 2004. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.

Also included in **Appendix 4** is a copy of a letter from the Department of Land and Natural Resources (DLNR), dated October 18, 2005, indicating their concurrence with Cultural Surveys Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

As mentioned earlier, SHPD of the DLNR indicated that the submittal will require SHPD review under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. Their letter went on to describe steps that HHDC needs to take to address Section 106 and their other requirements.

HHDC’s archaeological consultant, Cultural Surveys Hawaii will work with SHPD to meet their requirements related to HRS §6E and NHPA Section 106 and SHPD’s other requirements for the Project.

- (B) *“Maximize information retention through preservation of remains and artifacts or salvage operations; and”*

As mentioned earlier, a letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

- (C) *“Support state goals for protection, restoration, interpretation, and display of historic resources;”*

HHDC supports these State goals, and has taken this opportunity to find, protect, interpret and reinter historic resources.

#### 8.8.2.3 Scenic and open space resources

- (A) *“Identify valued scenic resources in the coastal zone management area;”*

The Project site located 1,580 feet from the shoreline, does not provide or contain any valued scenic resources.

- (B) *“Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;”*

The Project site located 1,580 feet from the shoreline will not affect existing public views to and along the shoreline and being on a fairly level disturbed lot will not result in the alteration of natural landforms.

- (C) *“Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and”*

The Project will not affect shoreline open space or scenic resources.

- (D) *“Encourage those developments that are not coastal dependent to locate in inland areas;”*

This Project is not coastal dependent and is located 1,580 feet inland.

#### 8.8.2.4 Coastal ecosystems

- (A) *“Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;”*

This Project is located 1,580 feet inland from the shoreline and will not affect the protection, use, and development of marine and coastal resources.

- (B) *Improve the technical basis for natural resource management;*

This Project located 1,580 feet inland from the shoreline does not provide an opportunity or nexus for providing technical information on natural resource management.

- (C) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*

This Project will not affect the valuable coastal ecosystem, being 1,580 feet inland from the shoreline.

- (D) *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*

This Project does not involve stream diversion, channelization or similar land and water uses involving competing water needs.

- (E) *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures;*

This Project, has been reviewed by BWS and they have determined that the municipal system is adequate to support the proposed affordable senior rental housing.

#### 8.8.2.5 Economic uses

- (A) *Concentrate coastal dependent development in appropriate areas;*

The Project is not a coastal dependent development and is appropriately located 1,580 feet from the shoreline.

- (B) *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*

The Project is not a coastal dependent development and is appropriately located 1,580 feet from the shoreline.

- (C) *Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*

- (i) *Use of presently designated locations is not feasible;*  
 (ii) *Adverse environmental effects are minimized; and*

(iii) *The development is important to the State's economy;*

The Project at its present location is feasible and not located along or near the shoreline (1,580 feet mauka). The Project will result in an economic and job-creating stimulus for the local economy, during the construction period. The Project will also result in an affordable senior rental housing development. Adverse environmental effects are minimized with this development.

8.8.2.6 Coastal hazards;

(A) *Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*

Waikiki has an emergency warning system, including sirens to announce storm wave, tsunami and flood events. The applicant also has emergency evacuation procedures in the event of one of these events. Subsidence events have occurred in Waikiki and developers and contractors have developed ways to minimize impacts from subsidence (shifting of the ground from ground water removal). The City and State have policies in place to deal with point and nonpoint source pollution hazards, in the form of required permits.

(B) *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;*

According to FEMA Flood Insurance Rate Map (FIRM) Panel 15003C0368G dated January 19, 2011, the Ainahau Vista II property is subject to FEMA Zone AE flooding with flood elevation of 6 feet. All units will be developed above the six foot elevations.

(C) *Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*

The Project will comply with the rules and regulations of the National Flood Insurance Program presented in Title 44 of the Code of federal Regulations (44CFR). The Project will also comply with applicable flood ordinances of the City.

(D) *Prevent coastal flooding from inland projects;*

This Project is not within a coastal flood zone and should not be affected by coastal flooding.

## 8.8.2.7 Managing development;

- (A) *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*

The Project will follow existing law in relation to development within the coastal zone management area, and as discussed in this section meets its policies.

- (B) *Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*

The Project is being processed on a timely basis with the processing of this initial environmental review.

- (C) *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process;*

This Project is not a coastal development.

## 8.8.2.8 Public participation;

- (A) *Promote public involvement in coastal zone management processes;*

This policy is probably directed towards State and County agencies.

- (B) *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*

Again appears to be more a State and County agency responsibility. This FEA provides a discussion of coastal management zone guidelines and policies and the Project's compliance with these in a report that will be available to the public on OEQC's website and at DPP's office.

- (C) *Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts;*

A State and County agency policy. Due to the location of this Project, 1,580 feet from the shoreline, coastal issues and conflicts do not occur.

## 8.8.2.9 Beach protection;

- (A) *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*

The Project with its new affordable senior rental development structure is located 1,580 feet inland from the shoreline and will not affect shoreline processes or potential loss of improvements due to erosion.

- (B) *Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;*

This Project does not involve erosion-protection structures.

- (C) *Minimize the construction of public erosion-protection structures seaward of the shoreline;*

This Project does not involve erosion-protection structures.

- (D) *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*

This Project does not involve inducing or cultivating vegetation in a beach transit corridor.

- (E) *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor;*

This Project does not involve a beach transit corridor or any encroachments to such a corridor.

## 8.8.2.10 Marine resources;

- (A) *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*

This Project does not involve the use or development of coastal resources.

- (B) *Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*

This Project does not affect marine and coastal resources or activities.

- (C) *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*

This policy should be implemented by the State.

- (D) *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*

Another policy that should be implemented by the State.

- (E) *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

Another policy that should be implemented by the State.

## 8.9 CUMULATIVE IMPACTS WITH OTHER RELATED PROJECTS

Of the projects planned in Waikiki, there are some that are situated quite a distance from the Project site and are not expected to significantly affect the portion of Ala Wai Boulevard that will serve as the major thoroughfare that will provide access to Tusitala Street which serves the project. These include Grays Beach, Hilton Hawaiian Village, Waikiki Landing, 2121 Kuhio and 2139 Kuhio (the two Ritz Carlton developments) and Waikiki Parc Hotel.

The projects located in closer proximity to the Project site and that could utilize the portion of Ala Wai Boulevard that serves this development include Princess Kaiulani and Diamond Head Tower, the Royal Hawaiian Market Place, the International Market Place, and 133 Kaiulani (King's Village) developments. The Royal Hawaiian Market Place is a smaller project located about 0.4 miles away and is not expected to have a significant cumulative impact, even if construction schedules overlap. The International Market Place is currently under construction and is expected to be completed by the time ground breaking occurs for the Project. Princess Kaiulani, Diamond Head Tower and 133 Kaiulani developments could be under construction at the same time as the Project, and if this occurs, HHDC will contact the other developments to coordinate construction activities to manage disruptions to the street system that could occur if major concrete pours or street/lane closures occur at the same time.

## 8.10 POPULATION AND GROWTH IMPACTS

The Project, when completed, will have an impact on the number of permanent residents in Waikiki, adding about 62 residents, given the typical occupancy of the senior units. However, it will not affect the visitor population, as it is planned as an affordable residential project geared to seniors earning at or below 60% of the AMI.

## 8.11 CULTURAL IMPACT ASSESSMENT

Cultural Surveys Hawaii, Inc. prepared a “Cultural Impact Evaluation for the Tusitala Vista Elderly Apartments” (now Ainahau Vista), Waikiki, Kona District, Oahu Island, dated December 2004. Please refer to **Appendix 8** of this report. The following is an excerpt from the Section on “Summary and Recommendations”:

“None of the community contacts queried for this cultural impact evaluation identified any ongoing cultural practices within the project area.

It is possible that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project parcel. Other possible deposits may be associated with nineteenth century Hawaiian royalty.

Based on the above findings, it is recommended that no further cultural impact mitigation measures are warranted.”

Previously identified non-Native Hawaiian fragments of human skeletal remains were encountered on this property during the permitting process for Ainahau Vista. HHDC went before the Burial Counsel and a burial treatment plan was approved in a letter from DLNR to Cultural Surveys Hawaii Inc. on November 28, 2006. Please see **Appendix 4**.

Based on the findings and recommendation of the archaeological inventory survey, an archaeological monitoring program will be implemented with on-site and on-call monitoring of initial subsurface impacts.

## 9. CONFORMANCE WITH SMA GUIDELINES

The Project Site is not within the City's Special Management Area, as such, a Special Management Area Use Permit will not be required for this development.

### 9.1 TERMS AND CONDITIONS OF DEVELOPMENT

- **Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles.** The proposed Project will not adversely impact access to any public recreation area or shoreline. Tusitala Street is located about 1,360 feet from the shoreline and will not have an impact on access to the shoreline.

- **Adequate and properly located public recreation areas and wildlife preserves are reserved.** The Project's distance from the shoreline will ensure protection of existing public recreation and access areas along the shoreline. There are no wildlife preserves in close proximity to the Ainahau Vista II.

- **Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources.** Ainahau Vista II will not be located within the Special Management Area of the island.

- **Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.** The Project is in a highly urbanized area with no significant land forms, water resources or scenic and recreational amenities nearby that would be affected by the Project. The proposed Ainahau Vista II development will not affect the current potential for or impact from floods, landslides, erosion, siltation or failure in the event of earthquake.

## 9.2 REQUIRED COUNCIL FINDINGS

- **The development will not have any substantial adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest.** As discussed throughout this FEA, this nine-story affordable senior apartment development is not expected to have substantial environmental or ecological effects due to (i) its 80-foot height in an Apartment Precinct with a height limit of 240 feet; and (ii) its location among existing apartment and condominium developments. Drainage impacts during construction of the Project will be mitigated to ensure that no adverse impact to the coastal waters will occur.

- **The development is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26.** ROH Sec. 25-3.1 provides that the objectives and policies of ROH Chapter 25 shall be those contained in HRS Section 205A-2. The Project is consistent with policy HRS 205A-2(b)(5)(A), which states “Provide public or private facilities and improvements important to the State’s economy in suitable locations.” The Project will be important to the State and City’s economy in many different respects. It will be located in an Apartment Precinct in Waikiki that is suitable for this development and will assist with the local economy by offering homes the seniors earning 60% or below the AMI. New construction jobs will be created during development, and afterward jobs will be created relating to security, management and numerous maintenance positions.

- **The development is consistent with the county general plan, development plans and zoning.** The proposed Ainahau Vista II will be consistent with the County General Plan, Development Plan and Zoning.

### General Plan

The Project’s compliance with the objectives and policies of the O’ahu General Plan are provided in Section 7.2 of this FEA.

### PUCDP

The Project’s compliance with the objectives and policies of the PUCDP and the PUCDP Land Use Map are provided in Sections 7.3 and 7.4, respectively of this FEA.

## Zoning

The Project is within the Apartment Precinct with a 240-foot height limit. The proposed use is consistent with this zoning precinct, which allows apartments and condominiums. Conceptual Plans of the Project, providing verification of compliance with the development standards of the Resort Mixed Use Precinct, are provided in **Appendix 1**.

### 10. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITY'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

The development of Ainahau Vista II for seniors earning at or below 60% of the AMI will contribute to the long-term productivity of this otherwise vacant lot.

### 11. DESCRIPTION OF IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The Project Site has long been designated as an Apartment Precinct. The proposed Ainahau Vista II represents an irreversible and irretrievable commitment of the land as an Apartment Precinct. The existing vacant property is in need of development to ensure its continued economic viability.

### 12. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Some of the probable adverse effects which cannot be avoided include the following:

#### 12.1 DISPLACEMENT OF EXISTING TENANTS

Ainahau Vista II will be developed on a vacant lot, therefore there will be no displacement of existing tenants.

#### 12.2 CONSTRUCTION IMPACTS

##### 12.2.1 Construction Noise

D.L. Adams Associates has prepared the "Environmental Noise Assessment Report Ainahau Vista II, Honolulu, Hawaii" for the Ainahau Vista II Project, Waikiki, Oahu, Hawaii" ("Noise Assessment") dated May 2015. The Noise Assessment in its entirety is provided in **Appendix 2**.

Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential short term noise impacts from the Project that is summarized as follows:

The various construction phases of the project will generate significant amounts of noise and will need to comply with the requirements of the

Department of Health (DOH). The project will involve excavation, grading, material handling, concrete mixing, and other typical construction activities. Pile driving activities are not planned for this project.

### 12.2.2 Construction Impact on Air Quality

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines.

### 12.2.3 Construction Impact on Traffic and Pedestrians

During the construction phase there will be impacts to pedestrians and vehicular traffic in the area.

## 12.3 Noise (Acoustical) Long Term Impacts

Chapter 5.0. Potential Noise Impacts, from that Noise Assessment, includes a discussion of potential long term noise impacts from the Project that is summarized as follows:

The Ainahau Vista II development is proposed to be a senior rental development, which will likely incorporate stationary mechanical equipment, including air conditioning (HVAC) equipment, emergency generators, etc. Noise from this mechanical equipment and other equipment must meet the DOH noise regulations.

Existing traffic noise level projections at the project's Ala Wai Boulevard facing façade are expected to approach the FHWA maximum noise limit of 67 dBA Leq(h) at all apartment units up to the 9th floor ("Normally Unacceptable"). Only the 9th floor Leq(h) level is predicted to be below 66 dBA. No noise impacts are expected on the Ewa, Diamond Head, or makai sides of the building ("Acceptable").

Exterior design elements such as glazing and wall construction should be designed to comply with the U.S. Department of Housing and Urban Development (HUD) Ldn 45 dBA noise criteria inside the units.

The Ewa and Diamond Head sides of the building are projected to have noise levels that also exceed HUD noise criteria. However, there are no exterior unit walls with glazing so these areas do not require noise mitigation.

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

### 13. MITIGATION MEASURES

#### 13.1 CONSTRUCTION PRACTICES

##### 13.1.1 Noise

D.L. Adams Associates has prepared the “Environmental Noise Assessment Report Ainahau Vista II, Honolulu, Hawaii” for the Ainahau Vista II Project, Waikiki, Oahu, Hawaii” (“Noise Assessment”) dated May 2015. The Noise Assessment in its entirety is provided in **Appendix 2**.

Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential short term noise mitigation for the Project that is summarized as follows:

In cases where construction noise exceeds, or is expected to exceed the State’s “maximum permissible” property line noise levels, a permit must be obtained from DOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the “maximum permissible” levels.

The contractor should use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc.

Compliance with DOH construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

##### 13.1.2 Air Quality

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor during construction, including active work areas will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Dirt-hauling trucks will be covered when traveling on roadways. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions, that may occur as a result of trucks tracking dirt onto paved roadways in the project area.

### 13.1.3 Traffic

HHDC will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

## 13.2 Noise (Acoustic) Long Term

Chapter 6.0. Noise Impact Mitigation, from that Acoustic Study, includes a discussion of potential long term noise mitigation for the Project that is summarized as follows:

The design of the Ainahau Vista II building should give consideration to controlling noise emanating from all stationary mechanical equipment such as air-cooled chillers, cooling towers, air-handling units, condensing units, emergency generators, etc. so as to comply with the State of Hawaii Community Noise Control Rules. Noisy equipment should be located away from neighboring properties and residential units, as much as possible. Enclosed mechanical rooms may be required for some equipment.

Units overlooking Ala Wai Boulevard will experience relatively high noise levels due to traffic on Ala Wai Boulevard. The exterior wall should have a minimum rating of STC 50, which is typical of poured concrete in any thickness greater than 4 inches. HHDC construction will utilize 8-inch thick hollow tile wall with all cells filled in that will have a minimum rating of STC 50 as recommended. A minimum STC 35 rated window assembly, typical of a 1" IGU, should be considered to comply with the HUD interior noise design criteria for all units facing Ala Wai Boulevard. The window assembly typically degrades the STC rating of the glazing by 3 points, therefore STC requirements for the glass itself should be a minimum of STC 38. Smaller window sizes may reduce these STC requirements. HHDC will utilize rated window assemblies as recommended here.

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD Criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

## 13.3 TRAFFIC IMPROVEMENTS

The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation with only 17 vehicle trips during the AM peak hour and 20 vehicle trips during the PM peak hour. As such, no mitigation measures were recommended by the Traffic Impact Assessment. The Project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents' local transportation needs. A full size on-site loading stall will be provided, as recommended by surrounding neighbors.

## 14. SUMMARY OF UNRESOLVED ISSUES

There will be further action required with respect to the following unresolved issues:

- A WSD Permit, Minor application will be submitted for review and approval by DPP.
- Building Permit applications will be submitted for review and approval by DPP.
- A Drain Connection application will be submitted for review and approval by DPP.
- A Site Development Division Master Application for Sewer Connection will be submitted for review and approval by DPP.
- A Street Usage application will be submitted for review and approval by DPP.
- A Construction Plan Approval application will be submitted for review and approval by DPP.
- A Trenching Permit will be submitted for review and approval by DPP.
- A Dewatering Permit may be submitted for review and approval by DPP.
- State: Construction Noise Permit application will be submitted for review and approval by the Department of Health.

## 15. COMMUNITY INPUT

### 15.1 WAIKIKI NEIGHBORHOOD BOARD

The Project was presented to the Waikiki Neighborhood Board by Keith Kurahashi on the evening of November 18, 2014. Notification letters, to all adjoining property owners, were mailed on November 5, informing them of the upcoming Waikiki Neighborhood Board presentation on Ainahau Vista II (**Appendix 9**). The following comments and questions were presented by Board members and members of the audience:

1. Parking Exemptions: Merz and Smith voiced support for the parking exemption request.
2. Density: Merz noted the sensible use of land is important, and asked how much of a density exemption was asked.
3. Visual of Building: Erteschik asked for a visual representation of the building after exemptions. *This was presented at a follow up Board meeting in January 2015.*
4. Room Size: Williams voiced concern about the small size of the rooms, and Flood voiced concern about noise issues if the rooms were small. *The small rooms (277 square feet) have been eliminated and rooms are now at least 377 square feet in size.*
5. Sacred Land: Resident Grace Chien noted Ainahau is a sacred place for many Hawaiians, and voiced concern about the preservation of the sacred land. Kurahashi noted HHDC will work with DLNR to ensure preservation of any sacred artifacts found on the land. Kurahashi noted for Loo that the sacred statue and plaque were placed there and HHDC will request that they be relocated. A resident voiced agreements with Chien's concerns. (After checking with the applicant, there is no statue, just a plaque with an image of Princess Liliuokalani that was prepared and placed there by HHDC on behalf of another party and HHDC is authorized to relocate it on the property.)

6. Purpose of Housing First: Grace reminded the public and Board that Housing First is geared towards providing services to the chronically homeless population. *The Project has decided not to pursue Housing First funds.*
7. Inconsistency: Erteschik voiced concern about the inconsistency of the Board's opinions about developments, and voiced support for the Ainahua Vista II project.
8. Interior: Adams recommended designing the interior of the apartments to accommodate for the small size. *The small rooms have been eliminated.*
9. Update: Chair Finley requested Kurahashi return to the Waikiki Neighborhood Board No. 09 in January 2015 with an update on the Ainahua Vista II development and with answers to the concerns voiced. *Mr. Kurahashi agreed to return to the Board in January.*

Chair Finley asked and Mr. Kurahashi agreed to return to the Board at a later date, at which time the Board expects to vote on the Project.

The Project was presented to the Waikiki Neighborhood Board by Keith Kurahashi on the evening of January 13, 2015 (minutes in **Appendix 9**). The Board passed a motion to approve the Project by a 15-1-0 vote.

Ainahau Vista II, 2428 Tusitala Street Mr. Kurahashi provided a PowerPoint describing the project and responded to the following concerns presented at the November meeting:

**Density**: The allowable density with the planned 35% open space is 64,947 square feet and the proposed density will be 94,617 square feet. The project will be 29,670 square feet over the allowable density. However, if calculated with 50% open space provided the project will be 12,349 square feet over the allowable density (Vistas 1 and 2).

**Visual of Building**: A slide provided a visual representation of the exemptions being requested.

**Room Size**: The studio units have been increased in size from 275 square feet to 377 square feet. It was noted that the studio units have increased in size.

**Sacred Land**: Kurahashi will work with the State Department of Land and Natural Resources (DLNR) to ensure preservation of any sacred artifacts found on the land. HHDC will relocate the plaque to allow development of the site.

Questions, comments and concerns followed:

1. **Comment**: Apaka relayed that tonight's update shows a much better plan.
2. **Parking Stalls**: Regarding the anticipation of seniors with cars, Kurahashi answered for Apaka that 23 parking stall will be provided with the possibility of a large loading zone area. Apaka added that almost everyone catches the bus.
3. **Onsite Security**: Kurahashi answered for Flood that there will a security guard on site during the day and guard on duty at night. It is unsure if cameras would be installed.
4. **Soundproofing Wall**: It was asked if the walls would be soundproofed. *Exterior walls will be hollow tile, which does attenuate sound.*

5. Support: Grace noted the efforts of support and to protect seniors. Grace asked how would the seniors residing in the Ainahau Vista I be protected from lane closures. *Lane closures would probably occur just on several occasions during construction. Very few of the seniors drive, as Catholic Charities provides shuttle service for the seniors.*
6. Current Plan: Erteschik inquired why the current plan is substantially different from the previous plan and much denser than regulations allow. Affordable housing is needed. Kurahashi relayed a concern from the owner and Board is the homeless problem. There is a market for smaller units. It is hopeful that smaller affordable units would be available in the future. *Actually, the current plan is about 5,000 square feet less in floor area than the plan shown at the November meeting (38,588 square feet – 33,669 square feet = 4,919).*
7. Environmental Assessment (EA): Merz pointed out that the EA is not the end. There is still time for concerns and recommendations. Kurahashi noted that the Board would be informed when the public may provide input.

## 15.2 WAIKIKI IMPROVEMENT ASSOCIATION

A presentation of the Project was made to the Waikiki Improvement Association, Board of Directors on March 18, 2015. The Board of Directors voted to support the Ainahau Vista II Project.

## 15.3 COUNCILMEMBER TREVOR OZAWA

HHDC's planning consultant met with Councilmember Ozawa and discussed the proposed Ainahau Vista II development. Councilmember Ozawa noted that he looked forward to further discussions on the proposed affordable senior rental development and additional information provided through the DEA process, the 201H process and the Waikiki Special District Major permit process.

## 16. OTHER AGENCY COMMENTS

The following agencies, organizations and public utilities provided comments on the preparation of the DEA, that were not covered in earlier sections of this FEA (all DEA comments and our responses are included in **Appendix 10**):

The Department of Land and Natural Resources, Land Division in a letter dated April 28, 2015 had no comment on the preparation of the DEA.

The Department of Community Services (DCS) in a letter dated April 27, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the proposed project will have no adverse impacts on any DCS activities or project at this time.

The Department of Land and Natural Resources, Commission on Water Resource Management (CWRM) in a letter dated May 6, 2015 commented as follows (their first three standard comment boxes were not checked off):

4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at <http://www.usgbc.org/leed>. A listing of fixtures certified by the EPA as having high water efficiency can be found at <http://www.epa.gov/watersense/>.

*HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.*

5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at <http://hawaii.gov/dbedt/czm/initiative/lid.php>.

*Once the construction phase begins, HHDC will use approved Best Management Practices (BMP) fronting all drainage facilities that may be affected by construction runoff along Tusitala Street, Ala Wai Boulevard, Kaiulani Avenue, and Kapili Street.*

6. We recommend the use of alternative water sources, wherever practicable.

*HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.*

7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at <http://energy.hawaii.gov/green-business-program>.

*The Hawaii Green Business Program is geared towards businesses and there was no category available for rental apartment units.*

*However, as mentioned earlier, HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.*

8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at [http://www.hawaiiscap.com/wp-content/uploads/2013/04/LICH\\_Irrigation\\_Conservation\\_BMPS.pdf](http://www.hawaiiscap.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPS.pdf).  
*HHDC will incorporate efficient landscaping irrigation systems in an effort to reduce potable water demands.*

The Department of Design and Construction (DDC) in a letter dated June 12, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that they do not have comments to offer.

## 17. SIGNIFICANCE CRITERIA

The following review of the significance criteria indicates that the development will not have a significant impact on the environment.

- (1) “Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;”

*The underutilized development site is surrounded by urban development and represents an infill development. The site was at one time planned for a parking lot, but has remained in open space.*

*The property is not listed on either the State or Federal Registers of Historic Places and Ainahau Vista built in 2007 does not qualify for inclusion on the either register.*

*An Archaeological Inventory Survey was conducted on the entire property during the development of Ainahau Vista, titled “Archaeological Inventory Survey for the Tusitala Vista Elderly Apartments”. Please refer to **Appendix 4** for complete report prepared by Cultural Surveys Hawaii.*

*Also included in **Appendix 4** is a copy of a letter from the Department of Land and Natural Resources (DLNR) , dated October 18, 2005, indicating their concurrence with*

*Cultural Surveys Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.*

*Included in **Appendix 4**, is a letter from the DLNR, dated December 12, 2008, commenting that “The Data Recovery Report meets the minimum requirements, and is accepted as compliance with 6E-42 and Hawaii Administrative Rules (HAR) § 13-13-278 Rules Governing Standards for Archaeological Data Recovery Studies and Reports.”*

*The SHPD, of the DLNR, in a letter dated June 17, 2015 (**Appendix 3 – Agency Pre-Consultation Comments**), commenting on the proposed DEA indicated that the submittal will require SHPD review under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. Their letter went on to describe steps that HHDC needs to take to address Section 106 and their other requirements.*

*HHDC’s archaeological consultant, Cultural Surveys Hawaii will work with SHPD to meet their requirements related to HRS §6E and NHPA Section 106 and SHPD’s other requirements for the Project.*

*Cultural Surveys Hawaii, Inc. prepared a “Cultural Impact Evaluation for the Tusitala Vista Elderly Apartments” (now Ainahau Vista), Waikiki, Kona District, Oahu Island, dated December 2004. Please refer to **Appendix 8** of this report. The following is an excerpt from the Section on “Summary and Recommendations”:*

*“None of the community contacts queried for this cultural impact evaluation identified any ongoing cultural practices within the property area.*

*It is possible that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project parcel. Other possible deposits may be associated with nineteenth century Hawaiian royalty.*

*Based on the above findings, it is recommended that no further cultural impact mitigation measures are warranted.*

*In order to address traditional cultural concerns, and given the cultural sensitivity of the entire Waikiki area, it should be noted, however, that subsurface properties associated with former traditional Hawaiian activities in the project area, such as artifacts and cultural layers, may be present despite decades of sugar cultivation activities. As a precautionary measure, personnel involved in future development activities in the area*

*should be informed of the possibility of inadvertent finds, and should be made aware of the appropriate notification measures to follow.”*

*Previously identified non-Native Hawaiian fragments of human skeletal remains were encountered on this property during the permitting process for Ainahau Vista. HHDC went before the Burial Counsel and a burial treatment plan was approved in a letter from DLNR to Cultural Surveys Hawaii Inc. on November 28, 2006. Please see **Appendix 4**.*

*Based on the findings and recommendation of the archaeological inventory survey, an archaeological monitoring program will be implemented with on-site and on-call monitoring of initial subsurface impacts.*

- (2) “Curtails the range of beneficial uses of the environment;”

*The proposed development will not curtail, but will instead enhance the range of beneficial uses of the environment. The development site will provide much needed senior affordable rental units to meet the growing housing demands for our rapidly growing senior population.*

- (3) “Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;”

*The State's environmental policies and guidelines are set forth in Chapter 343, Hawaii Revised Statutes, "State Environmental Policy". The broad policies set forth include conservation of natural resources and enhancement of quality of life. As discussed earlier, the development does not adversely affect significant natural resources. With the proposed development, this underutilized portion of the property will be developed to provide our community with senior affordable rental units. This will enhance the quality of life for future senior residents of Ainahau Vista II.*

- (4) “Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;”

*The development will give a temporary boost to the State's economy with the provision of short-term construction employment and related tax impacts, and a few long-term operational jobs in the form of support services for Ainahau Vista II.*

*The social welfare of the community would be positively affected by the development of this senior affordable rental development which will serve qualified seniors who otherwise may be unable to rent a home of their own. The Ainahau Vista II affordable senior rental development will offer an attractive living environment for seniors in close proximity to public transit and goods and services.*

*The senior residents in Ainahau Vista II will have a long term positive economic effect on businesses in the area, by providing a source of new customers.*

- (5) Substantially affects public health;

*The proposed action will not affect public health. The proposed land use is compatible with the surrounding residential condominium and apartment development.*

- (6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

*The Ainahau Vista II will result in 62 new affordable senior rental units. These new units will result in an increase to the residential population in Waikiki of about 69, since based on other existing affordable senior rental developments in Honolulu, the average household size is 1.1.*

*Based on the Department of Planning and Permitting's (DPP's) "Annual Report on the Status of Land Use on O'ahu, Fiscal Year 2010" (Report), the Year 2000 population actual number of housing units in the Primary Urban Center (PUC) was 171,773. This number is expected to grow by 2015 to 184,935 units and by 2025 to 196,197 units. The projected growth from 2000 to 2015 is an increase of 13,162 units and from 2015 to 2025 an increase of 11,262 units. The proposed 62 new affordable units will help support the projected growth in the PUC through the year 2025.*

- (7) Involves substantial degradation of environmental quality;

*The development will not result in a substantial degradation of the environment. Only minimal impact is projected during the construction phase with the planned mitigation measures in place. Long term impacts from traffic and noise will also be minimal with the planned mitigation measures.*

- (8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment to larger actions;

*The proposed development at Ainahau Vista II does not involve a commitment to larger actions nor will it result in cumulative impacts to the environment. The proposed Ainahau Vista II senior affordable rental development will not generate future developments on this site or in the surrounding area that would create a cumulative impact.*

- (9) Substantially affects a rare, threatened or endangered species or its habitat;

*No rare, threatened, or endangered species or their habitats would be affected in the proposed development.*

- (10) Detrimentially affects air or water quality or ambient noise levels;

*Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for*

*foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor, including where appropriate, the use of water wagons, erection of dust barriers and other methods for minimizing dust.*

*Short term noise impacts at construction sites are a normal result of construction activity. The State Department of Health administers rules and regulations relating to the hours during which construction is permitted and the noise levels permitted during those hours. The contractor will be required to apply for a permit from the State Department of Health should noise from construction activities exceed regulatory limits. The contractor will abide by the noise regulations incorporated into the permit.*

*Long term noise impact from the proposed development are expected to be minimal due to the nature of the proposed senior rental apartment and the minimal increase in traffic projected. Long term impacts from traffic noise on Ala Wai Boulevard will be mitigated by the hollow tile structure and design considerations.*

*Water quality would not be detrimentally affected by the proposed development. The proposed residential development will not have an adverse impact on aquifers or water resources.*

- (11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

*The Project Site is in a flood plain, but is not located in other environmentally sensitive area such as a tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters. The flood elevation for this property is six feet and all units will be developed above the six foot elevation.*

- (12) Substantially affect scenic vistas and viewplanes identified in county or state plans or studies; or,

*The proposed development will not substantially affect scenic vistas and view planes identified in county or state plans or studies. The property involves an infill development with housing similar to that in the developed surrounding area. The proposed development will be developed at an 80-foot height while Ainahau Vista is 85 feet tall and will not have a significant impact on view planes. The height limit for this property is 240 feet.*

- (13) Require substantial energy consumption;

*HHDC intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. HHDC will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. HHDC will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. HHDC will reduce material waste through effective construction and operational*

*recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.*

#### 18. DETERMINATION

Based on this Final Environmental Assessment, a Finding of No Significant Impact (FONSI) for the proposed Ainahau Vista II Affordable Rental Project is anticipated.

#### 19. PERSONS AND FIRMS PREPARING THIS FINAL EA

**Kusao & Kurahashi, Inc.**

Planning & Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawai'i 96822

**Kazutoshi Yato, AIA**

2033 Round Top Terrace  
Honolulu, Hawaii 96822

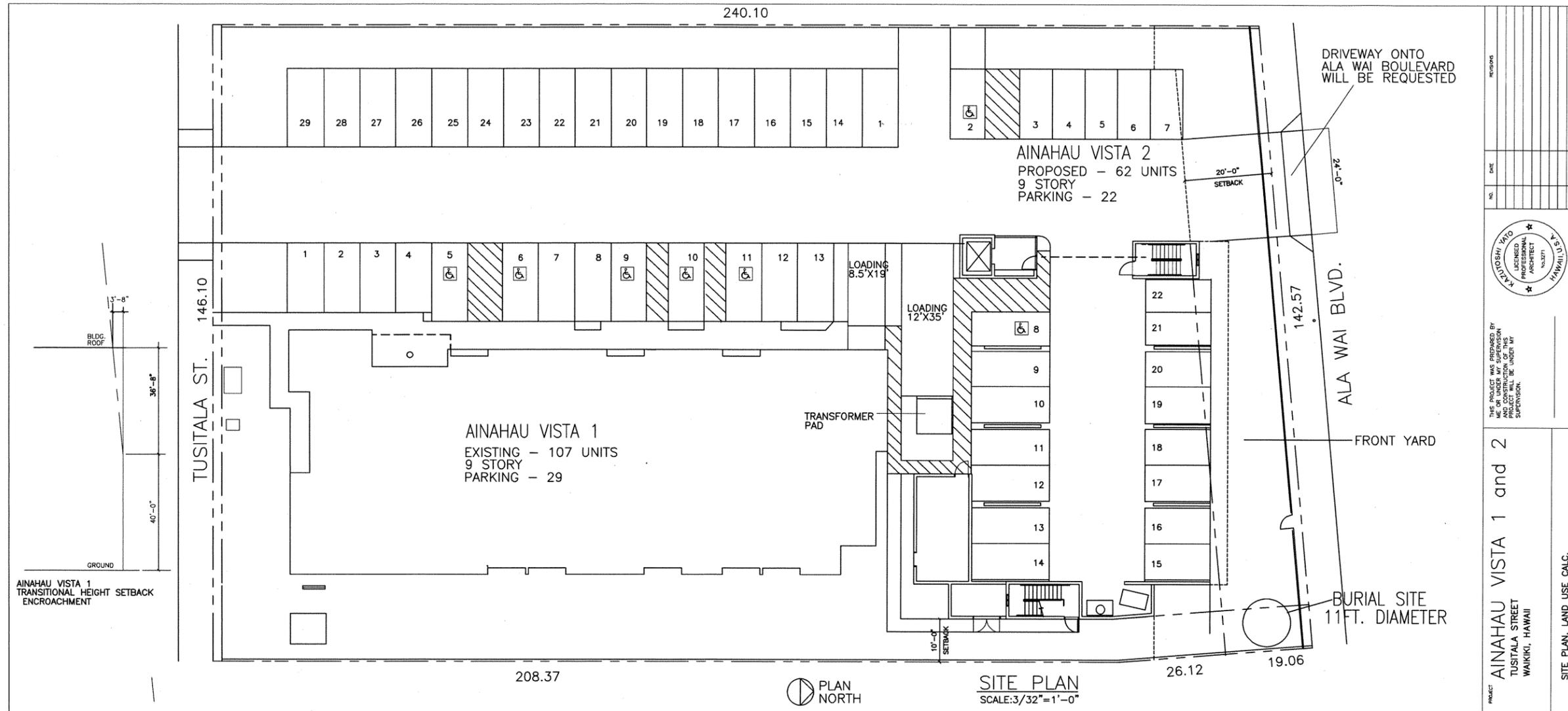
**Dean Alcons and Associates Inc.**

905 Umi Street, Suite 101  
Honolulu, Hawaii 96819

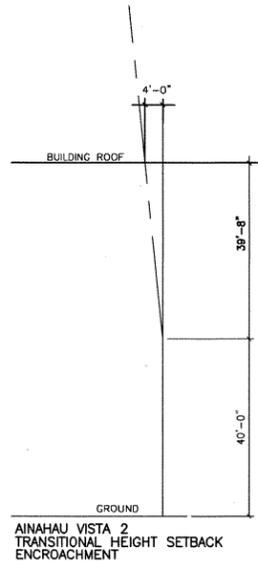
**Julian Ng, PE**

P.O.Box 816  
Kaneohe, Oahu, Hawaii 96744

**APPENDIX 1**  
**CONCEPTUAL PLANS**



AINAHAU VISTA 1  
TRANSITIONAL HEIGHT SETBACK  
ENCROACHMENT



AINAHAU VISTA 2  
TRANSITIONAL HEIGHT SETBACK  
ENCROACHMENT

PLAN NORTH

SITE PLAN  
SCALE: 3/32" = 1'-0"

**AINAHAU VISTA 1 AND 2 EXEMPTION TO ZONING REQUIREMENT**

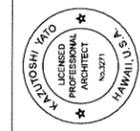
- ① SEC. 21-9.80-5(c)(2) TRANSITIONAL HEIGHT SETBACKS AS SHOWN ON THIS SHEET
- ② TABLE 21-6.3 OFF STREET PARKING REQUIREMENTS WAIKIKI SPECIAL DISTRICT  
169 REQUIRED AND 46 + 5 GUEST STALLS PROVIDED.
- ③ TABLE 21-9.6(B) WAIKIKI SPECIAL DISTRICT DEVELOPMENT STANDARDS APARTMENT PRECINCT  
ALLOWABLE FLOOR AREA=1.5X(35761+5346+2192)=64,948SF  
PROPOSED FLOOR AREA=60,948 (EXIST.)+33,894=94,842SF  
OVERAGE OF 29,894SF
- ④ SECTION 21-9.80-5(b) and TABLE 21-9.6(B) RELATED TP SIDE YARD TO ALLOW AN ENCROACHMENT OF A LOADING STALL MANEUVERING SPACE 12-FOOT WIDE BY 10-FOOT DEE INTO THE WEST BOUNDARY SIDE YARD (120-SQUARE FOOT ENCROACHMENT).
- ⑤ PARK DEDICATION  
REQUIRED=10% OF 94,842SF=9,484SF  
PROVIDED= 3586 (PRIVATE PARK)+1693 (VICTORY GARDEN) +1152 (MULTI-PURPOSE RM)=6431  
SHORTAGE=3053SF

**AINAHAU VISTA 1 AND 2 ZONING PROJECT DATA**

TMK:2-6-24:70&71  
LAND AREA=23,644SF+12,117SF=35,761SF  
CUP FILE NO.2005/CUP-75 Jt.Dev.  
ZONING: WAIKIKI APARTMENT PRECINCT  
FAR=1.5  
ALLOWABLE FLOOR AREA=1.5X(35,761+5346+2192)=64,948SF  
1/2 STREET FRONTAGE:  
ALA WAI=142.57x(.5x75)=5346sf  
TUSITALA=146.1x(.5x30)=2192sf  
HEIGHT LIMIT=240'  
  
PROPOSED  
EXISTING BUILDING (AINAHAU VISTA 1)= 60,948.44SF  
AINAHAU VISTA 2  
GROUND FLOOR= 1166SF  
TYPICAL FLOORS = 8X4091SF=32,728SF  
TOTAL=33,894SF  
GRAND TOTAL FOR 2 BUILDINGS=94,842SF

OPEN SPACE PROVIDED FOR AINAHAU VISTA 1 & 2  
LOT COVERAGE=16,249SF+4,091(BUILDING)+3,109SF=23,449SF  
REQUIRED=35%= 12,516SF  
PROVIDED=12,547SF (35.1%)  
  
NUMBER OF UNITS:  
AINAHAU VISTA 1=107  
AINAHAU VISTA 2=62 (47-1BR& 15 STUDIO)  
TOTAL=169 UNITS  
  
PARKING  
PROVIDED=24 FOR AINAHAU VISTA 1 +5 GUEST STALLS  
PROVIDED=22 FOR AINAHAU VISTA 2  
BUILDING CODE  
TYPE OF CONSTRUCTION- IA

NO.	DATE	REVISIONS



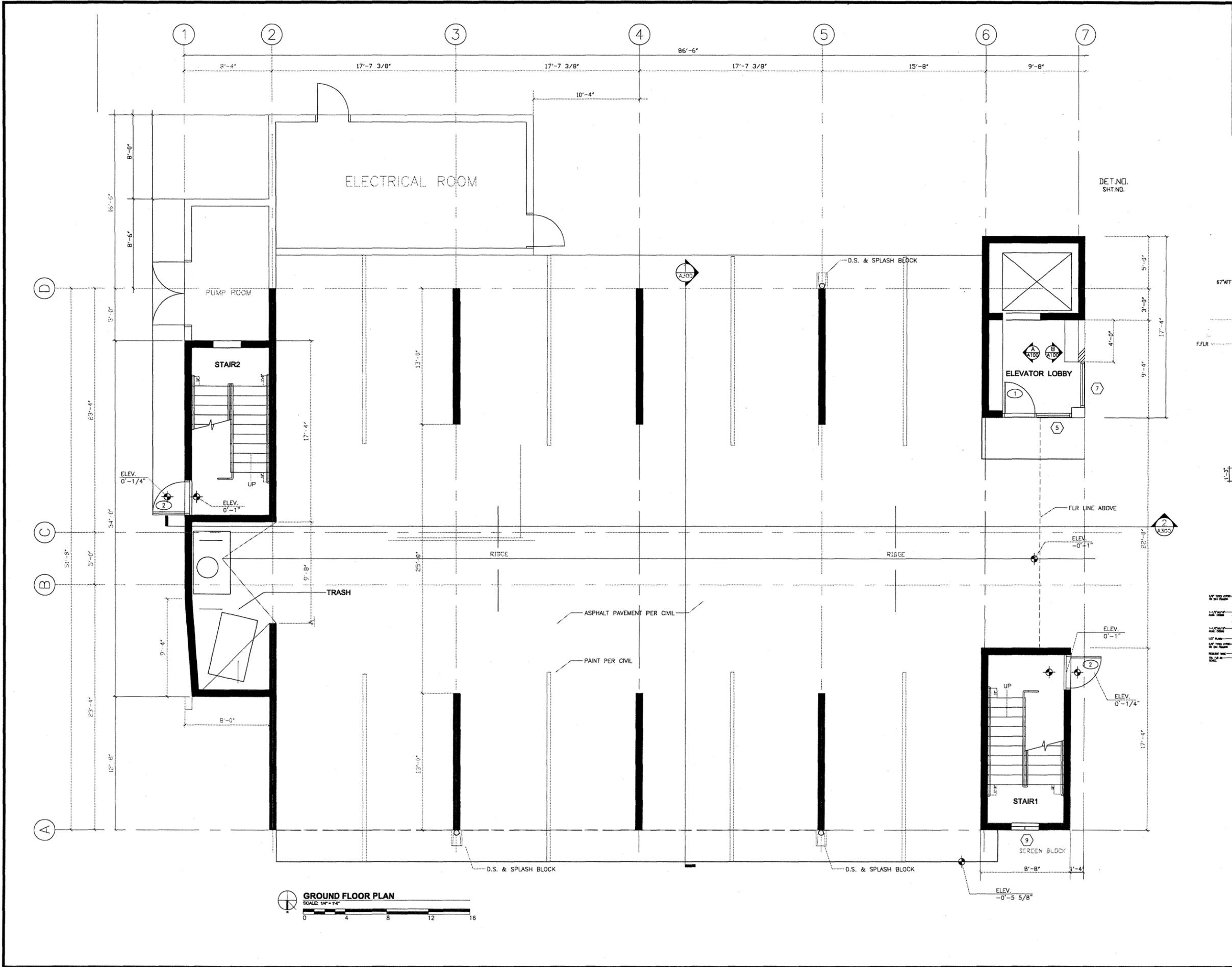
THIS PROJECT WAS PREPARED BY  
KAZU YATO ARCHITECTS AND ASSOCIATES  
AND CONSTRUCTION OF THIS PROJECT  
WILL BE UNDER MY SUPERVISION.

PROJECT: AINAHAU VISTA 1 and 2  
TUSITALA STREET  
WAIKIKI, HAWAII  
SITE PLAN, LAND USE CALC.

**KAZU YATO, AIA & ASSOCIATES**  
2025 KAUAI AVENUE  
WAIKIKI, HAWAII 96815  
TEL: (808) 945-2011  
FAX: (808) 945-2011

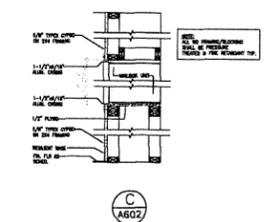
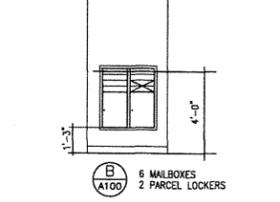
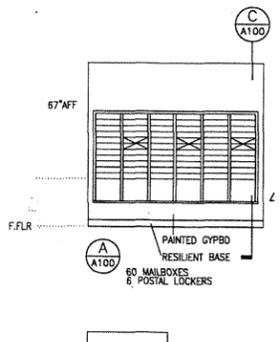
DATE	10/23/15
DRAWN	KY
CHECK	KY
FILE	

A1



**GROUND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"  
0 4 8 12 16

NO.	DATE	REVISIONS
DELTA 1	1/14/18	REVISED



**KAZU YATO**  
LICENSED PROFESSIONAL ARCHITECT  
No. 3271  
HAWAII, U.S.A.  
Expiration Date: 7/30/2018

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**AINAHAU VISTA 2**  
2428 TUSTILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
GROUND FLOOR PLAN

**KAZU YATO, AIA & ASSOCIATES, INC.**  
203 ROUNDTOP TERRACE  
HONOLULU, HI 96813  
TEL: (808) 945-0400  
FAX: (808) 945-0411

DATE: **11.8.2015**  
SHEET

**A100**

NO.	DATE	REVISIONS
	11/18/15	
DELTA 1	1/14/16	REVISED
DELTA 2	4/25/16	CODE



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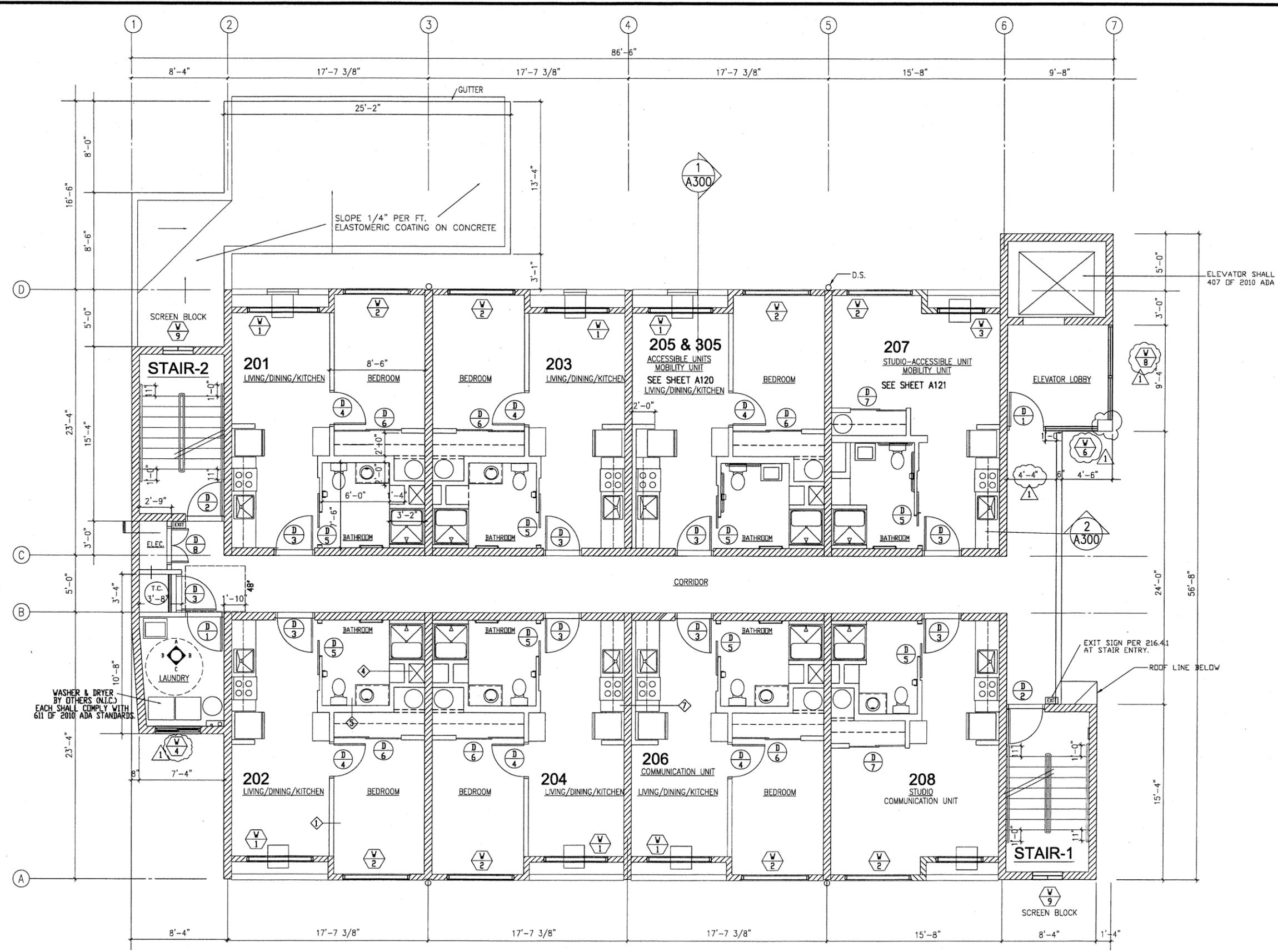
**AINAHAU VISTA 2**  
 2428 TUSTILA STREET  
 WAIKIKI, HONOLULU, HAWAII 96815  
 2ND FLOOR PLAN

**KAZU YATO, AIA & ASSOCIATES, INC.**  
 2033 ROUNDTOP TERRACE  
 HONOLULU, HI 96818  
 TEL: (808) 945-0640  
 FAX: (808) 945-0641

DATE: 11/18/15

SHEET

**A101**



ELEVATOR SHALL CONFORM TO 407 OF 2010 ADA STANDARDS.

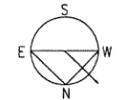
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ROOF LINE BELOW

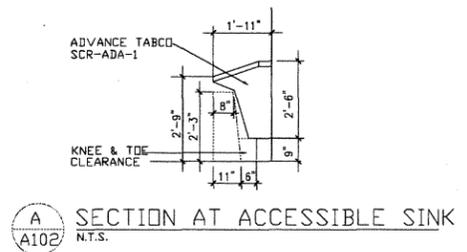
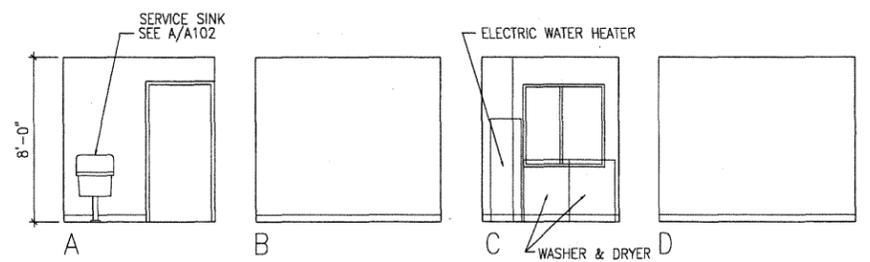
WASHER & DRYER BY OTHERS (N.I.C.) EACH SHALL COMPLY WITH 611 OF 2010 ADA STANDARDS.

SLOPE 1/4" PER FT. ELASTOMERIC COATING ON CONCRETE

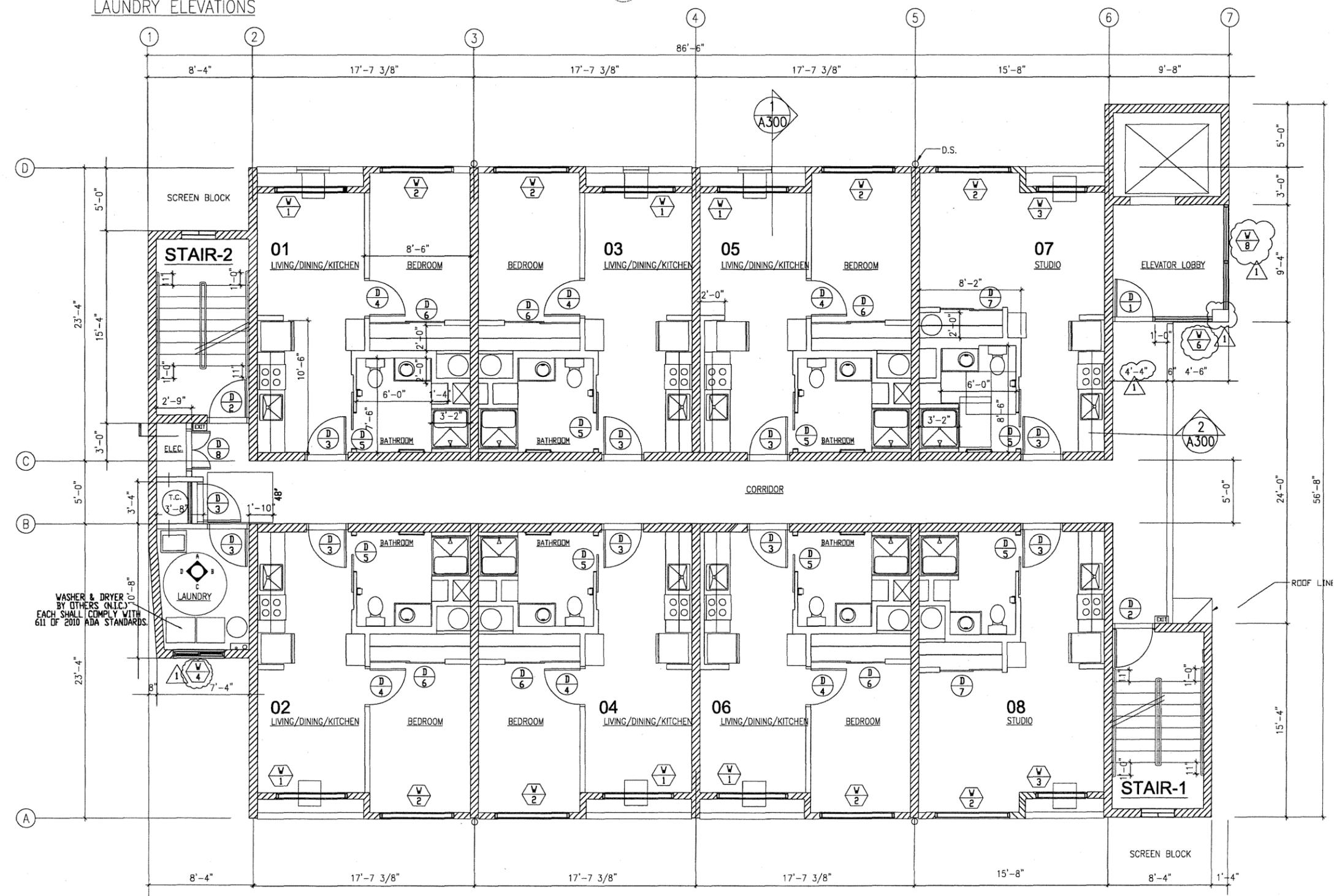
**SECOND FLOOR PLAN**  
 SCALE 1/4"=1'-0"



2 ADDED DOOR AND WINDOW TAGS



NO.	DATE	REVISIONS
	11/18/15	
DELTA 1	1/14/16	REVISED
DELTA 2	4/25/16	CODE



WASHER & DRYER BY OTHERS (N.I.C.) EACH SHALL COMPLY WITH 611 OF 2010 ADA STANDARDS.

TYPICAL FLOOR PLAN (3 - 8)  
SCALE 1/4"=1'-0"

2 ADDED DOOR AND WINDOW TAGS



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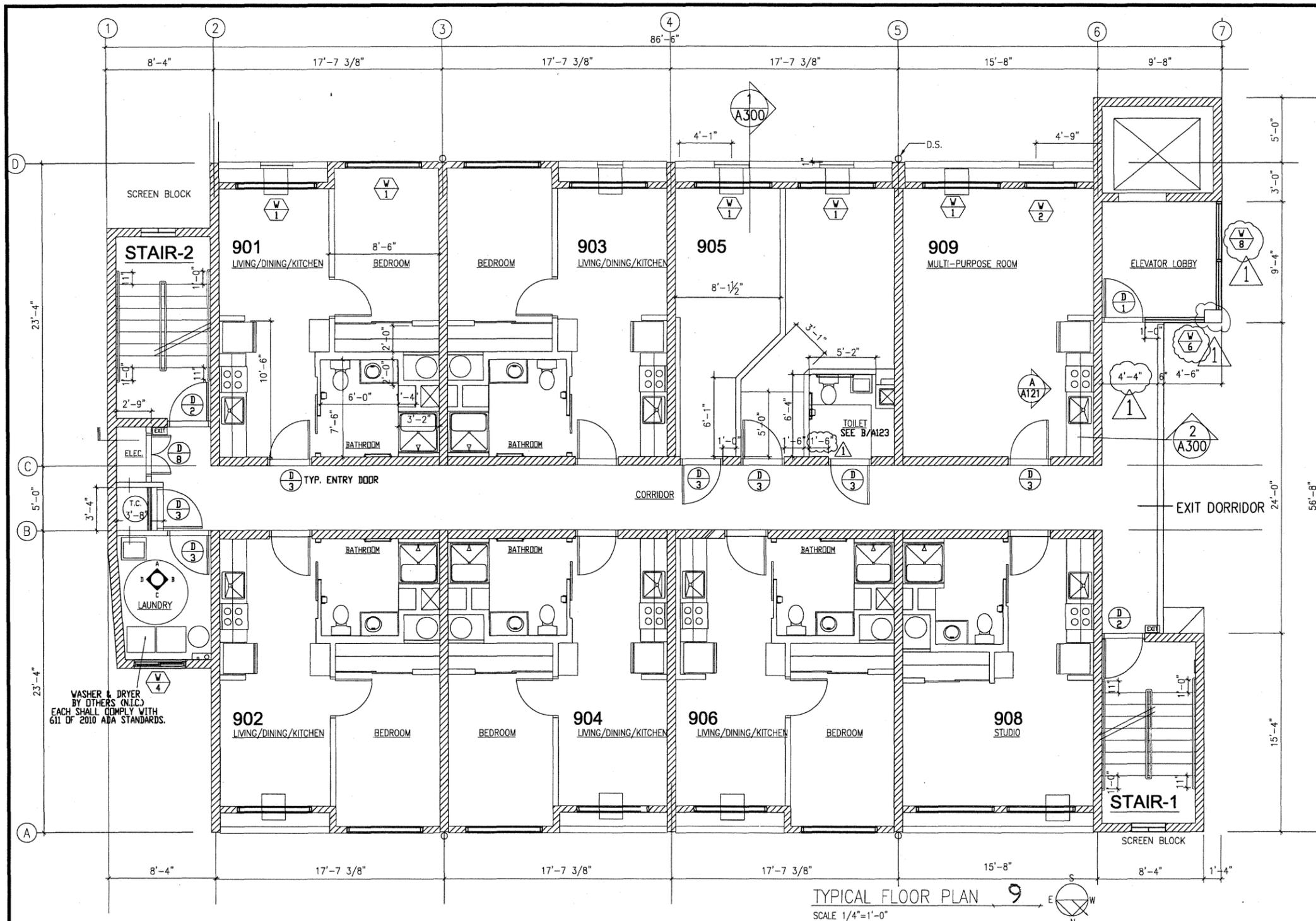
*Kazu Yato*

**AINAHAU VISTA 2**  
2428 TUSTILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
TYPICAL FLOOR PLAN (3 THRU 8)

**KAZU YATO, AIA & ASSOCIATES, INC.**  
2033 HONOLULU TERRACE  
HONOLULU, HI 96815  
TEL: (808) 942-9848  
FAX: (808) 942-0541

DATE: 11/18/15  
SHEET

**A102**



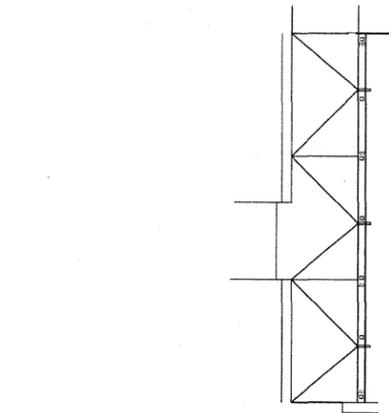
TYPICAL FLOOR PLAN 9  
SCALE 1/4"=1'-0"

NO.	DATE	REVISIONS
	11/18/15	
DELTA	1/14/16	REVISED

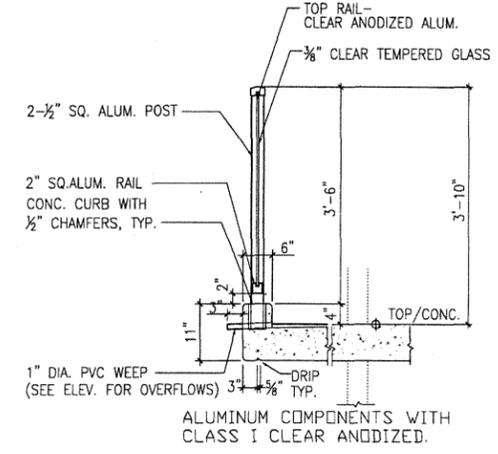


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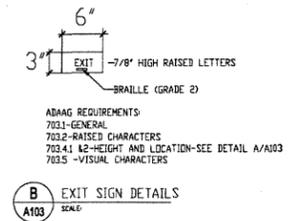
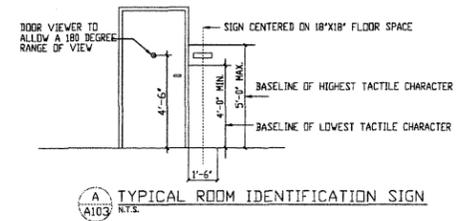
*Kazu Yato*



EXIT CORRIDOR PLAN & ELEVATION



RAILING@ EXIT CORRIDOR



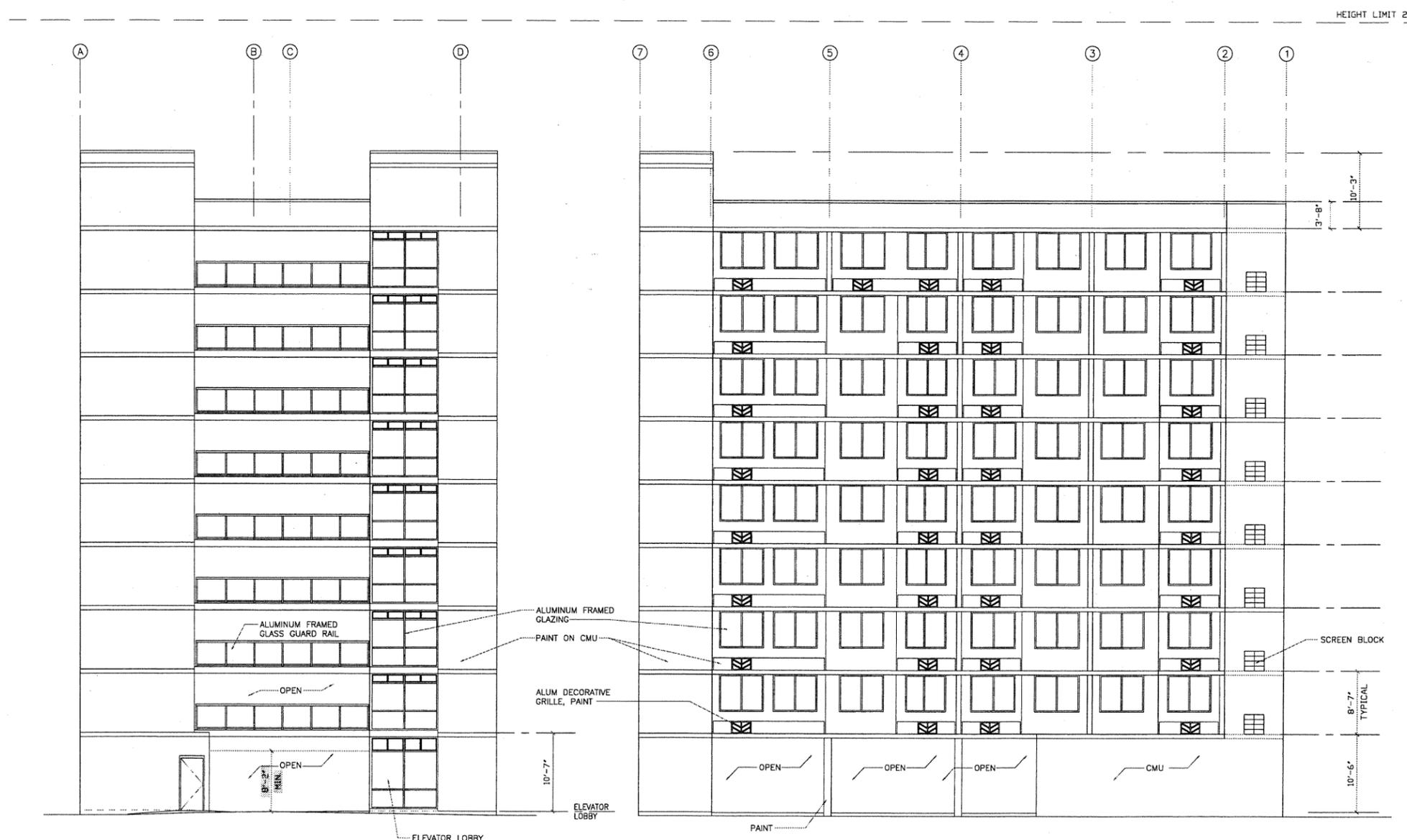
**AINAHU VISTA 2**  
2428 TUSTITILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
9TH FLOOR PLAN

**KAZU YATO, AIA & ASSOCIATES, INC.**  
TEL: (808) 945-0048  
FAX: (808) 945-0041  
2023 BONDING TERRACE  
HONOLULU, HI 96822  
DATE: 11/8/15

SHEET

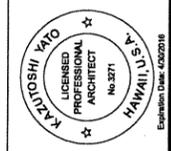
**A103**

NO.	DATE	REVISIONS
	1/14/16	



**EWA ELEVATION**  
SCALE: 1/8" = 1'-0"

**MAKAI ELEVATION**  
SCALE: 1/8" = 1'-0"



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*Kazu Yato*

**AINAHAU VISTA 2**  
2428 TUSTILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
MAUKA & EWA ELEVATIONS

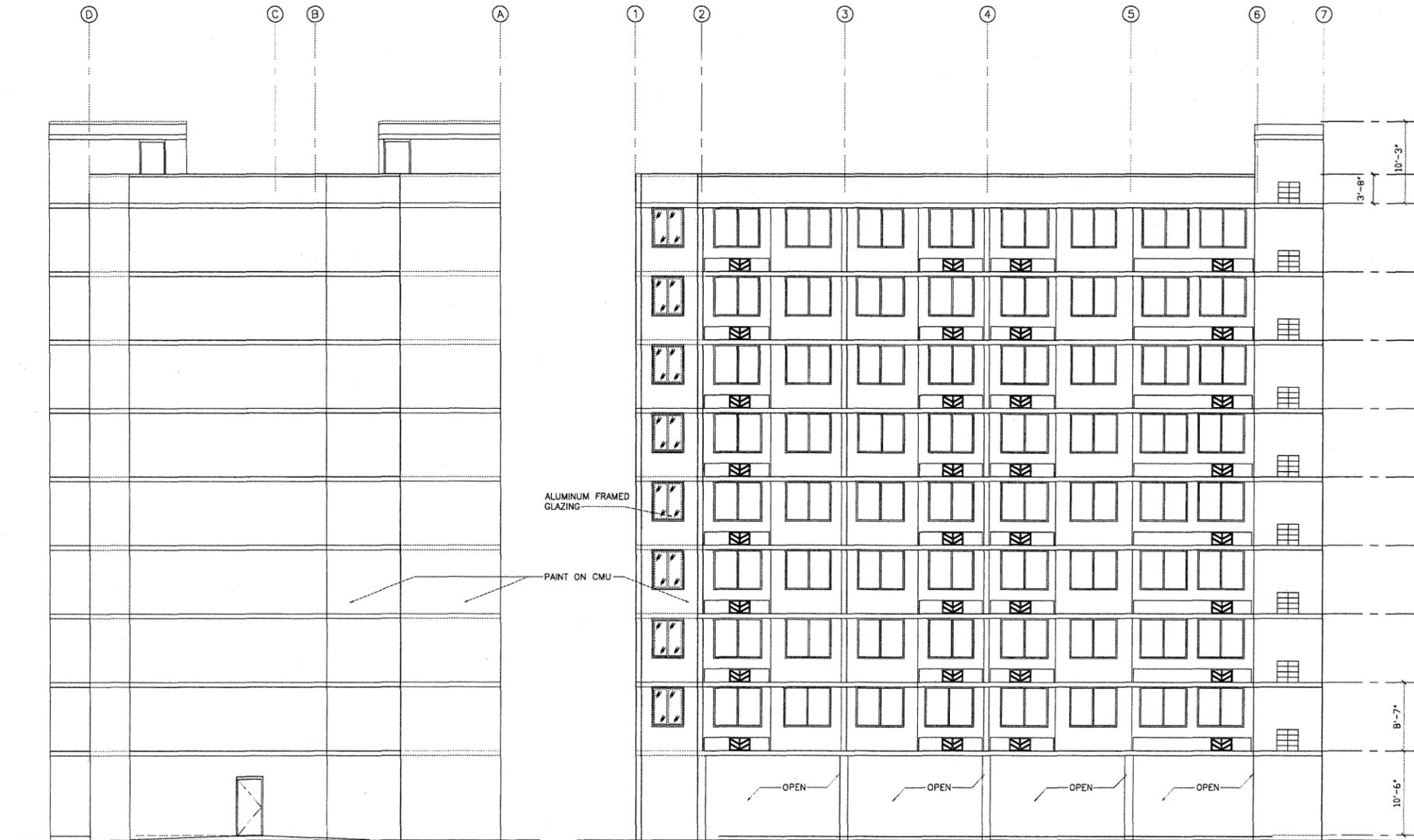
**KAZU YATO, AIA & ASSOCIATES, INC.**  
233 REARVIEW TERRACE  
HONOLULU, HI 96822  
TEL: (808) 942-0040  
FAX: (808) 942-0041

DATE: **11.8.2015**

SHEET

**A200**

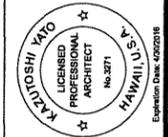
HEIGHT LIMIT 240'



**DIAMOND HEAD ELEVATION**  
SCALE: 1/8" = 1'-0"

**MAUKA ELEVATION**  
SCALE: 1/8" = 1'-0"

NO.	DATE	REVISIONS
	1/14/16	



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*Kazu Yato*

**AINAHAU VISTA 2**  
2428 TUSTILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
MAKAI & DIAMOND HEAD ELEVATIONS

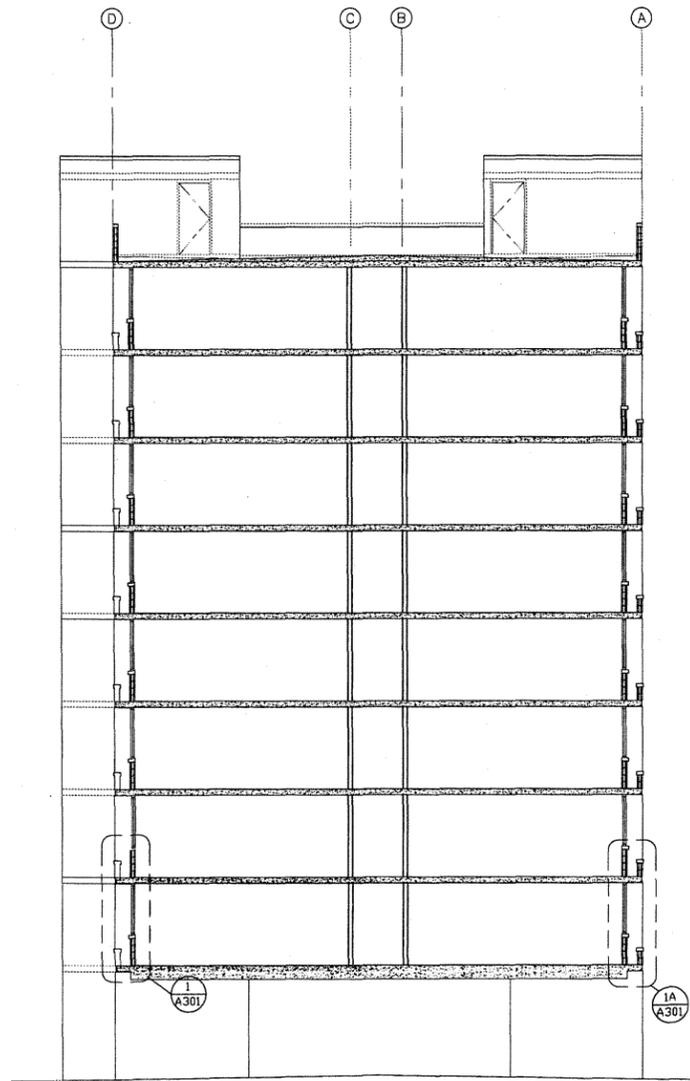
**KAZU YATO, AIA & ASSOCIATES, INC.**  
2033 KIMIKO TERRACE  
HONOLULU, HI 96815  
TEL: (808) 942-0046  
FAX: (808) 942-0044

DATE: 11.8.2015

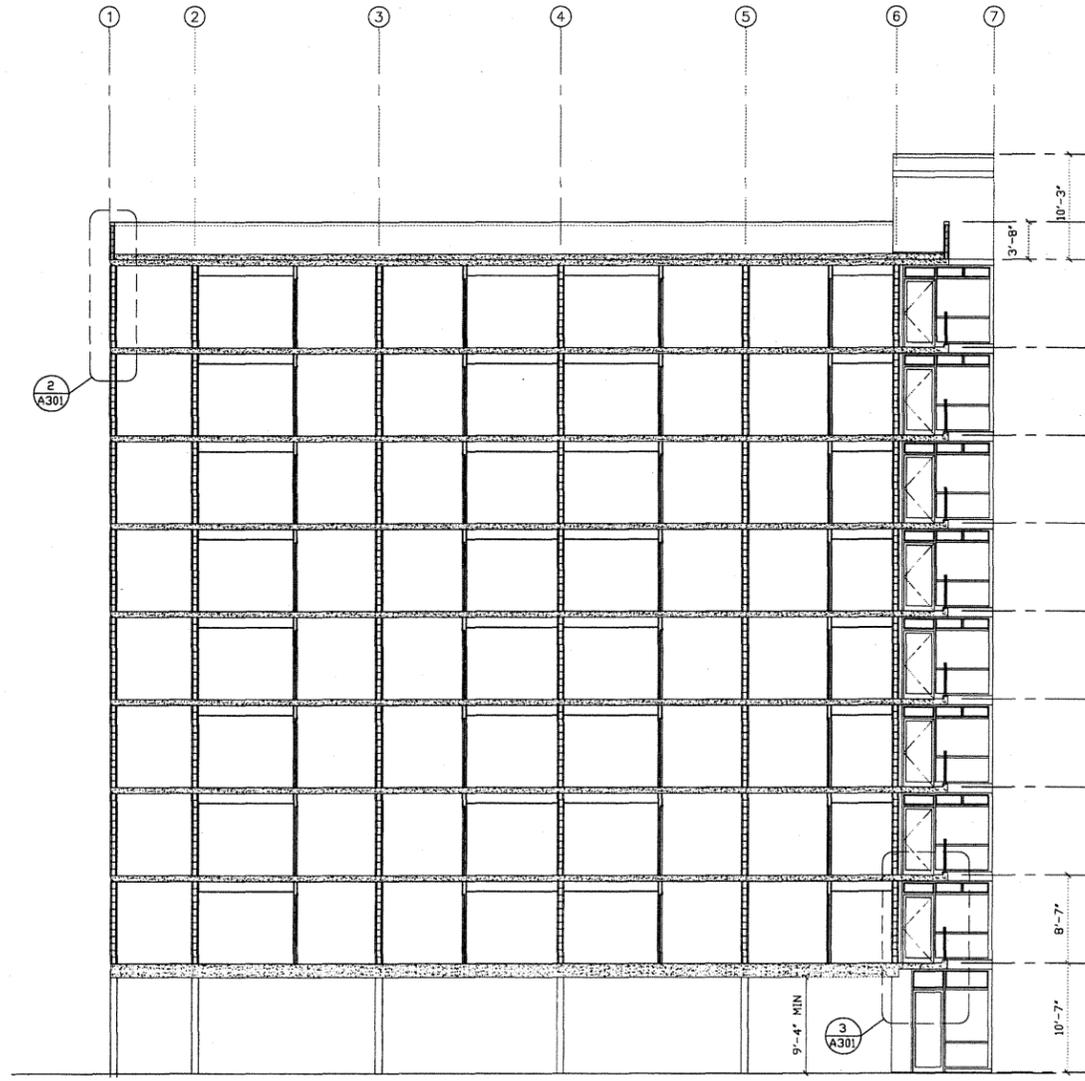
SHEET

**A201**

HEIGHT LIMIT 240'



**1 BUILDING SECTION**  
SCALE: 1/8" = 1'-0"  
0 8 16 24 32



**2 BUILDING SECTION**  
SCALE: 1/8" = 1'-0"

NO.	DATE	REVISIONS



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*Kazu Yato*

**AINAHAU VISTA 2**  
2428 TUSTITILA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
BUILDING SECTIONS

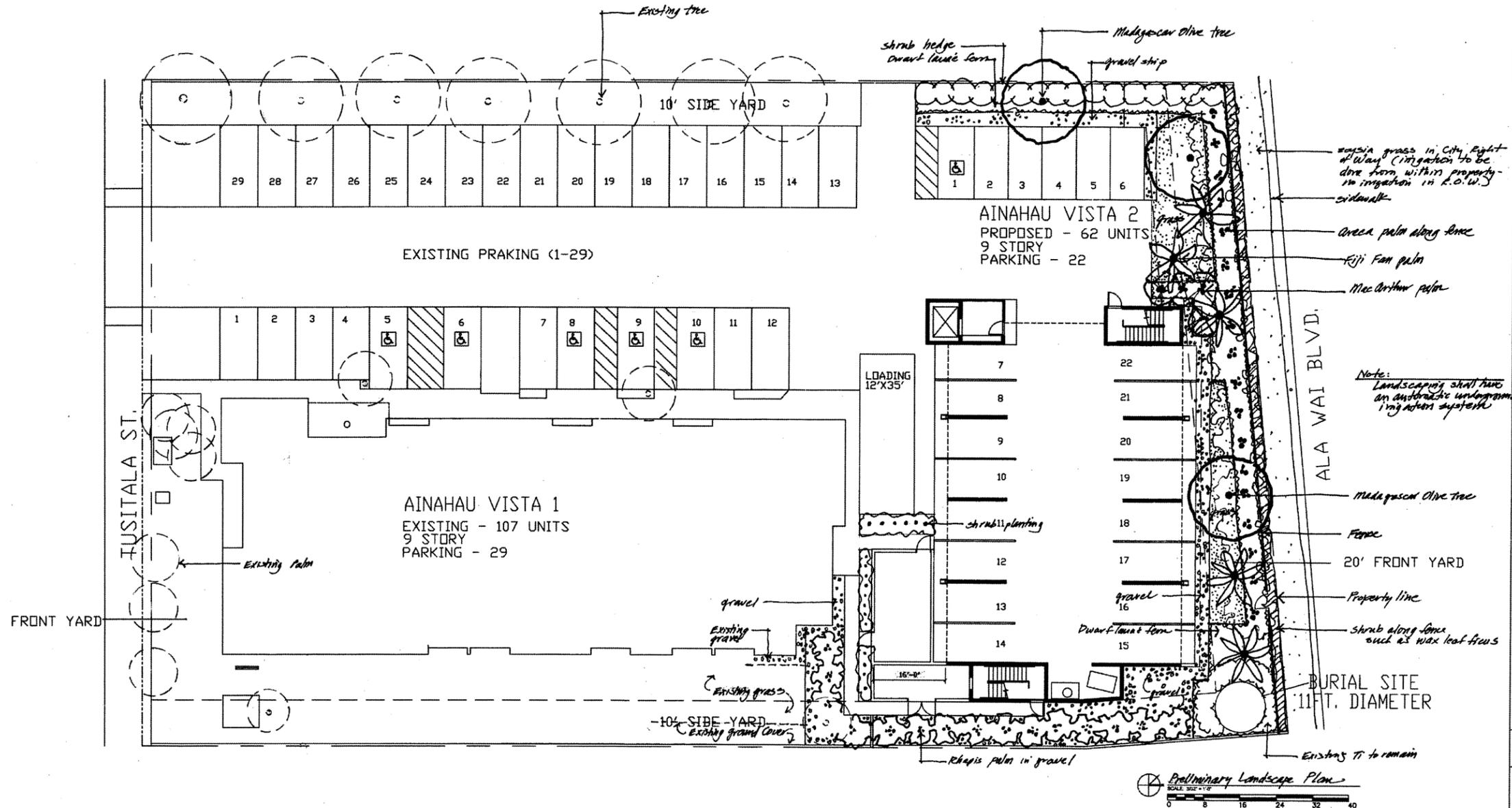
**KAZU YATO, AIA & ASSOCIATES, INC.**  
2033 BOUNDARY TERRACE  
HONOLULU, HI 96822  
TEL: (808) 945-0640  
FAX: (808) 945-0641

DATE: **11.8.2015**

SHEET

**A300**

NO.	DATE	REVISIONS



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**AINAHAU VISTA 2**  
2428 TUSITALA STREET  
WAIKIKI, HONOLULU, HAWAII 96815

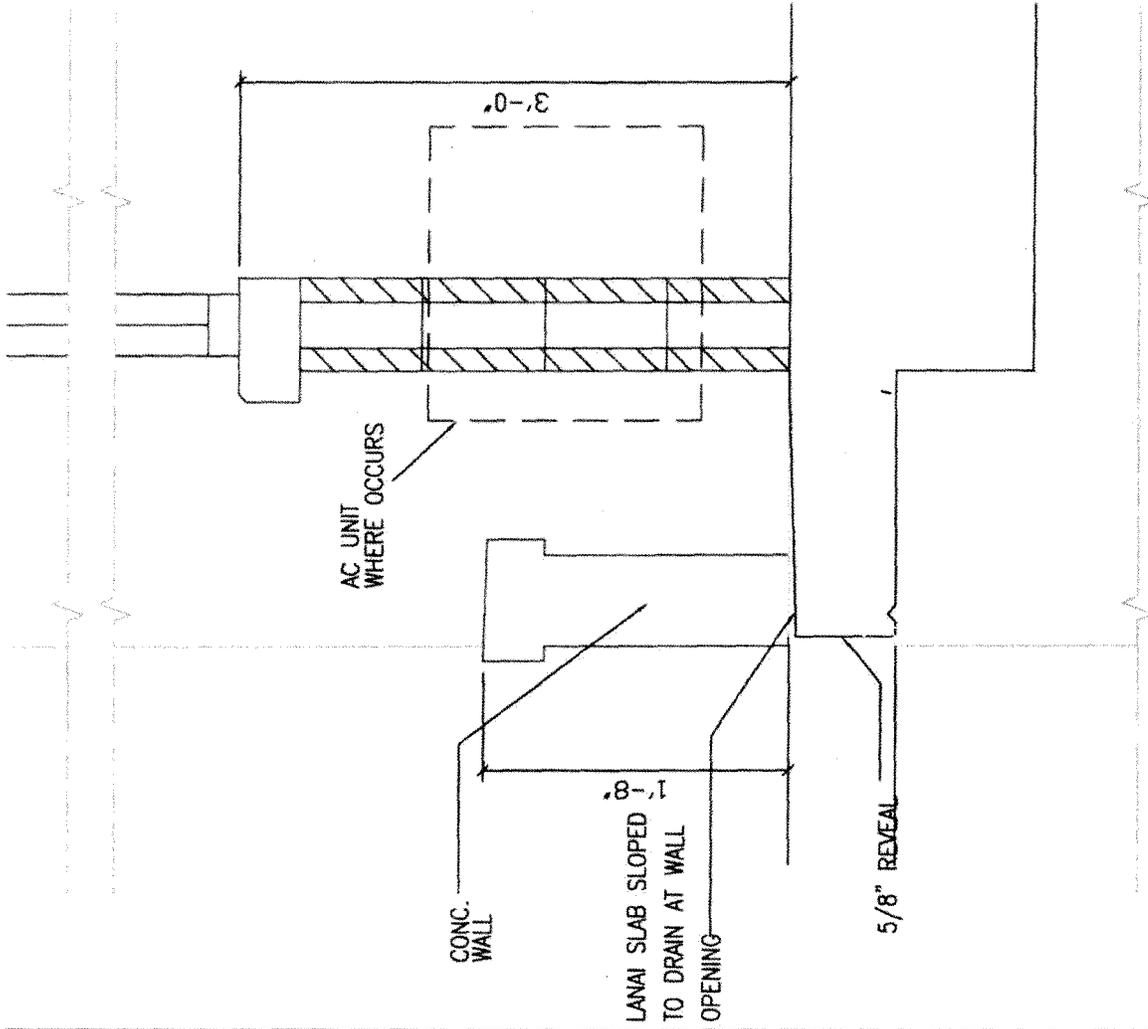
KAZU YATO, AIA & ASSOCIATES, INC.  
2428 TUSITALA STREET  
WAIKIKI, HONOLULU, HAWAII 96815  
TEL: 808-955-1234  
FAX: 808-955-1235

DATE: OCT. 16, 2015

SHEET







**1** WALL SECTION  
 SCALE: 1" = 1'-0"

# FRIGIDAIRE

# Home Comfort

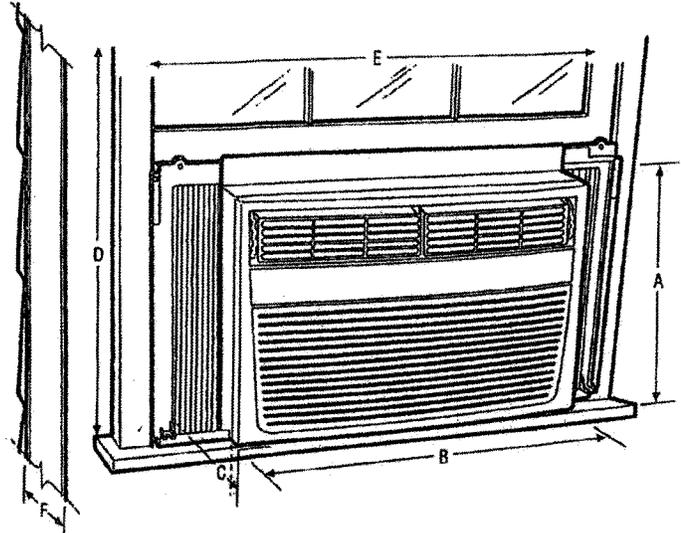
FRA186MT2 Median Air Conditioner

<b>Performance</b>	
BTU (Cool)	18,500/18,200
Dehumidification (Pints/Hour)	5.5
Cool Area (Sq. Ft.)	1,170
Energy Efficiency Ratio	10.7
<b>Electrical</b>	
Volts	230/208
Amps (Cool)	7.7/8.3
Watts (Cool)	1,730/1,700
Length of Power Cord (Min./Max.)	5'/6'
Plug Type (NEMA)	LC6I (6-15)
<b>Features</b>	
Electronic Controls	Ready-Select® Controls
Fan Speeds (Cool/Fan)	3/3
Low Voltage Start-Up	Yes
Auto Cool Function	Yes
Energy Save	Yes
Sleep Mode	Yes
Filter Check	Yes
24-Hour On/Off Timer	Yes
Clean Air Ionizer	Yes
Remote Control	Full-Function Remote T'Stat
Air CFM (High/Med/Low)	459/408/344
Air Direction Control	8-Way
Fresh Air/Exhaust Vent/Closed	Yes/Yes/Yes
Filter Type	Antibacterial Mesh
Filter Access	Tilt-Out
Slide-Out Chassis	Yes
Window Mounting Kit (Included)	Pleated Quick Mount
Warranty*	Yes
<b>Certifications</b>	
ENERGY STAR®	
Performance	AHAM
<b>Specifications</b>	
Refrigerant	R410a
Shipping Weight (Approx.)	124 Lbs.

\*Warranty 5 year sealed system/1 year full parts and labor.



Plug Type (NEMA)  
6-15P



NOTE: For planning purposes only. Always consult local and national electric codes. Refer to Product Installation Guide for detailed installation instructions on the web at [frigidaire.com](http://frigidaire.com).



Product Dimensions		Window Dimensions	
A - Height	17-7/8"	D - Height (Min.)	18-1/2"
B - Width	23-5/8"	E - Width (Min./Max.)	26-1/2" / 40-1/2"
C - Depth	25-3/8"	<b>Wall Cutout Dimensions</b>	
		F - Max. Wall Thickness	8"
		Height	18"
		Width	23-7/8"

Accessories information available on the web at [frigidaire.com](http://frigidaire.com)

## FRIGIDAIRE

USA • 10200 David Taylor Drive • Charlotte, NC 28262 • 1-800-FRIGIDAIRE • [frigidaire.com](http://frigidaire.com)  
CANADA • 5955 Terry Fox Way • Mississauga, ON L5V 3E4 • 1-800-265-8352 • [frigidaire.ca](http://frigidaire.ca)

FRA186MT2 10/13

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Specifications subject to change.

**APPENDIX 2**  
**ENVIRONMENTAL NOISE ASSESSMENT REPORT**



**D. L. ADAMS  
ASSOCIATES**

acoustics | performing arts | technology

970 N. Kalaheo Ave.  
Suite A311  
Kailua, HI 96734  
www.dlaa.com  
808.254.3318

**Environmental Noise Assessment Report  
Ainahau Vista II  
Honolulu, Hawaii**

July 2015

Prepared by:  
D.L. Adams Associates, Ltd.  
970 N. Kalaheo Avenue, Suite A-311  
Kailua, Hawaii 96734  
DLAA Project No. 15-19

Prepared for:  
Kusao & Kurahashi Inc.  
2752 Woodlawn Dr.  
Honolulu, HI 96822



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## 1.0 EXECUTIVE SUMMARY

- 1.1 The Ainahau Vista II project is located in the Waikiki district in Honolulu, Hawaii. The proposed 9 story project includes approximately 62 senior affordable rental units and 22 parking stalls. The project site is located between the current Ainahau Vista building and Ala Wai Boulevard in an area zoned as an Apartment Precinct (zoning code X2).
- 1.2 The project area is currently exposed to varying daytime and nighttime ambient noise levels, typical of urban Waikiki. Noise measurements taken on the project site show an average day-night level ( $L_{dn}$ ) of 71 dBA. Daytime noise levels ranged from 66 to 74 dBA. Nighttime noise levels were slightly less and ranged from 57 to 71 dBA. The dominant noise source was vehicular traffic noise from Ala Wai Boulevard.
- 1.3 During project construction, the dominant noise sources will likely be earth moving equipment, such as bulldozers and diesel powered trucks. Noise from construction activities should be short term and must comply with State Department of Health noise regulations, and a construction noise permit.
- 1.4 After construction is complete, noise generated from any stationary mechanical equipment on the project site must comply with the Hawaii Department of Health property line noise regulations. Noise mitigation for stationary mechanical equipment should be considered during the design of the project.
- 1.5 To evaluate existing vehicular traffic noise levels from Ala Wai Boulevard on the project site, traffic noise was calculated in the occupied areas and compared to both the FHWA/HDOT and HUD noise level criteria. Future traffic noise levels were not evaluated. Traffic noise was projected on the full elevation façade of the building and on the exterior area at ground level on the Ainahau Vista II project site. The exterior façade of the apartment units overlooking Ala Wai Boulevard are expected to be exposed to noise levels in excess of the HUD site acceptability standards and the FHWA noise abatement criteria. In order to comply with the HUD noise criteria inside the units, exterior façade elements such as glazing and wall construction should be considered during the design of the project. A noise impact is not expected for the Ewa, Diamond Head, and Makai sides of the building.
- 1.6 Design of the exterior elements of the building should incorporate features that reduce noise levels to the interior spaces of the apartment unit. These features include concrete exterior walls, minimum STC 35 rated windows, and no window AC or PTAC units installed in the exterior shell of the building.
- 1.7 The FHWA/HDOT criteria are not regulatory requirements for this project as it has not authority to enforce land use. The criteria are recommended by the FHWA to be used as a guideline for consideration of land use and the impact of traffic noise. It is also important to note that the HUD noise guidelines are also design goals and not enforceable regulations. However, these guidelines and design goals are useful tools for assessing the noise environment. It is important to note that the HUD site acceptability standards must be satisfied for projects involving HUD or federal financing.

## **2.0 PROJECT DESCRIPTION**

### **2.1 Project Design**

The Ainahau Vista II project is located in the Waikiki district in Honolulu, Hawaii. The proposed 9 story project includes approximately 62 rental units and 22 parking stalls. The project site is located between the current Ainahau Vista building and Ala Wai Boulevard in an area zoned as an Apartment Precinct (zoning code X2).

## **3.0 NOISE STANDARDS**

Various local and federal agencies have established guidelines and standards for assessing environmental noise impacts and set noise limits as a function of land use. A brief description of common acoustic terminology used in these guidelines and standards is presented in Appendix A.

### **3.1 State of Hawaii, Community Noise Control (HDOH)**

The State of Hawaii Community Noise Control Rule [Reference 1] defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to *stationary* noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, etc. The Community Noise Control Rule does not address most *moving* sources, such as vehicular traffic noise, aircraft noise, or rail transit noise. However, the Community Noise Control Rule does regulate noise related to agricultural, construction, and industrial activities, which may not be stationary.

The maximum permissible noise levels for stationary mechanical equipment are enforced by the Hawaii Department of Health (HDOH) for any location at or beyond the property line and shall not be exceeded for more than 10% of the time during any 20-minute period. The specified noise limits which apply are a function of the zoning and time of day as shown in Figure 1. With respect to mixed zoning districts, the rule specifies that the primary land use designation shall be used to determine the applicable zoning district class and the maximum permissible sound level. In determining the maximum permissible sound level, the background noise level is taken into account by HDOH.

The criteria for *impulse* or impact noise is separate from stationary noise due to the nature of the sound. HDOH defines impulse noise as "any sound with a rapid rise and decay of sound pressure level, lasting less than one second, caused by sudden contact between two or more surfaces...". Noise from pile driving is considered impulse noise and the maximum permissible noise level is 10 dB above the specified noise limits for stationary sources, as shown in Figure 1.

### **3.2 U.S. Federal Highway Administration (FHWA)**

The FHWA regulation 23 CFR 772 contains highway traffic noise abatement criteria (NAC) for seven land use activity categories and assigns corresponding maximum hourly equivalent sound levels ( $L_{eq}(h)$ ) for traffic noise exposure [Reference 2, 3]. The Noise Abatement Criteria (NAC) for all seven categories are listed in Figure 2. This project is classified under "Category B" for residential activities, which has a maximum  $L_{eq}(h)$  of 67 dBA. These limits are viewed as design goals, and all projects meeting these limits are deemed in conformance with FHWA noise standards.

### **3.3 State of Hawaii Department of Transportation (HDOT)**

The HDOT has implemented the requirements of the FHWA's design goals for traffic noise exposure in its noise analysis and abatement policy [Reference 4]. According to the policy, a traffic noise impact occurs when the predicted traffic noise levels "approach" or exceed FHWA's NAC or when the predicted traffic noise levels "substantially exceed the existing noise levels." The policy also states that "approach" is defined as 1 dB less than FHWA's NAC and "substantially exceed" is defined as an increase of at least 15 dB.

### 3.4 U.S. Department of Housing and Urban Development (HUD)

HUD's environmental noise criteria and standards in 24 CFR 51 [Reference 5] were established for determining housing project site acceptability. These standards are based on day-night equivalent sound levels,  $L_{dn}$ , and are not limited to traffic noise exposure.  $L_{dn}$  takes into account noise levels from both daytime (15-hour average) and nighttime (9-hour average). The  $L_{dn}$  metric is used in areas that are typically occupied during both daytime and nighttime hours, and where people are intended to sleep.

#### 3.4.1 Exterior Noise Design Criteria

The HUD standards applies to locations where quiet outdoor space is required. The HUD Site Acceptability Standards for exterior sound levels are summarized in Table 1. HUD also recommends  $L_{dn}$  55 dBA as a future goal for outdoors in residential areas, however this is rarely achievable in urban environments.

**Table 1.** HUD Site Acceptability Standards

Category	Site $L_{dn}$	Comments
Acceptable	$\leq 65$ dBA	No special acoustical design consideration necessary
Normally Unacceptable	$> 65$ dBA, $\leq 70$ dBA	5 dB additional attenuation required through use of barriers or in design to ensure interior noise levels are acceptable
	$> 70$ dBA, $\leq 75$ dBA	10 dB addition attenuation required through the use of barriers or in design to ensure interior noise levels are acceptable
Unacceptable	$> 75$ dBA	Attenuation measures must be submitted on a case-by-case basis

#### 3.4.2 Interior Noise Design Criteria

The intent of the above exterior noise criteria is to achieve an interior  $L_{dn}$  of 45 dBA. HUD will sometimes allow upgrades to the building shell to meet an interior  $L_{dn}$  of 45 dBA in Normally Unacceptable or Unacceptable areas. This can be accomplished by specifying building facades, windows, and doors with a higher STC rating than normal construction.

### 3.5 Community Response to Change in Noise Level

Human sensitivity to changes in sound pressure level is highly individualized. Sensitivity to sound depends on frequency content, time of occurrence, duration, and psychological factors such as emotions and expectations. However, the average ability of an individual to perceive changes in noise levels is well documented and has been summarized in Table 2 [Reference 6]. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

**Table 2.** Average Ability to Perceive Changes in Noise Level

Sound Level Change (dB)	Human Perception of Sound
0	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	Two times (or 1/2) as loud
20	Four times (or 1/4) as loud

## 4.0 EXISTING ACOUSTICAL ENVIRONMENT

Noise measurements consisted of continuous long-term and short term ambient noise level measurements, as described in the sections below. The noise measurements were conducted between May 15, 2015 and May 18, 2015.

The methodology, location, and results for the measurement are described below and the measurement location is illustrated in Figure 3. Photographs of the measurements locations are provided in Appendix B.

### 4.1 Long Term Noise Measurements

Continuous long-term ambient noise level measurements were conducted to assess the existing acoustical environment at the project site. Long-term measurements (taken continuously over the course of multiple days) offer a baseline for establishing existing ambient noise levels in the area and are used for estimating future noise levels by adding the ambient levels to other noise levels generated from the proposed project.

#### 4.1.1 Long-Term Noise Measurement Procedure

Hourly equivalent sound levels ( $L_{eq}(h)$ ) were recorded for approximately 4 days. The measurements were taken using a Larson-Davis, Model 831, Type 1 Sound Level Meter together with a Larson Davis, PRM831 Type 1 Microphone. Calibration was checked before and after the measurements with a Larson-Davis Model CAL200 calibrator. Both the sound level meter and the calibrator have been certified by the manufacturer within the recommended 2-year calibration period. The microphone was mounted to a tripod at approximately 5.5 feet above the ground. A windscreen covered the microphone during the entire measurement period. The sound level meter was secured in a weather-resistant case.

#### 4.1.2 Long-Term Noise Measurement Locations

*Location L1:* The sound level meter was located immediately inside the fence line of the Ainahau Vista property adjacent to Ala Wai Boulevard. The dominant noise source was vehicular traffic from the roadway. Secondary noise sources included birds and wind.

#### 4.1.3 Long-Term Noise Measurement Results

The measured  $L_{eq}(h)$  and the 90 percent exceedance level ( $L_{90}$ ) in dBA are graphically presented in Figure 4. The ambient sound levels were dynamic and depended significantly on the vehicular traffic patterns along Ala Wai Avenue. The range of  $L_{eq}(h)$  during the day (7:00 AM to 10:00 PM) and during the night (10:00 PM to 7:00 AM) and average calculated day-night level are summarized for each location in Table 3 below.

**Table 3.** Summary of Long-Term Noise Measurement Results (dBA)

Measurement Location	7 AM-10 PM $L_{eq}(h)$ Range	10 PM-7 AM $L_{eq}(h)$ Range	Average $L_{dn}$
Location L1	66-74	57-71	71

### 4.2 Short Term Noise Measurements

Short term ambient noise level measurements were conducted with corresponding traffic counts of Ala Wai Boulevard during the PM peak traffic hour as identified by the HDOT Traffic Station Survey [Reference 8] for Ala Wai Boulevard near Ohua Avenue. These short term measurements and traffic counts are compared to the predicted levels of a noise model of traffic at the project site to verify the accuracy of the noise model created for the project site.

**4.2.1 Short-Term Noise Measurement Procedure**

Equivalent sound levels ( $L_{eq}$ ) were measured for 30 minutes with a simultaneous traffic count of Ala Wai Boulevard being conducted. The measurements were taken using a Larson-Davis, Model 831, Type 1 Sound Level Meter together with a Larson Davis, PRM831 Type 1 Microphone. Calibration was checked before and after the measurements with a Larson-Davis Model CAL200 calibrator. Both the sound level meter and the calibrator have been certified by the manufacturer within the recommended 2-year calibration period. The microphone was mounted to a tripod at approximately 5.5 feet above the ground. A windscreen covered the microphone during the entire measurement period.

**4.2.2 Short-Term Noise Measurement Location**

*Location S1:* The sound level meter was approximately 35 feet from the edge of Ala Wai Boulevard inside the fence line of the Ainahau Vista property and 15 feet North East of the properties entry gate on Ala Wai Boulevard.

**4.2.3 Short Term Noise Measurement Results**

The measured  $L_{eq}$  in dBA are presented below in Table 4.

**Table 4.** Summary of Short-Term Noise Measurement Results

Measurement Location	30 Minute $L_{eq}$
S1	63 dBA

**5.0 POTENTIAL NOISE IMPACTS**

**5.1 Project Construction Noise and Compliance with HDOH Community Noise Control Rule**

The various construction phases of the project will generate significant amounts of noise and will need to comply with the HDOH requirements. Development of the project areas will involve excavation, grading, material handling, concrete mixing, and other typical construction activities during construction. The actual noise levels produced during construction will be a function of the methods employed during each stage of the construction process. Construction stages include site preparation, building construction, etc. Typical ranges of construction equipment noise are shown in Figure 5. Earthmoving equipment, e.g., bulldozers and diesel-powered trucks, will probably be the loudest equipment used during construction, assuming that no impact noise from pile driving occurs. In cases where construction noise is expected to exceed the HDOH maximum permissible property line noise levels, a permit must be obtained to allow the operation of construction equipment. Pile driving activities are not planned for this project.

**5.2 Project Generated Stationary Mechanical Noise and Compliance with HDOH Community Noise Control Rule**

The Ainahau Vista II development is proposed to be a senior rental development, which will likely incorporate stationary mechanical equipment. Expected mechanical equipment may include HVAC equipment, emergency generators, etc. Noise from this mechanical equipment and other equipment must meet the HDOH noise regulations, which stipulate maximum permissible noise limits at the property line. For residential apartment areas, the noise limits are 60 dBA during the day and 50 dBA during the night, as shown in Figure 1. Mitigation of mechanical noise to meet the HDOH noise rules should be incorporated into the project design.

### 5.3 Traffic Noise at Project Site and Compliance with FHWA/HDOT and HUD Guidelines

To evaluate the project site's ambient noise levels, traffic noise projections in the occupied areas were evaluated and compared to both the FHWA/HDOT  $L_{eq}(h)$  and the HUD  $L_{dn}$  noise level criteria as described in Sections 3.2-3.4.

The FHWA/HDOT criteria are not regulatory requirements for this project as it has not authority to enforce land use. The criteria are recommended by the FHWA to be used as a guideline for consideration of land use and the impact of traffic noise. It is also important to note that the HUD noise guidelines are also design goals and not enforceable regulations. However, these guidelines and design goals are useful tools for assessing the noise environment. It is important to note that the HUD site acceptability standards must be satisfied for projects involving HUD or federal financing.

#### 5.3.1 Traffic Noise Analysis

A vehicular traffic noise analysis was completed using the DataKustik CadnaA (version 4.5.151) software program [Reference 9] for the existing traffic condition. Future conditions were not evaluated because the Traffic Consultant's future traffic volume projections are deemed not significant per the traffic report [Reference 9].

Traffic volume data was not available for off-peak hours, and was based on the highest peak hour traffic as identified in the HDOT Traffic Station Survey [Reference 8] for Ala Wai Boulevard near Ohua Avenue. Noise model parameters for Ala Wai Boulevard included 2703 vehicles per hour, with 0% heavy truck traffic, average speed of 25 mph, traveling on smooth asphalt. The results produced in the traffic noise model from these parameters correlated with the short term noise measurements and traffic counts taken at the project site. The noise model predictions were also able to accurately reproduce the levels documented at the long term measurement location on the project site.

Day-night level ( $L_{dn}$ ) is based on a 24-hour measurement with a 10 dB penalty applied to noise level measurements taken during the night time hours of 10 PM to 7 AM. Due to the lack of off-peak hour traffic data, a 24 hour noise model could not be created to determine the projected  $L_{dn}$  levels. Because of this, a correction factor based on the difference between the  $L_{dn}$  and corresponding peak traffic hour  $L_{eq}(h)$  from the long term noise measurements was created and applied to the calculated  $L_{eq}(h)$  levels from the model to determine the projected  $L_{dn}$  levels.

Based on the long term measurements taken at the site, the 24-hour  $L_{dn}$  levels ranged from 2 to 6 dB higher than the  $L_{eq}(h)$  levels with the  $L_{dn}$  having an overall average of 4 dB higher than the corresponding  $L_{eq}(h)$  during the AM peak traffic hours as identified by the HDOT Traffic Station Survey. This 4 dB average was used as the correction factor on the calculated  $L_{eq}(h)$  values of the peak traffic noise hour from the noise model to predict the  $L_{dn}$  at the building façade.

#### 5.3.2 Projected Traffic Noise

Traffic noise was projected on the full elevation façade of the building and on the exterior area at ground level on the Ainahau Vista II project site. The predicted  $L_{dn}$  noise levels on the Ala Wai facing elevation of the building and the adjacent sides are shown in Figure 6 and Figure 7 and the noise levels in the exterior ground level areas are shown in Figure 8.

The results from the model indicate that the façade of the side of the building facing Ala Wai Boulevard will experience  $L_{dn}$  levels ranging from 69-72 dBA with the loudest levels on the first three floors and the lowest noise levels experienced on

the highest floors. Therefore, all units facing the roadway are expected to have  $L_{dn}$  levels above 65 dBA. The Ewa and Diamond Head sides of the building are expected to have  $L_{dn}$  levels that range from below 65 and up to 69 dBA. The makai side of the building has  $L_{dn}$  levels projected to be below 65 dBA.

The  $L_{eq}(h)$  values for these same areas are expected to be 4 dB quieter than the  $L_{dn}$  for the same area, per the adjustment factor from section 5.3.1. Therefore the  $L_{eq}(h)$  levels on the Ala Wai Boulevard facing side of the project will range from approximately 65-68 dBA. The Ewa and Diamond Head sides of the building will experience  $L_{eq}(h)$  levels that range from 61 to 65 dBA. The makai side of the building is expected to have  $L_{eq}(h)$  levels below 61 dBA.

In addition to the noise levels on the façade of the building, the model predicted the  $L_{dn}$  at ground level. The exterior areas immediately adjacent to Ala Wai Boulevard are expected to experience  $L_{dn}$  levels in the range of 70-75 dBA. On the makai side of the building that is shielded from the traffic noise from the building itself, the noise levels are projected to be 35-40 dBA  $L_{dn}$ .

### 5.3.3 Expected Traffic Noise Impacts

Existing traffic noise level projections of the project's Ala Wai Boulevard facing façade are expected to approach the FHWA maximum noise limit of 67 dBA  $L_{eq}(h)$  at all apartment units up to the 9th floor. Only the 9th floor  $L_{eq}(h)$  level is predicted to be below 66 dBA. No noise impacts are expected on the the Ewa, Diamond Head, or makai sides of the building.

Existing traffic noise projections at apartment façades range from "Acceptable" to "Normally Unacceptable". Noise levels on the the Ewa, Diamond Head, and makai sides of the building are projected to be below the 65 dBA  $L_{dn}$  level set as the HUD criteria for "Acceptable". Noise levels on the Ala Wai Boulevard facing side of the building are expected to exceed  $L_{dn}$  65 dBA and which is considered "Normally Unacceptable" per HUD's exterior noise design criteria. Therefore, exterior façade elements such as glazing and wall construction should be designed to comply with the HUD  $L_{dn}$  45 dBA noise criteria inside the units. These areas of the façade are shown in Figure 9 and mitigation recommendations are described in Section 6.5.1.

The Ewa and Diamond Head sides of the building are projected to have noise levels that also exceed HUD noise criteria. However, there are no exterior unit walls with glazing so these areas do not require noise mitigation.

## 6.0 NOISE IMPACT MITIGATION

### 6.1 HDOH Noise Permit for Construction Noise

In cases where construction noise exceeds, or is expected to exceed the State's "maximum permissible" property line noise levels [Reference 1], a permit must be obtained from HDOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the "maximum permissible" levels.

In order for HDOH to issue a construction noise permit, the contractor must submit a noise permit application to HDOH, which describes the construction activities for the project. Prior to issuing the noise permit, HDOH may require action by the contractor to incorporate noise mitigation into the construction plan. HDOH may also require the contractor to conduct noise monitoring or community meetings inviting the neighboring residents and business owners to discuss construction noise. The contractor should use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc. However, HDOH may require

additional noise mitigation, such as temporary noise barriers, or time of day usage limits for certain kinds of construction activities.

Specific permit restrictions for construction activities [Reference 1] are:

"No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels ... before 7:00 AM and after 6:00 PM of the same day, Monday through Friday."

"No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels... before 9:00 AM and after 6:00 PM on Saturday."

"No permit shall allow any construction activities which emit noise in excess of the maximum permissible sound levels on Sundays and on holidays."

Although not anticipated during construction of the rental apartment development, the use of pile drivers, hoe rams and jack hammers 25 pounds (lbs.) or larger, high pressure sprayers, and chain saws are restricted to 9:00 AM to 5:30 PM, Monday through Friday. In addition, construction equipment and on-site vehicles or devices whose operations involve the exhausting of gas or air, excluding pile hammers and pneumatic hand tools weighing less than 15 pounds (lbs.), must be equipped with mufflers [Reference 1].

The HDOH noise permit does not limit the noise level generated at the construction site, but rather the times at which noisy construction can take place. However, when considering a noise permit application, consideration is also given to any proposed noise mitigation for the project. Therefore, noise mitigation for construction activities should be addressed using project management and the source and path noise control measures discussed in Section 6.3 below.

## **6.2 HDOH Noise Variance for Construction Noise**

In cases where nighttime construction is expected, a variance must be obtained from the HDOH to allow the operation of a noise source which emits noise levels in excess of the maximum permissible levels and which operation does not conform to the requirements of the noise permit (i.e., nighttime construction activities which occur between 6:00 p.m. and 7:00 a.m., Monday through Friday). However, nighttime construction is not anticipated for this project so a variance will not be required.

## **6.3 Mitigation of Project Construction Noise**

### **6.3.1 Mitigation of Noise Source**

Mitigating construction noise at the source is the most effective form of noise control. The source control methods listed in Table 5 below can be applied to most construction equipment.

**Table 5. Construction Noise Source Control Methods**

Scheduling	Limit activities that generate the most noise to less sensitive time periods (e.g. daytime hours).
Substitution	Use quieter methods/equipment when possible (e.g. low noise generators, smaller excavators, etc.).
Exhaust Mufflers	Install quality mufflers on equipment.
Reduced Power Options	Use smallest size and/or lowest power as required.
Quieter Backup Alarms	Install manual adjustable or ambient sensitive alarms. Do not use backup alarms during night work.
Motors	Insulate or enclose motors
Equipment Selection	Electric equipment is quieter than pneumatic equipment
Equipment Retrofit	Rubber chucks in jackhammers
Equipment Maintenance	Sharpen and balance tools, repair silencing equipment, replace worn parts and open airways
Staging Area	Maximize the distance between the construction staging areas and nearby receptors to the greatest extent possible

In general, a majority of the construction noise mitigation is in the form of scheduling, specifically, limiting the construction hours to the time frame specified by the HDOH.

#### **6.3.2 Mitigation of Noise Path**

When source control measures are not sufficient to avoid a noise impact, path control measures must be considered. Non-permanent noise barriers or curtains and equipment enclosures could be installed at the construction site to reduce construction noise in noise sensitive locations. The general contractor could also conduct noise monitoring of construction during noisy or extensive activities at locations close to residential properties.

#### **6.4 Mitigation of Development Noise**

The design of the Ainahau Vista II building should give consideration to controlling noise emanating from all stationary mechanical equipment such as air-cooled chillers, cooling towers, air-handling units, condensing units, emergency generators, etc. so as to comply with the State of Hawaii Community Noise Control rules [Reference 1]. Noisy equipment should be located away from neighboring properties and residential units as much as possible. Enclosed mechanical rooms may be required for some equipment.

#### **6.5 Mitigation of Traffic Noise**

##### **6.5.1 Residential Interior Spaces of the Development**

Units overlooking Ala Wai Boulevard will experience relatively high noise levels due to traffic on Ala Wai Boulevard. The exterior wall should have a minimum rating of STC 50, which is typical of poured concrete in any thickness greater than 4 inches.

A minimum STC 35 rated window assembly, typical of a 1" IGU, should be considered to comply with the HUD interior noise design criteria for all units facing Ala Wai Boulevard. The window assembly typically degrades the STC rating of the glazing by 3 points, therefore STC requirements for the glass itself should be a minimum of STC 38. Smaller window sizes may reduce these STC requirements.

Additionally, no window AC or PTAC ductless HVAC units should be installed as they would degrade the acoustical isolation of the wall and window assembly.

### **6.5.2 Residential Exterior Spaces of the Development**

The exterior areas immediately adjacent to Ala Wai Boulevard will experience noise levels that are higher than the established HUD criteria but future noise levels are expected to remain the same as the existing ambient noise environment. Since these exterior areas are not intended for recreational purposes or other activities, no additional noise mitigation measures will be required.

## REFERENCES

1. Chapter 46, *Community Noise Control*, Department of Health, State of Hawaii, Administrative Rules, Title 11, September 23, 1996.
2. *Department of Transportation, Federal Highway Administration Procedures for Abatement of Highway Traffic Noise*, Title 23, CFR, Chapter 1, Subchapter J, Part 772, 38 FR 15953, June 19, 1973; Revised at 75 FR 32820, July 13, 2010.
3. *Highway Traffic Noise: Analysis and Abatement Guidance*, U.S. Department of Transportation, Federal Highways Administration, December 2011.
4. *Highway Noise Policy and Abatement Guidelines*, Department of Transportation, Highways Division, State of Hawaii, November 29, 2011.
5. *Department of Housing and Urban Development Environmental Criteria and Standards*, Title 24, CFR, Part 51, 44 FR 40860, July 12, 1979; Amended by 49 FR 880, January 6, 1984.
6. M. David Egan, *Architectural Acoustics*, McGraw-Hill Book Company, 1998
7. *Department of Transportation, Federal Transit Authority: Transit Noise and Vibration Impact Assessment*, May 2006.
8. *Hawaii DOT 2011 Traffic Station Maps*, Island of Oahu, Station# B72771000000, Hawaii Department of Transportation, Highways Division, Planning Branch, October 2012
9. DataKustik CadnaA software program, Version 4.5.151; DataKustik GmbH, 2015.
10. *Traffic Assessment for Ainahau Vista II*, Julian Ng Incorporated, February 2015



**APPENDIX 3**

**AGENCY PRE-CONSULTATION COMMENTS**

DAVID Y. IGE  
GOVERNOR



FORD N. FUCHIGAMI  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:  
STP 8.1786

April 23, 2015

Mr. Keith Kurahashi  
President  
Kusao & Kurahashi, Inc.  
Manoa Market Place  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Ainahau Vista II  
Draft Environmental Assessment Pre-Consultation and  
201H Application for Affordable Rental Development  
Waikiki, Oahu, Hawaii  
TMK: (1) 2-6-024: 070 and 071

The subject project is not expected to significantly impact the State highway facility. However, a permit from DOT Highways Division, is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,

A handwritten signature in black ink, appearing to read "Ford N. Fuchigami".

FORD N. FUCHIGAMI  
Director of Transportation

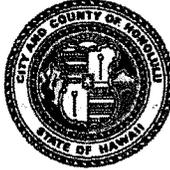


DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

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KIRK CALDWELL  
MAYOR



MICHAEL D. FORMBY  
DIRECTOR

MARK N. GARRITY, AICP  
DEPUTY DIRECTOR

TP4/15-606038R

May 4, 2015

Mr. Keith Kurahashi  
President  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: 201H Application and Pre-Consultation on a proposed Draft Environmental Assessment (DEA) for Ainahau Vista II, a Senior Affordable Rental Development in Waikiki, Oahu, Hawaii, Tax Map Key No. (1) 2-6-024: 070 & 071**

In response to your letters dated April 8, 2015, we have the following comments:

1. No objections or comments concerning your 201H Application.
2. The DEA should discuss traffic impacts due to the project and possible mitigative measures. It should contain a traffic management plan, which should note that during construction, deliveries to the site should be scheduled during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any impacts to pedestrians and traffic at or near the proposed project site driveway.
3. The DEA should also provide a discussion on the transit impacts of the project, especially on the City's paratransit (TheHandi-Van) operations.
4. Accommodations for paratransit pick-up/drop-off should be provided on-site. A pick-up/drop-off area on-site should have adequate turning geometrics to provide for the City's Handi-Van vehicles.
5. Waikiki Neighborhood Board No. 9, as well as the area residents, businesses, emergency personnel, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

Mr. Keith Kurahashi  
May 4, 2015  
Page 2

6. A street usage permit from the City's Department of Transportation Services (DTS) shall be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street. Your 201H Application does not exempt the project from street usage permit fees charged by DTS.
7. Ensure that all access driveways provide safe pedestrian conditions when crossing.

We reserve further comment pending submission of the DEA.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,



Michael D. Formby  
Director

cc: Mr. Stan Fujimoto, Project Manager,  
State of Hawaii, Hawaii Housing Finance  
and Development Corporation

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

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LAND DIVISION

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DEPT. OF LAND AND NATURAL RESOURCES  
STATE OF HAWAII

FRANKIE D. CASE  
DIRECTOR  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALISHIWA  
DIRECTOR  
W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
LAND AND OCEAN RECREATION  
PLANS AND CONVEYANCES  
PLANNING AND RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CULTURAL RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAROLAWA ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

June 17, 2015

Russell Y. Tsuji, Administrator  
Land Division  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

LOG NO: 2015.01425  
DOC NO: 1506GC03  
Archaeology, Architecture  
History and Culture

Dear Mr. Tsuji:

**SUBJECT: Chapter 6E-8 and National Historic Preservation Act (NHPA) Section 106 Consultation –  
Ainahau Vista II - Draft EA Pre-Consultation and Ainahau Vista II 201H Application  
Waikiki Ahupua'a, Honolulu (Kona) District, Island of O'ahu  
TMK: (1) 2-6-024: 070 and 071**

Thank you for the opportunity to provide comments on the Pre-Consultation phase for a Draft Environmental Assessment (DEA) for the proposed Ainahau Vista II senior affordable rental development in Waikiki. The Hawaii Housing Development Corporation (applicant) indicates that an environmental review is triggered by the possible use of State and city funds and Federal tax credits to help finance the proposed development. We received this submittal on April 17, 2015, and we apologize for the delayed review.

This submittal will require the State Historic Preservation Division (SHPD) to review the proposed senior affordable rental development under Hawaii Revised Statutes (HRS) §6E and possibly under the National Historic Preservation Act (NHPA) Section 106. The involvement of Federal programs could be the nexus for the NHPA Section 106 review to be triggered. The governing statute to Section 106 is the 36 CFR 800. Attached are steps that the Hawaii Housing Development Corporation needs to address under Section 106:

- Name of the federal and state funding or licensing agency/agencies involved with this project. The State Historic Preservation Officer is required to respond to the federal agency or to the agency's designated authority. Consultants contracted to prepare information, analyses, or recommendations are not recognized as a federally-delegated authority. Every project has a federal funding, licensing, or permitting agency. Please include the name, address, and telephone number of the contact person/s at the federally delegated authority. A federal agency or federally delegated authority contact is mandatory pursuant to 36 CFR §800.2(a);
- A delegation letter from the federal agency that identifies the particular activities and responsibilities they have delegated to you on their behalf;
- Information documenting that the agency has evaluated and determined the project constitutes an undertaking as defined in 36 CFR §800.16(y);
- Information indicating that a thorough and good faith effort has been conducted to identify historic properties (architectural, archaeological, or traditional cultural properties [TCP's]) within the area of potential effect (APE) pursuant to 36 CFR §800.4(a) and 4(b). The identification effort should include consultation efforts with Native Hawaiian Organizations (NHOs) [36 CFR §800.4(a)(4)] and consultation efforts with individuals, organizations and the public with a demonstrated interest in the undertaking [36

Russell Y. Tsuji  
June 17, 2015  
Page 2

CFR §800.2(c)] and should include documentation of the nature of the consultation, the names of the consulted parties and their comments/concerns; and

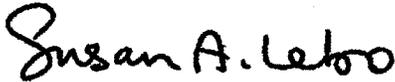
- A determination of eligibility and significance for any properties or potential historic districts within the APE [36 CFR §800.4(c)]; assessment of project effect [36 CFR §800.4(d)]; and if necessary resolution of adverse effects [36 CFR §800.6] for any sites located within the APE.

In addition to the above, indicate whether the APE boundaries and acreage includes all ingress/egress and staging areas related to the project, and provide information on the anticipated locations and depths of all excavations. Furthermore, the submitted site plan indicates there is a burial site within the 20-foot setback, please provide further information on this site.

We look forward to receiving the federal agency's and/or delegated authority's request to initiate the NHPA Section 106 consultation on this proposed undertaking.

Please contact Ms. Jessica L. Puff at (808) 692-8023 or at [Jessica.L.Puff@hawaii.gov](mailto:Jessica.L.Puff@hawaii.gov) if you have any architectural questions or concerns, and Ms. Regina Hilo for any cultural or historical concerns, including burials, at (808) 692-8026 or at [Regina.Hilo@hawaii.gov](mailto:Regina.Hilo@hawaii.gov). Please contact Dr. Susan A. Lebo at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) or at (808) 692-8019 or if you have any questions or concerns regarding archaeological resources or this letter.

Aloha,



Susan A. Lebo, PhD  
Acting Archaeology Branch Chief

Signed for

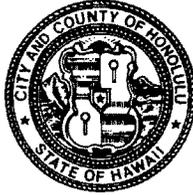
Alan A. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: Steve L. Molmen, DLNR-Land Division ([steve.molment@hawaii.gov](mailto:steve.molment@hawaii.gov))  
Keith Kurahashi, Kusao & Kurahashi, Inc. ([kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com))

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)

KIRK CALDWELL  
MAYOR



GEORGE I. ATTA, FAICP  
DIRECTOR

ARTHUR D. CHALLACOMBE  
DEPUTY DIRECTOR

2015/ELOG-694(JY)

April 27, 2015

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT:** Request for Comments  
Chapter 201H Application and  
Pre-Consultation for Draft Environmental Assessment  
Proposed Ainahau Vista II - Waikiki  
Tax Map Key 2-6-24: 70 and 71

This is in response to your request (received April 13, 2015) for comments regarding a proposed senior affordable rental development on the subject site, which is in the Apartment Precinct of the Waikiki Special District with a 240-foot height limit. We understand that the project will include 62 rental units (47 one-bedroom and 15 studio units) in a nine-story building with a height of 80 feet, and 22 parking stalls on the ground floor. This rental housing will be for those seniors that earn at or below the 60% median income.

The project will be subject to the rules and regulations of the Waikiki Special District and will require a Special District Permit (Major). Since the two parcels were joint developed in 2005, be sure to include the existing senior housing project in the development standard calculations and tabulations (i.e., yards, transitional height setbacks, floor area, building area, open space, parking, loading, and park dedication). Discuss how the project will meet the Waikiki Special District objectives, especially how it will contribute to a Hawaiian sense of place. Show and discuss building mass relationships between the existing and proposed buildings. Discuss any shared facilities and operations.

Should you have any further questions on this matter, please contact Joette Yago of our Urban Design Branch at 768-8034 or [jyago@honolulu.gov](mailto:jyago@honolulu.gov).

Very truly yours,

*George I. Atta*  
FOR George I. Atta, FAICP  
Director



## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



June 12, 2015

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair  
ADAM C. WONG, Vice Chair  
THERESIA C. McMURDO  
DAVID C. HULIHEE  
KAPUA SPROAT

ROSS S. SASAMURA, Ex-Officio  
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer *mk*

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
Planning and Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Your Letter Dated April 8, 2015 Requesting Comments for the Environmental Assessment Pre-Consultation for Ainahau Vista II, a Senior Affordable Rental Development in Waikiki – Tax Map Key: 2-6-024: 070 & 071

Thank you for the opportunity to comment on the proposed senior affordable rental development.

The existing water system is adequate to accommodate the proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges (WSFC) for resource development, transmission and daily storage.

Water conservation measures are required for all proposed developments. These measures include low flow plumbing fixtures, utilization of nonpotable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

Mr. Keith Kurahashi  
June 12, 2015  
Page 2

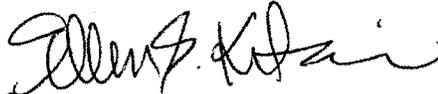
The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We have no objections to the deferral of the applicable WSFC and/or installation charges until the construction loan is available. Prior to or when the project is ready to go through its permit application process, the developer should submit a letter requesting for the deferral of payment of the applicable charges and indicate in the letter approximately when payment can be made. Also, we will need a contact person and mailing address to send the postdated invoice before we can approve the building permit application.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

  
ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

cc: Craig Hirai, HHFDC

DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707  
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonorolu.org>

KIRK CALDWELL  
MAYOR



LORI M.K. KAHIKINA, P.E.  
DIRECTOR

TIMOTHY A. HOUGHTON  
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.  
DEPUTY DIRECTOR

IN REPLY REFER TO  
PRO 15-067

April 23, 2015

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
Planning and Zoning Consultants  
2752 Woodland Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Pre-Consultation on a Proposed Draft Environmental  
Assessment for Ainahau Vista II, a Senior Affordable Rental  
Development in Waikiki, Oahu, Hawaii  
Tax Map Key: (1) 2-6-024:070 & 071**

We have reviewed the document as transmitted to us by your letter dated April 8, 2015 regarding the above subject. We have no comments at this time.

Should you have any questions, please call Marisol Olaes, Civil Engineer, at 768-3467.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lori M.K. Kahikina".

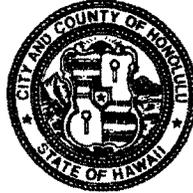
↑ Lori M.K. Kahikina, P.E.  
Director



DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**

1000 Ulu'ohia Street, Suite 216, Kapolei, Hawaii 96707  
Phone: (808) 768-3343 • Fax: (808) 768-3381  
Website: www.honolulu.gov

KIRK CALDWELL  
MAYOR



ROSS S. SASAMURA, P.E.  
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
DRM 15-387

June 2, 2015

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for  
Ainahau Vista II, a Senior Affordable Rental Development in Waikiki,  
Oahu, Hawaii, Tax Map Key No. (1) 2-6-024: 070 & 071**

Thank you for the opportunity to review and provide our input regarding your letter dated April 8, 2015, on the above-subject project documents and the CD ROM.

Our comments are as follows:

- Once construction phase commence, install approved Best Management Practices (BMP) fronting all drainage facilities (Catch Basin/Drainage inlets along Tusitala Street, Ala Wai Boulevard, Kaiulani Avenue, and Kapili Street).
- During construction and upon completion of the project, any damages/deficiencies to Tusitala Street and Ala Wai Boulevard right-of-ways shall be corrected to City standards and at the owner's cost.
- The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and remove BMP upon completion of the project.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

A handwritten signature in black ink, appearing to read "Ross S. Sasamura", is written over a horizontal line.

Ross S. Sasamura, P.E.  
Director and Chief Engineer





**STATE OF HAWAII**  
**DEPARTMENT OF EDUCATION**  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

April 22, 2015

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Planning and Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Re: 201H Application and Pre-Consultation Draft Environmental Assessment for the Proposed  
Ainahau Vista II, a Senior Affordable Rental Development in Waikiki, Oahu, Hawaii  
TMK: (1) 2-6-024: 070 & 071

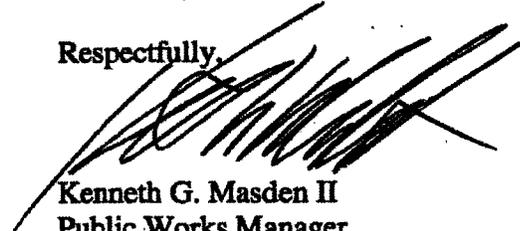
Dear Mr. Kurahashi:

The Department of Education (DOE) has reviewed the 201H application and the Draft  
Environmental Assessment for the proposed senior affordable rental development,  
Ainahau Vista II.

The DOE does not anticipate that this project will have a significant impact of its facilities.

We appreciate the opportunity to provide comment. If you have any questions, please call Heidi  
Meeker, of the Facilities Development Branch at 377-8301.

Respectfully,



Kenneth G. Masden II  
Public Works Manager  
Planning Section

KGM:jmb

c: Craig K. Hirai, Executive Director, Hawaii Housing Finance and Development Corporation



DEPARTMENT OF PARKS & RECREATION  
**CITY AND COUNTY OF HONOLULU**

1000 Uluohia Street, Suite 300, Kapolei, Hawaii 96707  
Phone: (808) 768-3003 • Fax: (808) 768-3053  
Website: www.honolulu.gov

KIRK CALDWELL  
MAYOR



MICHELE K. NEKOTA  
DIRECTOR

JEANNE C. ISHIKAWA  
DEPUTY DIRECTOR

April 16, 2015

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96707

Dear Mr. Kurahashi:

**SUBJECT:** Pre-Consultation on a Draft Environmental Assessment  
For Ainahau Vista II, Tax Map Key No.: (1) 2-6-024: 070 & 071  
and 201H Application for TMK: (1) 2-6-024: 070 & 071

Thank you for the opportunity to review and comment at the pre-consultation stage of the Draft Environmental Assessment and 201H Application for the Hawaii Housing Development Corporation's 62 unit Ainahau Vista II Senior Affordable Rental Development in Waikiki.

The Department of Parks and Recreation (DPR) has no comment on the Draft Environmental Assessment and has no objection to the approval of the requested 201H Application. As the proposed project will have no impact on any program or facility of the DPR. You may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner at 768-3017.

Sincerely,

A handwritten signature in black ink, appearing to read "Michele K. Nekota". The signature is fluid and cursive, with a large loop at the end.

Michele K. Nekota  
Director

MKN:jr  
(605787)

cc: Craig Hirai, Executive Director, Hawaii Housing Finance and Development Corporation



POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813  
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK CALDWELL  
MAYOR



LOUIS M. KEALOHA  
CHIEF

DAVE M. KAJIHIRO  
MARIE A. MCCAULEY  
DEPUTY CHIEFS

OUR REFERENCE MT-DK

April 21, 2015

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in response to your letter dated April 8, 2014, requesting pre-consultation comments on a proposed Draft Environment Assessment for the Ainahau Vista II, a senior affordable rental development in Waikiki.

The Honolulu Police Department has no concerns regarding the project at this time.

If there are any questions, please call Major Lisa A. Mann of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA  
Chief of Police

By

  
MARK TSUYEMURA  
Management Analyst VI  
Office of the Chief



HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

936 South Street  
Honolulu, Hawaii 96813-6007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

April 23, 2015

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Preconsultation on a Proposed Draft Environmental Assessment  
Ainahau Vista II  
Tax Map Key: 2-6-024: 070 and 071

In response to your letter dated April 8, 2015, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1, Uniform Fire Code [UFC]<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.2.)

A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and provides access to the interior of the building. (NFPA 1, UFC<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet from a water supply on a fire apparatus access road, as measured by an approved route around

Mr. Keith Kurahashi, President  
Page 2  
April 23, 2015

the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1, UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1, UFC™, 2006 Edition, Section 18.2.3.4.1.1, as amended.)
4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or [tseelig@honolulu.gov](mailto:tseelig@honolulu.gov).

Sincerely,



SOCRATES D. BRATAKOS  
Assistant Chief

SDB/SY:bh

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKO A. KALUHIWA  
FIRST DEPUTY

W. ROY HARDY  
ACTING 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

April 28, 2015

Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
Planning & Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, HI 96822

Via email: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

Dear Mr. Kurahashi,

SUBJECT: Ainahau Vista II 201H Application; Ainahau Vista II Draft Environmental Assessment Pre-Consultation

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (1) Land Division – Oahu District; and (2) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji", written over a large, sweeping flourish.

Russell Y. Tsuji  
Land Administrator



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

April 14, 2015

MEMORANDUM

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA  
FIRST DEPUTY

W. ROY HARDY  
ACTING 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

TO:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division - Oahu District
- Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Ainahau Vista II 201H Application; Ainahau Vista II Draft Environmental Assessment Pre-Consultation

LOCATION:

Waikiki, Oahu, Hawaii, Tax Map Key No. (1) 2-6-024: 070 & 071

APPLICANT:

Hawaii Housing Development Corporation by its agent Kusao & Kurahashi, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on these documents, a portion of which are attached, and which the remainder can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LD\Visitor Password: 0pa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Ainahau Vista II 201H Application; Ainahau Vista II Draft Environmental Assessment Pre-Consultation", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by April 28, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ( ) We have no objections.
- (✓) We have no comments.
- ( ) Comments are attached.

Signed: T. Chang  
Print Name: Timothy A. Chang  
Date: 4/17/2015



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

April 14, 2015

MEMORANDUM

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
  
KEKOA KALUHIWA  
FIRST DEPUTY  
  
W. ROY HARDY  
ACTING 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

15 APR 16 AM 11:05 ENGINEERING

2015 APR 23 11:10:54

TO: PR:

- DLNR Agencies:
- Div. of Aquatic Resources
  - Div. of Boating & Ocean Recreation
  - Engineering Division
  - Div. of Forestry & Wildlife
  - Div. of State Parks
  - Commission on Water Resource Management
  - Office of Conservation & Coastal Lands
  - Land Division - Oahu District
  - Historic Preservation

FROM: TO:

SUBJECT: Russell Y. Tsuji, Land Administrator  
Ainahau Vista II 201H Application; Ainahau Vista II Draft Environmental Assessment Pre-Consultation

LOCATION: Waikiki, Oahu, Hawaii, Tax Map Key No. (1) 2-6-024: 070 & 071

APPLICANT: Hawaii Housing Development Corporation by its agent Kusao & Kurahashi, Inc.

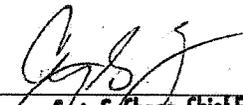
Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on these documents, a portion of which are attached, and which the remainder can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LD\Visitor Password: 0pa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Ainahau Vista II 201H Application; Ainahau Vista II Draft Environmental Assessment Pre-Consultation", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by April 28, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:   
 Print Name: Carty S. Chang, Chief Engineer  
 Date: 4/27/15

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/ Russell Y. Tsuji

Ref.: 201H Application and Pre-Consultation for DEA for Proposed Ainahau Vista II (Senior Affordable Rental Development), Waikiki

Oahu.024

COMMENTS

- ( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_.
- (X) Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zone AE. The National Flood Insurance Program regulates developments within this zone as indicated in bold letters below.
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- (X) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- (X) Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- ( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.
- (X) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- (X) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: \_\_\_\_\_

( ) Other: \_\_\_\_\_

Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed:   
CARTY S/CHANG, CHIEF ENGINEER

Date: 4/27/15





DAVID Y. IGE  
GOVERNOR OF HAWAII



VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

**STATE OF HAWAII**  
**DEPARTMENT OF HEALTH**  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

In reply, please refer to:  
File:

EPO 15-096

May 7, 2015

Mr. Keith Kurahashi, President  
Kusao & Kurahashi  
Planning and Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822  
Via email: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

Dear Mr. Kurahashi:

**SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment (PC DEA) for Ainahau Vista II, Waikiki, Oahu, TMK: (1) 2-6-024: 070 & 071**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PC DEA to our office on April 8, 2015. Thank you for allowing us to review and comment on the proposed project. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: <http://health.hawaii.gov/epo/home/landuse-planning-review-program>. Projects are required to adhere to all applicable standard comments.

We encourage you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: <https://eha-cloud.doh.hawaii.gov>

You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards>

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

A handwritten signature in black ink, appearing to read "Laura Phillips".

Laura Leialoha Phillips McIntyre, AICP  
Program Manager, Environmental Planning Office



DEPARTMENT OF COMMUNITY SERVICES  
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 768-7762 • FAX: 768-7792

KIRK CALDWELL  
MAYOR



GARY K. NAKATA  
DIRECTOR DESIGNATE

BARBARA YAMASHITA  
DEPUTY DIRECTOR

April 27, 2015

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Market Place  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Proposed Draft Environmental Assessment Pre-Consultation  
Ainahau Vista II, a Senior Affordable Rental Development in Waikiki,  
Oahu, Hawaii, Tax Map Key No. (1) 2-6-024: 070 & 071**

We have reviewed your letter dated April 8, 2015, and the information provided for this Pre-Consultation on a Proposed Draft Environmental Assessment for Ainahau Vista II.

Our review of the information provided indicates that the proposed project will have no adverse impacts on any Department of Community Services' activities or project at this time.

Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary K. Nakata", is written over a horizontal line.

Gary K. Nakata  
Director Designate

GKN:sgk



## **APPENDIX 4**

### **ARCHAEOLOGICAL INVENTORY SURVEY FOR THE TUSITALA VISTA (NOW AINAHAU VISTA)**

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  
COMMISSION ON WATER RESOURCE MANAGEMENT

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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  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

December 12, 2008

Mr. Todd Tulchin  
Cultural Surveys Hawaii  
P. O. Box 1114  
Kailua, Hawai'i 96734

LOG NO: 2008.5241  
DOC NO: 0812WT31  
Archaeology

Dear Mr. Tulchin:

**SUBJECT: Chapter 6E-42 Historic Preservation Review –  
FINAL Data Recovery Report for SIHP 50-80-09-6707, at Tusitala Vista Elderly  
Apartments, Waikiki Ahupua'a, Kona District, O'ahu Island, Hawai'i  
TMK: (1) 2-6-024: 070, 071, & 089**

Thank you for the opportunity to review this revised Data Recovery Report (DRR) received December 8, 2008.

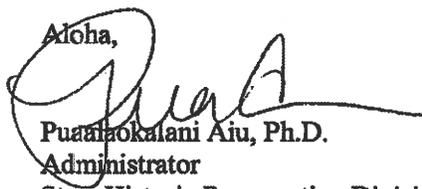
Data recovery efforts concentrated on mitigating impacts to historic property SIHP#50-80-09-6707 a prehistoric buried basalt rock wall associated with wetland taro agriculture recorded during an archaeological inventory survey (AIS) on the approximately 35,761 sq. ft. project area.

Research objectives were aimed at collecting pollen and soil samples to confirm paleoenvironmental change, collect radiocarbon data to determine chronology of man-made alterations of the landscape known to exist during the pre-contact and early post-contact eras. Radiocarbon dates confirm that this site was utilized in the date range of 1380AD to 1450AD, well within the pre-contact period, with initial clearing for wetland agriculture occurring between 1120AD and 1270AD, hypothesized to be the period of initial settlement in the ahupua'a. It is thought that the results of this study could be applied to the ahupua'a of Waikiki to better understand the chronology of agricultural use, both in the upland reaches, and down in the coastal area, and expand the data utilized in settlement pattern analysis.

The Data Recovery Report meets the minimum requirements, and is accepted as compliance with 6E-42 and Hawaii Administrative Rules (HAR) §13-13-278 *Rules Governing Standards for Archaeological Data Recovery Studies and Reports*.

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

Aloha,

  
Puuahaokalani Aiu, Ph.D.

Administrator  
State Historic Preservation Division

To <i>David Shideler</i>	From <i>Jocelyn</i>
Co./Dept.	Co.
Phone #	Phone #
Fax # <i>262-4950</i>	Fax #



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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

November 28, 2005

Ms. Constance R. O'Hare  
Cultural Surveys Hawaii, Inc.  
P.O. Box 1114  
Kailua, HI 96734

LOG NO: 2005.2563  
DOC NO: 0511SG04

Dear Ms. O'Hare:

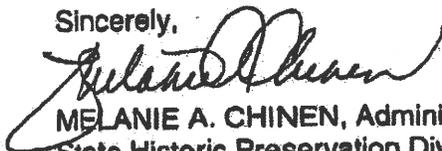
**SUBJECT: (REVISED) Burial Treatment Plan for the Tusitala Vista Elderly  
Apartments  
Waikiki Ahupuaa, Kona District, Island of Oahu  
TMK: (1) 2-6-0247: 070, 071**

We are in receipt of the October 2005 revisions to the aforementioned burial treatment plan (plan), which addresses previously identified non-Native Hawaiian fragments of human skeletal remains encountered on the above mentioned parcel during inventory survey. We are also in receipt of additional revisions as submitted in your fax dated November 18, 2005.

We have reviewed your plan as revised and it meets the final requirements under §13-300-34, Hawaii Administrative Rules (HAR) which we requested in our October 20, 2005 letter. Following the receipt of a final revised plan which incorporates the revisions in your November 18, 2005 fax, the department shall approve the plan. The plan provides for the relocation of the remains to the east corner of the project area.

Please submit to the department two copies of the final burial treatment plan. We look forward to receiving copies of the final plan and request your assistance in providing perpetual protection by recording the reburial site in the Bureau of Conveyances when reburial occurs.

Sincerely,

  
MELANIE A. CHINEN, Administrator  
State Historic Preservation Division

c: Kusao & Kurahashi, Inc. (2752 Woodlawn Drive, Ste. 5-202, Honolulu, HI 96822)  
Sunny Greer, SHPD Cultural Programs Director  
David L. Brown, SHPD Archaeology Branch Chief

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DIVISION

HONOLULU AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

---

**Archaeological Inventory Survey  
for the Tusitala Vista Elderly Apartments in  
Waikiki Ahupua'a, Kona District, O'ahu Island**

TMK: 2-6-24: 70, 71

by

**Rodney Chiogioji, B.A.,  
Uta Rainalter, B.S.,  
Sallee D.M. Freeman, M.A.,  
and  
Hallett H. Hammatt, PhD**

Prepared for

**Kusao & Kurahashi, Inc.**

by

**Cultural Surveys Hawai'i, Inc.  
December 2004**

---

MANAGEMENT SUMMARY

<b>Title</b>	Archaeological Inventory for the Tusitala Vista Elderly Apartments in Waikīkī, Ahupua'a, Waikīkī, O'ahu
<b>Date</b>	December 2004 (Draft)
<b>Project Number</b>	Cultural Surveys Hawai'i Inc. (CSH) Job No. WAIK 62
<b>Agency</b>	State of Hawai'i Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD)
<b>Permit Number</b>	Fieldwork was performed under CSH's annual archaeological research permit, No. 0404, issued by DLNR / SHPD
<b>Location</b>	The project area comprises TMK 2-6-024:70, 71, bounded by Ala Wai Boulevard to the northeast, Tusitala Street to the southwest, "Ala Wai Townhouse" (at 2421 Ala Wai Blvd.) to the northwest and the "Waikīkī Bellevue Apartments" (at 2427 Ala Wai Blvd.) to the southeast, in the <i>ahupua'a</i> of Waikīkī, District of Kona, Island of O'ahu. This area is depicted on the 1998 Honolulu 7.5-minute USGS topographic quadrangle.
<b>Land Jurisdiction</b>	Private, Hawai'i Housing Development Corporation is presently in the process of purchasing the project area land from Starts International Hawai'i, Inc.
<b>Project Acreage</b>	Approximately 1.03 acres
<b>Project Description</b>	The proposed project involves developing the southwest or <i>makai</i> half of the currently vacant property into a single 8-story residential apartment complex and the northwest or <i>mauka</i> half into a surface parking lot. There will be associated utility installation and landscaping. Most, if not all, of the project area will have subsurface ground disturbance.
<b>Area of Potential Effect (APE) and Inventory Survey Acreage</b>	For this inventory survey investigation, the project's APE is defined as the entire approximately 1-acre footprint of the proposed apartment complex development. The project area's surrounding built environment is urban (paved streets and low rise and high rise buildings) and the proposed apartment construction poses no <i>additional</i> auditory or visual impact to any surrounding potential historic properties (for example historic buildings or structures) Accordingly, for the current inventory survey investigation the survey area and the project APE are one and the same.
<b>Document Purpose</b>	At the request of Kusao and Kurahashi, Inc., CSH undertook this archaeological inventory survey. In consultation with SHPD, the inventory survey investigation was designed to fulfill the state requirements for archaeological inventory survey [Hawai'i Administrative Rules (HAR) Chapter 13-276]. This document was prepared to support the proposed project's historic preservation review under HRS Chapter 6E-42 and HAR Chapter 13-284, as well as the project's environmental review under HRS Chapter 343.

Management Summary

<p><b>Dates, Personnel, and Number of Person-days Required for Field Effort</b></p>	<p>Jessie York, BA, Jennifer Olson, BA, Daniel Terry BA, Anthony Bush, BA, and Uta Rainalter, BS, assisted project director William Folk, BA, with the field effort, which required 16 person-days to complete. Fieldwork took place 4-8 October 2004 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).</p>
<p><b>Number of historic properties identified</b></p>	<p>Four</p>
<p><b>Historic Properties Recommended Eligible to the Hawai'i Register of Historic Places (Hawai'i Register)</b></p>	<p>Site -6682, buried A Horizon; 'Āinahau (Cleghorn Estate), habitation, criteria "B"          Site -6705, human skeletal fragments in disturbed sediment, criteria "D" and "E"          Site -6706, stream bed, believed to be a segment of 'Āpuakēhau Stream, criteria "D"          Site -6707, stone retaining wall, criteria "A, B, C, D, E"</p>
<p><b>Historic Properties Recommended Ineligible for the Hawai'i Register</b></p>	<p>None</p>
<p><b>Results of Archaeological Inventory Survey</b></p>	<p>Prior to the project's fieldwork, an extensive archaeological and historical literature review was conducted to inform on the project area's cultural setting. Fieldwork consisted of the excavation and documentation of 14 backhoe trenches. The historic properties documented within the project area are part of an extensive archaeological landscape, including 'auwai (irrigation ditches), lo'i (pond fields), part of 'Āinahau (the Cleghorn Estate), and other remnants of pre-contact and historic land use. This archaeological landscape has been documented throughout much of Waikīkī. Information regarding the four historic properties currently documented includes historical and archival data, stratigraphic information, geographic locations and areal extents, and the results of radiocarbon dating analysis of selected samples. The findings of this inventory survey were in keeping with the predictive model based on background research. These findings indicate that the project area was the site of extensive traditional Hawaiian land use, both in pre-contact and historic times. Within the current project area traditional land use effectively ended with the dredging and construction of the Ala Wai Canal in the 1920s.</p>
<p><b>Effect Recommendation</b></p>	<p>CSH's project specific effect recommendation is "effect with mitigation commitments." The proposed condominium development will adversely affect significant historic properties (SIHP sites -6682, -6705, -6706, and -6707) located with the project's APE. Of the four sites recorded in the project area, SIHP site -6707 is recommended for data recovery, SIHP site -6705 for further monitoring, and SIHP sites -6682 and -6706 for no further work. Because these significant historic properties are subsurface and will be affected by the ground disturbance that is proposed throughout all, or most, of the project area, the recommended mitigation measures will reduce the project's effect to these historic properties.</p>

<b>Mitigation Recommendation</b>	<p>To alleviate the proposed project's adverse effect on significant historic property -6705 (human skeletal fragments), CSH recommends that an SHPD-approved archaeological monitoring package be implemented during the ground disturbing phases of the project. The monitoring methods should be developed in coordination with SHPD and should include appropriate sampling and analytic methods to document additional information from exposed archaeological and/or paleoenvironmental deposits and to facilitate the identification and treatment of any additional burials discovered within the project area. To alleviate the proposed project's adverse effect on significant historic property -6707 (likely a <i>lo'i</i> field retaining wall), CSH recommends that an SHPD-approved data recovery plan be implemented. Tentative research goals for a data recovery plan include additional backhoe trenches to better delineate the horizontal extent of SIHP site -6707, likely a <i>lo'i</i> field retaining wall.</p>
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## I. INTRODUCTION

### A. Project Background

At the request of Kusao & Kurahashi, Inc., Cultural Surveys Hawai'i Inc. (CSH) has completed an archaeological inventory survey with subsurface testing of approximately 1.03 acres in Waikiki Ahupua'a, Kona District, Island of O'ahu. In consultation with the State of Hawai'i Department of Land and Natural Resources State Historic Preservation Division (DLNR / SHPD), the inventory survey investigation was designed to fulfill the state requirements for archaeological inventory survey [Hawai'i Administrative Rules (HAR) Chapter 13-276]. This document was prepared to support the proposed project's historic preservation review under HRS Chapter 6E-42 and HAR Chapter 13-284, as well as the project's environmental review under HRS Chapter 343.

The project area comprises TMK 2-6-024:070 and 071, which are bounded by Ala Wai Boulevard to the northeast, Tusitala Street to the southwest, "Ala Wai Townhouse" Apartments to the northwest and the "Waikiki Bellevue Apartments" to the southeast. This area is depicted on the 1998 Honolulu 7.5-minute USGS topographic quadrangle and TMK 2-6-024 (Figures 1, 2). Housing Development Corporation is presently in the process of purchasing the project area land from Starts International Hawai'i, Inc.

For this inventory survey investigation, the project's APE is defined as the entire approximately 1-acre footprint of the proposed apartment complex development. The proposed project involves developing the currently vacant property into a single eight-storied apartment complex and a surface parking lot. There will be associated utility installation and landscaping. Most, if not all, of the project area will have subsurface ground disturbance. The project area's surrounding built environment is urban (paved streets and low rise and high rise buildings) and the proposed condominium construction poses no *additional* auditory or visual impact to any surrounding potential historic properties (for example historic buildings or structures). Accordingly, for the current inventory survey investigation the survey area and the project APE are one and the same.

Jessie York, BA, Jennifer Olson, BA, Daniel Terry, BA, Anthony Bush, BA, and Uta Rainalter, BS assisted project director William Folk, BA, with the field effort, which required 16 person-days to complete. Fieldwork took place between 5 and 8 October 2004 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).

Fieldwork was performed under CSH's annual archaeological research permit, No. 0404, issued by the DLNR / SHPD.

### B. Scope of Work

The following archaeological inventory survey scope of work was completed to satisfy the State and County requirements per the State Historic Preservation Division (SHPD) Hawai'i Administrative Rules Title 13, Sub-Title 13, Chapter 276 - Rules Governing Standards for Archaeological Inventory Surveys and Reports. The scope of work includes:

1. A complete ground survey of the entire project area for the purpose of site inventory. All sites were located, described, and mapped with evaluation of function, interrelationships, and significance. Documentation included photographs and scale drawings of selected sites and complexes. All sites were assigned SIHP site numbers.

2. Subsurface testing with a backhoe to determine if subsurface deposits are located in the project area, and, evaluation of their significance. When appropriate samples from these excavations were found, they were analyzed for chronological and paleoenvironmental information.
3. Research on historic and archaeological background, including search of historic maps, written records, and Land Commission Award documents. This research focused on the specific area with general background on the *ahupua'a* and district and emphasized settlement patterns.
4. Preparation of a survey report which included the following:
  - a. A topographic map, if available, of the survey area showing all archaeological sites and site areas;
  - b. Description of all archaeological sites with selected photographs, scale drawings, and discussions of function;
  - c. Historical and archaeological background sections summarizing pre-contact and historic land use as they relate to the archaeological features;
  - d. A summary of site categories and their significance in an archaeological and historic context;
  - e. Recommendations based on all information generated specified what steps should be taken to mitigate impact of development on archaeological resources - such as data recovery (excavation) and preservation of specific areas. These recommendations were developed in consultation with the client and the State agencies.



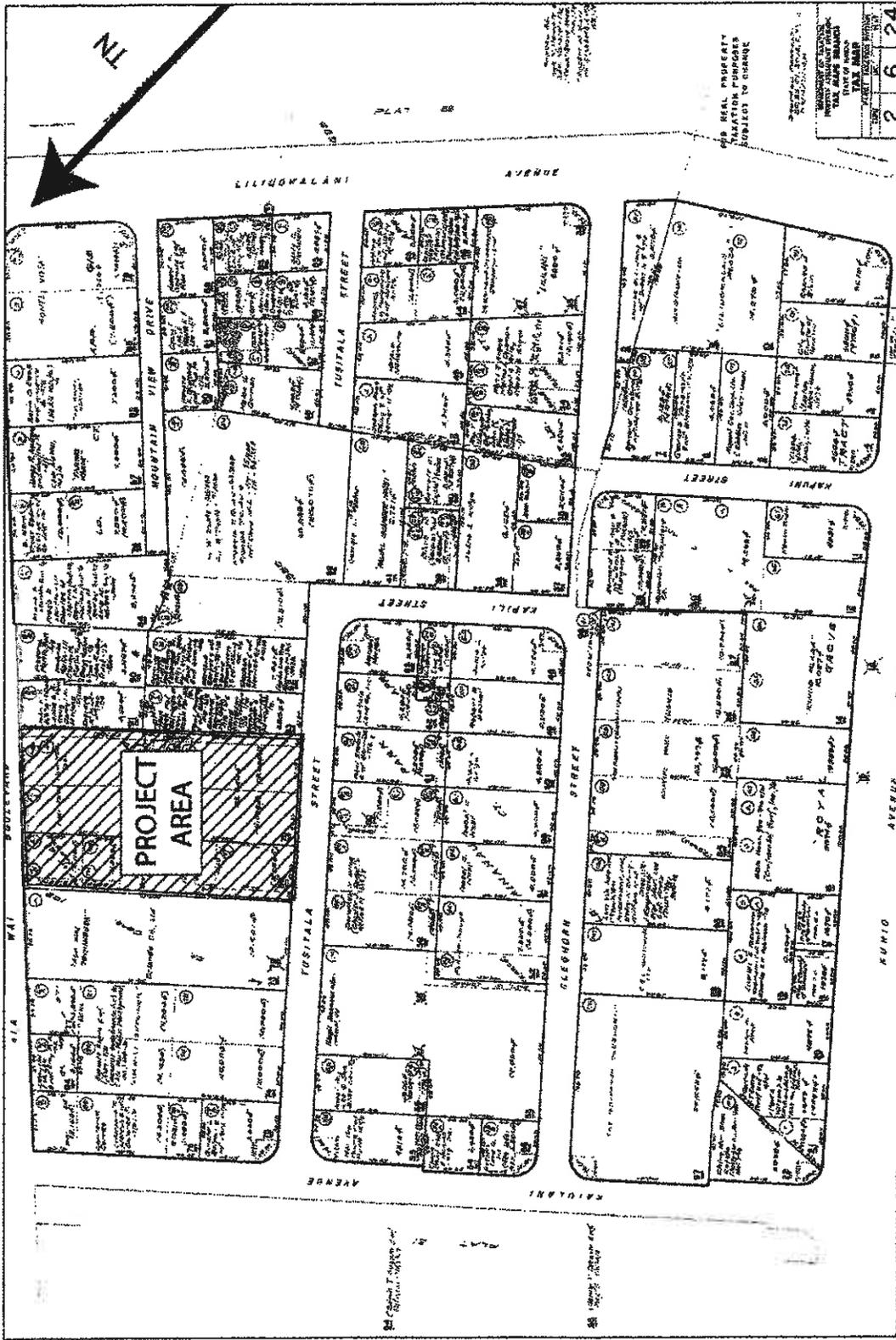


Figure 2. TMK 2-6-24 map showing location of the present project area

This scope of work also includes full coordination with the State Historic Preservation Division (SHPD), and county relating to archaeological matters. This coordination takes place after consent of the landowner or representatives.

### C. Methods

#### 1. Fieldwork

The inventory survey field inspection and subsurface testing of the project area took place from October 5<sup>th</sup> to October 8<sup>th</sup>, 2004, with four Cultural Surveys Hawai'i archaeologists working under the direction of William Folk, B.A. and Hallett H. Hammatt, Ph.D. Subsurface testing consisted of the excavation of 14 backhoe trenches to document the subsurface nature of the project area. Trenches were placed to test specific questions identified in the background research, as well as to provide adequate coverage of all portions of the project parcel.

In all trenches, the base of excavation was the water table, which was approximately 150 cm below the current land surface. Trenches were generally one bucket width (1-1.4 m) wide and of variable depths (depending on ground water, tide, and the different elevation above sea level of ground surfaces within the project area).

Four archaeologists were on site at all times to monitor the excavation, to document the exposed sections, and to collect sediment samples. One archaeologist was positioned to watch the bucket and the exposed section on one side of the trench. Another was positioned to watch the bucket and the other exposed section. A third archaeologist was positioned to watch the bucket as the excavated material was dumped from the bucket. Trench location, dimensions, and orientation were recorded.

Exposed trench sections were documented with scale section profiles, photographs, sediment descriptions, and, where useful, sediment samples. Sediment descriptions included Munsell color designations, sediment size, inclusions, compactness, and cultural material present. Representative samples of cultural material were collected from sediment sifted through 1/8th inch mesh screens.

Samples and cultural materials were inventoried, catalogued, and in some cases sent for radiocarbon dating.

#### 2. Laboratory work

During the course of backhoe trenching, cultural materials, primarily charcoal samples were collected both *in situ* and through screening. Cultural materials were collected for species analysis and analysis of any indication of pre-contact and/or historic occupation of the lands and if so, the chronological development of the site(s).

A total of 4 samples were submitted for carbon dating from both shallow deposits (less than 30 cm below surface) as well as deeper deposits up to 190 cm below surface. All four of these samples had sufficient mass for radiocarbon dating.

All collected materials and data will be temporarily stored at CSH offices until further notification from the landowner and SHPD of an agreed upon final repository.

### 3. Background research

Background research included a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources, a review of record at the Bishop Museum archives, and a review of documents and maps at the Cultural Surveys Hawai'i library.

Individuals knowledgeable about the project area's history are being consulted in conjunction with a companion Cultural Impact Assessment document entitled *Cultural Impact Evaluation for the Tusitala Vista Elderly Apartments Waikīkī, Kona District, O'ahu Island (TMK: 2-6-24: 70, 71)*, covering the same project area.

### 4. Bishop Museum archival research

The OIBC requested that a Cultural Surveys Hawai'i, Inc. (CSH) archaeologist meet with DeSoto Brown, collections manager of the Bishop Museum archives, to examine Dillingham Corporation records to determine if these documents provide information about the origin of the fill material in which the human skeletal fragments were found. One CSH archaeologist researched the Bishop Museum archives on two separate occasions, November 23 and 30, 2004. No conclusive information regarding the fill material was obtained.

The Dillingham Corporation files are located in the Business Archives section of the library. The scope of the files includes the records of the Dillingham Corporation, its predecessors, and related companies (e.g., Lewers & Cooke, O'ahu Railway & Land Company, Hawaiian Dredging Company, Inter-island Steam Navigation Company, and numerous small companies). The Dillingham family personal and business papers present in the records include the papers of Benjamin F. Dillingham (1844-1918), his wife, Emma Lowell (Smith) Dillingham (1844-1920), Walter F. Dillingham (1875-1963), Benjamin F. Dillingham II, and scattered materials of other family members and of the Smith family.

The types of information present in the records include ledgers (payments received and paid, subcontractors), financial journals (purchasing and distribution), invoices, vouchers, financial statements, auditor's reports, taxes information, contracts, agreements, job accounts ledgers, an example of the corporate seal, maps and sketches of project areas, general correspondence, photos, stockholders documents, day books, miscellaneous volumes (sundry ledgers, journals, vessel accounts, cash books), secretary's minutes, title abstracts, and miscellaneous data for the company and related individuals.

## D. Natural Setting

### 1. Modern Geology, Climate, and Vegetation

The plain of Waikīkī is flat and, generally, less than 4.5 m (15 feet) above sea level (Davis 1989:5). Soils in the area are composed solely of Jaucus Sand with 0-15% slopes (JaC) (Foote et al. 1972: Map 63). Rainfall averages less than 30 inches of rain per year (Armstrong 1983:62); however, the area receives additional water from the Kālia and Pālolo Streams, as well as rain showers that drift into the area from the mountains and inland valleys (Cleghorn 1996:3). Northeasterly tradewinds prevail throughout the year, although their frequency varies from more than 90% during the summer months to 50% in January. The average annual wind velocity is approximately 10 miles per hour (Okamoto 1998:2-1). Currently, vegetation in the project area is

primarily comprised of a variety of grasses with a few *Plumeria* and *Papaya* trees planted along the northern and southern fence lines.

## 2. Geomorphology

Modern Hawaiian shoreline configuration, including Waikīkī Beach is primarily the result of: 1) rising sea level following the end of the Pleistocene (see Stearns 1978 and McDonald et al. 1983); 2) the mid to late Holocene c. 1.5-2.0 meter high-stand of the sea (see summary in Dye and Athens 2000:18-19); and, 3) pre-contact and historic human landscape modification. At the end of the Pleistocene, between approximately 20,000 and 5-6,000 years ago, water previously locked in glacial ice returned to the world's oceans and sea-level rose over 100 meters to approximately its current level. Rising sea levels flooded the previously dry, earlier Pleistocene reef deposits, which had formed hundreds of thousands of years previously when sea level was comparable to modern levels. In the late Pleistocene/early Holocene, the Waikīkī area was characterized by an expansive delta drainage system which flowed from the Ko'olau Mountains to the sea (Ferrall 1976: plate II).

Land formation was directly related to changes in the sea level, terrigenous sediment load of streams, and reef and marine sediment formation. Lowering sea levels and increased marine sediment load (from reef erosion due to wave action) combined to create a sand accretion barrier along the coast as marine sediments were deposited on the resulting shallower reefs. This created a lagoon environment between the island shoreline and the sand accretion barrier. Terrigenous sediments were carried into this lagoon environment by Mānoa and Pālolo streams. When sea level reached approximately modern levels, the now coastal regions became depositional environments, where for tens of thousands of years previously, during the lower sea levels, they had been erosional environments. This resulted in the deposition of both terrigenous and marine sediments in low-energy estuarine or lagoonal environments, leading to the accumulation of thick deposits of soft/loose sediments along the current coastlines in areas that had formerly been valleys and drainage ways (Geolabs Hawai'i Inc. 1993:9). By the time humans occupied the coastal area of Waikīkī, the lagoon had become a wetland (which was used for cultivation) behind the sand accretion barrier (which was used for habitation) (Ferrall 1976: B-2). It is likely that only since the major construction projects of the beachfront hotels has the overall accretion trend of Waikīkī beach been stopped or reversed. The current landform at Waikīkī is largely the result of the historical drainage excavation of the Ala Wai Canal and associated fill deposits.

## II. HISTORICAL BACKGROUND

### A. Pre-Contact to Early 1800s

By the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, Waikīkī had long been a center of population and political power on O‘ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become “the ruling seat of the chiefs of Oahu.” The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha’s decision to reside there upon wresting control of O‘ahu by defeating the island’s chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘Ī (1959:17), himself a member of the *ali‘i* (chiefly class), described the king’s Waikīkī residence:

Kamehameha’s houses were at Puaaliifii, makai of the old road, and extended as far as the west side of the sands of ‘Āpuakēhau. Within it was Helumoa where Ka‘ahumanu mā went to while away the time. The king built a stone house there, enclosed by a fence . . . (‘Ī‘Ī 1959:17).

‘Ī‘Ī further noted that the “place had long been a residence of chiefs. It is said that it had been Kekuapoi’s home, through her husband Kahahana, since the time of Kahekili” (‘Ī‘Ī 1959:17).

Chiefly residences, however, were only one element of a complex of features that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua‘a*. The pioneering nineteenth-century scholar Samuel Mānaiakalani Kamamau recounts Kalamakua’s significance for the Hawaiian people:

Kalamakua-a-Kaipūhōlua was a good chief. He was noted for cultivating, it was he who constructed the large pond fields Ke‘okea, Kūalulua, Kalāmanamana, and the other lo‘i in Waikīkī. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the *maka‘āinana*. They loved him. Kelea-nui-noho-‘ana-‘api‘api became his wife when he was a mature man. (Kamakau 1991: 45)

Captain George Vancouver (1798:161-164), arriving at “Whyteete” in 1792, captured something of the profusion of taro *lo‘i* across Waikīkī in his journals:

On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.

[Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.

This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and

figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.

[We] found the plain in a high state of cultivation, mostly under immediate crops of taro; and abounding with a variety of wild fowl, chiefly of the duck kind . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence.

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua'a* of Waikīkī are given by Archibald Menzies (1920:23-24), a naturalist accompanying Vancouver's expedition:

The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Draecena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews.

The work of chief Kalamakua in Waikīkī will be further detailed in the discussion of the present project area in Section H below.

The traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change – disrupted by the same Euro-American contact that produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu - with the only sheltered harbor on O'ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood

that had developed. By 1828, the missionary Levi Chamberlain (1957:26), describing a journey into Waikīkī, would note:

Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. (Chamberlain 1957:26)

Tragically, the depopulation of Waikīkī was not simply a result of the attractions of Honolulu (where, by the 1820s, the population was estimated at 6,000 to 7,000) but also of the European diseases that had devastating effects upon the Hawaiian populace.

### **B. Mid-Nineteenth Century and the Māhele**

The depopulation of Waikīkī, however, was not total and the *ahupua'a* continued to sustain Hawaiians living traditionally into the mid-nineteenth century. The Organic Acts of 1845 and 1846 initiated the process of the Māhele (the division of Hawaiian lands) that introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali'i* (royalty) received their land titles. Subsequently in the Māhele, Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. Land Commission Award records document awardees continuing to maintain fishponds and irrigated and dryland agricultural plots, though on a greatly reduced scale than had been previously possible with adequate manpower.

A discussion of Land Commission Awards related to the present project area is presented in Section H below.

### **C. Mid to Late 1800s**

As the nineteenth century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O'ahu. An 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *ali'i* – the Hawaiian royalty – and several notables had residences there. A visitor to O'ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

Other developments during the second half of the nineteenth century a prelude of changes that would dramatically alter the landscape of Waikīkī during the twentieth century – include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalākaua Ave.), the building of a tram line between the two areas, and the opening of Kapi'olani Park on June 11, 1877. Traditional land-uses in Waikīkī were abandoned or modified. By the end of the 19th century most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States.

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was \$3 a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands' availability throughout the islands in the late 1800s reflected the declining demand for taro as the native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.

In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai'i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product. (Coulter and Chun, 1937: 13)

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O'ahu. Most of the former taro *lo'i* converted to rice fields were located *mauka* of the present Ala Wai Boulevard.

#### **D. 1900 to 1920**

During the first decade of the twentieth century, the U.S. War Department acquired more than 70 acres in the Kālia portion of Waikīkī for the establishment of a military reservation called Fort DeRussy, named in honor of Brig. Gen. R.E. DeRussy of the Army Corps of Engineers.

On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post...

Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O'ahu. At DeRussy other activities also had to be attended to - especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground. (Hibbard and Franzen 1986:79)

All the fishponds were filled by 1928.

E. 1920s to 1930s

During the 1920s, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa...

The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311]

During the course of the Ala Wai Canal's construction, the banana patches and ponds between the canal and the *mauka* side of Kalākauā Avenue were filled and the present grid of streets was laid out. These newly created land tracts spurred a rush to development in the 1930s. An article in the Honolulu Star-Bulletin in 1938 extolled the area's progress:

The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.

These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938: 10)

The writer speculated that the "future of Waikīkī is assured."

F. 1940s

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put on hold plans for the development of Waikīkī as a tourist destination. Until the war's end in 1945, the tourist trade was non-existent "...since the Navy controlled travel to and from Hawai'i and did not allow pleasure trips" (Brown 1989: 141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]

Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the Honolulu Advertiser of July 16, 1945 decried "honky-tonks" that had sprung up in Waikīkī during the course of the war, and asked: "Can anyone look at present-day Kalākauā Ave. — lined

with makeshift curio shops, noisy 'recreation' centers, eyesores that pass under the name of lunchrooms and miscellany of 'joints' – and hope that Waikīkī can stage a comeback [as a tourist destination]?"

### G. 1950s

By the mid-1950s there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi'olani Park. The Waikīkī population, by the mid-1950s, was not limited to transient tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

### H. Historical Documentation of the Project Area

Beginning at the mid-nineteenth century, the historical record of Waikīkī including the present project area and adjacent lands was established in increasingly detailed documentation including photographs, maps, newspaper articles, and government records. These documents also give insight into pre-contact Waikīkī. During subsequent decades of the twentieth century, abundant documentation of Waikīkī allows a more precise focus on the changes within the project area itself up to the 1950s.

#### 1. 1881 survey map by S.E. Bishop

An 1881 Hawaiian Government survey map by Serrano E. Bishop with locations of LCA parcels provides a detailed record of the physical landscape of Waikīkī before the transformations of the twentieth century. Figure 3 presents a portion of the 1881 map with the location of the current project area indicated. As shown on the map, coursing through the middle of the project area is 'Āpuakēhau Stream which once descended from Mānoa Valley, entering the ocean "near the present Moana Hotel" and which was "probably named for a rain" (Pukui et al. 1974: 13).

The map also shows the project area straddling two Waikīkī 'ili which appears to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in Auaukai.

As was noted above, according to Samuel Kamakau, Kalāmanamana was one of the areas where the chief Kalamakua constructed the "large pond fields" of taro that once covered the Waikīkī plain. Some of the Kalāmanamana *lo'i* are shown in Figure 3. The complete 1881 map shows a network of *lo'i* (which by the 1880s were being converted to rice fields) extending across present-day McCully and Mō'ili'ili to the foot of Mānoa Valley, suggesting the impressive scale of the field system engineered by Kalamakua.

Also indicated on the map are the *auwai* created to channel water of streams descending from Pālolo, Mānoa, and Makiki Valleys. The almost 90-degree bend of 'Āpuakēhau Stream into the present project area, as shown on the 1881 map, suggests that the stream was diverted sometime early in the creation of the Waikīkī fields either to direct water to *lo'i* constructed elsewhere or to create a broader expanse of dryland in the 'ili identified on the map as Auaukai, Kaluaokau, Kapuni and Uluniu. These 'ili would, in time, come to be identified with 'ali'i (the Hawaiian royalty) who resided in Waikīkī.

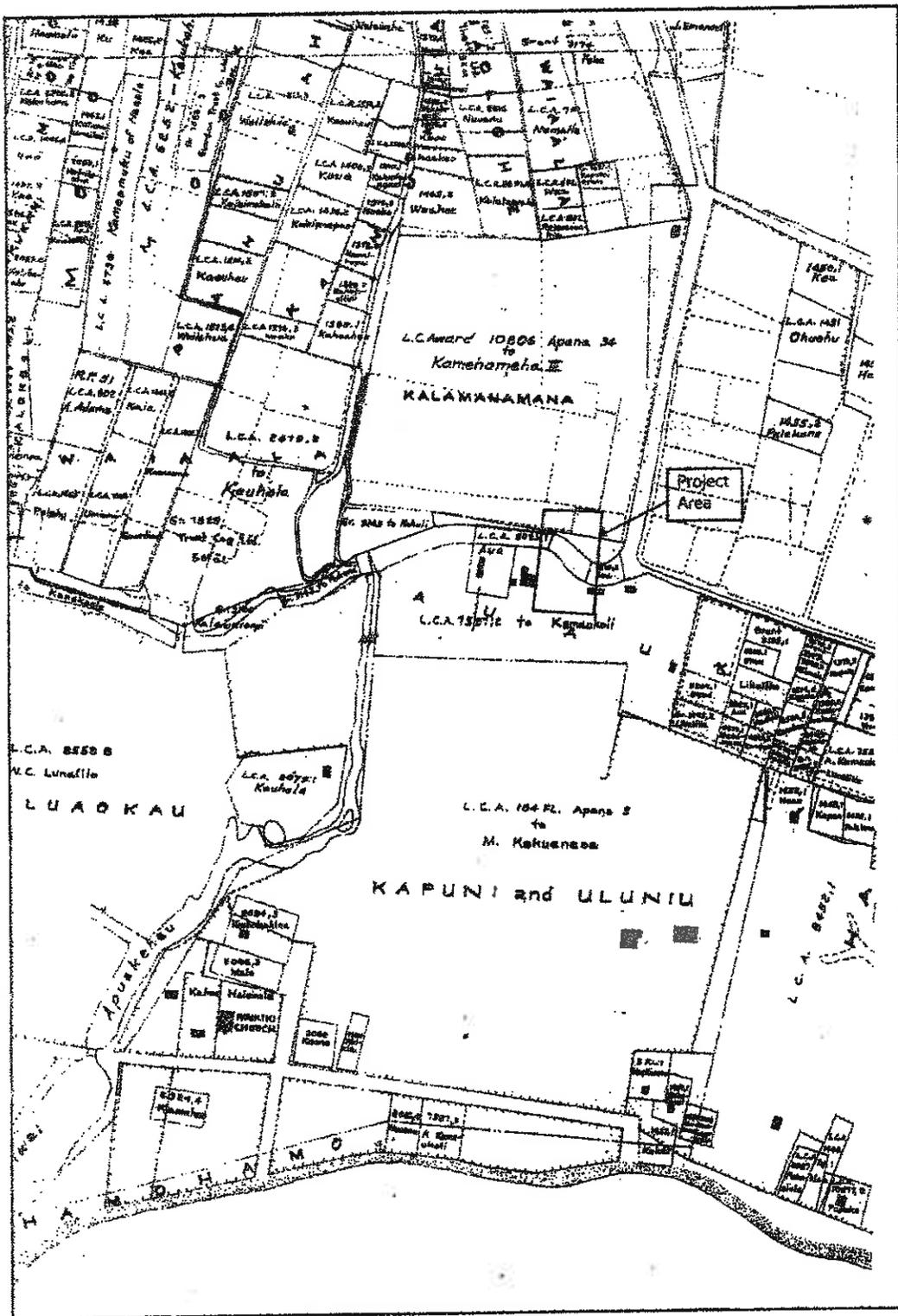


Figure 3. Portion of an 1881 Serrano E. Bishop map showing location of Land Commission Awards with the approximate location of project area indicated

## 2. Land Commission Award Records

The 1881 map (Figure 3) identifies locations of Land Commission Awards within Waikīkī. Documentation about Māhele awards provides specific details of life within and adjacent to the present project area during the nineteenth century and earlier. Based on the 1881 map, four awards appear to be most relevant to the project area:

LCA 10806, Apana (parcel) 34 awarded to Kanikeaouli, Kamehameha III;

LCA 104 FL (Fort Lands), Apana 5 awarded to Mataio Kekūanaō'a;

LCA 7597, Apana 2 awarded to Kamaukoli; and

LCA 8023, Apana 1 & 2 awarded to Aua.

Information provided in LCA records for these four awards is presented below.

The records for LCA 10806 identify Parcel 34 as Kalamanamana, one of the king's "farms at Waikīkī" (Native Register vol. 3, pg. 387-390). Testimonies given in support of the award identify taro *lo'i* (irrigated fields) at Kalāmanamana and the king's other Waikīkī farm lands:

M. Kekuanaoa, sworn, I had known that these lois: Hohe, Kalamanamana and Keokea are for the King, the kole lois throughout the island of Oahu are also for the King. Some koele patches were given to the konohiki during the land Māhele. They are in the ilis of Hamohamo and Kalia and they have been for the King since the time of Kaahumanu until the time of the land distribution. There are some government portions in here, but these lois are for the King which is complicating to me at this time. It is for the King probably, for the government, perhaps, for whom is it? Kamehameha I had built these farms, Kamehameha III has them now.

Piikoi, sworn, I have seen these places for which the King is demanding. These patches were planted with taro at the time Kinau was governor of Oahu and Kamanawa did the harvesting and S. Kuluwailehua was the tax assessor at the time. It was probably before 1839 and since that time to the Māhele, the King has sent Kaihe to show me the King's interest that I might work in it. It has been that way to the present and I have heard these places are for the King and the claim has been filed. I have also heard that these places have been for the King from the time of Kamehameha I and had been in the care of Kinau and Kaahumanu. (Native Testimony vol. 10, pg.448)

LCA 104 FL was granted to Mataio Kekūanaō'a. Kekūanaō'a, born in Hilo on Hawai'i Island in the 1790s, was governor of O'ahu at the time of the Māhele. He was the father of Alexander Liholiho (King Kamehameha IV), Lot Kamehameha (King Kamehameha V), Princess Victoria Kamāmalu, Princess Ruth Ke'elikolani, and Moses Kekuaiwa. Following his death in November 1868 his lands were inherited by his daughter, Princess Ruth.

The records for LCA 104 FL (Fort Lands) suggest that Apana 4, as indicated on the 1881 map, comprised land associated with Kekūanaō'a's "house site in Kapuni, Waikīkī, Kona, Oahu" (Native Testimony vol. 10, pg. 390). Based on descriptions in the LCA records, the house site itself was located at the coast. The records do not indicate any specific land features or agricultural activity within Apana 4. Records for LCA 7597, Apana 2 awarded to Anederea

Kamaukoli provide detailed information on the parcel and reveal that Kamaukoli was *konohiki* (headman of an *ahupua* 'a land division under the chief of the area). Kamaukoli himself testified:

...I...hereby state my claim for land, Auaukai, an 'Ili, was given me by Kaahumanu I in the year in which Poki sailed to Nanapua [*i.e.* about 1829] and disappeared. That was when I acquired this 'Ili and from that time I have occupied this land as konohiki. The tenants are living under me, and going to my work days and are ruled by the laws of this time. My own lo'is in Auaukai, an 'ili in the Ahupua'a of Waikiki, are three taro lo'i, one weed-grown kula for planting sweet potatoes and gourd. (Native Register vol. 5, pg. 413-415)

Other records identify the taro in Apana 2 as *puepue* or dryland.

Kamaukoli is identified in Māhele documents as the father-in-law of Aua, the awardee of LCA 8023. Aua testified that he received the land in the "'ili of Auaukai" from Kamaukoli "in the time of [the regency] of Kaahumanu" (Foreign Testimony vol. 14, pg. 475). It appears that the two parcels of LCA 8023 shown on the 1881 map comprise "one pauku [land section] of taro...in the water course and...another pauku of stream" (Native Register vol. 5, pg. 478).

In summary, the Māhele documents indicate that within the present project area at the mid-nineteenth century: the *mauka* section comprised a portion of taro *lo'i* belong to the king; the central section comprised a portion of Apuahekau Stream in which taro was also growing; and the *makai* portion comprised *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. It is likely that these agricultural activities recorded in the documents reflect the continuation into the nineteenth century of the primary traditional Hawaiian land use and cultural activity within the project area and vicinity.

### 3. 'Āinahau

Historic maps identify the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Princess Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i.

Cleghorn not only beautified Waikīkī through his work at Kapi'olani Park [he had been instrumental in the park's creation and design], but also at his estate, 'Āinahau, which he had purchased in 1872 for \$300. Inheriting a love of horticulture from his father, Cleghorn lavishly landscaped this parcel, making it "the most beautiful private estate in the Hawaiian Islands" (Hibbard and Franzen 1986: 12)

A 1917 government survey map – on which the present project area is indicated – shows the boundaries of the 'Āinahau estate and other land owned by Cleghorn immediately *mauka* of 'Āinahau, beyond the *mauka* bank of 'Āpuakēhau Stream (Figure 4). When the 1917 map is studied in tandem with the 1881 map discussed above (Figure 3), it appears that the 'Āinahau estate comprised the entire LCA 7597 Apana 2 and an adjacent portion of LCA 104 FL Apana 5. The portion of LCA 104 FL is probably the land that Princess Ruth Keelikolani gave to Princess Kaiulani as a christening gift.

The structures indicated within LCA 7597 Apana 2 on the 1881 map would appear to be buildings constructed by Cleghorn on the 'Āinahau grounds. Among these buildings, the large structure indicated just outside the present project area is likely the bungalow which was the

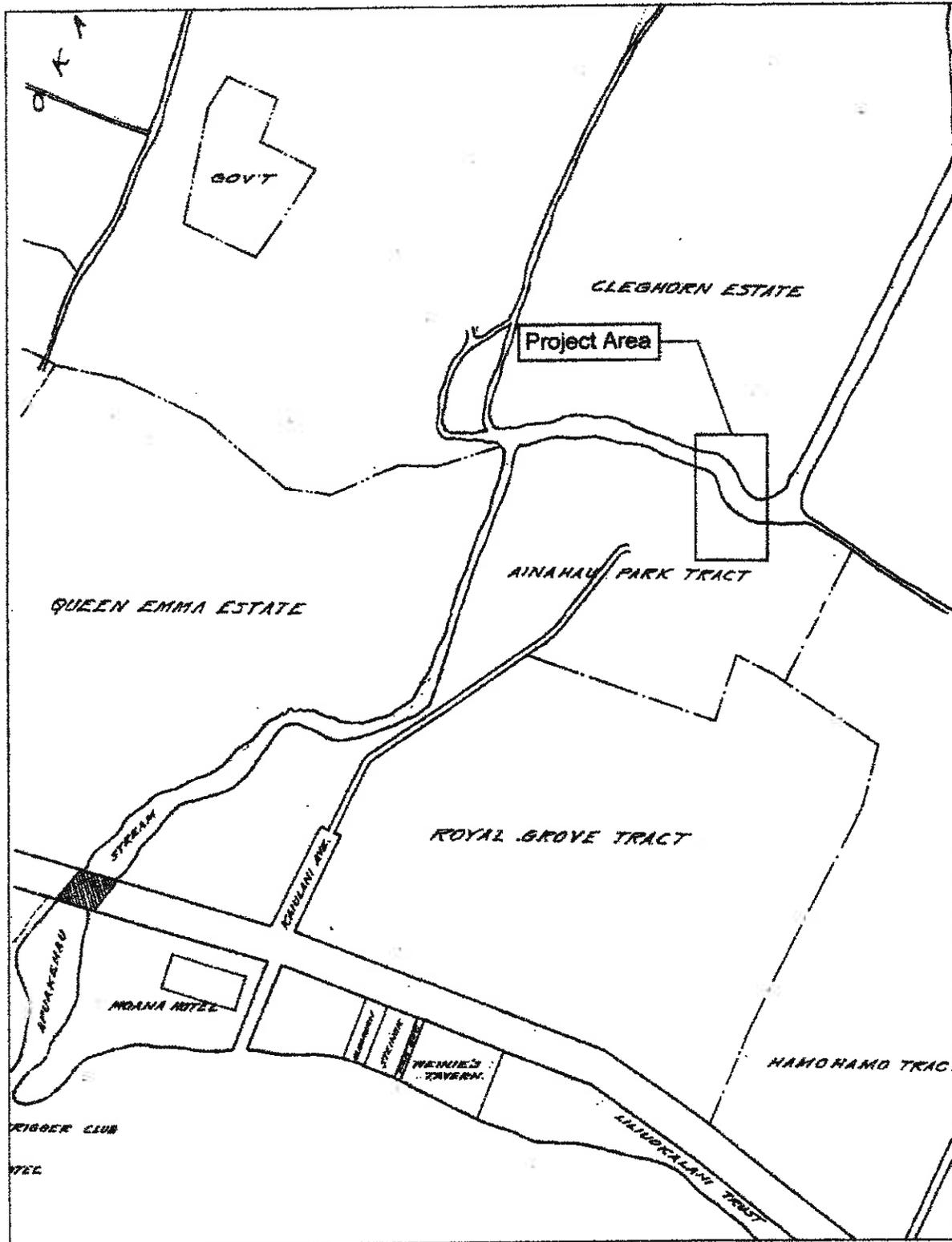


Figure 4. Portion of a 1917 government survey map (Bishop Museum) shows boundaries of the Cleghorn Estate and approximate location of the present project area

Cleghorn family's first residence on the estate. Subsequently, in the 1890s, Cleghorn constructed, immediately adjacent to the bungalow, a large Victorian-style house. A visitor in the 1890s noted:

The new house was a white frame structure, of two stories, with wings at either end – the favourite form of Honolulu architecture – with a wide verandah extending across the front. The shrubbery had been cut away for several yards in every direction to allow the free circulation of the air, and just beyond the main entrance stood the one incomparable banyan tree, which the owner presently informed me was the handsomest thing he had. (in Stassen-McLaughlin 1986: 127)

Historic photographs indicate that this house was located within the *makai* portion of the present project area.

Two members of the Cleghorn family would not live to see the twentieth century:

Not only a site of pleasant pastimes, these lands [‘Āinahau] also were associated with grief and tragedy. Here, Princess Likelike died on 2 February 1887, at the age of thirty-six, and twelve years later, in 1899, Cleghorn's daughter Ka'īulani, passed away here in the springtime of her life, at the age of twenty-four. (Hibbard and Franzen 1989: 13)

Cleghorn himself would continue to reside at ‘Āinahau until his death in 1910. The house would burn down on August 2, 1921 in a fire caused by a gas heater.

#### 4. The Project Area in the Twentieth Century

Seven years following Cleghorn's death, the ‘Āinahau estate was put up for sale.

In 1917 James W. Pratt bought the estate, then sold most of it in 1919 to William Chauncey Wilder. Wilder, along with developer Percy M. Pond, had great plans. The property was offered to the public for subdivision. [Stassen-McLaughlin 1986: 128]

An advertisement appearing in the Pacific Commercial Advertiser on May 5, 1919 shows the residential subdivision developed by Pond (Figure 5). The streets shown on the map, which were constructed for the subdivision, correspond to the present-day Ka'īulani Avenue, Cleghorn Street, Kapili Street, and Tusitala Street.

The map also indicates that ‘Āpuakēhau Stream continued to flow in the first decades of the twentieth century and delineated the *mauka* and ‘Ewa boundaries of the ‘Āinahau subdivision tract. The map suggests that, in 1919, only the *makai* portion of the present project area was developed as a portion of the tract. ‘Āpuakēhau Stream and remnants of the pond fields of Waikīkī continued extant in the *mauka* portion of the project area. Additionally, as was noted above, the ‘Āinahau residence was still standing in 1919, likely within the present project area, until it burned down in 1921. The ‘Āinahau tract subdivision may have excluded the residence and its immediate surroundings from development.

As was also noted above, the construction of the Ala Wai Drainage Canal between 1921 and 1928 resulted in the draining and filling in of the Waikīkī fishponds and irrigated fields, and their replacement with the gridwork of streets of present-day Waikīkī. A 1927 fire insurance map shows the Ala Wai Canal and Ala Wai Boulevard immediately *mauka* of the present project area

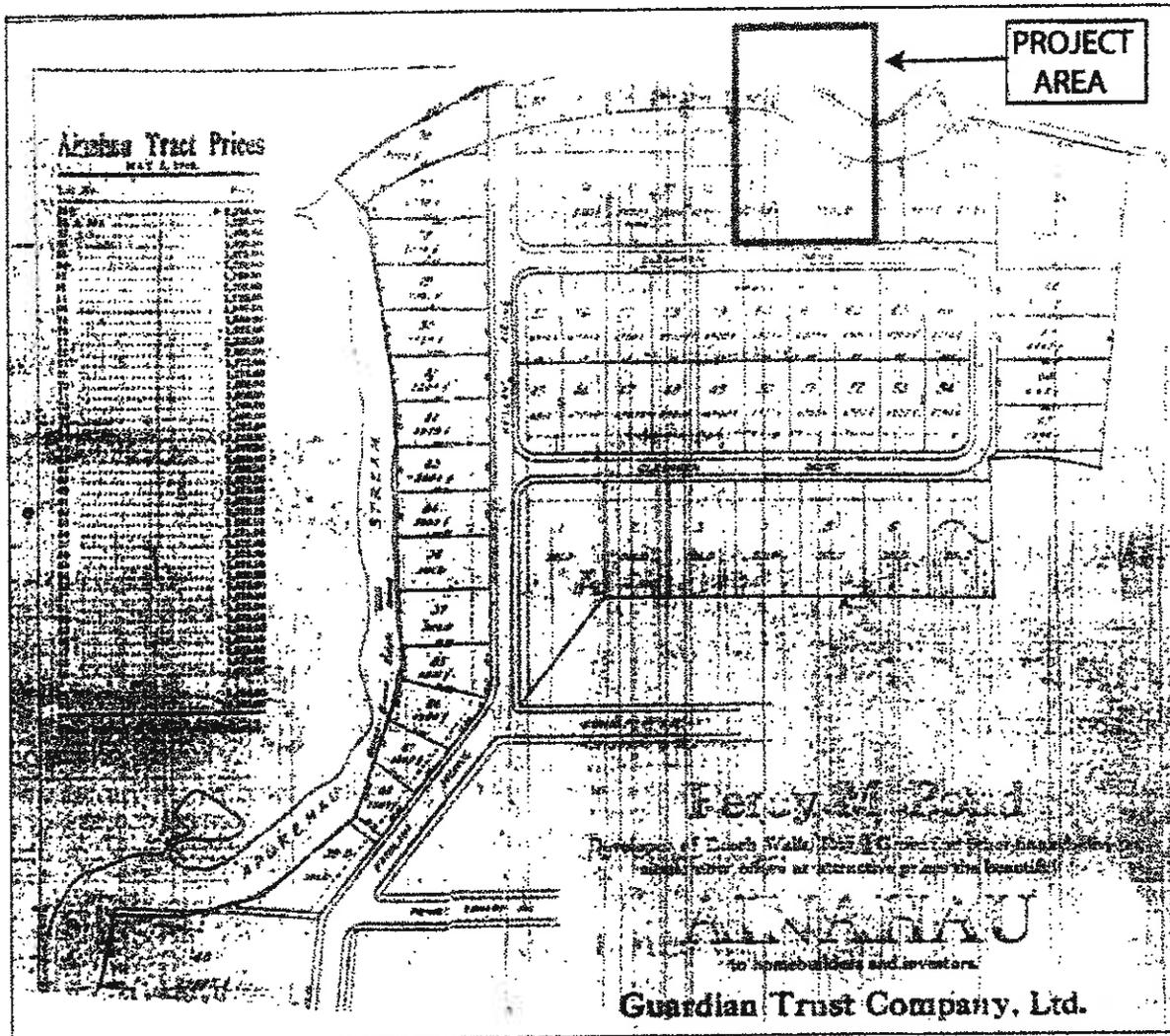


Figure 5. Advertisement in Pacific Commercial Advertiser on May 5, 1919 showing division of 'Ainaha residential subdivision by Percy Pond with approximate location of present project area indicated

which is now a fully-formed urban block (Figure 6). The map indicates that the project area parcel, like other parcels in the neighborhood, is filled with single-story wooden cottages. These cottages characterized much of Waikīkī during the first half of the twentieth century.

An insight into Waikīkī life in the 1920s and 1930s is provided by Betty Dyer Sorensen whose family lived at the corner of Kalākaua Avenue and Beach Walk. Her parents, John and Mabel Dyer, had bought a 7055-square-foot lot at 290 Beach Walk for \$1500 in 1918. Mrs. Sorensen describes the house her parents built there, in which she lived following her birth in 1922 until her marriage in 1946:

The front porch was on the mauka (mountain) side, and it caught the mountain breezes. It was painted buff with white trim and was in the Twenties bungalow style. (Sorensen 1995: 30-31)

In the 1920s, Waikīkī was a small neighborhood:

... with little cottages, inexpensive apartments and a few nice houses. People liked to live there because it was so close to the ocean and to transportation. The streetcars went down Kalakaua Avenue, Waikiki's main thoroughfare, all the way from Diamond head to the business section of downtown Honolulu, three miles away. The few tourists who visited either stayed with friends for at least a month or they rented a cottage. (Sorensen 1995.:1)

Since the area was documented on the 1927 map, a 1950 fire insurance map (Figure 7) reveals few changes to the cityscape of the present project area and its surrounding neighborhood. This lack of major transformation is in sharp contrast to the rapid urban development of the hotel, retail and residential properties in Waikīkī at this time, in the areas in closer proximity to the shoreline. In the present project area and its neighborhood, single storied wooden houses still predominate, though several of these have either been added on to or divided into duplexes or triplexes. In addition, a handful of new dwellings have been built. The map also shows that the name of the street to the southwest of the project area, Cleghorn Drive, was changed to its current name, Tusitala Street.



Figure 6. Portion of 1927 fire insurance map (Sanborn) with approximate location of the present project area indicated

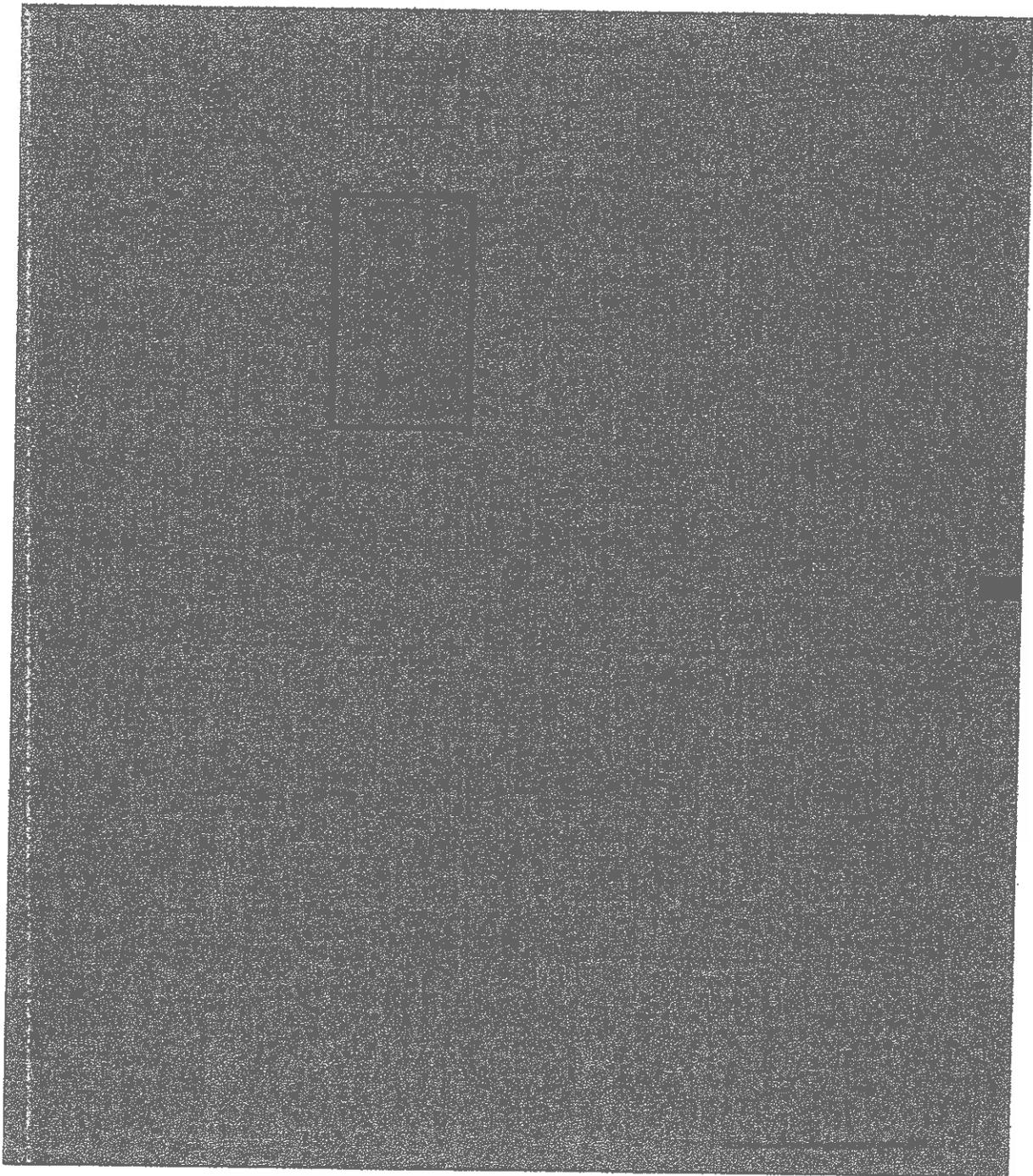


Figure 7. Portion of 1950 fire insurance map (Sanborn) with approximate location of the present project area indicated

### III. PREVIOUS ARCHAEOLOGICAL RESEARCH

The *ahupua'a* of Waikīkī, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources, that supported a large population. In the nineteenth and early twentieth centuries, after a period of depopulation, Waikīkī was reanimated by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system, which had been converted from taro to rice. Farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields. Remnants of the pre-contact and historical occupation of Waikīkī have been discovered and recorded in archaeological reports, usually in connection with construction activities related to urban development, or infrastructural improvements. These discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits. Location of previously identified sites is shown in Figure 8 and a list of projects conducted in the Waikīkī area is listed in Table 1. A discussion of projects focusing on burials follows.

#### A. Previous Archaeology in Waikīkī, Focusing on Burials

N.B. Emerson reported on the uncovering of human burials during the summer of 1901 on the property of James B. Castle - site of the present Elks Club - in Waikīkī during excavations for the laying of sewer pipes (Emerson 1902:18-20). Emerson noted:

The soil was white coral sand mixed with coarse coral debris and sea-shells together with a slight admixture of red earth and perhaps an occasional trace of charcoal. The ground had been trenched to a depth of five or six feet, at about which level a large number of human bones were met with, mostly placed in separate groups apart from each other, as if each group formed the bones of a single skeleton. Many of the skulls and larger bones had been removed by the workmen before my arrival, especially the more perfect ones. [Emerson 1902:18]

Emerson's report on the find describes the remains of at least four individuals, all presumed to be Hawaiian. Associated burial goods were also exposed during excavation; these included "a number of conical beads of whale-teeth such as the Hawaiians formerly made" and "a number of round glass beads of large size". The glass beads "can be assigned with certainty to some date subsequent to the arrival of the white man" (Emerson 1902:19). Also located with the beads was "a small sized *nihopalaoa*, such as was generally appropriated to the use of the chiefs" which had been "carved from the tooth of the sperm-whale" and which was "evidently of great age" (Emerson 1902:19).

In the 1920s and 30s the first systematic archaeological survey of O'ahu was conducted by J. C. McAllister (1933). He recorded four *heiau* (temples), three of which were located at the *mauka* reaches of Waikīkī *Ahupua'a* in lower Mānoa Valley. The fourth *heiau* - Papa'ena'ena - was located at the foot of Diamond Head crater near the present site of the La Pietra Estates condominium development (2933 Poni Moi Road). Other sources that place the *heiau* at La Pietra, the former mansion of Walter F. Dillingham, now the Hawai'i School for Girls (La Pietra Circle) are incorrect (Weyneth 1991:48). Papa'ena'ena *Heiau* is traditionally associated with Kamehameha I, who was said to have visited the *heiau* before setting off to battle for Ni'ihau and Kaua'i in 1804. Five years later, according to John Papa 'Ī'Ī, Kamehameha placed at

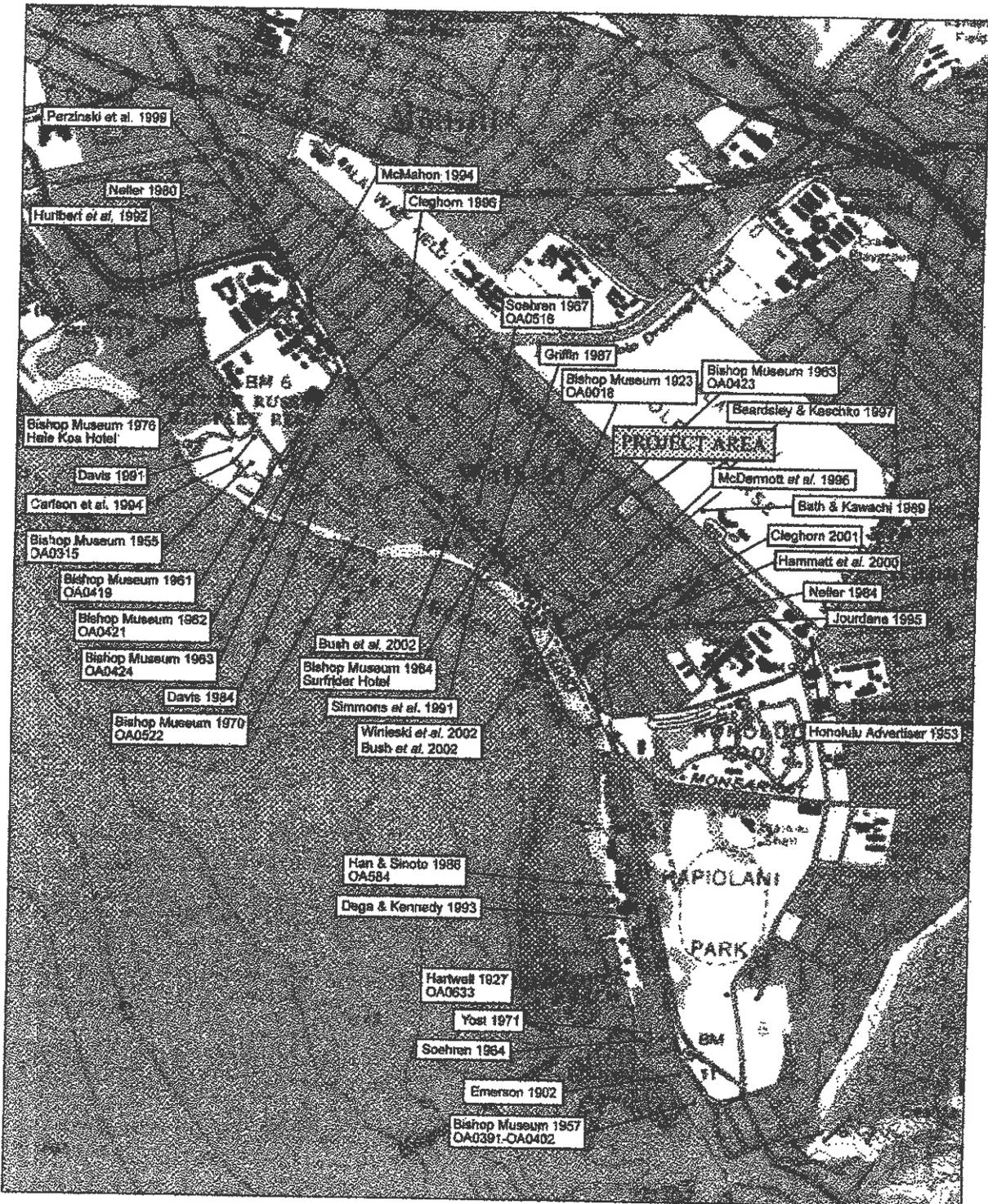


Figure 8. Previous archaeological work in Waikīkī including location of burials and the present project area

Table 1. Previous Archaeological Investigations in Waikiki Ahupua'a

Reference	Investigation	Geographic Location	Findings
McAllister 1933	Island-wide survey	All of O'ahu	Waikiki listed as Site 60.
Neller 1980	Monitoring Report	Hilton Hawaiian Village	Kalia Burial Site: Partial recovery of 3 historic Hawaiian burials, trash pit from 1890's
Bishop Museum 1981	Testing, & Monitoring Report	Halekulani Hotel	Intact cultural deposits found.
Neller 1981	Reconnaissance Survey	Halekulani Hotel	Limited background research on area
Davis 1984	Archaeological Investigation	Halekulani Hotel	48 historic and pre-contact features excavated.
Bishop Museum 1984	Burial Remains List	Waikiki Ahupua'a	Listing of burial remains found in Waikiki at the Bishop Museum
Neller 1984	Narrative Report	Paoakalani Street	Recovery of human skeletons at construction site
Griffin 1987	Inadvertent Burial Discovery	Kalākāua Ave. near corner of Kai'ulani St.	Bones removed and bagged by construction crew, burial found in <i>maka</i> wall of gas pipe excavation.
SHPD 1987	Burial, PA Report	Kalākāua Ave.	From excavation adjacent to Moana Hotel-9901).
Davis 1989	Reconnaissance Survey and Historical Research	Fort DeRussy	Fishponds & other buried features. Sites 4573 thru - 4577 are fishponds, 4570 is a remnant cultural deposit.
Rosendahl 1989	Inventory Survey, Preliminary Report	Fort DeRussy	Historic artifacts, no human remains
Riford 1989	Background Literature Search	TMK: 2-6-014:039	List of literature pertaining to Waikiki area.
Athens 1990	Letter to SHPD	TMK: 2-6-023:025	List of human remains at IARII lab from Pacific Beach Hotel & Barbers Point Generating Station.
Hurst 1990	Historical Literature	Waikiikian Hotel	Background & planning document. No fieldwork.

Reference	Type of Project	Location	Summary
Chigtoji 1991	Assessment	2 parcels, TMK 2-6-24-65-68 and 80-83; 2-6-24:34-40 & 42-45	Formerly part of the 'Ainahu estate; remainder of parcels, former <i>aiwai</i> , <i>kalo</i> , and rice fields; excavations & sampling strategy recommended.
Davis 1991	Monitoring Report	Fort DeRussy	See also Davis 1989. No groundwater contamination found; subsurface features and material remains date to 1780/1790s through the mid-19 <sup>th</sup> century.
Kennedy 1991b	Monitoring Report	TMK: 2-6-022:014 IMAX theatre location	Pollen and bulk-sediment <sup>14</sup> C samples from ponded sediments recovered. 3 <sup>14</sup> C dates and the pollen sequence were inverted.
Simons et al. 1991	Monitoring and Data Recovery	Moana Hotel Area	8 pre-contact burials & pre- and post-contact artifacts recovered
Hurbett 1992	Monitoring Report	TMK: 2-6-008:001	Site -2870 (3 burials) found by Neller in 1980. This report is on testing & monitoring in same area.
Pietrusewsky 1992d	PA Report	Moana Hotel	Right half of human mandible found by hotel guest.
Pietrusewsky 1992e	PA Report	Hamohamo	Human Remains from Hamohamo, Waikiki, O'ahu
Rosendahl 1992	Monitoring Report	Hilton Hawaiian Village	12 historic refuse pits, 3 historic to modern trenches; no further work
Streck 1992	Memorandum for Record	Fort DeRussy	Human burial (probably late pre-contact Hawaiian) found during data recovery excavations
Cleghorn 1993	Inadvertent Burial Discovery	Waikiki Aquarium	Remains of 1 human individual, mandible identified.
Dagher 1993d	Inadvertent Burial Discovery	Waikiki Aquarium	Remains of at least 1 burial found, excavation recommended.
Dega and Kennedy 1993	Inadvertent Burial Discovery	Waikiki Aquarium	Discovery of unidentified bones, remains given to SHPD.

Reference	Type of Investigation	General Location	Findings
Hammatt and Chioigi 1993	Archaeological Assessment	16-Acre Portion of the Ala Wai Golf Course	Pre-contact and early historic occupation layers associated with <i>lo'i</i> system intact below modern fill. Burial testing recommended.
Maly et al. 1994	Arch. & Historical Assessment Study	Convention Center Project Area	Recommend subsurface testing to determine presence or absence of cultural deposits and features.
McMahon 1994	Inadvertent Burial Discovery	Kalākāua & Kuamo'o Street	Miscellaneous bones uncovered in back dirt pile during construction.
Hammatt & Shideler 1995	Sub-surface Inventory Surface	1777 Kalākāua Ave.	No further work recommended at Hawai'i Convention Center site.
Jourdane 1995	Inadvertent Burial Discovery	Paoakalani Avenue	Remains discovered in planted strip between street and sidewalk fronting hotel.
Simons et al. 1995	Data Recovery Excavations	Fort DeRussy	Historic & pre-contact artifacts, artifact debris, & midden from 7 occupation layers. 6 pre-contact cultural features; <i>auwai</i> bunds and channels, fishpond walls & sediments, possible <i>lo'i</i> , hearths.
Cleghorn 1996	Inventory Survey	TMK: 2-6-016:23, 25, 26, 28, 61, 69	7 backhoe trenches excavated, no sites located.
Grant 1996b	Historical Reference	Waikiki	Historical information about Waikiki prior to 1900.
Hammatt and Shideler 1996	Data Recovery	Hawai'i Convention Center	No clear evidence of Kuwili Pond sediments in project area; no further work recommended.
McDermott et al. 1996	Inventory Survey	'Āinahau Estate	Buried remnants of <i>auwai</i> and <i>lo'i</i> and human burial found on 'Āinahau Estate, <sup>14</sup> C dates
Denham et al. 1997	Data Recovery Report	Fort DeRussy	Excavations conducted at fishponds, <sup>14</sup> C dates mid-Seventeenth century
Denham and Pantaleo 1997	Monitoring and Excavations Report	Fort DeRussy	10 subsurface features and 9 burials found. <sup>14</sup> C dates; no SHPD recommendations

Reference	Monitoring & Data Recovery Report	Location	Findings
Beardsley and Kaschko 1997	Monitoring & Data Recovery Report	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposits and 2 human burials. 3 <sup>14</sup> C dates
Hammatt and Chioigioji 1998b	Assessment	King Kalākaua Plaza Phase II	No surface sites, documented human burials, presence of subsurface pre-contact & historic cultural deposits
Hammatt and McDermott 1999	Burial Disinterment Plan and Report	Kalākaua Avenue	Two human burials found
Perzinski et al. 1999	Monitoring Report	Ala Wai Blvd., Kalākaua Ave., & 'Ena Rd.	2 burials found (1 before monitoring); pockets of undisturbed layers exist
Rosendahl 1999	Interim Report: Inventory Survey	Fort DeRussy	This area is part of the old shoreline.
Hammatt and Chioigioji 2000	Archaeological Assessment	Honolulu Zoo Parcel	Monitoring recommended for SW portion of zoo parcel, which may have significant cultural deposits.
LeSuer et al. 2000	Inventory Survey	King Kalākaua Plaza Phase II	Site -5796 has been adversely affected by land alteration Site -4970 adequately documented.
Perzinski et al. 2000a	Burial Findings	Kalākaua Ave. between Kai'ulani & Monsarrat Ave.	44 sets of human remains; 37 disinterred, 7 left in place; believed to be Native Hawaiian, pre-1820.
Cleghorn 2001a,b	Mitigation	Burger King Site	3 incidents of uncovered human remains while locating a buried sewer-line for the ABC's store.
Corbin 2001	Inventory Survey	Hilton Waikikian	No arch. sites were found during excavations
Elmore and Kennedy 2001	Inadvertent Burial Discovery	Royal Hawaiian Hotel	Human remains found during trench excavations for conduit. In situ remains left in place, remains disturbed reentered with others.
McGuire and	Cultural Assessment	Lewers St., Beach Walk, Kālia Rd. &	Waikiki Beach Walk project; Inadvertent burial discovery. Monitoring recommended for all

Previous Archaeological Research

Reference	Type of Investigation	General Location	Findings
Hammatt 2001		Saratoga Rd.	subsurface work
Perzinski and Hammatt 2002	Monitoring Report	Kapi'olani Bandstand	A charcoal layer .most on the SW side of the bandstand, observed; recovered a basalt lamp with a handle from SE end.
Perzinski and Hammatt 2001b	Monitoring Report	Kalākaua Ave., Natorium to Poni Mo'i Road	No cultural layer, artifacts, midden, or human burials were encountered
Rosendahl 2001	Assessment Study	Outrigger Beach Walk	Assessment of previous archaeological & historical literature.
Winieski and Hammatt 2000	Monitoring Report	TMK: 1-2-6-025:000	Possibility that Hawaiian or historic materials and burials may still be present
Borthwick et al. 2002	Inventory Survey	71,000 sq. ft. parcel, TMK: 2-6-016:002	No burials found; absence of dry Jaucus sands indicate that burial finds are unlikely in project area.
Bush and Hammatt 2002	Monitoring Report	Kalākaua Ave., between Ala Moana Blvd. and Kapahulu Ave.	Found 4 human burials, probably pre-contact; several historic trash pits; entire pig within an <i>imu</i> pit (c. A.D. 1641-1671); gleyed muck associated with former ponds.
Calis 2002	Monitoring Report	Lemon Road	No historic deposits, major previous disturbance
Elmore and Kennedy 2002	Monitoring Report	Fort DeRussy	No findings.
Mann and Hammatt 2002	Monitoring Report	Lili'uokalani & Uluniu Avenues	5 burial finds of 6 individuals; two historic trash pits.
Putzi and Clegghorn 2002	Monitoring Report	Hilton Hawaiian Village	No findings during monitoring of trench sewer excavations
Winieski et al. 2002a	Monitoring Report	Kalākaua Ave. between Ka'iulani and	44 human burials encountered, 37 disinterred; buried habitation layer identified, with traditional artifacts, midden, hearths, & charcoal; remnant of Honolulu

Reference	Type of Investigation	General Location	Findings
		Monsarrat Avenues.	Transit trolley system (light rail gauge) found; low-energy alluvial sediments associated with the now channelized <i>muliwai</i> Kukaunahi
Winieski et al. 2002b	Monitoring Report	Kāhiō Beach	Skeletal remains of 10 individuals, 6 disinterred, only 2 in situ. 4 indigenous artifacts, none in situ. Cultural layer, historic seawall.
Bush et al. 2003	Monitoring Report	International Marketplace	Historic trash found.
Tome & Dega 2003	Monitoring Report	Waikīki Marriott	No in situ remains, recommends monitoring if more work is done, 1 isolated not in situ possible human bone fragment.
Tulchin and Hammatt 2003	Arch. & Cultural Impact Assessment	2284 Kalākaua Ave.	Possibility of burials in project area; recommends inventory survey & subsurface testing.

Papa'ena'ena the remains of an adulterer - "all prepared in the customary manner of that time" ('I'i 1959:50-51).

In 1963, two human skulls and other human remains were discovered in a construction trench at 2431 Prince Edward St. (Bishop Museum site Oa-A4-23, cited in Neller 1984). Multiple burials were encountered in 1963 during excavation for the construction of the present Outrigger Canoe Club at the Diamond Head end of Kalākaua Avenue. As reported in a newspaper article on Jan. 24, 1963:

The Outrigger Canoe Club yesterday dedicated its new site [on land adjacent to and leased from the Elks Club], an ancient Hawaiian burial ground in Waikīkī. . . .

Robert Bowen of the Bishop Museum has been working closely with Ernest Souza, Hawaiian Dredging superintendent, on the removal of skeletons unearthed on the site, between the Colony Surf and the Elks Club. . . .

Most of the bodies were buried in the traditional ho'olewa position, with the legs bound tightly against the chest.

One of the skeletons, Bowen said, shows evidence of a successful amputation of the lower forearm, indicating that the Hawaiians knew this kind of operation before the arrival of Europeans.

The ages of the skeletons ranged from children to 40-year-old men and women. The average life span of the Hawaiians at the time was about 32 years [*Honolulu Star-Bulletin*; Jan. 24, 1963: 1A].

A total of 27 burials were encountered (Yost 1971:28). Apparently, no formal archaeological report on the burials was produced.

In 1964, sand dune burials, a traditional Hawaiian mortuary practice, were revealed as beach sand eroded fronting the Surf Rider Hotel (Bishop Museum Site Files).

In 1976, during construction of the Hale Koa Hotel, adjacent to the Hilton Hawaiian Village Hotel, six burials were unearthed, five of apparent pre-contact or early historic age, and one of more recent date (Bishop Museum Site Files).

In 1980, three burials were exposed at the Hilton Hawaiian Village during construction of the hotel's Tapa Tower. Earl Neller of the (then named) State Historic Preservation Program was called in upon discovery of the burials and conducted fieldwork limited to three brief inspection of the project area. Neller's (1980) report noted:

The bones from three Hawaiian burials were partially recovered; one belonged to a young adult male, one a young adult female, and one was represented by a single bone. An old map showed that rapid shoreline accretion had occurred in the area during the 1800s, and that the beach in the construction area was not very old. It is possible the burials date back to the smallpox epidemic of 1853. It is likely that burials will continue to be found in the area. It is also possible that early Hawaiian sites exist farther inland, beneath Mō'ili'ili, adjacent to where the shoreline would have been 1000 years ago. [Neller 1980:5]

Neller also documented the presence of trash pits, including one from the 1890s which contained "a large percentage of luxury items, including porcelain table wares imported from China, Japan, the United States, and Europe" (Neller 1980:5). He further notes:

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits related to the different ethnic and social groups that occupied Waikīkī over the last 200 years [Neller 1980:5].

Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekūlani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from pre-contact Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date . . . settlement in Waikīkī to no later than the mid-1600s" (Neller 1980:5). Just as significant to Davis was the collection of historic era material at the Halekūlani site; he states:

[The] Halekūlani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikīkī, Honolulu, or in any of the other urbanized areas of Hawai'i [Neller 1980:5].

In 1983, at the Lili'uokalani Gardens condominium construction site, seven traditional Hawaiian burials were recovered (Neller 1984). This had been the site of a bungalow owned by Queen Lili'uokalani at the end of the nineteenth century. In addition to the burials, the site contained plentiful historic artifacts, and a pre-historic cultural layer pre-dating the burials.

In 1985, International Archaeological Research Institute, Inc. performed archaeological monitoring and data recovery at the Pacific Beach Hotel Office Annex (Beardsley and Kaschko 1997). Two traditional Hawaiian burials were discovered and removed. Intact buried traditional Hawaiian cultural deposits, including a late pre-contact habitation layer, contained pits, firepits, post molds, artifacts, and food debris. The artifacts included basalt and volcanic glass flakes and cores, a basalt adze and adze fragments, worked pearl shells, a coral file and abraders, and a pearl shell fishhook fragment. Additionally, a late nineteenth century trash pit was discovered, which contained a variety of ceramics, bottles, and other materials.

During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph.D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikīkī. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered during the monitoring, all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The three partial burials reported by Neller (1980) were found within that project area. No further burials were encountered during the PHRI field work (Hurlbett et al. 1992).

In 1987, a human burial was discovered and removed at the intersection of Kalākaua Avenue and Ka‘iulani Street during excavations for a gas pipe fronting the Moana Hotel (Griffin 1987).

In 1988, the Moana Hotel Historical Rehabilitation Project (Simons et. al. 1991) encountered human remains that amounted to at least 17 individuals. Based on stratigraphic association these burials were interred over time as the land form at the site changed. The sediment surrounding these burials yielded traditional midden and artifact assemblages. The burials and human remains were found in the Banyan Court and beneath the hotel itself.

Davis' (1989, 1991) excavation and monitoring work at Fort DeRussy documented substantial subsurface archaeological deposits, pre-contact, historic, and modern. These deposits included buried fishpond sediments, 'auwai [irrigation ditch] sediments, midden, and artifact enriched sediments, structural remains such as post holes and fire pits, historic trash pits, and a human burial. Davis' (1991) report documents human activity in the Fort DeRussy beach front area from the sixteenth century to the present.

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simons et al. 1995). BioSystems research documents the development and expansion of the fishpond and 'auwai system in this area. The 'auwai system was entered on the State Inventory of Historic Places (SIHP) as State Site 50-80-14-4970. As indicated on the 1881 map by S. E. Bishop discussed above, this 'auwai enters the Fort DeRussy grounds through the present project area). Remains of the fishpond and 'auwai deposits, as well as habitation deposits, were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late pre-contact/early historic subsurface deposits, even amidst the development of Waikīkī.

In 1992, Hurlbett et al. (1992) conducted additional monitoring and testing in this same area as Neller (1980). The state site -2870 was given to the three burials first found by Neller. Additional subsurface features, postdating 1881, were found during trenching operations.

The realignment of Kālia Road at Fort DeRussy in 1993 uncovered approximately 40 human burials. A large majority of these remains were recovered in a large communal burial feature (Carlson et. al. 1994). The monitoring and excavations associated with this realignment uncovered a cultural enriched layer which contained post holes.

In 1993, during construction activities at the Waikīkī Aquarium, fragmentary human remains were discovered scattered in a back dirt pile, although no burial pit was identified (Dega and Kennedy 1993).

On April 28, 1994, an inadvertent burial discovery was made during excavation for a water line at the intersection of Kalākaua Avenue and Kuamo‘o Street (just *mauka* of Fort. DeRussy). These remains represented a single individual (McMahon 1994).

In 1995, the remains of one individual were discovered in situ during construction activities on Paoakalani Street, fronting the Waikīkī Sunset Hotel (Jourdane 1995).

In 1996, Pacific Legacy, Inc. conducted an archaeological inventory survey of the block bounded by Kalākaua Avenue, Kūhiō Avenue, ‘Ōlohana Street, and Kālaimoku Street (Cleghorn 1996). The survey included excavation of seven backhoe trenches. The subsurface testing indicated that:

... this area was extremely wet and probably marshy. This type of environment was not conducive for traditional economic practices. ... The current project area appears to have been unused because it was too wet and marshy. Several peat deposits, containing the preserved remains of organic plant materials were discovered and sampled. These deposits have the potential to add to our knowledge of the paleoenvironment of the area [Cleghorn 1996:15].

The report concluded that no further archaeological investigations of the parcel were warranted since "no potentially significant traditional sites or deposits were found", but cautioned of the "possibility, however remote in this instance, that human burials may be encountered during large scale excavations" (Cleghorn 1996:15).

In 1996, a traditional Hawaiian burial was discovered and left in place during test excavations on two lots at Lili'uokalani Avenue and Tusitala Street southeast of the current project area (McDermott et al. 1996). Cultural Surveys Hawaii's research suggested that a portion of the study lots -specifically TMK 2-6-24:36-40 - was formerly a corner of the 'Āinahau Estate. A total of 2 indigenous and 15 historic artifacts were collected from the former 'Āinahau Estate portion of the project area. Cultural Surveys Hawaii's research further suggested that the remainder of the present study lots comprise a former 'auwai and taro and rice fields.

In 1997, during archaeological monitoring by CSH for the Waikīkī Force Main Replacement project, scattered human bones were encountered on 'Ōhua Street (Winieski and Hammatt 2000). These included the proximal end and mid-shaft of a human tibia, a patella, and the distal end and mid-shaft of a femur. These remains occurred within a coralline sand matrix which had been heavily disturbed by previous construction, and by the on-going construction project. No precise location for the original burial site was identified.

In April 1999, two human burials were inadvertently encountered near the intersection of Ena Road and Kalākaua Avenue during excavation activities for the first phase of the Waikīkī Anti-Crime Lighting Improvements Project (Perzinski et al. 1999).

From July 1999 to October 2000, four sets of human remains were inadvertently encountered during excavation activities relating to the Waikīkī Anti-Crime Street Lighting Improvement project along portions of Kalākaua Avenue (Bush and Hammatt 2002). The first burial was encountered on Kalākaua Avenue, just before Dukes Lane and assigned State Site 50-80-14-5864. The burial was left in place however, and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka'iulani Avenue. Earlier, during archaeological monitoring for the water mains project, two burials were encountered in the immediate area of the second burial find and assigned state site 50-80-14-5856 features A and B. Due to the close proximity to the previously encountered burials, the second burial was assigned the same State Site 50-80-14-5856, and designated feature C. Burials 3 and 4 were recovered at the intersection of Kalākaua and Ke'ālohilani Avenues, near an area of concentrated burials assigned State Site 50-80-14-5860 during monitoring for the water mains project. Consequently, burials 3 and 4 were also assigned State Site 50-80-14-5860, features U and V. In addition to human remains, pre-contact deposits, historic and modern rubbish concentrations, and pond sediments were also encountered.

From November, 1999, to May, 2000, 44 human burials, with associated cultural deposits, were encountered during excavation for a waterline project on Kalākaua Avenue between the Ka'iulani and 'Ōhua Avenues (Winieski et al. 2002a). Except for previously disturbed partial

burials in fill, the bulk of the burials were encountered within a coralline sand matrix. Additionally, a major cultural layer was found and documented.

From January, 2000, to October 2000, 10 human burials were encountered during archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project (Winieski et al. 2002b). Six of these were located within a coralline sand matrix. The four others were partial and previously disturbed within fill. Additionally, a major cultural layer was found and documented, apparently part of the same major cultural layer associated with the waterline project between Ka'iulani and 'Ōhua Avenues.

In April 2001 human remains were inadvertently disturbed during excavations associated with the construction of a spa at the Royal Hawaiian Hotel (Ehmore et al. 2001). Archaeological Consultants of the Pacific, Inc was responsible for the documentation of the remainder of the burial and carrying out the instruction of DLNR/ SHPD. The burial and place it was encountered was assigned State Site # 50-80-14-5937. The burial was encountered on the North side of the hotel in the spa garden. The burial was partially disturbed through the thoracic region and anatomical left side. The disturbed remains were wrapped in muslin cloth and placed with the in-situ remains and reburied. The burial was recorded as a post contact burial based on artifacts associated with it. The associated artifacts included one shell button found *in-situ* and three more shell buttons found in the disturbed material. A single drilled dog tooth was found also during excavation but could not be positively associated with the site.

On May 2nd and June 14th, 2001, two in situ and two previously disturbed human burials were encountered at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of 'Ōhua Street and Kalākaua Avenue (Cleghorn 2001a and 2001b). Because of their proximity to five burials encountered during the Kalākaua 16" Water Main Installation (Winieski et al. 2002a), they were included in the previously assigned State Site 50-80-14-5861. Three of these burials were recovered, and one was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer was also observed which contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments were also encountered within fill materials.

In 2001 and 2002, CSH (Mann and Hammatt 2002) performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili'uokalani Avenue. During the course of monitoring, five burials finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these inadvertent finds were found in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no State Site number(s) be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned State Site #50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was recorded from Lili'uokalani Avenue. Since three burials had been found in the immediate vicinity during a previous project (Winieski et al. 2002b) and had been assigned to Site #50-80-14-5859, the two new individuals were recorded as Feature H of this previously recorded site.

In summary, past archaeological research, from the beginning of the twentieth century to the present has produced evidence that traditional Hawaiian cultural deposits, historic trash deposits, and, most notably, human burials, do exist throughout the breadth of the Waikīkī area.

#### IV. PREDICTIVE MODEL

The *ahupua'a* of Waikīkī in the centuries before the arrival of Europeans was a well-used locale with abundant natural and cultivated resources – including an expansive system of irrigated taro fields and numerous fishponds – supporting a large population that included the highest-ranking *ali'i* (Hawaiian royalty). In the second half of the nineteenth century, after a period of depopulation and desuetude, Waikīkī was reanimated by the Hawaiian *ali'i* and the foreigners residing there, and by farmers continuing to work the irrigated field system that had been converted from taro to rice. This farming continued up to the first decades of the twentieth century when the newly-constructed Ala Wai Canal drained the remaining ponds and irrigated fields of Waikīkī.

Archaeological reports have documented human burials – both pre-contact Hawaiian and historic – throughout the breadth of Waikīkī as far *mauka* as the Ala Wai Golf Course. Several archaeological studies have recorded the presence within Waikīkī of subsurface cultural deposits of both pre-contact Hawaiian and historic provenance. These deposits had remained intact despite the years of construction activity that have altered the entire Waikīkī area. It is possible that intact pre-contact and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project parcel. Other possible deposits may be associated with nineteenth century Hawaiian royalty.

Based on Māhele documents and information available from nineteenth century maps, the following geography and land use within the present project area at the mid-nineteenth century is indicated: the *mauka* or northeast portion comprised a portion of taro *lo'i* belonging to the king; the central section comprised a portion of 'Āpuakēhau Stream in which taro was also growing; and the *makai* or southwest half comprised habitation area as well as *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. The map also shows the project area straddling two Waikīkī *'ili* which appear to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in Auaukai. Kalāmanamana was one of the areas where the chief Kalamakua constructed the "large pond fields" of taro that once covered the Waikīkī plain. Some of the Kalāmanamana *lo'i* are shown in Figure 3. It is believed that agricultural land use within the northeast section of the project area, perhaps with former taro fields planted in rice, continued until the construction of the Ala Wai Drainage Canal between 1921 and 1928. This portion of the study area could yield datable material associated with the development of irrigated agriculture in the *ahupua'a* of Waikīkī.

Cultural Surveys Hawaii's research also suggests that the *makai* half of the present project area was formerly the site of at least a portion of the main houses of the 'Āinahau estate house, associated with important personages in Hawaiian history. In the final quarter of the nineteenth century the portion of the project area *makai* or southwest of 'Āpuakēhau Stream was purchased by Archibald Cleghorn (1835-1910) and transformed into his estate. It is believed that a portion of the Victorian-style house he built in the 1890s was located in the present project area. Archaeological testing in this area could also uncover significant trash and refuse pits.

## V. RESULTS OF FIELDWORK

### A. Summary of Trenches

The archaeological inventory survey fieldwork consisted of excavation of 14 backhoe trenches throughout the project area (Figure 9) and documentation of the sediment profiles and archaeological features found. The sediments and features exposed confirmed the presence of historical features recorded in historical texts and on early survey maps. Four general stratigraphic layers were identified within the project area. Each of these primary layers contains sub-layers that are time or activity specific and are described below in the context of associated events.

The uppermost layer (Stratum I) is comprised of various introduced sediments and fill layers that originated off the property being introduced on one hand to raise the level of the property and from another view to dispose of waste material from other locations.

One prominent fill layer is a specific time marker derived from the dredging of the Ala Wai canal that began in 1921 and was completed in 1928. This layer is present in the eastern or *mauka* end of the project area especially filling in the low lying channel of 'Āpuakēhau Stream (in Trenches 4, 8 and 11 which bisect the stream in "Area II" of Figure 9), and covering the old taro ponds adjacent to the *mauka* side of 'Āpuakēhau Stream (especially in Trenches 13 and 14 in "Area III" of Figure 9), but not to any significant degree to the *makai* side of the stream. This sediment consists primarily of horizontal microstratigraphic bands of very fine coralline silt with coral pebble inclusions and lenses of coral gravel resulting from hydraulic dredging and pumping episodes.

Additional fill layers comprising at least the upper 0.6 meters of sediment are present across the entire parcel. This fill is of unknown origin. At the west end of the property the fill material is a sandy clay loam (Trenches 1-3 and 5-6) while in the central-west area (Trenches 9 and 10) the fill is a fine loamy sediment full of small boulders of fine grain basalt, cement pieces and some granite. In Trench 10 this fill layer lies upon a concrete slab at about 0.75 m below the present surface. The slab is probably a foundation of the structures shown on the 1927 and 1950 fire insurance maps (refer to Figure 6 and Figure 7). In Trench 9 this same bouldery fill layer extends in a pit to the depth of the ground water at about 1.5 m below the surface and within the upper 0.20 m of the pit fill fragments of human skeletal material was found. These bone fragments, the distal end of an ulna and mid-section of a femur, appear to have been introduced to the project property as part of the bouldery fill in these two trenches. SHPD was notified of this find and the appropriate processes have been initiated following Hawai'i Revised Statutes Chapter 6E-43 and HAR Section 13-300.

The surface of Stratum II has a time line of about 1872 to 1950. A charcoal lens in Trench 4 caps the Stratum II and may be related to disposal of the remains of Cleghorn's homes here that burned down in 1921. The concrete slab from 1927 in Trench 10 lies upon the surface of Stratum II. In Trench 1 the Stratum II layer is overlain by 10 cm of fine wind blown coralline sand, a hiatus of activity marking time very early in the twentieth century at 'Āinahau.

The Stratum II layer at the western side of the project property is an A horizon approximately 0.50 m to 1.0 m thick developed in a C horizon deposit (Stratum III) of coral sand extending to the underlying coral reef 0.50 m below ground water. A radiocarbon date from charcoal near the bottom of Stratum II in Trench 1 (refer to Figure 10) shows that this cultural layer dates from AD

1290 to 1530 at its inception and continues to the early 20<sup>th</sup> century as noted above. Although a cultural layer with charcoal flecking and dark staining throughout and a few pit features of possible postholes and small fireplaces the layer is in general lacking in midden and artifacts as might be found in high use areas.

The Stratum II and Stratum III sediments at the east end of the project property (exemplified in Trenches 7 and 12) are very different from the west end. They are comprised of rich, loamy, sediments with iron staining from decomposing basaltic pebbles and cobbles indicative of waterlogged agricultural soils typical of taro cultivation in ponded fields (refer to Figure 16 and Figure 21). Stratum II extends from less than 0.50 m below the present surface to over 1.25 m deep. Stratum III is of similar composition to Stratum II only with more clay and extending below the ground water level to the coarse gley colored coralline sand on the surface of the reef formation (Stratum IV).

Stratum II and III are deltaic sediments derived from the Manoa, Palolo and Makiki Streams and captured by stoneworks of the taro lo'i system put in place between the mountains and Waikiki probably in the 6<sup>th</sup> century AD. One of these stoneworks, a 3 to 5 course high wall constructed of small, water rounded, basalt boulders, was found at the base of Trench 4 and 7. The wall, built upon the basal coral reef formation, was part of the original development of these agricultural works. The nineteenth century expression of this stone wall is simply a soil embankment well above the buried wall, but it still serves the same purpose separating the lo'i on its mauka side from 'Āpuakēhau stream on its makai side. The embankment is recorded on the 1881 Bishop map (refer to Figure 3)

'Āpuakēhau Stream is identified easily in Trenches 4, 8, and 11 which bisect portions of the former stream (refer to Figure 9). The stratigraphic profile of the streambed clearly shows a trough-shaped cross section with clayey sediments at a slightly lower elevation than the surface of the agricultural fields to mauka. The streambed was filled with fine coralline sediments from the dredging the 1920s of the Ala Wai Canal, which was subsequently covered with other fill of terrestrial origin imported to the project parcel from unknown locations.

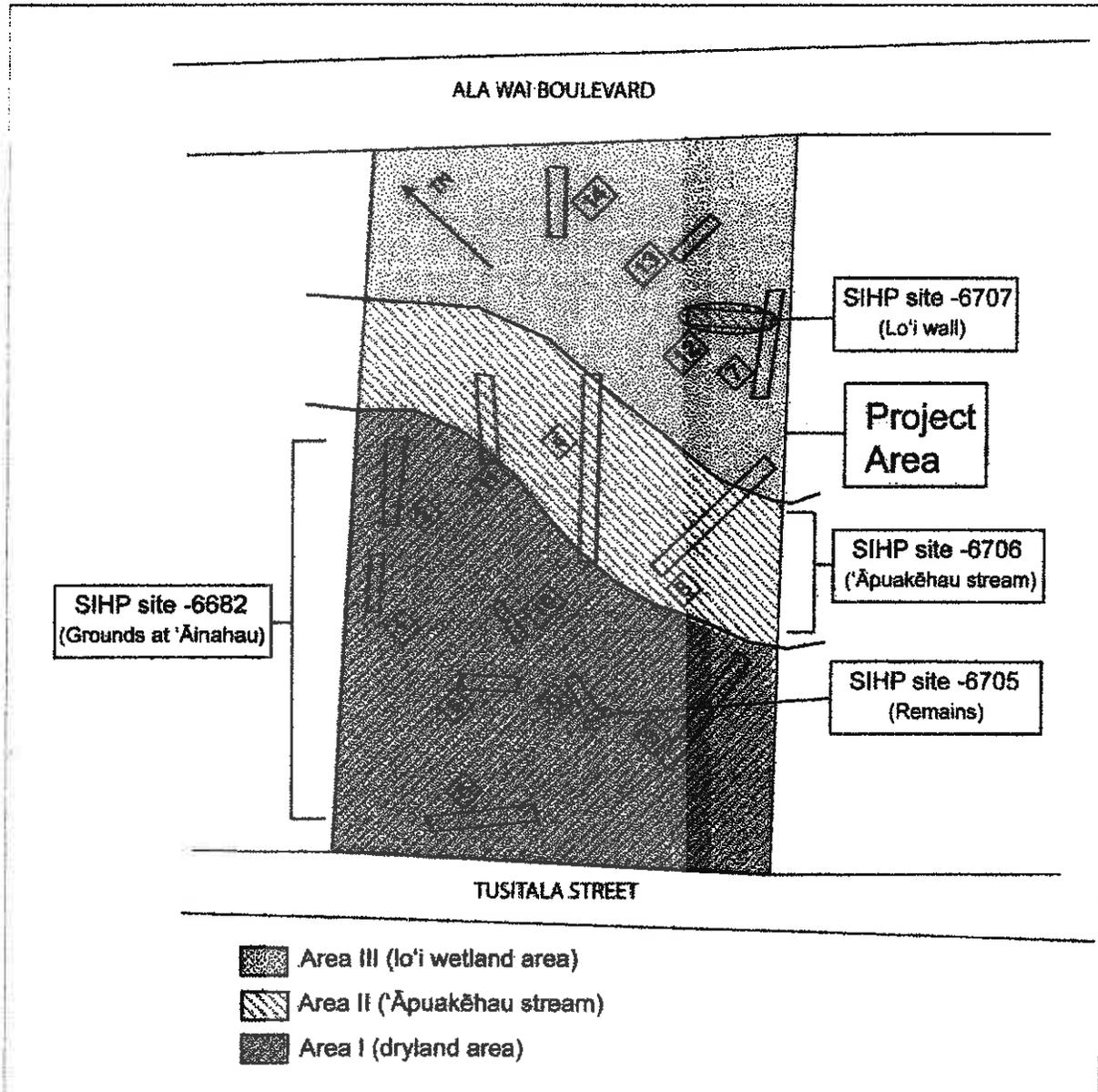


Figure 9. Map of project area showing the locations of the three distinct stratigraphic areas, Trenches 1-14, and SIHP Sites

## B. Trench Descriptions

The following is a description of each backhoe trench excavated during the inventory survey. A sidewall profile and an in depth stratigraphic description has been included for each trench. Photographs of the project area (Figure 24) and each trench (Figures 25-39) are included in Section IX, entitled "Photo Appendix."

### Trench 1

Trench 1 was excavated in the southwestern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 2, 3, 5, 6, 9, and 10, are in the vicinity of the former Cleghorn estate, 'Āinahau. Trench 1 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 1 measured 4.6 m (15.1 feet), had a maximum depth of 160 cm (5.2 feet), a maximum width of 1 m (3.3 ft), and was oriented north-south (37° magnetic north). Three strata were noted and described in the excavation (Figure 10). Stratum I was identified as imported fill. The surface associated with 'Āinahau was documented as the Buried A Horizon, Stratum IIA/IIB. The trench was excavated to the water table.

Two charred wood samples were collected from the Buried A Horizon (Stratum IIA/IIB). Sample #1 was collected at a depth of 110-120 cmbs, weighing 4.6 g. Sample #2, sent for radio carbon dating, was collected at a depth of 90-100 cmbs, weighing 9.5 g. A photograph of Trench 1 (Figure 25) is included in the Photo Appendix.

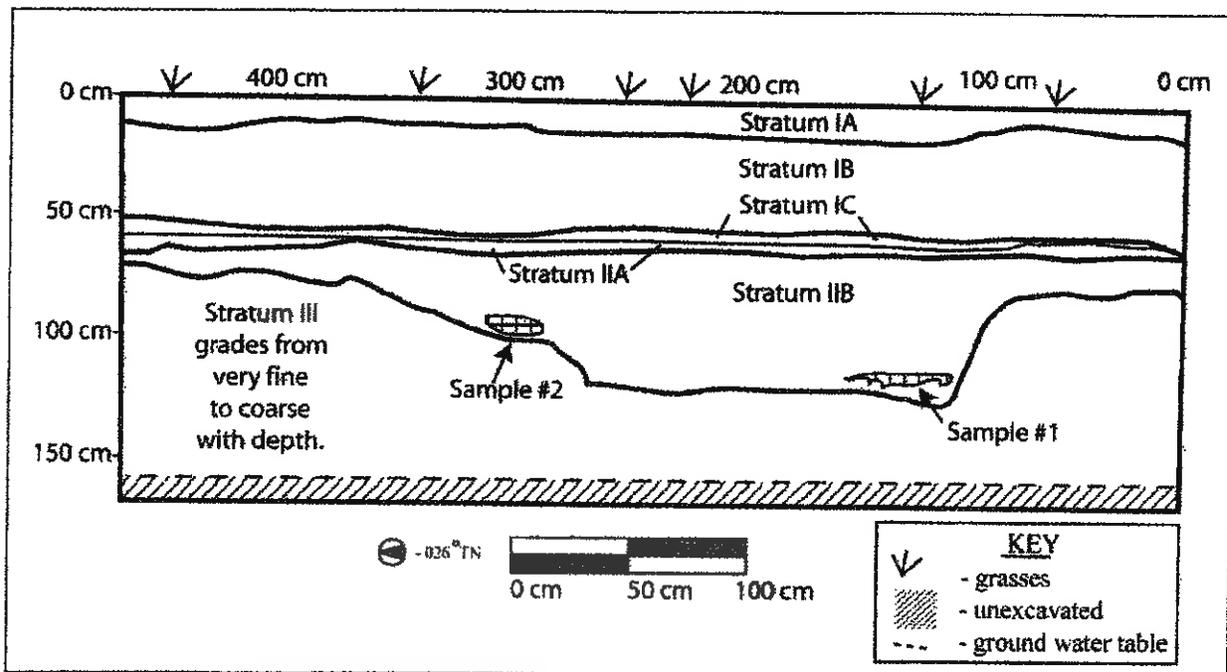


Figure 10. Profile of east wall of Trench 1

- Stratum IA: 0-10 cmbs; Modern A Horizon in fill; 10 YR 3/4, dark yellowish brown; silt loam; moderate, fine to medium, subangular blocky structure; weakly coherent dry consistency; slightly sticky wet consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments; many rootlets
- Stratum IB: 10-55 cmbs; Fill; 10 YR 3/3, dark brown; silty clay loam; strong, fine/medium/coarse, subangular blocky structure; hard dry consistency; slightly sticky wet consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous of sediments; few rootlets
- Stratum IC: 55-60 cmbs; Eolian sand; 10 YR 6/4, light yellowish brown; fine, structureless, fine, single grain structure; loose dry consistency; non-sticky wet consistency; non-plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments
- Stratum IIA: 60-62 cmbs; Buried A Horizon; 10 YR 3/3, very dark grayish brown; sandy clay; weak, medium, blocky structure; loose dry consistency; sticky wet consistency; plastic; weak cementation; abrupt smooth lower boundary; mixed marine and terrigenous sediments; surface associated with 'Aina Hau
- Stratum IIB: 63-125 cmbs; Buried A Horizon; 10 YR 4/2, dark grayish brown to 10 YR 6/2, light brownish gray; loamy sand; medium, single grain structure; loose moist consistency; slightly plastic; very weak; clear wavy lower boundary; mixed marine and terrigenous sediments; basalt flakes common; few charcoal fragments, coral pebbles, very few basalt pebbles; microrootlets common; historic, pre-contact A horizon
- Stratum III: 75-160 cmbs; C Horizon; 10 YR 8/3, very pale brown; very fine to coarse, coralline sand; structureless, loose dry consistency; non-plastic; no cementation; Unknown lower boundary; marine marine and terrigenous sediments; sand grades from very fine at the top of the layer to coarse at the ground water level

## Trench 2

Adjacent to Trench 1, Trench 2 was also excavated in the southwestern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 1, 3, 5, 6, 9, and 10, are in the vicinity of the former Cleghorn estate. Trench 2 was excavated to document the stratigraphy of the former 'Ainahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 2 measured 5.0 m (16.4 feet). It had a maximum depth of 170 cm (5.6 feet) and a maximum width of 1 m (3.3 ft). The trench and was oriented north-south (35° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 11). Stratum I was identified as imported historic fill, with the exception of Stratum IC (55-60 cmbs), described as a fine sand "eolian non-conformity." The surface associated with 'Ainahau was documented as the Buried A Horizon, Stratum IIA/IIB. A photograph of Trench 2 (Figure 26) is included in the Photo Appendix.

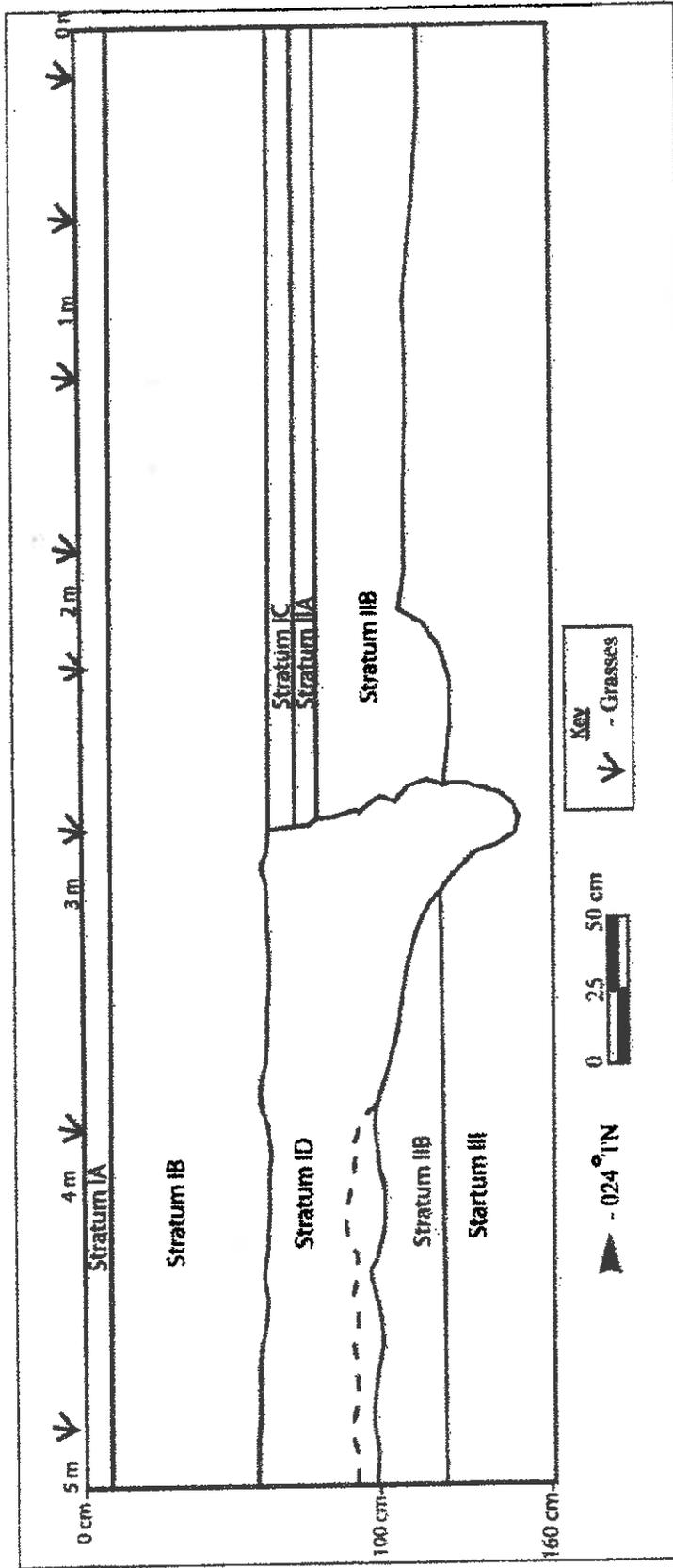


Figure 11. Profile of east wall of Trench 2

- Stratum IA: 0-10 cmbs; Modern A Horizon in fill; 10 YR 3/4, dark yellowish brown; silt loam; moderate, fine to medium, subangular blocky structure; weakly coherent dry consistency; slightly sticky wet consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments
- Stratum IB: 10-65 cmbs; Fill; 10 YR 3/3, dark brown; silty clay loam; strong, fine/medium/coarse, subangular blocky structure; hard dry consistency; slightly sticky wet consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments
- Stratum IC: 65-75 cmbs; Fill; 10 YR 3/4, dark yellowish brown; sandy clay; weak, fine, subangular blocky structure; friable moist consistency; sticky wet consistency; slightly plastic; no cementation; abrupt smooth lower boundary; mixed marine and terrigenous sediments
- Stratum IC: (Lense) 95-100 cmbs; Fill; 10 YR, 6/4, light yellowish brown; fine sand; no structure; dry loose consistency; wet non-sticky consistency; non plastic; no cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments; coral sand
- Stratum ID: 60-95 cmbs; Fill; 10 YR, 3/3, dark brown, to 10 YR, 4/2, dark grayish brown, with large mottles of 10 YR, 3.1, very dark gray, clay; sandy loam; no structure; moist friable consistency; non plastic; weak cementation; abrupt irregular lower boundary; mixed marine and terrigenous sediments
- Stratum IIA: 75-80 cmbs; Buried A Horizon; 10 YR, 2/2, very dark brown; sandy clay loam; weak coarse crumb structure; moist friable consistency; wet slightly sticky consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments; charcoal bits throughout, few basalt pebbles, few coral pebbles
- Stratum IIB: 80-125 cmbs; Buried A Horizon; 10 YR, 4/2, dark grayish brown, to 10 YR, 6/2, light brownish gray; sandy clay loam; no structure; moist friable consistency; wet slightly sticky consistency; slightly plastic; weak cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments; charcoal particles, coral
- Stratum III 117-170 cmbs; C Horizon; 10 YR 8/3, very pale brown; sand, fine-coarse; no structure; moist loose consistency; non plastic; no cementation; abrupt wavy lower boundary; marine marine and terrigenous sediments

### Trench 3

Trench 3 was excavated in the southern corner of the project area (Figure 12). Historic maps and documentation indicate that this trench, as well as Trenches 1, 3, 5, 6, 9, and 10, are in the vicinity of the former Cleghorn estate. Trench 3 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 3 measured 9.1 m (29.9 feet), had a maximum depth of 150 cm (4.9 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented southwest-southeast (236° true north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 12). The stratigraphy was similar to that found in Trenches 1 and 2: Stratum I was identified as imported historic fill; Stratum II as the Buried A Horizon surface associated with 'Āinahau; and Stratum III as sterile coralline sand. A photograph of Trench 3 (Figure 27) is included in the Photo Appendix.

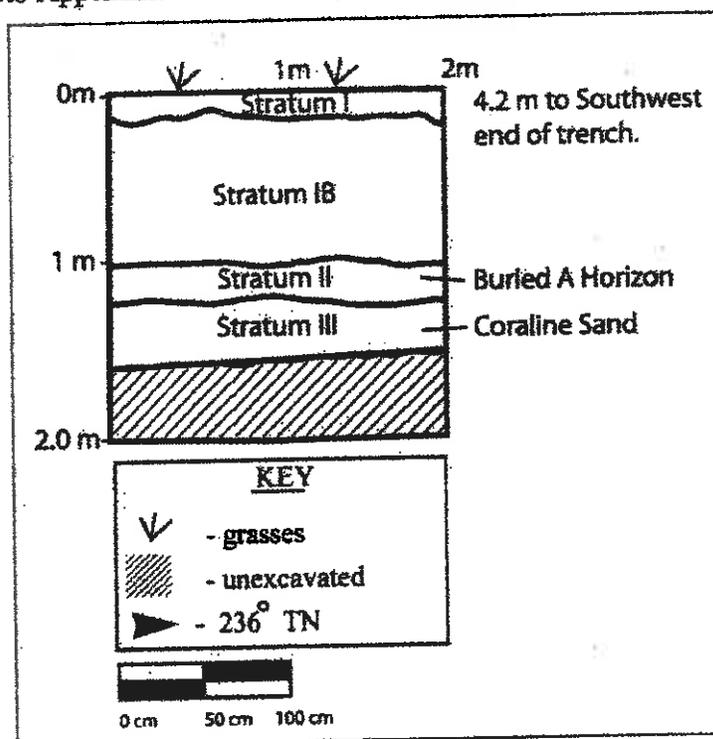


Figure 12. Profile of southeast wall of Trench 3

- Stratum IA: 0-5/7 cmbs; Fill; 10 YR 3/2, very dark grayish brown; clay loam; weak, fine/medium, crumb structure; loose dry consistency; slightly plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; imported top soil
- Stratum IB: 5/7-100 cmbs; Fill; 10 YR 3/3, dark brown; sandy loam; structureless, weakly coherent dry consistency; slightly plastic; no cementation; clear smooth lower boundary; terrestrial marine and terrigenous sediments
- Stratum II: 100-119/120 cmbs; Buried A Horizon; 10 YR 3/1, very dark gray; sandy loam; structureless, weakly coherent moist consistency; slightly plastic/plastic; no cementation; abrupt smooth lower boundary; mixed marine and terrigenous sediments; no artifacts observed; amount of C14 not worth sampling
- Stratum III: 120-150/153 cmbs; 10 YR 8/3, fine to medium, sand; structureless, loose dry consistency; non-plastic; no cementation; N/A lower boundary; terrestrial marine and terrigenous sediments; unaltered marine shell; sterile coralline beach sand

#### Trench 4

Trench 4 was excavated in the center of the project area (Figure 9), in the area of the former 'Āpuakēhau Stream (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 8 and 11 are in the vicinity of the former 'Āpuakēhau Stream. Trench 4 was excavated to document the stratigraphy of the former 'Āpuakēhau Stream.

Trench 4 measured 17 m (55.7 ft), had a maximum depth of 2.0 m (6.6 ft) and a maximum width of 1.0 m (3.3 ft). It was oriented NE/SW (48° true north) and was excavated to ground water. Six distinct strata were observed in the excavation (Figure 13). Stratum I, II, III, and IV were of historic imported fill, most likely dating to the construction of the Ala Wai canal and subsequent filling of the 'Āpuakēhau Stream. Microstratigraphic layers were present, particularly in Stratum IV, and are most likely the result of hydraulic dredging episodes during the Ala Wai land reclamation projects. Stratum II contains weathered minerals of yellowish red color, indicative of fluctuating dry and wet conditions.

Three charred wood samples were collected from the elongate semi-horizontal charcoal lense found in Stratum III, one of which was sent for AMS radiocarbon dating. The first sample was collected at a depth of 80-90 cmbs and weighed 103.9 g; the second was collected at a depth of 137 cmbs and weighed 0.3 g; the third, which was sent for radiocarbon dating was collected at a depth of 150 cmbs and weighed 0.1 g. A photograph of Trench 4 (Figure 28) is included in the Photo Appendix.

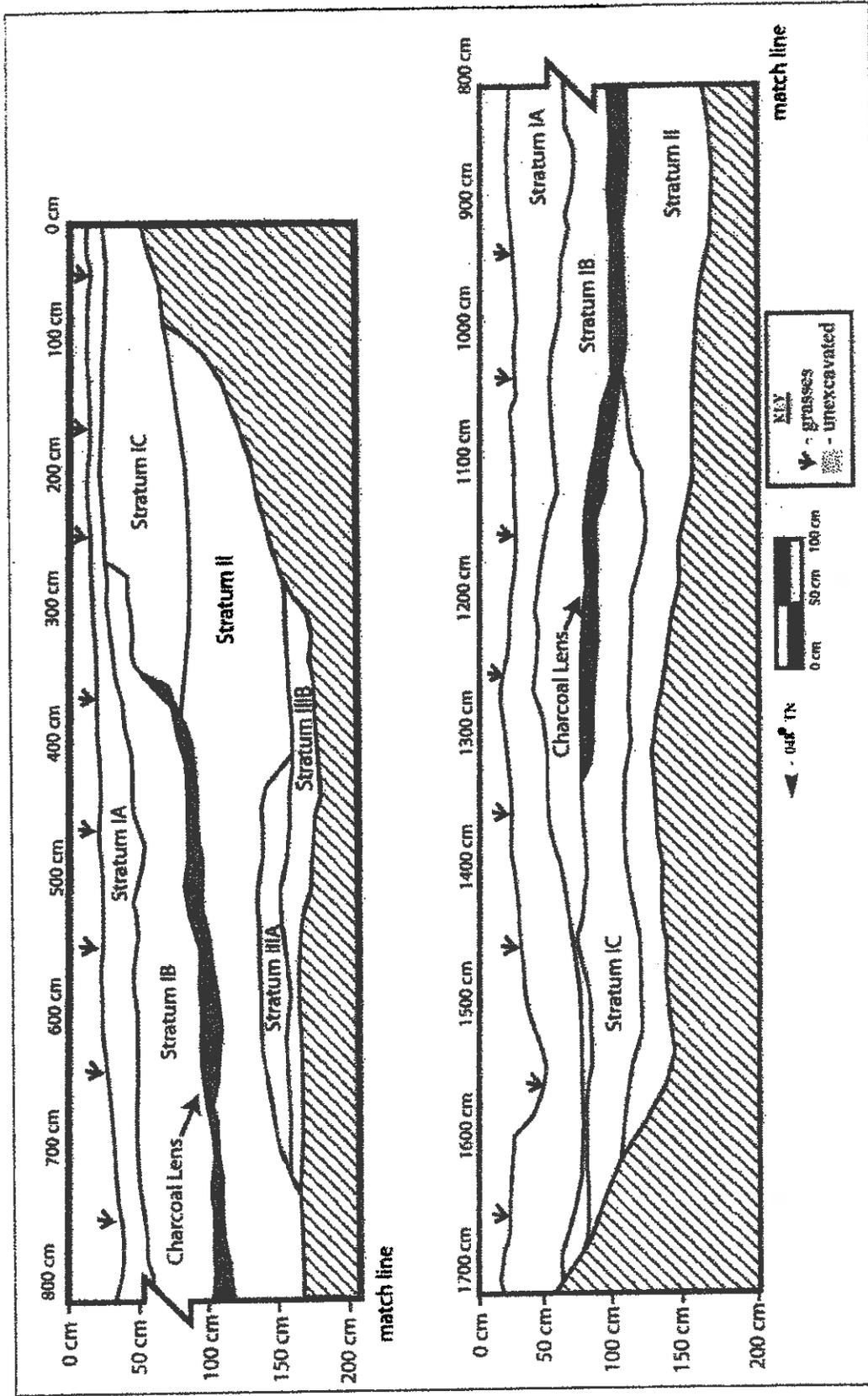


Figure 13. Profile of east wall of Trench 4

- Stratum IA: 0-73 cmbs; Modern A Horizon in fill; 10 YR 3/3, dark brown; medium to coarse, sand; structureless, loose dry consistency; slightly plastic; no cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; roots and rootlets
- Stratum IB: 29-110 cmbs; Fill Horizon; 7.5 YR 6/4, light brown; fine, silt; structureless, loose dry consistency; slightly plastic; no cementation; abrupt irregular lower boundary; mixed marine and terrigenous sediments; <2mm sized marine shell; mainly horizontal microlayers
- Stratum IC: 24-128 cmbs; Fill; 10 YR 2/2, very dark brown; medium to coarse, silt loam; structureless, loose dry consistency; non-plastic; no cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; <1% marine shell by volume; contains weathered minerals of 5 YR 5/8 yellowish red color
- Stratum II: 74-170 cmbs; Buried A Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless, very firm moist consistency; slightly plastic; no cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; contains elongate semi-horizontal charcoal lens and broken glass bottles
- Stratum IIIA: 150-172 cmbs; C Horizon; 10 YR 3/6, dark yellowish brown; fine, sandy clay; structureless, very friable moist consistency; slightly plastic; no cementation; diffuse wavy lower boundary; mixed marine and terrigenous sediments; roots and rootlets
- Stratum IIIB: 150-170 cmbs; C Horizon; 5 YR 5/6, yellowish red; fine, sand/sand coralline; structureless, loose moist consistency; non-plastic; no cementation; N/A N/A lower boundary; marine marine and terrigenous sediments; charcoal present in uppermost portion of stratum; roots

### Trench 5

Trench 5 was excavated in the southwestern corner of the project area (Figure 9), bordering and approximately parallel to Tusitala Street. Historic maps and documentation indicate that this trench, as well as Trenches 1, 2, 3, 6, 9, and 10, are in the vicinity of the former Cleghorn estate, 'Āinahau. Trench 5 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 5 measured 8.8 m (28.9 feet), had a maximum depth of 2 m (6.6 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented SW/NE (317° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 14). The stratigraphy was similar to that found in Trenches 1 and 2. Strata IA and IB were identified as imported historic fill; Stratum II was identified as the Buried A Horizon surface associated with 'Āinahau; Stratum III was identified as sterile coralline sand.

A charred wood lense (Feature 3) was documented on top of the Buried A horizon of Stratum II and a charred wood sample was collected from this lense at a depth 60-65 cmbs with a weight of 140.1 g. In addition, two pit features (Feature 1 and Feature 2), probable post holes, extend from the bottom of Stratum II into the sterile coralline sand of Stratum III. The sediments of the two features are identical to the description of Stratum II. One charcoal sample was collected from each of these features.

The sample from Feature 1, sent for radiocarbon dating, was collected at 85-119 cmbs and weighed 36.5 g; the sample taken from Feature 2 was collected at a depth of 85-128 cmbs and weighed 7.4 g. A photograph of Trench 5 (Figure 29) is included in the Photo Appendix.

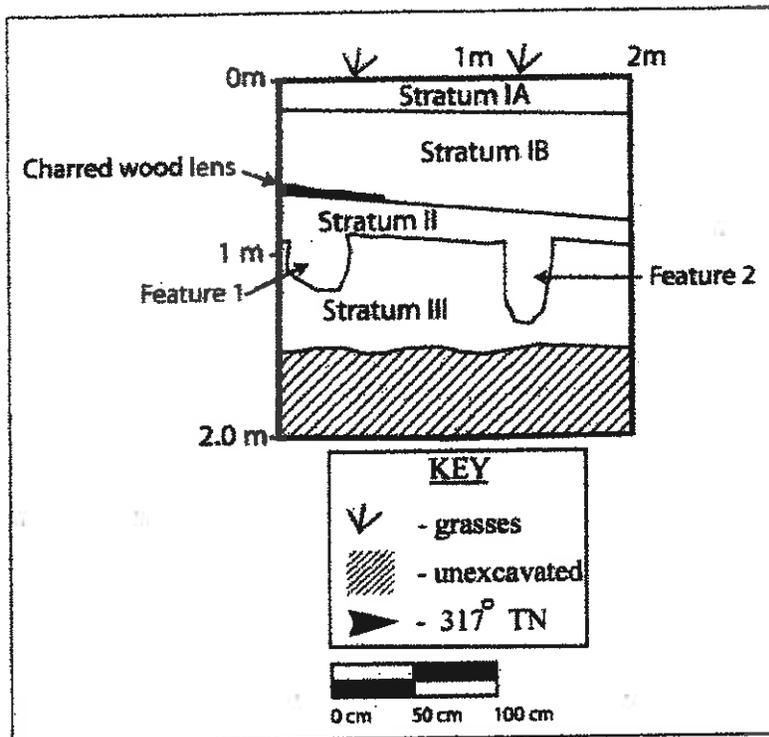


Figure 14. Profile of southwest wall of Trench 5

- Stratum IA:** 0-11/17 cmbs; Modern A Horizon in fill; 10 YR 3/2, very dark grayish brown; clay loam; weak, fine, crumb structure; loose dry consistency; slightly plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; top soil
- Stratum IB:** 11/17-65/71 cmbs; Fill; 10 YR 3/3, dark brown; clay loam; weak, fine, crumb structure; loose dry consistency; slightly plastic; no cementation; smooth lower boundary; terrestrial marine and terrigenous sediments
- Stratum II:** 65/71-85 cmbs; Buried A Horizon; 10 YR 3/1, very dark gray; sandy loam; structureless, loose dry consistency; non-plastic; no cementation; abrupt smooth lower boundary; mixed marine and terrigenous sediments; charcoal
- Stratum III:** 85-145 cmbs; C Horizon; 10 YR 8/3, fine to medium, sand; loose dry consistency; non-plastic; no cementation; N/A N/A lower boundary; terrestrial marine and terrigenous sediments; naturally worn marine shell; sterile coralline sand

### Trench 6

Trench 6 was excavated in the southwestern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 1, 2, 3, 5, 9, and 10, are in the vicinity of the former Cleghorn estate, 'Āinahau. Trench 6 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 6 measured 4.6 m (15.1 feet). It had a maximum depth of 2 m (6.6 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented NW/SE (323° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 15). The stratigraphy was similar to that found in Trenches 1, 2, 3, and 5. Stratum I was identified as imported historic fill; Stratum II as the Buried A Horizon surface associated with 'Āinahau; and Stratum III as sterile coralline sand.

A pit feature, Feature 1, was observed in Stratum II and III, and was a mottling of the two Strata (the clay loam of Stratum II and the sterile coral sand of Stratum III). A photograph of Trench 6 (Figure 30) is included in the Photo Appendix.

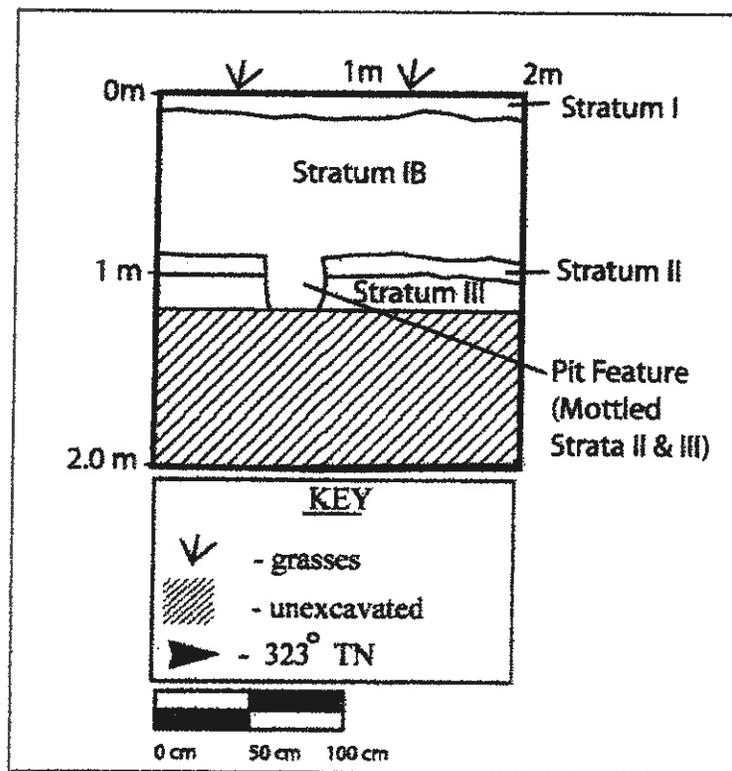


Figure 15. Profile of southwest wall of Trench 6

- Stratum IA: 0-10 cmbs; Modern A Horizon in fill; 10 YR 3/2, very dark grayish brown; clay loam; weak, fine, crumb structure; loose dry consistency; very plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; top soil
- Stratum IB: 10-90 cmbs; Fill; 10 YR 3/3, dark brown; clay loam; weak, fine, crumb structure; loose moist consistency; slightly plastic; no cementation; smooth lower boundary; terrestrial marine and terrigenous sediments slightly plastic; no cementation; coral inclusions; abrupt and smooth lower boundary
- Stratum II: 90-100 cmbs; Buried A Horizon; 10 YR 4/2, dark grayish brown; clay loam; weak, fine/medium, crumb structure; loose dry consistency; slightly plastic; no cementation; abrupt wavy lower boundary; mixed marine and terrigenous sediments
- Stratum III: 100-107 cmbs; C Horizon; 10 YR 8/3, fine, sand; structureless, loose dry consistency; non-plastic; no cementation; N/A lower boundary; unaltered marine shell; sterile coral sand

### Trench 7

Trench 7 was excavated in the northeastern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench (as well as Trenches 12, 13, and 14), is located in what was a former *lo'i* field.

Trench 7 measured 4.4 m (14.4 feet). It had a maximum depth of 161 cm (5.3 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented NE/SW (53° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 16). Strata IA and IB were identified as imported fill. Stratum II was identified as dark gray clay, fine-grained terrigenous alluvial deposits related to *lo'i*. A photograph of Trench 7 (Figure 31) is included in the Photo Appendix.

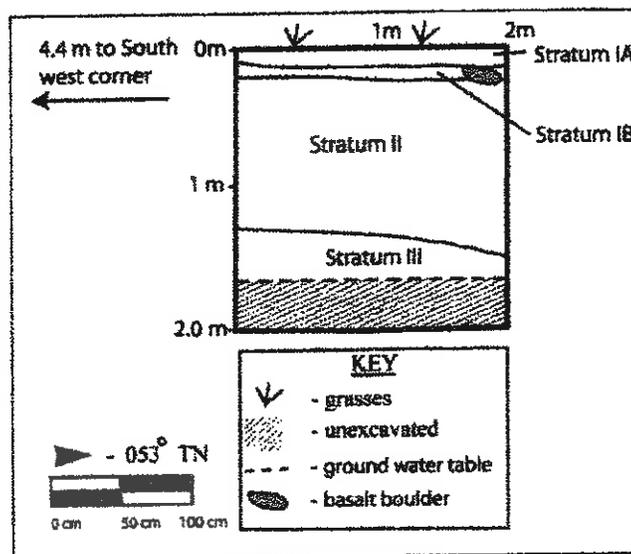


Figure 16. Profile of northwest wall of Trench 7

- Stratum IA: 0-9 cmbs; Modern A Horizon infill; 10 YR 3/1, very dark gray clay loam; weak, fine crumb structure; loose dry consistency; slightly plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; imported top soil
- Stratum IB: 9-122 cmbs; Fill; 10 YR 3/3, dark brown; clay loam; weak, fine, crumb structure; loose dry consistency; slightly plastic; no cementation; mixed marine and terrigenous sediments
- Stratum II: 122-147 cmbs; Buried A Horizon; 10 YR 4/1, dark gray; clay; structureless, very friable moist consistency; plastic; no cementation; abrupt wavy lower boundary; terrestrial marine and terrigenous sediments; iron staining, abundant roots; taro patch (*lo'i*) sediment
- Stratum III: 147-161 cmbs; C Horizon; 10 YR 3/1, very dark gray; gleyed, sandy clay loam; structureless, sticky wet consistency; slightly plastic; no cementation; N/A lower boundary; mixed marine and terrigenous sediments.

### Trench 8

Trench 8 was excavated in the center of the project area (Figure 9), in the area of the former 'Āpuakēhau Stream (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 8 and 11 are in the vicinity of the former 'Āpuakēhau Stream. Trench 8 was excavated to document the stratigraphy of the former 'Āpuakēhau Stream.

Trench 8 measured 17 m (55.7 ft), had a maximum depth of 2.0 m (6.6 ft) and a maximum width of 1.0 m (3.3 ft). It was oriented NE/SW (48° true north) and was excavated to ground water. Six distinct strata were observed in the excavation (Figure 17). Stratum I, II, III, and IV were of historic imported fill, most likely dating to the construction of the Ala Wai canal and subsequent filling of the 'Āpuakēhau Stream. Stratum II contains weathered minerals of yellowish red color, indicative of fluctuating dry and wet conditions. Micro-stratigraphic layers were present, particularly in Stratum IV, and are most likely the result of hydraulic dredging episodes during the Ala Wai land reclamation projects. A photograph of Trench 8 (Figure 32) is included in the Photo Appendix.

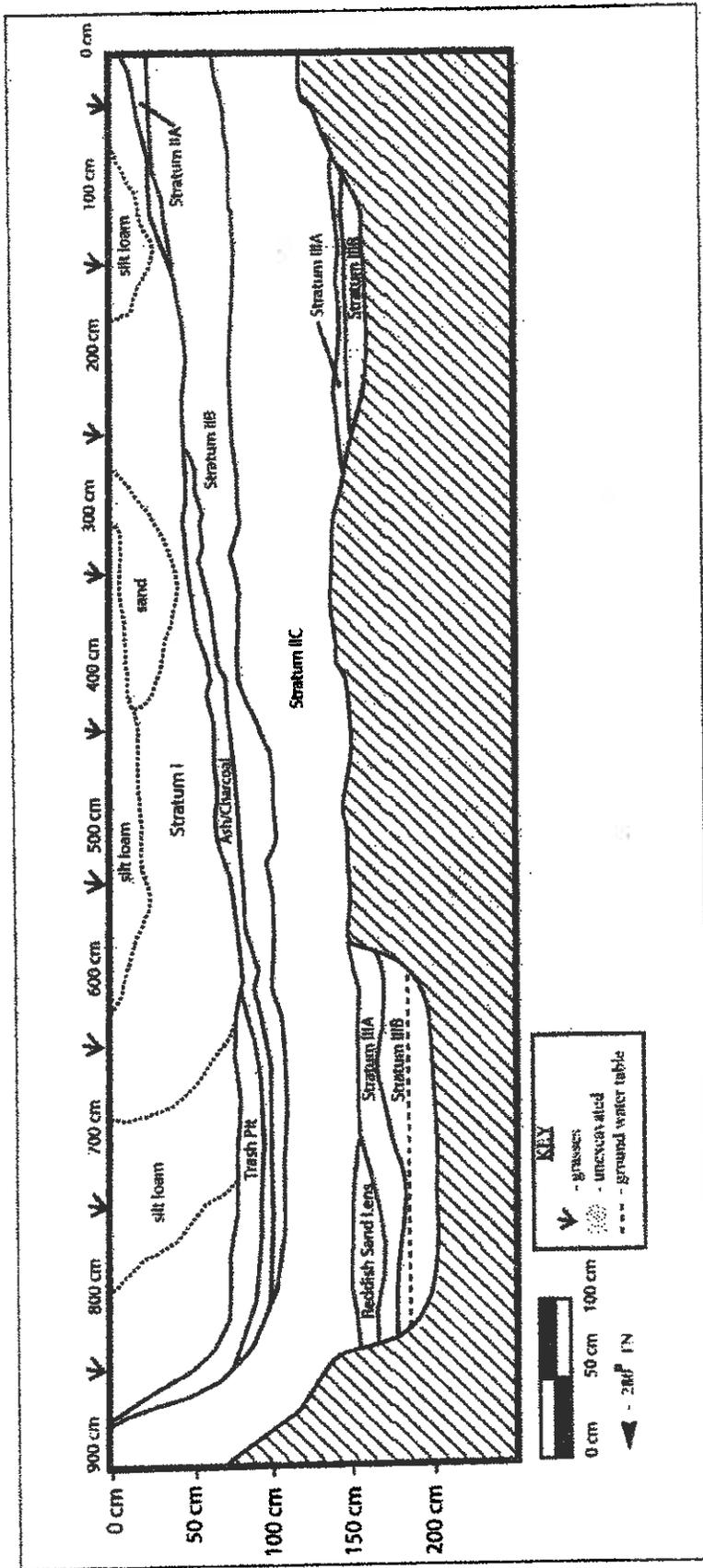


Figure 17. Profile of north wall of Trench 8

- Stratum I: 0-80 cmbs; Multiple fill layers; 7.5 YR 6/4, light brown; silt; structureless; loose dry consistency; slightly plastic; no cementation; abrupt irregular boundary; mixed marine and terrigenous sediments; marine shell, microfine layers 'auwai filled with dredging
- 10 YR 2/1, black; silt loam; weak, fine, blocky structure; loose dry consistency; non plastic; no cementation; abrupt irregular lower boundary; terrestrial marine and terrigenous sediments
- 10 YR 3/3, dark brown; silt loam; structureless, firm moist consistency; slightly plastic; weak cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; marine shell
- 7.5 YR 6/4, light brown; coarse sand; structureless; dry loose consistency; non plastic; no cementation; abrupt, wavy lower boundary; marine marine and terrigenous sediments; marine shell, "pothole" fill
- Stratum IIA: 20-40 cmbs; 10 YR 2/2, very dark brown; fine clay; moderate, medium angular blocky structure; moist friable firm consistency; very plastic; no cementation; clear, smooth lower boundary; mixed marine and terrigenous sediments; rich organic layer, roots and rootlets, high in peds
- Stratum IIB 20-90 cmbs; 10 YR 2/2, very dark brown; fine clay; moderate, medium angular blocky structure; moist friable firm consistency; very plastic; no cementation; clear, smooth lower boundary; mixed marine and terrigenous sediments; rich organic layer, roots and rootlets, medium to low peds
- Stratum IIC 90-180 cmbs; 10 YR 2/2, very dark brown; fine clay; moderate, medium angular blocky structure; moist friable firm consistency; very plastic; no cementation; clear, smooth lower boundary; mixed marine and terrigenous sediments; straight clay, no more peds
- Stratum IIIA 140-190 cmbs; 10 YR 3/1, very dark gray; clay loam; moderate, fine-medium blocky structure; wet sticky consistency; slightly plastic; weak cementation; abrupt, smooth lower boundary; mixed marine and terrigenous sediments; marine shell, organic layer below 'auwai
- Stratum IIIB 150-200 cmbs; 10 YR 3/1, very dark gray; clay loam; moderate, fine-medium blocky structure; wet sticky consistency; slightly plastic; weak cementation; clear, abrupt, irregular boundary; mixed marine and terrigenous sediments; marine shell, continuation of organic layer with 20% sand

### Trench 9

Trench 9 was excavated in the southern portion of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 1, 2, 3, 5, 6, and 10, are in the vicinity of the former Cleghorn estate, 'Āinahau. Trench 9 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 9 measured 5.9 m (19.4 feet). It had a maximum depth of 2 m (6.6 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented north-south ( $180^\circ$  magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 18). The stratigraphy was similar to that found in Trenches 1, 2, 3, and 5 in that it does have Strata IA and IB, however, the stratigraphic sequence of Stratum I and II has been altered by the backfilled pit that contained 40% large basalt boulders (Feature I). The fill of the Pit Feature is believed to be historic fill postdating the demolition of the structure shown on Sanborn Fire Maps of 1927 and 1950 (Figures 6 and 7). Feature I contained charcoal, marine shell, pipe elbows, rusted metal fragments, nails, glass, and modern /historic trash.

Fragmentary human skeletal remains, consisting of a distal end ulna shaft and head, femur shaft and other unidentified human skeletal fragments were encountered on October 6, 2004 in the southeast end of Trench 9 at 10 cm below surface in Stratum IA top soil fill. No context or associated goods were found. No evidence of age, era, or provenience was observed. SHPD was promptly notified regarding this burial find and the appropriate notification processes have been implemented following Hawai'i Revised Statutes Chapter 6E-43. All sediment from the skeletal find area was screened through a 1/8-inch screen, and all bone fragments were collected. Except for the two larger fragments listed above, all other bone fragments measured less than 3 cm. Per the request of the SHPD, the layer in which the human skeletal remains were initially found (Stratum IA) was scraped by the backhoe to look for any further remains. None were found. All human remains were placed in a brown paper bag with stones and a pipe marker and reburied in the trench at approximately 50 cmbs. A photograph of Trench 9 (Figure 33) is included in the Photo Appendix.

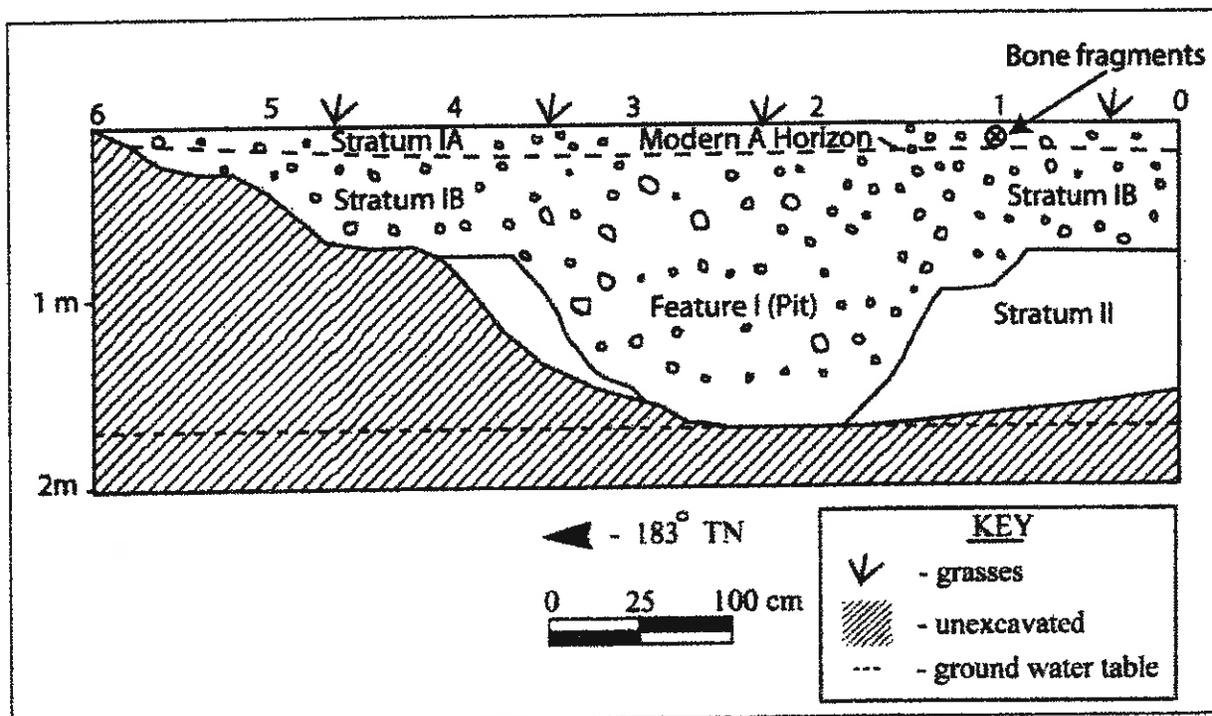


Figure 18. Profile of east wall of Trench 9

- Stratum IA: 0-10/12 cmbs; Fill; 10 YR 3/2, very dark grayish brown; clay loam; moderate, fine/medium, platy structure; slightly hard dry consistency; slightly plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; glass fragments and nails
- Stratum IB: 10/12-70/81 cmbs; Fill; 2.5 YR 4/2, clay loam; weak, fine, subangular blocky structure; weakly coherent dry consistency; slightly plastic; no cementation; clear smooth lower boundary; mixed marine and terrigenous sediments; nails, cans
- Stratum II: 70/81-155 cmbs; 10 YR 5/1, gray; sandy loam; structureless, loose dry consistency; non-plastic; no cementation; clear wavy lower boundary; mixed marine and terrigenous sediments; charcoal, unaltered marine shell; cultural layer with mottles of IB and III charcoal, unaltered marine shell; cultural layer with mottles of IB and III
- Stratum III: 145-149 cmbs; C Horizon; 10 YR 6/1, gray; medium, sand; structureless, non-sticky wet consistency; non-plastic; no cementation; N/A N/A lower boundary; terrestrial marine and terrigenous sediments

#### **Trench 10**

Trench 10 was excavated in the southwestern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 1, 2, 3, 5, 6, and 9, are in the vicinity of the former Cleghorn estate, 'Āinahau. Trench 10 was excavated to document the stratigraphy of the former 'Āinahau estate and to establish if intact early historic/pre-contact cultural strata and/or features existed.

Trench 10 measured 4.8 m (15.7 feet), had a maximum depth of 1 m (3.3 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented approximately north-south (185° magnetic north) and was excavated to the water table. One stratum with two substrata was noted and described in the excavation (Figure 19). The stratigraphy was similar to that found in Trenches 1, 2, 3, and 5. Stratum IA was identified as imported historic fill; Stratum IB was identified as the Buried A Horizon surface associated with 'Āinahau. Modern to historic trash was observed in Stratum IB.

A concrete slab, a probable remnant of the structure shown on Sanborn Fire Maps of 1927 and 1950 (Figures 6 and 7) was observed below Stratum IB, at approximately 75-95 cmbs. A photograph of Trench 10 (Figure 34) is included in the Photo Appendix.

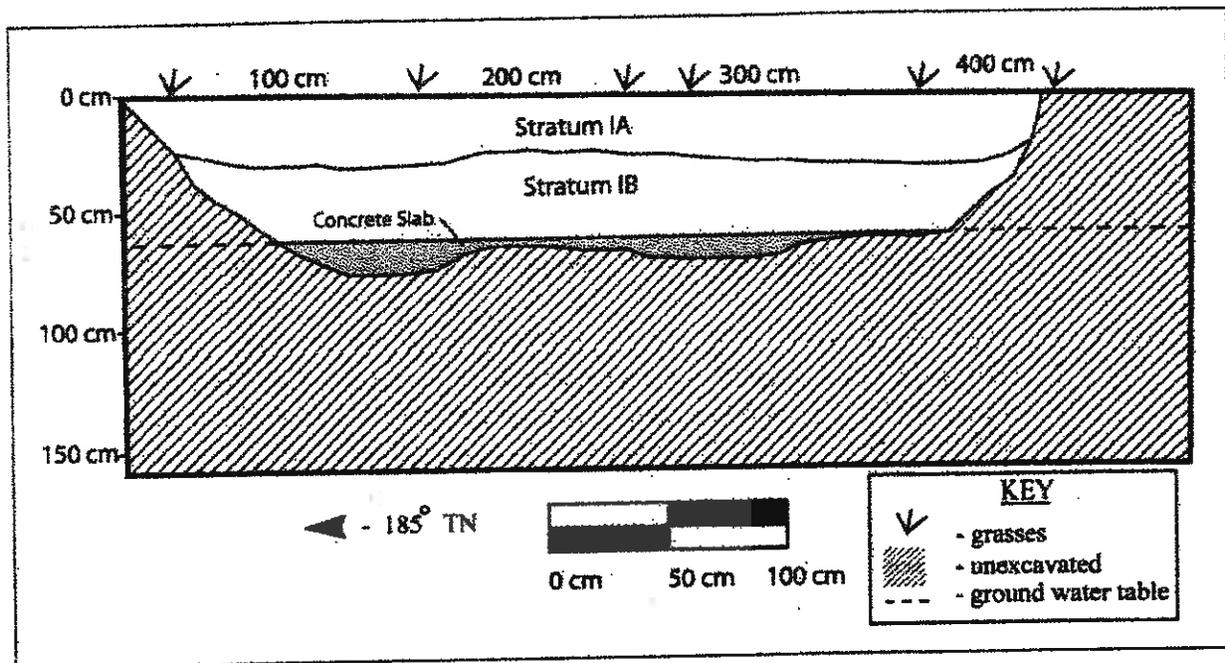


Figure 19. Profile of west wall of Trench 10

- Stratum IA:** 0-29/33 cmbs; Modern A Horizon in fill; 10 YR 3/2, very dark grayish brown; clay loam; moderate, medium/course, subangular blocky structure; slightly hard dry consistency; slightly plastic; no cementation; clear wavy lower boundary; mixed marine and terrigenous sediments
- Stratum IB:** 29/33-74/90 cmbs; Fill; 2.5 YR 4/2, loam; structureless, loose dry consistency; non-plastic; no cementation; mixed marine and terrigenous sediments; modern to historic trash

### Trench 11

Trench 11 was excavated in the center of the project area (Figure 9). Historic maps and documentation indicate that this trench (as well as Trenches 4 and 8) is in the vicinity of the former 'Āpuakēhau Stream. Trench 11 was excavated to document the stratigraphy of the former 'Āpuakēhau Stream.

Trench 11 measured 9.6 m (31.5 ft), had a maximum depth of 167 cm (5.5 ft) and a maximum width of 1.0 m (3.3 ft). It was oriented NE/SW (51° true north) and was excavated to ground water. Four distinct strata were observed in the excavation (Figure 20). Stratum I, II, and IV were of historic imported fill, most likely dating to the construction of the Ala Wai canal and subsequent filling of the 'Āpuakēhau Stream. Stratum II contains a semi-horizontal charcoal lense and weathered minerals of yellowish red color, indicative of fluctuating dry and wet conditions. Microstratigraphic layers were present, particularly in Stratum IV, and are most likely the result of hydraulic dredging episodes during the Ala Wai land reclamation projects. A photograph of Trench 11 (Figure 35) is included in the Photo Appendix.

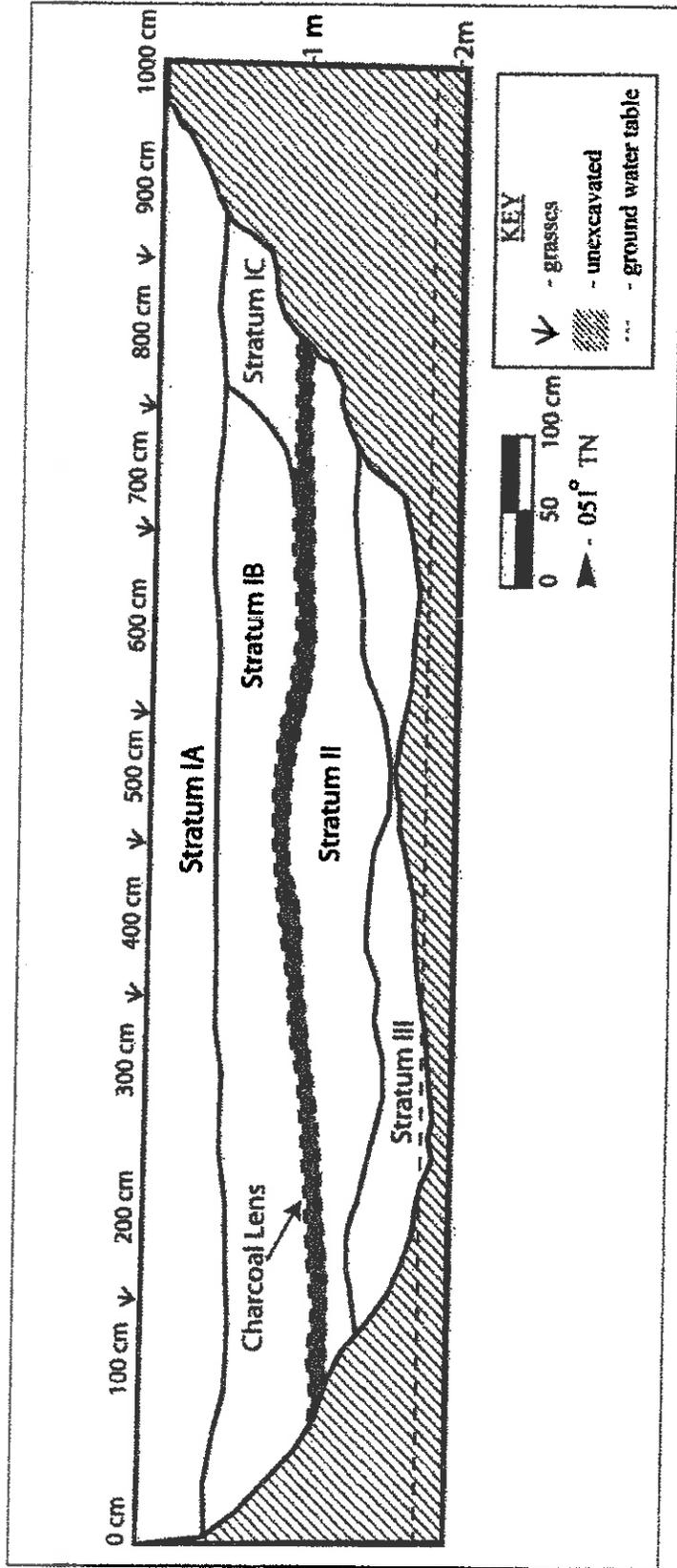


Figure 20. Profile of southeast wall of Trench 1 I

- Stratum IA: 0-52 cmbs; Modern A Horizon in fill; 10 YR 3/3, dark brown; medium to coarse, sand; structureless, loose dry consistency; slightly plastic; no cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; roots and rootlets
- Stratum IB: 37-158 cmbs; Fill; 10 YR 2/2, very dark brown; medium to coarse, silt loam; structureless, loose dry consistency; non-plastic; no cementation; diffuse wavy lower boundary; terrestrial marine and terrigenous sediments; <1% marine shell by volume; contains weathered mineral grains of 5 YR 5/8 yellowish red color and semi horizontal charcoal lense
- Stratum II: 80-167 cmbs; Buried A Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless, very firm moist consistency; diffuse lower boundary; terrestrial marine and terrigenous sediments; charcoal flakes
- Stratum III: 37-110 cmbs; Buried A Horizon; 7.5 YR, 6/4, light brown; fine silt; structureless; dry loose consistency; slight plastic; no cementation; abrupt, irregular lower boundary; mixed marine and terrigenous sediments; marine shell (less than 2 mm in size), semi-horizontal microlayers

### Trench 12

Trench 12 was excavated in the northeastern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench, as well as Trenches 7, 13, and 14 (Figure 9), is located in what was a former *lo'i* field. These trenches clearly displayed fine-grained terrigenous alluvial deposits and structural features related to *lo'i* that were once extant.

In the mid-1920s, as part of the excavation of the Ala Wai Canal, dredge sediments were distributed widely between the Ala Wai Canal and Kalākaua Avenue. These historic dredge sediments were observed.

Trench 12 measured 4.4 m (14.4 feet). It had a maximum depth of 161 cm (5.3 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented NE/SW (53° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 21). Strata IA and IB were identified as imported fill. Stratum II was identified as dark gray clay taro patch (*lo'i*) sediment. Photographs of Trench 12 (Figures 36, 37) are included in the Photo Appendix.

Results of Fieldwork

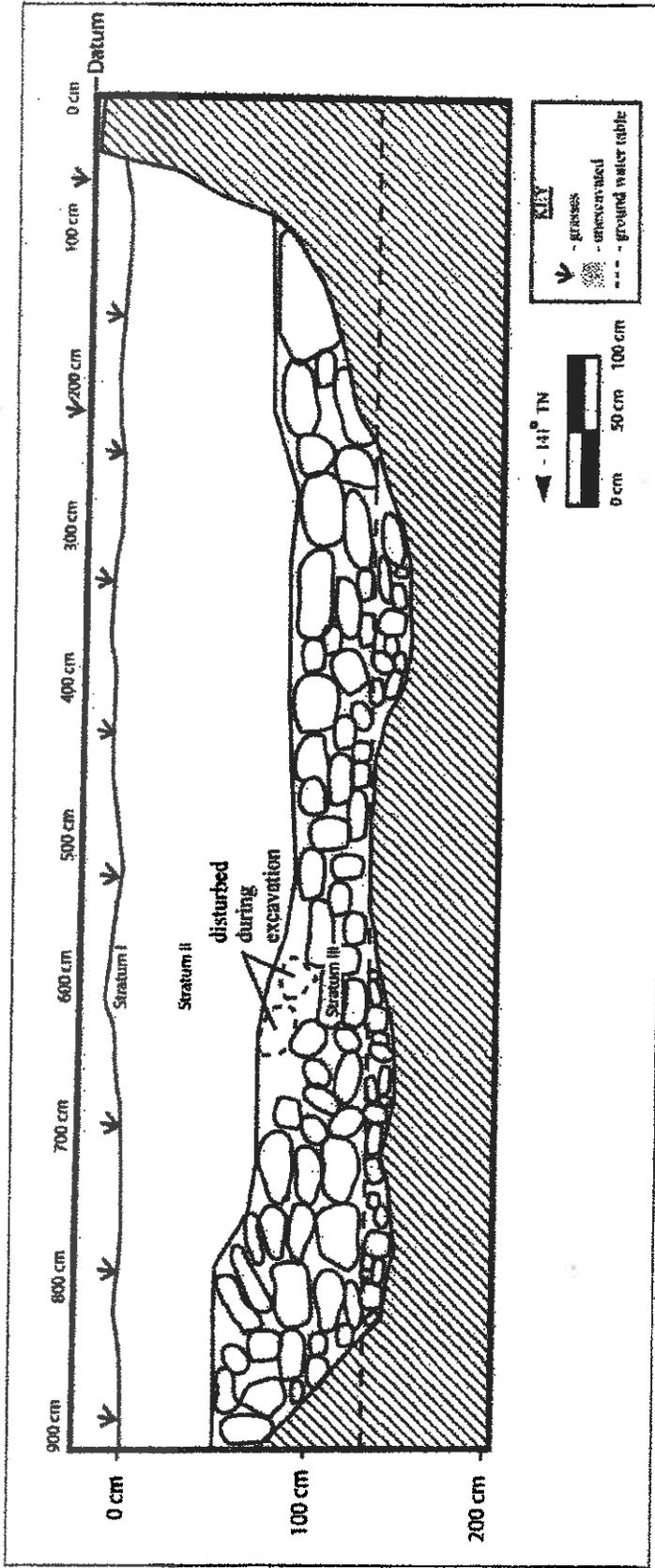


Figure 21. Profile of northwest wall of Trench 12

- Stratum I: 0-10 cmbs; Modern A Horizon; 10 YR 4/3, brown; weak fine crumb structure; dry loose consistency; non-plastic; no cementation; clear smooth lower boundary; terrestrial marine and terrigenous sediments; roots and rootlets, topsoil
- Stratum II: 10-110 cmbs; Buried A Horizon; 10 YR 3/3, dark brown; clay loam; moderate-strong, medium, blocky structure; moist very firm consistency; plastic; weak cementation; very abrupt, irregular lower boundary; terrestrial marine and terrigenous sediments; historic trash
- Stratum III: 100-190 cmbs; Buried A Horizon; 10 YR 2/2, very dark brown; clay; moderate, medium, angular blocky structure; moist firm consistency; very plastic; no cementation; clear, smooth lower boundary; mixed marine and terrigenous sediments
- Stratum IV: 160-190 cmbs; C Horizon; Coarse gleyed clayey sand; no structure; wet very sticky consistency; non plastic; no cementation; marine and terrigenous sediments; unsorted

### Trench 13

Trench 13 was excavated in the northeastern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench (as well as Trenches 7, 12, and 14), is located in what was a former *lo'i* field.

Trench 13 measured 4.4 m (14.4 feet) and had a maximum depth of 155 cm (5.1 feet) and a maximum width of 1 m (3.3 ft). It was oriented E/W (96° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 22). Strata IA and IB were identified as imported fill. Stratum II was identified as dark gray clay, fine-grained terrigenous alluvial deposits related to *lo'i*. A photograph of Trench 13 (Figure 38) is included in the Photo Appendix.

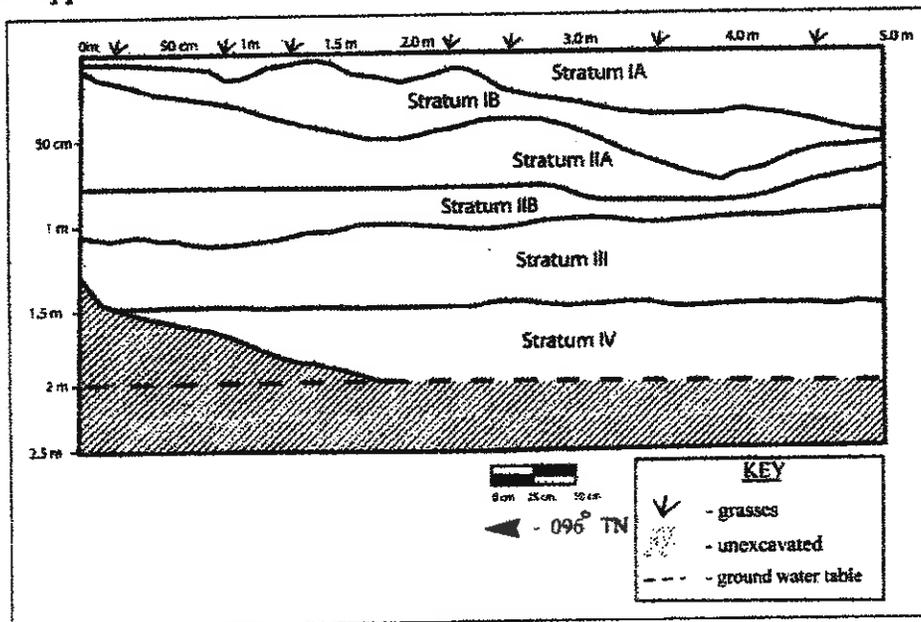


Figure 22. Profile of northwest wall of Trench 13

- Stratum IA: 0-52 cmbs; O Horizon; 10 YR 3/3, dark brown; medium-coarse silt loam; structureless; dry loose consistency; slightly plastic; no cementation; clear, irregular lower boundary; terrestrial marine and terrigenous sediments; roots, rootlets
- Stratum IB: 8-78 cmbs; Fill; 7.5 YR 6/4, light brown; fine silt; structureless; dry loose consistency; slightly plastic; no cementation; abrupt, irregular lower boundary; mixed marine and terrigenous sediments; abrupt, irregular lower boundary; marine shell (less than 2 mm in size); semi-horizontal micro layers
- Stratum IIA: 13-95 cmbs; O Horizon; 10 YR, 2/2, very dark brown; silt loam; structureless; moist firm consistency; slightly plastic; weak cementation; diffuse, wavy lower boundary; terrestrial marine and terrigenous sediments; marine shell (less than 1% by volume), contains weathered minerals of 5 YR, 5/8, yellowish red color.
- Stratum IIB: 72-125 cmbs; O Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless; moist very firm consistency; slightly plastic; no cementation; diffuse, wavy lower boundary; terrestrial marine and terrigenous sediments; broken glass, bottles
- Stratum III: 47-160 cmbs; Buried A Horizon; 10 YR 2/2, very dark brown; fine clay; moderate, medium, blocky angular structure; moist firm consistency; very plastic; no cementation; clear, smooth lower boundary; mixed marine and terrigenous sediments; organic-rich, root remnants, probable former agricultural layer
- Stratum IV: 155-water line cmbs; C Horizon; 7.5 YR, 6/0, gray; very coarse sand; structureless; wet non-sticky consistency; non-plastic; no cementation; clear lower boundary; marine marine and terrigenous sediments; large coral fragments, some 7.5 cm, appearance is that of wet cement

#### Trench 14

Trench 14 was excavated in the northeastern corner of the project area (Figure 9). Historic maps and documentation indicate that this trench (as well as Trenches 7, 12, and 13), is located in what was a former *lo'i* field.

Trench 14 measured 4.6 m (15.1 feet). It had a maximum depth of 120 cm (3.9 feet) and a maximum width of 1 m (3.3 ft). The trench was oriented NE/SW (141° magnetic north) and was excavated to the water table. Three strata were noted and described in the excavation (Figure 23). Strata IA and IB were identified as imported fill. Stratum II was identified as dark gray clay, fine-grained terrigenous alluvial deposits related to *lo'i*. A photograph of Trench 14 (Figure 39) is included in the Photo Appendix.

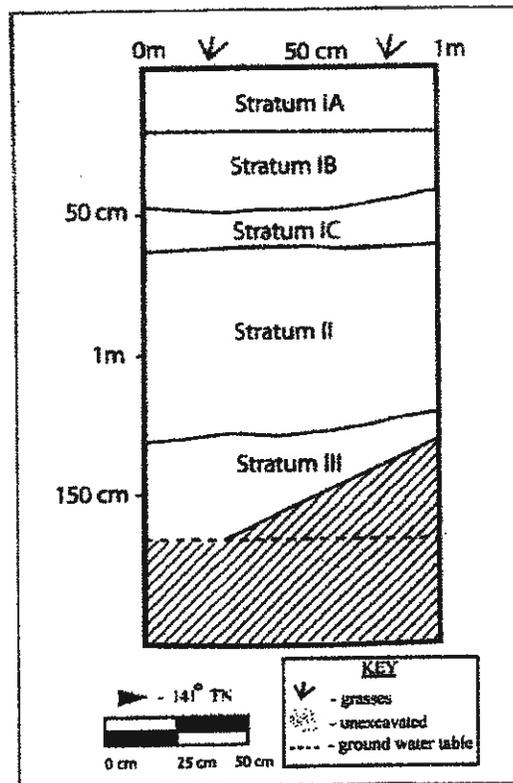


Figure 23. Profile of north wall of Trench 14

- Stratum IA:** 0-21 cmbs; Modern A Horizon in fill; 10 YR 3/3, dark brown; medium-coarse silt loam; structureless; dry loose consistency; slightly plastic; no cementation; diffuse, wavy lower boundary; terrestrial marine and terrigenous sediments; roots, rootlets, historic rubbish
- Stratum IB:** 21-49 cmbs; Fill; 7.5 YR 6/4, light brown; fine silt; structureless; dry loose consistency; slightly plastic; no cementation; abrupt, irregular lower boundary; mixed marine and terrigenous sediments; abrupt, irregular lower boundary; marine shell (broken pieces less than 2 mm in size); semi-horizontal micro layers
- Stratum IC:** 42-64 cmbs; Fill; 10 YR, 2/2, very dark brown; medium-coarse silt loam; structureless; dry loose consistency; non plastic; no cementation; diffuse, clear, wavy lower boundary; terrestrial marine and terrigenous sediments; marine shell and coral fragments (up to 5 cm in size)
- Stratum II:** 59-130 cmbs; Buried A Horizon; 10 YR 3/2, very dark grayish brown; fine clay loam; structureless; moist very firm consistency; slightly plastic; no cementation; clear, wavy lower boundary; terrestrial marine and terrigenous sediments; charcoal flakes
- Stratum III:** 120 cmbs -water level; Buried A Horizon; 10 YR 2/2, very dark brown; fine clay; moderate, medium, blocky subangular structure; moist firm consistency; very plastic; no cementation; mixed marine and terrigenous sediments; organic-rich, roots and rootlets, probable former agricultural layer

### C. Site Descriptions

Four sites were identified within the project area (Figure 9). The sites included the buried A horizon representative of the nineteenth century ground surface of the structures of the 'Āinahau estate (SIHP site 50-80-09-6682); human skeletal fragments (observed in Trench 9) in disturbed sediment (SIHP site 50-80-09-6705); 30-foot wide stream bed documented in Trenches 4,8, and 11(SIHP site 50-80-09-6706); and a traditional stone *lo'i* field retaining wall (SIHP site 50-80-09-6707).

Table 2. State Sites Identified Within the Project Area

State Site #	Form	Function	Recommendation
-6682	Buried A Horizon	Habitation	No Further Work
-6705	Human skeletal fragments	Interment	Future Monitoring
-6706	Stream bed	Agriculture	No Further Work
-6707	Stone wall	Agriculture	Data Recovery

\*Note prefix for all SIHP sites is 50-80-09

**SIHP Site #: 50-80-09-6682**

**Site Type:** Buried A Horizon, 'Āinahau (Cleghorn Estate)

**Function:** Habitation

**Description:** SIHP site -6682 consists of the buried A horizon in coralline sand documented in several trenches in "Area 1" (Figure 9), the historically dryland portion of the project area. This is the nineteenth century ground surface of 'Āinahau, the Cleghorn Estate. Historic maps identify the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife, Princess Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i.

**SIHP Site #: 50-80-09-6705**

**Site Type:** Burial (Human skeletal fragments in disturbed sediment)

**Function:** Interment (at least a secondary interment)

**Description:** SIHP site -6705 consisted of a distal end ulna shaft and head, femur shaft and other unidentified human skeletal fragments encountered on October 6, 2004 in Trench 9 at 10 cm below surface in Stratum IA top soil fill. No context or associated goods. No evidence of age, era, provenience, etc. SHPD was promptly notified regarding this burial find and the appropriate notification processes have been implemented following Hawai'i Revised Statutes Chapter 6E-43.

SIHP Site #: 50-80-09-6706

Site Type: Stream bed

Function: Agriculture ('*auwai* source)

**Description:** SIHP site -6706 consists of a thirty foot wide stream oriented north-northwest by south-southeast in the Ala Wai portion of the project parcel (Trenches 4, 8, and 11). From research of historical documentation and maps, it is believed that this is the remnant of a segment of 'Āpuakēhau Stream. This stream has an LCA claim in it and separates the dry ground of the 'Āinahau Estate from the taro fields southwest or *mauka* of the stream.

SIHP Site #: 50-80-09-6707

Site Type: Stone wall

Function: Agriculture

**Description:** SIHP site -6707 consists of a stone wall comprised of five courses of water rounded basalt boulders, believed to be a traditional *lo'i* field retaining wall. The base course of the wall is set on the coral reef deposits 20 cm below the ground water level. This wall is an excellent example of type and method of construction. It is a likely remnant of the extensive Waikīkī network of irrigated taro fields that were constructed beginning in the fifteenth century and traditionally attributed to the chief Kalamakua.

#### D. Summary of Samples Submitted for Radiocarbon Dates

In total, three charcoal samples and one soil sample were sent to Beta Analytic, Inc. for Radiocarbon (<sup>14</sup>C) Dating Analyses (Table 3). Samples were selected based on their stratigraphic context and association with presumed indigenous cultural layers.

Table 3. Samples Submitted for Radiocarbon Dating

Beta Analytic ID #	Sample Material	Provenience	Conventional Radiocarbon Age	C13/C12 Ratio	Oxcal Calibrated Calendar Age* (2 sigma)
Beta 197276	Charred material	Trench 1 Stratum IIB 30 cmbs SIHP site -6682	510 +/- 80 BP	-24.3 o/oo	(90.4%) 1290-1530 AD (5.0%) 1580-1630 AD
Beta 197277	Charred material	Trench 4 Stratum III 150 cmbs SIHP site -6706	490 +/- 40 BP	-25.7 o/oo	(90.9%) 1390-1480 AD (4.5%) 1320-1350 AD
Beta 197278	Charred material	Trench 5 Feature 1 (Pit) 85-119 cmbs	670 +/- 60 BP	-25.9 o/oo	(95.4%) 1250-1410 AD

Results of Fieldwork

Beta Analytic ID #	Sample Material	Provenience	Conventional Radiocarbon Age	C13/C12 Ratio	Great Calibrated Calendar Age* (2 sigma)
Beta 197279	Organic sediment	Trench 12 Stratum IV 190 cmbs	520 +/- 60 BP	25.3 o/oo	(95.4%) 1300-1480 AD

The provenience of C14 Sample Beta -197276 was Trench 1, Stratum IIB, from approximately 90-100 cmbs (centimeters below surface). The resulting 2-Sigma calibrated results, ca. A.D. 1290 to 1500, provide a clearly pre-contact date related to Native Hawaiian occupation of this portion of Waikiki.

The second sample, Beta 197277, was from Trench 4, Stratum III, from approximately 150 cmbs. The 2-Sigma calibrated results, ca. A.D. 1410 to 1460, again provide a clearly pre-contact date related to Native Hawaiian occupation of this portion of Waikiki.

The third sample, Beta 197278, was taken from Trench 5, within the pit feature, from approximately 85-119 cmbs. The sample, 36.5 g, provided 2-Sigma calibrated results, ca. A.D. 1270 to 1420, again provides a clearly pre-contact date related to Native Hawaiian occupation of this portion of Waikiki.

The fourth sample, Beta 197279, was taken from Trench 12, immediately below the *lo'i* retaining wall, Stratum IX, from approximately 190 cmbs. The resulting 2-Sigma calibrated results, ca. A.D. 1310 to 1370 and A.D. 1380 to 1470, again provides a clearly pre-contact date related to native Hawaiian occupation of this portion of Waikiki. The *lo'i* retaining wall is presumed to be associated with the vast system of irrigated taro fields that was constructed beginning in the fifteenth century, extending across the littoral plain from Waikiki to lower Mānoa and Pālolo valleys. This field system is traditionally attributed to the chief Kalamakua. The dates appear to correspond to the development of this presumed agricultural feature.

The resulting calibrated age of samples Beta 197276, Beta 197277, Beta 197278, and Beta 197279 suggests that the Waikiki wet land agricultural complex and associated construction and use activities (e.g. walls, *'auwai*, berms, fields, limited habitation, etc.) was at least partially developed and presumably expanding by the fifteenth century. Research at For DeRussy has "...*'auwai* and fishpond features...dated to the fifteenth century," though "...expansion of fishpond and *'auwai* complex" was posited to be during the "...seventeenth - eighteenth century" (Simmons et al. 1995). The present data may be indicative of a more expansive and intensive Waikiki plains agricultural complex by the fifteenth century than previously documented. The data does clearly indicate that active traditional Hawaiian use of the parcel from ca. A.D. 1400 - 1500.

## VI. SUMMARY

Cultural Surveys Hawai'i completed an archaeological inventory survey with subsurface testing for a 1.03-acre parcel of land in Waikīkī Ahupua'a, Kona District, Island of O'ahu, TMK 2-6-24: 70,71 (Figures 1 & 2). Fieldwork was carried out between the 5<sup>th</sup> and the 8<sup>th</sup> of October 2004 under the direction of William Folk, B.A., and Hallett H. Hammatt, Ph.D.

Fieldwork consisted of excavation and documentation of 14 backhoe trenches. The backhoe trenches were placed throughout the project area (Figure 9). They adequately sampled the project area for subsurface cultural deposits and provided representative information regarding the project area's stratigraphy and sedimentary depositional history. Backhoe excavation results were generally consistent with predictions based on information compiled prior to the fieldwork from historic maps and documents as well as previous archaeological investigations in the project area's vicinity. Project area stratigraphy varied distinctly between the northeast and southwest halves of the project area. All findings, however, were consistent with expectations based on background research. In all trenches the base of excavation was the water table, which was generally 150 cm below the current land surface.

Based on Māhele documents and information available from nineteenth century maps, the following geography and land use within the present project area at the mid-nineteenth century is indicated: the *mauka* or northeast half comprised a portion of taro *lo'i* belonging to the king; the central section comprised a portion of 'Āpuakēhau Stream in which taro was also growing; and the *makai* or southwest half comprised habitation area as well as *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. The map also shows the project area straddling two Waikīkī *'ili* which appear to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in Auaukai. Kalāmanamana was one of the areas where the chief Kalamakua constructed the "large pond fields" of taro that once covered the Waikīkī plain. Some of the Kalāmanamana *lo'i* are shown in Figure 3.

Cultural Surveys Hawaii's research also suggests that the *makai* half of the present project area was formerly the site of at least a portion of the main houses of the 'Āinahau estate house, associated with important personages in Hawaiian history. In the final quarter of the nineteenth century the portion of the project area *makai* or southwest of 'Āpuakēhau Stream was purchased by Archibald Cleghorn (1835-1910) and transformed into his estate. It is believed that a portion of the Victorian-style house he built in the 1890s was located in the present project area. A pronounced charcoal enriched layer observed in many of the project area's trenches is likely related to the fire that raised the 'Āinahau house in 1921.

The subsurface testing results are consistent with this nineteenth century historical reconstruction. Trenches 4, 8 and 11 bisected portions of 'Āpuakēhau Stream. Trenches 7, 12, 13, and 14 clearly displayed fine-grained terrigenous alluvial deposits and structural features related to *lo'i* that were once extant. Trenches 1, 3, and 5, 9, and 10, in the southwest portion of the project area, exposed drier, sandier beach sediments overlain by historic fill. In the mid-1920s, as part of the excavation of the Ala Wai Canal, dredge sediments were distributed widely between the Ala Wai Canal and Kalākaua Avenue. These historic dredge sediments were observed in many of the current project's northeastern or *makai* trenches.

Fragmentary human skeletal remains were observed in Trench 9. These skeletal remains were clearly previously disturbed (prior to the current inventory survey excavations) and were most likely brought into the current project area inadvertently as part of historic fill layers that were noted in this southwestern portion of the project area. SHPD was notified regarding this burial find and the appropriate burial notification procedures were undertaken per the requirements of HRS Chapter 6E-43 and HAR Section 13-300.

The burial was discussed at the October O'ahu Island Burial Council (OIBC) meeting, where the OIBC members made two requests. First, that a soil engineer be contacted to determine whether it is possible to identify the source origination of the fill material in which the human skeletal fragments were found. To fulfill this request, soil engineers at Hirata & Associates, a Geotechnical Engineering firm, were consulted. In a letter to Mr. Gary Furuta from Paul S. Morimoto, P.E. (Ernest K. Hirata & Associates, Inc.) dated November 9, 2004, Mr. Morimoto asserts that "Based on our experience, the fill material is similar to that encountered throughout the Waikiki area as well as in other areas of Honolulu. Based on our observations, we are unable to determine the vicinity from where the fill material may have originated." Secondly, the OIBC requested that a Cultural Surveys Hawai'i, Inc. (CSH) archaeologist meet with DeSoto Brown, collections manager of the Bishop Museum archives, to examine Dillingham Construction Company records to determine if these documents provide information about the origin of the fill material in which the human skeletal fragments were found. A CSH archaeologist fulfilled this request on November 23 and 30, 2004. No conclusive information regarding the fill material was obtained.

From examination of historic maps as well as the results of stratigraphic profiling during fieldwork, it is believed that the fill material was imported in the years following the demolition of the residential houses shown in the present project area on the fire insurance maps of 1927 and 1950 (Figures 6, 7). Concrete slabs observed in Trench 10, believed to be associated with these residential houses were documented near the location of the burial at a depth of approximately three feet. The bouldery fill material that contained the human skeletal fragments is on top of that layer (at a depth of approximately 10 cm) and therefore, is likely to post date the occupation of these residences.

## VII. SIGNIFICANCE AND RECOMMENDATIONS

### A. Significance

A total of four historic properties of varied archaeological significance are present in the project area and assigned State Inventory of Historic Places (SIHP) numbers. One of these, the Cleghorn 'Āinahau Estate has been previously identified and assigned the SIHP number 50-80-14-6682.. Individual significance of the four properties and recommended treatment are specified in Table 4. Sites were evaluated for significance according to the broad criteria established for the National and State Registers. The five criteria are:

- A Site reflects major trends or events in the history of the state or nation.
- B Site is associated with the lives of persons significant in our past.
- C Site is an excellent example of a site type.
- D Site may be likely to yield information important in prehistory or history.
- E Site has cultural significance; probable religious structures and/or burials present.

The initial significance assessments are based on functional interpretations of the sites and site types. All four sites within the project area are considered significant (Figure 9, Table 4).

SIHP Site 50-80-14-6682, assessed with Criteria B, consists of the buried A horizon documented in Trench 1 and other trenches at the west end of the project property. Historic maps identify the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Prince Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i. This cultural horizon represents the nineteenth century ground surface of the yard or gardens surrounding the structures of 'Āinahau, and is therefore associated with the lives of persons significant in our past. However, the excavations indicate there is little tangible evidence buried here that will provide additional information on this historic property.

SIHP site 50-80-14-6705, assessed with Criteria E, consists of limited human skeletal fragments collected from the disturbed sediments of imported fill material in Trench 9. SHPD was notified regarding this burial find and the appropriate notification processes have been implemented following Hawai'i Revised Statutes Chapter 6E-43 and HAR Section 13-300.

SIHP site 50-80-14-6706, assessed with Criteria D, consists of what is clearly the streambed remnant of a segment of 'Āpuakēhau Stream. As evidenced by historic map documentation, 'Āpuakēhau Stream was an important source of freshwater; an integral part of Kalamanamana and the other taro planting and irrigation field systems comprising the complex between the foothills of Koolau to Waikīkī.

SIHP site 50-80-14-6707, assessed with Criteria A, B, C, and D, consists of a stone wall comprised of one to five courses of water rounded basalt boulders. The base course of the wall is set on the coral reef deposits 20 cm below the ground water level. This wall is an excellent example of type and method of construction of a traditional *lo'i* field retaining wall. As a likely physical remnant of the extensive Waikīkī network of irrigated taro fields that were constructed beginning in the fifteenth century and traditionally attributed to the chief Kalamakua, it is associated with events and lives of persons important in our past. It is also likely to yield valuable information on the chronology of the system of irrigated fields in this area.

Table 4. Recommendations for SIHP Sites

State Site #	Feature	Function	Significance	Recommendation
-6682	Buried A Horizon; grounds of 'Āinahau (Cleghorn Estate)	Habitation	B	No Further Work
-6705	Human skeletal fragments in disturbed sediment	Burial	E	Future Monitoring
-6706	Stream bed, believed to be a segment of 'Āpuakēhau Stream	Agriculture	D	No Further Work
-6707	Stone retaining wall	Agriculture	A, B, C, D, E	Data Recovery

\*Note prefix for all SIHP sites is 50-80-09

## B. Recommendations

Of the four sites recorded in the project area, SIHP site -6707 is recommended for data recovery, SIHP site -6705 for further monitoring, and SIHP sites -6682 and -6706 for no further work.

### 1. No Further Work

SIHP site -6682 and -6706 are recommended for no further work. The features were mapped, placed on a plan view map and the immediate vicinity was tested for subsurface deposits. Based on the findings of the subsurface testing in these sites and research of historical documentation, it is believed that the information contained in these historic properties within the project property has been acquired and that no further archaeological documentation is necessary.

### 2. Monitoring

Results from the archaeological inventory survey indicate that the majority of the project area is free of archaeological resources and constraints. However, the identification of human skeletal fragments in the disturbed sediment of imported fill within the inventory survey fieldwork (SIHP site -6705) indicates possibility that additional fragmented human skeletal remains may be present within the fill material in project area. Based on the findings, an archaeological monitoring program is recommended with on-site and on-call monitoring of initial subsurface impacts.

### 3. Data Recovery

Archaeological data recovery is recommended for SIHP site -6707. This is a *lo'i*, (or terraced, ponded, field) retaining wall. It is a remnant of the extensive Moilili-Kapahulu-Waikiki network of irrigated taro fields constructed beginning in the fifteenth or sixteenth century and

traditionally attributed to the chief Kalamakua, a significant personage in Hawaiian history. This field system, an impressive feat of engineering, took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*.

Tentative research goals for a Data Recovery Plan include additional backhoe trenches to better delineate the horizontal extent of the wall, and hand dug trenches to obtain additional samples for a detailed radiocarbon age sequence and paleoenvironmental reconstruction based on pollen analysis.

The results of this research should be integrated into available previous archaeological and paleoenvironmental research within Waikīkī to aid in constructing a comprehensive chronology of Hawaiian settlement and agricultural practices in this important *ahupua'a*.

Data recovery should be implemented through plans submitted to the Department of Land and Natural Resources, State Historic Preservation Division (DLNR/SHPD) for review and approval.

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IX. PHOTO APPENDIX

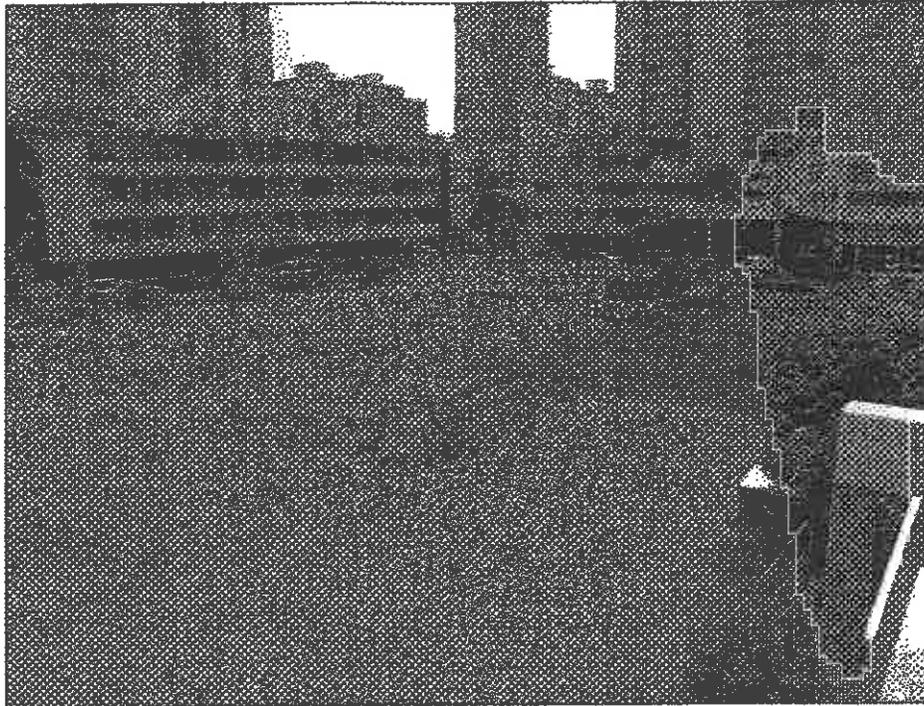


Figure 24. Photograph of project area taken from north corner, view to south



Figure 25. Photograph of Trench 1, east profile showing buried A horizon of 'Ainahau estate

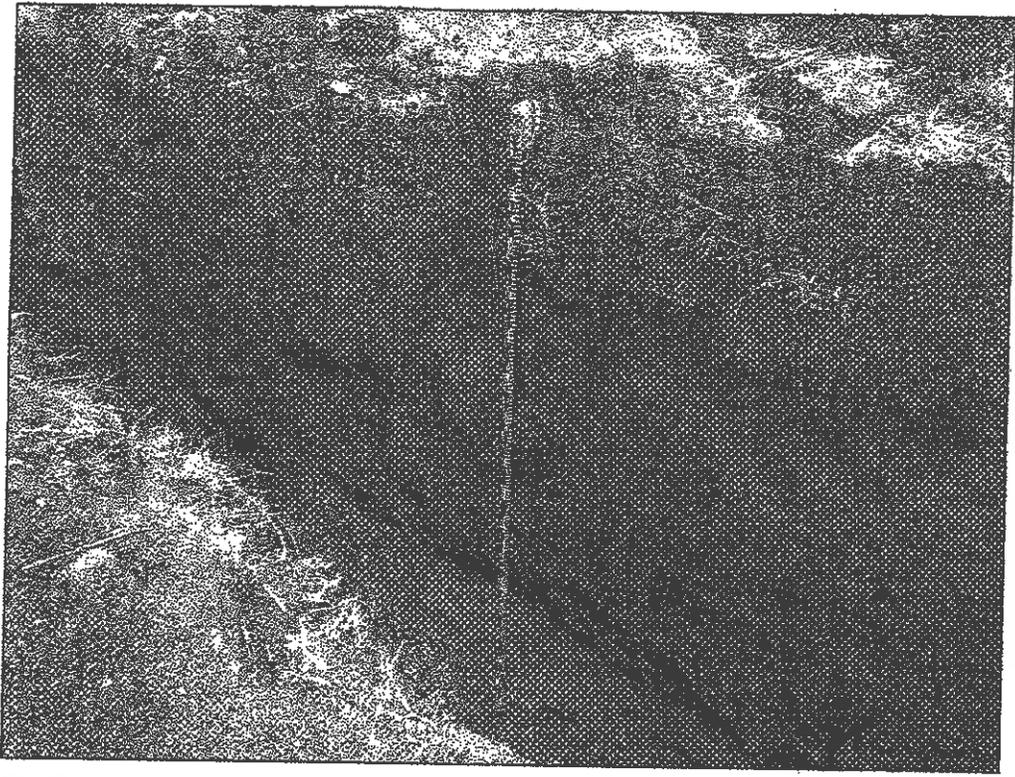


Figure 26. Photograph of Trench 2, east profile

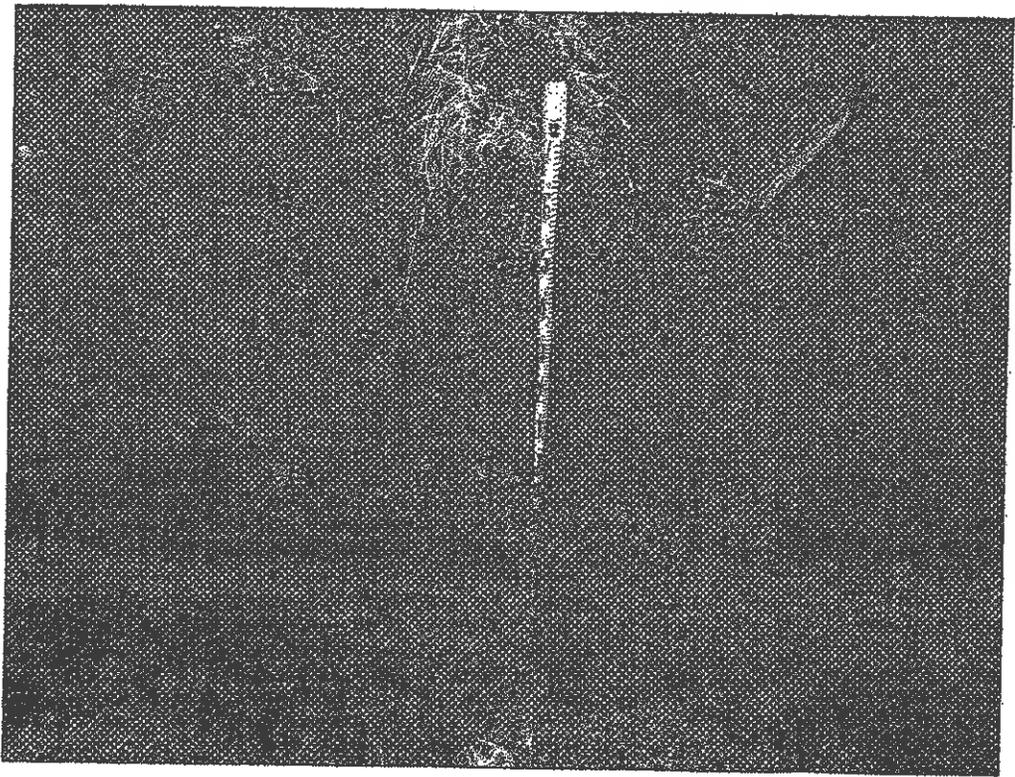


Figure 27. Photograph of Trench 3, southeast profile

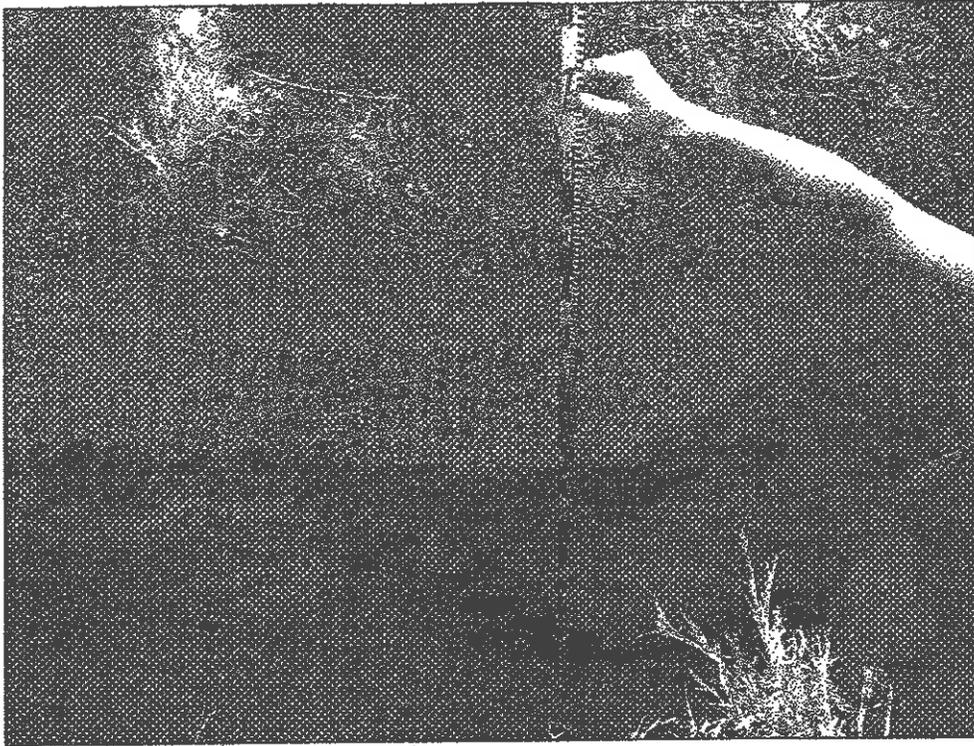


Figure 28. Photograph of Trench 4, southeast profile showing *makai* edge of streambed

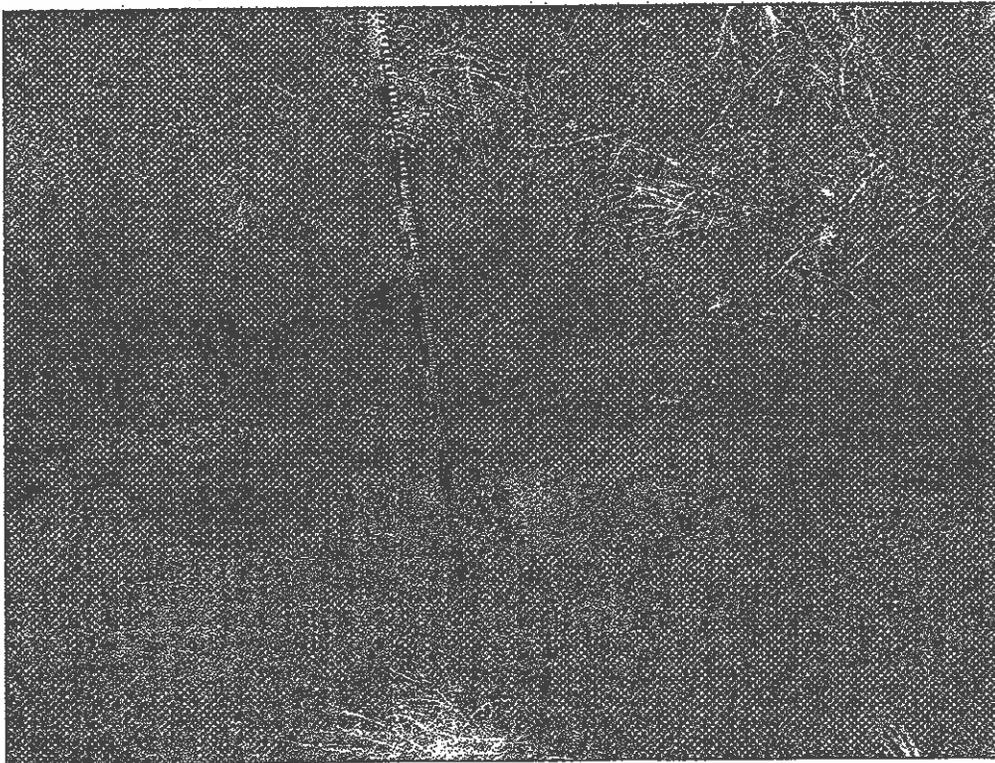


Figure 29. Photograph of Trench 5, southwest profile showing pit features 1 and 2

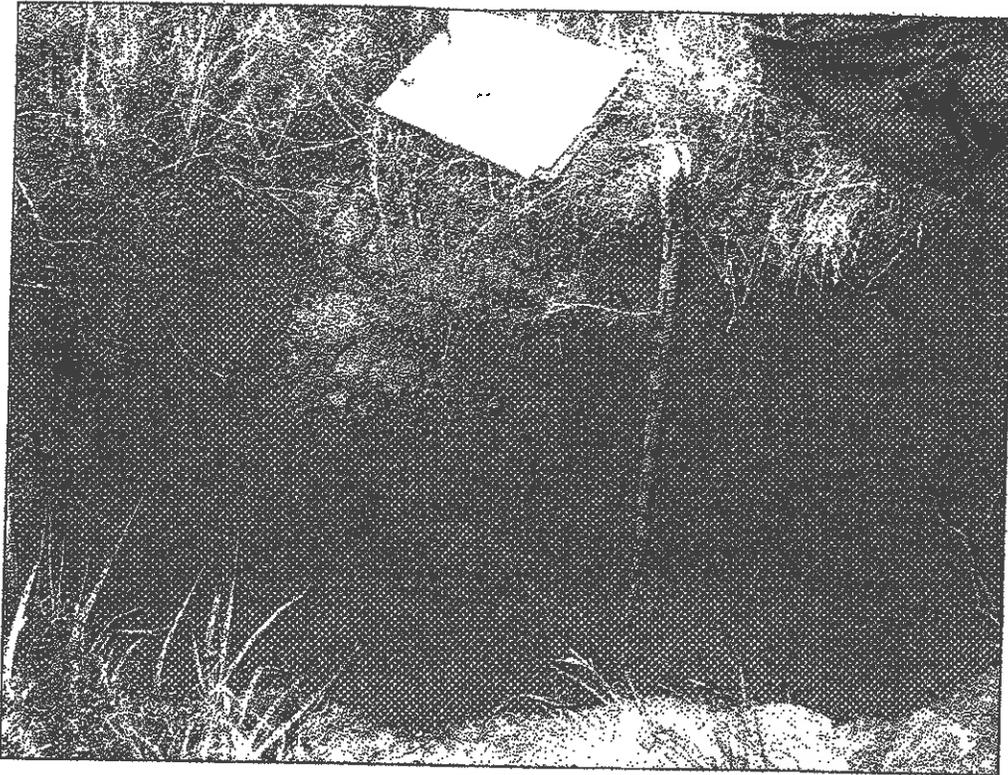


Figure 30. Photograph of Trench 6, southwest profile showing pit feature 1

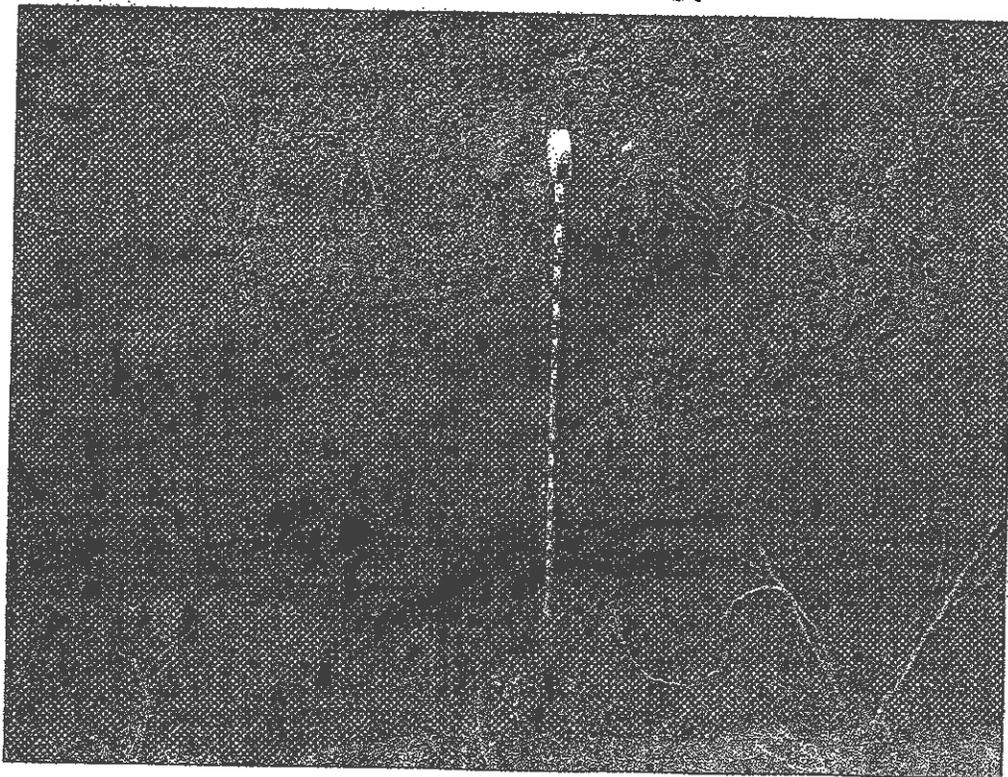


Figure 31. Photograph of Trench 7, northwest profile showing *lo'i* sediments

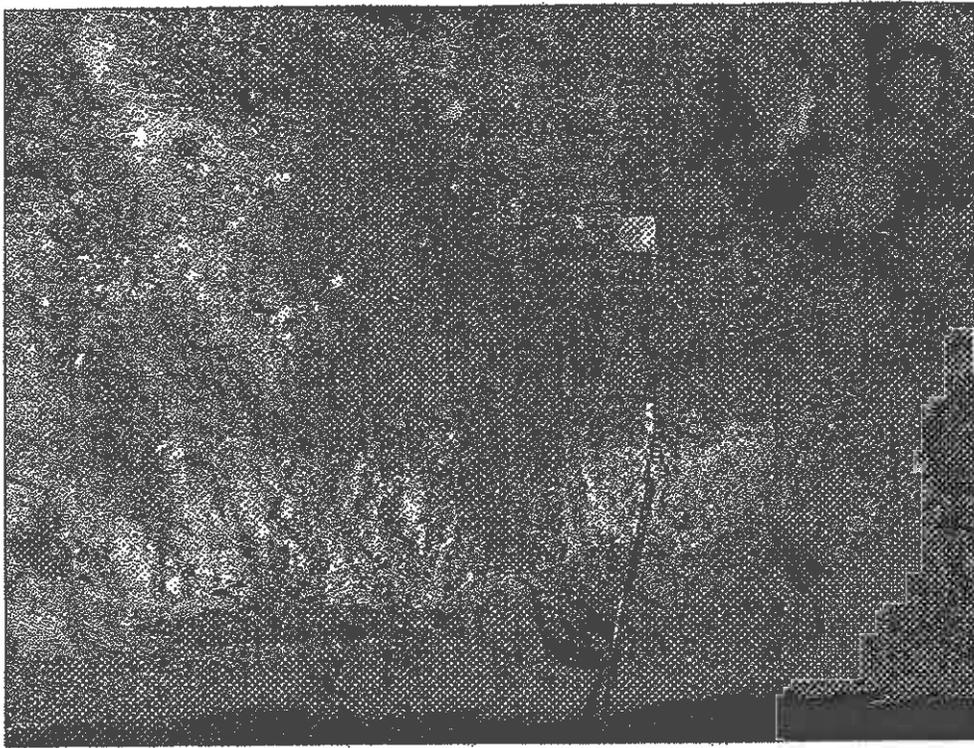


Figure 32. Photograph of Trench 8, north profile showing charcoal lense



Figure 33. Photograph of Trench 9, east profile

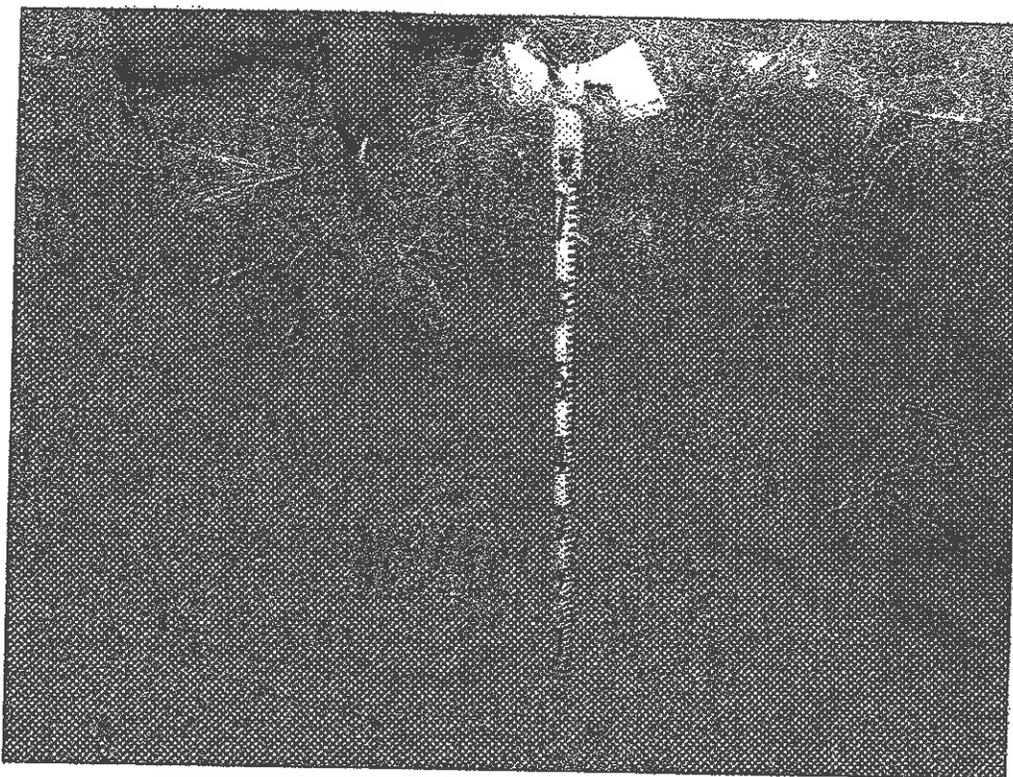


Figure 34. Photograph of Trench 10, west profile

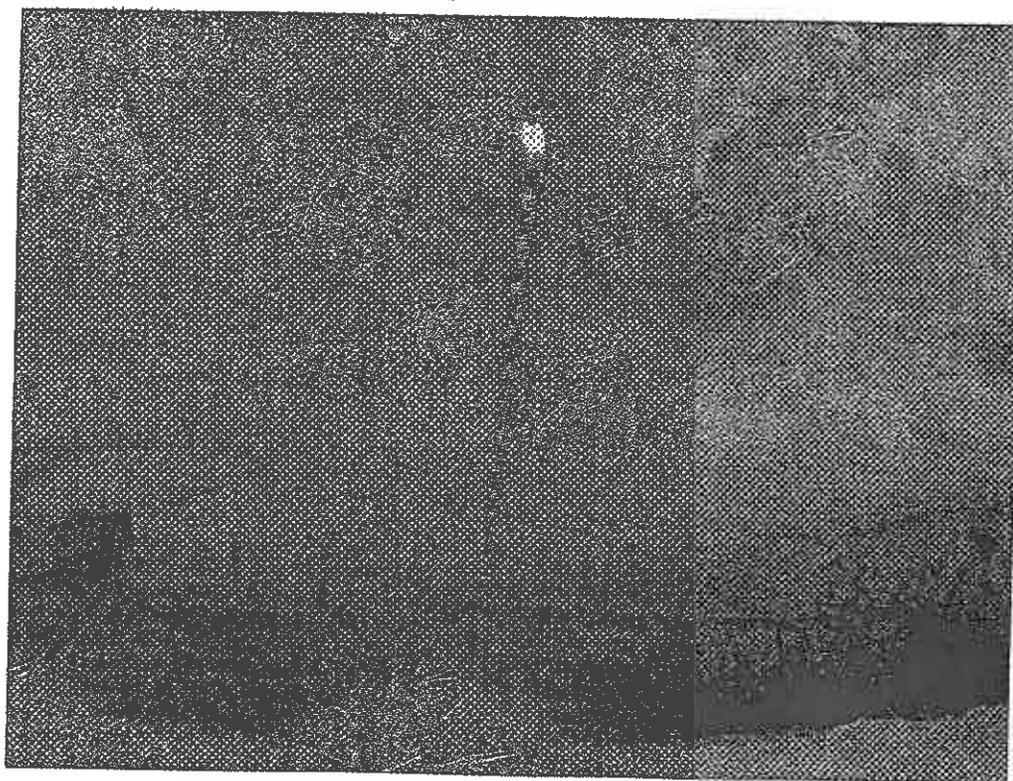


Figure 35. Photograph of Trench 11, northwest profile



Figure 36. Photograph of Trench 12, northeast profile showing remnants of *lo'i* retaining wall

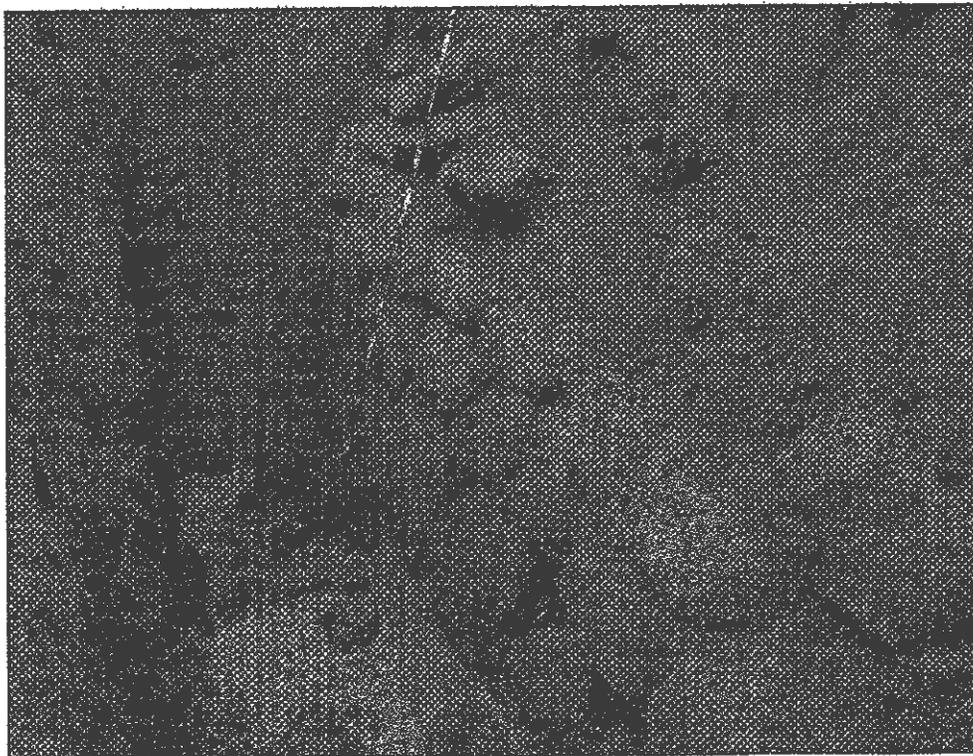


Figure 37. Photograph of Trench 12, close-up of northeast profile showing remnants of *lo'i* retaining wall

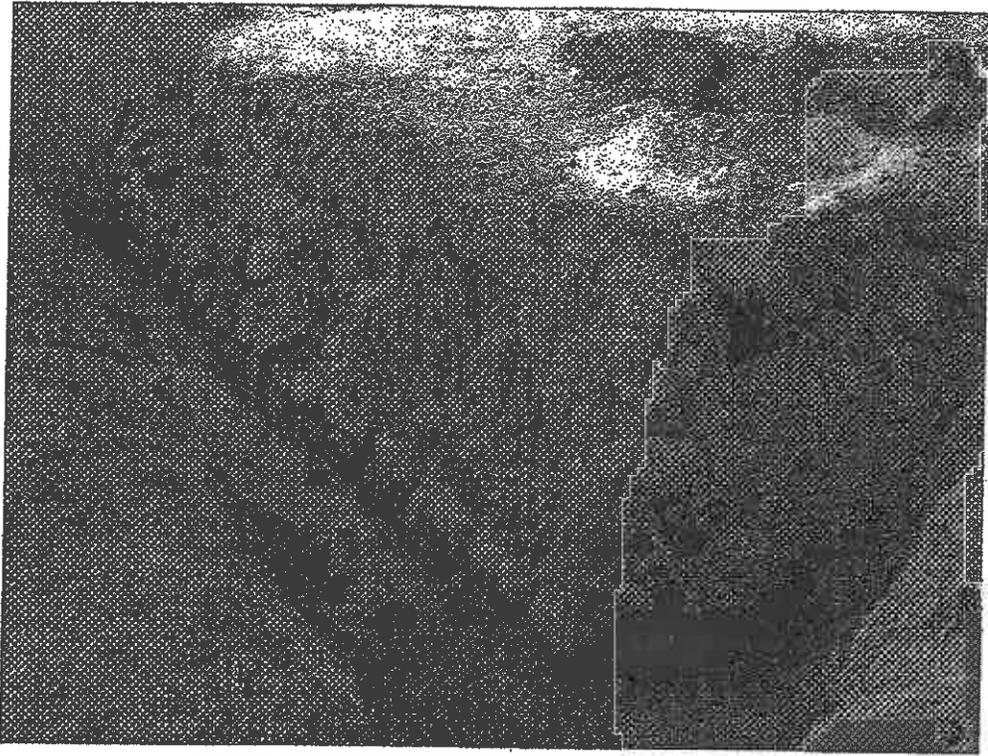


Figure 36. Photograph of Trench 12, northeast profile showing remnants of *lo'i* retaining wall



Figure 37. Photograph of Trench 12, close-up of northeast profile showing remnants of *lo'i* retaining wall

**APPENDIX 5**  
**TRAFFIC IMPACT ASSESSMENT**

# Julian Ng Incorporated

Transportation Engineering Consultant

P. O. Box 816

Kaneohe, Hawaii 96744-0816

email: [jnghi@hawaii.rr.com](mailto:jnghi@hawaii.rr.com)

phone: (808) 236-4325

fax: (808) 235-8869

February 19, 2015

Mr. Gary Furuta, Project Manager  
Hawaii Housing Development Corporation  
1288 Ala Moana Boulevard, Suite 35A  
Honolulu, Hawaii 96826

Subject: Traffic Assessment for Ainahau Vista II  
2428 Tusitala Street  
Honolulu, Hawaii [TMK 2-6-24: 70 and 71]

Dear Mr. Furuta:

We have reviewed the project information that you have provided and have prepared an assessment of the potential traffic impact of the development. While any development can be expected to increase traffic and other transportation-related demands, the assessment has found that these increases would not be significant.

## Existing Transportation Conditions

The project site is a portion of a lot occupied by the existing Ainahau Vista I affordable senior rental development. The lot is north of Tusitala Street, a City-owned public street, and extends to Ala Wai Boulevard, a City Street in a 72-foot wide right-of-way. A single driveway to Tusitala Street serves the existing parking lot; no vehicular connection exists to Ala Wai Boulevard.

Tusitala Street is in a 32-foot wide public right-of-way that has been improved to a curbed street (4- to 6-foot wide concrete sidewalks on each side, 26 feet for vehicular traffic between curbs). Tusitala Street is a single block in length, operated one-way in the eastbound direction from Kaiulani Avenue to Kapili Street, with parallel parking allowed between driveways only on the north (project) side of the street. Other 32-foot streets in the area that complete the vehicular circulation include Kaiulani Avenue, Cleghorn Street, and Kapuni Street. A portion of Cleghorn Street is operated two-way, allowing vehicular traffic to exit from the area to the east onto Liliuokalani Avenue.

Concrete sidewalks are provided for pedestrian use on Tusitala Street, Kaiulani Avenue, and the one-way segment of Cleghorn Street. Street crossings at most intersections with the 32-foot roadways are not marked, but marked crosswalks are provided across Kaiulani Avenue and Kuhio Avenue, across the legs where crossing is permitted at that signalized intersection.

Bus stops for the City public bus system ("TheBus") are located on both sides of Kuhio Avenue near the intersection with Kaiulani Avenue, approximately 2,000 feet from the site entrance. An on-line review of current bus route information ([www.thebus.org](http://www.thebus.org)) shows that eight local bus routes provide service on Kuhio Avenue, and that midday service is provided by 20 buses per hour in each direction, which provides a capacity of more than 1,000 seats

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Mr. Gary Furuta  
 February 19, 2015  
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per hour (more than 1,500 total, including standees) in each direction. Transit users can access the entire island-wide bus system at these bus stops and transfer at locations where bus routes intersect.

## Project Impact to Transportation

The proposed project will consist of 62 rental units (47 one-bedroom and 15 studio units) and two offices in a nine-story building; 22 parking stalls will be provided at ground level. The rentals will be limited to seniors (elderly persons) with incomes no more than 60% of the average median gross income for the Honolulu area. Residents of the project will have access to a shuttle van that provides transportation service for doctor visits, shopping, or other errands.

Vehicular access to the new parking parking will be through the existing Ainahau Vista I surface parking lot, which has a single driveway to Tusitala Street; stalls provided for residents' use will all be assigned. An expected condition of project approval is that tenants who do not have an assigned parking stall on the project site will not be able to own a car. Based on the experience at other similar Vista projects, the parking ratio of 0.35 parking spaces per affordable elderly rental unit is not unreasonable.

These parameters were used to estimate the project traffic impact. Factors from a commonly used reference shown below (rates for the highest hourly traffic generated if not coincident with the peak hour for other traffic is shown within parentheses) were applied to estimate vehicular trips generated (one "trip" is counted for each entering and exiting vehicle; a round trip counts as two trips).

### Traffic Generation Factors

	Average Weekday		AM Peak Hour (generator AM)		PM Peak Hour (generator PM)	
	Average rate	% entering	Average rate	% entering	Average rate	% entering
Senior Adult Housing – attached (per dwelling unit)	3.44	50%	0.20 (0.39)	34% (46%)	0.25 (0.35)	54% (55%)
Apartment (per dwelling unit)	6.65	50%	0.51	20%	0.62	65%
Apartment (per vehicle)	5.10	50%	0.46	n.a.	0.60	n.a.
General office (per 1,000 square feet of floor area)	11.03	50%	1.56	88%	1.46	17%

Source: Institute of Transportation Engineers, *Trip Generation Manual, 9<sup>th</sup> Edition, 2012*  
 n.a. = not available

# Julian Ng Incorporated

Mr. Gary Furuta  
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Senior (elderly) housing typically would have less traffic impact during the peak hours of traffic on the nearby streets than apartments, because many of the senior residents would not be commuting to work or school during peak traffic hours. The time-of-day characteristics of traffic generated by senior housing, however, include higher trip generation in non-peak hours, as shown in “( )” in the table above. The *Trip Generation Manual* also has rates for apartments based on the number of vehicles owned, and those rates were used in an alternative computation for the traffic generated by the residents. Since no entering percentages were listed with the per-vehicle rates, the percent entering from the line above (per dwelling unit) was used. The general office rates were used to account for staff arrivals and departures and other office-related traffic. The table below shows the computed project traffic volumes.

### Driveway Traffic Due to Project

	Average Weekday		AM Peak Hour (generator AM)		PM Peak Hour (generator PM)	
	enter	exit	enter	exit	enter	exit
62 Senior rental apartments	107	107	4 (11)	8 (13)	8 (12)	7 (10)
22 vehicles *	56	56	2	8	9	5
560 square feet office	3	3	1	0	0	1
Shuttle service	30	30	2 (3)	2 (3)	2 (3)	2 (3)
<b>Total **</b>	<b>140</b>	<b>140</b>	<b>7 (18)</b>	<b>10 (16)</b>	<b>10 (15)</b>	<b>10 (14)</b>
<b>Total Traffic, enter + exit</b>	<b>280</b>		<b>17 (34)</b>		<b>20 (29)</b>	
* alternative computation based on vehicles (not included in total)						
** the total uses the higher numbers of trips computed for residents (between the numbers computed using dwelling units and using vehicles)						

The computed daily traffic would be the same as the daily traffic that would have been computed for 42 apartment dwelling units, and peak hour volumes would be similar to that generated by 32 or 33 apartments. As shown in the table above, the daily total traffic (in + out) would be less than 300 vehicle trips per day. Highest peak hour impact would be 20 vehicle trips per hour, with the highest impact occurring during a non-peak morning hour, with a total of 34 vehicle trips per hour.

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The project impact to traffic is less than the commonly-used criteria<sup>†</sup> (100 added vehicles per hour, 1,000 added vehicles per day) for determining when a significant traffic impact would occur and trigger a need to conduct a traffic impact analysis study. The project traffic impact, therefore, is minor and not considered to be significant.

Transit impacts can be expected to occur with the increased elderly population. The nearest bus stops are within ¼ mile of the site entrance and some additional bus use can be expected. The shuttle service provided by Aina hau Vista, however, would be more convenient and will lessen the increase in demand on public transit. An estimate of additional public transit use resulting from the completion and full use of the project was developed from the vehicular traffic estimates. If the numbers of persons using public transit were half of the number vehicles, there would be 70 additional transit riders boarding and 70 alighting each day; at the nearest bus stops, or about a 5% increase at those bus stops, where the City recorded 2,800 persons per day on or off local buses<sup>††</sup> in 2010. The time-of-day distribution was assumed to be similar, with greater demand later in the morning rather than during the peak periods of other traffic. The highest hourly increase in bus ridership is estimated to be 10 persons, or approximately 1% of the seating capacity of buses running on Kuhio Avenue. The additional 140 transit users per day would represent about 0.06% of the total transit trips<sup>†††</sup> on TheBus.

## Conclusion

The proposed 62-unit senior affordable rental project is not expected to have a significant impact on traffic or transportation. The project is located in an improved area with sidewalks along the streets, has public transit service within ¼ mile, and will provide shuttle service for many of the residents' local transportation needs. Should you have any questions, please contact me as indicated above.

Sincerely,

JULIAN NG INCORPORATED



Julian Ng, P.E., P.T.O.E.  
President

cc: Keith Kurahashi

---

<sup>†</sup> These include:

Institute of Transportation Engineers, *Transportation Impact Analyses for Site Development* (2005)  
State of Hawaii, Department of Transportation, Highways Division, Planning Branch. *Best Practices for Traffic Impact Analysis Reports* (proposed in 2011, never adopted)

<sup>††</sup> based on information received from City and County of Honolulu, Department of Transportation Services, Public Transit Division

<sup>†††</sup> [www.thebus.org/AboutTheBus/TheBustFacts14\\_1.pdf](http://www.thebus.org/AboutTheBus/TheBustFacts14_1.pdf) shows a Weekday Ridership on TheBus of 229,400

**APPENDIX 6**  
**SEWER CONNECTION PERMIT**



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

650 SOUTH KING STREET \* HONOLULU, HAWAII 96813  
 Phone: (808) 768-8209 \* Fax: (808) 768-4210

# SEWER CONNECTION APPLICATION

APPLICATION NO.: **2015/SCA-0010**

STATUS: **Approved with conditions**

DATE RECEIVED: **01/07/2015**

IWDP APP. NO.:

PROJECT NAME: **2015/SCA-0010 Tusitala Vista 2**

<b>\$419,059.20</b>
Estimated Wastewater System Facility Charge*

**LOCATION:**

Zone	Section	Plat	Parcel
2	6	024	071
Zone	Section	Plat	Parcel
2	6	024	070

12,117 Sq. Ft.

23,644 Sq. Ft.

SPECIFIC LOCATION: **2423 and 2439 Ala Wai Blvd.**

APPLICANT: **Alcon & Associates, Inc.**  
 ATTN. Wes Toyota  
 716 Umi Street Suite 250  
 Honolulu, Hawaii 96819

DEVELOPMENT TYPE: **Dwelling, Multi-family**

SEWER CONNECTION WORK DESIRED:

OTHER USES:

NON-RESIDENTIAL AREA: s.f.

APPROXIMATE DATE OF CONNECTION: **01/05/2017**

PROPOSED UNITS

EXISTING UNITS

UNITS TO BE DEMOLISHED

No. of New Units: **96**

No. of Existing Units: **107**

No. of Units to be Demolished: **0**

- Studios: 96
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

- Studios:
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

- Studios:
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

REMARKS The 6-inch offsite sewer segments on Tusitala Street (asset IDs: 437238 and 690650) shall be upgraded to 8-inch lines. The existing 27 units serviced by the holding tank facility may connect directly to the City sewers. Submit construction plans for review and approval.

APPROVAL DATE: **01/08/2015**

*Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.  
 \* Applicable WSFC shall be collected at the prevailing rate in accordance with ROH 1990, Chapter 14, Sections 14-10.3, 14-10.4, 14-10.5 and Appendix 14-D.*

EXPIRATION DATE: **01/07/2017**

REVIEWED BY: **Tessa Ching**

Site Development Division, Wastewater Branch



**APPENDIX 7**

**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

TUSITALA VISTA  
2423 & 2429 ALA WAI BOULEVARD  
HONOLULU, HAWAII 96815

*Prepared For:*

TUSITALA VISTA L.P.  
725 KAPIOLANI BOULEVARD, SUITE C103  
Honolulu, Hawaii 96813

GESG PROJECT NUMBER: 3E005

January 29, 2004

*Prepared By:*

**Global Environmental Services Group, LLC**

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## 1. EXECUTIVE SUMMARY

GESG has completed a Phase I Environmental Site Assessment (ESA) of 2423 and 2429 Ala Wai Boulevard, Honolulu, Hawaii. The assessment was performed in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard E 1527-00, to comply with the contract between GESG and Tusitala Vista L.P. dated December 15<sup>th</sup>, 2003. Any exceptions to or deletions from the ASTM E 1527-00 standard of practice are described in Section 2.3 of this report.

The subject site is located at 2423 and 2429 Ala Wai Blvd., Honolulu, Hawaii, and is approximately 35,761 square feet in size. The subject site is not improved and at the time of the site visit was grown in with 1-foot high grass and other vegetation. The vicinity of the subject site can generally be described as residential. Current usage of adjoining property includes the following.

The site north of the subject site is Ala Wai Boulevard and the Ala Wai canal. Immediately south of the subject site is Tusitala Street with the Waikiki Towne House high rise apartments across the street. Further south is numerous high and low rise apartment, condominium and hotel developments up to Waikiki Beach and the Pacific Ocean. To the west of the site is the Ala Wai Towne House High Rise Condominium with other high rise and low rise developments further west. East of the subject site is the Waikiki Bellevue apartments and the Dynasty Apartment Complex. Numerous apartment building developments exist further east.

Review of Sanborn Maps from 1927, the site shows what appears to be residential housing development consisting of seven separate structures. Through viewing aerial photographs, the subject site appears developed 1949. The site appears to be developed with these structures through the mid 1980's. Sometime between 1983 and 1988 all of the structures were removed from the subject site. The site has remained vacant since that time.

During the site reconnaissance nothing was noted on the site that appeared to be of an adverse environmental nature. It was noted that some household trash was deposited along Tusitala Street on the sidewalk immediately adjacent to the site (south).

The EDR database report identifies 2330 Kalakaua Ave., 2080 Kalakaua Ave., and 2002 Kalakaua Ave. as leaking underground storage tank sites (LUST). At this time there is no reason to believe that the surface and subsurface soil and groundwater at the site have been affected due to any of the regulatory listings. Currently, there are no outstanding issues with DOH or EPA for this site.

## **1.1 PHASE I ESA**

In accordance with ASTM Standard E 1527-00, this Phase I Environmental Site Assessment included reconnaissance of the subject and adjoining properties, interviews, and review of historical records and regulatory databases in an effort to identify evidence of recognized environmental conditions that may impact the property.

This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

## **1.2 RECOMMENDATIONS**

Based on investigation of the property for evidence of recognized environmental conditions, GESG has no immediate recommendations for further assessment or investigations. During construction it is recommended that any subsurface soil excavation be monitored for any abnormal objects or substances.

This summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided, and to aid in any decisions made or actions taken based on this information.

## 2. INTRODUCTION

### 2.1 PURPOSE AND SCOPE

This Phase I Environmental Site Assessment (ESA) was performed to search for evidence of recognized environmental conditions that may have an adverse environmental impact upon the property. The assessment included records review, interviews and reconnaissance to evaluate whether such conditions exist in connection with the property. The protocol utilized for this Phase I ESA was in general accordance with the requirements of ASTM Standard E 1527-00 as specified in the assessment contract. This report includes documentation to support the analysis, opinions and conclusions as presented. Authorization to perform this assessment was given on December 15<sup>th</sup>, 2003 by a signed copy of GESG Proposal Number 3085, between Tusitala Vista L.P. and GESG.

### 2.2 METHODOLOGY AND EXCEPTIONS

Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by Gary Furuta of Tusitala Vista L.P. Interviews were conducted with various persons as noted in the following table. Pertinent information reported by the interviewed parties is discussed in appropriate sections of the report.

NAME	FUNCTION	EMPLOYER	DATE	CONTACT
Gary Furuta	Client Representative	Tusitala Vista L.P.	12/15/03	(808) 529-7300
Edgar Gamiao	Aerial photography contact	RM Towill Corporation	12/19/02	In person
Hanako Hata	Client Representative	Starts, Inc.	12/30/03	email
Receptionist (No records)	DOH Solid & Hazardous Waste	Department of Health, Solid and Hazardous Waste Branch	12/30/02	(808) 586-4228

Ground reconnaissance was conducted on January 8, 2004 by Michael Polkinghorn of GESG. The ground reconnaissance consisted of observing the periphery of the property and viewing the site from accessible adjacent public thoroughfares. Interior portions of the property were systematically traversed to provide an overlapping field of view, wherever possible. Visual reconnaissance of adjoining properties was limited to areas and facilities that were readily observable from the subject property or from public access areas. Photographs were taken to document the features observed during the reconnaissance and environmental conditions of concern, where possible. A photographic log and copies of the photographs are included in Appendix C.

EDR database information was reviewed to help identify evidence of recognized environmental conditions in connection with the property.

A history of the previous uses of the property, and properties in the surrounding area to the extent that this information was revealed in the course of researching the subject property, was developed consistent with practices specified in ASTM Standard E 1527-00 § 7.3. From the standard historical sources specified in the ASTM practice, GESG reviewed: aerial photographs from 1949, 1964, 1970, 1978, 1983, 1988, 1993, and 1999 from R.M. Towill Corporation; Sanborn Maps from: 1927, 1949, 1956, 1975, 1977, 1991, and 1993; the United States Geological Survey (USGS) 7.5 minute topographic map titled Honolulu, Hawaii, dated 1998; property tax files for 1933 - 2002 obtained at the City and County Offices of Honolulu; chain of recorded land title records for 1938 - 2002 obtained at the City and County Offices of Honolulu; building department records for 1984 - 2002 obtained at the City and County Offices of Honolulu; and zoning/land use records for 1933 - 2001 obtained at the City and County Offices of Honolulu.

The first obvious developed use of the property identified in this assessment was in or around 1927. Historical information sources researched in this assessment allowed uses of the property to be traced from the present back to 1927. This does not constitute historical failure per ASTM Standard E 1527-00 § 7.3.2.

### **2.3 LIMITATIONS OF ASSESSMENT**

Along with all of the limitations set forth in various sections of the ASTM Standard E 1527-00 protocol, the accuracy and completeness of this report is necessarily limited by the following:

- Access Limitations - None.
- Physical Obstructions to Observations - None.
- Outstanding Information Requests - None.
- Historical Data Source Failure - The historical research performed for the purposes of this Phase I ESA provided information dating back to 1951. This does not meet the ASTM minimum research standard of 1940 and constitutes historical data failure.

This report was prepared in accordance with the contract GESG has with Tusitala Vista L.P. Reliance or any use of this report by anyone other than Tusitala Vista L.P. and HCDCH, for whom it was prepared, is prohibited. Reliance or use by any such third party without explicit authorization does not make said third party a third party beneficiary to GESG's contract with Tusitala Vista L.P. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

### **3. PROPERTY DESCRIPTION AND PHYSICAL SETTING**

#### **3.1 LOCATION AND DESCRIPTION**

The subject site is located at 2423 and 2429 Ala Wai Blvd. Honolulu, Hawaii, on the island of Oahu. The tax map key for the site is TMK 2-6-24-70 & 71. The subject site is located in Waikiki immediately to the south of the Ala Wai Canal. The subject site is located in a mixed setting. The neighborhood is developed predominantly with residential high-rise and low-rise apartment buildings.

The subject site footprint is approximately 35,761 square feet and is undeveloped. Utility systems identified at the property, as specified in ASTM Standard E 1527-00 § 8.4.1 and § 8.4.3 are as follows: Electricity is provided by Hawaiian Company Electric Company. Storm Water, Sewage Disposal, and Potable water at the property is provided through the City and County of Honolulu.

A scaled site plan or survey plat showing boundaries of the site was not provided for our use in the form of a previous Phase I ESA report prepared for the subject site. The subject property's location and site plan are provided in Appendix A. Photographs showing prominent features of the site and adjacent properties are provided in Appendix C.

#### **3.2 CURRENT USES OF THE PROPERTY**

The subject site is currently vacant and serving no immediate purposes. The User should refer to Section 6 of this report for additional site reconnaissance details.

#### **3.3 CURRENT USES OF ADJOINING PROPERTIES**

To the extent that indications of current and past uses of adjoining properties were identified through reconnaissance observation, interviews, records review or through client provided information, they are described below. Locations of adjoining properties discussed can be found on the site vicinity sketch in Appendix A.

#### **3.4 PHYSICAL SETTING**

##### **TOPOGRAPHIC MAP REVIEW**

A current United States Geological Survey (USGS) 7.5 minute topographic map (or equivalent) showing the area where the property is located was obtained and reviewed as specified in ASTM Standard E 1527-00 § 7.2.3. The 1998 USGS Honolulu, Hawaii quadrangle map was reviewed. According to the contour lines on the topographic map, the property is located approximately 5 feet above mean sea level. The contour lines in the area of the property indicate the area slopes downward towards the south in the direction of the ocean, which is located approximately a quarter mile away south. No water bodies are evident on the property. The property does not appear on the map as developed.

## GEOLOGY AND HYDROGEOLOGY

The soils beneath the subject site are classified as Fill Land Mixed. It consists mainly of material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources. This type of land is used for urban development including airports, housing areas, and industrial facilities.

According to the results of a regional investigation by Mink and Lau in 1990, the local cap rock and the basal aquifer are located within the Palolo Aquifer System of the Honolulu Aquifer Sector. The aquifer is described as being basal, confined/unconfined, and flank (horizontally extensive lavas)/sedimentary (nonvolcanic) aquifer that has fresh (<250 mg/l chlorides) to brackish (<5,000 mg/l), is of ecological importance as a fresh water source, and has a high to low vulnerability to contamination.

No site-specific information concerning hydrogeology, depth to groundwater, and direction of groundwater flow was obtained for this site, however, based on surface topography, it is assumed that groundwater flows in the direction of decreasing land elevation, towards the south. No data was available for neighboring facilities depth to groundwater at approximately; therefore it is difficult to estimate depth for the subject site.

## 4. Historical Review

### 4.1 AERIAL PHOTOGRAPHS

To the extent that indications of past uses of the property were identified through historical aerial photograph review, they are identified below.

Year	Property Usage
1949	The subject site appears to be developed with residential dwellings.
1964	The subject site appears to be developed with residential dwellings. The adjacent site west appears to be developed with an apartment complex.
1970	The subject site appears to be developed with residential dwellings. Numerous high rise and low rise developments noted throughout the area.
1978	The subject site appears to be developed with residential dwellings.
1983	The subject site has residential dwellings on the north half. The south half has had the dwellings removed.
1988	The subject site has residential dwellings on the north side removed (site vacant).
1993	The subject site appears to have no developments on it.
1999	The subject site appears be undeveloped.

The historical aerial photographic information developed and reviewed for the subject property revealed no evidence of recognized environmental conditions.

### 4.2 FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps were reviewed to assist in determining the previous site usage.

Year	Property Usage
1927	Eleven separate residential structures appear to be present on the site. Tusitala Street is Named Cleghorn Drive #1.
1949	Eleven separate residential structures appear to be present on the site. Tusitala Street appears as Tusitala Street.
1956	Eleven separate residential structures and one apartment building appear to be present on the site.
1975	Eleven separate residential structures and one apartment building appear to be present on the site. Ala Wai Town House is present adjacent to the NW. Dynasty Apts. Appear adjacent to the SE and the Waikiki Bellevue adjacent to the NE.
1977	Eleven separate residential structures and one apartment building appear to be present on the site.
1991	The subject site appears to have no developments on it.
1993	The subject site is vacant.

The historical Sanborn Map information developed and reviewed for the subject property revealed no evidence of recognized environmental conditions.

#### **4.3 PRIOR OWNERSHIP**

The site has been owned by numerous families and Trusts up to around 1987 when Starts International acquired the property.

#### **4.4 LOCAL AGENCY CONTACTS**

The Honolulu Fire Department was contacted on January 5<sup>th</sup>, 2004 to obtain information regarding complaints, permits, violations, or other pertinent records for the subject site and adjacent properties. No records are on file regarding any recognized environmental conditions for the subject site or adjacent properties.

According to the DOH Hazard Evaluation and Emergency Response (HEER) office, there are no records on file for the subject property.

Hawaiian Electric Company was contacted pertaining transformers in the area. Six pole mounted transformers adjacent to the subject site are all non PCB containing.

#### **4.5 PREVIOUS REPORTS**

HIES Performed a Phase I ESA of the subject site in January of 1999. A Copy of the Covers, Table of Contents, and Executive Summary was forwarded to us prior to conducting the investigation. The Executive Summary indicates no recognized environmental conditions associated with the subject site or adjacent properties.

#### **4.6 HISTORICAL SUMMARY**

The historical information provided in this section has established the use of the site since 1927. The site has remained residential since through the late 1980's. Since the late 1980's the site has been an undeveloped vacant lot. The surrounding area has remained residential since the 1920's. Multi-family residences (low rise apartments) began developing in the 1950's with high-rise development commencing in the late 1960's.

The historical information developed and reviewed for adjoining properties revealed no evidence of recognized environmental conditions in connection with the subject property. The User should refer to Section 6 of this report for additional site reconnaissance information on the current use of adjoining property.

## 5. ENVIRONMENTAL REGULATORY RECORDS REVIEW

### 5.1 STANDARD FEDERAL AND STATE ENVIRONMENTAL RECORD SOURCES

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements (RSR) of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Detailed information for sites identified within the RSR's is provided following the table, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property. Copies of the EDR research data and a description of the databases are included in Appendix B of this report.

STANDARD FEDERAL & STATE ENVIRONMENTAL DATABASE RECORD SUMMARY					
DATABASE RECORD	RSR (MILES)	TOTAL SITES FOUND	ON ADJ PROP	ON SUBJ PROP	DATA SOURCE
Federal NPL List	1	0	0	0	EDR
Federal CERCLIS List	0.5	0	0	0	EDR
Federal RCRA CORRACTS TSD Facilities List	1	0	0	0	EDR
Federal RCRA Non-CORRACTS TSD Facilities List	0.5	1	1	0	EDR
Federal RCRA Generators List	ADJ	0	0	0	EDR
Federal ERNS List	SITE	0	0	0	EDR
State-Equivalent NPL List	1	0	0	0	EDR
State-Equivalent CERCLIS List	0.5	0	0	0	EDR
State Landfill and/or Solid Waste Disposal Site List	0.5	1	1	0	EDR
State Leaking UST List	0.5	12	0	0	EDR
State Registered UST List	ADJ	7	0	0	EDR

### 5.2 DISCUSSION OF DATABASE FINDINGS

A total of 19 sites were identified within the RSR's. None of the listed sites pose an immediate environmental concern to subject site. The sites listed are not expected to present an environmental concern to the subject site due to their distance from the subject site or topographic location being downgradient/crossgradient.

A total of 20 unmappable sites are listed in the EDR report. These sites could not be plotted with confidence due to inaccurate or missing information in the environmental database provided by the applicable agency. These sites have been cross referenced by name and address and have been visually verified to not to be within the immediate area of the subject site. None of the unmappable sites pose any potential impact to the subject site at this time.

## 6. RECONNAISSANCE FINDINGS

### 6.1 PROPERTY RECONNAISSANCE FINDINGS

A summary of uses and conditions consistent with ASTM Standard E 1527-00 § 8.4 indicating the likelihood of recognized environmental conditions in connection with the property is provided below. For each of the uses or conditions identified on the property, detailed information is discussed following the summary along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property.

#### IDENTIFIED

YES NO

<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hazardous Substances In Connection With Property Use
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Petroleum Products In Connection With Property Use
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Aboveground or Underground Storage Tanks (ASTs/USTs)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Suspect Containers Not In Connection With Property Use
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Electrical or Mechanical Equipment Likely To Contain PCBs
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dry Cleaning Operations
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Agricultural Use (Pesticides/Herbicides)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Interior Stains or Corrosion
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drains or Sumps
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Air Emissions
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wastewater Discharges
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Septic or Sewage Tanks
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pits, Ponds or Lagoons
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pools of Liquid or Standing Water
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solid Waste Dumping, Landfills or Suspect Fill Material
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stained Soil or Pavement
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stressed Vegetation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wells
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Odors
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other Uses or Conditions of Concern

#### OTHER USES OR CONDITIONS OF CONCERN

During the site visit it was noted that household trash items were abandoned outside of the property on the side walk along Tusitala Street. These items included a television set, a computer monitor, and other household furniture. These items are not currently regulated for disposal however additional resources may be required to remove and dispose of them.



## **7. SUMMARY AND CONCLUSIONS**

### **7.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT**

GESG has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of the ASTM Standard E 1527-00 protocol of 2423/2429 Ala Wai Blvd. Honolulu, Hawaii. Exceptions to or deletions from this protocol are discussed earlier in this report.

This assessment has revealed no evidence of recognized environmental conditions as defined by ASTM, in connection with the property.

### **7.2 RECOMMENDATIONS**

Based on investigation of the property for evidence of recognized environmental conditions, GESG has no further recommendations for further assessment at the site at this time.

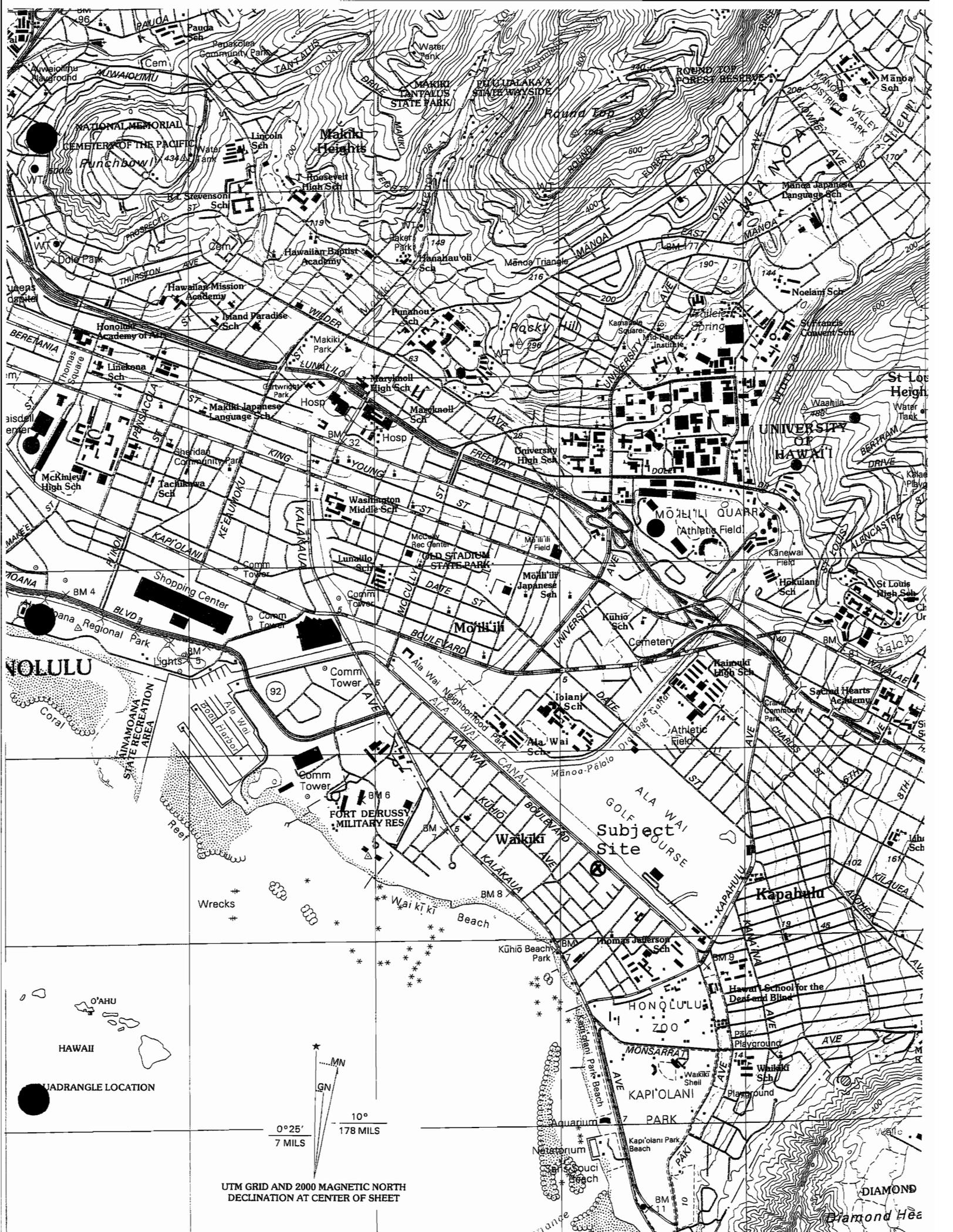
## 8. WARRANTY

GESG warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the ASTM Standard E 1527-00 protocol. These methodologies are described by the standard as representing good commercial and customary practice for conducting an Environmental Site Assessment of a parcel of property for the purpose of identifying recognized environmental conditions.

These findings and conclusions contain limitations inherent in these methodologies which are referred to in the protocol. There is a possibility that even with proper application of these methodologies, conditions may exist on the property that could not be identified within the scope of the assessment or that were not reasonably identifiable from the available information.

GESG believes that the information obtained from the records review and the interviews concerning the property is reliable. GESG does not warrant or guarantee that the information provided by these sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results. They are intended to provide the client with information regarding apparent suspicions of existing and potential adverse environmental conditions relating to the subject property.

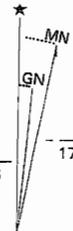
## APPENDIX A - MAPS AND SKETCHES



UTM GRID AND 2000 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

0°25' 10°  
7 MILS 178 MILS

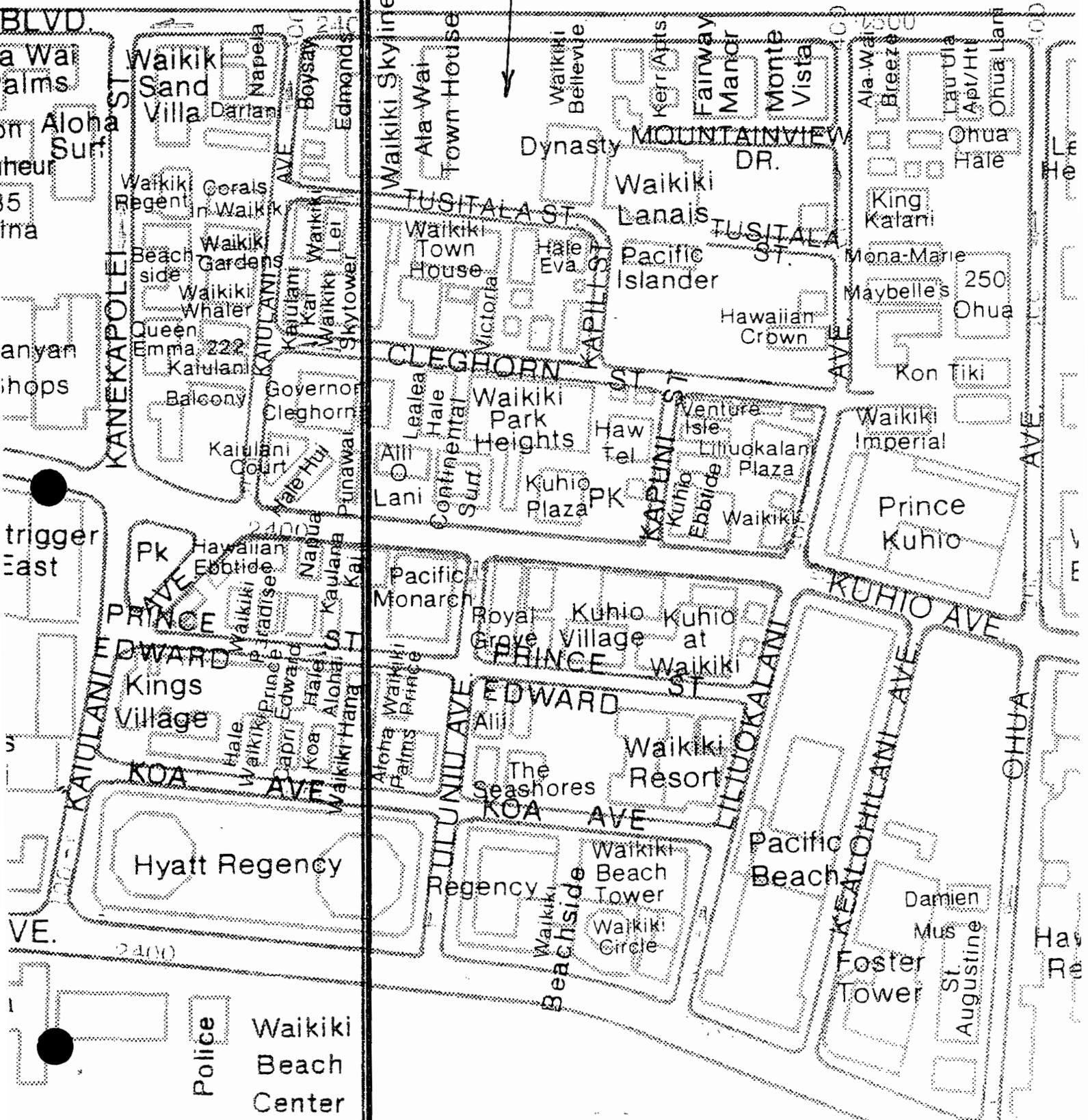
QUADRANGLE LOCATION



Ala Wai (

Ala Wai Canal

SUBJECT SITE



Police  
Waikiki  
Beach  
Center

**APPENDIX B - REGULATORY SEARCH REPORTS**



## Sanborn® Map Report

**Ship To:** Mike Polkinghorn  
Global Env. Svcs. Group  
105 Puuhale Road  
Honolulu, HI 96819

**Order Date:** 12/19/2003 **Completion Date:** 12/22/2003

**Inquiry #:** 1102348.3S

**P.O. #:** 3e005

**Site Name:** Tusital Vista

**Address:** 2423 ALA WAI BLVD

**City/State:** Honolulu, HI 96813

**Cross Streets:**

**Customer Project:** 3e005  
8014928MER 808-843-0400

Based on client-supplied information, fire insurance maps for the following years were identified

- 1927 - 1 Map
- 1949 - 1 Map
- 1956 - 1 Map
- 1975 - 1 Map
- 1977 - 1 Map
- 1991 - 1 Map
- 1993 - 1 Map

**Limited Permission to Photocopy**

**Total Maps: 7**

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- First Page Sanborn Map Report, listing years of coverage
- Second Page Electronic Sanborn Map Images USER'S GUIDE
- Third Page Oldest Sanborn Map Image
- Last Page Most recent Sanborn Map Image

### Navigating the Electronic Sanborn Image File

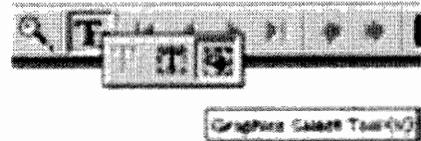
- Open file on screen.
- Identify TP (Target Property) on the most recent map.
- Find TP on older printed images.
- Using Acrobat, zoom to 250% in order to view more clearly.
  - 200-250% is the approximate equivalent scale of hardcopy Sanborn Maps.
- Zooming in on an image:
  - On the menu bar, click "View" and then zoom.
  - Use the magnifying tool and drag a box around the TP area.

### Printing a Sanborn Map from the Electronic File

- EDR recommends printing all images at 300 dpi (300 dpi prints faster than 600 dpi).
- To print only the TP area, cut and paste the area from Adobe Acrobat to your word processor.

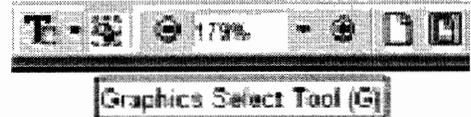
#### Acrobat Version 4

- Go to the Menu bar
- Press and hold the "T" button
- Choose the Graphics Select Tool
- Draw a box around the area selected
- Go to "Menu"
- Highlight "Edit"
- Highlight "Copy"
- Go to a word processor such as Microsoft Word, paste and print.



#### Acrobat Version 5

- Go to the Menu bar
- Click the "Graphics Select Tool"
- Draw a box around the area selected
- Go to "Menu"
- Highlight "Edit"
- Highlight "Copy"
- Go to a word processor such as Microsoft Word, paste and print.



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- Due to file size limitations, certain ISPs, including AOL, may occasionally delay or decline to deliver files. Please contact your ISP to identify their specific file size limitations.

399B

382

Ala Wai (Canal)



ALA WAI BLVD



78

Scale of Feet. 0 50 100 150

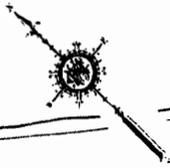


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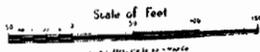
Ala Wai (Canal)



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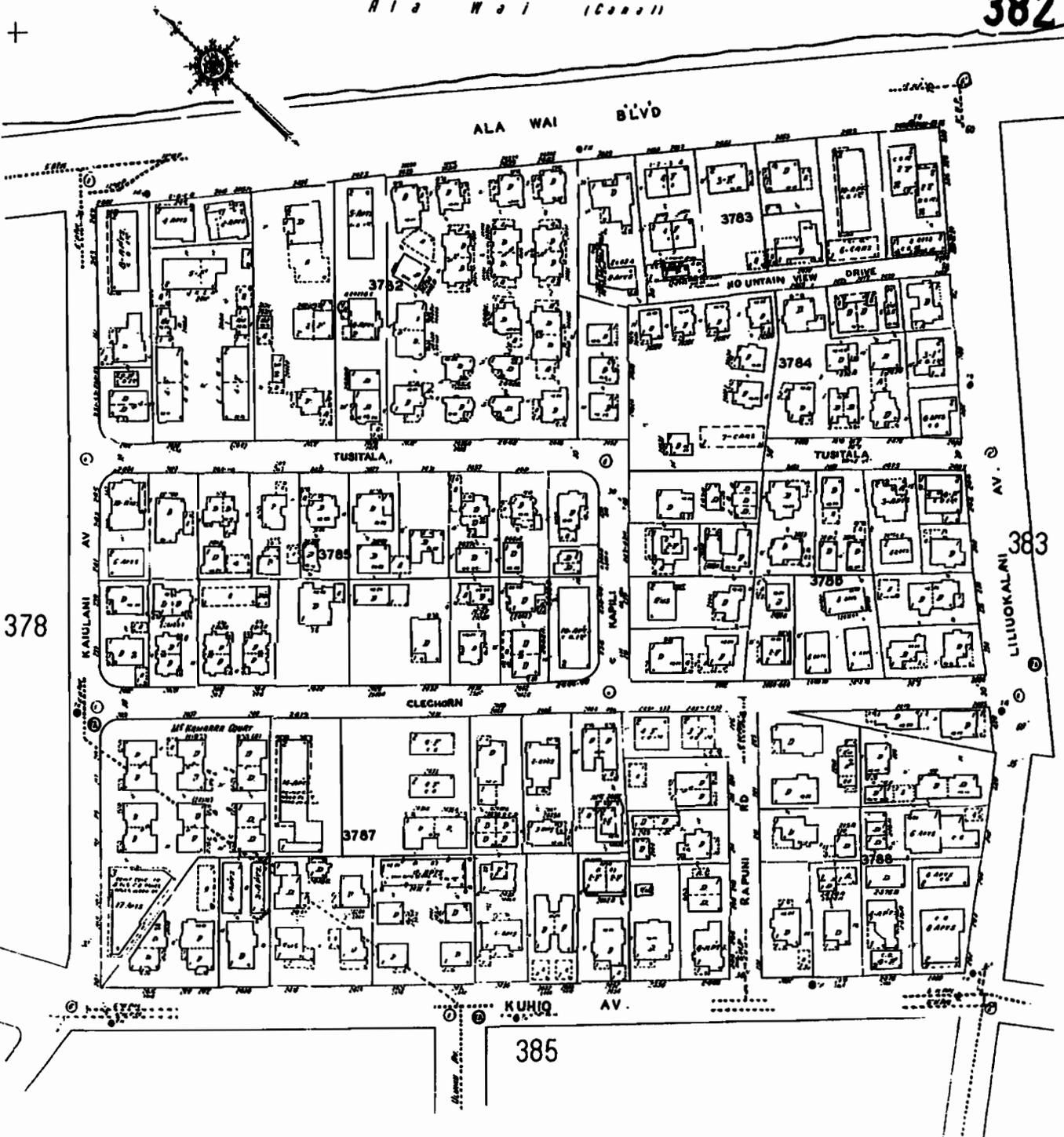


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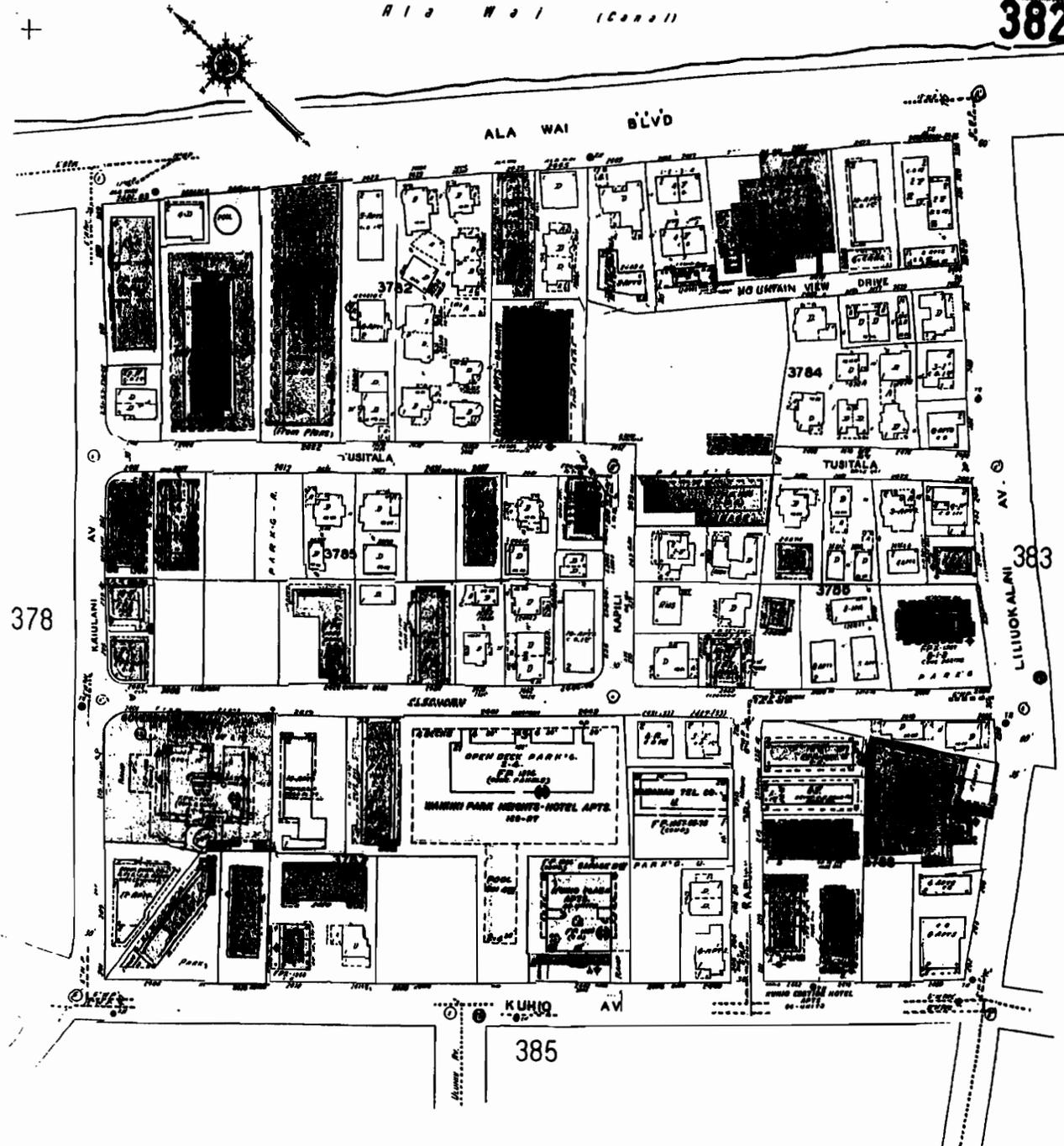
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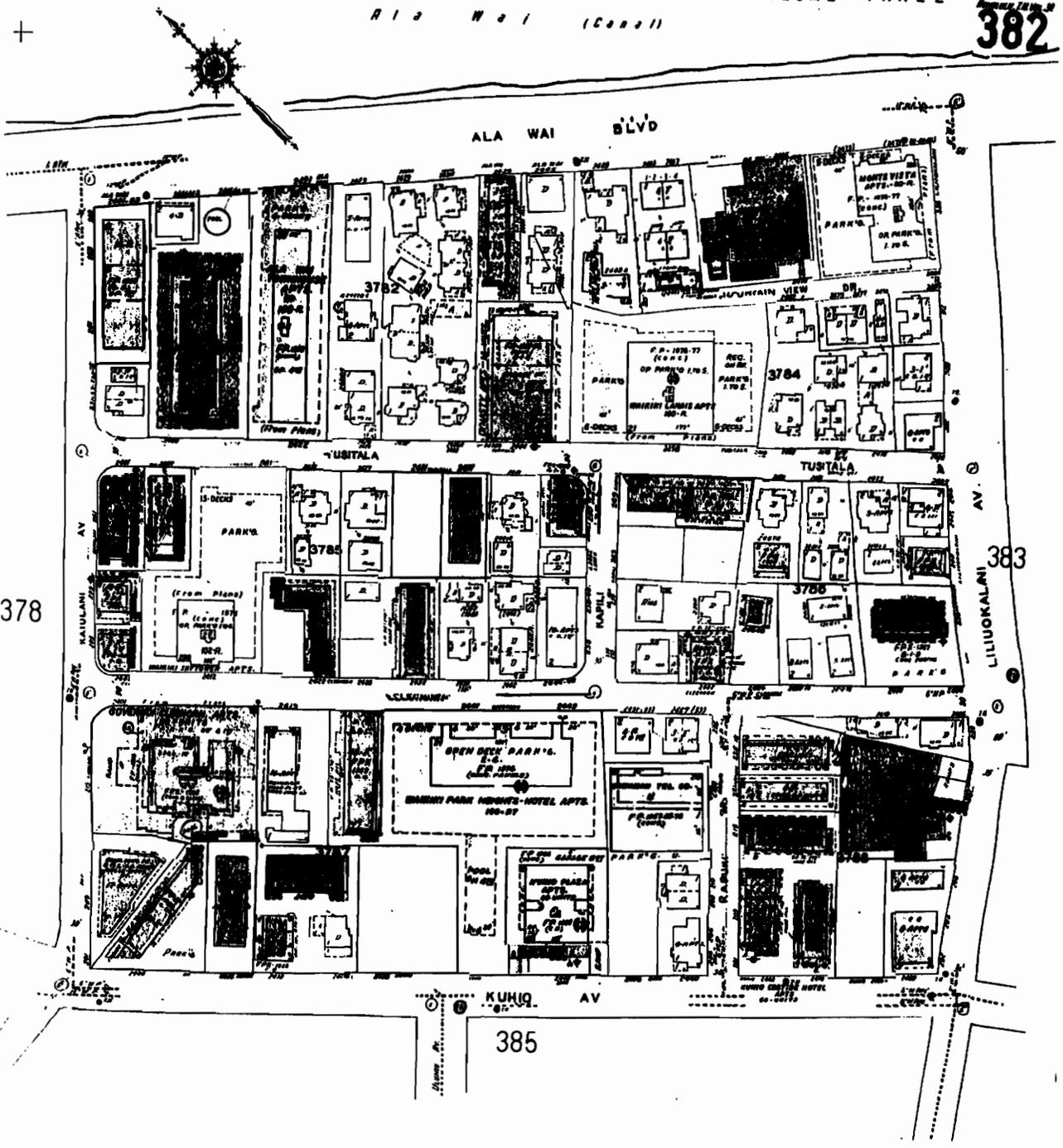
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## **The EDR Radius Map with GeoCheck<sup>®</sup>**

**Tusitala Vista  
2423/2429 Ala Wai Blvd  
Honolulu, HI 96813**

**Inquiry Number: 01102348.2r**

**December 19, 2003**

## ***The Source For Environmental Risk Management Data***

3530 Post Road  
Southport, Connecticut 06890

### **Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

### TARGET PROPERTY INFORMATION

#### ADDRESS

2423/2429 ALA WAI BLVD  
HONOLULU, HI 96813

#### COORDINATES

Latitude (North): 21.278100 - 21° 16' 41.2"  
Longitude (West): 157.822100 - 157° 49' 19.6"  
Universal Transverse Mercator: Zone 4  
UTM X (Meters): 622197.9  
UTM Y (Meters): 2353243.5  
Elevation: 3 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 21157-C7 HONOLULU, HI  
Source: USGS 7.5 min quad index

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

### FEDERAL ASTM STANDARD

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned  
CORRACTS..... Corrective Action Report  
RCRIS-TSD..... Resource Conservation and Recovery Information System  
ERNS..... Emergency Response Notification System

### STATE ASTM STANDARD

SWF/LF..... Permitted Landfills in the State of Hawaii

## EXECUTIVE SUMMARY

VCP..... Voluntary Response Program Sites

### FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees  
ROD..... Records Of Decision  
Delisted NPL..... National Priority List Deletions  
FINDS..... Facility Index System/Facility Identification Initiative Program Summary Report  
HMIRS..... Hazardous Materials Information Reporting System  
MLTS..... Material Licensing Tracking System  
MINES..... Mines Master Index File  
NPL Liens..... Federal Superfund Liens  
PADS..... PCB Activity Database System  
US BROWNFIELDS..... A Listing of Brownfields Sites  
DOD..... Department of Defense Sites  
RAATS..... RCRA Administrative Action Tracking System  
TRIS..... Toxic Chemical Release Inventory System  
TSCA..... Toxic Substances Control Act  
SSTS..... Section 7 Tracking Systems  
FTTS INSP..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

### STATE OR LOCAL ASTM SUPPLEMENTAL

SPILLS..... Release Notifications

### EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

### BROWNFIELDS DATABASES

US BROWNFIELDS..... A Listing of Brownfields Sites  
BROWNFIELDS..... Brownfields Sites  
VCP..... Voluntary Response Program Sites

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## EXECUTIVE SUMMARY

### FEDERAL ASTM STANDARD

**RCRIS:** Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-LQG list, as provided by EDR, and dated 09/10/2003 has revealed that there is 1 RCRIS-LQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>KUHIO VILLAGE RESORT AOA</i>	<i>2463 KUHIO AVE</i>	<i>1/8 - 1/4 S</i>	<i>A3</i>	<i>7</i>

**RCRIS:** Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-SQG list, as provided by EDR, and dated 09/10/2003 has revealed that there are 2 RCRIS-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>AZABU USA CORP DBA KINGS VILLA</i>	<i>131 KAIULANI AVE</i>	<i>1/8 - 1/4 WSW B8</i>		<i>10</i>
<i>PACIFIC BEACH HOTEL</i>	<i>2490 KALAKAUA AVE</i>	<i>1/8 - 1/4 SSW 12</i>		<i>12</i>

### STATE ASTM STANDARD

**SHWS:** The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 07/12/2001 has revealed that there are 3 SHWS sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
STAN SHINKAWA CO.	2330 KALAKAUA AVE	1/4 - 1/2 W	14	13

## EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<b>KING KALAKAUA PLAZA</b>	<b>2080 KALAKAUA AVE</b>	<b>1/2 - 1 WNW</b>	<b>22</b>	<b>21</b>
<b>CHEVRON U.S.A., INC.</b>	<b>2002 KALAKAUA AVE</b>	<b>1/2 - 1 NW</b>	<b>23</b>	<b>22</b>

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 08/01/2003 has revealed that there are 12 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<b>WAIKIKI CENTRAL OFFICE</b>	<b>220 KAPUNI ST</b>	<b>1/8 - 1/4 SSW</b>	<b>A1</b>	<b>6</b>
<b>AVIS RENT-A-CAR</b>	<b>148 KAIULANI AVE</b>	<b>1/8 - 1/4 WSW</b>	<b>B4</b>	<b>8</b>
<b>KING'S VILLAGE SHOPPING CENTER</b>	<b>131 KAIULANI AVE</b>	<b>1/8 - 1/4 WSW</b>	<b>B6</b>	<b>9</b>
<b>OUTRIGGER PRINCE KUHIO HOTEL</b>	<b>2500 KUHIO AVE</b>	<b>1/8 - 1/4 S</b>	<b>10</b>	<b>10</b>
<b>MOANA SURFRIDER HOTEL</b>	<b>2365 KALAKAUA AVE</b>	<b>1/4 - 1/2 WSW</b>	<b>13</b>	<b>13</b>
<b>ROYAL KUHIO CONDOMINIUMS</b>	<b>2240 KUHIO AVE</b>	<b>1/4 - 1/2 WNW</b>	<b>D15</b>	<b>15</b>
<b>MATSUSHITA INVESTMENT AND DEVELOPMENT</b>	<b>2237 KUHIO AVE</b>	<b>1/4 - 1/2 WNW</b>	<b>D16</b>	<b>15</b>
<b>ROYAL HAWAIIAN HOTEL</b>	<b>2259 KALAKAUA AVE</b>	<b>1/4 - 1/2 W</b>	<b>E17</b>	<b>15</b>
<b>SHERATON WAIKIKI HOTEL</b>	<b>2255 KALAKAUA AVE</b>	<b>1/4 - 1/2 W</b>	<b>E18</b>	<b>15</b>
<b>ALA WAI SERVICE</b>	<b>407 KAPAHULU AVE</b>	<b>1/4 - 1/2 SE</b>	<b>19</b>	<b>17</b>
<b>ALA WAI GOLF COURSE</b>	<b>484 KAPAHULU AVE</b>	<b>1/4 - 1/2 ESE</b>	<b>20</b>	<b>19</b>
<b>CONCOPHILLIPS 254573 (PREV: GE)</b>	<b>505 KAPAHULU AVE</b>	<b>1/4 - 1/2 ESE</b>	<b>21</b>	<b>19</b>

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 08/01/2003 has revealed that there are 7 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<b>WAIKIKI CENTRAL OFFICE</b>	<b>220 KAPUNI ST</b>	<b>1/8 - 1/4 SSW</b>	<b>A1</b>	<b>6</b>
<b>ABC STORE #21</b>	<b>2394 KUHIO AVE</b>	<b>1/8 - 1/4 W</b>	<b>2</b>	<b>6</b>
<b>AVIS RENT-A-CAR</b>	<b>148 KAIULANI AVE</b>	<b>1/8 - 1/4 WSW</b>	<b>B4</b>	<b>8</b>
<b>MIRAMAR HOTEL HAWAII, INC.</b>	<b>2345 KUHIO AVE</b>	<b>1/8 - 1/4 WNW</b>	<b>C5</b>	<b>9</b>
<b>KING'S VILLAGE SHOPPING CENTER</b>	<b>131 KAIULANI AVE</b>	<b>1/8 - 1/4 WSW</b>	<b>B7</b>	<b>9</b>
<b>HONOLULU PRINCE</b>	<b>415 NAHUA ST</b>	<b>1/8 - 1/4 WNW</b>	<b>C9</b>	<b>10</b>
<b>BUDGET RENT-A-CAR SYSTEMS, INC</b>	<b>2330 KUHIO AVE</b>	<b>1/8 - 1/4 WNW</b>	<b>C11</b>	<b>12</b>

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
KAWAIOA LANDFILL	SHWS, LUST
CARTWRIGHT NEIGHBORHOOD PARK	SHWS
ELLIOT STREET DRAINAGE CANAL	SHWS, SPILLS
HONOLULU SHIPYARD, INC. (EWA OF PIE	SHWS
HONOLULU SHIPYARD, INC.	SHWS
HAWAII INSTRUMENTATION & CONTROLS,	SHWS
KING KALAKAUA PLAZA (WAIKIKI GATEWA	SHWS, SPILLS
NIMITZ HIGHWAY RELIEF SEWER	SHWS
BHP, PIER 38	SHWS
SCRAP METAL PILE	SHWS
BHP TANK FARM, SAND ISLAND	SHWS, SPILLS
BARBERS POINT HARBOR EXPANSION	SHWS
TRIPLER ARMY MEDICAL CENTER, BUILDI	SHWS
HAWAII BITUMULS & PAVING CO	SHWS
MCAS KANEOHE LF (KMCAS LF-0041-95)	SWF/LF, SPILLS
NEW MILILANI LANDFILL	SWF/LF
OLD MILILANI LANDFILL	SWF/LF
AOAO YACHT HARBOR TOWERS	RCRIS-SQG, FINDS
PACIFIC CRUISES	RCRIS-SQG, FINDS
SHERATON PRINCESS KAIULANI	RCRIS-SQG, FINDS

# OVERVIEW MAP - 01102348.2r - Global Env. Svcs. Group



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ▨ National Priority List Sites
- ▩ Landfill Sites
- ▧ Dept. Defense Sites

- Oil & Gas pipelines
- ▨ 100-year flood zone
- ▩ 500-year flood zone
- ▧ Federal Wetlands



**TARGET PROPERTY:** Tusitala Vista  
**ADDRESS:** 2423/2429 Ala Wai Blvd  
**CITY/STATE/ZIP:** Honolulu HI 96813  
**LAT/LONG:** 21.2781 / 157.8221

**CUSTOMER:** Global Env. Svcs. Group  
**CONTACT:** Mike Polkinghorn  
**INQUIRY #:** 01102348.2r  
**DATE:** December 19, 2003 4:35 pm

# DETAIL MAP - 01102348.2r - Global Env. Svcs. Group



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ⚡ Sensitive Receptors
- ☐ National Priority List Sites
- ☐ Landfill Sites
- ☐ Dept. Defense Sites

- ⚡ Oil & Gas pipelines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- Federal Wetlands



**TARGET PROPERTY:** Tusitala Vista  
**ADDRESS:** 2423/2429 Ala Wai Blvd  
**CITY/STATE/ZIP:** Honolulu HI 96813  
**LAT/LONG:** 21.2781 / 157.8221

**CUSTOMER:** Global Env. Svcs. Group  
**CONTACT:** Mike Polkinghorn  
**INQUIRY #:** 01102348.2r  
**DATE:** December 19, 2003 4:35 pm

## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><u>FEDERAL ASTM STANDARD</u></b>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	1	NR	NR	NR	1
RCRIS Sm. Quan. Gen.		0.250	0	2	NR	NR	NR	2
ERNS		TP	NR	NR	NR	NR	NR	0
<b><u>STATE ASTM STANDARD</u></b>								
SHWS		1.000	0	0	1	2	NR	3
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	4	8	NR	NR	12
UST		0.250	0	7	NR	NR	NR	7
VCP		0.500	0	0	0	NR	NR	0
<b><u>FEDERAL ASTM SUPPLEMENTAL</u></b>								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
<b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b>								
SPILLS		TP	NR	NR	NR	NR	NR	0
<b><u>EDR PROPRIETARY HISTORICAL DATABASES</u></b>								
Coal Gas		1.000	0	0	0	0	NR	0
<b><u>BROWNFIELDS DATABASES</u></b>								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0

## MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
BROWNFIELDS		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1  
SSW  
1/8-1/4  
737 ft.

WAIKIKI CENTRAL OFFICE  
220 KAPUNI ST  
HONOLULU, HI 96815

UST U001235201  
LUST N/A

Site 1 of 2 in cluster A

Relative:  
Equal

Actual:  
3 ft.

LUST:  
Facility ID: 9-100535  
Alternate Event ID: 970023  
Facility Status Date: 09/24/1998  
Facility Status: Site Cleanup Completed  
Project Officer: Takaba

UST:  
Facility ID: 9-100535 Tank ID: R-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 560 Installed: 3/1/1970  
Date Closed: 11/12/1996 Substance: Diesel  
Owner: VERIZON HAWAII  
1177 BISHOP ST. P.O. BOX 2200 Hon.HI 96841  
Honolulu, HI 96815

Facility ID: 9-100535 Tank ID: R-2  
Tank Status: Permanently Out of Use  
Tank Capacity: 550 Installed: 5/7/1984  
Date Closed: 11/12/1996 Substance: Diesel  
Owner: VERIZON HAWAII  
1177 BISHOP ST. P.O. BOX 2200 Hon.HI 96841  
Honolulu, HI 96815

Facility ID: 9-100535 Tank ID: M-1  
Tank Status: Currently In Use  
Tank Capacity: 600 Installed: 12/1/1996  
Date Closed: Not reported Substance: Diesel  
Owner: VERIZON HAWAII  
1177 BISHOP ST. P.O. BOX 2200 Hon.HI 96841  
Honolulu, HI 96815

2  
West  
1/8-1/4  
763 ft.

ABC STORE #21  
2394 KUHIO AVE  
HONOLULU, HI 96813

UST U001235205  
N/A

Relative:  
Equal

Actual:  
3 ft.

UST:  
Facility ID: 9-100728 Tank ID: P-2  
Tank Status: Permanently Out of Use  
Tank Capacity: 0 Installed: Not reported  
Date Closed: 1/1/1974 Substance: Other  
Owner: MNS, LTD.  
766 POHUKAINA ST  
Honolulu, HI 96813

Facility ID: 9-100728 Tank ID: P-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 0 Installed: Not reported  
Date Closed: 1/1/1974 Substance: Other  
Owner: MNS, LTD.

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**ABC STORE #21 (Continued)**

766 POHUKAINA ST  
 Honolulu, HI 96813

Database(s)      EDR ID Number  
 EPA ID Number

**U001235205**

**A3**  
**South**  
**1/8-1/4**  
**856 ft.**

**KUHIO VILLAGE RESORT AOA**  
**2463 KUHIO AVE**  
**HONOLULU, HI 96815**

**RCRIS-LQG**      **1001112108**  
**FINDS**          **HIR00000802**  
**SPILLS**

**Site 2 of 2 in cluster A**

**Relative:**  
**Equal**

**RCRIS:**

**Actual:**  
**3 ft.**

Owner:            KVR INC  
                       (808) 531-1621  
 EPA ID:           HIR00000802  
 Contact:          JIM MESSINGER  
                       (808) 926-3242

Classification:   Large Quantity Generator  
 TSDF Activities: Not reported

Violation Status: No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system (RCRAINFO)

**HI SPILLS:**

Reported Date:            Not reported  
 Case Number:             19951106-2  
 Island:                     Oahu  
 Incident Description:     Oil from garage Sump pumped onto street. A pedestrian  
                                       slipped on the oil.  
 Cause:  
 Substances:               Oil, Waste  
 Quantity:                  Not reported  
 Media Affected:           Storm Drain  
 Reportable Quantity:     Not reported  
 Category:                  Not reported  
 Spill?:                      Yes  
 Reported By:               Not reported  
 Reporters Affiliation:     Not reported  
 ERNS Number:             Not reported  
 Responder:  
 Responder Affiliation:  
 Initial Response:           Penco hired.  
 Release Date:              11/03/96  
 Time of Release:           Not reported  
 Duration:                   Not reported  
 Input By:                   Marsha Mealey  
 Date Input:                 8/20/96  
 Staff 1:                     Bill Perry  
 Staff 2:                     Not reported  
 Emergency Response:     Not reported  
 Initial Site Screening Team Rank: Not reported  
 No Further Action:        Not reported  
 Priority:                     NFA  
 Comments:                 The HEER Office has no record of the initial verbal notification.  
 File Section:               Single  
 Type:                         Not reported  
 Department 1:              Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**KUHIO VILLAGE RESORT AOA (Continued)**

**100112108**

Department 2: Not reported  
Department 3: Not reported  
Cost Recovery: Not reported  
Official Notification: Yes  
Written Report: 11/10/95  
Confirmation Number: Not reported  
Pounds: Not reported  
Responsible Party: Not reported  
Manifest Document Number: Not reported  
Units: Not reported  
Standard Cause: Not reported  
Numerical Quantity: Not reported  
Zip id: Not reported  
Initial Notification: Not reported  
Written Notification: Not reported  
Imminent And Substantial: Not reported  
Lat/Lon: Not reported  
Verification of source: Not reported  
Potential Quantity Amount: Not reported  
Potential Quantity Unit: Not reported  
Verification of source: Not reported  
Source Id: Not reported  
Responsible Party Name: Not reported  
RP Address: Not reported  
RP Contact: Not reported  
RP Phone Number: Not reported  
Verification Of RP: Not reported  
Responsible Party ID: Not reported  
Contractor Amount: Not reported  
Personnel Amount: Not reported  
Equipment Amount: Not reported  
Travel Amount: Not reported  
Miscellaneous Amount: Not reported  
Federal Project Number: Not reported  
Pollution Removal Funding Auth: Not reported  
Authorization Date: Not reported  
Authorization Ceiling: Not reported  
Identifier: Not reported  
Total Environment Revolving Response Fund: 0

**B4 AVIS RENT-A-CAR**  
**WSW 148 KAIULANI AVE**  
**1/8-1/4 HONOLULU, HI 96815**  
**973 ft.**

**UST U001235079**  
**LUST N/A**

**Site 1 of 4 in cluster B**

**Relative:**  
**Equal**

**LUST:**  
Facility ID: 9-100173  
Alternate Event ID: 920032  
Facility Status Date: 11/21/1994  
Facility Status: Site Cleanup Completed  
Project Officer: Seid

**Actual:**  
**3 ft.**

**UST:**  
Facility ID: 9-100173 Tank ID: R-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 1500 Installed: 4/14/1972  
Date Closed: Not reported Substance: Gasoline

**MAP FINDINGS**

Map ID			
Direction			
Distance			
Distance (ft.)			
Elevation	Site	Database(s)	EDR ID Number EPA ID Number

**AVIS RENT-A-CAR (Continued)**

**U001235079**

Owner: AVIS RENT A CAR  
6 SYLVAN WAY DEPT 29-093-36  
Honolulu, HI 96815

**C5**  
**WNW**  
**1/8-1/4**  
**1080 ft.**

**MIRAMAR HOTEL HAWAII, INC.**  
**2345 KUHIO AVE**  
**HONOLULU, HI 96815**

**UST U001235536**  
**N/A**

**Site 1 of 3 in cluster C**

Relative:  
Equal

**UST:**

Actual:  
3 ft.

Facility ID:	9-101531	Tank ID:	R-1
Tank Status:	Permanently Out of Use	Installed:	5/21/1976
Tank Capacity:	2000	Substance:	Gasoline
Date Closed:	10/27/1992		
Owner:	MIRAMAR HOTEL HAWAII, INC. 2345 KUHIO AVENUE Honolulu, HI 96815		

Facility ID:	9-101531	Tank ID:	R-2
Tank Status:	Permanently Out of Use	Installed:	5/22/1983
Tank Capacity:	5000	Substance:	Diesel
Date Closed:	11/23/1992		
Owner:	MIRAMAR HOTEL HAWAII, INC. 2345 KUHIO AVENUE Honolulu, HI 96815		

**B6**  
**WSW**  
**1/8-1/4**  
**1084 ft.**

**KING'S VILLAGE SHOPPING CENTER**  
**131 KAIULANI AVE**  
**HONOLULU, HI 96819**

**LUST S104241265**  
**N/A**

**Site 2 of 4 in cluster B**

Relative:  
Equal

**LUST:**

Actual:  
3 ft.

Facility ID:	9-103611		
Alternate Event ID:	000038		
Facility Status Date:	12/13/1999		
Facility Status:	Site Cleanup Completed		
Project Officer:	Takaba		

**B7**  
**WSW**  
**1/8-1/4**  
**1084 ft.**

**KING'S VILLAGE SHOPPING CENTER**  
**131 KAIULANI AVE**  
**HONOLULU, HI 96819**

**UST U003711757**  
**N/A**

**Site 3 of 4 in cluster B**

Relative:  
Equal

**UST:**

Actual:  
3 ft.

Facility ID:	9-103611	Tank ID:	R-1
Tank Status:	Permanently Out of Use	Installed:	Not reported
Tank Capacity:	6000	Substance:	Gasoline
Date Closed:	11/26/1999		
Owner:	KING'S VILLAGE SHOPPING CENTER 131 KAIULANI AVE Honolulu, HI 96819		

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**KING'S VILLAGE SHOPPING CENTER (Continued)**

Database(s)      EDR ID Number  
 EPA ID Number

**U003711757**

**B8**      **AZABU USA CORP DBA KINGS VILLAGE**  
**WSW**      **131 KAIULANI AVE**  
**1/8-1/4**      **HONOLULU, HI 96815**  
**1084 ft.**

**RCRIS-SQG**      **1004688997**  
**FINDS**      **HIR000069344**

**Site 4 of 4 in cluster B**

**Relative:**  
**Equal**

**RCRIS:**  
 Owner:      AZABU USA CORP  
                   (808) 944-6855  
 EPA ID:      HIR000069344  
 Contact:      LARRY GILL  
                   (808) 924-7395

**Actual:**  
**3 ft.**

Classification:    Conditionally Exempt Small Quantity Generator  
 TSDF Activities:   Not reported  
 Violation Status:   No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 Hawaii Underground Storage Tank (HI-UST)  
 Resource Conservation and Recovery Act Information system (RCRAINFO)

**C9**      **HONOLULU PRINCE**  
**WNW**      **415 NAHUA ST**  
**1/8-1/4**      **HONOLULU, HI 96815**  
**1104 ft.**

**UST**      **U003154821**  
**N/A**

**Site 2 of 3 in cluster C**

**Relative:**  
**Equal**

**UST:**  
 Facility ID:      9-103092      Tank ID:      R-1  
 Tank Status:    Permanently Out of Use  
 Tank Capacity:   550      Installed:      8/1/1961  
 Date Closed:    6/27/1995      Substance:      Diesel  
 Owner:      KOEI USA ENTERPRISE, INC.  
                   415 NAHUA ST  
                   Honolulu, HI 96815

**Actual:**  
**3 ft.**

**10**      **OUTRIGGER PRINCE KUHIO HOTEL**  
**South**      **2500 KUHIO AVE**  
**1/8-1/4**      **HONOLULU, HI 96815**  
**1153 ft.**

**SPILLS**      **U003154553**  
**LUST**      **N/A**

**Relative:**  
**Equal**

**LUST:**  
 Facility ID:      9-102154  
 Alternate Event ID:   880021  
 Facility Status Date:   09/25/1991  
 Facility Status:      Case Transferred to HEER  
 Project Officer:      HEER

**Actual:**  
**3 ft.**

**HI SPILLS:**

Reported Date:      Not reported  
 Case Number:      19950307-2  
 Island:      Oahu  
 Incident Description:    Between 4:00 a.m. and 5:30 a.m., failure occurred of valve between day tank and main tank. Boiler is used for hot water heater. Day tanks are located on the 9th and 10th

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**OUTRIGGER PRINCE KUHIO HOTEL (Continued)**

**U003154553**

floors. The spill went down the side of building and into a  
sanitar  
Cause: overflow of day tank  
Substances: diesel  
Quantity: 50 gallons  
Media Affected: sewer system  
Reportable Quantity: Not reported  
Category: Not reported  
Spill?: Not reported  
Reported By: Mike Devich  
Reporters Affiliation: Senior VP of property purchases  
ERNS Number: Not reported  
Responder:  
Responder Affiliation:  
Initial Response: pump shut off. Muranaka Environmental hire to assess clean-up efforts  
Release Date: 03/07/95  
Time of Release: Not reported  
Duration: Not reported  
Input By: TKC  
Date Input: 04/21/95  
Staff 1: Chris Takeno  
Staff 2: Not reported  
Emergency Response: Not reported  
Initial Site Screening Team Rank: Not reported  
No Further Action: NFA  
Priority: NFA  
Comments:  
File Section: Central  
Type: Private  
Department 1: Not reported  
Department 2: Not reported  
Department 3: Not reported  
Cost Recovery: Not reported  
Official Notification: Not reported  
Written Report: Not reported  
Confirmation Number: Not reported  
Pounds: Not reported  
Responsible Party: Not reported  
Manifest Document Number: Not reported  
Units: Gallons  
Standard Cause: Not reported  
Numerical Quantity: Not reported  
Zip id: Not reported  
Initial Notification: Not reported  
Written Notification: Not reported  
Imminent And Substantial: Not reported  
Lat/Lon: Not reported  
Verification of source: Not reported  
Potential Quantity Amount: Not reported  
Potential Quantity Unit: Not reported  
Verification of source: Not reported  
Source Id: Not reported  
Responsible Party Name: Not reported  
RP Address: Not reported  
RP Contact: Not reported  
RP Phone Number: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**OUTRIGGER PRINCE KUHIO HOTEL (Continued)**

**U003154553**

Verification Of RP: Not reported  
Responsible Party ID: Not reported  
Contractor Amount: Not reported  
Personnel Amount: Not reported  
Equipment Amount: Not reported  
Travel Amount: Not reported  
Miscellaneous Amount: Not reported  
Federal Project Number: Not reported  
Pollution Removal Funding Auth: Not reported  
Authorization Date: Not reported  
Authorization Ceiling: Not reported  
Identifier: Not reported  
Total Environment Revolving Response Fund: Not reported

**C11 BUDGET RENT-A-CAR SYSTEMS, INC.**  
**WNW 2330 KUHIO AVE**  
**1/8-1/4 HONOLULU, HI 96815**  
**1175 ft.**

**UST U001235453**  
**N/A**

**Site 3 of 3 in cluster C**

**Relative:**  
**Equal**

**UST:**

**Actual:**  
**3 ft.**

Facility ID: 9-101361 Tank ID: 2  
Tank Status: Permanently Out of Use  
Tank Capacity: 6000 Installed: 1/1/1983  
Date Closed: 6/24/1993 Substance: Gasoline  
Owner: BUDGET RENT-A-CAR SYSTEMS, INC.  
P.O. BOX 15188  
Honolulu, HI 96815

Facility ID: 9-101361 Tank ID: 1  
Tank Status: Permanently Out of Use  
Tank Capacity: 6000 Installed: 1/1/1983  
Date Closed: 6/24/1993 Substance: Gasoline  
Owner: BUDGET RENT-A-CAR SYSTEMS, INC.  
P.O. BOX 15188  
Honolulu, HI 96815

**12 PACIFIC BEACH HOTEL**  
**SSW 2490 KALAKAUA AVE**  
**1/8-1/4 HONOLULU, HI 96815**  
**1264 ft.**

**RCRIS-SQG 1001485083**  
**FINDS HIR000050740**

**Relative:**  
**Equal**

**RCRIS:**

**Actual:**  
**3 ft.**

Owner: PACIFIC BEACH CORP  
(808) 922-1233  
EPA ID: HIR000050740  
Contact: BRUCE ARAI  
(808) 921-6126

Classification: Small Quantity Generator  
TSDF Activities: Not reported

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**PACIFIC BEACH HOTEL (Continued)**

**1001485083**

Violation Status: No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system (RCRAINFO)

**13**  
**WSW**  
**1/4-1/2**  
**1563 ft.**

**MOANA SURFRIDER HOTEL**  
**2365 KALAKAUA AVE**  
**HONOLULU, HI 96815**

**UST U001236002**  
**LUST N/A**

**Relative:**  
**Equal**

**LUST:**

Facility ID: 9-102647  
 Alternate Event ID: 930059  
 Facility Status Date: 10/17/1997  
 Facility Status: Site Cleanup Completed  
 Project Officer: Okoji

**Actual:**  
**3 ft.**

**UST:**

Facility ID:	9-102647	Tank ID:	R-1
Tank Status:	Permanently Out of Use	Installed:	12/30/1970
Tank Capacity:	4000	Substance:	Diesel
Date Closed:	11/30/1992		
Owner:	KYO-YA COMPANY, INC 2255 KALAKAUA AVE, 2ND FLOOR Honolulu, HI 96815		

Facility ID:	9-102647	Tank ID:	1
Tank Status:	Currently In Use	Installed:	12/30/1992
Tank Capacity:	2500	Substance:	Diesel
Date Closed:	Not reported		
Owner:	KYO-YA COMPANY, INC 2255 KALAKAUA AVE, 2ND FLOOR Honolulu, HI 96815		

**14**  
**West**  
**1/4-1/2**  
**1752 ft.**

**STAN SHINKAWA CO.**  
**2330 KALAKAUA AVE**  
**HONOLULU, HI 96815**

**SHWS 1000306067**  
**N/A**

**Relative:**  
**Equal**

**SHWS:**

File Section :	Central
Type :	Private
Department 1 :	Not reported
Department 2 :	Not reported
Department 3 :	Not reported
Table :	Sitelist
Island :	Oahu
Zip :	Not reported
Discovery Assesment and Remediation :	Not reported
Initial Site Screening Team Lead :	Not reported
ISST Assigned :	Not reported
ISST Date :	3/25/96
ISST Priority :	NFA
ISST Letter :	Not reported
Env Justice Eligible :	Not reported
Preliminary Assesment :	No
PA Lead :	Not reported

**Actual:**  
**3 ft.**

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

Database(s)      EDR ID Number  
 EPA ID Number

**STAN SHINKAWA CO. (Continued)**

**1000306067**

PA Date :	Not reported
PA Result :	Not reported
Site Investigation :	No
SI Lead :	Not reported
SI Date :	Not reported
SI Result :	Not reported
Remediation Action Planned :	Not reported
VRP :	Not reported
Brownfields :	Not reported
Agreement :	Not reported
Remedial Investigation :	Not reported
RAA :	Not reported
Response Action Memo :	Not reported
REM Lead :	Not reported
REM Date :	Not reported
REM Last Update :	12/01/93
Input By :	Adia/Tom
Case :	Not reported
Fed Id :	HID980497325
UST :	Not reported
Permits :	Not reported
RCRA :	Not reported
Program :	Not reported
Priority :	Not reported
Lat/Long :	Not reported
Cost :	Not reported
CU QNTY Site :	Not reported
Enforcement :	Not reported
CU Method :	Not reported
Ownership :	Private-Stan Shinkawa rents site from Waikiki Development corp.
Tax Map Key :	Not reported
Form :	Tom/Tricia
EPCRA :	Not reported
EPCRA FIL :	Not reported
Pathways :	Not reported
Targets :	Not reported
Manager :	Not reported
REM Result :	Not reported
Identifier :	Not reported
Site Code :	Not reported
Event :	Not reported
Event Type :	DS1 02/01/80 PA1 09/01/84
Notes :	Not reported
Site :	Not reported
Site_ :	Jewelry Manufacturing - Precious Metals (Gold)
Operator :	Stan Shinkawa, Inc. 2030 Kalakaua Ave, Honolulu, Hi 96815 Stan or Helen Shinkawa - Owners (808) 923-3510
Current :	Not reported
Compounds :	Not reported
Oname :	Waikiki Development Corp.

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

Site

Database(s)      EDR ID Number  
 EPA ID Number

**D15**      **ROYAL KUHIO CONDOMINIUMS**  
**WNW**      **2240 KUHIO AVE**  
**1/4-1/2**      **HONOLULU, HI 96815**  
**1936 ft.**

**UST**      **U003711723**  
**LUST**      **N/A**

**Site 1 of 2 in cluster D**

**Relative:**  
**Equal**

**LUST:**  
 Facility ID:              9-103574  
 Alternate Event ID:      000065  
 Facility Status Date:      04/02/2001  
 Facility Status:          Site Cleanup Completed  
 Project Officer:          Li

**Actual:**  
**3 ft.**

**UST:**  
 Facility ID:              9-103574                      Tank ID:              R-M-1  
 Tank Status:              Permanently Out of Use  
 Tank Capacity:              550                              Installed:              Not reported  
 Date Closed:              2/21/2000                      Substance:              Diesel  
 Owner:                      ROYAL KUHIO CONDOMINIUM ASSOCIATION OF APT OWNERS  
                                     2240 KUHIO AVE  
                                     Honolulu, HI 96815

**D16**      **MATSUSHITA INVESTMENT AND DEVELO**  
**WNW**      **2237 KUHIO AVE**  
**1/4-1/2**      **HONOLULU, HI 96815**  
**1984 ft.**

**LUST**      **U003154815**  
                  **N/A**

**Site 2 of 2 in cluster D**

**Relative:**  
**Equal**

**LUST:**  
 Facility ID:              9-103083  
 Alternate Event ID:      960007  
 Facility Status Date:      03/11/1996  
 Facility Status:          Site Cleanup Completed  
 Project Officer:          Ruiz

**Actual:**  
**3 ft.**

**E17**      **ROYAL HAWAIIAN HOTEL**  
**West**      **2259 KALAKAUA AVE**  
**1/4-1/2**      **HONOLULU, HI 96815**  
**2224 ft.**

**LUST**      **1000601227**  
                  **N/A**

**Site 1 of 2 in cluster E**

**Relative:**  
**Equal**

**LUST:**  
 Facility ID:              9-102646  
 Alternate Event ID:      930047  
 Facility Status Date:      05/17/1993  
 Facility Status:          Site Cleanup Completed  
 Project Officer:          Assigned

**Actual:**  
**3 ft.**

**E18**      **SHERATON WAIKIKI HOTEL**  
**West**      **2255 KALAKAUA AVE**  
**1/4-1/2**      **HONOLULU, HI 96815**  
**2252 ft.**

**UST**      **U001236003**  
**SPILLS**      **N/A**  
**LUST**

**Site 2 of 2 in cluster E**

**Relative:**  
**Equal**

**LUST:**  
 Facility ID:              9-102650  
 Alternate Event ID:      930027  
 Facility Status Date:      09/03/1997  
 Facility Status:          Site Cleanup Completed  
 Project Officer:          Ichinotsubo

**Actual:**  
**3 ft.**

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

SHERATON WAIKIKI HOTEL (Continued)

U001236003

HI SPILLS:

Reported Date: Not reported  
Case Number: 19930830-1  
Island: Oahu  
Incident Description: On 08/25/93, at about 10:45PM, the Sheraton Waikiki Hotel experienced a minor oil spill. Approximately 1.5 Gals of #2 Diesel spilled from a vent onto the Hotel's roadway connecting Kalia Rd & Helumoa Rd. The Vent is connected to 100  
Cause: Overflow from Vent System  
Substances: #2 Diesel Fuel  
Quantity: 1.5 Gals  
Media Affected: Asphalt & Concrete-Land & Roadway  
Reportable Quantity: Not reported  
Category: Not reported  
Spill?: Not reported  
Reported By: David R. Lee  
Reporters Affiliation: Chief Engineer, Sheraton Waikiki Hotel  
ERNS Number: Not reported  
Responder: HFD, Hotel Security & Housekeeping Depts  
Responder Affiliation: Unitek, Hotel Engineering Dept, HFD  
Initial Response: Hotel Security responded by calling HPD. HFD & Hotel Housekeeping Dept used absorbents to clean up the spill. Spill was confined to Roadway. Unitek was to be called in to properly dispose of absorbents. Hotel Engineering was investig  
Release Date: 08/25/93  
Time of Release: Not reported  
Duration: Not reported  
Input By: Adia/Tom  
Date Input: 12/01/93  
Staff 1: Not reported  
Staff 2: Not reported  
Emergency Response: Not reported  
Initial Site Screening Team Rank: Not reported  
No Further Action: Not reported  
Priority: NFA  
Comments:  
File Section: Single  
Type: Not reported  
Department 1: Not reported  
Department 2: Not reported  
Department 3: Not reported  
Cost Recovery: Not reported  
Official Notification: Not reported  
Written Report: Not reported  
Confirmation Number: Not reported  
Pounds: Not reported  
Responsible Party: Not reported  
Manifest Document Number: Not reported  
Units: Gallons  
Standard Cause: Not reported  
Numerical Quantity: Not reported  
Zip id: Not reported  
Initial Notification: Not reported  
Written Notification: Not reported  
Imminent And Substantial: Not reported  
Lat/Lon: Not reported  
Verification of source: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**SHERATON WAIKIKI HOTEL (Continued)**

**U001236003**

Potential Quantity Amount: Not reported  
Potential Quantity Unit: Not reported  
Verification of source: Not reported  
Source Id: Not reported  
Responsible Party Name: Not reported  
RP Address: Not reported  
Not reported  
RP Contact: Not reported  
RP Phone Number: Not reported  
Verification Of RP: Not reported  
Responsible Party ID: Not reported  
Contractor Amount: Not reported  
Personnel Amount: Not reported  
Equipment Amount: Not reported  
Travel Amount: Not reported  
Miscellaneous Amount: Not reported  
Federal Project Number: Not reported  
Pollution Removal Funding Auth: Not reported  
Authorization Date: Not reported  
Authorization Ceiling: Not reported  
Identifier: Not reported  
Total Environment Revolving Response Fund: Not reported

UST:

Facility ID: 9-102650 Tank ID: 4  
Tank Status: Currently In Use  
Tank Capacity: 2500 Installed: 12/30/1992  
Date Closed: Not reported Substance: Diesel  
Owner: KYO-YA COMPANY, INC  
2255 KALAKAUA AVE, 2ND FLOOR  
Honolulu, HI 96815

Facility ID: 9-102650 Tank ID: R-M-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 1000 Installed: 12/30/1971  
Date Closed: 11/9/1992 Substance: Diesel  
Owner: KYO-YA COMPANY, INC  
2255 KALAKAUA AVE, 2ND FLOOR  
Honolulu, HI 96815

**19 ALA WAI SERVICE**  
**SE 407 KAPAHULU AVE**  
**1/4-1/2 HONOLULU, HI 96815**  
**2545 ft.**

**LUST 1000601445**  
**UST N/A**

**Relative:**  
**Higher**

LUST:

Facility ID: 9-101211  
Alternate Event ID: 880018  
Facility Status Date: 08/26/1999  
Facility Status: Site Cleanup Completed  
Project Officer: Maniulit

**Actual:**  
**7 ft.**

UST:

Facility ID: 9-101211 Tank ID: R-3  
Tank Status: Permanently Out of Use  
Tank Capacity: 5000 Installed: 10/1/1968  
Date Closed: 1/1/1982 Substance: Gasoline  
Owner: CHEVRON PRODUCTS COMPANY  
91-480 MALAKOLE ST  
Honolulu, HI 96815

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

ALA WAI SERVICE (Continued)

1000601445

Facility ID:	9-101211	Tank ID:	R-2
Tank Status:	Permanently Out of Use	Installed:	10/1/1968
Tank Capacity:	10000	Substance:	Gasoline
Date Closed:	1/1/1982		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	R-4A
Tank Status:	Permanently Out of Use	Installed:	10/1/1968
Tank Capacity:	1000	Substance:	Used Oil
Date Closed:	1/1/1982		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	R-1
Tank Status:	Permanently Out of Use	Installed:	10/1/1968
Tank Capacity:	10000	Substance:	Gasoline
Date Closed:	1/1/1982		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	R-4B
Tank Status:	Permanently Out of Use	Installed:	7/18/1982
Tank Capacity:	1000	Substance:	Used Oil
Date Closed:	11/18/1994		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	92
Tank Status:	Currently In Use	Installed:	7/18/1982
Tank Capacity:	10000	Substance:	Gasoline
Date Closed:	Not reported		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	89
Tank Status:	Currently In Use	Installed:	7/18/1982
Tank Capacity:	10000	Substance:	Gasoline
Date Closed:	Not reported		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		
Facility ID:	9-101211	Tank ID:	87
Tank Status:	Currently In Use	Installed:	7/18/1982
Tank Capacity:	10000	Substance:	Gasoline
Date Closed:	Not reported		
Owner:	CHEVRON PRODUCTS COMPANY 91-480 MALAKOLE ST Honolulu, HI 96815		

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

ALA WAI SERVICE (Continued)

Database(s) EDR ID Number  
EPA ID Number

1000601445

20  
ESE  
1/4-1/2  
2579 ft.

ALA WAI GOLF COURSE  
484 KAPAHULU AVE  
HONOLULU, HI 96816

UST U003154701  
LUST N/A

Relative:  
Higher

LUST:  
Facility ID: 9-102885  
Alternate Event ID: 940034  
Facility Status Date: 11/05/2001  
Facility Status: Site Cleanup Completed  
Project Officer: Sutterfield

Actual:  
9 ft.

UST:  
Facility ID: 9-102885 Tank ID: R-3  
Tank Status: Permanently Out of Use  
Tank Capacity: 250 Installed: Not reported  
Date Closed: 11/16/1993 Substance: Used Oil  
Owner: C&C OF HNL - ALA WAI GOLF COURSE  
484 KAPAHULU AVENUE  
Honolulu, HI 96816

Facility ID: 9-102885 Tank ID: R-2  
Tank Status: Permanently Out of Use  
Tank Capacity: 1000 Installed: Not reported  
Date Closed: 10/25/1993 Substance: Diesel  
Owner: C&C OF HNL - ALA WAI GOLF COURSE  
484 KAPAHULU AVENUE  
Honolulu, HI 96816

Facility ID: 9-102885 Tank ID: R-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 3000 Installed: Not reported  
Date Closed: 10/25/1993 Substance: Gasoline  
Owner: C&C OF HNL - ALA WAI GOLF COURSE  
484 KAPAHULU AVENUE  
Honolulu, HI 96816

21  
ESE  
1/4-1/2  
2618 ft.

CONCOPHILLIPS 254573 (PREV: GEORGE'S UNION SERVICE)  
505 KAPAHULU AVE  
HONOLULU, HI 96815

UST U001235048  
LUST N/A

Relative:  
Higher

LUST:  
Facility ID: 9-100103  
Alternate Event ID: 930015  
Facility Status Date: 10/22/2002  
Facility Status: Site Cleanup Completed  
Project Officer: Takaba

Actual:  
10 ft.

UST:  
Facility ID: 9-100103 Tank ID: 4573-5  
Tank Status: Currently In Use  
Tank Capacity: 12000 Installed: 12/31/1988  
Date Closed: Not reported Substance: Gasoline  
Owner: CONOCOPHILLIPS COMPANY  
P.O. BOX 52085  
Honolulu, HI 96815

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

CONCOPHILLIPS 254573 (PREV: GEORGE'S UNION SERVICE (Continued))

U001235048

Facility ID:	9-100103	Tank ID:	4573-6
Tank Status:	Currently In Use	Installed:	12/31/1988
Tank Capacity:	12000	Substance:	Gasoline
Date Closed:	Not reported		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-4
Tank Status:	Permanently Out of Use	Installed:	3/26/1960
Tank Capacity:	500	Substance:	Used Oil
Date Closed:	11/18/1987		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-2
Tank Status:	Permanently Out of Use	Installed:	3/26/1981
Tank Capacity:	8000	Substance:	Gasoline
Date Closed:	1/1/1987		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-1-3
Tank Status:	Permanently Out of Use	Installed:	3/26/1960
Tank Capacity:	4000	Substance:	Gasoline
Date Closed:	1/1/1987		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-1-2
Tank Status:	Permanently Out of Use	Installed:	3/26/1960
Tank Capacity:	5000	Substance:	Gasoline
Date Closed:	1/1/1987		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-1-1
Tank Status:	Permanently Out of Use	Installed:	3/26/1960
Tank Capacity:	4000	Substance:	Gasoline
Date Closed:	1/1/1987		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		
Facility ID:	9-100103	Tank ID:	R-4573-7
Tank Status:	Permanently Out of Use	Installed:	12/31/1988
Tank Capacity:	550	Substance:	Used Oil
Date Closed:	11/18/1997		
Owner:	CONOCOPHILLIPS COMPANY P.O. BOX 52085 Honolulu, HI 96815		

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**CONCOPHILLIPS 254573 (PREV: GEORGE'S UNION SERVICE (Continued))**

**U001235048**

**22  
 WNW  
 1/2-1  
 3471 ft.**

**KING KALAKAUA PLAZA  
 2080 KALAKAUA AVE  
 HONOLULU, HI 96815**

**UST U003154872  
 SHWS N/A  
 LUST**

**Relative:  
 Equal**

**Actual:  
 3 ft.**

SHWS:  
 File Section : Central  
 Type : Private  
 Department 1 : Not reported  
 Department 2 : Not reported  
 Department 3 : Not reported  
 Table : Sitelist  
 Island : Oahu  
 Zip : Not reported  
 Discovery Assesment and Remediation : Not reported  
 Initial Site Screening Team Lead : Not reported  
 ISST Assigned : Not reported  
 ISST Date : Not reported  
 ISST Priority : Not reported  
 ISST Letter : Not reported  
 Env Justice Eligible : Not reported  
 Preliminary Assesment : Not reported  
 PA Lead : Not reported  
 PA Date : Not reported  
 PA Result : Not reported  
 Site Investigation : Not reported  
 SI Lead : Not reported  
 SI Date : Not reported  
 SI Result : Not reported  
 Remediation Action Planned : Not reported  
 VRP : Not reported  
 Brownfields : Not reported  
 Agreement : Not reported  
 Remedial Investigation : Not reported  
 RAA : Not reported  
 Response Action Memo : Not reported  
 REM Lead : Not reported  
 REM Date : Not reported  
 REM Last Update : Not reported  
 Input By : Not reported  
 Case : Not reported  
 Fed Id : Not reported  
 UST : Not reported  
 Permits : Not reported  
 RCRA : Not reported  
 Program : Not reported  
 Priority : Not reported  
 Lat/Long : Not reported  
 Cost : Not reported  
 CU QNTY Site : Not reported  
 Enforcement : Not reported  
 CU Method : Not reported  
 Ownership : Not reported  
 Tax Map Key : Not reported  
 Form : Not reported  
 EPCRA : Not reported  
 EPCRA FIL : Not reported  
 Pathways : Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

**MAP FINDINGS**

Database(s) EDR ID Number  
EPA ID Number

**KING KALAKAUA PLAZA (Continued)**

**U003154872**

Targets : Not reported  
Manager : Not reported  
REM Result : Not reported  
Identifier : Not reported  
Site Code : CS  
Event : Not reported  
Event Type : Not reported  
Notes : Not reported  
Site : Not reported  
Site\_ : Not reported  
Operator : Not reported  
Current : Not reported  
Compounds : Not reported  
Oname : Not reported

**LUST:**

Facility ID: 9-103235  
Alternate Event ID: 960085  
Facility Status Date: 03/17/2000  
Facility Status: Site Cleanup Completed  
Project Officer: Maniulit

**UST:**

Facility ID: 9-103235 Tank ID: R-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 300 Installed: Not reported  
Date Closed: 7/24/1996 Substance: Diesel  
Owner: K. YOUNG KALAKAUA PARTNERS INC.  
841 BISHOP ST, SUITE 2250  
Honolulu, HI 96815

23  
NW  
1/2-1  
4083 ft.

**CHEVRON U.S.A., INC.**  
**2002 KALAKAUA AVE**  
**HONOLULU, HI 96815**

**UST U001235436**  
**SHWS N/A**  
**LUST**

**Relative:**  
**Equal**

**Actual:**  
**3 ft.**

**SHWS:**

File Section : Central  
Type : Private  
Department 1 : Not reported  
Department 2 : Not reported  
Department 3 : Not reported  
Table : Sitelist  
Island : Oahu  
Zip : Not reported  
Discovery Assesment and Remediation : Not reported  
Initial Site Screening Team Lead : Not reported  
ISST Assigned : Not reported  
ISST Date : 10/1/97  
ISST Priority : NFA  
ISST Letter : Not reported  
Env Justice Eligible : Not reported  
Preliminary Assesment : No  
PA Lead : Not reported  
PA Date : Not reported  
PA Result : Not reported  
Site Investigation : No  
SI Lead : Not reported  
SI Date : Not reported  
SI Result : Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

CHEVRON U.S.A., INC. (Continued)

U001235436

Remediation Action Planned : No  
VRP : Not reported  
Brownfields : Not reported  
Agreement : Not reported  
Remedial Investigation : Not reported  
RAA : Not reported  
Response Action Memo : Not reported  
REM Lead : Not reported  
REM Date : Not reported  
REM Last Update : 3/22/00  
Input By : Bryce  
Case : Not reported  
Fed Id : Not reported  
UST : Not reported  
Permits : Not reported  
RCRA : N/A  
Program : HEER  
Priority : Not reported  
Lat/Long : Not reported  
Cost : Not reported  
CU QNTY Site : Not reported  
Enforcement : Not reported  
CU Method : Not reported  
Ownership : Not reported  
Tax Map Key : Not reported  
Form : Not reported  
EPCRA : Not reported  
EPCRA FIL : Not reported  
Pathways : Not reported  
Targets : Not reported  
Manager : Not reported  
REM Result : Not reported  
Identifier : Not reported  
Site Code : Not reported  
Event : Not reported  
Event Type : Not reported  
Notes : Not reported  
Site : Not reported  
Site\_ : Not reported  
Operator : Not reported  
Current : Not reported  
Compounds : Not reported  
Oname : Not reported

LUST:

Facility ID: 9-101266  
Alternate Event ID: 920073  
Facility Status Date: 06/10/1997  
Facility Status: Site Cleanup Completed  
Project Officer: Okoji

UST:

Facility ID: 9-101266 Tank ID: R-1  
Tank Status: Permanently Out of Use  
Tank Capacity: 10000 Installed: Not reported  
Date Closed: Not reported Substance: Gasoline  
Owner: DAIO USA CORP  
CENTURY CENTER, SUITE 705 / 1750 KALAKAUA AVE

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

CHEVRON U.S.A., INC. (Continued)

EDR ID Number  
EPA ID Number

Database(s)

Honolulu, HI 96815

U001235436

Facility ID:	9-101266	Tank ID:	R-4
Tank Status:	Permanently Out of Use		
Tank Capacity:	1000	Installed:	Not reported
Date Closed:	Not reported	Substance:	Used Oil
Owner:	DAIO USA CORP CENTURY CENTER, SUITE 705 / 1750 KALAKAUA AVE Honolulu, HI 96815		

Facility ID:	9-101266	Tank ID:	R-2
Tank Status:	Permanently Out of Use		
Tank Capacity:	10000	Installed:	Not reported
Date Closed:	Not reported	Substance:	Gasoline
Owner:	DAIO USA CORP CENTURY CENTER, SUITE 705 / 1750 KALAKAUA AVE Honolulu, HI 96815		

Facility ID:	9-101266	Tank ID:	R-3
Tank Status:	Permanently Out of Use		
Tank Capacity:	5000	Installed:	Not reported
Date Closed:	Not reported	Substance:	Gasoline
Owner:	DAIO USA CORP CENTURY CENTER, SUITE 705 / 1750 KALAKAUA AVE Honolulu, HI 96815		

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HALEIWA	1000146720	KAWAILOA LANDFILL	KAWAILOA RD	96813	SHWS, LUST
HONOLULU	1004688961	AOAO YACHT HARBOR TOWERS	1600_1650 ALA MOANA BLVD	96815	RCRIS-SQG, FINDS
HONOLULU	1006806688	PACIFIC CRUISES	181 ALA MOANA BLVD PIER 7A	96813	RCRIS-SQG, FINDS
HONOLULU	S104534112	CARTWRIGHT NEIGHBORHOOD PARK	CORNER OF KEEAUMOKU ST. / MATLOCK A	96814	SHWS
HONOLULU	S104534136	ELLIOT STREET DRAINAGE CANAL	ELLIOT ST		SHWS, SPILLS
HONOLULU	S104657434	HONOLULU SHIPYARD, INC. (EWA OF PIE	EWA OF PIER 40	96813	SHWS
HONOLULU	S104534209	HONOLULU SHIPYARD, INC.	EWA OF PIER 40		SHWS
HONOLULU	S104657419	HAWAII INSTRUMENTATION & CONTROLS,	822 HALKAUWILA ST	96813	SHWS
HONOLULU	1004688907	SHERATON PRINCESS KAILUANI	120 KAILUANI AUCNUE	96815	RCRIS-SQG, FINDS
HONOLULU	S104657451	KING KALAKAUA PLAZA (WAIKIKI GATEWA	KALAKAUA AND KALAIMOKU STREETS		SHWS, SPILLS
HONOLULU	S104657484	NIMITZ HIGHWAY RELIEF SEWER	N. NIMITZ HWY AND HART ST	96813	SHWS
HONOLULU	S104534100	BHP, PIER 38	PIER 38		SHWS
HONOLULU	S104657508	SCRAP METAL PILE	PIER 34-35, NIMITZ HWY		SHWS
HONOLULU	S104534098	BHP TANK FARM, SAND ISLAND	SAND ISLAND		SHWS, SPILLS
HONOLULU	S104534082	BARBERS POINT HARBOR EXPANSION	TMK 9-1-14: PORTION OF 24 AND PORTI		SHWS
HONOLULU	S104657520	TRIPLER ARMY MEDICAL CENTER, BUILDI	TRIPLER ARMY MEDICAL CENTER, BUILDI		SHWS
HONOLULU COUNTY	S103763651	MCAS KANEOHE LF (KMCAS LF-0041-95)	KANEOHE BAY		SWFILF, SPILLS
HONOLULU COUNTY	S103763647	NEW MILILANI LANDFILL	WAIPIO		SWFILF
HONOLULU COUNTY	S103763648	OLD MILILANI LANDFILL	WAIPIO		SWFILF
MOKULEIA	S104534174	HAWAII BITUMULS & PAVING CO	FARRINGTON HWY	96826	SHWS

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

## FEDERAL ASTM STANDARD RECORDS

### **NPL: National Priority List**

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/21/03

Date Made Active at EDR: 12/08/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/03/03

Elapsed ASTM days: 35

Date of Last EDR Contact: 11/03/03

### **NPL Site Boundaries**

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1

Telephone 617-918-1143

EPA Region 3

Telephone 215-814-5418

EPA Region 4

Telephone 404-562-8033

EPA Region 6

Telephone: 214-655-6659

EPA Region 8

Telephone: 303-312-6774

### **Proposed NPL: Proposed National Priority List Sites**

Source: EPA

Telephone: N/A

Date of Government Version: 10/14/03

Date Made Active at EDR: 12/08/03

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/01/03

Elapsed ASTM days: 7

Date of Last EDR Contact: 11/03/03

### **CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System**

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/11/03

Date Made Active at EDR: 10/29/03

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03

Elapsed ASTM days: 35

Date of Last EDR Contact: 09/24/03

### **CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned**

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/11/03  
Date Made Active at EDR: 10/29/03  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03  
Elapsed ASTM days: 35  
Date of Last EDR Contact: 09/24/03

**CORRACTS:** Corrective Action Report

Source: EPA

Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/17/03  
Date Made Active at EDR: 11/11/03  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/01/03  
Elapsed ASTM days: 41  
Date of Last EDR Contact: 09/08/03

**RCRIS:** Resource Conservation and Recovery Information System

Source: EPA

Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/03  
Date Made Active at EDR: 10/01/03  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 09/11/03  
Elapsed ASTM days: 20  
Date of Last EDR Contact: 11/18/03

**ERNS:** Emergency Response Notification System

Source: National Response Center, United States Coast Guard

Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02  
Date Made Active at EDR: 02/03/03  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/03  
Elapsed ASTM days: 7  
Date of Last EDR Contact: 10/27/03

### FEDERAL ASTM SUPPLEMENTAL RECORDS

**BRS:** Biennial Reporting System

Source: EPA/NTIS

Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01  
Database Release Frequency: Biennially

Date of Last EDR Contact: 10/01/03  
Date of Next Scheduled EDR Contact: 12/15/03

**CONSENT:** Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A  
Database Release Frequency: Varies

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### **ROD:** Records Of Decision

Source: EPA  
Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/09/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/08/03  
Date of Next Scheduled EDR Contact: 01/05/04

### **DELISTED NPL:** National Priority List Deletions

Source: EPA  
Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/21/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03  
Date of Next Scheduled EDR Contact: 02/02/04

### **FINDS:** Facility Index System/Facility Identification Initiative Program Summary Report

Source: EPA  
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

### **HMIRS:** Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation  
Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 08/11/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/23/03  
Date of Next Scheduled EDR Contact: 01/19/04

### **MLTS:** Material Licensing Tracking System

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03  
Date of Next Scheduled EDR Contact: 01/05/04

### **MINES:** Mines Master Index File

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959

Date of Government Version: 08/27/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 10/01/03  
Date of Next Scheduled EDR Contact: 12/29/03

### **NPL LIENS:** Federal Superfund Liens

Source: EPA  
Telephone: 202-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 11/21/03  
Date of Next Scheduled EDR Contact: 02/23/04

**PADS:** PCB Activity Database System

Source: EPA  
Telephone: 202-564-3887

PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/30/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**DOD:** Department of Defense Sites

Source: USGS  
Telephone: 703-648-5920

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/12/03  
Date of Next Scheduled EDR Contact: 02/09/04

**STORMWATER:** Storm Water General Permits

Source: Environmental Protection Agency  
Telephone: 202 564-0746

A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A  
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**US BROWNFIELDS:** A Listing of Brownfields Sites

Source: Environmental Protection Agency  
Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 09/15/03  
Date of Next Scheduled EDR Contact: 12/15/03

**RMP:** Risk Management Plans

Source: Environmental Protection Agency  
Telephone: 202-564-8600

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Database Release Frequency: N/A

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

**RAATS:** RCRA Administrative Action Tracking System

Source: EPA  
Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/08/03  
Date of Next Scheduled EDR Contact: 12/08/03

**TRIS:** Toxic Chemical Release Inventory System

Source: EPA  
Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**TSCA:** Toxic Substances Control Act

Source: EPA  
Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98  
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 09/02/03  
Date of Next Scheduled EDR Contact: 12/08/03

**FTTS INSP:** FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA  
Telephone: 202-564-2501

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

**SSTS:** Section 7 Tracking Systems

Source: EPA  
Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01  
Database Release Frequency: Annually

Date of Last EDR Contact: 10/20/03  
Date of Next Scheduled EDR Contact: 01/19/04

**FTTS:** FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA/Office of Prevention, Pesticides and Toxic Substances  
Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/16/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/23/03  
Date of Next Scheduled EDR Contact: 12/22/03

## STATE OF HAWAII ASTM STANDARD RECORDS

### **SHWS:** Sites List

Source: Department of Health  
Telephone: 808-586-4249

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 07/12/01  
Date Made Active at EDR: 10/16/01  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 09/24/01  
Elapsed ASTM days: 22  
Date of Last EDR Contact: 09/23/03

### **SWF/LF:** Permitted Landfills in the State of Hawaii

Source: Department of Health  
Telephone: 808-586-4245

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/03/99  
Date Made Active at EDR: 05/25/99  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 05/10/99  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 10/27/03

### **LUST:** Leaking Underground Storage Tank Database

Source: Department of Health  
Telephone: 808-586-4228

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/01/03  
Date Made Active at EDR: 09/17/03  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 15  
Date of Last EDR Contact: 09/02/03

### **UST:** Underground Storage Tank Database

Source: Department of Health  
Telephone: 808-586-4228

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/01/03  
Date Made Active at EDR: 09/11/03  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 09/02/03  
Elapsed ASTM days: 9  
Date of Last EDR Contact: 09/02/03

### **VCP:** Voluntary Response Program Sites

Source: Department of Health  
Telephone: 808-586-4249

Date of Government Version: 10/10/03  
Date Made Active at EDR: 10/21/03  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 10/13/03  
Elapsed ASTM days: 8  
Date of Last EDR Contact: 09/23/03

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## STATE OF HAWAII ASTM SUPPLEMENTAL RECORDS

### **SPILLS:** Release Notifications

Source: Department of Health

Telephone: 808-586-4249

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency

Response since 1988.

Date of Government Version: 09/01/00

Database Release Frequency: Varies

Date of Last EDR Contact: 09/23/03

Date of Next Scheduled EDR Contact: 12/22/03

## EDR PROPRIETARY HISTORICAL DATABASES

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

### **Disclaimer Provided by Real Property Scan, Inc.**

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

## BROWNFIELDS DATABASES

### **BROWNFIELDS:** Brownfields Sites

Source: Department of Health

Telephone: 808-586-4249

Date of Government Version: 10/10/03

Database Release Frequency: Varies

Date of Last EDR Contact: 09/23/03

Date of Next Scheduled EDR Contact: 12/22/03

### **VCP:** Voluntary Response Program Sites

Source: Department of Health

Telephone: 808-586-4249

Date of Government Version: 10/04/03

Database Release Frequency: Varies

Date of Last EDR Contact: 09/23/03

Date of Next Scheduled EDR Contact: 12/22/03

### **US BROWNFIELDS:** A Listing of Brownfields Sites

Source: Environmental Protection Agency

Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

### OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

#### **Electric Power Transmission Line Data**

Source: PennWell Corporation  
Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### **AHA Hospitals:**

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

#### **Medical Centers: Provider of Services Listing**

Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

#### **Nursing Homes**

Source: National Institutes of Health  
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

#### **Public Schools**

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

#### **Private Schools**

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### STREET AND ADDRESS INFORMATION

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## GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

TUSITALA VISTA  
2423/2429 ALA WAI BLVD  
HONOLULU, HI 96813

### TARGET PROPERTY COORDINATES

Latitude (North):	21.278099 - 21° 16' 41.2"
Longitude (West):	157.822098 - 157° 49' 19.6"
Universal Transverse Mercator:	Zone 4
UTM X (Meters):	622197.9
UTM Y (Meters):	2353243.5
Elevation:	3 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### FEMA FLOOD ZONE

<u>Target Property County</u> HONOLULU, HI	<u>FEMA Flood Electronic Data</u> YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property:	1500010120C
Additional Panels in search area:	Not Reported

### NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> HONOLULU	<u>NWI Electronic Data Coverage</u> YES - refer to the Overview Map and Detail Map
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### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### ROCK STRATIGRAPHIC UNIT

Era: -  
System: -  
Series: -  
Code: N/A (decoded above as Era, System & Series)

#### GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: LITHIC USTORTHENTS

Soil Surface Texture: variable

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 40 inches

Depth to Bedrock Max: > 60 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	6 inches	variable	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.20	Max: 7.30 Min: 6.10
2	6 inches	60 inches	stratified	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.20	Max: 7.30 Min: 6.10
3	60 inches	64 inches	unweathered bedrock	Not reported	Not reported	Max: 2.00 Min: 0.06	Max: 0.00 Min: 0.00

### OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sand  
silty clay loam

Surficial Soil Types: sand  
silty clay loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: sand  
coarse sand

### ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	USGS0224169	0 - 1/8 Mile WNW
B3	USGS0224105	0 - 1/8 Mile SSE
C5	USGS0224171	1/8 - 1/4 Mile WNW
D8	USGS0224098	1/4 - 1/2 Mile SSW
E9	USGS0224104	1/4 - 1/2 Mile ESE
F12	USGS0224106	1/4 - 1/2 Mile WSW
E14	USGS0224103	1/4 - 1/2 Mile ESE
G16	USGS0224173	1/4 - 1/2 Mile ENE
E18	USGS0224099	1/4 - 1/2 Mile ESE
G21	USGS0224172	1/4 - 1/2 Mile ENE
H23	USGS0224112	1/4 - 1/2 Mile NE
I26	USGS0224183	1/4 - 1/2 Mile North
I27	USGS0224117	1/2 - 1 Mile North
J30	USGS0224175	1/2 - 1 Mile ENE
I31	USGS0224116	1/2 - 1 Mile North
I33	USGS0224119	1/2 - 1 Mile North
I35	USGS0224121	1/2 - 1 Mile NNE
K37	USGS0224167	1/2 - 1 Mile SE
L40	USGS0224110	1/2 - 1 Mile ENE
M42	USGS0224122	1/2 - 1 Mile NNE
N44	USGS0224182	1/2 - 1 Mile NE
N45	USGS0224181	1/2 - 1 Mile NE
N46	USGS0224180	1/2 - 1 Mile NE
O47	USGS0224118	1/2 - 1 Mile NNE
N49	USGS0224179	1/2 - 1 Mile NE
P52	USGS0224164	1/2 - 1 Mile SSE
M53	USGS0224124	1/2 - 1 Mile NNE
Q56	USGS0224177	1/2 - 1 Mile NE
57	USGS0224165	1/2 - 1 Mile SE
R58	USGS0224128	1/2 - 1 Mile North
S61	USGS0224163	1/2 - 1 Mile SE
T63	USGS0224130	1/2 - 1 Mile North
U67	USGS0224127	1/2 - 1 Mile NE
V68	USGS0224174	1/2 - 1 Mile NNE
W70	USGS0224159	1/2 - 1 Mile South
U82	USGS0224190	1/2 - 1 Mile NE
U83	USGS0224189	1/2 - 1 Mile NE
U84	USGS0224186	1/2 - 1 Mile NE
U85	USGS0224188	1/2 - 1 Mile NE
U86	USGS0224187	1/2 - 1 Mile NE
U87	USGS0224191	1/2 - 1 Mile NE

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
U88	USGS0224192	1/2 - 1 Mile NE
U89	USGS0224193	1/2 - 1 Mile NE
U90	USGS0224194	1/2 - 1 Mile NE
U91	USGS0224125	1/2 - 1 Mile NE
U92	USGS0224126	1/2 - 1 Mile NE
X93	USGS0224160	1/2 - 1 Mile SSE
V96	USGS0224133	1/2 - 1 Mile NNE
Y99	USGS0224111	1/2 - 1 Mile WNW
Z100	USGS0224195	1/2 - 1 Mile NNE
AA102	USGS0224132	1/2 - 1 Mile NE

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
65	HI0000331	1/2 - 1 Mile SSW

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

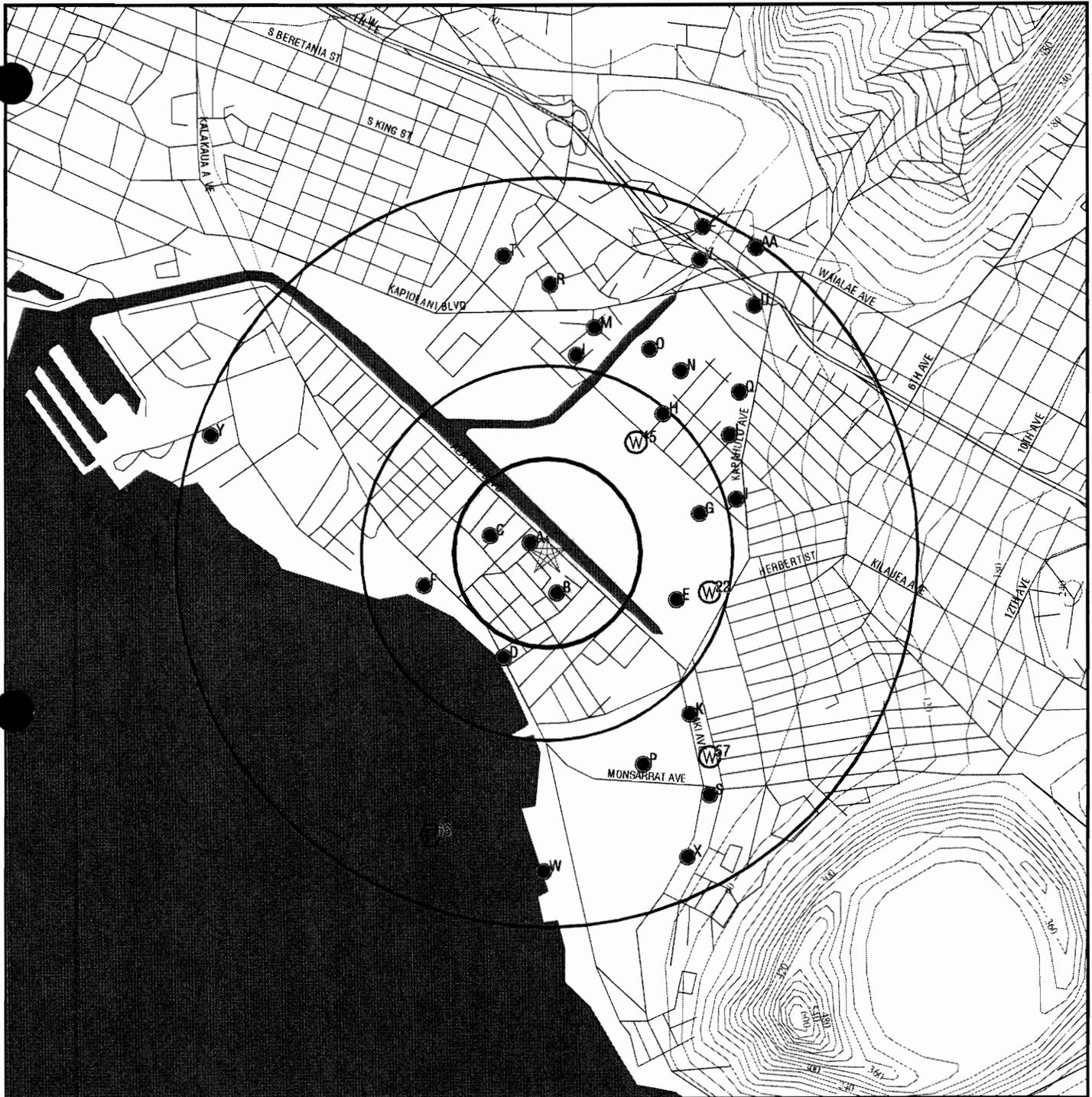
MAP ID	WELL ID	LOCATION FROM TP
A2	3-1649-008	0 - 1/8 Mile WNW
B4	3-1649-001	0 - 1/8 Mile SSE
C6	3-1649-009	1/8 - 1/4 Mile WNW
D7	3-1649-007	1/4 - 1/2 Mile SSW
E10	3-1649-004	1/4 - 1/2 Mile ESE
F11	3-1649-012	1/4 - 1/2 Mile WSW
E13	3-1649-003	1/4 - 1/2 Mile ESE
15	3-1749-023	1/4 - 1/2 Mile NE
G17	3-1649-006	1/4 - 1/2 Mile ENE
E19	3-1649-002	1/4 - 1/2 Mile ESE
G20	3-1649-005	1/4 - 1/2 Mile ENE
22	3-1649-018	1/4 - 1/2 Mile ESE
H24	3-1749-008	1/4 - 1/2 Mile NE
I25	3-1749-017	1/4 - 1/2 Mile North
I28	3-1749-012	1/2 - 1 Mile North
J29	3-1749-009	1/2 - 1 Mile ENE
I32	3-1749-002	1/2 - 1 Mile North
I34	3-1749-013	1/2 - 1 Mile North
I36	3-1749-010	1/2 - 1 Mile NNE
K38	3-1649-014	1/2 - 1 Mile SE
L39	3-1749-016	1/2 - 1 Mile ENE
M41	3-1749-011	1/2 - 1 Mile North
N43	3-1749-007	1/2 - 1 Mile NE
O48	3-1749-014	1/2 - 1 Mile NNE
N50	3-1749-022	1/2 - 1 Mile NE
P51	3-1649-011	1/2 - 1 Mile SSE
M54	3-1749-001	1/2 - 1 Mile NNE

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
Q55	3-1749-018	1/2 - 1 Mile NE
R59	3-1749-005	1/2 - 1 Mile North
S60	3-1649-013	1/2 - 1 Mile SE
S62	3-1649-015	1/2 - 1 Mile SSE
T64	3-1749-003	1/2 - 1 Mile North
U66	3-1749-015	1/2 - 1 Mile NE
V69	3-1749-019	1/2 - 1 Mile NNE
W71	3-1649-010	1/2 - 1 Mile South
U72	3-1748-005	1/2 - 1 Mile NE
U73	3-1748-006	1/2 - 1 Mile NE
U74	3-1748-003	1/2 - 1 Mile NE
U75	3-1748-004	1/2 - 1 Mile NE
U76	3-1748-007	1/2 - 1 Mile NE
U77	3-1748-011	1/2 - 1 Mile NE
U78	3-1748-014	1/2 - 1 Mile NE
U79	3-1748-010	1/2 - 1 Mile NE
U80	3-1748-008	1/2 - 1 Mile NE
U81	3-1748-009	1/2 - 1 Mile NE
X94	3-1649-016	1/2 - 1 Mile SSE
V95	3-1749-006	1/2 - 1 Mile NNE
X97	3-1649-017	1/2 - 1 Mile SSE
Y98	3-1750-006	1/2 - 1 Mile WNW
Z101	3-1749-004	1/2 - 1 Mile NNE
AA103	3-1748-002	1/2 - 1 Mile NE

# PHYSICAL SETTING SOURCE MAP - 01102348.2r



- ↘ County Boundary
- ↘ Major Roads
- ↘ Contour Lines
- ⊙ Earthquake epicenter, Richter 5 or greater
- ⊙ Water Wells
- ⊙ Public Water Supply Wells
- Cluster of Multiple Icons

- ↑ Groundwater Flow Direction
- (G1) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location



TARGET PROPERTY:	Tusitala Vista	CUSTOMER:	Global Env. Svcs. Group
ADDRESS:	2423/2429 Ala Wai Blvd	CONTACT:	Mike Polkinghorn
CITY/STATE/ZIP:	Honolulu HI 96813	INQUIRY #:	01102348.2r
LAT/LONG:	21.2781 / 157.8221	DATE:	December 19, 2003 4:35 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**A1**

**WNW**

**0 - 1/8 Mile  
 Higher**

**FED USGS**

**USGS0224169**

Agency:	USGS	Site ID:	211654157493201
Site Name:	3-1649-08 W19 WAIKIK		
Dec. Latitude:	21.2785		
Dec. Longitude:	-157.82281		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	5.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19000101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	666		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**A2**

**WNW**

**0 - 1/8 Mile  
 Higher**

**HI WELLS**

**3-1649-008**

Wid:	3-1649-008	Island Code:	3
Island Name:	Oahu	Well no:	1649-08
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1900	Driller:	AI
Quad_map:	13	Latitude:	211654
Longitude:	1574932	UTM:	Y
Gps:	N	Owner/user:	Guardian Trus
Old number:	19-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	5	Well depth:	666
Solid casing Depth:	608	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	20.5
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-661	bot_solid depth:	-603
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	20.5	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/02/1900 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**B3**  
**SSE**  
**0 - 1/8 Mile**  
**Higher**

**FED USGS      USGS0224105**

Agency:	USGS	Site ID:	211647157492801
Site Name:	3-1649-01 W21 WAIKIK		
Dec. Latitude:	21.27656		
Dec. Longitude:	-157.8217		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	5.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18820101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	856		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**B4**  
**SSE**  
**0 - 1/8 Mile**  
**Higher**

**HI WELLS      3-1649-001**

Wid:	3-1649-001	Island Code:	3
Island Name:	Oahu	Well no:	1649-01
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1882	Driller:	Not Reported
Quad_map:	13	Latitude:	211647
Longitude:	1574928	UTM:	Y
Gps:	N	Owner/user:	Lucas G
Old number:	21-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	5	Well depth:	856

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	856	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	27	Water Top Elev:	7
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	7.0
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	00
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-851	bot_solid depth:	-851
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	7	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1882 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**C5**  
**WNW**  
**1/8 - 1/4 Mile**  
**Higher**

**FED USGS      USGS0224171**

Agency:	USGS	Site ID:	211655157493801
Site Name:	3-1649-09 W23 WAIKIK		
Dec. Latitude:	21.27878		
Dec. Longitude:	-157.82448		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	4.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19140101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	810		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**C6**  
**WNW**  
**1/8 - 1/4 Mile**  
**Higher**

**HI WELLS      3-1649-009**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1649-009	Island Code:	3
Island Name:	Oahu	Well no:	1649-09
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1914	Driller:	Not Reported
Quad_map:	13	Latitude:	211655
Longitude:	1574938	UTM:	Y
Gps:	N	Owner/user:	Matson Nav Co
Old number:	23-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	4	Well depth:	810
Solid casing Depth:	781	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	9.6
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	Not Reported
Min chlorides:	Not Reported	Min CI year:	Not Reported
Bot_hole depth:	-806	bot_solid depth:	-777
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	9.6	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1914 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**D7**  
**SSW**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1649-007**

Wid:	3-1649-007	Island Code:	3
Island Name:	Oahu	Well no:	1649-07
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1892	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211638
Longitude:	1574936	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	22-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	5	Well depth:	941
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	27	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	5.5
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-936	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	5.5	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1892 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**D8  
SSW  
1/4 - 1/2 Mile  
Higher**

**FED USGS USGS0224098**

Agency:	USGS	Site ID:	211638157493601
Site Name:	3-1649-07 W22 WAIKIK		
Dec. Latitude:	21.27406		
Dec. Longitude:	-157.82393		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	5.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18920101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	941		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**E9  
ESE  
1/4 - 1/2 Mile  
Higher**

**FED USGS USGS0224104**

Agency:	USGS	Site ID:	211647157491201
Site Name:	3-1649-04 W17 ALAWAI		
Dec. Latitude:	21.27656		
Dec. Longitude:	-157.81726		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	4.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18830101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	Not Reported
Aquifer type:	Not Reported		
Well depth:	825		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**E10**  
**ESE**  
 1/4 - 1/2 Mile  
 Higher

**HI WELLS      3-1649-004**

Wid:	3-1649-004	Island Code:	3
Island Name:	Oahu	Well no:	1649-04
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1883	Driller:	Not Reported
Quad_map:	13	Latitude:	211647
Longitude:	1574912	UTM:	Y
Gps:	N	Owner/user:	Campbell Est
Old number:	17-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	4	Well depth:	825
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	25	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	7.5
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-821	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	7.5	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1883 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**F11**  
**WSW**  
 1/4 - 1/2 Mile  
 Higher

**HI WELLS      3-1649-012**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1649-012	Island Code:	3
Island Name:	Oahu	Well no:	1649-12
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1967	Driller:	NAT WHITON
Quad_map:	13	Latitude:	211648
Longitude:	1574948	UTM:	Y
Gps:	N	Owner/user:	Kyo Ya Ltd
Old number:	23-1	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	Not Reported	Well depth:	105
Solid casing Depth:	54	Perf casing Depth:	Not Reported
Use:	OTH	Use Desc:	Other
Use year:	74	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	200	Drop in water Lvl:	0.2
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	RS	Geology desc:	Unconsolidated marine calcareous sediments
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	1000
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-6-001:013	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1967 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**F12**  
**WSW**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS0224106**

Agency:	USGS	Site ID:	211648157494801
Site Name:	3-1649.01 -01/W23-1		
Dec. Latitude:	21.27684		
Dec. Longitude:	-157.82726		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	8.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19671001	Inven Date:	Not Reported
Well Type:	Drain dug to water table or potentiometric surface to either lower ground-water level or serve as a water supply		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	105		
Hole depth:	105	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**E13**

**ESE**

**1/4 - 1/2 Mile  
Higher**

**HI WELLS      3-1649-003**

Wid:	3-1649-003	Island Code:	3
Island Name:	Oahu	Well no:	1649-03
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1883	Driller:	Not Reported
Quad_map:	13	Latitude:	211646
Longitude:	1574910	UTM:	Y
Gps:	N	Owner/user:	Campbell Est
Old number:	16-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	4	Well depth:	746
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	25	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	5.8
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-742	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	5.8	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1883 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**E14**

**ESE**

**1/4 - 1/2 Mile  
Higher**

**FED USGS      USGS0224103**

Agency:	USGS	Site ID:	211646157491001
Site Name:	3-1649-03 W16 ALAWAI		
Dec. Latitude:	21.27628		
Dec. Longitude:	-157.8167		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	4.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18830101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	Not Reported
Aquifer type:	Not Reported		
Well depth:	746		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**15**  
**NE**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1749-023**

Wid:	3-1749-023	Island Code:	3
Island Name:	Oahu	Well no:	1749-23
Well name:	Ala Wai Pit 5	Old name:	Not Reported
Yr drilled:	1964	Driller:	Not Reported
Quad_map:	13	Latitude:	211708
Longitude:	1574916	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	18
Ground Elev:	Not Reported	Well depth:	12
Solid casing Depth:	4	Perf casing Depth:	Not Reported
Use:	IRR	Use Desc:	Irrigation
Use year:	Not Reported	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	700
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	01/01/1987 00:00:00	Max Cl year:	87
Min chlorides:	Not Reported	Min Cl year:	87
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	1.008	Draft (mgd):	Not Reported
Tax map key:	2-7-036:002	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1964 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**G16**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS0224173**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211658157490801
Site Name:	3-1649-06 W14 ALAWAI		
Dec. Latitude:	21.27961		
Dec. Longitude:	-157.81615		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	4.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18910101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	516		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**G17**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1649-006**

Wid:	3-1649-006	Island Code:	3
Island Name:	Oahu	Well no:	1649-06
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1891	Driller:	Not Reported
Quad_map:	13	Latitude:	211658
Longitude:	1574908	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	14-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	4	Well depth:	516
Solid casing Depth:	507	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.2
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-512	bot_solid depth:	-503
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24.2	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1891 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**E18**  
**ESE** **FED USGS**      **USGS0224099**  
 1/4 - 1/2 Mile  
 Higher

Agency:	USGS	Site ID:	211645157490801
Site Name:	3-1649-02 W15 ALAWAI		
Dec. Latitude:	21.276		
Dec. Longitude:	-157.81615		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	5.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18830101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	860		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**E19**  
**ESE** **HI WELLS**      **3-1649-002**  
 1/4 - 1/2 Mile  
 Higher

Wid:	3-1649-002	Island Code:	3
Island Name:	Oahu	Well no:	1649-02
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1883	Driller:	Not Reported
Quad_map:	13	Latitude:	211645
Longitude:	1574908	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	15-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	4
Ground Elev:	5	Well depth:	860
Solid casing Depth:	640	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	26	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	19.3
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-855	bot_solid depth:	-635
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	19.3	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1883 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**G20**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1649-005**

Wid:	3-1649-005	Island Code:	3
Island Name:	Oahu	Well no:	1649-05
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1884	Driller:	Not Reported
Quad_map:	13	Latitude:	211658
Longitude:	1574905	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	13-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	8	Well depth:	586
Solid casing Depth:	448	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.0
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-578	bot_solid depth:	-440
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1884 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**G21**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS0224172**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211658157490501
Site Name:	3-1649-05 W13 ALAWAI		
Dec. Latitude:	21.27961		
Dec. Longitude:	-157.81531		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	8.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18840101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	586		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**22**  
**ESE**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1649-018**

Wid:	3-1649-018	Island Code:	3
Island Name:	Oahu	Well no:	1649-18
Well name:	Ala Wai Pit 2	Old name:	Not Reported
Yr drilled:	1934	Driller:	Not Reported
Quad_map:	13	Latitude:	211647
Longitude:	1574905	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	DUG
Type:	Dug Well	Casing dia:	Not Reported
Ground Elev:	Not Reported	Well depth:	10
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	IRR	Use Desc:	Irrigation
Use year:	Not Reported	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	300
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	.432	Draft (mgd):	Not Reported
Tax map key:	2-7-036:002	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1934 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**H23**  
**NE**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS0224112**

Agency:	USGS	Site ID:	211712157491201
Site Name:	3-1749-08 W24 PALOLO		
Dec. Latitude:	21.2835		
Dec. Longitude:	-157.81726		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	11.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18880101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	411		
Hole depth:	411	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**H24**  
**NE**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1749-008**

Wid:	3-1749-008	Island Code:	3
Island Name:	Oahu	Well no:	1749-08
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1888	Driller:	Not Reported
Quad_map:	13	Latitude:	211712
Longitude:	1574912	UTM:	Y
Gps:	N	Owner/user:	Chang Kim
Old number:	24-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	4
Ground Elev:	10	Well depth:	410
Solid casing Depth:	196	Perf casing Depth:	Not Reported
Use:	Not Reported	Use Desc:	Not Reported
Use year:	74	Water Top Elev:	20.1
Chloride value:	51	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	11	Static Water Lvl:	26.5
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-400	bot_solid depth:	-186
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	0.0
Tax map key:	2-7-035:069	Aquifer code:	30101
Latest head mmt:	26.5	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1888 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**I25**  
**North**  
**1/4 - 1/2 Mile**  
**Higher**

**HI WELLS      3-1749-017**

Wid:	3-1749-017	Island Code:	3
Island Name:	Oahu	Well no:	1749-17
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1917	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211718
Longitude:	1574925	UTM:	Y
Gps:	N	Owner/user:	Hawn Hotels
Old number:	29-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	11	Well depth:	468
Solid casing Depth:	402	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	71	Water Top Elev:	18.5
Chloride value:	83	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	12.7
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-457	bot_solid depth:	-391
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	12.7	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1917 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**I26**  
**North**  
**1/4 - 1/2 Mile**  
**Higher**

**FED USGS      USGS0224183**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211718157492501
Site Name:	3-1749-17 W29 PALOLO		
Dec. Latitude:	21.28517		
Dec. Longitude:	-157.82087		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	11.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19170101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	468		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I27**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224117**

Agency:	USGS	Site ID:	211720157492701
Site Name:	3-1749-12 W33 PALOLO		
Dec. Latitude:	21.28572		
Dec. Longitude:	-157.82142		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	12.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18890101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	521		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I28**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-012**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1749-012	Island Code:	3
Island Name:	Oahu	Well no:	1749-12
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1889	Driller:	Not Reported
Quad_map:	13	Latitude:	211720
Longitude:	1574927	UTM:	Y
Gps:	N	Owner/user:	Char Y T
Old number:	33-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	12	Well depth:	521
Solid casing Depth:	418	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	49	Water Top Elev:	19.9
Chloride value:	240	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.4
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-509	bot_solid depth:	-406
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24.4	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1889 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**J29**  
**ENE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-009**

Wid:	3-1749-009	Island Code:	3
Island Name:	Oahu	Well no:	1749-09
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1889	Driller:	Not Reported
Quad_map:	13	Latitude:	211700
Longitude:	1574901	UTM:	Y
Gps:	N	Owner/user:	C&C Honolulu
Old number:	12-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	12	Well depth:	510
Solid casing Depth:	470	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	21
Chloride value:	74	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	22.3
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-498	bot_solid depth:	-458
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	22.3	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1889 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**J30**  
**ENE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS    USGS0224175**

Agency:	USGS	Site ID:	211700157490102
Site Name:	3-1749-09 W12 PALOLO		
Dec. Latitude:	21.28017		
Dec. Longitude:	-157.8142		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	12.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18890101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	510		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I31**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS    USGS0224116**

Agency:	USGS	Site ID:	211720157492401
Site Name:	3-1749-02 W28 PALOLO		
Dec. Latitude:	21.28572		
Dec. Longitude:	-157.82059		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	13.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18810101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	Not Reported
Aquifer type:	Not Reported		
Well depth:	428		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I32**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-002**

Wid:	3-1749-002	Island Code:	3
Island Name:	Oahu	Well no:	1749-02
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1881	Driller:	Not Reported
Quad_map:	13	Latitude:	211720
Longitude:	1574924	UTM:	Y
Gps:	N	Owner/user:	Shee Y C
Old number:	28-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	13	Well depth:	428
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	38	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-415	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1881 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**I33**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224119**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211721157492601
Site Name:	3-1749-13 W34 PALOLO		
Dec. Latitude:	21.286		
Dec. Longitude:	-157.82115		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18890101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	500		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I34**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-013**

Wid:	3-1749-013	Island Code:	3
Island Name:	Oahu	Well no:	1749-13
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1889	Driller:	Not Reported
Quad_map:	13	Latitude:	211721
Longitude:	1574926	UTM:	Y
Gps:	N	Owner/user:	Whee L Y
Old number:	34-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	14	Well depth:	500
Solid casing Depth:	430	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	23
Chloride value:	216	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	20.8
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-486	bot_solid depth:	-416
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	20.8	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1889 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**I35**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224121**

Agency:	USGS	Site ID:	211722157492301
Site Name:	3-1749-10 W31 PALOLO		
Dec. Latitude:	21.28628		
Dec. Longitude:	-157.82031		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	13.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18890101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	463		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**I36**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-010**

Wid:	3-1749-010	Island Code:	3
Island Name:	Oahu	Well no:	1749-10
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1889	Driller:	Not Reported
Quad_map:	13	Latitude:	211722
Longitude:	1574923	UTM:	Y
Gps:	N	Owner/user:	Tsumoto F Y
Old number:	31-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	13	Well depth:	463
Solid casing Depth:	424	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	40	Water Top Elev:	23.2
Chloride value:	47	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.4
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-450	bot_solid depth:	-411
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24.4	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1889 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**K37**  
**SE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224167**

Agency:	USGS	Site ID:	211630157490801
Site Name:	3-1649-14 KAPIOLANI PARK		
Dec. Latitude:	21.27184		
Dec. Longitude:	-157.81615		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	10.		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	1983	Inven Date:	19881125
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**K38**  
**SE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1649-014**

Wid:	3-1649-014	Island Code:	3
Island Name:	Oahu	Well no:	1649-14
Well name:	Kapiolani 2	Old name:	Not Reported
Yr drilled:	1983	Driller:	FOUNDATN INTL
Quad_map:	13	Latitude:	211630
Longitude:	1574908	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	16
Ground Elev:	9	Well depth:	35

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	15	Perf casing Depth:	35
Use:	IRR	Use Desc:	Irrigation
Use year:	Not Reported	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	150	Drop in water Lvl:	Not Reported
Chloride Test:	1300	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QLS	Geology desc:	Quaternary limestone deposits
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-26	bot_solid depth:	-6
Bot_perf depth:	-26	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-043:002	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1983 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**L39**  
**ENE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-016**

Wid:	3-1749-016	Island Code:	3
Island Name:	Oahu	Well no:	1749-16
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1911	Driller:	WRIGHT
Quad_map:	13	Latitude:	211709
Longitude:	1574902	UTM:	Y
Gps:	N	Owner/user:	U S Army
Old number:	11-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	8	Well depth:	420
Solid casing Depth:	344	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	67	Water Top Elev:	22
Chloride value:	53	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	28.1
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-412	bot_solid depth:	-336
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	28.1	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1911 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**L40**  
**ENE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224110**

Agency:	USGS	Site ID:	211709157490201
Site Name:	3-1749-16 W11 PALOLO		
Dec. Latitude:	21.28267		
Dec. Longitude:	-157.81448		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	8.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19110101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	420		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**M41**  
**North**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1749-011**

Wid:	3-1749-011	Island Code:	3
Island Name:	Oahu	Well no:	1749-11
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1889	Driller:	Not Reported
Quad_map:	13	Latitude:	211723
Longitude:	1574923	UTM:	Y
Gps:	N	Owner/user:	Dumae S S
Old number:	32-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	14	Well depth:	475
Solid casing Depth:	420	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	45	Water Top Elev:	24
Chloride value:	47	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.8
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-461	bot_solid depth:	-406
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24.8	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1889 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**M42**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS USGS0224122**

Agency:	USGS	Site ID:	211723157492201
Site Name:	3-1749-11 W32 PALOLO		
Dec. Latitude:	21.28656		
Dec. Longitude:	-157.82004		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18890101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	435		
Hole depth:	475	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**N43**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS 3-1749-007**

Wid:	3-1749-007	Island Code:	3
Island Name:	Oahu	Well no:	1749-07
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1885	Driller:	Not Reported
Quad_map:	13	Latitude:	211718
Longitude:	1574910	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	25-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	18	Well depth:	625

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	309	Perf casing Depth:	Not Reported
Use:	OBS	Use Desc:	Observation
Use year:	74	Water Top Elev:	25
Chloride value:	56	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	219	Static Water Lvl:	27.1
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-607	bot_solid depth:	-291
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	0.6
Tax map key:	2-7-024:001	Aquifer code:	30101
Latest head mmt:	27.1	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1885 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**N44**  
**NE**  
 1/2 - 1 Mile  
 Higher

FED USGS    USGS0224182

Agency:	USGS	Site ID:	211718157491002
Site Name:	3-1749-07 W25 TB D		
Dec. Latitude:	21.28517		
Dec. Longitude:	-157.8167		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.30		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	19510801	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	459		
Hole depth:	625	Source:	other government (other than USGS)
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-01-24	-11.20	

**N45**  
**NE**  
 1/2 - 1 Mile  
 Higher

FED USGS    USGS0224181

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211718157491001
Site Name:	3-1749-07 W25 TB E		
Dec. Latitude:	21.28517		
Dec. Longitude:	-157.8167		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.35		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	19510801	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	393		
Hole depth:	625	Source:	other government (other than USGS)
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 20

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1980-01-17	11.71				
Note: Other conditions existed that would affect the measured water level.					
1979-11-23	10.46				
Note: Other conditions existed that would affect the measured water level.					
1979-10-22	10.07				
Note: Other conditions existed that would affect the measured water level.					
1979-08-31	9.81				
Note: Other conditions existed that would affect the measured water level.					
1979-07-18	11.26				
Note: Other conditions existed that would affect the measured water level.					
1979-06-13	11.45				
Note: Other conditions existed that would affect the measured water level.					
1979-04-24	10.49				
Note: Other conditions existed that would affect the measured water level.					
1979-03-20	10.78				
Note: Other conditions existed that would affect the measured water level.					
1979-02-02	10.10				
Note: Other conditions existed that would affect the measured water level.					
1978-12-21	10.29				
Note: Other conditions existed that would affect the measured water level.					
1978-09-19	8.36				
Note: Other conditions existed that would affect the measured water level.					
1978-08-02	8.08				
Note: Other conditions existed that would affect the measured water level.					
1978-07-03	8.82				
Note: Other conditions existed that would affect the measured water level.					
1978-05-22	8.43				
Note: Other conditions existed that would affect the measured water level.					
1978-03-31	7.90				
Note: Other conditions existed that would affect the measured water level.					
1978-02-14	8.01				
Note: Other conditions existed that would affect the measured water level.					
1978-01-09	8.72				
Note: Other conditions existed that would affect the measured water level.					
1977-11-28	9.40				
Note: Other conditions existed that would affect the measured water level.					

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1977-10-13	7.85				
Note: Other conditions existed that would affect the measured water level.					
1964-07-31	-9.15				

**N46**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

FED USGS USGS0224180

Agency:	USGS	Site ID:	211718157491000
Site Name:	3-1749-07 W25		
Dec. Latitude:	21.28517		
Dec. Longitude:	-157.8167		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.30		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	18850101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	338		
Hole depth:	338	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1911-09-17	-10.70	

**O47**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

FED USGS USGS0224118

Agency:	USGS	Site ID:	211721157491401
Site Name:	3-1749-14 W26 PALOLO		
Dec. Latitude:	21.286		
Dec. Longitude:	-157.81781		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	13.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18910101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	417		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**O48**  
**NNE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1749-014**

Wid:	3-1749-014	Island Code:	3
Island Name:	Oahu	Well no:	1749-14
Well name:	Kaimuki High Sch	Old name:	Not Reported
Yr drilled:	1891	Driller:	Not Reported
Quad_map:	13	Latitude:	211721
Longitude:	1574914	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	26-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	13	Well depth:	417
Solid casing Depth:	282	Perf casing Depth:	Not Reported
Use:	OBS	Use Desc:	Observation
Use year:	74	Water Top Elev:	24.8
Chloride value:	57	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	21.3
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	01/01/1987 00:00:00	Max Cl year:	87
Min chlorides:	01/01/1987 00:00:00	Min Cl year:	87
Bot_hole depth:	-404	bot_solid depth:	-269
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-024:001	Aquifer code:	30101
Latest head mmt:	21.3	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1891 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**N49**  
**NE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224179**

Agency:	USGS	Site ID:	211718157490801
Site Name:	3-1749-22 W25-1A PAL		
Dec. Latitude:	21.28517		
Dec. Longitude:	-157.81615		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	14.34		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19701001	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	Not Reported
Aquifer type:	Not Reported		
Well depth:	911		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**N50  
NE  
1/2 - 1 Mile  
Higher**

**HI WELLS      3-1749-022**

Wid:	3-1749-022	Island Code:	3
Island Name:	Oahu	Well no:	1749-22
Well name:	Kaimuki Mon	Old name:	Not Reported
Yr drilled:	1970	Driller:	LAYNE INT
Quad_map:	13	Latitude:	211718
Longitude:	1574908	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	25-1A	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	8
Ground Elev:	14	Well depth:	911
Solid casing Depth:	305	Perf casing Depth:	Not Reported
Use:	OBS	Use Desc:	Observation
Use year:	74	Water Top Elev:	23.4
Chloride value:	145	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	24.0
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	23.6
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-897	bot_solid depth:	-291
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-024:001	Aquifer code:	30101
Latest head mmt:	23.6	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1970 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**P51  
SSE  
1/2 - 1 Mile  
Higher**

**HI WELLS      3-1649-011**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1649-011	Island Code:	3
Island Name:	Oahu	Well no:	1649-11
Well name:	Honolulu Zoo	Old name:	Not Reported
Yr drilled:	1967	Driller:	LAYNE INT
Quad_map:	13	Latitude:	211623
Longitude:	1574915	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	12
Ground Elev:	5	Well depth:	85
Solid casing Depth:	40	Perf casing Depth:	Not Reported
Use:	OTH	Use Desc:	Other
Use year:	74	Water Top Elev:	1.9
Chloride value:	1367	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	300
Annual Draft:	Not Reported	Static Water Lvl:	1.9
Geology:	RA	Geology desc:	Recent alluvium (unconsolidated non-calcareous deposits)
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-80	bot_solid depth:	-35
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	.432	Draft (mgd):	Not Reported
Tax map key:	3-1-043:001	Aquifer code:	30101
Latest head mmt:	1.9	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1967 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**P52**  
**SSE**  
**1/2 - 1 Mile**  
**Higher**

FED USGS USGS0224164

Agency:	USGS	Site ID:	211623157491501
Site Name:	3-1649-11 W20-1 KAPI		
Dec. Latitude:	21.26989		
Dec. Longitude:	-157.81809		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	8.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19670901	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	60.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-10-05	3.10	

**M53**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224124**

Agency:	USGS	Site ID:	211725157492201
Site Name:	3-1749-01 W27 PALOLO		
Dec. Latitude:	21.28711		
Dec. Longitude:	-157.82004		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	15.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18810101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	407		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**M54**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-001**

Wid:	3-1749-001	Island Code:	3
Island Name:	Oahu	Well no:	1749-01
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1881	Driller:	Not Reported
Quad_map:	13	Latitude:	211725
Longitude:	1574922	UTM:	Y
Gps:	N	Owner/user:	Spencer C K
Old number:	27-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	15	Well depth:	407
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	72	Water Top Elev:	22.7
Chloride value:	28	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	22.9
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-392	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	22.9	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1881 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**Q55**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-018**

Wid:	3-1749-018	Island Code:	3
Island Name:	Oahu	Well no:	1749-18
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1921	Driller:	SAMSON-SMOCK
Quad_map:	13	Latitude:	211715
Longitude:	1574901	UTM:	Y
Gps:	N	Owner/user:	Gouveia Trust
Old number:	9-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	4
Ground Elev:	16	Well depth:	269
Solid casing Depth:	255	Perf casing Depth:	Not Reported
Use:	UNU	Use Desc:	Unused
Use year:	93	Water Top Elev:	22.6
Chloride value:	32	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	22	Static Water Lvl:	22.0
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-253	bot_solid depth:	-239
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	0.1
Tax map key:	2-7-032:036	Aquifer code:	30101
Latest head mmt:	22	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1921 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**Q56**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224177**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency: USGS Site ID: 211715157490001  
 Site Name: 3-1749-18 W9 PALOLO  
 Dec. Latitude: 21.28434  
 Dec. Longitude: -157.81392  
 Coord Sys: NAD83  
 State: HI  
 County: Honolulu County  
 Altitude: 16.00  
 Hydrologic code: 20060000  
 Topographic: Flat surface  
 Site Type: Ground-water other than Spring  
 Const Date: 19210101 Inven Date: Not Reported  
 Well Type: Single well, other than collector or Ranney type  
 Primary Aquifer: Not Reported  
 Aquifer type: Not Reported  
 Well depth: 269  
 Hole depth: Not Reported Source: Not Reported  
 Project no: Not Reported

Ground-water levels, Number of Measurements: 0

**57**  
**SE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS USGS0224165**

Agency: USGS Site ID: 211624157490501  
 Site Name: 3-1649-15 KAPIOLANI PARK WELL A  
 Dec. Latitude: 21.27017  
 Dec. Longitude: -157.81531  
 Coord Sys: NAD83  
 State: HI  
 County: Honolulu County  
 Altitude: 10.  
 Hydrologic code: 20060000  
 Topographic: Flat surface  
 Site Type: Ground-water other than Spring  
 Const Date: 198407 Inven Date: 19881125  
 Well Type: Single well, other than collector or Ranney type  
 Primary Aquifer: Not Reported  
 Aquifer type: Not Reported  
 Well depth: 31.  
 Hole depth: 31. Source: other government (other than USGS)  
 Project no: Not Reported

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
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1985-01-15	9.14	
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**R58**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS USGS0224128**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211730157492901
Site Name:	3-1749-05 W35 PALOLO		
Dec. Latitude:	21.2885		
Dec. Longitude:	-157.82198		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	8.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18830101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	587		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**R59  
North  
1/2 - 1 Mile  
Higher**

**HI WELLS      3-1749-005**

Wid:	3-1749-005	Island Code:	3
Island Name:	Oahu	Well no:	1749-05
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1883	Driller:	Not Reported
Quad_map:	13	Latitude:	211730
Longitude:	1574929	UTM:	Y
Gps:	N	Owner/user:	Ung T Y
Old number:	35-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	8	Well depth:	587
Solid casing Depth:	564	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	45	Water Top Elev:	24.8
Chloride value:	37	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	24.8
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-579	bot_solid depth:	-556
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	24.8	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1883 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**S60**  
**SE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1649-013**

Wid:	3-1649-013	Island Code:	3
Island Name:	Oahu	Well no:	1649-13
Well name:	Kapiolani 1	Old name:	Not Reported
Yr drilled:	1983	Driller:	FOUNDATN INTL
Quad_map:	13	Latitude:	211619
Longitude:	1574905	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec.
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	16
Ground Elev:	12	Well depth:	35
Solid casing Depth:	15	Perf casing Depth:	35
Use:	IRR	Use Desc:	Irrigation
Use year:	Not Reported	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	100	Drop in water Lvl:	Not Reported
Chloride Test:	800	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QLS	Geology desc:	Quaternary limestone deposits
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	01/01/1985 00:00:00	Max Cl year:	85
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-23	bot_solid depth:	-3
Bot_perf depth:	-23	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-043:002	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1983 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**S61**  
**SE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224163**

Agency:	USGS	Site ID:	211619157490501
Site Name:	3-1649-13 KAPIOLANI PARK		
Dec. Latitude:	21.26878		
Dec. Longitude:	-157.81531		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	10.		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	1983	Inven Date:	19881125
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	other government (other than USGS)
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**S62**  
**SSE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1649-015**

Wid:	3-1649-015	Island Code:	3
Island Name:	Oahu	Well no:	1649-15
Well name:	Kapiolani A	Old name:	Not Reported
Yr drilled:	1984	Driller:	FOUNDATN INTL
Quad_map:	13	Latitude:	211618
Longitude:	1574905	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	12
Ground Elev:	Not Reported	Well depth:	31
Solid casing Depth:	11	Perf casing Depth:	31
Use:	UNU	Use Desc:	Unused
Use year:	85	Water Top Elev:	0
Chloride value:	0	Test date:	01/18/1985 00:00:00
Pumping Test rate:	100	Drop in water Lvl:	3.4
Chloride Test:	320	Temperature:	26.7
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QLS	Geology desc:	Quaternary limestone deposits
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	29
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-043:001	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	07/01/1984 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**T63**  
**North**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224130**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211734157493601
Site Name:	3-1749-03 W40 PALOLO		
Dec. Latitude:	21.28961		
Dec. Longitude:	-157.82392		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	10.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18820101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	730		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**T64  
North  
1/2 - 1 Mile  
Higher**

**HI WELLS 3-1749-003**

Wid:	3-1749-003	Island Code:	3
Island Name:	Oahu	Well no:	1749-03
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1882	Driller:	COOKE-PEDDLER
Quad_map:	13	Latitude:	211734
Longitude:	1574936	UTM:	Y
Gps:	N	Owner/user:	Magoon Trust
Old number:	40-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	Not Reported
Ground Elev:	10	Well depth:	730
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	OTH	Use Desc:	Other
Use year:	74	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-720	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1882 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**65**  
**SSW**  
**1/2 - 1 Mile**  
**Lower**

**FRDS PWS      HI0000331**

PWS ID:                      HI0000331                      PWS Status:      Not Reported  
 Date Initiated:              Not Reported                      Date Deactivated:      Not Reported  
 PWS Name:                      HONOLULU-WINDWARD-PEARL HARBOR  
    630 S BERETANIA STREET  
    630 SOUTH BERETANIA  
    HONOLULU, OANU, HI 96843

Treatment Objective: DISINFECTION  
 Treatment Process: GASEOUS CHLORINATION, POST  
 Source: Ground water

Addressee / Facility:              System Owner/Responsible Party  
    MR. KAZU HAYASHIDA  
    BOARD OF WATER SUPPLY  
    630 SOUTH BERETANIA STREET  
    HONOLULU, HI 96843

Facility Latitude:	21 12 17.0000	Facility Longitude:	157 48 58.0000
Facility Latitude:	21 16 13.0000	Facility Longitude:	157 49 47.0000
Facility Latitude:	21 17 7.0000	Facility Longitude:	157 46 17.0000
Facility Latitude:	21 17 13.0000	Facility Longitude:	157 46 53.0000
Facility Latitude:	21 17 19.0000	Facility Longitude:	157 47 36.0000
Facility Latitude:	21 17 27.0000	Facility Longitude:	157 48 58.0000
Facility Latitude:	21 17 53.0000	Facility Longitude:	157 45 19.0000
Facility Latitude:	21 18 13.0000	Facility Longitude:	157 49 47.0000
Facility Latitude:	21 18 31.0000	Facility Longitude:	157 51 20.0000
Facility Latitude:	21 18 31.0000	Facility Longitude:	157 51 43.0000
Facility Latitude:	21 18 33.0000	Facility Longitude:	157 51 23.0000
Facility Latitude:	21 18 37.0000	Facility Longitude:	157 47 29.0000
Facility Latitude:	21 19 36.0000	Facility Longitude:	157 46 27.0000
Facility Latitude:	21 19 53.0000	Facility Longitude:	157 52 27.0000
Facility Latitude:	21 19 58.0000	Facility Longitude:	157 43 58.0000
Facility Latitude:	21 19 59.0000	Facility Longitude:	157 47 33.0000
Facility Latitude:	21 19 59.0000	Facility Longitude:	157 48 18.0000
Facility Latitude:	21 20 2.0000	Facility Longitude:	157 52 8.0000
Facility Latitude:	21 20 7.0000	Facility Longitude:	157 44 44.0000
Facility Latitude:	21 20 11.0000	Facility Longitude:	157 45 12.0000
Facility Latitude:	21 20 12.0000	Facility Longitude:	157 44 55.0000
Facility Latitude:	21 20 14.0000	Facility Longitude:	157 45 1.0000
Facility Latitude:	21 20 52.0000	Facility Longitude:	157 52 36.0000
Facility Latitude:	21 21 16.0000	Facility Longitude:	157 49 14.0000
Facility Latitude:	21 21 17.0000	Facility Longitude:	157 48 40.0000
Facility Latitude:	21 21 19.0000	Facility Longitude:	157 53 54.0000
Facility Latitude:	21 21 20.0000	Facility Longitude:	157 53 54.0000
Facility Latitude:	21 21 20.0000	Facility Longitude:	157 53 55.0000
Facility Latitude:	21 21 27.0000	Facility Longitude:	157 49 5.0000
Facility Latitude:	21 21 52.0000	Facility Longitude:	157 48 11.0000
Facility Latitude:	21 22 14.0000	Facility Longitude:	157 50 11.0000
Facility Latitude:	21 22 28.0000	Facility Longitude:	157 49 49.0000

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Facility Latitude:	21 22 35.0000	Facility Longitude:	157 49 55.0000
Facility Latitude:	21 22 56.0000	Facility Longitude:	157 49 35.0000
Facility Latitude:	21 22 57.0000	Facility Longitude:	157 55 14.0000
Facility Latitude:	21 22 58.0000	Facility Longitude:	157 49 35.0000
Facility Latitude:	21 23 5.0000	Facility Longitude:	157 48 31.0000
Facility Latitude:	21 23 5.0000	Facility Longitude:	157 54 26.0000
Facility Latitude:	21 23 13.0000	Facility Longitude:	127 55 35.0000
Facility Latitude:	21 23 13.0000	Facility Longitude:	157 55 35.0000
Facility Latitude:	21 23 20.0000	Facility Longitude:	157 56 3.0000
Facility Latitude:	21 23 22.0000	Facility Longitude:	157 48 52.0000
Facility Latitude:	21 23 22.0000	Facility Longitude:	157 55 3.0000
Facility Latitude:	21 23 27.0000	Facility Longitude:	157 56 43.0000
Facility Latitude:	21 23 27.0000	Facility Longitude:	157 56 47.0000
Facility Latitude:	21 23 37.0000	Facility Longitude:	157 55 53.0000
Facility Latitude:	21 23 37.0000	Facility Longitude:	157 57 25.0000
Facility Latitude:	21 23 37.0000	Facility Longitude:	157 57 27.0000
Facility Latitude:	21 23 38.0000	Facility Longitude:	157 55 54.0000
Facility Latitude:	21 23 38.0000	Facility Longitude:	157 55 55.0000
Facility Latitude:	21 23 38.0000	Facility Longitude:	157 56 49.0000
Facility Latitude:	21 23 39.0000	Facility Longitude:	157 55 53.0000
Facility Latitude:	21 23 39.0000	Facility Longitude:	157 55 54.0000
Facility Latitude:	21 23 39.0000	Facility Longitude:	157 55 55.0000
Facility Latitude:	21 23 42.0000	Facility Longitude:	157 49 9.0000
Facility Latitude:	21 23 42.0000	Facility Longitude:	157 56 47.0000
Facility Latitude:	21 23 48.0000	Facility Longitude:	157 56 22.0000
Facility Latitude:	21 23 49.0000	Facility Longitude:	157 56 22.0000
Facility Latitude:	21 24 7.0000	Facility Longitude:	157 58 25.0000
Facility Latitude:	21 24 10.0000	Facility Longitude:	157 56 45.0000
Facility Latitude:	21 24 11.0000	Facility Longitude:	157 56 46.0000
Facility Latitude:	21 24 12.0000	Facility Longitude:	157 56 47.0000
Facility Latitude:	21 24 12.0000	Facility Longitude:	158 57 23.0000
Facility Latitude:	21 24 13.0000	Facility Longitude:	157 58 12.0000
Facility Latitude:	21 24 13.0000	Facility Longitude:	158 57 24.0000
Facility Latitude:	21 24 14.0000	Facility Longitude:	157 57 6.0000
Facility Latitude:	21 24 14.0000	Facility Longitude:	158 57 25.0000
Facility Latitude:	21 24 35.0000	Facility Longitude:	157 50 2.0000
Facility Latitude:	21 24 37.0000	Facility Longitude:	157 50 8.0000
Facility Latitude:	21 24 39.0000	Facility Longitude:	157 57 59.0000
Facility Latitude:	21 25 7.0000	Facility Longitude:	157 49 41.0000
Facility Latitude:	21 25 53.0000	Facility Longitude:	157 57 31.0000
Facility Latitude:	21 26 16.0000	Facility Longitude:	157 51 23.0000
Facility Latitude:	21 26 16.0000	Facility Longitude:	157 51 32.0000
Facility Latitude:	21 26 39.0000	Facility Longitude:	157 52 12.0000
Facility Latitude:	21 26 58.0000	Facility Longitude:	157 51 40.0000
Facility Latitude:	21 27 2.0000	Facility Longitude:	157 51 41.0000
Facility Latitude:	21 27 3.0000	Facility Longitude:	157 51 38.0000
Facility Latitude:	21 33 14.0000	Facility Longitude:	157 53 8.0000
Facility Latitude:	21 33 15.0000	Facility Longitude:	157 53 11.0000
Facility Latitude:	21 34 39.0000	Facility Longitude:	157 53 47.0000
Facility Latitude:	21 34 41.0000	Facility Longitude:	157 49 17.0000
Facility Latitude:	21 34 41.0000	Facility Longitude:	157 53 44.0000
Facility Latitude:	21 34 50.0000	Facility Longitude:	157 53 12.0000
Facility Latitude:	21 35 17.0000	Facility Longitude:	157 53 46.0000
Facility Latitude:	21 35 17.0000	Facility Longitude:	157 53 49.0000
Facility Latitude:	21 35 22.0000	Facility Longitude:	157 53 53.0000
Facility Latitude:	21 35 27.0000	Facility Longitude:	157 53 59.0000

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Facility Latitude:	21 36 39.0000	Facility Longitude:	157 52 12.0000
City Served:	AIEA		
City Served:	HONO-WINDW-PEAR		
City Served:	HONOLULU		
City Served:	KAILUA		
City Served:	KANEOHE		
City Served:	PEARL CITY		
Treatment Class:	Mixed (treated and untreated)	Population:	645741

PWS currently has or had major violation(s) or enforcement: No

**U66**  
**NE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1749-015**

Wid:	3-1749-015	Island Code:	3
Island Name:	Oahu	Well no:	1749-15
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1892	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574901	UTM:	Y
Gps:	N	Owner/user:	Nakano D S
Old number:	8-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	19	Well depth:	165
Solid casing Depth:	122	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	40	Water Top Elev:	17.3
Chloride value:	44	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.0
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-146	bot_solid depth:	-103
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	27	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1892 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U67**  
**NE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224127**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157490101
Site Name:	3-1749-15 W8 PALOLO		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.8142		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	19.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18920101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	165		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**V68**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224174**

Agency:	USGS	Site ID:	211700157490101
Site Name:	3-1749-19 Princess Kaiulani Palolo Oahu HI		
Dec. Latitude:	21.28894		
Dec. Longitude:	-157.81608		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	21		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	19270801	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	120KLLF		
Aquifer type:	Confined single aquifer		
Well depth:	276		
Hole depth:	276	Source:	driller
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**V69**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-019**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1749-019	Island Code:	3
Island Name:	Oahu	Well no:	1749-19
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1927	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211732
Longitude:	1574908	UTM:	Y
Gps:	N	Owner/user:	Kokusai Kogyo
Old number:	6-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	21	Well depth:	276
Solid casing Depth:	175	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	24.7
Chloride value:	24	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	500
Annual Draft:	128	Static Water Lvl:	27.1
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	89	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-255	bot_solid depth:	-154
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	.720	Draft (mgd):	0.4
Tax map key:	2-7-027:002	Aquifer code:	30101
Latest head mmt:	27.1	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1927 00:00:00
Pump Inst. Date:	08/10/1989 00:00:00	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	-9
Pump depth:	30		

**W70**  
**South**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224159**

Agency:	USGS	Site ID:	211608157493001
Site Name:	3-1649-10 W20 KAPIOL		
Dec. Latitude:	21.26573		
Dec. Longitude:	-157.82226		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	2.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19541023	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	85.0		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1954-10-22	7.50	

**W71**  
**South**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS 3-1649-010**

Wid:	3-1649-010	Island Code:	3
Island Name:	Oahu	Well no:	1649-10
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1954	Driller:	NAT WHITON
Quad_map:	13	Latitude:	211608
Longitude:	1574930	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	20-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	Not Reported	Well depth:	85
Solid casing Depth:	46	Perf casing Depth:	Not Reported
Use:	OTH	Use Desc:	Other
Use year:	74	Water Top Elev:	0
Chloride value:	19500	Test date:	Not Reported
Pumping Test rate:	1150	Drop in water Lvl:	2.7
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	RS	Geology desc:	Unconsolidated marine calcareous sediments
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	426
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-031:006	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1954 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U72**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS 3-1748-005**

Wid:	3-1748-005	Island Code:	3
Island Name:	Oahu	Well no:	1748-05
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1912	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-G	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	37	Well depth:	250

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	100	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	22.3
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.2
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	Not Reported
Min chlorides:	Not Reported	Min CI year:	Not Reported
Bot_hole depth:	-213	bot_solid depth:	-63
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.2	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1912 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U73**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-006**

Wid:	3-1748-006	Island Code:	3
Island Name:	Oahu	Well no:	1748-06
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1912	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-H	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	27	Well depth:	250
Solid casing Depth:	100	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	24
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.2
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	Not Reported
Min chlorides:	Not Reported	Min CI year:	Not Reported
Bot_hole depth:	-223	bot_solid depth:	-73
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.2	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1912 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**U74**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-003**

Wid:	3-1748-003	Island Code:	3
Island Name:	Oahu	Well no:	1748-03
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1898	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-A	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	25	Well depth:	260
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	25.2
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	1288	Static Water Lvl:	27.1
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-235	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	3.5
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.1	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1898 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U75**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-004**

Wid:	3-1748-004	Island Code:	3
Island Name:	Oahu	Well no:	1748-04
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1898	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-B	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	26	Well depth:	260

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.1
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	Not Reported
Min chlorides:	Not Reported	Min CI year:	Not Reported
Bot_hole depth:	-234	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.1	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1898 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U76**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-007**

Wid:	3-1748-007	Island Code:	3
Island Name:	Oahu	Well no:	1748-07
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1925	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-C	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	29	Well depth:	301
Solid casing Depth:	95	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	24.9
Chloride value:	41	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.2
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-272	bot_solid depth:	-66
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.2	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1925 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**U77**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-011**

Wid:	3-1748-011	Island Code:	3
Island Name:	Oahu	Well no:	1748-11
Well name:	Kaimuki Mon 1	Old name:	Not Reported
Yr drilled:	1960	Driller:	PACIFIC DRLG
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	T86-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	6
Ground Elev:	29	Well depth:	1404
Solid casing Depth:	114	Perf casing Depth:	Not Reported
Use:	OBS	Use Desc:	Observation
Use year:	60	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-1375	bot_solid depth:	-85
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1960 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U78**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-014**

Wid:	3-1748-014	Island Code:	3
Island Name:	Oahu	Well no:	1748-14
Well name:	Kaimuki Mon 2	Old name:	Not Reported
Yr drilled:	1986	Driller:	WAT RES INTL
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	9
Ground Elev:	26	Well depth:	1203

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	123	Perf casing Depth:	Not Reported
Use:	OBS	Use Desc:	Observation
Use year:	86	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	01/01/1987 00:00:00	Max Cl year:	87
Min chlorides:	01/01/1987 00:00:00	Min Cl year:	87
Bot_hole depth:	-1177	bot_solid depth:	-97
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	23.95	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1986 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U79**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-010**

Wid:	3-1748-010	Island Code:	3
Island Name:	Oahu	Well no:	1748-10
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1928	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-F	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	32	Well depth:	308
Solid casing Depth:	101	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	25
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.2
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-276	bot_solid depth:	-69
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.2	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1928 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**U80**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-008**

Wid:	3-1748-008	Island Code:	3
Island Name:	Oahu	Well no:	1748-08
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1925	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-D	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	28	Well depth:	304
Solid casing Depth:	101	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	23.9
Chloride value:	46	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.2
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	-276	bot_solid depth:	-73
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.2	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1925 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U81**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-009**

Wid:	3-1748-009	Island Code:	3
Island Name:	Oahu	Well no:	1748-09
Well name:	Kaimuki Pump Sta	Old name:	Not Reported
Yr drilled:	1925	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211727
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Honolulu Bws
Old number:	7-E	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	12
Ground Elev:	28	Well depth:	302

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	101	Perf casing Depth:	Not Reported
Use:	MUN	Use Desc:	Municipal
Use year:	74	Water Top Elev:	24.8
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	22.5
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	27.3
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	87
Min chlorides:	01/01/1987 00:00:00	Min Cl year:	87
Bot_hole depth:	-274	bot_solid depth:	-73
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-7-030:012	Aquifer code:	30101
Latest head mmt:	27.3	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1925 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**U82**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS    USGS0224190**

Agency:	USGS	Site ID:	211727157485804
Site Name:	3-1748-06 W7-H PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	27.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19120101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	250		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U83**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS    USGS0224189**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157485803
Site Name:	3-1748-05 W7-G PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	27.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19120101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	250		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U84**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224188**

Agency:	USGS	Site ID:	211727157485800
Site Name:	3-1748-03 TO 10		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	29.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Multiple wells (a group of wells that are pumped through a single header)		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U85**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224188**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157485802
Site Name:	3-1748-04 W7-B PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	26.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18980101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	260		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U86**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224187**

Agency:	USGS	Site ID:	211727157485801
Site Name:	3-1748-03 W7-A PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	25.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18980101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	260		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U87**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224191**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157485805
Site Name:	3-1748-07 W7-C PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	29.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19250101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	301		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U88**  
**NE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224192**

Agency:	USGS	Site ID:	211727157485806
Site Name:	3-1748-08 W7-D PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	28.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19250101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	304		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U89**  
**NE**  
 1/2 - 1 Mile  
 Higher

**FED USGS      USGS0224193**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157485807
Site Name:	3-1748-09 W7-E PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	28.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19250101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	302		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U90**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224194**

Agency:	USGS	Site ID:	211727157485808
Site Name:	3-1748-10 W7-F PALOL		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	32.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19280101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	308		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1928-04-13	7.00	

**U91**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224125**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211727157485809
Site Name:	3-1748-11 T86 PALOLO		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	29.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19600101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	1404		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**U92**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224126**

Agency:	USGS	Site ID:	211727157485810
Site Name:	3-1748-14 KAIMUKI MW 2		
Dec. Latitude:	21.28767		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	26.		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	1986	Inven Date:	19881128
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	1203.		
Hole depth:	1203.	Source:	other government (other than USGS)
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**X93**  
**SSE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224160**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	211611157490901
Site Name:	3-1649-17 KAPIOLANI PARK WELL C		
Dec. Latitude:	21.26656		
Dec. Longitude:	-157.81643		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	10.		
Hydrologic code:	20060000		
Topographic:	Flat surface		
Site Type:	Ground-water other than Spring		
Const Date:	1984	Inven Date:	19881125
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	34.		
Hole depth:	34.	Source:	other government (other than USGS)
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**X94  
SSE  
1/2 - 1 Mile  
Higher**

**HI WELLS      3-1649-016**

Wid:	3-1649-016	Island Code:	3
Island Name:	Oahu	Well no:	1649-16
Well name:	Kapiolani B	Old name:	Not Reported
Yr drilled:	1984	Driller:	FOUNDATN INTL
Quad_map:	13	Latitude:	211611
Longitude:	1574907	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	12
Ground Elev:	Not Reported	Well depth:	32
Solid casing Depth:	12	Perf casing Depth:	32
Use:	UNU	Use Desc:	Unused
Use year:	87	Water Top Elev:	0
Chloride value:	0	Test date:	01/24/1985 00:00:00
Pumping Test rate:	125	Drop in water Lvl:	8.0
Chloride Test:	190	Temperature:	26.7
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QLS	Geology desc:	Quaternary limestone deposits
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	16
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-043:001	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	07/01/1984 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**V95**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-006**

Wid:	3-1749-006	Island Code:	3
Island Name:	Oahu	Well no:	1749-06
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1884	Driller:	Not Reported
Quad_map:	13	Latitude:	211735
Longitude:	1574905	UTM:	Y
Gps:	N	Owner/user:	Bishop Estate
Old number:	5-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	22	Well depth:	162
Solid casing Depth:	125	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	30	Water Top Elev:	23.3
Chloride value:	34	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	23.7
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-140	bot_solid depth:	-103
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	23.7	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1884 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**V96**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224133**

Agency:	USGS	Site ID:	211735157490501
Site Name:	3-1749-06 W5 PALOLO		
Dec. Latitude:	21.28989		
Dec. Longitude:	-157.81531		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	22.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18840101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Primary Aquifer:	Not Reported	Source:	Not Reported
Aquifer type:	Not Reported		
Well depth:	162		
Hole depth:	Not Reported		
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**X97**  
**SSE**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1649-017**

Wid:	3-1649-017	Island Code:	3
Island Name:	Oahu	Well no:	1649-17
Well name:	Kapiolani C	Old name:	Not Reported
Yr drilled:	1984	Driller:	FOUNDATN INTL
Quad_map:	13	Latitude:	211608
Longitude:	1574909	UTM:	Y
Gps:	N	Owner/user:	C&C Pks&Rec
Old number:	Not Reported	Well_type:	ROT
Type:	Rotary Drill	Casing dia:	12
Ground Elev:	Not Reported	Well depth:	35
Solid casing Depth:	15	Perf casing Depth:	35
Use:	UNU	Use Desc:	Unused
Use year:	85	Water Top Elev:	0
Chloride value:	0	Test date:	01/31/1985 00:00:00
Pumping Test rate:	95	Drop in water Lvl:	5.2
Chloride Test:	262	Temperature:	26.4
Units:	C	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	QLS	Geology desc:	Quaternary limestone deposits
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	0
Min chlorides:	Not Reported	Min Cl year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	18
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	3-1-043:001	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	07/01/1984 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**Y98**  
**WNW**  
 1/2 - 1 Mile  
 Higher

**HI WELLS      3-1750-006**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1750-006	Island Code:	3
Island Name:	Oahu	Well no:	1750-06
Well name:	Waikiki	Old name:	Not Reported
Yr drilled:	1955	Driller:	SAMSON-SMOCK
Quad_map:	13	Latitude:	211709
Longitude:	1575020	UTM:	Y
Gps:	N	Owner/user:	Hilton Hotel
Old number:	30-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	Not Reported	Well depth:	122
Solid casing Depth:	93	Perf casing Depth:	Not Reported
Use:	UNU	Use Desc:	Unused
Use year:	74	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	2-6-008:034	Aquifer code:	30101
Latest head mmt:	0	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1955 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**Y99  
WNW  
1/2 - 1 Mile  
Higher**

**FED USGS USGS0224111**

Agency:	USGS	Site ID:	211709157502001
Site Name:	3-1750-06 W30 DERUSY		
Dec. Latitude:	21.28267		
Dec. Longitude:	-157.83615		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	5.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19550607	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	122		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**Z100**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224195**

Agency:	USGS	Site ID:	211738157490601
Site Name:	3-1749-04 W4 PALOLO		
Dec. Latitude:	21.29072		
Dec. Longitude:	-157.81559		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	28.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18830101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	286		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**Z101**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1749-004**

Wid:	3-1749-004	Island Code:	3
Island Name:	Oahu	Well no:	1749-04
Well name:	Kapahulu	Old name:	Not Reported
Yr drilled:	1883	Driller:	Not Reported
Quad_map:	13	Latitude:	211738
Longitude:	1574906	UTM:	Y
Gps:	N	Owner/user:	State Of Haw
Old number:	4-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	28	Well depth:	286
Solid casing Depth:	190	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	26	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	25.1
Geology:	TKB	Geology desc:	Tertiary Koolau basalt
Installed:	Not Reported	Last Measured:	Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Max chlorides:	Not Reported	Max Cl year:	Not Reported
Min chlorides:	Not Reported	Min Cl year:	Not Reported
Bot_hole depth:	-258	bot_solid depth:	-162
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	25.1	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1883 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

**AA102**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**FED USGS      USGS0224132**

Agency:	USGS	Site ID:	211735157485801
Site Name:	3-1748-02 W3 PALOLO		
Dec. Latitude:	21.28989		
Dec. Longitude:	-157.81337		
Coord Sys:	NAD83		
State:	HI		
County:	Honolulu County		
Altitude:	29.00		
Hydrologic code:	20060000		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	18960101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	159		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

**AA103**  
**NE**  
**1/2 - 1 Mile**  
**Higher**

**HI WELLS      3-1748-002**

Wid:	3-1748-002	Island Code:	3
Island Name:	Oahu	Well no:	1748-02
Well name:	Palolo	Old name:	Not Reported
Yr drilled:	1896	Driller:	MCCANDLESS
Quad_map:	13	Latitude:	211735
Longitude:	1574858	UTM:	Y
Gps:	N	Owner/user:	Booth E K
Old number:	3-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	10
Ground Elev:	29	Well depth:	159

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	100	Perf casing Depth:	Not Reported
Use:	SLD	Use Desc:	Sealed
Use year:	28	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	22.5
Geology:	Not Reported	Geology desc:	Not Reported
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	-130	bot_solid depth:	-71
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	30101
Latest head mmt:	22.5	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1896 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

Federal EPA Radon Zone for HONOLULU County: 3

Note: Zone 1 indoor average level > 4 pCi/L.  
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for Zip Code: 96813

Number of sites tested: 3

<u>Area</u>	<u>Average Activity</u>	<u>% &lt;4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% &gt;20 pCi/L</u>
Living Area - 1st Floor	0.067 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.350 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### **USGS 7.5' Digital Elevation Model (DEM)**

Source: United States Geologic Survey  
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### **AQUIFLOW<sup>R</sup> Information System**

Source: EDR proprietary database of groundwater flow information  
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### **Geologic Age and Rock Stratigraphic Unit**

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### **STATSGO: State Soil Geographic Database**

Source: Department of Agriculture, Natural Resources Conservation Services  
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

### **FEDERAL WATER WELLS**

#### **PWS: Public Water Systems**

Source: EPA/Office of Drinking Water  
Telephone: 202-564-3750  
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### **PWS ENF: Public Water Systems Violation and Enforcement Data**

Source: EPA/Office of Drinking Water  
Telephone: 202-564-3750  
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### **USGS Water Wells: USGS National Water Inventory System (NWIS)**

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## STATE RECORDS

### Ground Water Wells

Source: Department of Land and Natural Resources  
Telephone: 808-587-0242

## RADON

### Area Radon Information

Source: USGS  
Telephone: 703-356-4020  
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

### EPA Radon Zones

Source: EPA  
Telephone: 703-356-4020  
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## OTHER

### Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

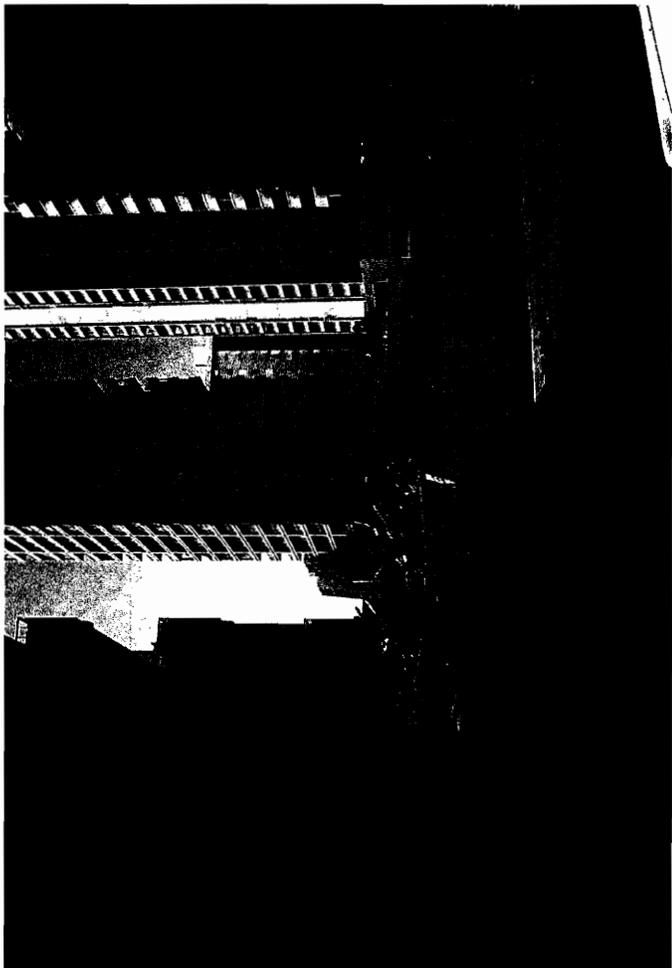
### Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

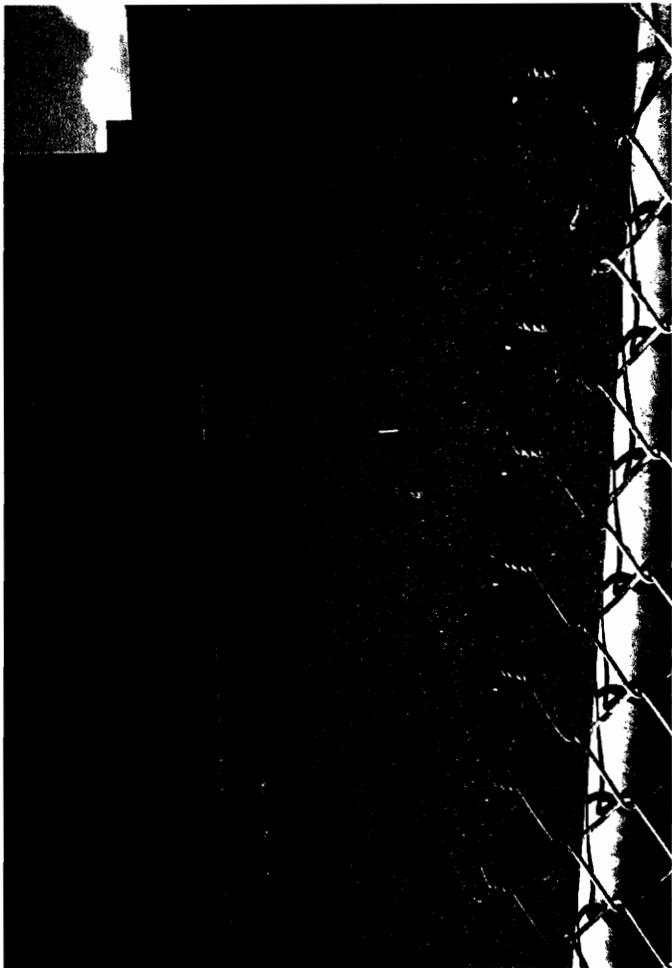
**APPENDIX C - RECONNAISSANCE PHOTOGRAPHS**

## PHOTOGRAPH LOG

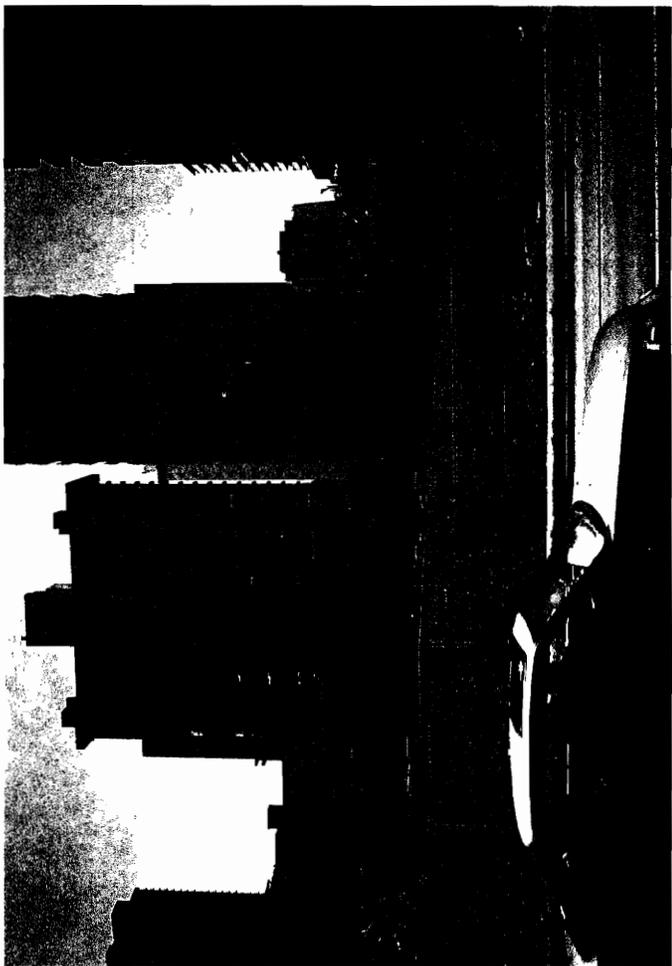
1. View of 2423 & 2429 Ala Wai Blvd. from the north across Ala Wai Blvd. looking to the south.
2. View of 2423 & 2429 Ala Wai Blvd. from the north across Ala Wai Blvd. looking to the southwest.
3. View of 2423 & 2429 Ala Wai Blvd. from the north across Ala Wai Blvd. looking to the southwest.
4. View of the subject site from the east looking to the west.
5. South side of the site. Note the discarded items along the fence line on the sidewalk.
6. View of 2423 & 2429 Ala Wai Blvd. from the south looking to the north.
7. View of the southern section of the site looking at Tusitala Street.
8. View of 2423 & 2429 Ala Wai Blvd. from the south looking to the north.



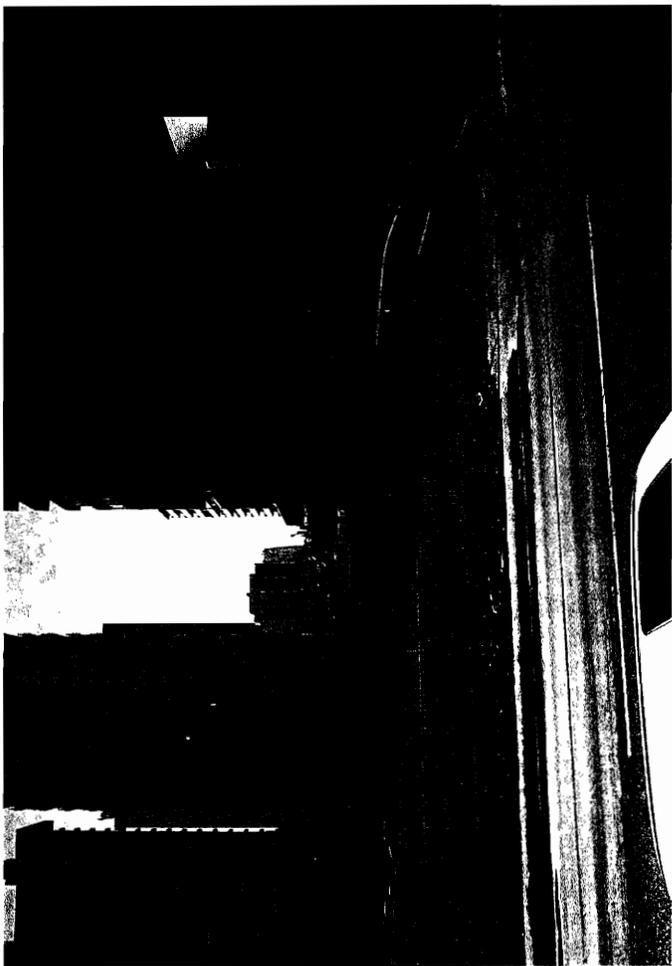
2.



4.



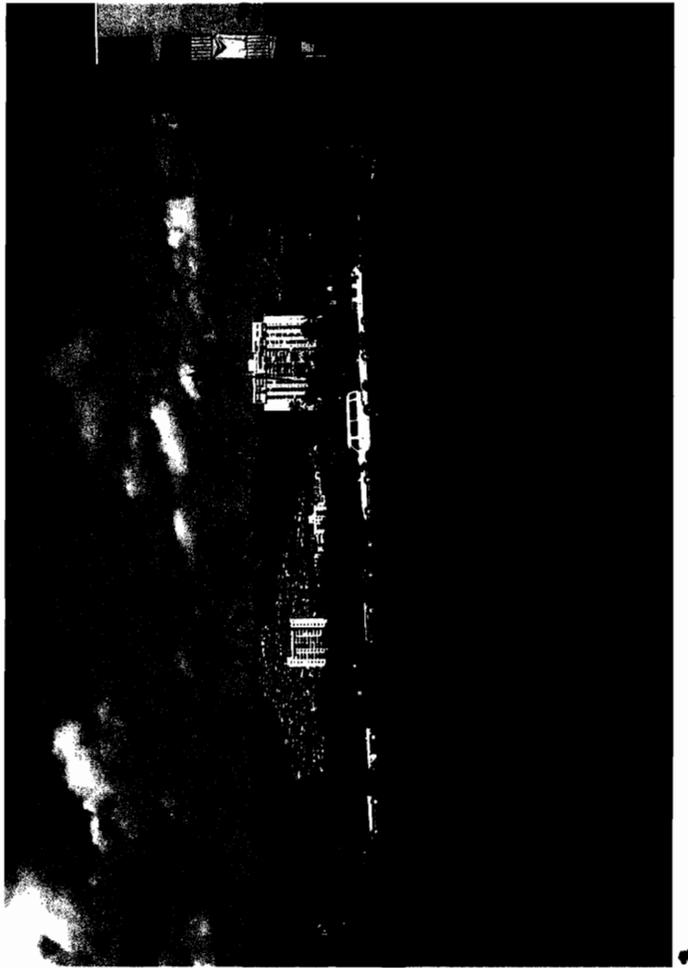
1.



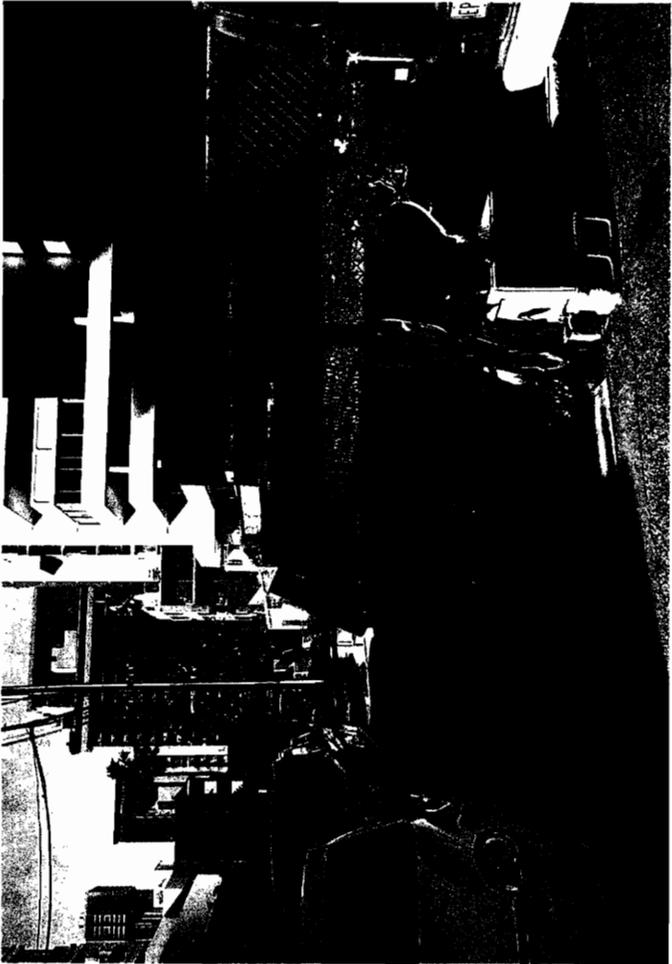
3.



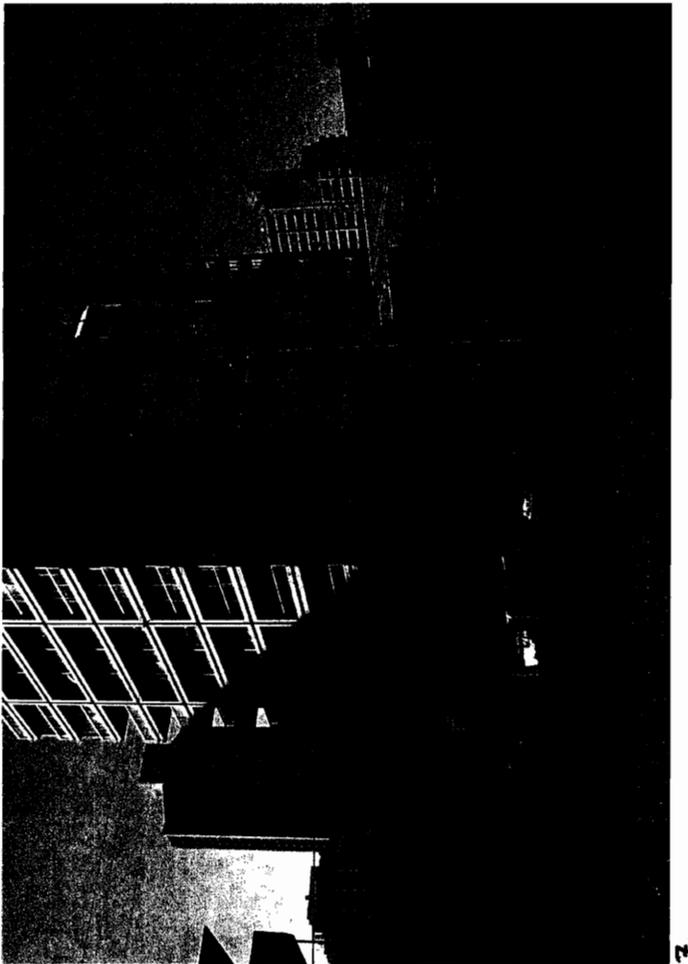
2.



3.



5.



7.

**APPENDIX D - REFERENCES & SOURCES**

## References and Sources

1. Tusitala Vista L.P., Mr. Gary Furuta - Developer
2. Starts, Inc., Hanako Hata - Current Site Owner Representative
3. R.M. Towill, Edgar Gaiamo - Aerial Photo Review
4. USGS Topographic Map Honolulu Quadrangle 1998
5. Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii, Technical Report No. 179
6. City & County of Honolulu Real Property Assessment Division: Ownership Documentation and Tax Maps.
7. Sanborn Fire Insurance Maps
8. EDR Radius Map Reports - Regulatory Data Base
9. Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai State of Hawaii. USDA 1972.
10. State of Hawaii Department of Health UST Database, HEER Office Database.

**APPENDIX E - CREDENTIALS**

**Michael W. Polkinghorn**  
Technical Director, Honolulu, Hawaii



#### **EDUCATION**

BS in Geology/Petroleum Engineering, 1981, Michigan State University

#### **CERTIFICATIONS/REGISTRATIONS/TECHNICAL TRAINING**

Environmental Professional - #103129PSI

Professional Geologist - PG3199 - Wyoming 1998

EPA AHERA Asbestos Inspector / Management Planner, HIASB-0184

EPA AHERA Asbestos Contractor Supervisor / Project Designer, HIASB-0184

OSHA 29 CFR 1910.120 HAZWOPER, Supervisor

#### **PROFESSIONAL EXPERIENCE**

Mr. Polkinghorn, Technical Director for GESG is responsible for the successful completion of all elements of a project. He supervises compliance for all Federal, State, and local environmental and industrial hygiene regulations. He possesses extensive experience with Phase I/II/III Environmental Site Assessments, soil and groundwater remediation, and has a working knowledge of optical mineralogy, microscopy. He has supervised and performed numerous asbestos surveys, lead paint surveys, and overseen the clean-up operations. He has extensive experience with UST removal and site remediation. He also is in charge of the META Hawaii EPA/Hawaii Accredited Asbestos Training Program which includes numerous OSHA/HIOSH training program certifications such as confined space entry and HAZWOPER training.

#### **REPRESENTATIVE ENVIRONMENTAL SERVICES AND INDUSTRIAL HYGIENE PROJECTS**

- Castle & Cooke Properties; Hawaii.
- City & County of Honolulu; Hawaii.
- County of Hawaii; Hawaii.
- County of Kauai; Hawaii.
- County of Maui; Hawaii.
- First Hawaiian Center Demolition Survey; Hawaii.
- Hickam AFB; Hawaii.
- Kamehameha Schools; Hawaii.
- NAS Barbers Point; Hawaii.
- Pearl Harbor; Hawaii.
- Punahou School; Hawaii.
- Schofield Barracks; Hawaii.
- Sheraton Hotels; Hawaii.
- State of Hawaii; Hawaii.
- Territory of Guam; Guam.
- Wilcox Memorial Hospital; Hawaii.

**YEARS EXPERIENCE WITH OTHER FIRMS:** 21

**YEAR STARTED WITH GESG:** 2003

**APPENDIX 8**  
**CULTURAL IMPACT ASSESSMENT**

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**Cultural Impact Evaluation for the Tusitala Vista Elderly Apartments**

**Waikīkī, Kona District, O'ahu Island**

**TMK: 2-6-24: 70, 71**

by

**Auli'i Mitchell, B.A.,**

and

**Hallett H. Hammatt, Ph.D.**

Prepared for

**Kusao & Kurahashi, Inc.**

by

**Cultural Surveys Hawai'i, Inc.**

**December 2004**

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## I. INTRODUCTION

### A. Project Background

At the request of Kusao & Kurahashi, Inc., Cultural Surveys Hawai'i Inc. (CSH), has completed a cultural impact evaluation of 1.03 acres in Waikiki Ahupua'a, Kona District, Island of O'ahu, TMK 2-6-24:70, 71. The project area is a rectangular shaped parcel bounded by Ala Wai Boulevard to the north, Tusitala Street to the south, Ka'iulani Avenue to the west and Lili'uokalani Avenue to the east (Figures 1, 2 and 3). Hawai'i Housing Development Corporation is presently in the process of purchasing the project area land from Starts International Hawai'i, Inc.

### B. Scope of Work

The scope of work for the cultural impact evaluation is summarized as follows:

- 1) Examination of historical documents, Land Commission Awards, historic maps, and previously documented oral histories, with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal and other resources or agricultural pursuits as may be indicated in the historic record.
- 2) A review of the existing archaeological information pertaining to the sites on the property as they may allow us to reconstruct traditional land use activities and identify and describe the cultural resources, practices and beliefs associated with the parcel and identify present uses, if appropriate.
- 3) Conduct consultations with persons and groups knowledgeable about the historic and traditional practices in the project area and region. CSH would focus particularly on previously recognized lineal and cultural descendants of families associated with Waikiki, circa 1850.
- 4) Preparation of a report on items 1-3 summarizing the information gathered related to traditional practices and land use. The report will evaluate the impact of the proposed action on the cultural practices and features identified.

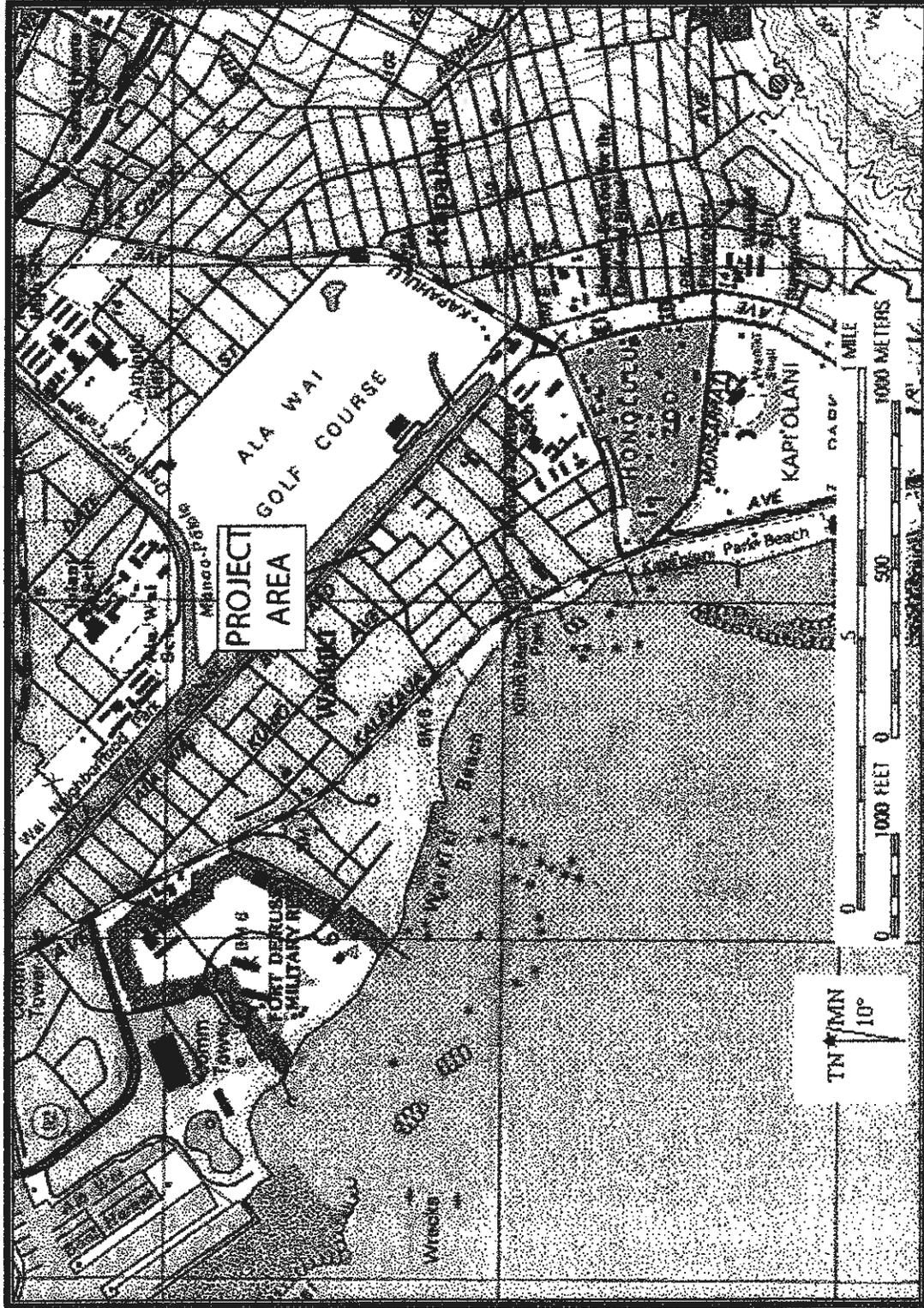


Figure 1 Portion of USGS Honolulu Quad (1998) map showing project area

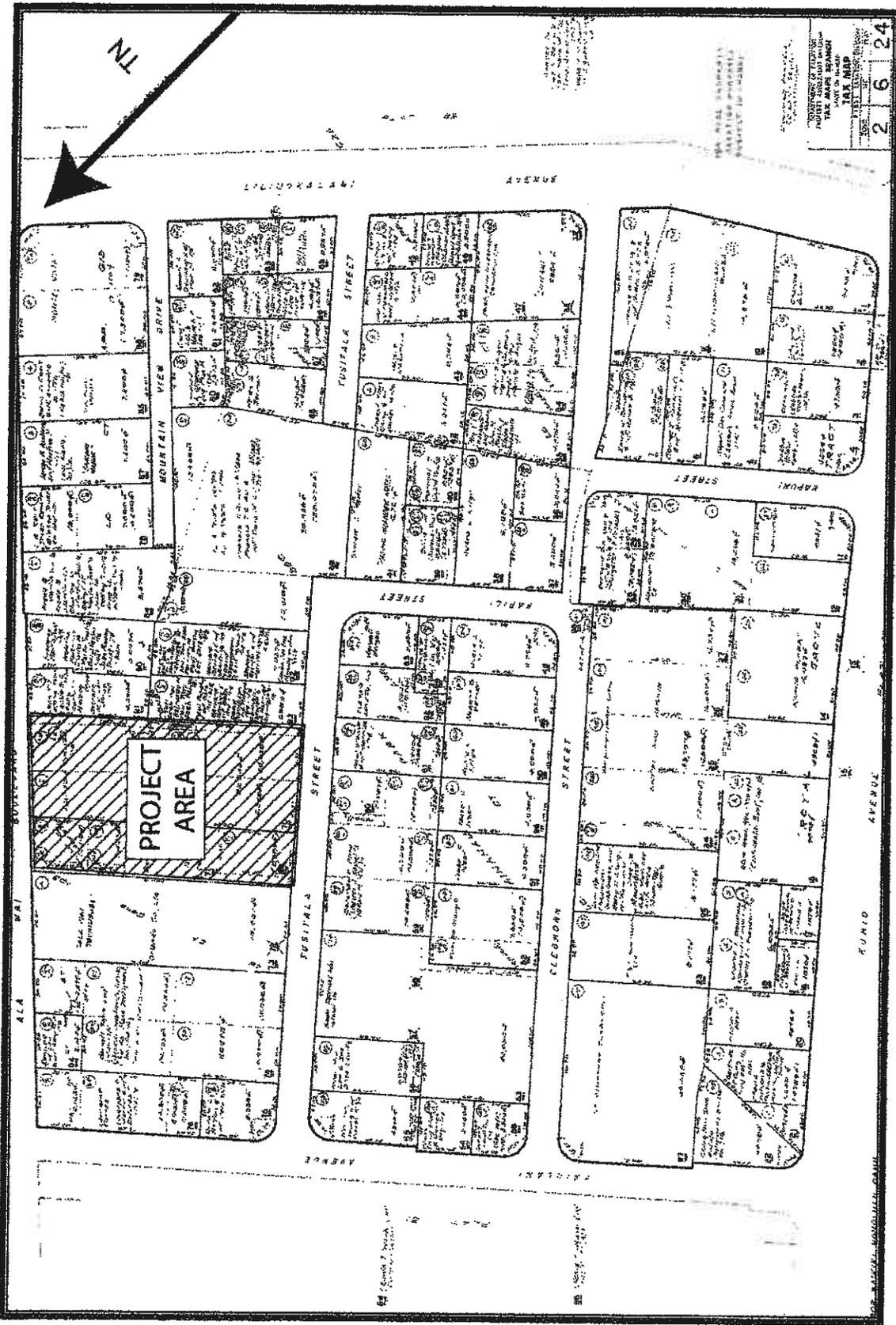


Figure 2 TMK 2-6-24 map showing location of present project area

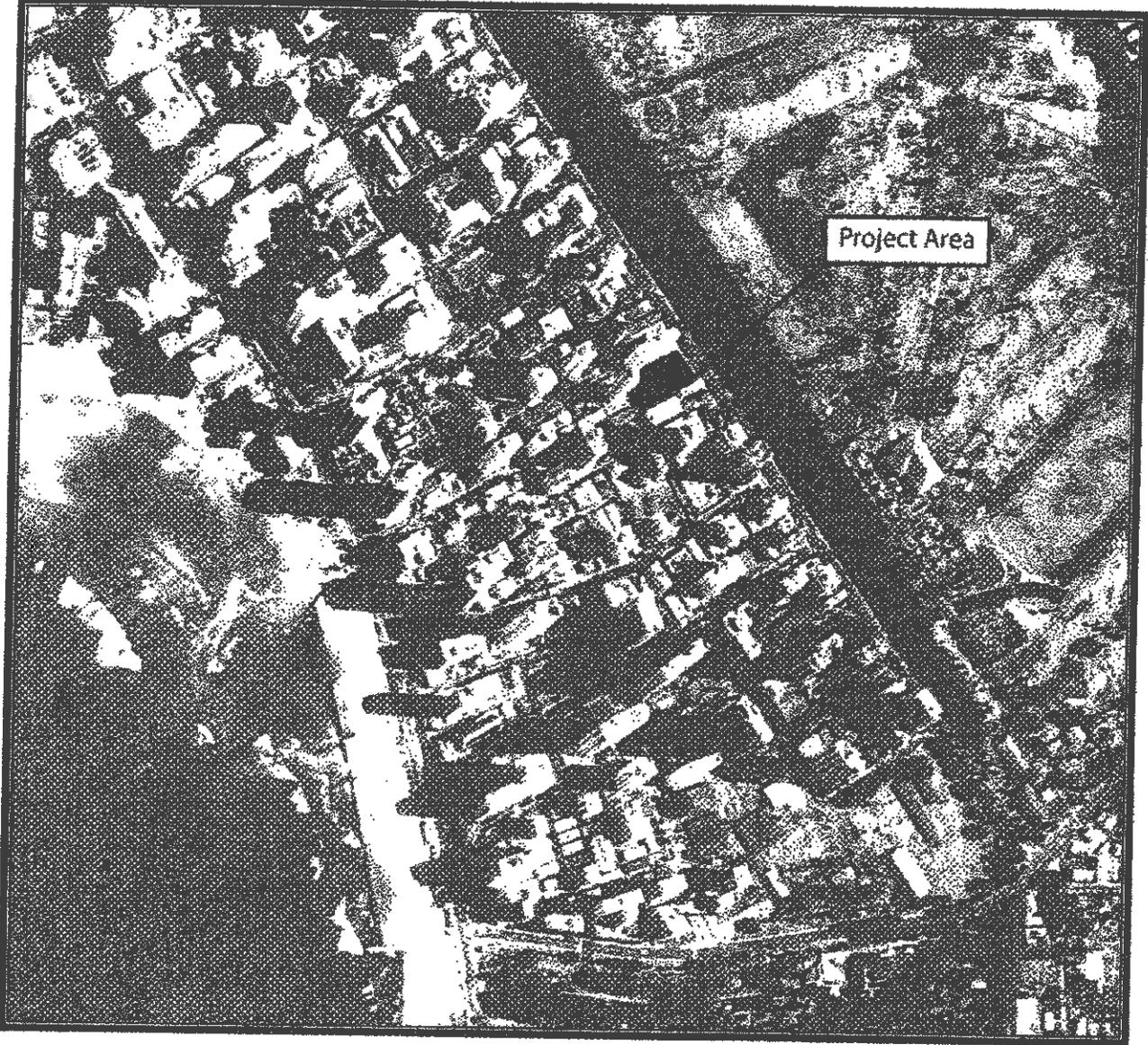


Figure 3 Aerial photograph showing location of the project area

### C. Work Accomplished

Historical documents, maps, and photographs were researched at: the Hawai'i State Archives; the Survey Office of the Department of Accounting and General Services; the Hawai'i State Library; the Bernice Pauahi Bishop Museum Archives and Library; Hamilton Library at the University of Hawai'i at Mānoa; the Mission Houses Museum Library; the State Historic Preservation Division (SHPD) Library; and the Library of Cultural Surveys Hawai'i.

Hawaiian organizations, government agencies, community members and recognized cultural descendants with ties to Waikīkī were contacted to: 1) identify potentially knowledgeable individuals with cultural expertise and knowledge of the project area and the surrounding vicinity, and 2) identify cultural concerns and potential impacts within the project area. Results of the community contact process are presented in Table 2.

### D. Natural Setting

The plain of Waikīkī is flat and, generally, less than 4.5 m (15 feet) above sea level (Davis 1989:5). Soils in the area are composed solely of Jaucus Sand with 0-15% slopes (JaC) (Foote et al. 1972: Map 63). Rainfall averages less than 30 inches of rain per year (Armstrong 1983:62); however, the area receives additional water from the Kālia and Pālolo Streams, as well as rain showers that drift into the area from the mountains and inland valleys (Cleghorn 1996:3). Northeasterly trade winds prevail throughout the year, although their frequency varies from more than 90% during the summer months to 50% in January; the average annual wind velocity is approximately 10 miles per hour (Okamoto 1998:2-1). Currently, vegetation in the project area includes a variety of grasses and a few Plumeria and Papaya trees along the northern and southern fence lines.

Modern Hawaiian shoreline configuration, including Waikīkī Beach is primarily the result of: 1) rising sea level following the end of the Pleistocene (see Stearns 1978 and McDonald et al. 1983); 2) the mid to late Holocene c. 1.5-2.0 meter high-stand of the sea (see summary in Dye and Athens 2000:18-19); and, 3) prehistoric and historic human landscape modification. At the end of the Pleistocene, between approximately 20,000 and 5-6,000 years ago, water previously locked in glacial ice returned to the world's oceans and sea-level rose over 100 meters to approximately its current level. Rising sea levels flooded the previously dry, earlier Pleistocene reef deposits, which had formed hundreds of thousands of years previously when sea level was comparable to modern levels. In the late Pleistocene/early Holocene, the Waikīkī area was characterized by an expansive delta drainage system which flowed from the Ko'olau Mountains to the sea (Ferrall 1976: plate II).

Land formation was directly related to changes in the sea level, terrigenous sediment load of streams, and reef and marine sediment formation. Lowering sea levels and increased marine sediment load (from reef erosion due to wave action) combined to create a sand accretion barrier along the coast as marine sediments were deposited on the resulting shallower reefs. This created a lagoon environment between the island shoreline and the sand accretion barrier. Terrigenous sediments were carried into this lagoon environment by Mānoa and Pālolo streams. When sea level reached approximately modern levels, the now coastal regions became depositional environments, where for tens of thousands of years previously, during the lower sea levels, they had been erosional environments. This resulted in the deposition of both terrigenous and marine sediments in low-energy estuarine or lagoonal environments, leading to the

accumulation of thick deposits of soft/loose sediments along the current coastlines in areas that had formerly been valleys and drainage ways (Geolabs Hawai'i Inc. 1993:9). By the time humans occupied the coastal area of Waikīkī, the lagoon had become a wetland (which was used for cultivation) behind the sand accretion barrier (which was used for habitation) (Ferrall 1976: B-2). It is likely that only since the major construction projects of the beachfront hotels has the overall accretion trench of Waikīkī beach been stopped or reversed. The current landform at Waikīkī is largely the result of the historical drainage excavation of the Ala Wai Canal and fill deposits.

## II. TRADITIONAL ACCOUNTS OF WAIKĪKĪ

Waikīkī had a previous life, long before the first tourist arrived or the first hotel was built. Rekindling a love for Waikīkī's past has been the passion of author/historian Dr. George Kanahahele. Histories are intended to give meaning to events, and then all histories are stories, for stories are about meaning, which explain why things could have happened in a certain way. Traditionally, for Hawaiians, the *mo'olelo* (story) sought to do more than explain: it sought to re-enchant the mind and spirit. In his book *Waikīkī 100 B. C. to 1900 A.D. An Untold Story*, Dr. Kanahahele sums up the following legends of Waikīkī reflecting the elements of water that once flourished in the lands of Waikīkī and who's rolling surf still breaks upon the shores of Waikīkī (Kanahahele 1995:1).

### 1. Kamō'ili'ili (the pebble lizard)

Waikīkī's earliest *mo'o* god was probably *Kamō'ili'ili* (literally, the pebble lizard) who was slain by Hi'iaka, Pele's sister. The legend relates that:

Hi'iaka and Wahine'ōma'o were escorting Lohi'au (Pele's lover-prince) back to Pele on the island of Hawai'i. During the return journey they left their canoe at Waikīkī and walked up toward Kamō'ili'ili. When they arrived at the particular spot (said to be where the old stone church stood in the 1920s), a heavy gust of wind blew, and Wahine'ōma'o and Lohi'au felt invisible hands pulling their ears back. They called to Hi'iaka for help. She knew that it was the lizard god, Kamō'ili'ili, who did it and told the other gods to keep closely behind her. A short distance away, they met Kamō'ili'ili who wanted to fight. Hi'iaka removed her outside skirt which concealed bolts of lightning and struck him with them. His body was cut to pieces and the peices turned into the long, low hill across from Waikīkī's Kūhiō School. [Kanahahele 1995:42]

### 2. The Shark God Ka'ehu

Shark stories accompany surfing stories in myth as well as in real life because the man-eating shark is the most feared element in surfing. One legend that is popular even today is about the little yellow shark Ka'ehu of Pearl Harbor who was endowed with magical power by his ancestor Kamohoa'li'i, the shark god and brother of Pele. Yearning to see his parents off the Puna coast on the island of Hawai'i:

One day Ka'ehu called his shark friends to accompany him to Puna. On the way they stopped at Waikīkī where they met Pehu, a man-eating shark from Maui, who was swimming back and forth at Kalehuawehe in wait for an unsuspecting surfer.

Ka'ehu asked what Pehu was doing there and he replied, "I'm catching a crab for my breakfast." "We'll help you catch your crab," Ka'ehu said, and told him to go near the coral reef while he and his friends would drive them shoreward, allowing Pehu to catch this crab easily. He was pleased with the plan and swam close to the reef where he hid himself in its shadows.

Then Ka'ehu told his friends, "We must kill this man-eater because he is destroying our people. Let's try to push him into the shallow water."

Soon two surfers appeared and when Pehu leaps to catch one, Ka'ehu and his friends pushed the surfer aside and hurled Pehu over the reef into a deep hole in the coral. The more he thrashed about to escape, the more trapped he became.

When the surfers saw what had happened, they were not as afraid of Pehu and moved to the hole to kill him. As they cut into his body they discovered the remains of their own people. Out of respect, they delivered them to Pele'ula (an area with many healing *heiau* located in Kou, now downtown Honolulu) and burned the remains. Ka'ehu had many more adventures that had a similar objective, the punishment of other man-eaters from the great sea. [Kanahele 1995:58-59]

### 3. Surfing with Kelea

Surfing was one of the principal attractions of Waikīkī to both chiefs and commoners. So important was surfing that a major *heiau* dedicated to the *nalu* or surf, and its riders. Here at the "surfing *heiau*" of Papa'ena'ena, a terraced structure built at the foot of Diamond Head, is where surfers came to offer their sacrifices in order to obtain *mana* and knowledge of the surf. The site overlooked what surfers call today "First Break," the start of the Kalehuawehe surfing course which extended to Kawewehi (the deep, dark surf) at Kālia. Although everyone, including women and children, surfed, it was the chiefs who dominated the sport, and one of the best among Waikīkī's chiefs was Kalamakua. He came from a long ancestry of champion surfers whose knowledge, skill and *mana* were handed down and passed on from generation to generation. The story of his romantic meeting with Keleanuino'ana'api'api ("Great Kelea who flutters,") has been preserved as a reminder of the role that surfing played in the history of Waikīkī (Kanahele 1995:56-58):

One day this beautiful chiefess with "clear skin and sparkling eyes," who then resided in Wahiawā (in Central O'ahu), was visiting Waikīkī with a few of her ladies-in waiting. She entered the coconut grove and beach of Kawehewehe which was located just east of the Halekūlani Hotel. Here is where the sick came to bathe and to be healed. They would wear *limu kala* (seaweed) leis and leave them in the water as a request to the gods for forgiveness of past wrongs which was the cause of much illness.

The residents welcomed Keleanuino'ana'api'api and offered her coconuts to eat. She remarked that Waikīkī was "the most pleasant place we have seen," to which her hosts replied, "This is a place for enjoyment. Over there is the *kou* grove of Kahaloa where one may view the surfing of the chiefs and of the *ali'i nui* Kalamakua." Kahaloa, or "Long Place," was also a beach area located today between the Royal Hawaiian and Halekūlani hotels and noted for its fragrant *lipoa* seaweed. When she asked if she could borrow a surfboard, the Waikīkīans were surprised because they thought people from Wahiawā were only adept at "slicing *mo'okilau* ferns and *pōpolo* stalks," not at surfing. They did not know that their visitor was originally from Maui where she surfed with all the chiefs. She was too beautiful to refuse and someone gave her a board.

Before she entered the water, she "rubbed off the red dirt of 'Ewa from her feet so as to look fresh," and then paddled off like an expert, moving easily and noiselessly without the least heeling over. Instead of starting at the first break where *kama'āina* (native born) surfers congregated, she went beyond and waiting for a large wave. She let the first, second and third waves pass, and rode the fourth one all the way to shore. The chiefs and commoners were so impressed with her skill and grace that they immediately joined in loud cheers of admiration.

Meanwhile, Kalamakua, who was working in his taro fields nearby asked his men who was causing the commotion. They replied that the people were amazed at the performance of a female surfer. A skilled surfer himself, Kalamakua rushed to the edge of the beach to see for himself. He recognized Kelea at once as the chiefess from Maui famed for her surfing prowess.

When she reached shore, he took hold of her board and asked, "Are you Kelea?" "Yes," she answered. As she stood up, in naked splendor, he removed his feathered shoulder cap and wrapped it around her. Then he guided her to a *kapu* place and made her his *ali'i wahine mō'i*, or queen. [Kanahele 1995:56-58]

### III. HISTORICAL ACCOUNTS

#### A. Pre-Contact to Early 1800s

By the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, Waikīkī had long been a center of population and political power on O'ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become "the ruling seat of the chiefs of Oahu." The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O'ahu by defeating the island's chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa 'Ī'ī (1959:17), himself a member of the *ali'i* (chiefly class), described the king's Waikīkī residence:

Kamehameha's houses were at Puaaliili, *makai* of the old road, and extended as far as the west side of the sands of 'Apuakehau. Within it was Helumoa where Ka'ahumanu *mā* went to while away the time. The king built a stone house there, enclosed by a fence . . . ('Ī'ī 1959:17).

'Ī'ī further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili" ('Ī'ī 1959:17).

Chiefly residences, however, were only one element of a complex of features that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*. The pioneering nineteenth-century scholar Samuel Mānaiakalani Kamamau recounts Kalamakua's significance for the Hawaiian people:

Kalamakua-a-Kaipūhōlua was a good chief. He was noted for cultivating, it was he who constructed the large pond fields Ke'ōkea, Kūalulua, Kalāmanamana, and the other *lo'i* in Waikīkī. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the *maka'āinana*. They loved him. Kelea-nui-noho-'ana-'api'api became his wife when he was a mature man. (Kamakau 1991: 45)

Captain George Vancouver (1798:161-164), arriving at "Whyteete" in 1792, captured something of the profusion of taro *lo'i* across Waikīkī in his journals:

On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.

[Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.

This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and

figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.

[We] found the plain in a high state of cultivation, mostly under immediate crops of taro; and abounding with a variety of wild fowl, chiefly of the duck kind . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence.

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua'a* of Waikīkī are given by Archibald Menzies (1920:23-24), a naturalist accompanying Vancouver's expedition:

The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Draecena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriance of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews.

The work of chief Kalamakua in Waikīkī will be further detailed in the discussion of the present project area in Section H below.

The traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change -- disrupted by the same Euro-American contact that produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu - with the only sheltered harbor on O'ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood

that had developed. By 1828, the missionary Levi Chamberlain (1957:26), describing a journey into Waikīkī, would note:

Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. (Chamberlain 1957:26)

Tragically, the depopulation of Waikīkī was not simply a result of the attractions of Honolulu (where, by the 1820s, the population was estimated at 6,000 to 7,000) but also of the European diseases that had devastating effects upon the Hawaiian populace.

### **B. Mid-Nineteenth Century and the *Mahele***

The depopulation of Waikīkī, however, was not total and the *ahupua'a* continued to sustain Hawaiians living traditionally into the mid-nineteenth century. The Organic Acts of 1845 and 1846 initiated the process of the *Mahele* (the division of Hawaiian lands) that introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali'i* (royalty) received their land titles. Subsequently in the *Mahele*, Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. Land Commission Award records document awardees continuing to maintain fishponds and irrigated and dryland agricultural plots, though on a greatly reduced scale than had been previously possible with adequate manpower.

A discussion of Land Commission Awards related to the present project area is presented in Section H below.

### **C. Mid to Late 1800s**

As the nineteenth century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O'ahu. An 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *ali'i* – the Hawaiian royalty – and several notables had residences there. A visitor to O'ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

Other developments during the second half of the nineteenth century a prelude of changes that would dramatically alter the landscape of Waikīkī during the twentieth century – include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalākaua Ave.), the building of a tram line between the two areas, and the opening of Kapi'olani Park on June 11, 1877. Traditional land-uses in Waikīkī were abandoned or modified. By the end of the 19th century most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States.

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was \$3 a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands' availability throughout the islands in the late 1800s reflected the declining demand for taro as the native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.

In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai'i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun, 1937: 13] m.

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O'ahu. Most of the former taro *lo'i* converted to rice fields were located *mauka* of the present Ala Wai Boulevard.

#### D. 1900 to 1920

During the first decade of the twentieth century, the U.S. War Department acquired more than 70 acres in the Kālia portion of Waikīkī for the establishment of a military reservation called Fort DeRussy, named in honor of Brig. Gen. R.E. DeRussy of the Army Corps of Engineers.

On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post...

Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O'ahu. At DeRussy other activities also had to be attended to - especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground, [Hibbard and Franzen 1986:79].

All the fishponds were filled by 1928.

### E. 1920s to 1930s

During the 1920s, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa...

The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block. [Johnson 1991:311]

During the course of the Ala Wai Canal's construction, the banana patches and ponds between the canal and the *mauka* side of Kalākaua Avenue were filled and the present grid of streets was laid out. These newly created land tracts spurred a rush to development in the 1930s. An article in the Honolulu Star-Bulletin in 1938 extolled the area's progress:

The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.

These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938: 10)

The writer speculated that the "future of Waikīkī is assured."

### F. 1940s

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put on hold plans for the development of Waikīkī as a tourist destination. Until the war's end in 1945, the tourist trade was non-existent "...since the Navy controlled travel to and from Hawai'i and did not allow pleasure trips" (Brown 1989: 141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]

Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the Honolulu Advertiser of July 16, 1945 decried "honky-tonks" that had sprung up in Waikīkī

during the course of the war, and asked: "Can anyone look at present-day Kalākaua Ave. – lined with makeshift curio shops, noisy 'recreation' centers, eyesores that pass under the name of lunchrooms and miscellany of 'joints' – and hope that Waikīkī can stage a comeback [as a tourist destination]?"

### G. 1950s

By the mid-1950s there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi'olani Park. The Waikīkī population, by the mid-1950s, was not limited to transient tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

### H. Historical Documentation of the Project Area

Beginning at the mid-nineteenth century, the historical record of Waikīkī including the present project area and adjacent lands was established in increasingly detailed documentation including photographs, maps, newspaper articles, and government records. These documents also give insight into pre-contact Waikīkī. During subsequent decades of the twentieth century, abundant documentation of Waikīkī allows a more precise focus on the changes within the project area itself up to the 1950s.

#### 1. 1881 survey map by S.E. Bishop

An 1881 a portion of the Hawaiian Government survey map by Serrano E. Bishop with locations of LCA parcels provides a detailed record of the physical landscape of Waikīkī before the transformations of the twentieth century (Figure 4). As shown on the map, coursing through the middle of the project area is 'Āpuakēhau Stream which once descended from Mānoa Valley, entering the ocean "near the present Moana Hotel" and which was "probably named for a rain" (Pukui *et al.* 1974: 13).

The map also shows the project area straddling two Waikīkī 'ili which appears to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in 'Au'aukai.

As was noted above, according to Samuel Kamakau, Kalāmanamana was one of the areas where the chief Kalamakua constructed the "large pond fields" of taro that once covered the Waikīkī plain. Some of the Kalāmanamana *lo'i* are shown in Figure 4. The complete 1881 map shows a network of *lo'i* (which by the 1880s were being converted to rice fields) extending across present-day McCully and Mō'ili'ili to the foot of Mānoa Valley, suggesting the impressive scale of the field system engineered by Kalamakua.

Also indicated on the map are the *'auwai* created to channel water of streams descending from Pālolo, Mānoa, and Makiki Valleys. The almost 90-degree bend of 'Āpuakēhau Stream into the present project area, as shown on the 1881 map, suggests that the stream was diverted sometime early in the creation of the Waikīkī fields either to direct water to *lo'i* constructed elsewhere or to create a broader expanse of dryland in the 'ili identified on the map as 'Au'aukai, Kaluaokau, Kapuni and Uluniu. These 'ili would, in time, come to be identified with 'ali'i (the Hawaiian royalty) who resided in Waikīkī.

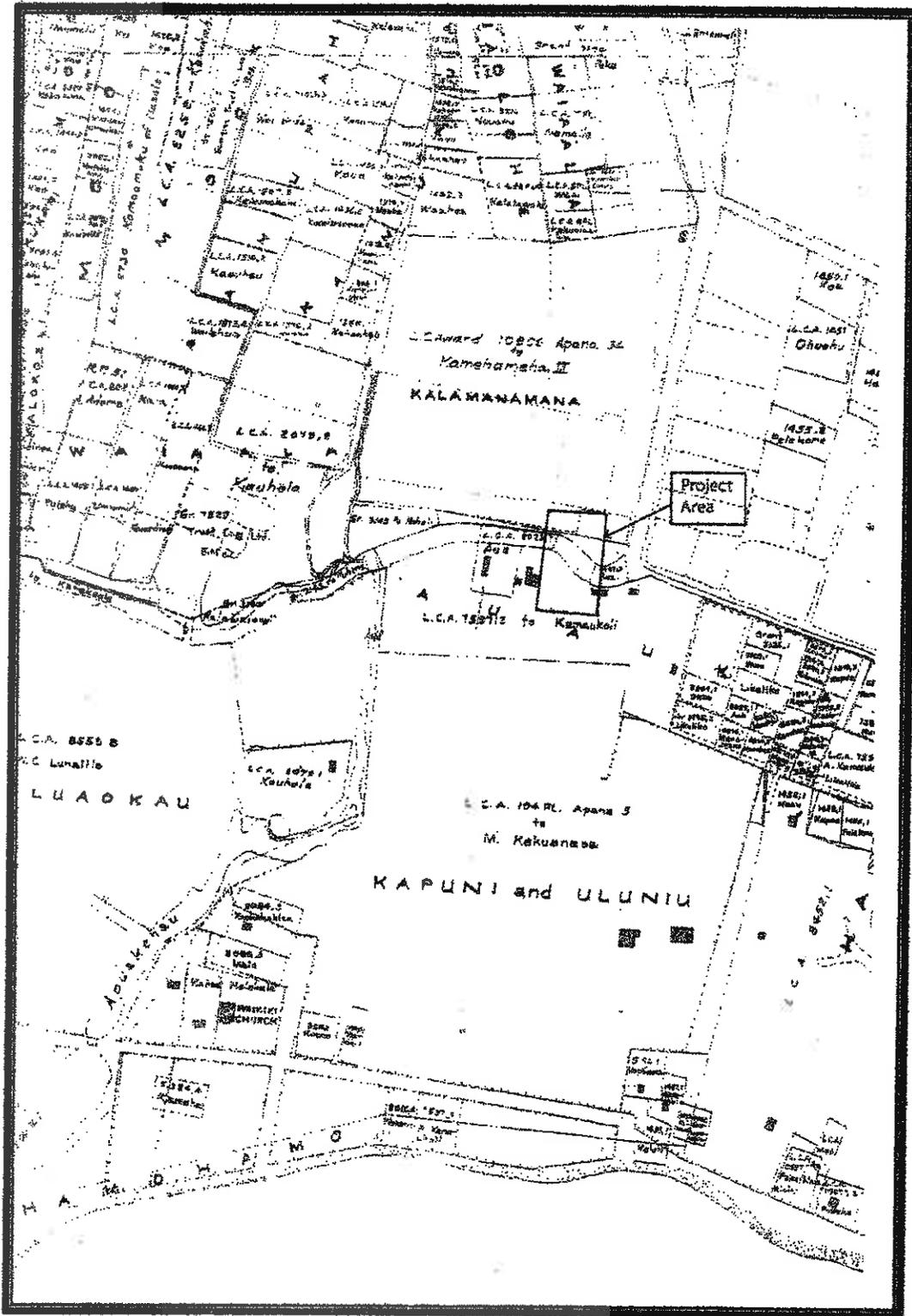


Figure 4 Portion of an 1881 Serrano E. Bishop map showing of Land Commission Awards with the approximate location of project area indicated in red

## 2. Land Commission Award Records

The 1881 map (Figure 4) identifies locations of Land Commission Awards within Waikīkī. Documentation about *Mahele* awards provides specific details of life within and adjacent to the present project area during the nineteenth century and earlier. Based on the 1881 map, four awards appear to be most relevant to the project area:

LCA 10806, Apana (parcel) 34 awarded to Kauikeaouli, Kamehameha III;

LCA 104 FL (Fort Lands), Apana 5 awarded to Mataio Kekūanaō'a;

LCA 7597, Apana 2 awarded to Kamaukoli; and

LCA 8023, Apana 1 & 2 awarded to Aua.

Information provided in LCA records for these four awards is presented below.

The records for LCA 10806 identify Parcel 34 as Kalāmanamana, one of the king's "farms at Waikiki" (Native Register vol. 3, pg. 387-390). Testimonies given in support of the award identify taro *lo'i* (irrigated fields) at Kalāmanamana and the king's other Waikīkī farm lands:

M. Kekuanaoa, sworn, I had known that these *lois*: Hohe, Kalamanamana and Keokea are for the King, the *kole lois* throughout the island of Oahu are also for the King. Some *koele* patches were given to the *konohiki* during the land *Māhele*. They are in the *ilis* of Hamohamo and Kalia and they have been for the King since the time of Kaahumanu until the time of the land distribution. There are some government portions in here, but these lois are for the King which is complicating to me at this time. It is for the King probably, for the government, perhaps, for whom is it? Kamehameha I had built these farms, Kamehameha III has them now.

Piikoi, sworn, I have seen these places for which the King is demanding. These patches were planted with taro at the time Kinau was governor of Oahu and Kamanawa did the harvesting and S. Kuluwailehua was the tax assessor at the time. It was probably before 1839 and since that time to the *Mahele*, the King has sent Kaihe to show me the King's interest that I might work in it. It has been that way to the present and I have heard these places are for the King and the claim has been filed. I have also heard that these places have been for the King from the time of Kamehameha I and had been in the care of Kinau and Kaahumanu. (Native Testimony vol. 10, pg.448)

LCA 104 FL was granted to Mataio Kekūanaō'a. Kekūanaō'a, born in Hilo on Hawai'i Island in the 1790s, was governor of O'ahu at the time of the *Mahele*. He was the father of Alexander Liholiho (King Kamehameha IV), Lot Kamehameha (King Kamehameha V), Princess Victoria Kamāmalu, Princess Ruth Ke'elikolani, and Moses Kekuaiwa. Following his death in November 1868 his lands were inherited by his daughter, Princess Ruth.

The records for LCA 104 FL (Fort Lands) suggest that Apana 4, as indicated on the 1881 map, comprised land associated with Kekūanaō'a's "house site in Kapuni, Waikīkī, Kona, Oahu" (Native Testimony vol. 10, pg. 390). Based on descriptions in the LCA records, the house site itself was located at the coast. The records do not indicate any specific land features or agricultural activity within Apana 4. Records for LCA 7597, Apana 2 awarded to Anederea

Kamaukoli provide detailed information on the parcel and reveal that Kamaukoli was *konohiki* (headman of an *ahupua'a* land division under the chief of the area. Kamaukoli himself testified:

...I...hereby state my claim for land, Auaukai, an *'ili*, was given me by Kaahumanu I in the year in which Poki sailed to Nanapua [*i.e.* about 1829] and disappeared. That was when I acquired this *'ili* and from that time I have occupied this land as *konohiki*. The tenants are living under me, and going to my work days and are ruled by the laws of this time. My own *lo'i*s in Auaukai, an *'ili* in the Ahupua'a of Waikiki, are three taro *lo'i*, one weed-grown *kula* for planting sweet potatoes and gourd. (Native Register vol. 5, pg. 413-415)

Other records identify the taro in Apana 2 as *puepue* or dryland.

Kamaukoli is identified in *Mahele* documents as the father-in-law of Aua, the awardee of LCA 8023. Aua testified that he received the land in the "*'ili* of 'Au'aukai" from Kamaukoli "in the time of [the regency] of Kaahumanu" (Foreign Testimony vol. 14, pg. 475). It appears that the two parcels of LCA 8023 shown on the 1881 map comprise "one pauku [land section] of taro...in the water course and...another *pauku* of stream" (Native Register vol. 5, pg. 478).

In summary, the *Mahele* documents indicate that within the present project area at the mid-nineteenth century: the *mauka* section comprised a portion of taro *lo'i* belong to the king; the central section comprised a portion of 'Āpuahēkau Stream in which taro was also growing; and the *makai* portion comprised *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. It is likely that these agricultural activities recorded in the documents reflect the continuation into the nineteenth century of the primary traditional Hawaiian land use and cultural activity within the project area and vicinity.

### 3. 'Āinahau

Historic maps identify the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Prince Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i.

Cleghorn not only beautified Waikīkī through his work at Kapi'olani Park [he had been instrumental in the park's creation and design], but also at his estate, 'Āinahau, which he had purchased in 1872 for \$300. Inheriting a love of horticulture from his father, Cleghorn lavishly landscaped this parcel, making it "the most beautiful private estate in the Hawaiian Islands". (Hibbard and Franzen 1986: 12)

A 1917 government survey map – on which the present project area is indicated – shows the boundaries of the 'Āinahau Estate and other land owned by Cleghorn immediately *mauka* of 'Āinahau, beyond the *mauka* bank of 'Āpuakēhau Stream (Figure 5). When the 1917 map is studied in tandem with the 1881 map discussed above (Figure 4), it appears that the 'Āinahau estate comprised the entire LCA 7597 Apana 2 and an adjacent portion of LCA 104 FL Apana 5. The portion of LCA 104 FL is probably the land that Princess Ruth Ke'elikōlani gave to Princess Ka'iulani as a christening gift.

The structures indicated within LCA 7597 Apana 2 on the 1881 map would appear to be buildings constructed by Cleghorn on the 'Āinahau grounds. Among these buildings, the large structure indicated just outside the present project area is likely the bungalow which was the

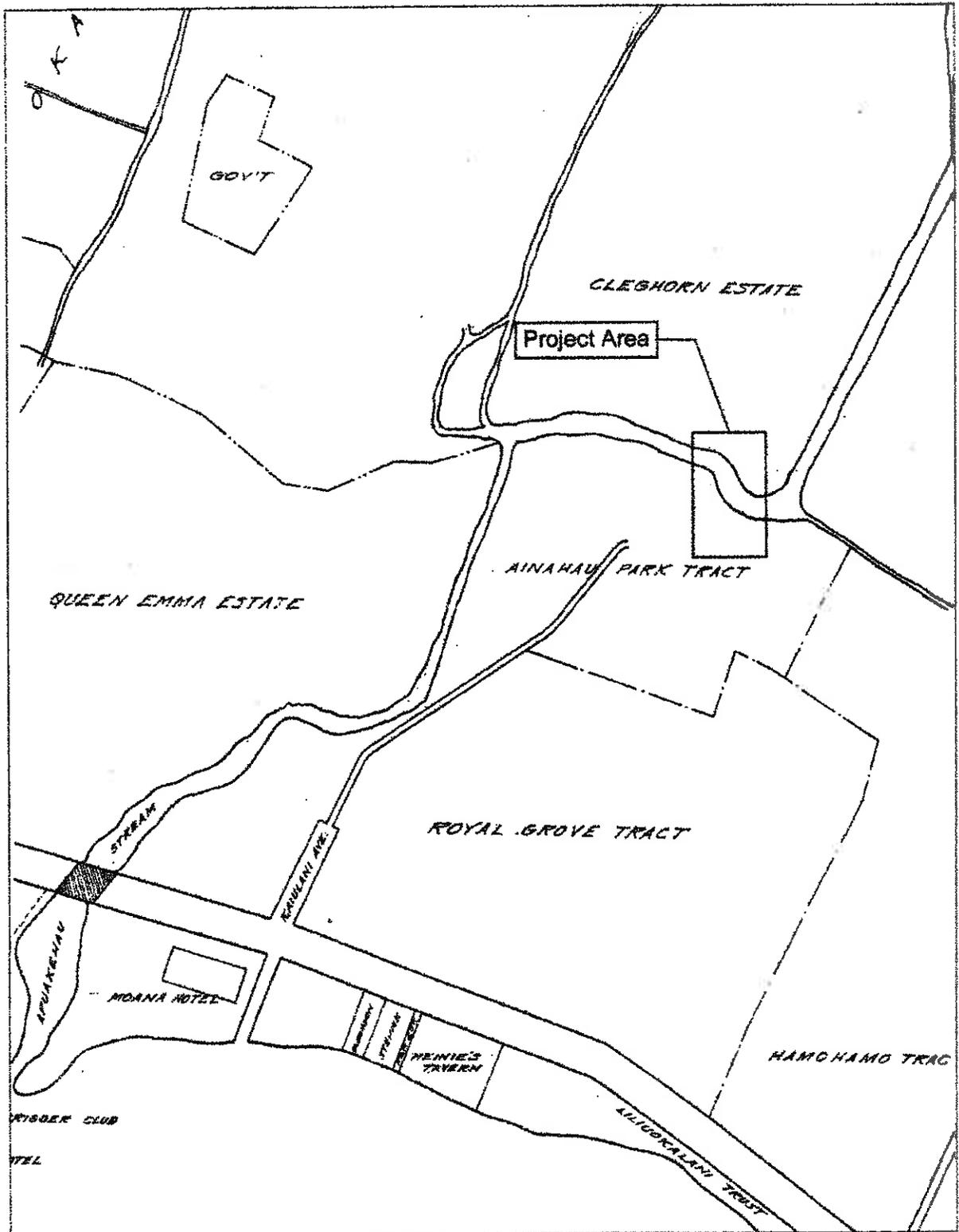


Figure 5 Portion of a 1917 government survey map (Bishop Museum) shows boundaries of the Cleghorn Estate and approximate location of the present project area

Cleghorn family's first residence on the estate. Subsequently, in the 1890s, Cleghorn constructed, immediately adjacent to the bungalow, a large Victorian-style house. A visitor in the 1890s noted:

The new house was a white frame structure, of two stories, with wings at either end – the favorite form of Honolulu architecture – with a wide verandah extending across the front. The shrubbery had been cut away for several yards in every direction to allow the free circulation of the air, and just beyond the main entrance stood the one incomparable banyan tree, which the owner presently informed me was the handsomest thing he had. (In Stassen-McLaughlin 1986: 127)

Historic photographs indicate that this house was located within the *makai* portion of the present project area.

Two members of the Cleghorn family would not live to see the twentieth century:

Not only a site of pleasant pastimes, these lands [‘Āinahau] also were associated with grief and tragedy. Here, Princess Likelike died on 2 February 1887, at the age of thirty-six, and twelve years later, in 1899, Cleghorn's daughter Ka‘iulani, passed away here in the springtime of her life, at the age of twenty-four. (Hibbard and Franzen 1989: 13)

Cleghorn himself would continue to reside at ‘Āinahau until his death in 1910. The house would burn down on August 2, 1921 in a fire caused by a gas heater.

#### 4. The Project Area in the Twentieth Century

Seven years following Cleghorn's death, the 'Āinahau estate was put up for sale.

In 1917 James W. Pratt bought the estate, then sold most of it in 1919 to William Chauncey Wilder. Wilder, along with developer Percy M. Pond had great plans. The property was offered to the public for subdivision. (Stassen-McLaughlin 1986: 128)

An advertisement appearing in the Pacific Commercial Advertiser on May 5, 1919 shows the residential subdivision developed by Pond (Figure 6). The streets shown on the map, which were constructed for the subdivision, correspond to the present-day Ka'iulani Avenue, Cleghorn Street, Kapili Street, and Tusitala Street.

The map also indicates that 'Āpuakēhau Stream continued to flow in the first decades of the 20<sup>th</sup> century and delineated the *mauka* and 'Ewa boundaries of the 'Āinahau subdivision tract. The map suggests that, in 1919, only the *makai* portion of the present project area was developed as a portion of the tract. 'Āpuakēhau Stream and remnants of the pond fields of Waikīkī continued extant in the *mauka* portion of the project area. Additionally, as was noted above, the 'Āinahau residence was still standing in 1919, likely within the present project area, until it burned down in 1921. The 'Āinahau tract subdivision may have excluded the residence and its immediate surroundings from development.

As was also noted above, the construction of the Ala Wai Drainage Canal between 1921 and 1928 resulted in the draining and filling in of the Waikīkī fishponds and irrigated fields, and their replacement with the grid work of streets of present-day Waikīkī. A 1927 fire insurance map shows the Ala Wai Canal and Ala Wai Boulevard immediately *mauka* of the present project area

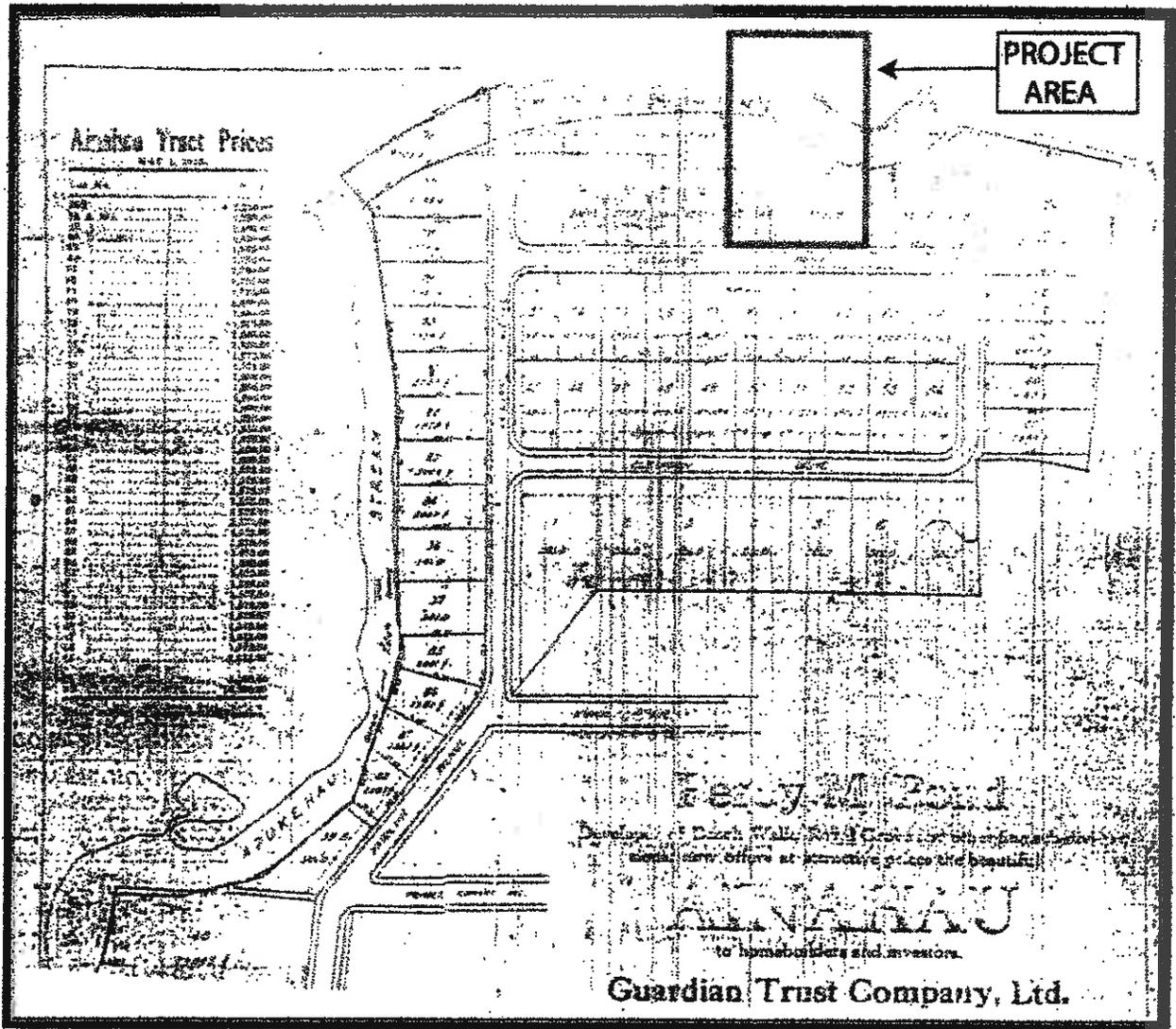


Figure 6 Advertisement in Pacific Commercial Advertiser on May 5, 1919 showing division of 'Ainahu residential subdivision by Percy Pond with approximate location of present project area indicated in red

which is now a fully-formed urban block (Figure 7). The map indicates that the project area parcel, like other parcels in the neighborhood, is filled with single-story wooden cottages. These cottages characterized much of Waikīkī during the first half of the twentieth century.

An insight into Waikīkī life in the 1920s and 1930s is provided by Betty Dyer Sorensen whose family lived at the corner of Kalākaua Avenue and Beach Walk. Her parents, John and Mabel Dyer, had bought a 7055-square-foot lot at 290 Beach Walk for \$1500 in 1918. Mrs. Sorensen describes the house her parents built there, in which she lived following her birth in 1922 until her marriage in 1946:

The front porch was on the *mauka* (mountain) side, and it caught the mountain breezes. It was painted buff with white trim and was in the Twenties bungalow style. (Sorensen 1995: 30-31)

In the 1920s, Waikīkī was a small neighborhood:

...with little cottages, inexpensive apartments and a few nice houses. People liked to live there because it was so close to the ocean and to transportation. The streetcars went down Kalākaua Avenue, Waikīkī's main thoroughfare, all the way from Diamond Head to the business section of downtown Honolulu, three miles away. The few tourists who visited either stayed with friends for at least a month or they rented a cottage. (Sorensen 1995:1)

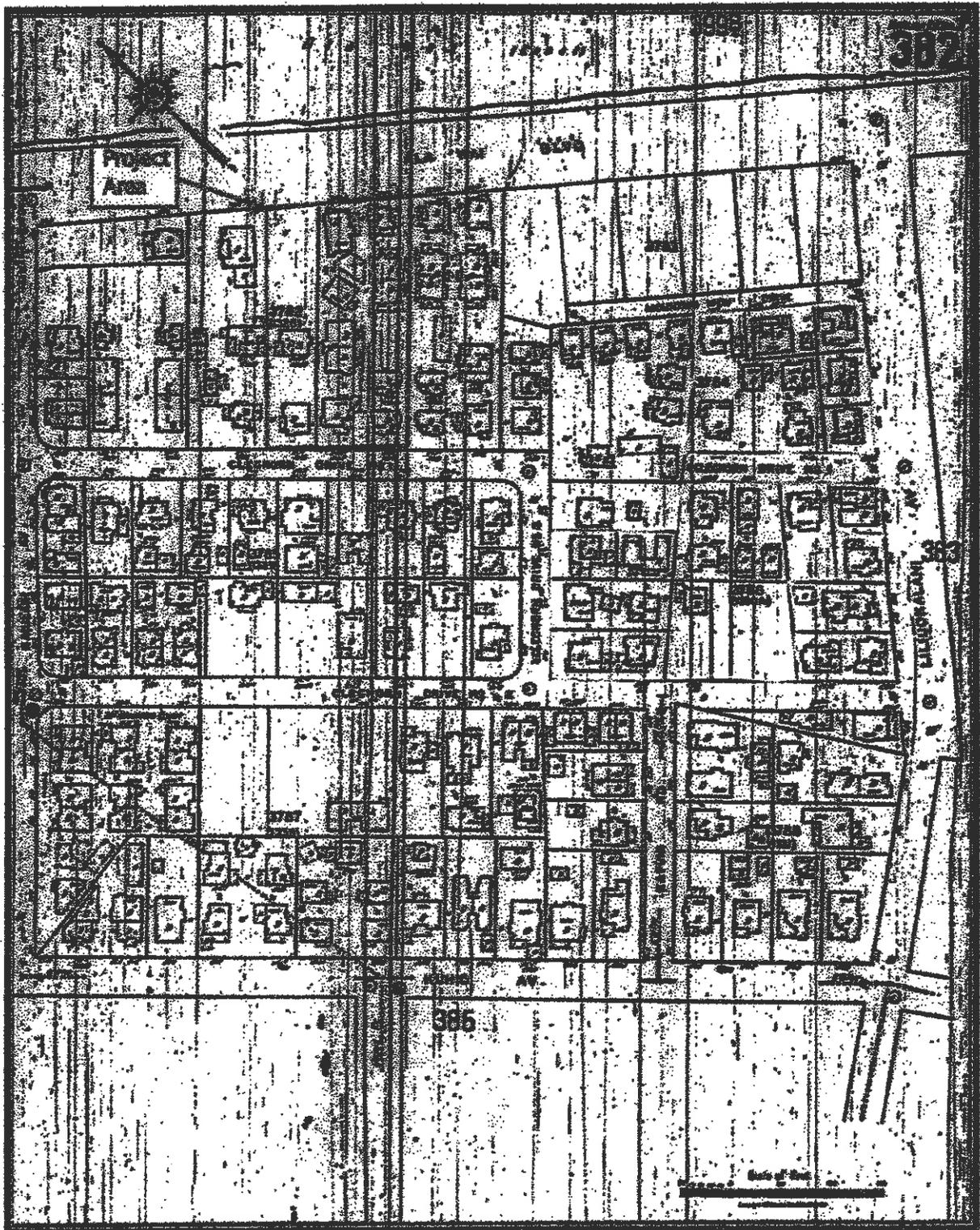


Figure 7 Portion of 1927 fire insurance map (Sanborn) with approximate location of the present project area indicated in red

#### IV. ARCHAEOLOGICAL RESEARCH

The *ahupua'a* of Waikīkī, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources, that supported a large population. In the nineteenth and early twentieth centuries, after a period of depopulation, Waikīkī was reanimated by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system, which had been converted from taro to rice. Farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields. Remnants of the pre-contact and historical occupation of Waikīkī have been discovered and recorded in archaeological reports, usually in connection with construction activities related to urban development, or infrastructural improvements. These discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits. Location of previously identified sites is shown in Figure 8 and full list of projects conducted in the Waikīkī area is listed in Table 1.

##### A. Previous Archaeology in Waikīkī, Focusing on Burials

N.B. Emerson reported on the uncovering of human burials during the summer of 1901 on the property of James B. Castle - site of the present Elks Club - in Waikīkī during excavations for the laying of sewer pipes (Emerson 1902:18-20). Emerson noted:

The soil was white coral sand mixed with coarse coral debris and sea-shells together with a slight admixture of red earth and perhaps an occasional trace of charcoal. The ground had been trenched to a depth of five or six feet, at about which level a large number of human bones were met with, mostly placed in separate groups apart from each other, as if each group formed the bones of a single skeleton. Many of the skulls and larger bones had been removed by the workmen before my arrival, especially the more perfect ones. [Emerson 1902:18]

Emerson's report on the find describes the remains of at least four individuals, all presumed to be Hawaiian. Associated burial goods were also exposed during excavation; these included "a number of conical beads of whale-teeth such as the Hawaiians formerly made" and "a number of round glass beads of large size". The glass beads "can be assigned with certainty to some date subsequent to the arrival of the white man" (Emerson 1902:19). Also located with the beads was "a small sized *niho-palaoa*, such as was generally appropriated to the use of the chiefs" which had been "carved from the tooth of the sperm-whale" and which was "evidently of great age" (Emerson 1902:19).

In the 1920s and 30s the first systematic archaeological survey of O'ahu was conducted by J. C. McAllister (1933). He recorded four *heiau* (temples), three of which were located at the *mauka* reaches of Waikīkī *Ahupua'a* in lower Mānoa Valley. The fourth *heiau* - Papa'ena'ena - was located at the foot of Diamond Head crater near the present site of the La Pietra Estates condominium development (2933 Poni Moi Road). Other sources that place the *heiau* at La Pietra, the former mansion of Walter F. Dillingham, now the Hawai'i School for Girls (La Pietra Circle) are incorrect (Weyneth 1991:48). Papa'ena'ena Heiau is traditionally associated with Kamehameha I, who was said to have visited the *heiau* before setting off to battle for Ni'ihau and Kaua'i in 1804. Five years later, according to John Papa 'Ī'ī, Kamehameha placed at

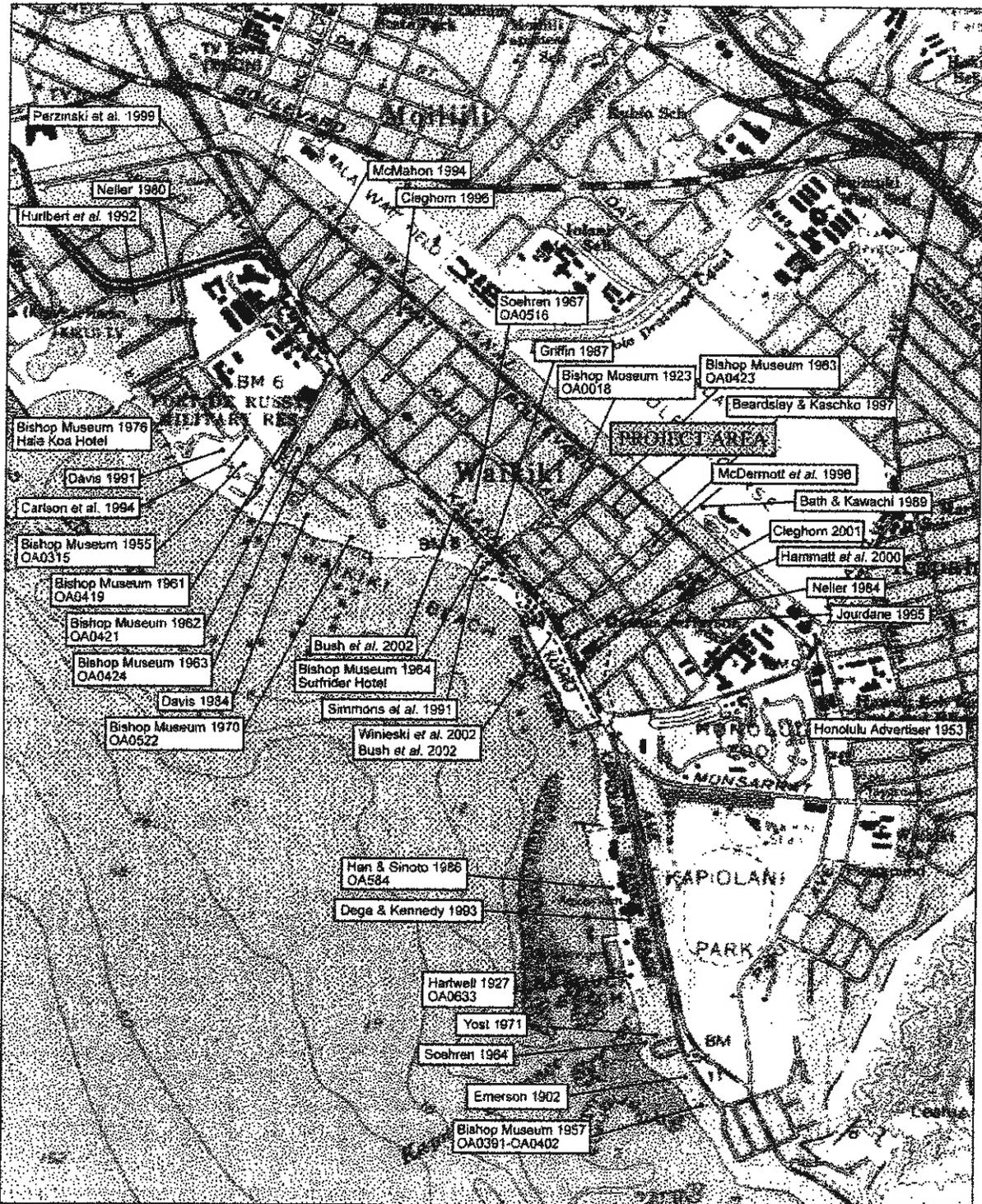


Figure 8 Previous archaeological work in Waikiki including location of burials and the present project area

Papa'ena'ena the remains of an adulterer - "all prepared in the customary manner of that time" (Ī 1959:50-51).

In 1963, two human skulls and other human remains were discovered in a construction trench at 2431 Prince Edward St. (Bishop Museum site Oa-A4-23, cited in Neller 1984). Multiple burials were encountered in 1963 during excavation for the construction of the present Outrigger Canoe Club at the Diamond Head end of Kalākaua Avenue. As reported in a newspaper article on Jan. 24, 1963:

The Outrigger Canoe Club yesterday dedicated its new site [on land adjacent to and leased from the Elks Club], an ancient Hawaiian burial ground in Waikīkī. . . .

Robert Bowen of the Bishop Museum has been working closely with Ernest Souza, Hawaiian Dredging superintendent, on the removal of skeletons unearthed on the site, between the Colony Surf and the Elks Club. . . .

Most of the bodies were buried in the traditional *ho'olewa* position, with the legs bound tightly against the chest.

One of the skeletons, Bowen said, shows evidence of a successful amputation of the lower forearm, indicating that the Hawaiians knew this kind of operation before the arrival of Europeans.

The ages of the skeletons ranged from children to 40-year-old men and women. The average life span of the Hawaiians at the time was about 32 years [*Honolulu Star-Bulletin*; Jan. 24, 1963: 1A].

A total of 27 burials were encountered (Yost 1971:28). Apparently, no formal archaeological report on the burials was produced.

In 1964, sand dune burials, a traditional Hawaiian mortuary practice, were revealed as beach sand eroded fronting the Surf Rider Hotel (Bishop Museum Site Files).

In 1976, during construction of the Hale Koa Hotel, adjacent to the Hilton Hawaiian Village Hotel, six burials were unearthed, five of apparent prehistoric or early historic age, and one of more recent date (Bishop Museum Site Files).

In 1980, three burials were exposed at the Hilton Hawaiian Village during construction of the hotel's Tapa Tower. Earl Neller of the (then named) State Historic Preservation Program was called in upon discovery of the burials and conducted fieldwork limited to three brief inspection of the project area. Neller's (1980) report noted:

The bones from three Hawaiian burials were partially recovered; one belonged to a young adult male, one to a young adult female, and one was represented by a single bone. An old map showed that rapid shoreline accretion had occurred in the area during the 1800s, and that the beach in the construction area was not very old. It is possible the burials date back to the smallpox epidemic of 1853. It is likely that burials will continue to be found in the area. It is also possible that early Hawaiian sites exist farther inland, beneath Mō'ili'ili, adjacent to where the shoreline would have been 1000 years ago. [Neller 1980:5]

Neller also documented the presence of trash pits, including one from the 1890s which contained "a large percentage of luxury items, including porcelain table wares imported from China, Japan, the United States, and Europe" (Neller 1980:5). He further notes:

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits related to the different ethnic and social groups that occupied Waikīkī over the last 200 years [Neller 1980:5].

Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekūlani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date . . . settlement in Waikīkī to no later than the mid-1600s" (Neller 1980:5). Just as significant to Davis was the collection of historic era material at the Halekūlani site; he states:

[The] Halekūlani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikīkī, Honolulu, or in any of the other urbanized areas of Hawai'i [Neller 1980:5].

In 1983, at the Lili'uokalani Gardens condominium construction site, seven traditional Hawaiian burials were recovered (Neller 1984). This had been the site of a bungalow owned by Queen Lili'uokalani at the end of the nineteenth century. In addition to the burials, the site contained plentiful historic artifacts, and a pre-historic cultural layer pre-dating the burials.

In 1985, International Archaeological Research Institute, Inc. performed archaeological monitoring and data recovery at the Pacific Beach Hotel Office Annex (Beardsley and Kaschko 1997). Two traditional Hawaiian burials were discovered and removed. Intact buried traditional Hawaiian cultural deposits, including a late pre-contact habitation layer, contained pits, firepits, post molds, artifacts, and food debris. The artifacts included basalt and volcanic glass flakes and cores, a basalt adze and adze fragments, worked pearl shells, a coral file and abraders, and a pearl shell fishhook fragment. Additionally, a late nineteenth century trash pit was discovered, which contained a variety of ceramics, bottles, and other materials.

During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph.D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikīkī. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered during the monitoring, all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The three partial burials reported by Neller (1980) were found within that project area. No further burials were encountered during the PHRI field work (Hurlbett et. al. 1992).

In 1987, a human burial was discovered and removed at the intersection of Kalākaua Avenue and Ka'ulani Street during excavations for a gas pipe fronting the Moana Hotel (Griffin 1987).

In 1988, the Moana Hotel Historical Rehabilitation Project (Simons et. al. 1991) encountered human remains that amounted to at least 17 individuals. Based on stratigraphic association these burials were interred over time as the land form at the site changed. The sediment surrounding these burials yielded traditional midden and artifact assemblages. The burials and human remains were found in the Banyan Court and beneath the hotel itself.

Davis' (1989, 1991) excavation and monitoring work at Fort DeRussy documented substantial subsurface archaeological deposits, prehistoric, historic, and modern. These deposits included buried fishpond sediments, 'auwai [irrigation ditch] sediments, midden, and artifact enriched sediments, structural remains such as post holes and fire pits, historic trash pits, and a human burial. Davis' (1991) report documents human activity in the Fort DeRussy beach front area from the sixteenth century to the present.

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simons et al. 1995). BioSystems research documents the development and expansion of the fishpond and 'auwai system in this area. The 'auwai system was entered on the State Inventory of Historic Places (SIHP) as State Site 50-80-14-4970. As indicated on the 1881 map by S. E. Bishop discussed above, this 'auwai enters the Fort DeRussy grounds through the present project area). Remains of the fishpond and 'auwai deposits, as well as habitation deposits, were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late prehistoric/early historic subsurface deposits, even amidst the development of Waikīkī.

In 1992, Hurlbett et al. (1992) conducted additional monitoring and testing in this same area as Neller (1980). The state site -2870 was given to the three burials first found by Neller. Additional subsurface features, postdating 1881, were found during trenching operations.

The realignment of Kālia Road at Fort DeRussy in 1993 uncovered approximately 40 human burials. A large majority of these remains were recovered in a large communal burial feature (Carlson et. al. 1994). The monitoring and excavations associated with this realignment uncovered a cultural enriched layer which contained post holes.

In 1993, during construction activities at the Waikīkī Aquarium, fragmentary human remains were discovered scattered in a back dirt pile, although no burial pit was identified (Dega and Kennedy 1993).

On April 28, 1994, an inadvertent burial discovery was made during excavation for a water line at the intersection of Kalākaua Avenue and Kuamo'o Street (just *mauka* of Fort. DeRussy). These remains represented a single individual (McMahon 1994).

In 1995, the remains of one individual were discovered in situ during construction activities on Paoakalani Street, fronting the Waikīkī Sunset Hotel (Jourdane 1995).

In 1996, Pacific Legacy, Inc. conducted an archaeological inventory survey of the block bounded by Kalākaua Avenue, Kūhiō Avenue, 'Ōlohana Street, and Kālamoku Street (Cleghorn 1996). The survey included excavation of seven backhoe trenches. The subsurface testing indicated that:

. . . this area was extremely wet and probably marshy. This type of environment was not conducive for traditional economic practices. . . . The current project area appears to have been unused because it was too wet and marshy. Several peat deposits, containing the preserved remains of organic plant materials were discovered and sampled. These deposits have the potential to add to our knowledge of the paleoenvironment of the area [Cleghorn 1996:15].

The report concluded that no further archaeological investigations of the parcel were warranted since "no potentially significant traditional sites or deposits were found", but cautioned of the "possibility, however remote in this instance, that human burials may be encountered during large scale excavations" (Cleghorn 1996:15).

In 1996, a traditional Hawaiian burial was discovered and left in place during test excavations on two lots at Lili'uokalani Avenue and Tusitala Street southeast of the current project area (McDermott et al. 1996). Cultural Surveys Hawaii's research suggested that a portion of the study lots -specifically TMK 2-6-24:36-40 - was formerly a corner of the 'Āinahau Estate. A total of 2 indigenous and 15 historic artifacts were collected from the former 'Āinahau Estate portion of the project area. Cultural Surveys Hawaii's research further suggested that the remainder of the present study lots comprise a former *'auwai* and taro and rice fields.

In 1997, during archaeological monitoring by CSH for the Waikīkī Force Main Replacement project, scattered human bones were encountered on 'Ōhua Street (Winieski and Hammatt 2000). These included the proximal end and mid-shaft of a human tibia, a patella, and the distal end and mid-shaft of a femur. These remains occurred within a coralline sand matrix which had been heavily disturbed by previous construction, and by the on-going construction project. No precise location for the original burial site was identified.

In April 1999, two human burials were inadvertently encountered near the intersection of 'Ena Road and Kalākaua Avenue during excavation activities for the first phase of the Waikīkī Anti-Crime Lighting Improvements Project (Perzinski et al. 1999).

From July 1999 to October 2000, four sets of human remains were inadvertently encountered during excavation activities relating to the Waikīkī Anti-Crime Street Lighting Improvement project along portions of Kalākaua Avenue (Bush and Hammatt 2002). The first burial was encountered on Kalākaua Avenue, just before Dukes Lane and assigned State Site 50-80-14-5864. The burial was left in place however, and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka'iulani Avenue. Earlier, during archaeological monitoring for the water mains project, two burials were encountered in the immediate area of the second burial find and assigned state site 50-80-14-5856 features A and B. Due to the close proximity to the previously encountered burials, the second burial was assigned the same State Site 50-80-14-5856, and designated feature C. Burials 3 and 4 were recovered at the intersection of Kalākaua and Ke'alohilani Avenues, near an area of concentrated burials assigned State Site 50-80-14-5860 during monitoring for the water mains project. Consequently, burials 3 and 4 were also assigned State Site 50-80-14-5860, features U and V. In addition to human remains, pre-contact deposits, historic and modern rubbish concentrations, and pond sediments were also encountered.

From November, 1999, to May, 2000, 44 human burials, with associated cultural deposits, were encountered during excavation for a waterline project on Kalākaua Avenue between the Ka'iulani and 'Ōhua Avenues (Winieski et al. 2002a). Except for previously disturbed partial

burials in fill; the bulk of the burials were encountered within a coralline sand matrix. Additionally, a major cultural layer was found and documented.

From January, 2000, to October 2000, 10 human burials were encountered during archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project (Winieski et al. 2002b). Six of these were located within a coralline sand matrix. The four others were partial and previously disturbed within fill. Additionally, a major cultural layer was found and documented, apparently part of the same major cultural layer associated with the waterline project between Ka'iulani and 'Ōhūa Avenues.

In April 2001 human remains were inadvertently disturbed during excavations associated with the construction of a spa at the Royal Hawaiian Hotel (Elmore et al. 2001). Archaeological Consultants of the Pacific, Inc was responsible for the documentation of the remainder of the burial and carrying out the instruction of DLNR/ SHPD. The burial and place it was encountered was assigned State Site # 50-80-14-5937. The burial was encountered on the North side of the hotel in the spa garden. The burial was partially disturbed through the thoracic region and anatomical left side. The disturbed remains were wrapped in muslin cloth and placed with the in-situ remains and reburied. The burial was recorded as a post contact burial based on artifacts associated with it. The associated artifacts included one shell button found *in-situ* and three more shell buttons found in the disturbed material. A single drilled dog tooth was found also during excavation but could not be positively associated with the site.

On May 2nd and June 14th, 2001, two in situ and two previously disturbed human burials were encountered at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of 'Ōhūa Street and Kalākaua Avenue (Cleghorn 2001a and 2001b). Because of their proximity to five burials encountered during the Kalākaua 16" Water Main Installation (Winieski et al. 2002a), they were included in the previously assigned State Site 50-80-14-5861. Three of these burials were recovered, and one was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer was also observed which contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments were also encountered within fill materials.

In 2001 and 2002, CSH (Mann and Hammatt 2002) performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili'uokalani Avenue. During the course of monitoring, five burials finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these inadvertent finds were found in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no State Site number(s) be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned State Site #50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was recorded from Lili'uokalani Avenue. Since three burials had been found in the immediate vicinity during a previous project (Winieski et al. 2002b) and had been assigned to Site #50-80-14-5859, the two new individuals were recorded as Feature H of this previously recorded site.

In summary, past archaeological research, from the beginning of the twentieth century to the present has produced evidence that traditional Hawaiian cultural deposits, historic trash deposits, and, most notably, human burials, do exist throughout the breadth of the Waikīkī area.

Table 1. Previous archaeological investigations in Waikiki Ahupua'a

Reference	Type of Investigation	General Location	Findings
McAllister 1933	Island-wide survey	All of O'ahu	Waikiki listed as Site 60.
Neller 1980	Monitoring Report	Hilton Hawaiian Village	Kalia Burial Site: Partial recovery of 3 historic Hawaiian burials, trash pit from 1890's
Bishop Museum 1981	Testing, & Monitoring Report	Halekūlani Hotel	Intact cultural deposits found.
Neller 1981	Reconnaissance Survey	Halekūlani Hotel	Limited background research on area
Davis 1984	Archaeological Investigation	Halekūlani Hotel	48 historic and prehistoric features excavated.
Bishop Museum 1984	Burial Remains List	Waikiki Ahupua'a	Listing of burial remains found in Waikiki at the Bishop Museum
Neller 1984	Narrative Report	Paoakalani Street	Recovery of human skeletons at construction site
Griffin 1987	Inadvertent Burial Discovery	Kalākaua Ave. near corner of Kai'ulani St.	Bones removed and bagged by construction crew, burial found in <i>makai</i> wall of gas pipe excavation.
SHPD 1987	Burial, P/A Report	Kalākaua Ave.	From excavation adjacent to Moana Hotel-9901).
Davis 1989	Reconnaissance Survey and Historical Research	Fort DeRussy	Fishponds & other buried features. Sites 4573 thru - 4577 are fishponds, 4570 is a remnant cultural deposit.
Rosendahl 1989	Inventory Survey, Preliminary Report	Fort DeRussy	Historic artifacts, no human remains
Riford 1989	Background Literature Search	TMK: 2-6-014:039	List of literature pertaining to Waikiki area.
Athens 1990	Letter to SHPD	TMK: 2-6-023:025	List of human remains at IARII lab from Pacific Beach Hotel & Barbers Point Generating Station.
Hurst 1990	Historical Literature	Waikiikian Hotel	Background & planning document. No fieldwork.

Archaeological Research

Reference	Type of Investigation	General Location	Findings
Chigioji 1991	Assessment	2 parcels, TMK 2-6-24:65-68 and 80-83; 2-6-24:34-40 & 42-45	Formerly part of the 'Ainahu estate; remainder of parcels, former <i>auwai</i> , <i>kalo</i> , and rice fields; excavations & sampling strategy recommended.
Davis 1991	Monitoring Report	Fort DeRussy	See also Davis 1989. No groundwater contamination found; subsurface features and material remains date to 1780/1790s through the mid-19 <sup>th</sup> century.
Kennedy 1991b	Monitoring Report	TMK: 2-6-022:014 IMAX theatre location	Pollen and bulk-sediment <sup>14</sup> C samples from ponded sediments recovered. 3 <sup>14</sup> C dates and the pollen sequence were inverted.
Simons et al. 1991	Monitoring and Data Recovery	Moana Hotel Area	8 pre-contact burials & pre- and post-contact artifacts recovered
Hurlbett 1992	Monitoring Report	TMK: 2-6-008:001	Site -2870 (3 burials) found by Neiler in 1980. This report is on testing & monitoring in same area.
Pietrusewsky 1992d	PA Report	Moana Hotel	Right half of human mandible found by hotel guest.
Pietrusewsky 1992e	PA Report	Hamohamo	Human Remains from Hamohamo, Waikiki, O'ahu
Rosendahl 1992	Monitoring Report	Hilton Hawaiian Village	12 historic refuse pits, 3 historic to modern trenches; no further work
Streck 1992	Memorandum for Record	Fort DeRussy	Human burial (probably late pre-contact Hawaiian) found during data recovery excavations
Cleghorn 1993	Inadvertent Burial Discovery	Waikiki Aquarium	Remains of 1 human individual, mandible identified.
Dagher 1993d	Inadvertent Burial Discovery	Waikiki Aquarium	Remains of at least 1 burial found, excavation recommended.
Dega and Kennedy 1993	Inadvertent Burial Discovery	Waikiki Aquarium	Discovery of unidentified bones, remains given to SHPD.

Archaeological Research

Reference	Type of Investigation	General Location	Findings
Hammatt and Chiofioji 1993	Archaeological Assessment	16-Acre Portion of the Ala Wai Golf Course	Pre-contact and early historic occupation layers associated with <i>lo'i</i> system intact below modern fill. Burial testing recommended.
Maly et al. 1994	Arch. & Historical Assessment Study	Convention Center Project Area	Recommend subsurface testing to determine presence or absence of cultural deposits and features.
McMahon 1994	Inadvertent Burial Discovery	Kalākāua & Kuamo'o Street	Miscellaneous bones uncovered in back dirt pile during construction.
Hammatt & Shideler 1995	Sub-surface Inventory Surface	1777 Kalākāua Ave.	No further work recommended at Hawai'i Convention Center site.
Jourdane 1995	Inadvertent Burial Discovery	Paoakalani Avenue	Remains discovered in planted strip between street and sidewalk fronting hotel.
Simons et al. 1995	Data Recovery Excavations	Fort DeRussy	Historic & pre-contact artifacts, artifact debris, & midden from 7 occupation layers. 6 pre-contact cultural features; <i>auwai</i> bunds and channels, fishpond walls & sediments, possible <i>lo'i</i> , hearths.
Cleghorn 1996	Inventory Survey	TMK: 2-6-016:23, 25, 26, 28, 61, 69	7 backhoe trenches excavated, no sites located.
Grant 1996b	Historical Reference	Waikiki	Historical information about Waikiki prior to 1900.
Hammatt and Shidefer 1996	Data Recovery	Hawai'i Convention Center	No clear evidence of Kūwili Pond sediments in project area; no further work recommended.
McDermott et al. 1996	Inventory Survey	'Āinahau Estate	Buried remnants of <i>auwai</i> and <i>lo'i</i> and human burial found on 'Āinahau Estate. <sup>14</sup> C dates
Denham et al. 1997	Data Recovery Report	Fort DeRussy	Excavations conducted at fishponds, <sup>14</sup> C dates mid-Seventeenth century
Denham and Pantaleo 1997	Monitoring and Excavations Report	Fort DeRussy	10 subsurface features and 9 burials found. <sup>14</sup> C dates; no SHPD recommendations

Reference	Type of Investigation	General Location	Findings
Beardsley and Kaschko 1997	Monitoring & Data Recovery Report	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposits and 2 human burials. 3 <sup>14</sup> C dates
Hammatt and Chiogioji 1998b	Assessment	King Kalākaua Plaza Phase II	No surface sites, documented human burials, presence of subsurface pre-contact & historic cultural deposits
Hammatt and McDermott 1999	Burial Disinterment Plan and Report	Kalākaua Avenue	Two human burials found
Perzinski et al. 1999	Monitoring Report	Ala Wai Blvd., Kalākaua Ave., & 'Ena Rd.	2 burials found (1 before monitoring); pockets of undisturbed layers exist
Rosendahl 1999	Interim Report: Inventory Survey	Fort DeRussy	This area is part of the old shoreline.
Hammatt and Chiogioji 2000	Archaeological Assessment	Honolulu Zoo Parcel	Monitoring recommended for SW portion of zoo parcel, which may have significant cultural deposits.
LeSuer et al. 2000	Inventory Survey	King Kalākaua Plaza Phase II	Site -5796 has been adversely affected by land alteration Site -4970 adequately documented.
Perzinski et al. 2000a	Burial Findings	Kalākaua Ave. between Kai'ulani & Monsarrat Ave.	44 sets of human remains; 37 disinterred, 7 left in place; believed to be Native Hawaiian, pre-1820.
Cleghorn 2001a,b	Mitigation	Burger King Site	3 incidents of uncovered human remains while locating a buried sewer-line for the ABC's store.
Corbin 2001	Inventory Survey	Hilton Waikikian	No arch. sites were found during excavations
Elmore and Kennedy 2001	Inadvertent Burial Discovery	Royal Hawaiian Hotel	Human remains found during trench excavations for conduit. In situ remains left in place, remains disturbed reentered with others.
McGuire and	Cultural Assessment	Lewers St., Beach Walk, Kālia Rd. &	Waikīki Beach Walk project; Inadvertent burial discovery. Monitoring recommended for all

Archaeological Research

Reference	Type of Investigation	General Location	Findings
Hammatt 2001		Saratoga Rd.	subsurface work
Perzinski and Hammatt 2002	Monitoring Report	Kapi'olani Bandstand	A charcoal layer .most on the SW side of the bandstand, observed; recovered a basalt lamp with a handle from SE end.
Perzinski and Hammatt 2001b	Monitoring Report	Kalākaua Ave., Natatorium to Ponimō'i Road	No cultural layer, artifacts, midden, or human burials were encountered
Rosendahl 2001	Assessment Study	Outrigger Beach Walk	Assessment of previous archaeological & historical literature.
Winieski and Hammatt 2000	Monitoring Report	TMK: 1-2-6-025:000	Possibility that Hawaiian or historic materials and burials may still be present
Borthwick et al. 2002	Inventory Survey	71,000 sq. ft. parcel, TMK: 2-6-016:002	No burials found; absence of dry Jaucus sands indicate that burial finds are unlikely in project area.
Bush and Hammatt 2002	Monitoring Report	Kalākaua Ave., between Ala Moana Blvd. and Kapahulu Ave.	Found 4 human burials, probably pre-contact; several historic trash pits; entire pig within an <i>imu</i> pit (c. A.D. 1641-1671); gleyed muck associated with former ponds.
Calis 2002	Monitoring Report	Lemon Road	No historic deposits, major previous disturbance
Elmore and Kennedy 2002	Monitoring Report	Fort DeRussy	No findings.
Mann and Hammatt 2002	Monitoring Report	Lili'uokalani & Uluhiu Avenues	5 burial finds of 6 individuals; two historic trash pits.
Putzi and Cleghorn 2002	Monitoring Report	Hilton Hawaiian Village	No findings during monitoring of trench sewer excavations
Winieski et al. 2002a	Monitoring Report	Kalākaua Ave. between Ka'iulani and	44 human burials encountered, 37 disinterred; buried habitation layer identified, with traditional artifacts, midden, hearths, & charcoal; remnant of Honolulu

Archaeological Research

Reference	Type of Investigation	General Location	Findings
		Monsarrat Avenues.	Transit trolley system (light rail gauge) found; low-energy alluvial sediments associated with the now channelized <i>mūhūwai</i> Kūkaunahi
Winiwski et al. 2002b	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals, 6 disinterred, only 2 in situ. 4 indigenous artifacts, none in situ. Cultural layer, historic seawall.
Bush et al. 2003	Monitoring Report	International Marketplace	Historic trash found.
Tome & Dega 2003	Monitoring Report	Waikīki Marriot	No in situ remains, recommends monitoring if more work is done, 1 isolated not in situ possible human bone fragment.
Tulchin and Hammatt 2003	Arch. & Cultural Impact Assessment	2284 Kalākaua Ave.	Possibility of burials in project area; recommends inventory survey & subsurface testing.

## V. COMMUNITY CONTACT PROCESS

Throughout the course of this study, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, community members and recognized cultural descendants of Waikīkī who might have knowledge of and/or concerns about traditional cultural practices specifically related to the project area. This effort was made by letter, e-mail, telephone and in person contact. In the majority of cases, letters along with a map and an aerial photograph of the project area were mailed with the following text:

At the request of Kusao & Kurahashi, Inc., Cultural Surveys Hawai'i is conducting a Cultural Impact Evaluation of a parcel located between Ala Wai Boulevard and Tusitala Street in Waikīkī, Kona District, on the island of O'ahu (TMK 2-6-24:70, 71). Please find enclosed a USGS map, tax map, and photographs of the project location.

The cultural impact evaluation is related to the proposed Tusitala Vista Elderly Apartments: a nine-story complex of 107 apartments being developed by the nonprofit Hawai'i Housing Development Corporation.

Based on a study of historic maps and documents, we believe that the parcel includes a portion of 'Āinahau, the ten-acre estate that, during the latter nineteenth century, was the home of Archibald Cleghorn, his wife Princess Miriam Likelike, and their daughter Princess Victoria Kawekiu Lunalilo Kalaninuiāhilapalapala Ka'iulani Cleghorn.

The purpose of the cultural impact evaluation we are conducting is to evaluate potential impacts of the proposed project to traditional cultural resources, beliefs and practices.

We are seeking your input regarding the following issues:

Identification of traditional Hawaiian activities including gathering of native plants, animals and other resources.

Identification of existing archaeological or cultural sites, trails, burials etc., which may be impacted by the proposed project.

Cultural associations with the study area through legends, traditional use or otherwise.

The individuals, organizations, and agencies attempted to be contacted and the results of any consultations are presented in the table below. Mr. Van Horn Diamond participated in a telephone interview with Cultural Surveys Hawai'i Inc. on November 1, 2004. The results of the community contacts are listed in Table 2.

Mr. Van Horn Diamond is the chairperson for the O'ahu Island Burial Council and a recognized cultural descendant for Waikīkī.

Mr. Diamond related the following information about the project area:

The parcel seemed to be cottage oriented and it did not go all the way to Tusitala Street. The Ala Wai side would have had home like cottages and a drive way. We know it was a portion of the 'Āinahau Estate on the Tusitala Street side. When you come down Ka'iulani Street towards Tusitala there used to be a sign pointing inside to the area where once stood a huge banyan tree. It may have been *makai* of an HVB sign. The sign had a picture of Kamehameha on it. The sign said, "Ka'iulani and Stevenson used to sit here". The *iwi* or bones found in the parcel could have come from the filling from the Ala Wai. In the 1960s at the intersection of Tusitala Street and Kapili Street used to be apartment building with parking underneath. The building was purchased by Mr. Eugene F. Kennedy. Who he purchased it from may give more leads.

Table 2 Community Contacts

Name	Organization, Affiliation	Comments
Ahlo, Charles	Cultural Descendant for Waikiki	No response.
Aiu, Colleen	'Ahahui O Ka'iulani	No response.
Among, Les A.	Waikiki Neighborhood Board Subdistrict 1-Chair	No response.
Apaka, Jeff	Waikiki Neighborhood Board Subdistrict 2-Chair	No response.
Ayau, Edward Halealoha	Hui Malama O Nā Iwi O Hawai'i Nei	No response.
Carney, Mary	State Historic Preservation Division Burials Program-Burials Facilitator	Referred to Recognized Cultural Descendants for Waikiki.
Cook, Delores	Waikiki Neighborhood Board Subdistrict 3-Chair	No response.
Correa, Lawrence	Waikiki Resident	No response.
Dressel, David L.	Waikiki Resident	No comment.
Gersaba, Nālani J.	Cultural Descendant for Waikiki	No response.
Gora, Amelia K.	Cultural Descendant for Waikiki	No response.
Guth, Heidi	Office of Hawaiian Affairs	No response.
Harris, Cy K.	Cultural Descendant for Waikiki	No response.
Kennedy, Eugene F.	Waikiki Resident	No response.
Keohokālole, Adrian K.	Cultural Descendant for Waikiki	No response.
Keohokālole, Dennis K.	Cultural Descendant for Waikiki	No response.
Keohokālole, Emalia E.	Cultural Descendant for Waikiki	No response.
Keohokālole, James H.	Cultural Descendant for Waikiki	No response.
Keohokālole, Joseph M.	Cultural Descendant for	No response.

Community Contact Process

K.	Waikīkī	
Koko, Kanaloa	Cultural Descendant for Waikīkī	No response.
Kuhea, G. Kealoha	Cultural Descendant for Waikīkī	No response.
Lau, Edmund M.	Waikīkī Resident	No response.
Marnac, Violet L.	Cultural Descendant for Waikīkī	No response.
Medeiros, Clarence A. Jr.	Cultural Descendant for Waikīkī	No response.
Medeiros, David	Cultural Descendant for Waikīkī	No response.
Napōka, Nathan	State Historic Preservation Division History and Culture	I suggest that Cultural Surveys Hawai'i check the Dillingham records at the Bernice Pauahi Bishop Museum and their Ka'iulani Collection. The 'Ahahui 'O Ka'iulani Foundation headed by Kumu Hula Colleen Aiu of Hula Hālau O Maiki may have concerns of the project area.
Rose, Charles	Association of Hawaiian Civic Clubs-President	Referred to Nālani Gersaba.
Sawyer, Stephen	Waikīkī Resident	Mr. Stephen Sawyer, a long time resident of Waikīkī, confirmed that the land was part of Cleghorn Estates long ago. Mr. Sawyer was quick to talk about Hawaiian burials all around the parcel as well. He summarized his concerns that Hawaiians buried the people where they lived.
Souza, William D.	Royal Order of Kamehameha, Kūhio Chapter	No comment.

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**Community Contact Process**

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	<b>-Knights Companion, Protocol Officer</b>	
<b>Tomczyk, Pi'ikea L.</b>	<b>Waikiki Hawaiian Civic Club-President</b>	<b>No response.</b>
<b>Yagodich, Darril</b>	<b>Department of Hawaiian Home Lands Planning Office</b>	<b>No comment.</b>

## VI. TRADITIONAL CULTURAL PRACTICES

Traditional cultural practices are based on profound awareness concerning harmony between man and their natural resources. The Hawaiians of old depended on these cultural practices for survival. Based on their familiarity with specific places and through much trial and error, Hawaiians communities were able to devise systems that fostered sustainable use of nature's resources. Many of these cultural practices have been passed down from generation to generation and are still practiced in some of Hawaii's communities today.

This project seeks to evaluate traditional cultural practices as well as resources pertaining to the project area within Waikīkī Ahupua'a. This section will convey the different types of traditional practices, cultural resources associated with the vicinity.

### A. Hawaiian Agriculture

Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*. It is likely that, during traditional Hawaiian times, environs like the present project area were used for less intensive cultivation of patches of sweet potato, *pia*, and *wauke*, and the gathering of *hala*, *kukui* and other upland resources.

The *Mahele* documents indicate that within the present project area at the mid-nineteenth century: the *mauka* section comprised a portion of taro *lo'i* belong to the king; the central section comprised a portion of 'Āpuahēkau Stream in which taro was also growing; and the *makai* portion comprised *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. It is likely that these agricultural activities recorded in the documents reflect the continuation into the nineteenth century of the primary traditional Hawaiian land use and cultural activity within the project area and vicinity.

### B. Gathering for Plant Resources

Hawaiians utilized upland resources for a multitude of purposes. Forest resources were gathered, for not only the basic needs of food and clothing, but for tools, weapons, canoe building, house construction, dyes, adornments, hula, medicinal and religious purposes. However, as noted above, during traditional Hawaiian times the present project area was used for the gathering of *hala*, *kukui* and similar upland resources.

Within the project area itself no specific documentation was found in regards to gathering of plants during traditional Hawaiian times. During this evaluation there were no ongoing practices related to traditional gathering of plant resources identified in the present project area. None of the individuals contacted or interviewed for this assessment identified any native plant gathering practices within the project area. Based on the information it is likely that there was far greater emphasis on gathering plant resources further inland.

### C. Aquatic Resources

Native stream animals supplied the Hawaiian diet with a rich source of protein. Before the Ala Wai Canal was built and the streams diverted, the streams feeding into Waikīkī were once abundant in 'o'opu and 'ōpae.

An 1881 Hawaiian Government survey map by Serrano E. Bishop with locations of LCA parcels provides a detailed record of the physical landscape of Waikīkī before the transformations of the twentieth century (Figure 3). As shown on the map, coursing through the middle of the project area is 'Āpuakēhau Stream which once descended from Mānoa Valley, entering the ocean "near the present Moana Hotel" and which was "probably named for a rain" (Pukui *et al.* 1974: 13). The map also shows the project area straddling two Waikīkī 'ili which appears to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in Auaukai. Also indicated on the map are the 'auwai created to channel water of streams descending from Pālolo, Mānoa, and Makiki Valleys. The almost 90-degree bend of 'Āpuakēhau Stream into the present project area, as shown on the 1881 map, suggests that the stream was diverted sometime early in the creation of the Waikīkī fields either to direct water to *lo'i* constructed elsewhere or to create a broader expanse of dryland in the 'ili identified on the map as 'Au'aukai, Kaluaokau, Kapuni and Uluniu. These 'ili would, in time, come to be identified with 'ali'i (the Hawaiian royalty) who resided in Waikīkī.

By the end of the 19th century most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. During the 1920s, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī.

### D. Traditional Hawaiian Sites

There is no surface or archaeological sites on the surface of the present project area. As noted above the current land surface in the parcel is landfill.

### E. Burials

Discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits.

In 1996, a traditional Hawaiian burial was discovered and left in place during test excavations on two lots at Lili'uokalani Avenue and Tusitala Street (McDermott *et al.* 1996). Cultural Surveys Hawai'i's research suggested that a portion of the study lots -specifically TMK 2-6-24:36-40 - was formerly a corner of the 'Āinahau Estate southeast of the current project area. A total of 2 indigenous and 15 historic artifacts were collected from the former 'Āinahau Estate portion of the project area.

Cultural Surveys Hawai'i is currently conducting the archaeological survey for the proposed Tusitala parcel. Fragments of human remains have been discovered. The work is still in progress.

Past archaeological research, from the beginning of the twentieth century to the present has produced evidence that traditional Hawaiian cultural deposits, historic trash deposits, and, most notably, human burials, do exist throughout the breadth of the Waikīkī area.

**F. Hawaiian Trails**

John Papa 'I'i's account of the ancient trail leading from Honolulu into "lower Waikīkī places the trail within Kālia and down to Iinaio; along the upper side of Kahanaumaikai's coconut grove, along the border of Kaihikapu Pond, into Kawehewehe; then through the center of Helumoa of Puaaliili, down to the mouth of the 'Āpuakehau stream northwest of the present project area ('I'i 1959:92). Part of the coastal trail system, there are no visible trail remnants to speak of today. No traditional trails were identified within the present project area on historic maps or by community informants.

**G. *Wahi pana* (Storied Places)**

Historic documentation identifies the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Prince Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i.

Cleghorn not only beautified Waikīkī through his work at Kapi'olani Park [he had been instrumental in the park's creation and design], but also at his estate, 'Āinahau, which he had purchased in 1872 for \$300. Inheriting a love of horticulture from his father, Cleghorn lavishly landscaped this parcel, making it "the most beautiful private estate in the Hawaiian Islands" (Hibbard and Franzen 1986: 12)

No other storied places were identified in the immediate vicinity of the project area.

## VII. SUMMARIES AND RECOMMENDATIONS

Reviewing the information provided by the elements of this cultural impact evaluation – historical documentation, archaeological research, and community contacts – there emerges a more detailed picture of the traditional landscape of Waikīkī Ahupua'a and the present project area. The *ahupua'a* of Waikīkī in the centuries before the arrival of Europeans was a well-used locale with abundant natural and cultivated resources – including an expansive system of irrigated taro fields and numerous fishponds – supporting a large population that included the highest-ranking *ali'i* (Hawaiian royalty). In the second half of the nineteenth century, after a period of depopulation and desuetude, Waikīkī was reanimated by the Hawaiian *ali'i* and the foreigners residing there, and by farmers continuing to work the irrigated field system which had been converted from taro to rice. This farming continued up to the first decades of the twentieth century when the newly-constructed Ala Wai Canal drained the remaining ponds and irrigated fields of Waikīkī.

The present Tusitala Elderly Apartments parcel straddles two Waikīkī *'ili* which appears to be separated by 'Āpuakēhau Stream: the *mauka* portion of the project area is in Kalāmanamana and the *makai* portion is in 'Au'aikai. Historic maps identify the present project area as a portion of 'Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Prince Miriam Likelike (1851-1887), and their daughter Princess Ka'iulani (1875-1899) – all significant personages in the history of Hawai'i. *Mahele* documents indicate that within the present project area at the mid-nineteenth century: the *mauka* section comprised a portion of taro *lo'i* belong to the king; the central section comprised a portion of 'Āpuahēkau Stream in which taro was also growing; and the *makai* portion comprised *kula* – a dryland agricultural field where taro, sweet potatoes, and gourd may have been growing. When the 1917 (figure 5) map is studied in tandem with the 1881 map discussed above (Figure 4), it appears that the 'Āinahau estate comprised the entire LCA 7597 Apana 2 and an adjacent portion of LCA 104 FL Apana 5. The portion of LCA 104 FL is probably the land that Princess Ruth Ke'elikōlani gave to Princess Ka'iulani as a christening gift.

As noted above, the parcel and adjacent lands are linked with the Hawaiian royalty. *Ali'i* residence likely represents the primary traditional Hawaiian cultural activity associated with the parcel.

In 1917 James W. Pratt bought the 'Āinahau Estate, then sold most of it in 1919 to William Chauncey Wilder, along with developer Percy M. Pond. A Pacific Commercial Advertiser 1919 map shows the residential subdivision developed by Pond. The streets shown on the map correspond to the present day Ka'iulani Avenue, Cleghorn Street, Kapili Street and Tusitala Street.

An advertisement appearing in the Pacific Commercial Advertiser on May 5, 1919 shows the residential subdivision developed by Pond (Figure 6). The streets shown on the map, which were constructed for the subdivision, correspond to the present-day Ka'iulani Avenue, Cleghorn Street, Kapili Street, and Tusitala Street. An advertisement appearing in the Pacific Commercial Advertiser on May 5, 1919 shows the residential subdivision developed by Pond (Figure 6). The streets shown on the map, which were constructed for the subdivision, correspond to the present-day Ka'iulani Avenue, Cleghorn Street, Kapili Street, and Tusitala Street. These 20<sup>th</sup> century

developments have effectively eliminated any surface sites that may have related to traditional Hawaiian cultural activity within the parcel.

While surface sites may have been eliminated within the parcel, subsurface deposits are of cultural concern. Several archaeological studies have recorded the presence within Waikīkī of subsurface cultural deposits of both pre-contact Hawaiian and historic provenance. These deposits had remained intact despite the years of construction activity that have altered the entire Waikīkī area. The authors of these studies emphasize that the potential for discovering similar intact deposits elsewhere in Waikīkī cannot be discounted.

Archaeological reports have documented human burials – both pre-contact Hawaiian and historic – throughout the breadth of Waikīkī. The possible presence of human burials within the parcel is of ongoing cultural concern.

None of the community contacts queried for this cultural impact evaluation identified any ongoing cultural practices within the project area.

It is possible that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project parcel. Other possible deposits may be associated with nineteenth century Hawaiian royalty.

Based on the above findings, it is recommended that no further formal cultural impact mitigation measures are warranted.

In order to address traditional cultural concerns, and given the cultural sensitivity of the entire Waikīkī area, it should be noted, however, that subsurface properties associated with former traditional Hawaiian activities in the project area, such as artifacts and cultural layers, may be present despite the decades of sugar cultivation activities. As a precautionary measure, personnel involved in future development activities in the area should be informed of the possibility of inadvertent cultural finds, and should be made aware of the appropriate notification measures to follow.

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**APPENDIX 9**

**WAIKIKI NEIGHBORHOOD BOARD MINUTES  
NOTIFICATION LETTERS**

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

November 5, 2014

Dear Neighboring Property Owner:

**Subject: Draft Environmental Assessment and Waikiki Special District Permit Application  
Ainahau Vista II Affordable Family Rental Project – 2428 Tusitala Street and 2423  
And 2429 Ala Wai Boulevard, Waikiki, Oahu, Hawaii  
Tax Map Keys: 2-6-24: 70 and 71**

The Applicant, Hawaii Housing Development Corporation, is planning to submit a Draft Environmental Assessment to the Hawaii Housing Finance & Development Corporation and subsequent to that, a Waikiki Special District Permit application to the Department of Planning and Permitting on the proposed Ainahau Vista II Affordable Family Rental Project. The proposed development is described on the attached summary sheet.

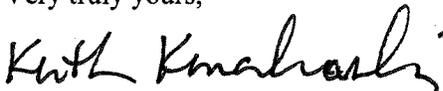
As an adjoining property owner and in accordance with the requirements of the City and County of Honolulu, we are notifying you of the upcoming presentation to the Waikiki Neighborhood Board described below, so that we may respond to your questions and/or concerns regarding our Ainahau Vista II Project and Draft Environmental Assessment and Waikiki Special District Permit application processes.

Waikiki Neighborhood Board No. 9

Date: Tuesday, November 18, 2014  
Time: 7:00 pm  
Place: Waikiki Community Center  
310 Paoakalani Avenue  
Honolulu, Hawaii 96815

We have also attached a location map for your review. Should you have questions, please do not hesitate to call our office at 988-2231.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Development Corporation  
Hawaii Housing Finance & Development Corporation  
Department of Planning and Permitting



**AINAHAU VISTA II  
DRAFT ENVIRONMENTAL ASSESSMENT, 201H APPLICATION,  
AND WAIKIKI SPECIAL DISTRICT PERMIT APPLICATION**

**Tax Map Key 2-6-24: 70 and 71  
2428 Tusitala Street  
2423 and 2429 Ala Wai Boulevard**

The Applicant, Hawaii Housing Development Corporation, proposes the Ainahau Vista II, a nine-story, approximately 80-foot high, affordable family rental apartment building in Waikīkī, Honolulu, on O'ahu (the "Project") on the mauka (north) portion of a lot (comprised of two parcels). The makai (south) portion of the lot is developed with Ainahau Vista, a 106-unit affordable senior housing rental development with 29 at grade parking stalls, 5 accessible stalls and one loading stall. The Applicant plans to submit a Draft Environmental Assessment and 201H Permit application for Ainahau Vista II to the Hawaii Housing Finance & Development Corporation, Department of Business, Economic Development & Tourism for processing. The Applicant plans to also submit a Waikiki Special District permit application to the Department of Planning and Permitting for the Project. The Project will be located on the mauka portion of a 35,781 square foot site in Waikīkī (the "Project Site"). Ainahau Vista II will be developed in accordance with the requirements of Chapter 201H of the Hawaii Revised Statutes (HRS), as amended and the Waikiki Special District.

The Applicant will be applying to government agencies for tax credits, rental housing trust funds, CDBG, Home and DURF funds to provide these affordable rental units for a period of just over 60 years. The Applicant is working with the Department of Community Services at the City to provide approximately 10% to 20% of the rental units for their Housing First Program to support the homeless in Waikiki.

The proposed affordable family rental apartment use is permitted in the Apartment Precinct.

The Project will provide affordable rental units to singles or families earning at or below 50% of the area median income. The nine-story building will provide 77 rental units (47 one-bedroom units and 30 studios) and 26 at grade parking stalls. The 80-foot high structure will have surface parking below and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and four studio units. The ninth floor will have five one-bedroom units, two studio units, a multi-purpose room, and two offices.

Ingress and egress to Ainahau Vista II is expected to be via Tusitala Street, through the existing parking level of Ainahau Vista.

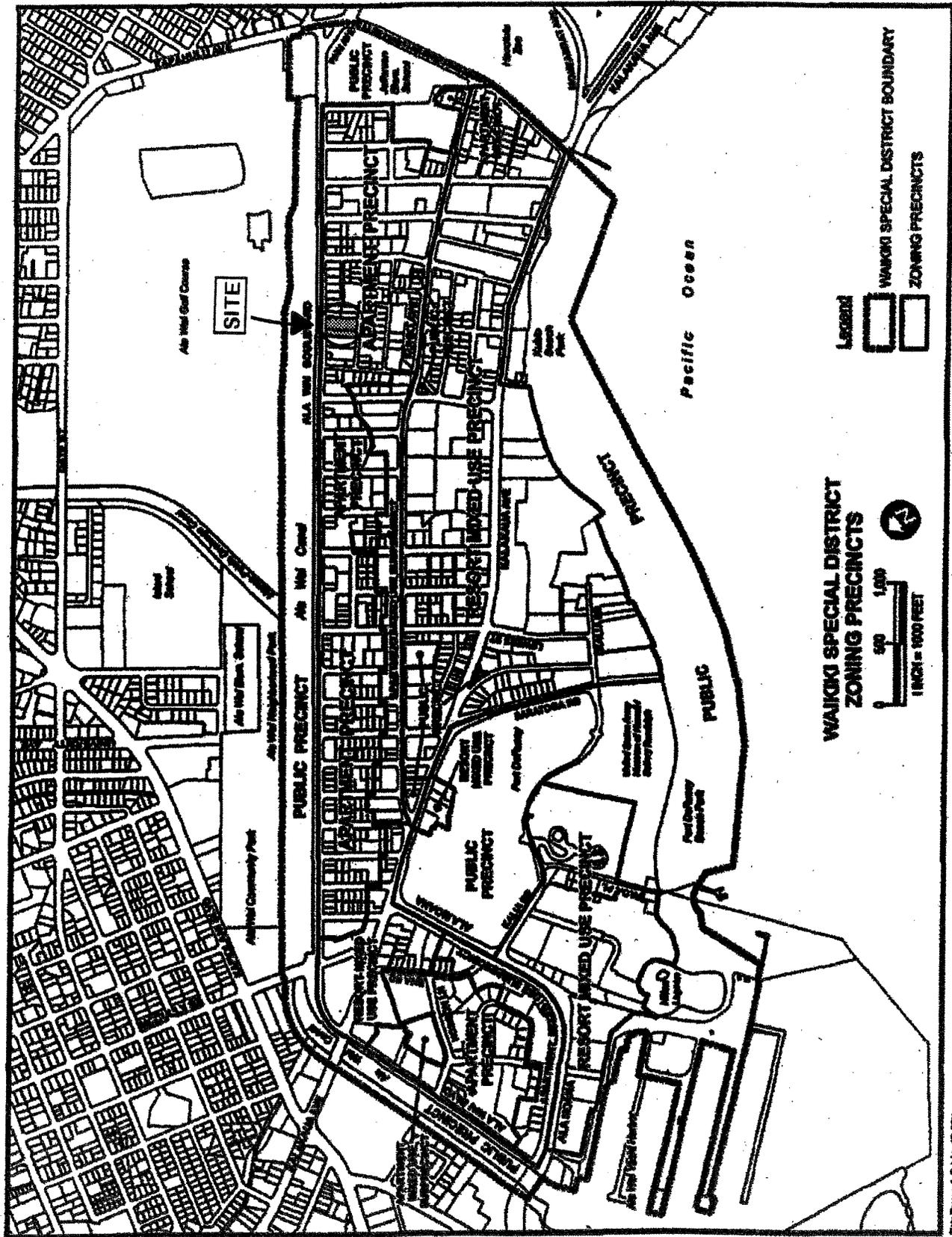


EXHIBIT 21-9.13

FIGURE 1 LOCATION AND ZONING MAP

Map Prepared October 15, 1981

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: kkurahashi@hawaii.rr.com

November 5, 2014

Dear Neighboring Property Owner c/o Condo Master and/or Building/Resident Manager:

**Subject: Draft Environmental Assessment and Waikiki Special District Permit Application  
Ainahau Vista II Affordable Family Rental Project – 2428 Tusitala Street and 2423  
And 2429 Ala Wai Boulevard, Waikiki, Oahu, Hawaii  
Tax Map Keys: 2-6-24: 70 and 71**

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Condo Master and/or Building/Resident Manager, please post in a prominent location - entry door, elevators, or other location where all residents/owners will see. We would further appreciate your contacting/notifying owners of the upcoming Waikiki Neighborhood Board Meeting.

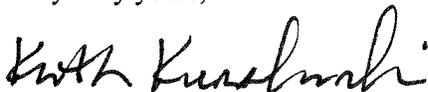
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Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Development Corporation  
Hawaii Housing Finance & Development Corporation  
Department of Planning and Permitting



**AINAHAU VISTA II  
DRAFT ENVIRONMENTAL ASSESSMENT, 201H APPLICATION,  
AND WAIKIKI SPECIAL DISTRICT PERMIT APPLICATION**

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2428 Tusitala Street  
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The proposed affordable family rental apartment use is permitted in the Apartment Precinct.

The Project will provide affordable rental units to singles or families earning at or below 50% of the area median income. The nine-story building will provide 77 rental units (47 one-bedroom units and 30 studios) and 26 at grade parking stalls. The 80-foot high structure will have surface parking below and 8 floors of apartment units above. Floors two to eight will each have six one-bedroom units and four studio units. The ninth floor will have five one-bedroom units, two studio units, a multi-purpose room, and two offices.

Ingress and egress to Ainahau Vista II is expected to be via Tusitala Street, through the existing parking level of Ainahau Vista.



~~Tusitala Vista~~ Ainahau Vista II  
11/14

TMK: 2-6-24: 99  
Ainahau Gardens LLC  
2442 Tusitala Street  
Honolulu, HI 96815

TMK: 2-6-24: 61  
Wong, Mei Y TR  
Xie, Hang TR  
P.O. Box 29178  
Honolulu, HI 96820

TMK: 2-6-24: 73  
Ala Wai Townhouse-Condo Mstr  
c/o Hawaiiana Management Co., Ltd.  
711 Kapiolani Boulevard, Suite 700  
Honolulu, Hawaii 96813

TMK: 2-6-24: 73  
Ala Wai Townhouse  
Condo Master  
2421 Ala Wai Blvd  
Honolulu, HI 96815

TMK: 2-6-24: 59  
Waikiki Townhouse  
Condo Master  
2421 Tusitala Street  
Honolulu, HI 96815

TMK: 2-6-24: 59  
Waikiki Townhouse, Building Manager  
Alex Colon  
2421 Tusitala Street  
Honolulu, HI 96815

TMK: 2-6-24: 91  
Wong Darryl Trust, c/o Lau Dierdre, etal  
DBA Waikiki Bellevue Apts  
2048 Kapiolani BLvd. Apt. 29  
Honolulu, HI 96826

TMK: 2-6-24: 73  
Ala Wai Townhouse, Resident Manager  
Farley Young  
2421 Ala Wai Blvd  
Honolulu, HI 96815

TMK: 2-6-24: 59  
Waikiki Townhouse-Condo Mstr  
c/o Hawaiiana Management Co., Ltd.  
711 Kapiolani Boulevard, Suite 700  
Honolulu, Hawaii 96813





## WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813  
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: <http://www.honolulu.gov>

### **DRAFT REGULAR MEETING MINUTES TUESDAY, NOVEMBER 18, 2014 WAIKIKI COMMUNITY CENTER**

**CALL TO ORDER:** Chair Robert Finley called the meeting to order at 7:00 p.m. **with a quorum of 13 members present.** Note: This 17-member Board requires nine (9) members to establish a quorum and to take official Board action.

**Board Members Present:** Jo-An Adams, Jeff Apaka, John Dew, Louis Erteschik, Robert Finley, Walt Flood, Janet Grace, William 'Bill' Lofquist, Jeff Merz, John Nigro (arrived at 8:01 p.m.), Jim Poole, Mary Simpson, Mark Smith, and Larry Williams.

**Board Members Absent:** Helen Carroll, Kuuipo Kumukahi, and John Moore.

**Guests:** Acting Captain Jake Nakajima (Honolulu Fire Department), Dominic Dias (Board of Water Supply), Councilmember Stanley Chang, Michael Leong (Councilmember Stanley Chang's Office staff), Mark Garrity (Mayor's Representative/Deputy Director, City Department of Transportation Services), Representative Tom Brower, Raytan Vares (Senator Brickwood Galuteria's Office staff), Rick Egged (Waikiki Improvement Association), David Benson (Waikiki Rotary Club), Keith Kurahashi (Kusao & Kurahashi), Corey Dillman, Linda Knix, Jan Bappe, Grace Chien, Dawn Ward, and Lori Snyder (Neighborhood Commission Office staff).

**Vacancies:** There were no vacancies.

#### **CITY MONTHLY REPORTS:**

**Honolulu Fire Department (HFD):** Acting Captain Jake Nakajima reported the following:

- **October 2014 Statistics:** There were 4 fires, 157 medical emergencies, 3 hazardous conditions, 6 service calls, 69 good intent calls, and 15 false alarm calls.
- **Fire Safety Tip:** HFD encourages every family to take the necessary steps to prepare for a natural disaster. Survival kit preparation, shelter locations, and other information can be found at [www.honolulu.gov/dem](http://www.honolulu.gov/dem). Consider a fire-resistant artificial Christmas tree this holiday season. When purchasing a natural tree, select the freshest tree and keep the tree hydrated and away from heat sources in the home. Use noncombustible materials for decorations. Choose only Underwriter's Laboratory-approved electrical decorations and follow the manufacturer's instructions for installation. Do not overload extension cords.

Questions, comments, and concerns followed:

1. **September 2014 Statistics:** Smith requested statistics from September 2014, and Chair Finley requested them to be sent to the neighborhood assistant for the minutes. The neighborhood assistant received an e-mail stating there were 132 medical emergencies in September 2014.
2. **Age Statistics:** Grace inquired if the medical emergency statistics were available by age group.
3. **Sit-Lie Bill:** Chair Finley asked if the number of medical emergency calls dropped, since the passage of the sit-lie bill.

**Honolulu Police Department (HPD):** No representative was present and no report was available.

**Board of Water Supply (BWS):** Dominic Dias reported the following:

- **Water Main Breaks:** There were no water main breaks in October 2014, and the Kapiolani Boulevard construction is ongoing.
- **BWS Fire Hydrants:** BWS has installed and maintained more than 20,000 fire hydrants across Oahu, which excludes federal and private water systems. BWS inspect and maintain hydrants every 18 months to make certain that water from each hydrant flows at sufficient water pressure. Residents can help keep fire hydrants dependable by keeping the area around fire hydrants clear, and reporting damaged or malfunctioning hydrants to BWS at 748-5000.



Questions, comments, and concerns followed: Fort Derussy Construction: Dias noted for Lofquist that the Fort Derussy construction was not a BWS project.

**Hearing no objections, Chair Finley took the agenda out of order to IV. C. Councilmember Stanley Chang.**

Councilmember Stanley Chang: Councilmember Stanley Chang reported the following:

- Coconut Tree: The Department of Parks and Recreation (DPR) maintained the hazardous coconut tree by a city bus stop on Monday, October 13, 2014 and Monday, November 3, 2014.
- Manukai Street Potholes: Funds have been appropriated for DPR to fix potholes on Manukai Street.
- Lunch Wagons: Notice of violation were issued to the cosmetics store and lunch wagons on Kuhio Street.
- Kuhio Shower Run Off: DPR and the Department of Design and Construction are addressing the Kuhio beach park shower run off.
- Homeless Encampment: The Department of Transportation (HDOT) is addressing the homeless encampment on Ala Moana Boulevard and Atkinson Drive.
- Bill Signing: Councilmember Chang joined Mayor Caldwell for the signing of Bills 42, 43, and 46, prohibiting sitting and lying on public streets in Waikiki, and urinating and defecation.
- Homeless Advocacy: Councilmember Chang thanked the Waikiki community for their advocacy about homelessness, and noted the state has devoted \$1.5 million to homelessness while the city has devoted over \$40 million.
- Legislation Update: Councilmember Chang gave an update on legislation, including Resolution 14-240 related to civil fines and Resolution 14-213 related to banning smoking on beaches statewide.
- Kaimuki Clean-Up: The 11th Annual Community Clean-Up at Kaimuki High School will be held on Saturday, November 22, 2014 from 9:00 a.m. to 1:00 p.m. Donations of recyclables, computers, usable clothing, and appliances are requested.

Questions, comments, and concerns followed:

1. Thank You: Dew, Mertz, and Lofquist thanked Councilmember Chang and staff for addressing the Board's concerns.
2. Security Cameras: Councilmember Chang will follow up for Poole on exact locations of security cameras during the Honolulu Marathon.

**The agenda order resumed.**

RESIDENTS' COMMUNITY CONCERNS:

- 2014 Elections Thank You: A community member noted an article from the Friday, November 14, 2014 Star Advertiser in which Board member Janet Grace voiced appreciation for the support of the Waikiki Community during the 2014 elections.
- Ō'lelo Channel: A community member noted there was a free small television with Ō'lelo available for those who do not get the Ō'lelo channel 49.
- Trash Trap Maintenance: A community member voiced concern that the Department of Land and Natural Resources (DLNR) was not maintaining the Ala Wai canal trash trap.
- Sidewalk Sweep: A community member requested the sweeping of sand off of the Waikiki Beach sidewalk, and voiced concern that the stones are deteriorating.

ELECTED OFFICIALS:

Mayor Kirk Caldwell's Representative: Deputy Director Mark Garrity reported the following:

- Lunch Wagons: Various inspections have occurred and notice of violations given in regards to the lunch wagons on Beachwalk near Trump Tower.
- Ena Road Weight Restrictions: The Department of Design and Construction (DDC) noted freight cars and large service trucks such as fire trucks service Ena Road, so a weight restriction could not be imposed. Further, there is scheduled bus service to Eaton Square.
- Kalakaua Avenue Hole: DPR's Division of Urban Forestry filled in the hole in front of the HPD substation on Kalakaua Avenue on Thursday, October 30, 2014.

Questions, comments and concerns followed:

1. Lunch Wagons: Flood voiced concern that the lunch wagons had not moved from the parking lot. Deputy Director Garrity noted the lunch wagons have a special use permit that allows them to stay parked. A community member voiced concern that the lunch wagons could be illegal.

2. Liliokalani Street Property: Dew inquired about the vacant property on Liliokalani Street being used as an equipment storage lot. Egged noted the property has not been sold. Deputy Director Garrity believed it was permitted to store equipment on the lot was given previously, but will follow up.
3. Pothole Update: Deputy Director Garrity will follow up for Lofquist on a pothole update. Apaka voiced concern that he called the pothole hotline about a pothole on 2121 Ala Wai Boulevard and one (1) at Waikiki Trade Center that have not been filled. A community member reported a pothole on Niihau Street.
4. Kuhio Beach Pool Barricade: A community member reported children playing in pools of water in potholes along Kuhio Beach, and requested barricades be placed around the potholes.
5. Halloween Theft: Flood reported a case of vandalism and theft at a convenience store on Halloween night, and asked if arrests were made, if there were any other incidents, and what the ordinance was that addresses this crime.

Governor Neil Abercrombie's Representative: There was no representative present and no report was available.

Representative Tom Brower: Representative Brower reported that he was walking the neighborhood and taking notes on needed improvements, is working on the issues of campers at Ala Moana Park, and is preparing for the legislative session.

Questions, comments and concerns followed: Beach Showers: Dew voiced concern that the public is not allowed to use shampoo or soap at beach showers.

Senator Brickwood Galuteria: Raytan Vares provided a handout and reported the following:

- Thank You: Senator Galuteria is appreciative of the community support during the elections.
- Legislative Session Assignments: Vares noted the legislative session leadership assignments have been made.

Questions, comments, and concerns followed:

1. Committee Assignments: Vares answered for Adams that Senator Galuteria will be the Vice Chairs for the Water and Land and Hawaiian Affairs committees, and a member of the Ways and Means, Public Safety, and Energy committees.
2. Tsunami Evacuation Zoning Meeting: Chair Finley announced a Tsunami Evacuation zoning meeting and inquired about the meeting date.
3. Animals in Stores: Dew voiced support for prohibiting animals inside a public store, and recommended more stores implement this rule. Chair Finley noted there is a law allowing service animals inside stores, and Dew voiced concern that an individual could order a service animal vest on the internet.

Waikiki Improvement Association (WIA): Rick Egged highlighted the following:

- New Years' Fireworks: WIA will be sponsoring the fireworks at midnight of New Years, Thursday, January 1, 2014 at the barge up shore.
- Institute of Human Services (IHS): IHS has been active in Waikiki and the Housing First program has begun. There has been more interest in the programs IHS offers since the compassionate disruption by the City started.

Questions, comments and concerns followed: Sleepers in Restrooms: Flood voiced concern that individuals were sleeping in restroom stalls and were not being removed.

**APPROVAL OF MINUTES OCTOBER 14, 2014: By UNANIMOUS CONSENT, the October 14, 2014 regular meeting minutes were APPROVED as amended, 13-0-0 (Aye: Adams, Apaka, Dew, Erteschik, Finley, Flood, Grace, Lofquist, Merz, Poole, Simpson, Smith, and Williams). Amendments included: Page 1: "Janet Grace" should be listed after Board Members Present. Page 2: In the third sentence of Beaches, "reinstated" should be changed to "enforced".**

#### NEW BOARD BUSINESS:

**John Nigro arrived at 8:01 p.m. There were 14 Board members present.**

Rotary Plan for Aloha Drive Park: David Benson displayed posters and reported about Rotary Club plans for a centennial park on Aloha Drive. The Waikiki Rotary Club meets at the Waikiki Hotel every Tuesday. To commemorate the 100th year of the Waikiki Club in Hawaii, the Rotary Club would like to create a centennial park. A proposal has been given to Mayor Kirk Caldwell's office, and meetings have been held with DPR and Mayor

Caldwell. The main gate out of three (3) gates would be located on Aloha Drive. The City is hiring a botanist to inspect the current landscaping, and there are plans to landscape a rotary design in the park. A fundraiser idea is to sell bricks that would be placed in the park, Benson noted he could present a more solid plan to the Board in summer 2015.

Questions, comments, and concerns followed:

- Disclosure: Chair Finley disclosed that he lives close to the park.
- Bill Sweatt: Apaka and Lofquist requested commemorating Bill Sweatt in the park.
- City Briefing: Erteschik requested a comprehensive briefing from the City about the park.
- Park Concerns: Smith requested high gates at the park that are locked at night to prevent the park from turning into a dangerous environment. Benson noted the park would be designed to discourage individuals from camping inside, and there are plans for a weekly maintenance crew for the park.
- Public Park: Adams requested the park be open to the public.

**Flood moved and Merz seconded that the Waikiki Neighborhood Board No. 9 supports the concept of the park developed by the Rotary Club.** Discussion followed:

- Public Involvement: Adams requested creating a way to ensure the public was involved in the planning.
- Board Updates: Chair Finley requested Lofquist work directly with Benson and provide the Board with updates, and requested Benson report back in January 2015.
- City Involvement: Erteschik requested an update from the City. Deputy Director Garrity noted Mayor Caldwell supported the project, DPR is neutral due to funding, and suggested DPR be involved in the reports of the project.
- Support: Lofquist voiced support for the project.

**The motion that the Waikiki Neighborhood Board No. 9 supports the concept of the park developed by the Rotary Club was ADOPTED by UNANIMOUS CONSENT, 14-0-0 (Aye: Adams, Apaka, Dew, Erteschik, Finley, Flood, Grace, Lofquist, Merz, Nigro, Poole, Simpson, Smith, and Williams).**

Ainahau Vista II: Keith Kurahashi, planning and zoning supporting applicant for the Ainahau Vista II project, provided a PowerPoint and reported the following:

- Applications: Hawaii Housing Development Corporation (HHDC) will be submitting a Draft Environmental Assessment, a 201H application, applying to government agencies for tax credits, rental housing trust funds, a Community Development Block Grant (CDBG), Home and Dwelling Unit Revolving Fund (DURF), and a Waikiki Special District Permit.
- Location: The development will be located between Ala Wai Boulevard and Tusitala Street, east of Kaiulani Avenue on a portion of a 35,781 square foot lot zoned Apartment Precinct with a 240 foot height limit.
- Residents: HHDC will provide affordable rental units to singles or families earning at or below 50% of the area median income. The nine (9) story building will provide 77 rental units and 26 parking stalls. The 80 foot high structure will have surface parking below and eight (8) floors of apartment units above.
- Housing First: HHDC has been in contact with the Department of Community Services (DCS) to consider the provision of 10% to 20% of the rental units for the Housing First Program.
- Exemptions: The proposed development will require exemptions including parking, loading space requirements, exceeding the maximum density, allow encroachment into yards, allow encroachment into the transitional height setback, and deferral of water and sewer connection fees.
- Traffic Impacts: Traffic impacts would be minimal with the development.
- Permits: The permits needed include a Finding of No Significant Impact on a Final Environmental Assessment, a 201H Affordable Housing Development Approval, a Waikiki Special Design District Permit, and Grading and Building permits.

Questions, comments and concerns followed:

1. Parking Exemptions: Merz and Smith voiced support for the parking exemption request.
2. Density: Merz noted the sensible use of land is important, and asked how much of a density exemption was asked.
3. Visual of Building: Erteschik asked for a visual representation of the building after exemptions.
4. Room Size: Williams voiced concern about the small size of the rooms, and Flood voiced concern about noise issues if the rooms were small.
5. Sacred Land: Resident Grace Chien noted Ainahau is a sacred place for many Hawaiians, and voiced concern about the preservation of the sacred land. Kurahashi noted HHDC will work with DLNR to ensure preservation of any sacred artifacts found on the land. Kurahashi noted for Loo that the sacred statue and

- plant were placed there and HHDC will request them to be relocated. A resident voiced agreements with Chien's concerns.
6. Purpose of Housing First: Grace reminded the public and Board that Housing First is geared towards providing services to the chronically homeless population.
  7. Inconsistency: Erteschik voiced concern about the inconsistency of the Board's opinions about developments, and voiced support for the Ainahua Vista II project.
  8. Interior: Adams recommended designing the interior of the apartments to accommodate for the small size.
  9. Update: Chair Finley requested Kurahashi return to the Waikiki Neighborhood Board No. 09 in January 2015 with an update on the Ainahua Vista II development and with answers to the concerns voiced.

REPORTS:

Treasurer's Report: Treasurer Williams reported expenditures of \$48.38 for printing and mailing, leaving a balance of \$477.28. The report was filed.

District 1 Report: Merz reported that the Outrigger Reef has provided a supplemental Environmental Impact Statement (SEIS) with many opportunities for public review. Also, a letter was received from Hyatt about a minor project.

Subdistrict 2 Report: Flood reported that HFD cited a violation for the large propane tanks at the lunch wagons on Kuhio Avenue. There were no barriers to prevent cars from hitting the propane tanks which could explode and kill or injure customers and neighbors.

Subdistrict 3 Report: Smith reported that he hopes to address the missing sidewalk on Paoakalani Avenue in 2015.

Chair Report: Chair Finley reported the following:

- Special Meeting: Chair Finley thanked the individuals who attended the Waikiki Neighborhood Board No. 9 special meeting on Wednesday, October 29, 2014.
- Liquor License Applications: Applications for a liquor license were received for Aloha Kitchen, Pacific Fun Discovery Bay, and Ohana East Hotel.
- Harbor Project: The State is searching for a new investor for the Ala Wai Harbor Project.

ANNOUNCEMENTS:

- Next Meeting: The Waikiki Neighborhood Board No. 09 regular meeting will be held on Tuesday, January 13, 2015, Waikiki Community Center at 7:00 p.m.

ADJOURNMENT: The meeting adjourned at 9:05 p.m.

Submitted by: Lori Snyder, Neighborhood Assistant  
Reviewed by: Nola Frank, Neighborhood Assistant  
Finalized by: Robert Finley, Chair; JoAnn Adams, Board Secretary





## WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813  
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: <http://www.honolulu.gov>

### **DRAFT REGULAR MEETING MINUTES TUESDAY, JANUARY 13, 2015 WAIKIKI COMMUNITY CENTER**

**CALL TO ORDER:** Chair Robert Finley called the meeting to order at 7:00 p.m. **with a quorum of 15 members present.** Note: This 17-member Board requires nine (9) members to establish a quorum and to take official Board action. Chair Finley announced that the "Keep Hawaii's Heroes" petition is on the back table to save our bases. Signatures are welcome

**Board Members Present:** Jo-An Adams, Jeff Apaka, Helen Carroll, John Dew, Louis Erteschik, Robert Finley, Walt Flood, Janet Grace, Kuuipo Kumukahi Arrived at 7:40 p.m.), William 'Bill' Lofquist, Jeff Merz, John Nigro, Jim Poole, Mary Simpson, Mark Smith and Larry Williams.

**Board Members Absent:** John Moore.

**Guests:** Stacilynn Eli (Senator Brickwood Galuteria's Office), Z. Lehua Sureda, Rodney and Grace Chiue; Dominic Dias (Board of Water Supply), Deputy Director Mark Garrity (Mayor Kirk Caldwell's representative/Department of Transportation Services), Randy Bartlett (Hawaii Invasive Species/State Department of Agriculture), Mary Kirchoff, Dawn Ward, Corey Dillman, Jan Bappe, Marilyn and Robert Katzman; Representative Tom Brower, Elsie Lee and Mela Kealoha Lindsey (COH); Steve Marcotz, Kurt Tsuneyoshi (Councilmember Trevor Nozawa's Office staff), Pat Fitzgerald, Keith Kurahashi (Kusao & Kurahashi), Rick Egged (Waikiki Improvement Association), Regina K. Hilo, Dave Mosttowitz, Daisy Murai, Senator Brickwood Galuteria, Lieutenant Dien Shearer (Honolulu Police Department, District 6-Waikiki), David Jones (Videographer) and Nola J. Frank (Neighborhood Commission Office staff).

**Vacancies:** There were no vacancies.

#### **CITY MONTHLY REPORTS:**

**Honolulu Fire Department (HFD):** A representative was not present; a report was not provided.

**Honolulu Police Department (HPD):** A representative was not present at this time.

**Board of Water Supply (BWS):** Dominic Dias reported the following:

- **Water Main Breaks:** No main breaks in December 2014 and not current BWS construction.
- **2015 Water Conservation Calendar:** The 2015 Water Conservation Calendar presents artwork and poetry submitted by Oahu youth in Grades K-12. Copies of the calendar were provided.
- **Water Conservation Contests:** The theme for the 37th annual Water Conservation Week Poster Contest and 7th annual Poetry Contest is "Water Matters – Conserve It". The contest is open to Oahu's student artists and poets in Grades K-12. Deadline to enter is Wednesday, February 26, 2015. For more information visit [www.boardofwatersupply.com](http://www.boardofwatersupply.com) or call the BWS Communication Office at 748-5041.
- **Olelo Xchange Video Competition:** BWS is pleased to sponsor a category in the Youth Xchange Video Competition, which is a statewide student video competition coordinated by `Olelo Community Media. The video contest is open to students statewide in grades Kindergarten through 12 and the entry deadline is Tuesday, March 3, 2015. For detailed information visit [www.boardofwatersupply.com](http://www.boardofwatersupply.com) or call the BWS Communications Office at 748-5041.

**Vote on Three (3) Absence Rule for Kuuipo Kumukahi:** Chair Finley announced that Board member Kumukahi replied that she would like to remain on the Board. Kumukahi is stuck in traffic and will be at the meeting shortly. **Apaka moved, Dew seconded to retain Kuuipo Kumukahi as a Board member. The motion was ADOPTED, 12-0-2 (Aye: Apaka, Carroll, Erteschik, Finley, Grace, Lofquist, Merz, Nigro, Poole, Simpson, Smith and Williams); Nay: 0; Abstain: Adams and Flood).**



RESIDENTS' COMMUNITY CONCERNS:

Hawaii Invasive Species Council: Randy Bartlett circulated information brochures regarding the little fire ant and coconut rhinoceros beetle.

- Little Fire Ant (LFA): The little fire ant is about 1/16 inch long, orange-red in color and slow moving has been found in Waimanalo and Mililani Mauka. To detect LFA, place sticks with a thin smear of peanut butter on a disposable chopstick around the yard for about an hour. If LFA are found on the chopstick, place the stick in a Ziploc bag, seal and label with your name address, and phone number and place bag in the freezer overnight to kill the ants. Call the Hawaii Department of Agriculture (HDOA) pest hotline at 643-PEST to report that you may have LFA.
- Coconut Rhinoceros Beetle (CRB): The CRB is from southeast Asia was found only on Oahu in a pile of mulch where the beetle breeds. Currently, the CRB is found on military bases. Samples of the beetles were circulated. Sites are being treated. If the CRB are seen or found in a neighborhood, please contact the Department of Agriculture.

Questions, comments and concerns followed:

1. Decontamination: Bartlett answered for Merz that the State Department of Agriculture is called to inspect ships and planes. It was noted that all ships are decontaminated.
2. CRB: Bartlett answered for a resident that the CRB is attracted to bright lights and does fly at night.

Restrooms Back of HPD Substation: A resident pointed out that use of these restrooms is paid by public money. He reported that the restrooms are open 24/7, and a security guard is on duty from 10:00 p.m. to 6:00 a.m. However, the security guard is not allowed to enter or use the restrooms. The resident stated that between 5:00 and 5:30 a.m. he went into the men's restroom and found defecation on the seats and between the doors. It was questioned why the security guard is not allowed to enter and check the restrooms. The resident asked should 911 be called if the toilets are found to be destroyed. It was suggested that the restrooms next to the Cheeseburger Restaurant be opened. The Department of Parks and Recreation (DPR) staff cleans the restrooms at 6:15 a.m. The issue was referred to Mayor's representative Garrity.

Board member Kuuipo Kumukahi arrived at 7:40 p.m.; **16 members present.**

3. Trespassing: A resident reported that people seeking shelter at night are trespassing, seeking shelter under apartment stairwells and breaking into apartments. A packet was circulated by SOS Security Incorporated, with information to assist condominiums and apartments with security. An example given was that large buildings could share security costs between them.

ELECTED OFFICIALS:

Mayor Kirk Caldwell's Representative: Mark Garrity wished everyone a Happy New Year and reported the following:

- Neighborhood Board Elections The deadline to apply is Friday, February 20, 2015. Paper applications are available on the front table or you may apply online at [www.honolulu.gov/nco](http://www.honolulu.gov/nco). More information on the boards and the election are also available on that site or by calling 768-3708.
- Keep Hawaii's Heroes: On November 9, 2014 Mayor Caldwell co-sponsored a petition named Keep Hawaii's Heroes, to urge the Army to maintain its Military Presence in Hawaii. The proposal by the Army would reduce over 16,000 personnel at Schofield Barracks and 4,000 personnel at Fort Shafter eliminating 19,800 soldiers and approximately 30,000 civilians. Mayor Caldwell has asked that community to join him in signing the petition and encourages anyone to sign up and testify at the Army's Listening Session held on Tuesday, January 27, 2015 at the Hale Koa Hotel. A petition is located on the table near the sign in sheet. For more information, please visit [www.KeepHawaiisHeroes.org](http://www.KeepHawaiisHeroes.org) or you can request more information at [infor@KeepHawaiisHeroes.org](mailto:infor@KeepHawaiisHeroes.org).
- Potholes on Kuhio Avenue across from Nahua Street (2121 Ala Wai and at Seaside Manor): Pothole patching crews have scheduled pothole repairs at these locations for January 9, 2015.
- New Sandstone Pavers on Kuhio Beach: The concern of premature wear of the new sandstone pavers will be referred to the Department of Design and Construction (DCC) who administered the design and construction of Kuhio Beach improvements and Department of Parks and Recreation (DPR) who maintains the improvements. It appears the path users are walking on the grassed areas rather than the pavers and it is the adjacent areas that are eroding rather than the paver stones.

- Liliuokalani Avenue Vacant Lots Used as Storage: Investigation by the Department of Planning and Permitting (DPP) revealed the vacant lots (4) along Liliuokalani/Tusitala and Cleghorn Streets are being used for the storage of vehicles and equipment by Okada Trucking for use on a City & County of Honolulu project Woodlawn Drive. This temporary use is permitted by Section 21-1.60 of the Land Use Ordinance.
- Potholes on Manukai Street: Manukai Street between Lewers Street and Royal Hawaiian Avenue is privately owned and does not qualify for City maintenance. Manukai Street between Royal Hawaiian and Seaside Avenue is under DPP jurisdiction. DPR reports that a hotel is utilizing Manukai Street as a private driveway and much of the damages are attributed to the hotel's use of the road. DPR is discussing the maintenance of the road with the hotel but on the interim DFM has scheduled pothole repairs to this portion of Manukai Street on January 9, 2014.
- Landscaping Project on Kalakaua Avenue near the Police Substation: The Department of Parks and Recreation (DPR) responds that the re-landscaping of the planter located beneath the HPD Waikiki Substation building sign was completed by the Division of Urban Forestry, Department of Parks and Recreation on December 12, 2014.
- Lunch Wagons on Beachwalk Lot: Investigation by DPP revealed that the five (5) lunch wagon vehicles have current license registrations. Special Design District No. 2013/SDD-90 was approved, with conditions, on January 13, 2014 for a lunch wagon park and does not require the lunch wagon vehicles to move every 24 hours.
- Kuhio Beach Pools for Washing Feet: A water supply line was leaking and needed to be shut down for repair work. On December 2, 2014, the repair work was completed by the Department of Parks and Recreation (DPR) Maintenance Support Services staff.
- Criminal Activity Halloween Night: According to HPD Halloween Night 2014 was an extremely busy night in Waikiki. HPD had approximately 55 police officers working that evening in anticipation of a very large crowd. Although the crowd was loud very few crime complaints were received. Due the report of broken glass and theft of alcohol, a Burglary in the Second Degree case was initiated November 1, 2014 for the Royal Mini Mart located at the Royal Grove Hotel building. A detective began investigating the incident, but the complainant withdrew his complaint. The case was subsequently closed.  
With reference to other incidents of "grab and run," if reported, although referred to as "shoplifting," a theft case would be initiated. The degree would be based on the cost of what was stolen, and if the total amount of the theft is \$100 or less, a Theft in the Fourth degree case would be initiated, which is a petty misdemeanor. If the amount exceeds \$100, a Theft in the Third Degree (misdemeanor) would be initiated. If the amount exceeds \$200 the classification would be Theft in the Second Degree, a Class C felony. Finally, if the amount were to exceed \$20,000, a Theft in the First Degree, which is a Class Be felony would be initiated.

Questions, comments and concerns followed:

1. General Excise Tax (GET) Surcharge: Erteschik commented that the public was told by a previous administration that the GET would be raised.
2. Liliuokalani Ave/Cleghorn Street Vacant Lots: Merz questioned the staging of equipment on these vacant lots for a project on Woodlawn Drive in Manoa. Merz pointed out that the project is not in the Waikiki area and is unacceptable. Merz stated that illegal storage (commercial use in a residential zone) has occurred for years. Nigro agreed with Merz, and noted that the staging of pipes and other equipment and driving three (3) miles to Manoa to the job site makes no sense. Nigro added that the street-usage permit should be re-checked. Nigro reiterated that items have been stored on the lots for years.
3. Rail Noise: Dew inquired about the effects of the noise that will be caused by the rail for residents' living in the Waimanu Street area. According to the condominium owners, the information regarding rail was provided at the time of their purchase.
4. Grateful: Lofquist expressed gratitude to the Department of Facility Maintenance (DFM) crew for filling the Manukai Street potholes on Monday, January 12, 2015. Garrity replied that concerns from the Neighborhood Board and questions makes things happen. Garrity noted that the City appreciates the Board's feedback.
5. Halloween Night in Waikiki: A resident reported that 13 people with bats were beating up other people on Lewers Street. The fight broke up right be HPD arrived. The resident wanted to know what was the per capita of HPD officers versus civilians.
6. Temporary Permit: Follow up will done as to the definition of a temporary permit.
7. Lunchwagons Comment: A resident noted that lunchwagons are not permitted to park in metered stalls. It was asked if the private lot allowing permanent permits and to park overnight. Garrity replied that per the response from DPP, the lunchwagons obtained a special design permit, which was approved with conditions for the Lunchwagon Park. The resident added that other lunch trucks and other businesses are

prohibited to use the Lunchwagon Park. It was pointed out that lunchwagons are not permitted to park in metered stalls. Garrity will follow up on the terms and expiration date for the permits.

Governor David Ige's Representative: A representative was not present; a report was not available.

Questions, comments and concerns followed:

1. Cigarette Butts: Merz asked who is in charge of the beaches and inquired if it is the state Department of Land and Natural Resources (DLNR). Representative Brower that this was a good question. It was noted that it is illegal to smoke or litter on beaches. Recycling of cigarette butts will be explored.

Councilmember Trevor Ozawa: Kurt Tsuneyoshi circulated a report and highlighted the following:

- Committees: Councilmember Ozawa will chair the Committee on Executive Matters and Legal Affairs and Kapiolani Park Trust. Vice Chair for the Committee on Zoning and Planning. Member of the Committee on Budget, Committee on Business, Economic Development & Tourism, Committee on Public Health, Safety and Welfare, Committee on Public Works, Infrastructure and Sustainability, and the Committee on Legislative Matters.
- Full City Council Meeting: The next full City Council meeting is scheduled for Wednesday, January 28, 2015.

Questions, comments and concerns followed:

- Restroom Issues: Apaka asked that Councilmember Ozawa work on this issue to allow the security guard to enter and check the restroom to help keep them clean.
- Iolani Park Trust: Tsuneyoshi answered for Dew that Councilmember Ozawa Chair's the Iolani Park Trust.
- Kalakaua Avenue: Smith reported people sitting on their backpacks on the sidewalks on Kalakaua Avenue, and asked if that is permitted.

Senator Brickwood Galuteria: Stacelynn Eli circulated a report and highlighted the following:

- 2015 Legislature: The 2015 Legislature will convene on Wednesday, January 21, 2015 at 10:00 a.m.
- Committee Assignments: Senator Galuteria will be Vice Chair of the Water and Land Committee, Hawaiian Affairs Committee; member of the Ways and Means, Energy and Environment, and Public Safety, Intergovernmental and Military Affairs Committees.

Representative Tom Brower: Representative Brower distributed his written report and highlighted the following:

- Committees: Representative Brower will continue to chair the Tourism committee, and sit on the committees on Judiciary, Agriculture, Economic Development, Consumer Protection and Military Affairs.
- Hawaii Five O Noise: Area filming of Hawaii Five O resulted in the use of simulated gunfire/explosion.
- Cigarette Butts on the Beaches: Cigarette butts are among the top pollutants with non-biodegradable filters, which pose a threat to marine life. Although smoking and littering are illegal on the beach, enforcement has been difficult and a burden on the police. New legislation for solutions are being explored and legislation for a beach cleanup fund to help keep the beaches cleaner.
- Rail Tour: Representative Brower participated in a tour of the rail in Kapolei, and noted that the project is currently on schedule.
- Lipeepee Street/Ala Moana Boulevard Crosswalk: A constituent inquired last month about the possibility of installing a crosswalk at Lipeepee Street and Ala Moana Boulevard. The City's traffic engineers informed Representative Brower that this is not necessary. According to state law, a person can cross at any intersection, unless signs prohibit doing so (Hawaii Revised Statutes 291C-72 and 73).
- Tax Clinic: A tax clinic will be held at the Capitol on Saturday, January 31, 2015 in Conference Room 329 from 9:00 a.m. to 2:00 a.m. For more information and see if you qualify call (808) 426-3858.

Questions, comments, and concerns followed:

1. Cigarette Butts: Merz inquired if it is the State Department of Land and Natural Resources (DLNR) is in charge of the beaches. Representative Brower noted that it is illegal to smoke or litter on beaches. Recycling of cigarette butts will be explored
2. General Excise Tax (GET): Chair Finley the amount of money the State takes from the City would be reduced. In response, 10% collected by the City is taken by the State. It was commented that cost to the City for lawsuits relating to rail is \$250 million. It was noted that the legislature voted to extend the City's ability to call on and utilize the General Excise Tax (GET) for the rail. It was noted that 30% of rail funding is from visitors.

Waikiki Improvement Association (WIA): Rick Egged highlighted the following:

- Beach Management Plan: A Bill has been introduced to establish a Waikiki Beach special improvement district at the request of the WIA and would fund a non-profit run by Waikiki stakeholders and develop a long-term Waikiki Beach Management Plan. This would contribute to approved public-private maintenance and restoration projects to help develop a long-term Waikiki. Funding would come from Waikiki's commercial property assessments.
- Ban: Suggestion are to ban vehicles from stopping next to the Waikiki Shopping Plaza causing backup of traffic.

Questions, comments and concerns followed:

1. Newspaper Tax Article: Egged answered for Erteschik that the word tax is misused. It is basically an assessment. Erteschik commended Egged and asked if beach coordination would occur. Egge noted that the project would be partnered with DLNR, and relayed that it does not hurt to get a government agency involved with private partners. Egge noted that a community plan is being worked on and working with government agencies on a beach plan.
2. International Market Place: Merz noted that the International Market Place is clean and quiet, and thanked Egged for doing a good job. Egged commended Chair Finley for attending the meetings and doing a good job with the community relations. Chair Finley added that the biggest problem was coordination with the Hawaiian Electric Company (HECO).
3. Beach Sand Disappearing: Per a newspaper article, Lofquist expressed concern regarding sand disappearing from Waikiki Beach, and questioned if the article is accurate. It was noted that sand was brought in in 2013, which is supposed to last for seven (7) to 10 years. However, 27% of the sand has eroded. It was pointed out to never anticipate that the sand would stay on the beach forever. It was noted that in November/December 2011 it was advocated and the Ewa wall torn down to improve beach erosion, which is not true. Lofquist asked if there are any future plans. Egged answered that proposal come up from time to time. The intent is to have a beach management plan for Waikiki Beach. Regarding the Sheraton Waikiki (T-groin), the beach management plan will be looked at in an orderly fashion. The best solution would be t-groin-wall-t-groin. However, some people want no structures. One (1) project is to replace the Royal Hawaiian groin going forward with the appropriated funding.
4. Lunchwagons: Regarding the lunchwagons, Egged answered for Adams that the WIA was not consulted. Egged noted being aware the permits were granted.

APPROVAL OF SPECIAL MEETING MINUTES OCTOBER 29, 2014: **The October 29, 2014 special meeting minutes were APPROVED as written and circulated by UNIMOUS CONSENT, 16-0-0 (Aye: Adams, Apaka, Carroll, Dew, Erteschik, Finley, Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Simpson, Smith, and Williams).**

APPROVAL OF MINUTES NOVEMBER 18, 2014: **The November 18, 2014 special meeting minutes were APPROVED as written and circulated by UNIMOUS CONSENT, 16-0-0 (Aye: Adams, Apaka, Carroll, Dew, Erteschik, Finley, Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Simpson, Smith, and Williams).**

NEW BOARD BUSINESS:

Rotary Plan for Aloha Drive Park Follow Up: David Benson reported the following: On Thursday, January 1, 2015, the Rotary Club is celebrated its 100th anniversary. The Rotary Club submitted a proposal for the Aloha Park to the City. According to the City Department of Parks and Recreation (DPR), the Rotary name logo cannot be used for the park or the selling of bricks with inscriptions in memory of someone. Based on State and City laws the park will be named the "Centennial Park." Plans are to setup an agreement with the City regarding the land, build the park, and turn the park over to the City. Board member Lofquist assisted with the plans and was invited by the Rotary to speak with the WIA board. The next step is to speak with area managers regarding the plans. The parks will consists of a rock wall and fencing. A developer has offered to donate the cement.

Questions, comments and concerns followed:

1. Park Name/Maintenance: Merz requested a Hawaiian name. Benson answered for Merz that the Department of Parks and Recreation (DPR) is in charge of the maintenance. A work party from the Rotary Club, Waikiki residents and area hotel meet every other Saturday to clean the park. Concern was raised regarding long-term maintenance and repairs. In response, plans will be available between the Rotary and the City. The park will remain under city jurisdiction, enforced by HPD, and locked at 10:00 p.m.

2. Small Restaurant Facilities: It was asked if a small restaurant would be placed in the park.
3. Mahalo: Lofquist thanked the Rotary Club for taking on this large project.
4. Other Parks: Smith asked if the Rotary Club has created other parks in the world. Benson noted that on Oahu, there is one (1) park on Diamond Head Road and the other on the Salvation Army property.

**Flood moved, Merz seconded in support of continuing efforts in continuing the completion of the park. The motion was UNANIMOUSLY ADOPTED, 16-0-0 (Aye: Adams, Apaka, Carroll, Dew, Erteschik, Finley Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Simpson, Smith, and Williams).**

Ainahau Vista II, 2428 Tusitala Street Follow Up: Keith Kurahashi provided a PowerPoint and highlighted the following:

- Applications: Hawaii Housing Development Corporation (HHDC) will be submitting a Draft Environmental Assessment (DEA), a 201H application, applying to government agencies for tax credits, housing trust funds, a Community Development Block Grant (CDBG), Home and Dwelling Unit Revolving Fund (DURF), and a Waikiki Special District Permit.
- Location: Between Ala Wai Boulevard and Tusitala Street, east of Kaiulani Avenue on a portion of a 35,781 square foot lot zoned Apartment Precinct with a 240 foot height limit.
- Residents: Affordable rental units to singles or families earning below 50% of the area median income. The nine (9) story building will provide 62 rental units and 23 parking stalls.
- Housing First: HHDC has been in contact with the Department of Community Services (DCS) to consider provision of 10% to 20% of the rental units for the Housing First Program.
- Exemptions: The proposed development will require exemptions including parking, loading space requirements, exceeding the maximum density, allow encroachment into yards, allow encroachment into transitional height setback, and deferral of water and sewer connection fees.
- Traffic Impacts: With the development traffic impacts will be minimal.
- Permits: The permits needed include a Finding of NO Significant Impact on a Final Environmental Assessment, a 200H Affordable Housing Development Approval, a Waikiki Special Design District Permit, and Grading and Building Permits.
- Responses to previously asked questions:
  - Parking Exemptions: The required parking for the development is 62 parking stalls and the applicant proposes to provide 24 parking stalls.
  - Density: The allowable density with the planned 35% open space is 54,947 square feet and the proposed density will be 94,617 square feet. The project will be 29,670 square feet over the allowable density. However, if calculated with 50% open space provided the project will be 12,349 square feet over the allowable density (Vistas 1 and 2).
  - Visual of Building: A slide provided a visual representation of the exemptions being requested.
  - Room Size: The studio units have been increased in size from 275 square feet to 377 square feet. It was noted that the studio units have increased in size.
  - Sacred Land: Kurahashi will work with the State Department of Land and Natural Resources (DLNR) to ensure preservation of any sacred artifacts found on the land. It HHDC will request that the sacred statue and plant be relocated.

Questions, comments and concerns followed:

1. Comment: Apaka relayed that tonight's update shows a much better plan.
2. Parking Stalls: Regarding the anticipation of seniors with cars, Kurahashi answered for Apaka that 23 parking stall will be provided with the possibility of a large loading zone area. Apaka added that almost everyone catches the bus.
3. Onsite Security: Kurahashi answered for Flood that there will a security guard on site during the day and guard on duty at night. It is unsure if cameras would be installed.
4. Soundproofing Wall: It was asked if the walls would be soundproofed.
5. Support: Grace noted the efforts of support and to protect seniors. Grace asked how would the seniors residing in the Ainahau Vista I be protected from lane closures.
6. Current Plan: Erteschik inquired why the current plan is substantially different from the previous plan and much denser than regulations allow. Affordable housing is needed. Kurahashi relayed a concern from the owner and Board is the homeless problem. There is a market for smaller units. It is hopeful that smaller affordable units would be available in the future.
7. Environmental Assessment (EA): Merz pointed out that the EA is not the end. There is still time for concerns and recommendations. Kurahashi noted that the Board would be informed when the public may provide input.

**Flood moved, Merz seconded in support of the project concept. The motion was ADOPTED, 15-1-0 (Aye: Adams, Apaka, Carroll, Erteschik, Finley, Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Simpson, Smith, and Williams; Nay: Dew; Abstain-0).**

**Flood moved Merz seconded in support of the Ainahau Vista II project concept. The motion was ADOPTED 15-1-0 (Aye: Adams, Apaka, Carroll, Erte4schik, Finley, Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Simpson, Smith and Williams; Nay: Dew; Abstain: 0).**

Honolulu Police Department (HPD): Lieutenant Dien Shearer apologized for being late, circulated the report and noted that he would be in the back to entertain any questions

Ohana West Update: Cassie Idehara reported the following:

- Location: The hotel is located at 2330 Kuhio Avenue.
- Building Design: The entrance on Walina Street will remain and added loading stalls.
- A restaurant will be located on the corner of Kuhio Avenue and Walina Street, with a Starbucks on the Nahua Street side.
- Exterior: The building exterior will be repainted, one (1) elevator added and a double height retail storefront. The Walina Street side of the hotel will be renovated with a new lobby, imagery and a double height ceiling.
- Construction: Anticipated construction start date is March 15, 2015 with demolition late April 2015 with barriers surrounding the entire building. Completion date is February 2016. Applications for noise variances have been submitted for the hours of 9:00 a.m. to 5:00 p.m. Work will be scheduled on weekdays Monday through Friday.

Questions, comments and concerns followed:

1. Sidewalks: Idehara answered for Lofquist that there will be sidewalks on Kuhio Avenue.
2. 24-Hour Restaurant: Apaka asked and it was noted that a 24-hour restaurant is not in the plans.
3. Square Footage: Flood asked and it was noted that there will be no change to the square footage (275-280 square feet).
4. Plan for Construction Trucks: Plans are to take one (1) going up Walina Street and down Kuhio Avenue.
5. Comment: Apaka pointed out that there is no 'Hawaiiana' in the plans. The response was there are limitations on what can be done Kumukahi asked what Hawaiian signs, artifacts, and wood items are in the interior. The response was wood. Kumukahi added if there is an opportunity for Hawaiian art in guest rooms, Hawaiian patterns on the side of the buildings, such as tapa prints. Kumukahi stated that Waikiki is a Special District.

**Flood moved Merz seconded in support of the Ohana West renovations. The motion was ADOPTED, 14-2-0 (Aye: Adams, Apaka, Carroll, Dew, Erteschik, Flood, Grace, Kumukahi, Lofquist, Merz, Nigro, Poole, Smith, and Williams); Nay: Finley and Simpson; Abstain: 0).**

#### REPORTS:

Treasurer's Report: Treasurer Williams reported expenditures of \$42.83 for printing and mailing, leaving a balance of \$434.45. The report was filed.

Subdistrict 2 Report: Flood reported that the Waialae Country Club is hosting the Sony Open. There are about 40 volunteers who are paid \$40.00 daily. Active military are free to watch the tournament.

Chair Report: Chair Finley reported the following:

- The Waikiki Transportation Stakeholder Oversight Committee continues to work to improve traffic issues and address the bus routes following Rail.
- : Several new buses have been ordered for Waikiki and they will be quiet and less polluting than current models.
- Mentioned by Rick Egged it was reiterated that the WIA is going to have a busy year with the formation of two new activities to improve the beach and parking. They will also be working on improvements to the WSDP.
- Bill 65 will address the need for hourly car rentals for our residents who need a car for a few hours a month but don't have parking or the budget to own a car next month.
  - Don't forget to sign up for the next Neighborhood Board election. It is NOT automatic. Deadline is Friday, February 20, 2015. There were no other reports.

ANNOUNCEMENTS:

- Next Meeting: The next Waikiki Neighborhood Board No. 09 regular meeting will be held on Tuesday, February 10, 2015, Waikiki Community Center at 7:00 p.m.

ADJOURNMENT: The meeting adjourned at 9:40 p.m.

Submitted by: Nola J. Frank, Neighborhood Assistant

Reviewed by: Neil Baarde, Neighborhood Assistant

Reviewed by: Finalized by: Robert Finley, Chair; JoAnn Adams, Board Secretary

**APPENDIX 10**

**COMMENTS AND RESPONSES ON DRAFT EA**

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Robert Kroning, P.E., Director  
Department of Design and Construction  
City and County of Honolulu  
650 So. King Street, Third Floor  
Honolulu, Hawaii 96813

Attention: Clifford Lau  
Facilities Division

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Kroning:

Thank you for your letter dated May 5, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

The applicant understands your concern about the reduction in open space on the property, however, it's a matter of establishing priorities and the applicant feels that there is a dire need for affordable senior rentals and a reduction in open space to create these rentals is a small price to pay.

We are providing relaxing outdoor landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

Your letter and this response will be included in the FEA.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR

ROBERT J. KRONING, P.E.  
DIRECTOR

MARK YONAMINE, P.E.  
DEPUTY DIRECTOR



May 5, 2016

Kusao & Kurahashi, Inc.  
Attn: Keith Kurahashi  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, HI 96822

Dear Mr. Kurahashi,

Subject: Chapter 343 Hawaii Revised Statutes Draft Environmental Assessment  
Ainahau Vista II  
2428 Tusitala Street and 2423 and 2429 Ala Wai Boulevard  
TMK: 2-6-24:70 and 71

The Department of Design and Construction, Facilities Division had the following comments for the Ainahau Vista II Draft Environmental Assessment. Please see the enclosure for their comments.

Thank you for the opportunity to review and comment. If there are any further questions, please call Clifford Lau from our Facilities Division at 768-8483.

Sincerely,

  
Robert Kroning, P.E.  
Director

RJK:ms(643564)

Enclosure

cc: Stan Fujimoto, Hawaii Housing Finance and Development Corp.

**AINAHAU VISTA AND AINAHAU VISTA II – EXEMPTION TO ZONING REQUIRMENTS (LAND USE ORDINANCE)**

1. Exemption from Chapter 21, Article 3, Section 21-9.80-5(c)(2), Land Use Ordinance, as amended, relating to transitional height setback: Aina hau Vista - to allow an encroachment into the transitional height setback of 3.67 feet at the roof level to 4.67 feet at the penthouse level (elevator shaft) along the Tusitala Street side above 40 feet and Aina hau Vista II to allow an encroachment into the transitional height setback of 4.92 feet at the top of the parapet wall on the east face of the building to 0 feet at the 40-foot level of the building wall.
2. Exemption from Chapter 21, Article 6, Section 21-6.20, Land Use Ordinance, Table 21-6.3, as amended, relating to the amount of off-street parking, to allow the provision of 46 parking stalls (for residents) rather than the required 169 parking stalls (1 stall per unit). Although no guest parking is required in the Waikiki Special District, 5 guest parking stalls are provided.
3. Exemption from Chapter 21, Article 3, Section 21-9.80-5, Land Use Ordinance, as amended, Table 9.6(B), relating to maximum density, to allow an FAR of 1.82 with the provision of 35% open space rather than the 50% open space required. This would allow 94,842 square feet of floor area, which exceeds the maximum allowable floor area by about 29,894 square feet (based on allowable FAR with 35% open space).

Do not recommend granting of the exemption. The additional park dedication will reduce the impact of the new residences on current park facilities.

Exemption from Chapter 21, Article 9, Section 21-9.80-5(b) and Table 21-9.6(B) related to side yards to allow an encroachment of a loading stall maneuvering space 12-foot wide by 10-foot deep into the west boundary side yard (120-square foot encroachment).

**AINAHAU VISTA II – EXEMPTION TO PARK DEDICATION REQUIREMENT**

Exemption from the Park Dedication requirements, Chapter 22, Article 7, ROH, including exemption from the Park Dedication permit process, to allow the provision of about 6,430 square feet for park dedication, portions of which encroach into the required side and rear yards. Proposed park dedication includes a private park (3,586 square feet), “Victory Garden” (1,692 square feet), and two multi-purpose recreation rooms (1,152 square feet). The park dedication requirement is 9,484 square feet. (10% of 94,842 square feet, maximum floor area or 169 units x 110 square feet = 18,590 square feet, whichever is less).

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Gary Nakata, Director  
Department of Community Services  
715 South King Street, Suite 311  
Honolulu, Hawaii 96813

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Nakata:

Thank you for your letter dated April 15, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your determination that the Project "will have no adverse impacts on any Department of Community Services' activities or projects at this time."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



DEPARTMENT OF COMMUNITY SERVICES  
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 768-7762 • FAX: 768-7792

KIRK CALDWELL  
MAYOR



GARY K. NAKATA  
DIRECTOR

BARBARA YAMASHITA  
DEPUTY DIRECTOR

April 15, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment  
Ainahau Vista II**

We have reviewed your letter dated February 19, 2016, and the enclosed copy of the Draft Environmental Assessment.

Our review of the documents provided indicates the proposed project will have no adverse impacts on any Department of Community Services' activities or projects at this time.

Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

  
Gary K. Nakata  
Director

GKN:jc

cc: Stan Fujimoto, Hawaii Housing Finance and Development Corporation,  
Department of Business Economic Development and Tourism



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Ford N. Fuchigami, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Fuchigami:

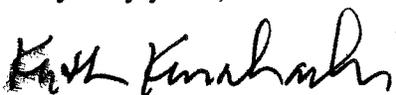
Thank you for your letter dated April 8, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

The Applicant appreciates that you have determined that "The subject project is not expected to significantly impact the State highway facility."

The Applicant understands that a permit from the Department of Transportation, Highway Division is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



DAVID Y. IGE  
GOVERNOR

RECEIVED  
HAWAII HOUSING FINANCE  
DEVELOPMENT CORP

2016 APR 13 2:31



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

FORD N. FUCHIGAMI  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

IN REPLY REFER TO:  
STP 8.1954

April 8, 2016

**TO:** THE HONORABLE CRAIG K. HIRAI, EXECUTIVE DIRECTOR  
HAWAII HOUSING FINANCE & DEVELOPMENT CORPORATION  
DEPARTMENT OF BUSINESS ECONOMIC DEVELOPMENT & TOURISM

**ATTN:** STAN FUJIMOTO, CHIEF  
DEVELOPMENT SECTION

**FROM:** FORD N. FUCHIGAMI  
DIRECTOR OF TRANSPORTATION

**SUBJECT:** AINAHAU VISTA II  
DRAFT ENVIRONMENTAL ASSESSMENT  
WAIKIKI, OAHU, HAWAII  
TMK: (1) 2-6-024: 070 and 071

The subject project is not expected to significantly impact the State highway facility. However, a permit from DOT Highways Division, is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

c: Keith Kurahashi (Kusao & Kurahashi, Inc.)



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
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June 14, 2016

Mr. Russell Y. Tsuji, Land Administrator  
Department of Land and Natural Resources  
Land Division  
P.O. Box 621  
Honolulu, Hawaii 96809

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Tsuji:

Thank you for your letter dated March 23, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

In response to your Engineering Division we offer the following response (in the order set forth in their memorandum).

1. The Applicant appreciates your confirmation that the Project Site is located in Zone AE, according to the Flood Insurance Rate Map (FIRM), an area regulated by the National Flood Insurance Program (NFIP). The project site is located in the Zone AE (flood elevation 6 feet)
2. The Project will comply with the rules and regulations of the NFIP presented in Title 44 of the Code of Federal Regulations (44CFR). The Applicant will work with Mr. Mario Siu-Li at the City and County of Honolulu Department of Planning and Permitting to ensure compliance with local flood ordinances.

Due to the project site being within the AE (flood elevation 6 feet) flood zone, the lowest habitable floor will be on the second floor with only an elevator lobby, mechanical room and stairwell exits on the ground floor.

Mr. Russell Y. Tsuji  
Page 2

We appreciate that the Land Division has no comments on the DEA.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive, slightly slanted style.

Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

DAVID Y. IGE  
GOVERNOR OF HAWAII



SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 23, 2016

Kusao & Kurahashi, Inc.  
Attention: Mr. Keith Kurahashi  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Department of Business Economic Development & Tourism  
Hawaii Housing Finance & Development Corporation  
Attention: Mr. Stan Fujimoto  
677 Queen Street  
Honolulu, Hawaii 96813

Dear Messrs. Kurahashi and Fujimoto:

SUBJECT: Draft Environmental Assessment (DEA) for Aina hau Vista II

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji  
Land Administrator

Enclosure(s)  
cc: Central Files

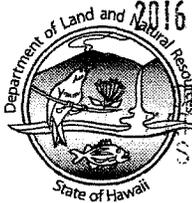


DAVID Y. IGE  
GOVERNOR OF HAWAII

RECEIVED  
LAND DIVISION



16 FEB 24 AM 11:03 ENGINEERING  
SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT



2016 FEB 26 AM 11:41

DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 23, 2016

MEMORANDUM

TO: FR:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Oahu District
- Historic Preservation

FROM: [Signature]  
SUBJECT:

Russell Y. Tsuji, Land Administrator  
Draft Environmental Assessment for Ainahau Vista II (an affordable senior rental development)

LOCATION: 2428 Tusitala Street and 2423 and 2429 Ala Wai Blvd.; TMK: (1) 2-6-024:070 and 071

APPLICANT: Hawaii Housing Development Corporation

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **March 22, 2016**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: [Signature]

Cary S. Chang, Chief Engineer

Print name: \_\_\_\_\_

Date: 2/26/16

cc: Central Files

RECEIVED  
LAND DIVISION  
2016 FEB 26 AM 11:10  
DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/ Russell Y. Tsuji

Ref.: Draft Environmental Assessment for Ainahau Vista II  
Oahu.015

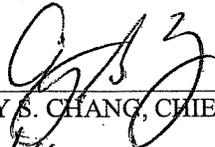
COMMENTS

- ( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_.
- (X) **According to the Flood Insurance Rate Map (FIRM), the project site is located in Zone AE. The National Flood Insurance Program regulates developments within Zone AE. Applicable regulations are indicated in bold letters below.**
- ( ) The correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- (X) **The project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.**

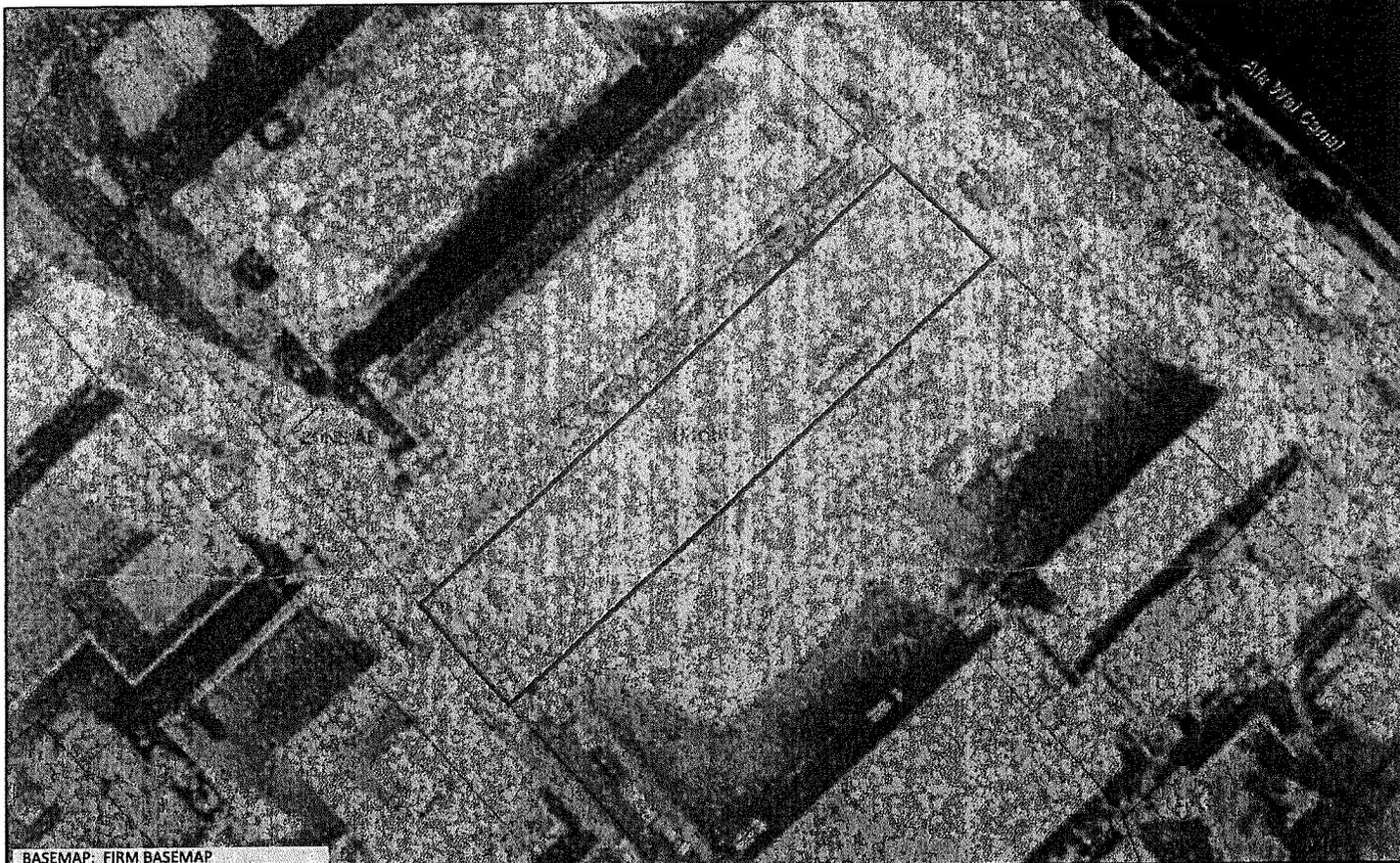
Be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- (X) **Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.**
- ( ) Mr. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- ( ) Mr. Stanford Iwamoto at (808) 241-4846 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
- ( ) Additional Comments: \_\_\_\_\_  
\_\_\_\_\_
- ( ) Other: \_\_\_\_\_  
\_\_\_\_\_

Should you have any questions, please call Mr. Rodney Shiraishi of the Planning Branch at 587-0258.

Signed:  \_\_\_\_\_  
CARTY S. CHANG, CHIEF ENGINEER

Date: 2/24/16



# Flood Hazard Assessment Report

www.hawaiiifip.org

TMK (1) 2-6-024:071

## Property Information

COUNTY: HONOLULU  
 TMK NO: (1) 2-6-024:071  
 WATERSHED: ALA WAI  
 PARCEL ADDRESS: UNKNOWN ADDRESS  
 HONOLULU, HI 96815

## Notes:

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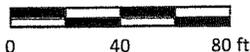
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## Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 05, 2014  
 LETTER OF MAP CHANGE(S): NONE  
 FEMA FIRM PANEL: 15003C0368G  
 PANEL EFFECTIVE DATE: JANUARY 19, 2011

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: NO  
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO  
 FOR MORE INFO, VISIT: <http://dlnreng.hawaii.gov/dam/>



*Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.*

*If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.*

## FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: legend does not correspond with NFHL)

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equalled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	<b>Zone A:</b> No BFE determined.
	<b>Zone AE:</b> BFE determined.
	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

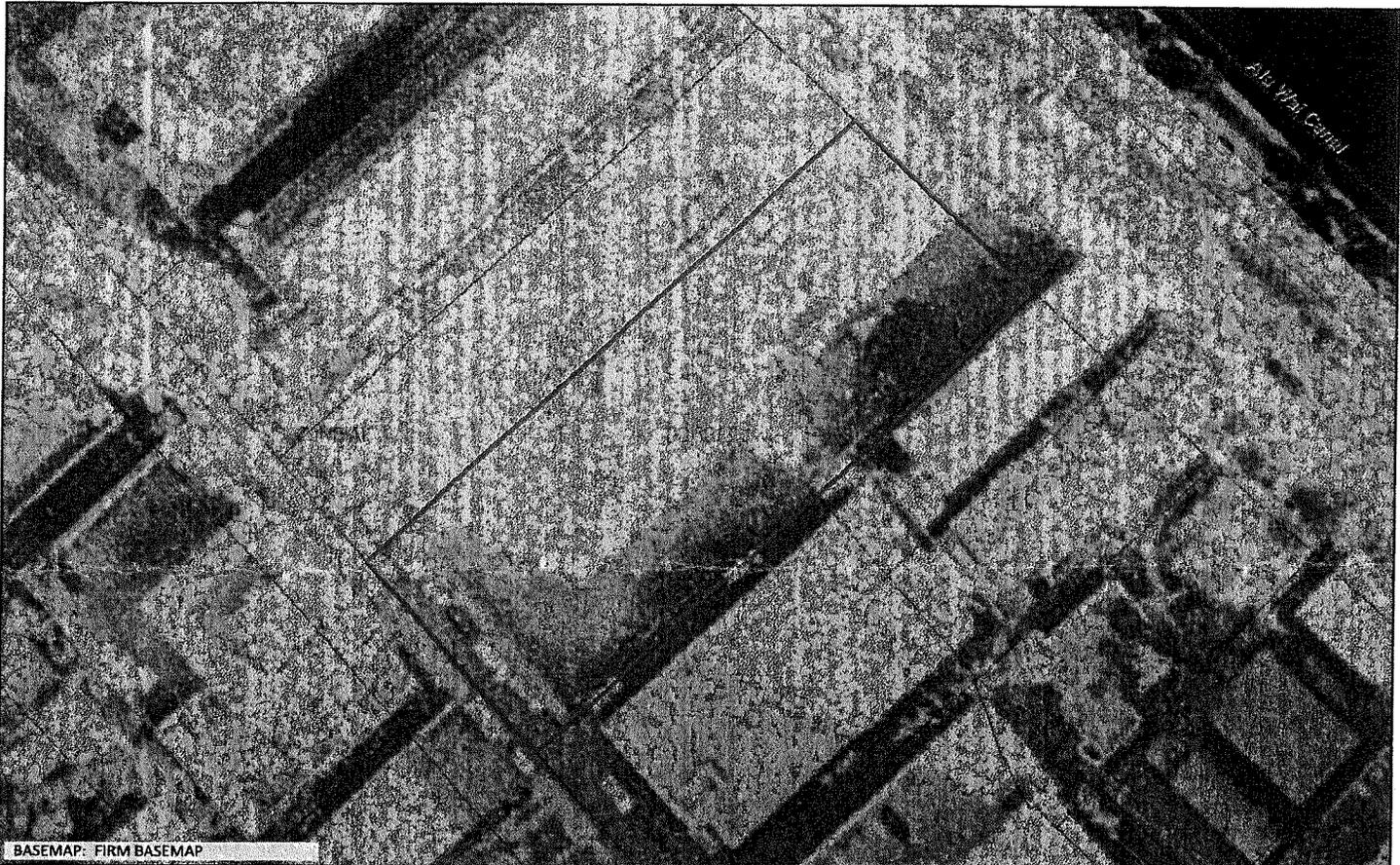
**NON-SPECIAL FLOOD HAZARD AREA** - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	<b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
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	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.
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## OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
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BASEMAP: FIRM BASEMAP



# Flood Hazard Assessment Report

www.hawaiiinfip.org

TMK (1) 2-6-024:070

## Property Information

COUNTY: HONOLULU  
 TMK NO: (1) 2-6-024:070  
 WATERSHED: ALA WAI  
 PARCEL ADDRESS: UNKNOWN ADDRESS  
 HONOLULU, HI 96815

## Notes:

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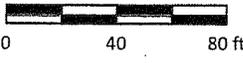
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## Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 05, 2014  
 LETTER OF MAP CHANGE(S): NONE  
 FEMA FIRM PANEL: 15003C0368G  
 PANEL EFFECTIVE DATE: JANUARY 19, 2011

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: NO  
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO  
 FOR MORE INFO, VISIT: <http://dlnreng.hawaii.gov/dam/>



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*If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.*

## FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

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**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

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	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	<b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.

### OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
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STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 23, 2016

MEMORANDUM

RECEIVED  
LAND DIVISION  
2016 MAR 22 PM 2:42  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

From TX:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division - Oahu District
- Historic Preservation

TO: FROM: Russell Y. Tsuji, Land Administrator  
 SUBJECT: Draft Environmental Assessment for Aina hau Vista II (an affordable senior rental development)

LOCATION: 2428 Tusitala Street and 2423 and 2429 Ala Wai Blvd.; TMK: (1) 2-6-024:070 and 071  
 APPLICANT: Hawaii Housing Development Corporation

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **March 22, 2016.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

- (  ) We have no objections.
- (  ) We have no comments.
- (  ) Comments are attached.

Signed: Chae

Print name: Timmy Chae  
Date: 2/25/16

PL



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. George I. Atta, FAICP, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 So. King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Attention: Joette Yago, Staff Planner  
Urban Design Branch

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Atta:

Thank you for your letter dated March 23, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

**A. SITE DEVELOPMENT DIVISION**

1. Civil Engineering Branch:
  - a. The Final Environmental Assessment (FEA) Section 7.7.1 will note that a trenching permit is required. If anticipated, a dewatering permit will also be included.
  - b. Section 8.6.4:
    - i. The Project will comply with the prevailing storm water quality standards at the time the construction/grading plans are submitted for review and approval.
    - ii. The last sentence of the second paragraph will be revised to read: "General distribution of surface runoff from the Project site in terms of magnitude and direction shall be maintained."

2. Wastewater Branch:

The Applicant appreciates that the Wastewater Branch has “no comments to the DEA at this time”.

3. Traffic Review Branch:

- a. A time line or phasing plan of the anticipated date to obtain major building permits for construction work, including the projected date of occupancy will be prepared by the Applicant in a format acceptable to DPP. The time line will identify when the construction management plan (CMP) will be submitted for review and approval. The Applicant understands that the CMP should be submitted for review and approval prior to the issuance of building permits for major construction work.
- b. The CMP will be prepared in accordance with your recommendations and requirements.
- c. Bicycle racks will be provided on the property for employees, as needed. The bicycle racks will be easily accessible and in a secure location.
- d. Construction plans for all work within or affecting public streets and traffic control plans during construction will be submitted to DPP, Traffic Review Branch, for review and approval. Adequate vehicular sight distance will be provided and maintained at all driveways to pedestrians and other vehicles. Driveway grades shall not exceed 5% for a minimum distance of 25 feet from the back of the designated pedestrian way. The driveway, in relation to any on-site parking and loading, shall be configured such that vehicles enter and exit the property front first.

**B. URBAN DESIGN BRANCH:**

1. As you have noted the orientation and location of the building is dictated by the existing structure and the layout of the parking lot. Through yard averaging, we should be able to eliminate any encroachment into the front yard. There will be a very slight encroachment into the height setback from about a 40-foot height, beginning at 0 and increasing to about 4 feet up to the 80 foot height. The encroachment into the height setback is needed to accommodate our open parking layout (parking stalls and required aisle width) on the ewa side of the building
2. The applicant has found that the number of parking stalls needed for an affordable senior rental development are significantly less than that for a market rental development, simply because at the time seniors decide to move into this type of development, most do not drive. DPP has also allowed this reduction based on a process to ensure that any senior that owns a car will have a parking stall on-site. If the applicant runs out of parking stalls, only senior applicants that do not own a vehicle will be allowed to rent. Initially the applicant was going to request that the exemption from provision of a full size loading zone for Ainahau Vista be continued for Ainahau Vista II. However, due to concerns raised by neighbors at the Waikiki Neighborhood Board meeting, the applicant decided to provide a full

size loading zone which only worked by allowing encroachment into the required yard. With the expectation that the maneuvering area for the loading zone will be used only on rare occasion, this side yard encroachment is not expected to have a significant impact on the neighboring property.

3. The increase in floor area over the 1.9 floor area ratio (FAR) is needed to provide the additional affordable senior rental units. The reduction in open space is needed to accommodate the building and parking to accommodate this affordable senior rental development. The allowance of 201H exemptions for affordable housing units was intended to accommodate the development of affordable rental units and actually, the exemptions being requested for this development is not significant in relation to the number of affordable units being provided and the level of affordability, with most units being offered at 50% and below of median income, with a few at 60% of median income. All units except for the resident managers unit will be affordable.
4. The affordable senior housing Project is located in Waikiki because the applicant already owns the land and there is room to develop an additional building on the property. In this instance land cost is zero for the Project. The applicant decided not to pursue providing transitional housing for the homeless or non-senior affordable housing. The applicant found that the Project works without the additional funds that may have been available with the provision of housing for the homeless or non-seniors. Although not a reason for the applicant's decision, the neighbors were extremely concerned about transitional housing for the homeless.
5. The applicant has developed a program to create very affordable senior rental units and additional design costs would have to be passed on to the senior's rental costs. The applicant will ask the architect to consider any low cost method of mitigating the blank wall at the Diamond Head elevation.

Your letter and this response will be included in the FEA.

Very truly yours,



Keith Kurahashi

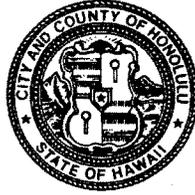
cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



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.dpp.org](http://www.honolulu.dpp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



GEORGE I. ATTA, FAICP  
DIRECTOR

ARTHUR D. CHALLACOMBE  
DEPUTY DIRECTOR

2016/ELOG-417(JY)

March 23, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-202  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Chapter 343, Hawaii Revised Statutes  
Draft Environmental Assessment  
Ainahau Vista II - Affordable Senior Rental Housing  
2428 Tusitala Street and  
2423 and 2429 Ala Wai Boulevard - Waikiki  
Tax Map Key 2-6-24: 70 and 71**

We have reviewed the above Draft Environmental Assessment (DEA), received February 22, 2016, for the above-mentioned Project, and have the following comments:

**A. Site Development Division:**

**1. Civil Engineering Branch:**

- a. Section 7.7.1: A trenching permit is required. Also, if anticipated, include dewatering permit.
- b. Section 8.6.4:
  - i. The Project shall comply with the prevailing storm water quality standards at the time the construction/grading plans are submitted for review and approval.
  - ii. Please revise the last sentence of the second paragraph to read: "General distribution of surface runoff from the Project site in terms of magnitude and direction shall be maintained".

2. Wastewater Branch: Construction plans are being reviewed with no comments to the DEA at this time.

3. Traffic Review Branch:

- a. A time line or phasing plan of the anticipated dates to obtain major building and occupancy permit(s) shall be prepared by the Applicant in a format acceptable to the Department of Planning and Permitting. The time line should identify when the construction management plan (CMP) will be submitted to the City for review and approval. Typically, the CMP should be submitted for review and approval prior to the issuance of building permits for major construction work.
- b. A CMP shall identify the type, frequency and routing of heavy trucks and construction related vehicles to the Project site. Every effort will be made to minimize impacts from these vehicles and related construction activities. The CMP should include provisions to limit vehicular activity to periods outside of the peak periods of traffic, utilizing alternate routes for heavy trucks, staging locations for construction workers and vehicles and other mitigation measures related to traffic and parking. The Applicant shall document the condition of roadways prior to the start of construction activities and provide remedial measures, as necessary, such as restriping, road resurfacing and/or reconstruction if the condition of the roadways has deteriorated as a result of the construction activities.
- c. Every effort shall be made to provide bicycle racks on the property, primarily for use by employees. The bicycle racks should be easily accessible and placed in a secure location.
- d. Construction plans for all work within or affecting public streets shall be submitted for review and approval. Traffic control plans during construction should also be submitted for review and approval, as required. Vehicular access points shall be constructed as standard City dropped driveways. Adequate vehicular sight distance shall be provided and maintained at all driveways to pedestrians and other vehicles. Driveway grades shall not exceed five percent (5%) for a minimum distance of 25-feet from the property line. The driveway, in relation to any on-site parking and loading, shall be configured such that vehicles enter and exit the property front first.

B. Urban Design Branch:

1. While the orientation of the building is dictated by the existing structure and lot configuration, there should be some discussion why the proposed building must encroach into the front yard and height setbacks.

Mr. Keith Kurahashi  
March 23, 2016  
Page 3

2. Provide some discussion why the required number of off-street parking stalls should be reduced. Explain why the maneuvering for the loading stall must encroach into the required side yard.
3. Provide some discussion why the floor area ratio (FAR) is more than 1.9 and why the open space is less than the required 50%.
4. Discuss why this affordable senior housing Project should be located in Waikiki where the land costs are generally higher. Discuss the previous proposal of providing housing for transitional homeless or affordable housing for non-senior citizens and why they are no longer part of this Project.
5. Discuss how the visual impact of the blank wall on the Diamond Head building elevation could be mitigated.

Should you have any further questions, please contact Joette Yago of our Urban Design Branch at 768-8034 or [jyago@honorolulu.gov](mailto:jyago@honorolulu.gov).

Very truly yours,

*FOR*   
George I. Atta, FAICP  
Director



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Cynthia Albert  
2428 Tusitala Street, #310  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Albert:

Thank you for your letter dated on March 22, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.
2. The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

3. The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuakehau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

4. The concept of developing Ainahau Vista II project for “low income and chronically homeless persons” in the Project next to the existing affordable senior rental unit was dropped. The Project will be developed for seniors similar to seniors that can rent, and are living in, the existing Ainahau Vista I Project, with the same income and age requirement.

We have had two meetings at the Waikiki Neighborhood Board (Board) and expect to have several meetings before the City Council before a decision is made by the City Council. At both Board meetings the proposed developed was described and renderings, site plans, floor plans and elevations were shared. The project was clearly presented and based on concerns presented at the first meeting the project was modified to address some of those concerns and presented to the Board with necessary plans.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

Mr. Stan Fujimoto  
Hawaii Housing  
877 Queen Street  
Honolulu HI 96813

RECEIVED  
HAWAII HOUSING FINANCE  
DEVELOPMENT CORP

2016 MAR 28 2:39

March 22, 2016

I am writing you to let you know I oppose the building of a second tower at Airakau Ula. Reasons listed below.

1. Streets in area are all one lane, one way streets. Parking on streets are over maximum, this affects emergency services.
2. You will be disrupting the Royal site and IWE on the grounds of the last remaining land of King Kalakaua, Queen Liliuokalani and Princess Kaiulani.
3. Placing low income and chronically homeless people next to serious, trusting, defenseless seniors? Are you taking responsibility for the seniors should any problems arise? Would you build this building next to your grand parents?

Have a second meeting to hear all concerns. The first and last meeting in 2014, nothing

definite was proposed and now  
you want to build.

Cynthia Albert

Cynthia Albert

2428 Tusitala St. #310

HON. HI 96815

PH 808. 222 0964

cc: Mr Keith Karahashi

Representative Tom Brown

Mayor Kirk Caldwell

Kim O Carvalho, IHS

Mr Stan Fujimoto

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Cynthia Albert  
2428 Tusitala Street, #310  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Albert:

We are not sure why you had addressed a letter to Keith Carvalho of IHS. Mr. Carvalho is not involved in this Project.

We would like to respond to your comments in that letter dated March 22, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

The concept of developing Ainahau Vista II project for "low income and chronically homeless persons" in the Project next to the existing affordable senior rental unit was dropped. The Project will be developed for seniors similar to seniors that can rent, and are living in, the existing Ainahau Vista I Project, with the same income and age requirement.

1. The applicant is not working toward providing homes for the homeless, but is focusing on an affordable senior rental development. The demand for affordable rentals for seniors and family is extremely high and other opportunities for providing these affordable rentals will be explored by the applicant, as other properties become available for sale. The opportunity at this Project site that the applicant owns will continue to be pursued. Ainahau Vista I has worked well and this second development is expected to similarly do well in providing badly needed affordable rentals for seniors.
2. The applicant owns the land proposed for Ainahau Vista II and the affordable senior rental development works with this property. The applicant is not involved in the

Sand Island Project, and usually develops sites that are near other residential or apartment developments.

3. The cost for low rise apartment buildings and the number of these buildings that would be required to develop about 62 affordable rental units would be cost prohibitive, not to mention the cost of renovation cost that may be needed.
4. The applicant is not aware of any elementary schools that have been closed that are available for the development of affordable rentals. Again the applicant would not give up on the Project site, but would welcome other opportunities to provide additional affordable rental units in different communities. The applicant has developed ten affordable rental developments in different parts of the island.
5. The applicant has bid on projects that have been offered by the City and State and will continue to pursue those opportunities as they become available to help increase the supply of affordable rental units.

As mentioned to you in an earlier letter, the makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuakehau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

Keith Carvalho

IHS

546 Kaahiki Street

Honolulu, HI 96817-4630

MARCH 22, 2016

Your options on high demand and limited inventory of affordable housing needs opinions from the public. I am concerned, a building is to be built in Waikiki, Aunahau Vista. This project is for low income seniors mixed with chronically homeless people. Also stated low income and chronically homeless, what happened to seniors.

Please read attached letter.

Solutions:

1. Land fronting Ala Wai gold course on Kapahulu. Land mass larger than the Royal site at Aunahau Vista.

Area is home for the homeless.

2. Upgrade Sand Island project, which is a failure. Purchase plans for tiny houses, volunteers to build.

Plan open market for Sand Island workers and close to "Sand Island community."

3. Purchase low level apartment buildings.  
Cost less than building.
4. Many elementary schools can be closed due to low student body or close to other elementary schools.  
Kaimuki area.
5. A 62 unit, 9 floor apartment can be built on any State or City and County land.

Why build it on the Royal site, Aunahau Vista, the last small green well cared for small space in Waikiki.

Cynthia Albert  
Cynthia Albert  
2428 Tusitola St #310  
Honolulu, HI 96815  
PH 808 222 0964

cc: Mr Keith Kawakashi  
Representative Tom Browne  
Mayn Kirk Credwell  
Kimo Carvalho JHS  
Mr Stan Fujimoto

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Beryl Clark  
2421 Tusitala Street, Apt. 1802  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Clark:

Thank you for your letter dated March 22, 2016 regarding the Draft Environmental Assessment (“DEA”) for Ainahau Vista II Affordable Senior Rental Project (“Project”).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The comment on smaller units was presented in an earlier proposal. The earlier proposal was for a studio unit with 275 square feet. The current proposal sizes the studio units at 377 square feet. For your information, one of our more popular affordable senior projects in Honolulu is made up of 90 units of approximately the same size.

There is a heavy demand for affordable senior rentals and the applicant hopes to meet that demand. All of the seniors that live in the existing Ainahau Vista benefitted from its development. Had the opposition at that time stopped the project, these seniors would have had to find other accommodations. The applicant is again hoping to accommodate seniors in a second midrise tower on the property. These new senior residents will have to meet the same criteria as the seniors in the first tower, to qualify to rent.

We are providing relaxing outdoor landscaped areas for the seniors, although not as large as the existing open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and further reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human bone fragment remains were brought onto the site and found in one specific location (one archaeological inventory survey trench).

The applicant is very supportive of seniors and most of the affordable housing units that they own are for seniors.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

Beryl Clark  
2421 Tusitala Street, Apt. 1802  
Honolulu, HI 96815

RECEIVED  
HAWAII HOUSING FINANCE  
DEVELOPMENT CORP  
2016 MAR 28 1:37

March 22, 2016

Mr. Stan Fujimoto  
Hawaii Housing Finance & Development Corp.  
677 Queen Street  
Honolulu, HI 96813

Dear Mr. Fujimoto:

Please accept this letter as my opposition to the planned addition of a second tower to Ainahou Vista affordable senior rental on Tusitala Street.

Seattle has been stated as having similar residencies that are even smaller in size. Hawaii is not Seattle and Waikiki certainly is vastly different!

Many of the senior residents in the Ainahou Vista use walkers, some use wheelchairs and they frequently enter and exit the premises and enjoy exercising in the grassy park and surrounding area. Yesterday, on the bus, one resident told me how stressed she felt by the proposed building, and lamented 'whatever', these are human beings, too!

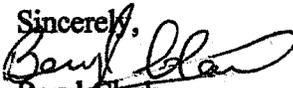
Tusitala Street is one-way, is used by ambulances, handi-vans, taxis, fire trucks, garbage trucks, mail vans, Oceanic Cable, Hawaiian Tel, in addition to the people who reside in the area.

Please respect Hawaiian values and allow the Hawaiian remains that are still there to rest in peace and, too, let the seniors already in the Ainahou Vista and those yet to come enjoy their remaining time in peace.

I am a senior and live on Tusitala Street. I have worked hard since the age of 15. We seniors have served our time and are vulnerable and trying to enjoy and make the best of the years left.

Please do not approve the planned addition of a second tower to the Ainahou Vista.

Thank you for your consideration.

Sincerely,  
  
Beryl Clark

cc: Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.,  
2752 Woodlawn Dr., Ste. 5-217  
Honolulu, HI 96822



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Senior Living at Ainahau Vista I  
2428 Tusitala Street  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Senior Living at Ainahau Vista I:

Thank you for your letter received on March 24, 2016 regarding the Draft Environmental Assessment (“DEA”) for Ainahau Vista II Affordable Senior Rental Project (“Project”).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The concept of developing Ainahau Vista II project for “low income and chronically homeless persons” in the Project next to the existing affordable senior rental unit was dropped. The Project will be developed for seniors similar to seniors that can rent, and are living in, the existing Ainahau Vista I Project, with the same income and age requirement.

The additional residents from Ainahau Vista II will be seniors very similar to yourself and other seniors in Ainahau Vista I. They will be subject to the same income and age requirement. Just as you and your existing neighbors were fortunate enough to live in these affordable rental units, these additional affordable senior rental units will provide housing for additional fortunate seniors.

When Ainahau Vista I was first presented to the neighbors the concerns you raise were raised by those neighbors about additional traffic, pedestrians and vehicular being added to Tusitala Street. Had the City listened and denied the Project, Ainahau Vista I would not have been built and you would be living elsewhere and not have the opportunity to live independently in an affordable senior rental in Waikiki. The applicant hopes that the State and the City in their wisdom will provide another opportunity for more badly needed affordable senior rentals in Waikiki.

The inconvenience of construction will be for a limited period of time, probably about a year. The contractor will be asked to minimize where possible impacts to the seniors and the neighboring properties. As much as possible construction equipment and vehicles will be stage on the Project site.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. The applicant based on concerns raised at the first Waikiki Neighborhood Board meeting is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

*Prudential Insurance broke away from managing properties and renamed it Locations.*

This comment and the following comments and questions do not relate specifically to the Ainahau Vista II project. However, Prudential Insurance has never managed Ainahau Vista I, or any other of the developer's projects. Prudential Locations merely changed its name to Locations LLC. There has been no change in management, since Ainahau Vista I was completed.

*This is when our rent started to increase.*

There has been no change in the way rents are reviewed for adjustment every year. Rents generally increase every year, since the building was constructed.

*How much does Locations get from the state to manage low income residences?* Locations is not paid by the state for managing Ainahau Vista I. I am not aware if Locations manages any other low income residences for the state. The applicant pays Locations for managing this and other Vista projects.

*We don't know where we can get answers to questions like this? How come electricity costs go down and rents go up?*

If there are questions such as these, please contact the Resident Manager and if she is unable to help, she can refer you to the Locations LLC Property Management offices who would be able to help.

*Who pays for the yard work and maintenance work – is coming from our rent?*

The yard work and maintenance are paid for by the non-profit developer to the private property management company, Locations LLC. The rent paid by tenants in Ainahau Vista I, and it will also be the case for Ainahau Vista II, is not sufficient to cover even the loan costs to develop a low-income rental project.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

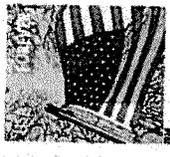


Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



2428 Tinsdale St  
Hon 96815



H H F D C Project Manager  
677 Queen St  
Honolulu HI 96813

Stan Fujimoto 96813517699



To Stan Fujimoto

DEVELOPMENT CORP

2016 MAR 24 A 10:40

As a Senior living at Ainalou Vista I I have some objections to the building of the Ainalou Vista II Project.

Planning on housing the chronically homeless, a number who have mental illness leading to uncertain behaviors, is very upsetting to the Seniors now residing at Vista I.

With the plan to have the two lots/buildings sharing one area is very concerning to us - this means that over 70 people walking through Vista I will pass the front door where seniors wait for pick-up for the Handi Van, residents waiting for their families being picked-up & workers who come to assist the elderly.

There will also be another 20 plus autos, plus extra handicab pick-ups, social workers & other visitors all coming through the parking area.

When construction begins large vehicles, material workers all will come through Vista I parking lot. Construction vehicles are not what you call noiseless, & the dust & the confusion will be very hard for the seniors to handle.

Also parking on the street in front of the construction area will be replaced as the large trucks & equipment will need room to maneuver.

Senior Resident at  
Ainalou Vista I

2016 MAR 24 A 0:40

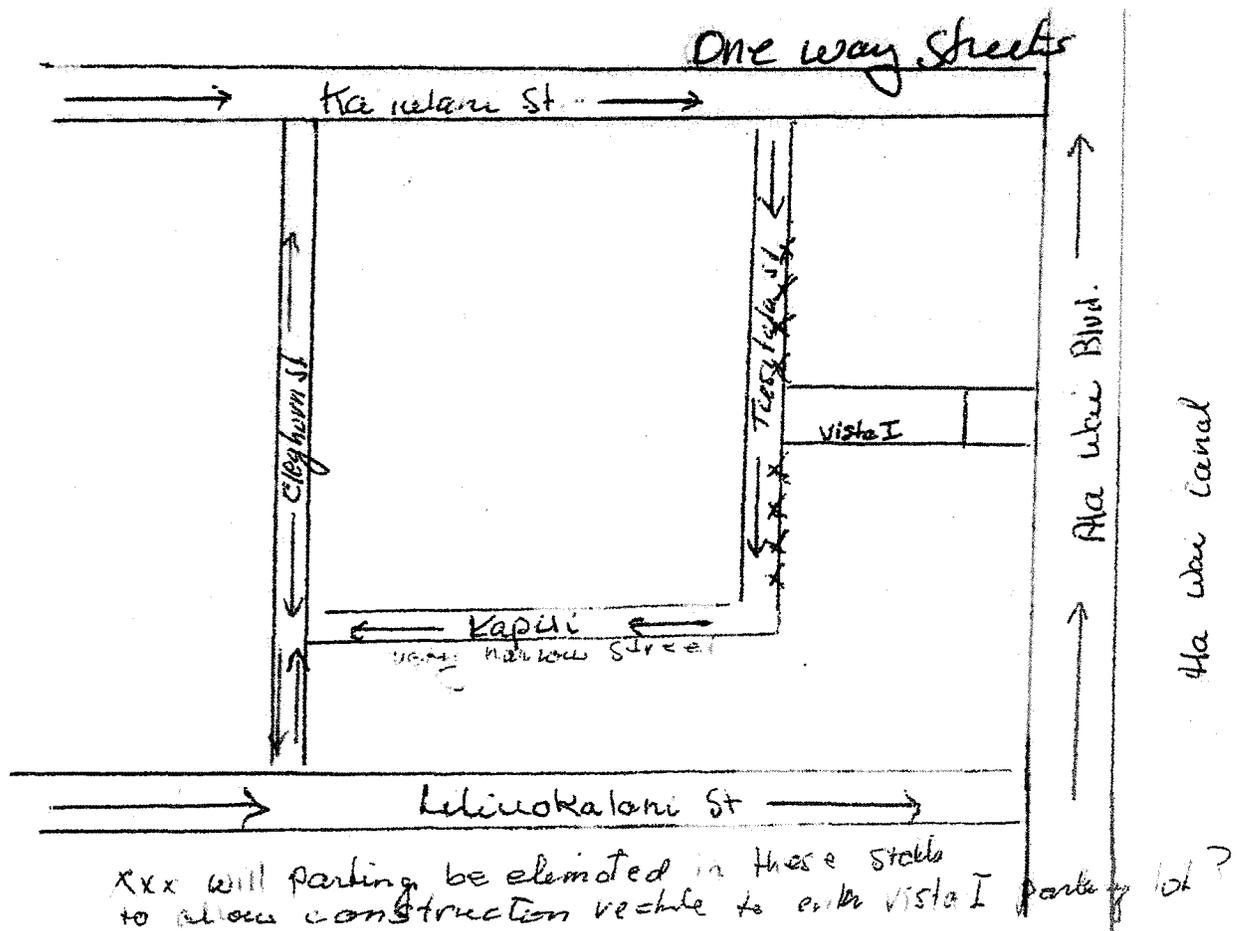
As shown on the diagram of the area being considered for building of Aiea Vista II, all the streets are one way streets.

Tuesitaka & Kapuli streets are narrow one way with on-street parking.

This is a high density area with a lot of local traffic & when there is an emergency - fire trucks, ambulances, there is a back-up & delay of traffic.

With construction, of up to one year, this is of great concern to all residents of the area.

The noise of large vehicles, both moving around & the backing up beeps will be a great upheaval in the lives of our residences.



2016 MAR 24 A 0:40

When I moved into low income housing  
it was a reasonable rent with Prudential  
Insurance as property manager.

Prudential Insurance broke away from  
managing properties & renamed it Locations LI.  
This is when our rent started to be increased.

How much does 'Locations' get from the State  
to manage low income residences?

We don't know where we can get answers  
to question like this?

How come electricity costs go down & rents  
go up?

Who pays for the yard work & maintenance work -  
is coming from our rent.?

Many questions we would like to be  
answered.

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Susan Danforth  
2421 Tusitala Street,  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Danforth:

Thank you for your letter received on March 21, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space.

The concept of including "low income and chronically homeless persons" in the Project next to the existing affordable senior rental unit was dropped. The Project will be rented to seniors similar to the existing Ainahau Vista Project, with the same income and age requirement.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. The applicant based on concerns raised at the first Waikiki Neighborhood Board meeting is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

The Project site is owned by the applicant and this was a major factor in locating the Project on this site which will allow development of an affordable senior rental, which will be similar to the existing development on the property and will provide much needed affordable senior rentals in Waikiki. The applicant is constantly looking for other site to develop affordable rental housing for seniors and families and if the sites you mention become available at a reasonable cost, these other sites may provide opportunities for additional affordable rental units.

We are not sure of the lo'i (taro patch) you mention in your letter.

In response to the concerns raised by the Petition:

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. The applicant based on concerns raised at the first Waikiki Neighborhood Board meeting is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space.

The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuhekau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

The Primary Urban Center Development Plan section on “**Protecting and Enhancing Natural, Cultural and Scenic Resources**” has a policy section that states as follows:

*“ Policies to protect and enhance these resources include:*

- ***Preserve historic and cultural sites:*** *Special emphasis should be placed on sites and associated settings that are unique, of special significance, or are in good condition.*
- ***Preserve and protect natural resource and constraint areas:*** *Establish an urban community boundary to define urban development and protect areas outside the boundary for their open space, scenic, and resource values.*
- ***Preserve panoramic views of natural landmarks and the urban skyline:*** *This includes important vistas and focused views of significant natural and urban features and skyline profiles that make up or frame the PUC from publicly accessible places.*
- ***Improve access to shoreline and mountain areas:*** *This includes continuous public access along Oahu’s southern shoreline as well as access to its mauka natural environments and features.*
- ***Develop stream greenbelts:*** *Keep or create mauka-makai connections and views up and down important streams and create public walkways where possible and appropriate.*
- ***Provide parks and active recreation areas:*** *Create or strengthen parks, plazas and other conveniences throughout the PUC, especially in more populated areas as a balance to the built environment, for recreation, social interaction and leisure interludes.”*

• ***Preserve and protect natural resource and constraint areas***

In order to address the historic and cultural nature of this site, the Project has undergone an archaeological review and that review resulted in the following:

The Department of Land and Natural Resources (DLNR) in a letter dated October 18, 2005, indicated their concurrence with Cultural Survey’s Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

• ***Preserve panoramic views of natural landmarks and the urban skyline:***

This Project will not affect panoramic views of natural landmarks or the urban skyline. The Project is an infill development, surrounded by urban development.

- ***Improve access to shoreline and mountain areas:***

This Project will not affect access to the shoreline or mountain areas.

- ***Develop stream greenbelts:***

The Project is not located in a stream greenbelt. It is situated makai of the Ala Wai Drainage Canal and is separated from the canal by Ala Wai Boulevard. There is a promenade area along the makai side of the canal.

- ***Provide parks and active recreation areas:***

This private open space provided on the Project site would not be considered a park and active recreation area, nor would this Project be expected to provide such.

In response to concerns about:

- **Increased traffic:**

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. The applicant based on concerns raised at the first Waikiki Neighborhood Board meeting is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

- **Decreased parking availability**

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista.

- **Denser population**

There is a strong demand for affordable senior rental units in Waikiki and elsewhere on the island. Seniors tend to have minimal impact on surrounding neighbors, as far as traffic, with lower trip generation rates. Our population will continue to increase with the influx of new residents and the island's birthrate versus mortality rate. Many

of the seniors occupying these units, similar to Ainahau Vista I are expected to be existing residents of Honolulu looking for affordable housing.

- **Construction on Royal lands**

The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuhekau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

- **Desecration or removal of iwi**

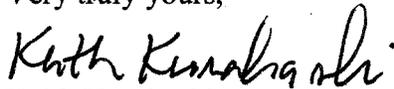
Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

- **Loss of last green space on Tusitala Street**

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space. It's a matter of establishing priorities and the applicant feels that there is a dire need for affordable senior rentals and a reduction in open space to create these rentals is a small price to pay.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

  
Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



RECEIVED  
HAWAII HOUSING FINANCE  
DEVELOPMENT CORP.

2016 MAR 22 A 0:32

3-21-2016

Mr. Fujimoto  
The 256 people who have signed  
This petition represents only a fraction of  
the Community opposed to construction of the  
proposed Ainalau Vista II. All signatures  
were obtained between March 11 and March  
21<sup>st</sup>, 2016. We do not want a 9 story  
building on the last green space on this section  
of Tusitala St. We do not want our  
cherished seniors, our most vulnerable citizens,  
living amongst unpredictable, chronically  
homeless people. Are you intending to house  
those being treated for drug addiction  
mixed with senior citizens???

We agree that low-income and homeless  
people need housing. This is a good idea.  
It is a very bad idea to use the  
proposed location. Do you intend to  
have the entry and exit on Tusitala?  
It is already overcrowded.



Put the entry / exit on the Ala Wai.  
better yet find a location with  
an existing structure in disrepair  
tear it down and build Aihahau Vistall.  
How about the old K-mart site?  
next to IHS.

or the lot across the street from  
the Waitiki Clinic on Ohua.  
or develop a housing structure  
on the Waitiki Clinic site.

Better yet, find a location outside  
of Waikiki.

Preserve the historic and cultural  
value of the lo'i situated on  
the proposed building site.

protect the open space where the  
Princess Kaiulani memorial stands.  
We implore you to not build on  
this land.

Sincerely,

-2- Suzan Danforth

Opposition to Ainahau Vista II

We, the undersigned residents of Tuscitola St. area and South Waikiki, oppose the construction of a 9 story, 62 unit tower on sacred burial land located on the Ala Wai side of 2428 Tuscitola St., adjacent to the existing Ainahau Vista. The proposed building site is accessible by only one, narrow one-way street and is bordered by three other one-way streets; Kapili, Cleghorn and Kaiulani. This area is already densely populated, with heavy traffic and extreme inadequate street and building parking. The new building plan irresponsibly provides only 22 stalls for 62 units.

Additionally, in the event that emergency police, fire or ambulance services are needed, residents would have increased difficulty entering or exiting their homes, apartments and high rises due to roadblock those emergency vehicles can create.

Moreover, this site is the last remaining green space on Tuscitola St. It was once the home of Princess Kaiulani, Heir to the Throne and her family. The site was a Hawaiian burial ground and contains ancient iwi (bones). This paradise garden should remain intact and preserved for its cultural and historic value in accordance with the Primary Urban Center Development Plan vision for 2025 that, "Honolulu's natural, cultural and scenic resources are protected and enhanced".

We, the undersigned community members oppose:

- Increased traffic
- Decreased parking availability
- Denser population
- Construction on Royal lands
- Desecration or removal of iwi
- Loss of the last green space on Tuscitola St.



Print Name	Phone #	Email	Signature	Address
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Opposition to Ainahau Vista II

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Opposition to Ainalahu Vista II

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ALBERTAH SEE	735-3450		3127 BROOKAW ST.	[Signature]
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Kasia Ataman	808-600-7509		2421 TUSITARA ST #1501	[Signature]
Judly Sanford	808-333-7774		222 Kaulani Ave #602	[Signature]

ZUZU ALAWAI BLDG 1804.

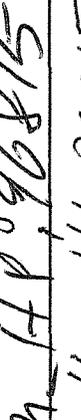
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AMY HONEY	926-9897	2421 TUSITALA ST.	1102	<i>[Signature]</i>
FERENC DANKO	4986347	2421 <del>ALA</del> WAI BLVD	#606	<i>[Signature]</i>
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ROGARD OMORI	2421	ALA WAI BLVD		<i>[Signature]</i>
TERRY G. JUHARTZ	241	KAILUANI AV	#404	Jay C. Juhart
STEFICA KEAWE	2421	Ala Wai Blvd	#802	Stephica Keawe
BARBARA KOACH	2421	ALA WAI BLVD	1404	Barbara Koach
Calvin Dasilva	2421	ALA WAI BLVD	1406	Calvin Dasilva
Alan K. Yoshitaka	2421	Ala Wai Blvd	#1803	Alan K. Yoshitaka
L Field	2415	Ala Wai	#1005	L Field

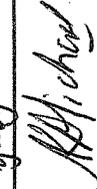
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LARRY MACKAY		2452 TUSTALA ST	#1903	Larry Mackey
Elisbeth Sarah Lee		2347 TUSTALA ST.	#302	
RICHARD NAYLOR		222 LILUOKUANI AVE	#1101	
REGINA NAYLOR		222 LILUOKUANI AVE	#1101	Regina Naylor
BRUCE LYNCH		225 KAIUKANI AVE.	#205	
Siena Garrett		250 KAPILI ST #4		Siena Garrett
MICAH KIM		2421 TUSTALA ST	#403	
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DOMALD LEE		2451 TUSITALA ST		D Lee
Spiky Mallet		209 Abouhillel #503		Spiky Mallet
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DIANE WACK		2428 Tustala St #912		Diane Wack
Adam White		2442 Tusitala St. # 302		Adam White
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Rendall Thatcher		264 Kaulaam #7		R Thatcher
Hazim Azhar		2421 Tusitala St 601		Hazim Azhar
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TERRY BEA		1380 HONAKA HANA ST. 96825	Terry Bea
YOSHIMI OKUBO		2421 ALAWAI #806 96815	Yoshimi Okubo
FRENK DUCKART		2452 TUSITALA ST. 96875	Frenk Duckart
VINCE PAN		2421 TUSITALA ST # 2607 96815	Vince Pan

OPPOSITION TO ANAHTAULISTA II

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- Rendall Thatcher 260 Kaulani #7 Hon. HI 96815 
- Regan Young 2437 Tusitala St Hon. HI 96815 
- CHRISTOPHER CAMOS 2442 TUSITALA ST Hon, HI 96815 
- BEATRIZ HANSEN-BAEHR 2452 TUSITALA ST #1208 96815 ~~Beatrix Baeher~~ 
- JAMES CUPAL 2452 TUSITALA ST #1208 702 96815 
- Derek Leach #2403 TUSITALA ST 96815 
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- HANA KUBECKOVA 250 KAPILI ST #3, HONOLULU, HI 96815 HANA KUBECKOVA 
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Mark Michael		2421 Tusitala 604 96815	
Karin Michael		2421 Tusitala 604 96815	

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IRENE LIU 782-8871 311 OHAU AVE #1101A HONOLULU HI 96815 *[Signature]*

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We, the undersigned community members oppose:

- Increased traffic
- Decreased parking availability
- Denser population
- Construction on Royal lands
- Desecration or removal of iwi
- Loss of the last green space on Tusitala

Print Name	Phone	Email	Signature	Address
MARVALYNE SASAKI	734-7141		<i>Marvalyne Sasaki</i>	1509 10th Aw. HON. 9681
HARUTOSHI KITAMURA	737-7879		<i>Harutoshi Kitamura</i>	3516 Makelaia St. Hon 9681
YVONNE KITAMURA	224-5652		<i>Yvonne Kitamura</i>	3516 Makelaia St. Hon
Naomi Sasaki	626-3541		<i>Naomi Sasaki</i>	95-219 Meleka'i Pl. Mililani HI 9671
Estelita Cantero	685-2957		<i>Estelita Cantero</i>	91-402 Makalea St Hon 96702

Opposition to Ainalau Vista II

Print name	Phone	Signature	Address
RUSSELL SAGHA	808-285-4885	<i>[Signature]</i>	95-219 MELEKAI PL MIL, HI 96788
Jordan Santos	808-626-4635	<i>[Signature]</i>	94-657 Alaula street
ANGIE KACHUKENI	808-211-2370	<i>[Signature]</i>	750 UM S. MAHA 96819
Yen doe Kim	808-387-4227	<i>[Signature]</i>	1505 6th AVE HAWAII H. 96814
KIMBERLY KIMURA	808-266-2536	<i>[Signature]</i>	3516 MALUKIA ST HON HI 96816
PAIGE Young	808-732-6195	<i>[Signature]</i>	3514 MALUKIA SH HON HI 96816
Sara Alleana Costa	808-734-8612	<i>[Signature]</i>	1526 10th Ave Honolulu 96816
Celia Verbes	808-542-1628	<i>[Signature]</i>	525 10th Ave Hon HI 96816
EDWIN SASAKI	808-734-7141	<i>[Signature]</i>	1509 10th AVE HON HI 96816
Nathan Lee	808-484-4497	<i>[Signature]</i>	99-827 Holoqi St. Aiea HI 967
Chris Albert	808-949-7372	<i>[Signature]</i>	1618 10th Ave Hon, HI 96816
Kathy Sasaki	808-542-2684	<i>[Signature]</i>	1509 10th Ave Hon HI 96816
Melia Albert	808-358-1401	<i>[Signature]</i>	1618 10th Ave Hon HI 96816
T.C. SULTAN	808-283-6641	<i>[Signature]</i>	2428 TASHIMA ST #612 HON HI 96816

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Opposition to Ainahau Vista II

We, the undersigned residents of Tusalala St. area and South Waikiki, oppose the construction of a 9 story, 62 unit tower on sacred burial land located on the Ala Wai side of 2428 Tusalala St., adjacent to the existing Ainahau Vista. The proposed building site is accessible by only one, narrow one-way street and is bordered by three other one-way streets; Kapili, Cleghorn and Kaiulani. This area is already densely populated, with heavy traffic and extreme inadequate street and building parking. The new building plan irresponsibly provides only 22 stalls for 62 units.

Additionally, in the event that emergency police, fire or ambulance services are needed, residents would have increased difficulty entering or exiting their homes, apartments and high rises due to roadblock those emergency vehicles can create.

Moreover, this site is the last remaining green space on Tusalala St. It was once the home of Princess Kaiulani, Heir to the Throne and her family. The site was a Hawaiian burial ground and contains ancient iwi (bones). This paradise garden should remain intact and preserved for its cultural and historic value in accordance with the Primary Urban Center Development Plan vision for 2025 that, "Honolulu's natural, cultural and scenic resources are protected and enhanced".

We, the undersigned community members oppose:

- Increased traffic
- Decreased parking availability
- Denser population
- Construction on Royal lands
- Desecration or removal of iwi
- Loss of the last green space on Tusalala

Print Name	Phone	Email	Signature	Address
CYNTHIA ALBERT	222-0964		<i>Cynthia Albert</i>	2428 Tusalala St. #310 96815
ROBERT PRESLEY	256-391-6668		<i>Robert Presley</i>	2428 Tusalala St.
THOMAS KAHALANAN	808-921-8123		<i>Thomas Kahalanana</i>	2428 Tusalala St.
FRANK WONG	908-5533		<i>Frank Wong</i>	2421
JANE WONG	722-2386		<i>Jane Wong</i>	2421 Ala Wai

Opposition to Ainalau Vista II

Print name	Phone	Signature	Address
Stan + Stephanie Kato		Stan + Stephanie Kato	2421 Ala Wai Blvd.
Erlik Ybsirob		Erlik Ybsirob	2021 Ala Wai Blvd #1605
Chase H. Yu		Chase H. Yu	2421 Ala Wai Blvd
Robert Kekoaenuu		Robert Kekoaenuu	2421 Ala Wai Blvd #1609
GARRY FREEMAN	926-4048	Garry Freeman	2421 Ala Wai Blvd #701

Opposition to Ainahau Vista II

We, the undersigned residents of Tunitala St. area and South Waikiki, oppose the construction of a 9 story, 62 unit tower on sacred burial land located on the Ala Wai side of 2428 Tunitala St., adjacent to the existing Ainahau Vista. The proposed building site is accessible by only one, narrow one-way street and is bordered by three other one-way streets; Kapili, Cleghorn and Kaiulani. This area is already densely populated, with heavy traffic and extreme inadequate street and building parking. The new building plan irresponsibly provides only 22 stalls for 62 units.

Additionally, in the event that emergency police, fire or ambulance services are needed, residents would have increased difficulty entering or exiting their homes, apartments and high rises due to roadblock those emergency vehicles can create.

Moreover, this site is the last remaining green space on Tunitala St. It was once the home of Princess Kaiulani, Heir to the Throne and her family. The site was a Hawaiian burial ground and contains ancient iwi (bones). This paradise garden should remain intact and preserved for its cultural and historic value in accordance with the Primary Urban Center Development Plan vision for 2025 that, "Honolulu's natural, cultural and scenic resources are protected and enhanced".

We, the undersigned community members oppose:

- Increased traffic
- Decreased parking availability
- Denser population
- Construction on Royal lands
- Desecration or removal of iwi
- Loss of the last green space on Tunitala

Print Name	Phone	Email	Signature	Address
Judy Whitcome	808 2206283	Judywhitcome@gmail.com	Judy Whitcome	2428 Tunitala St. Honolulu HI 96815
DAVIDA LEFERRE	808 269-1261	davidal@tunitalast.com	David Leferre	2428 Tunitala St. Honolulu HI 96815
Josephine K. Keany	808-638-3093	JKeany@tunitalast.com	Josephine Keany	2428 Tunitala St. Honolulu HI 96815
Bobby Brilliande	808-924-1978	Bobby.Brilliande@tunitalast.com	Bobby Brilliande	2428 Tunitala St. Honolulu HI 96815
Rickey Valdez	808 2240536	Rickey.Valdez@tunitalast.com	Rickey Valdez	2428 Tunitala St. Honolulu HI 96815

Opposition to Ainahau Vista II

Velma P. Kekipi 808-347-0199 aloha-kekipi@yahoo.com ~~Velma P. Kekipi P.O. Box 2516, Kaneohe~~ 96799  
Stenn S. Valdez 808-366-9890 Glenn J. Valdez 2047 Metcalf St 96822  
Alan Okuma 808-382-9926 Alan Okuma 2428 Tusitala 96875 #3281  
Stella Okuma 808-949-4733 Stella Okuma 2428 Tusitala #21 96815  
Judy Archer 808-542-1831 Judy Archer 2428 Tusitala #686 96815

## Keith Kurahashi

---

**From:** Keith Kurahashi <kkurahashi@hawaii.rr.com>  
**Sent:** Wednesday, March 23, 2016 9:39 AM  
**To:** 'Kuwaye, Kristen'  
**Cc:** 'Liu, Rouen'  
**Subject:** RE: Chapter 343 Hawaii Revised Statutes - Ainahau Vista II

Dear Ms. Kuwaye and Mr. Liu,

Thank you for your comments. The Applicant will continue to provide access to any easements or facilities that HECO may have on the property for maintenance of your facilities. The Applicant will keep HECO informed about the Project as it moves further along in design to ensure that your system will be able to support the Project.

Sincerely,  
Keith Kurahashi  
Kusao & Kurahashi, Inc.

---

**From:** Kuwaye, Kristen [<mailto:kristen.kuwaye@hawaiianelectric.com>]  
**Sent:** Wednesday, March 23, 2016 9:13 AM  
**To:** [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)  
**Cc:** Liu, Rouen  
**Subject:** Chapter 343 Hawaii Revised Statutes - Ainahau Vista II

*Kristen Kuwaye on behalf of Rouen Liu*

Dear Mr. Kurahashi,

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities. We appreciate your efforts to keep us apprised of the subject project in the planning process. As the Ainahau Vista II project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities. If you have any questions, please call me at 1-808-543-7245.

Sincerely,  
Rouen Q. W. Liu  
Permits Engineer  
Hawaiian Electric Company, Inc.  
Tel: (808) 543-7245  
Email: [Rouen.liu@hawaiianelectric.com](mailto:Rouen.liu@hawaiianelectric.com)

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**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Michael D. Formby, Director  
Department of Transportation Services  
City and County of Honolulu  
650 So. King Street, Third Floor  
Honolulu, Hawaii 96813

Attention: Renee Yamasaki

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Formby:

Thank you for your letter dated March 21, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The second sentence you have noted will be deleted in the Final Environmental Assessment (FEA).
2. To the extent practicable, the design of the project will consider the City's Complete Streets ordinance and include features to encourage walking, bicycling, car-share and public transit. The residents will have access to van/shuttle service through the Catholic Charities which provides transportation for residents, including shopping trips and appointments. The Project driveway is located about three blocks from bus stops traveling in the east and west direction on Kuhio Avenue, providing convenient bus service for the Project. The affordable senior rental projects owned and operated by the applicant have very low rates of vehicle ownership and other forms of transportation are used by most seniors.
3. The only full time employee is the resident manager. On-site bike racks and/or secure bike storage will be provided as needed. However, the applicant has not found significant bike usage at other affordable senior rental projects owned and operated by applicant. Probably due to the fact that the age of most of the residents in the applicant's other projects are in their late 70's and up.

Mr. Michael D. Formby  
Page 2

Your letter and this response will be included in the FEA.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive style with a large, prominent initial "K".

Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, THIRD FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL  
MAYOR



MICHAEL D. FORMBY  
DIRECTOR

MARK N. GARRITY, AICP  
DEPUTY DIRECTOR

TP2/16-644318R

March 21, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment for Ainahau Vista II, Waikiki, Oahu, Hawaii

In response to your letter dated February 19, 2016, we have the following comments:

1. Section 2.4.2 Traffic Improvements, Page 12, first paragraph, second sentence, should be removed since it is duplicated in the last paragraph of that page. Short-term traffic impacts during construction and corresponding mitigation measures should be addressed.
2. To the extent practicable, the design of the project should be consistent with the City's Complete Streets ordinance and include features to encourage walking, bicycling, car-share and public transit.
3. On-site bike racks and secure bike storage for the residents, employees and visitors should be included.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

  
Michael D. Formby  
Director

cc: Mr. Stan Fujimoto, State of Hawaii,  
Hawaii Housing Finance and Development Corporation



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Scott Glenn, Interim Director  
Office of Environmental Quality Control  
Department of Health, State of Hawaii  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Glenn:

Thank you for your letter dated March 21, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

In response to your comments we offer the following response (in the order set forth in their memorandum).

The Applicant appreciates your commendation for consideration of potential impacts and mitigation measures.

The Applicant has located all units on the second floor and up to minimize impact of flooding on the senior residents. Back-up generators and elevator components will be placed above the ground floor.

Your letter and this response will be included in the Final Environmental Assessment.

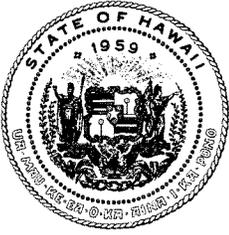
Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation





# OFFICE OF ENVIRONMENTAL QUALITY CONTROL

DAVID Y. IGE  
GOVERNOR

SCOTT GLENN  
INTERIM DIRECTOR

DEPARTMENT OF HEALTH, STATE OF HAWAII  
235 South Beretania Street, Suite 702, Honolulu, HI 96813

Phone: (808) 586-4185  
Email: oeqchawaii@doh.hawaii.gov

March 21, 2016

Craig Hirai  
Executive Director  
Hawaii Housing Finance and Development Corporation  
State of Hawai'i  
677 Queen Street  
Honolulu, Hawai'i 96813

Dear Executive Director Hirai,

**SUBJECT:** Draft Environmental Assessment (EA) for the Ainahau Vista II Affordable Rental Project

The Office of Environmental Quality Control (OEQC) reviewed the Draft EA prepared for the proposed action and offers the following comments for your consideration.

OEQC commends Hawaii Housing Development Corporation for considering the diverse range of potential impacts and mitigation measures for the proposed Ainahau Vista II project, such as environmental justice considerations.

As a rental facility providing for seniors, OEQC recommends considering placing critical infrastructure well above potential flooding hazards. The proposed action is to develop 62 senior rental units that would be affordable for at least 62 years, and presumably anticipates the building to last longer. The DEA notes that the site is located in a flood plain, the flood elevation for the property is six feet, and that all units will be developed above the six foot elevation. While this may be sufficient to meet present-day requirements, our best science indicates that flooding is likely to increase in frequency and severity over time. Given the anticipated lifespan of the project and the vulnerable population to be housed, OEQC recommends taking precautions to reduce the risk of power loss or obstacles to ingress/egress due to hazards such as flooding. One example could be to locate any critical items like backup generators or elevator components above the ground floor.

Thank you for the opportunity to comment on the Draft EA. OEQC looks forward to a response that also will be included within the project's Final EA. If you have questions about these comments, please consult myself or Tom Eisen in our office at (808) 586-4185.

Sincerely,

Scott Glenn, Interim Director

CC: Keith Kurahashi, Kusao & Kurahashi, Inc.



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Marilyn Katzman  
2410 Cleghorn Street, #3103  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Katzman:

Thank you for your letter dated March 20, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

There is a heavy demand for affordable senior rentals and the applicant hopes to meet that demand. The applicant is again hoping to accommodate seniors in a second midrise tower on the property. These new senior residents will have to meet the same criteria as the seniors in the first tower, to qualify to rent.

We are providing relaxing outdoor landscaped areas for the seniors, although not as large as the existing open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger

loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and further reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human bone fragment remains were brought onto the site and found in one specific location (one archaeological inventory survey trench).

The applicant is very supportive of seniors and most of the affordable housing units that they own are for seniors. This location, adjacent to an existing affordable senior housing development is very desirable and the cost savings by using the same resident manager for both towers and provision of services to both towers adds to the desirability.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

From: Marilyn Katzman  
2410 Cleghorn Street # 3103  
Honolulu, HI 96815

March 20, 2016

TO: Mr. Stan Fujimoto  
Hawaii Housing Finance & Development Corp  
677 Queen St.  
Honolulu, HI 96813

cc: Mr. Keith Kurahashi  
Kusao & Kurahashi Inc.  
2752 Woodlawn Drive Suite 5-217  
Honolulu, HI 96822

RE: Development of property on 2421 Tusitala

Please be advised that I represent a group of people in our neighborhood very much against this project.

We live in a very high density area and do not feel this project belongs on this street in Waikiki. This is a heavily traveled narrow one lane street. To remove this one historic green spot of nature, remove our view of the Ala Wai canal, to bring more cars and services to this area is unthinkable.

I represent a group of seniors who have worked hard all our lives and saved our money so we could live in Waikiki. When we purchased our property in this area over eleven years ago, the neighborhood was full of crime and undesirable people. We worked hard to clean up the neighborhood and lessen the number of car break-ins, thefts, vandalism, vagrants, trash and visible drug deals. We are now proud of our neighborhood and want to protect it from reverting back to it's previous unsafe condition.

We feel strongly that another location in another neighborhood is far more desirable for your low income and senior housing project. Please consider what is best for our neighborhood.

Sincerely,

Marilyn Katzman  
808-744-3736

A handwritten signature in black ink, appearing to read 'M. Katzman', is written over the typed name and phone number. The signature is fluid and cursive, with a long horizontal stroke extending to the right.



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Ernest Y.W. Lau, P.E., Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96813

Attention: Robert Chun  
Project Review Branch

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Lau:

Thank you for your letter dated March 15, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

The applicant appreciates your comment that the existing water system is presently adequate to accommodate the proposed development. However, the applicant further understands that the final decision on availability of water will be confirmed when the building permit application is submitted for approval.

The applicant understands that when water is made available, the applicant will be required to pay your Water System Facilities charges for resource development, transmission and daily storage.

The applicant understands that for this high-rise Project booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in your water system.

The applicant will implement low-flow plumbing fixtures, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.

Mr. Ernest Y.W. Lau, P.E.

Page 2

As you have recommended, the on-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

Your letter and this response will be included in the FEA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is written in a cursive style with a prominent initial "K".

Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



March 15, 2016

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair  
ADAM C. WONG, Vice Chair  
DAVID C. HULIHEE  
KAPUA SPROAT  
BRYAN P. ANDAYA

ROSS S. SASAMURA, Ex-Officio  
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer *ek*

Mr. Keith Kurahashi, President  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Your Letter Dated February 19, 2016 Requesting Comments for the Draft Environmental Assessment for Ainahau Vista II, Senior Affordable Rental Development in Waikiki – Tax Map Key: 2-6-024: 070 & 071

Thank you for the opportunity to comment on the proposed senior affordable rental development.

The existing water system is adequate to accommodate the proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges (WSFC) for resource development, transmission and daily storage.

Water conservation measures are required for all proposed developments. These measures include low flow plumbing fixtures, utilization of nonpotable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

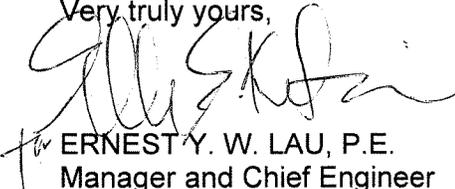
We have no objections to the deferral of the applicable WSFC and/or installation charges until the construction loan is available. Prior to or when the project is ready to go through its permit application process, the developer should submit a letter requesting for the deferral of payment of the applicable charges and indicate in the letter approximately when payment can be made. Also, we will need a contact person and mailing address to send the postdated invoice before we can approve the building permit application.

Mr. Keith Kurahashi  
March 15, 2016  
Page 2

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,



ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

cc: Stan Fujimoto, HHFDC

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Leo R. Asuncion Director  
Office of Planning  
State of Hawaii  
P.O. Box 2359  
Honolulu, Hawaii 96804

Attention: Mr. Josh Hekekia

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Asuncion:

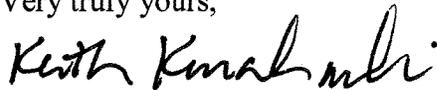
Thank you for your letter dated March 15, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant appreciates your recognition that the DEA addresses many of the plans, programs and policies that fall under your jurisdiction.
2. The applicant appreciates your recognition that the DEA addresses the project's consistency with many of the State Functional Plans and Policies.
3. The applicant will include in the Final Environmental Assessment (FEA) a list of the specific Hawaii State Plan statutes that this project is consistent with, as you have noted.

Your letter and this response will be included in the FEA.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation





# OFFICE OF PLANNING STATE OF HAWAII

DAVID Y. IGE  
GOVERNOR

LEO R. ASUNCION  
DIRECTOR  
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824  
Web: <http://planning.hawaii.gov/>

Ref. No. P-15073

March 15, 2016

To: Craig K. Hirai, Executive Director  
Hawaii Housing Finance & Development Corporation,  
Department of Business, Economic Development & Tourism

From: Leo R. Asuncion, Director 

Attention: Stan Fujimoto, Project Manager

Subject: Chapter 343 Hawaii Revised Statutes, Draft Environmental Assessment –  
Ainahau Vista II; Tax Map Key: (1) 2-6-024:070 and 071

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the proposed Ainahau Vista II, senior rental development project. The Draft EA review material was transmitted to our office by letter dated February 19, 2016.

It is our understanding that the Hawaii Housing Finance & Development Corporation proposes to build the Ainahau Vista II apartment complex. The complex will be a nine-story affordable senior rental building in Waikiki. It will have 62 rental units, and will provide six affordable rental units to seniors earning up to 60% of the area median income (AMI); 50 units for seniors earning up to 50% AMI; and six units for seniors earning up to 30% AMI. The south portion of the property is currently occupied by Ainahau Vista, a 106-unit affordable senior rental apartment development.

Ainahau Vista II will serve the needs of seniors residing in Honolulu by offering them affordable housing in the Waikiki area. Waikiki is located in a central location near commerce, services, and facilities vital to the needs of this demographic group. The housing will be modern and not require extensive maintenance.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. The Draft EA addresses many of the plans, programs, and policies that fall under the jurisdiction of OP.
  - o Section 8.8, pages 70-80 addresses the objectives and policies of the Hawaii Coastal Zone Management (CZM) program as listed in HRS § 205A-2.

Mr. Craig K. Hirai, Executive Director  
March 15, 2016  
Page 2

- Section 8.6.4, page 57 states that during the construction phase, best management practices will be utilized fronting all drainage facilities that may be affected by construction runoff along Tusitala Street, Ala Wai Boulevard, Kaiulani Avenue and Kapili Street. This will limit the impact on the nearshore environment from sediment loss and toxic-pollutants.
  - Section 8.6.4, pages 57-58 states the project will use enhanced landscaping along the perimeter of the building that will encourage natural filtration processes for treating stormwater.
2. Section 7.1.1 to 7.1.14, pages 35-38 of the Draft EA addresses the project's consistency with many State Functional Plans and Policies. The plans most compatible to this project include: the Economy, Energy, Historic Preservation, and Transportation.
3. Section 7.1.1, page 34-35 examines the project's consistency to HRS Chapter 226, the Hawaii State Plan. However, it does not specifically list which themes, goals, and objectives that it is consistent with. The Final Environmental Assessment should list the specific Hawaii State Plan statutes that this project is consistent with. The themes applicable to this project include, but not limited to:
- HRS § 226-12 – the Physical Environment – Scenic, Natural Beauty, and Historic Resources;
  - HRS § 226-19 – Socio-Cultural Advancement – Housing;
  - HRS § 226-22 – Socio-Cultural Advancement – Social Services;
  - HRS § 226-106 – the Priority Guidelines on Affordable Housing; and
  - HRS § 226-108 – the Priority Guidelines on Sustainability.

If you have any questions regarding this comment letter, please contact Joshua Hekekoa of our office at (808) 587-2845.

✓c: Keith Kurahashi, Kusao & Kurahashi, Inc

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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June 14, 2016

Ms. Denise Boisvert-Jorgensen  
225 Kaiulani Avenue, #1604  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Boisvert-Jorgensen:

Thank you for your letter dated March 12, 2016 regarding the Draft Environmental Assessment (“DEA”) for Ainahau Vista II Affordable Senior Rental Project (“Project”).

We appreciate your comments and offer the following response (in the order set forth in your letter).

**How is Waikiki an ideal location for vital goods and shopping for low-income seniors?**

There is a Food Pantry located about a quarter mile away from the Project site. There are ABC Stores throughout Waikiki serving food staple items. For medical emergencies, there is the Waikiki Fire Station just down the street on Ala Wai Boulevard. A Waikiki Police Substation is also located nearby. The Waikiki Health Center is also fairly close with activities for seniors. Catholic Charities operates a van service that will offer rides to shopping for farther trips and other services as needed.

**How will this project not have an impact on neighborhood traffic?**

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone

on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and further reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

**Why do developers need to fill in all the open air space in Waikiki?**

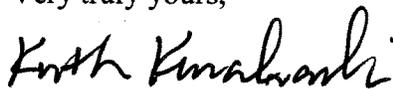
We are providing relaxing outdoor landscaped areas for the seniors, although not as large as the existing open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

The open space area is not a park, but a private landscaped open space for use by tenants and their guests. The Project site has a commemorative plaque honoring Princess Kaiulani, but did not include a park dedicated in her honor.

There is a heavy demand for affordable senior rentals and the applicant hopes to meet that demand. The applicant is again hoping to accommodate seniors in a second midrise tower on the property. These new senior residents will have to meet the same criteria as the seniors in the first tower, to qualify to rent.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

Denise Boisvert-Jorgensen  
225 Kaiulani Ave. #1604  
Honolulu, HI 96815  
March 12, 2016

Mr. Stan Fujimoto  
State of Hawaii HHFDC  
677 Queen St.  
Honolulu, HI 96813

Re: Ainahau Vista II

Dear Mr. Fujimoto:

The Draft EA states, "...the location itself is very central to those goods, services and facilities that are considered vital by senior households, particularly medical, with a fire station down the road, and also recreational, social, and shopping areas within a mile of the Project."

**How is Waikiki an ideal location for vital goods and shopping for low-income seniors?** Developers, the DPP and City Hall are proposing, approving and building ultra-expensive condo-hotels at a rapid-fire pace. Accompanying those gigantic walls of condos that fill in all of Waikiki's open air space are posh shops like Prada, Tiffany, Gucci, Harry Winston, Jimmy Choo, and Coach.

Mom and Pop shops for low to middle income tourists and residents, such as those in the King's Village and the former International Marketplace, are being forced out of business because of overzealous development. Practically the only people able to shop in Waikiki are wealthy foreign tourists; and it will only get worse – just look at the list of future projects proposed or slated for Waikiki in the Draft EA.

Affordable housing for seniors is greatly needed, but putting such a building in Waikiki is setting the building's residents up for feelings of failure. It isn't fair to the seniors to be basically stranded in a neighborhood and dependent on Handi-vans and shuttle buses to get to affordable shopping. This type of housing should be built near the Safeway plaza on Kapahulu and the Times plaza on Waialae.

**How will this project not have an impact on neighborhood traffic?** Many of the low-income seniors in the total of 168 Ainahau Vista housing units will have visitors who will not find enough parking on-site so they will circle and circle the area until (or if) they find street parking. There will also be many more daily trips of Handi-vans and shuttle buses that will be added to already busy and narrow Tusitala St. Each 911 call will bring several police cars, an ambulance and a fire truck to tiny Tusitala St. That always results in a blockage of the flow of traffic on Kaulani Ave, Tusitala St., Kapili St. and Cleghorn St. The whole project with its 168 housing units and its mere 51 non-loading parking spaces will have a sizable impact on a tiny neighborhood with already considerable parking problems.

**Why do developers need to fill in all the open air space in Waikiki?** This second tower is going to fill in the little remaining open air space along the makai side of Ala Wai Boulevard. There is a lovely small park dedicated to the memory of Princess Kaiulani that is a respite for the eyes and reminds passersby of the neighborhood's rich Hawaiian history. Please leave that precious park and open air space alone.

Sincerely,



Denise Boisvert-Jorgensen

cc: Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, HI 96822



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Socrates D. Bratakos, Assistant Chief  
Fire Department  
City and County of Honolulu  
636 South Street  
Honolulu, Hawaii 96813

Attention: Battalion Chief Terry Seelig  
Fire Prevention Bureau

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Assistant Chief Bratakos:

Thank you for your letter dated March 11, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant will provide the necessary, fire department access roads in accordance with the National Fire Protection Association 1, Uniform Fire Code, 2006 Edition, Section 18.2.3.2.2. and Section 18.2.3.2.1., as you have noted.
2. The applicant will provide a water supply, approved by the County, capable of supplying the required fire flow for fire protection of all facilities and buildings on the premises. When any portion of a facility or building is in excess of 150 feet (45,720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the Authority Having Jurisdiction.
3. Ala Wai Boulevard and the applicant's onsite fire apparatus access road will meet the unobstructed width requirement of 20 feet and the unobstructed vertical clearance of 13 feet, 6 inches.

Mr. Socrates Bratakos  
Page 2

4. Civil drawings will be submitted to the Honolulu Fire Department for review and approval.

The applicant understands that the current Fire Code of the City and County of Honolulu will apply at the time of plan submittal.

Your letter and this response will be included in the FEA.

Very truly yours,



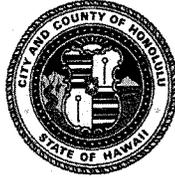
Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF  
LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

March 11, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Market Place  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment  
Ainahau Vista II  
Tax Map Keys: 2-6-024: 070 and 071

In response to your letter dated February 19, 2016, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]<sup>TM</sup>, 2012 Edition, Sections 18.2.3.2.2, 18.2.3.2.2.1.)

A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; UFC<sup>TM</sup>, 2012 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter

Mr. Keith Kurahashi  
Page 2  
March 11, 2016

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; UFC™, 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; UFC™, 2012 Edition, Section 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)
4. Submit civil drawings to the HFD for review and approval.

Please note that the current Fire Code of the City and County of Honolulu will apply at the time of plan submittal.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or [tseelig@honolulu.gov](mailto:tseelig@honolulu.gov).

Sincerely,



SOCRATES D. BRATAKOS  
Assistant Chief

SDB/SY:bh

cc: Stan Fujimoto, Hawaii Housing Finance  
and Development Corporation

**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Dan Murray  
2421 Tusitala Street, Apt. 2204  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Murray:

Thank you for your letter dated March 10, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

Mr. Julian Ng is our traffic engineering consultant and has followed national standards for preparation of the traffic study. Mr. Ng has also done field checks in support of the traffic study/report.

Some of the service vehicles presently service the existing Ainahau Vista I project and may, at the same stop, service the proposed Ainahau Vista II project.

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and further reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

There is a heavy demand for affordable senior rentals and the applicant hopes to meet that demand. The applicant is again hoping to accommodate seniors in a second midrise tower on the property. These new senior residents will have to meet the same criteria as the seniors in the first tower, to qualify to rent.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

Dan Murray  
2421 Tusitala APT 2204  
Honolulu, HI 96815

10 March 2016

HHFDC Project Manager  
677 Queen St  
Honolulu, HI 96813

RE: Ainahau Vista II Project- comments for 30 day Public Review

Stan Fujimoto,

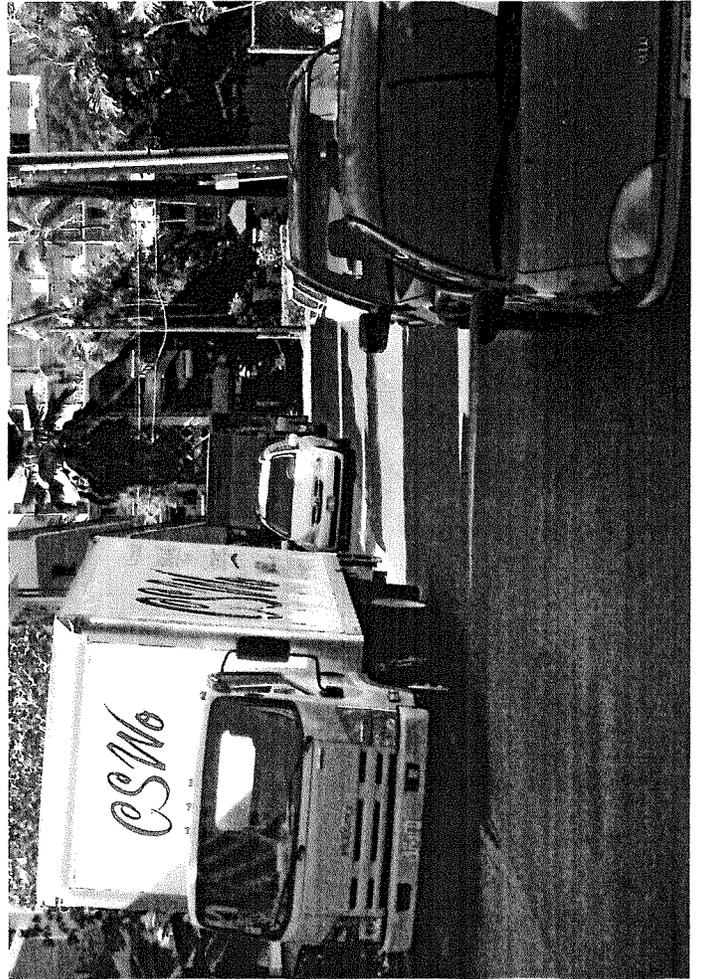
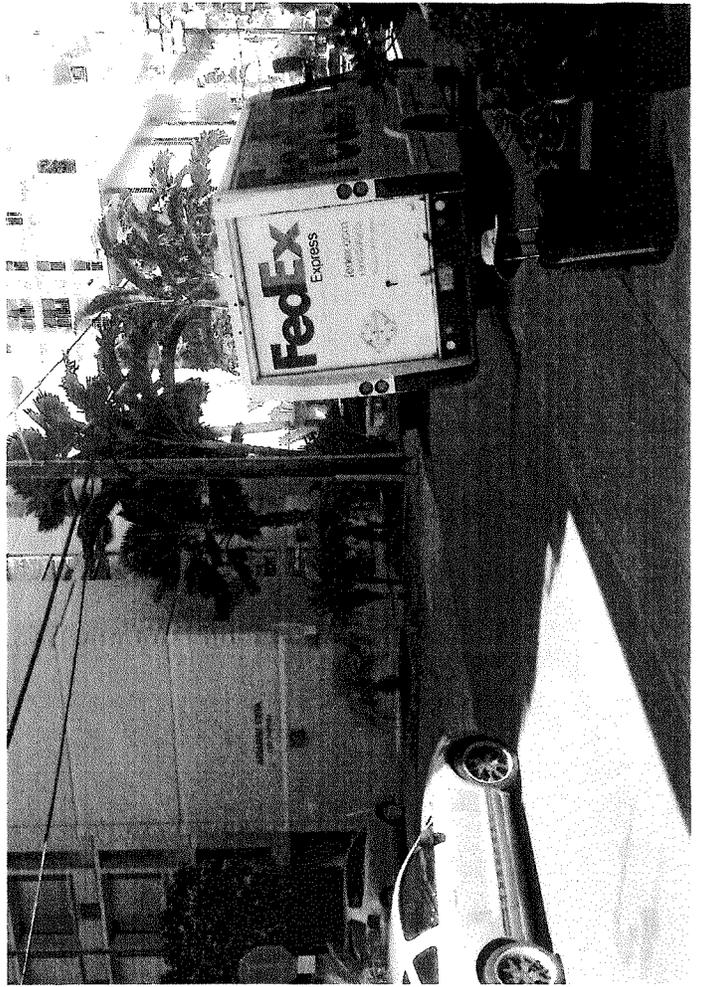
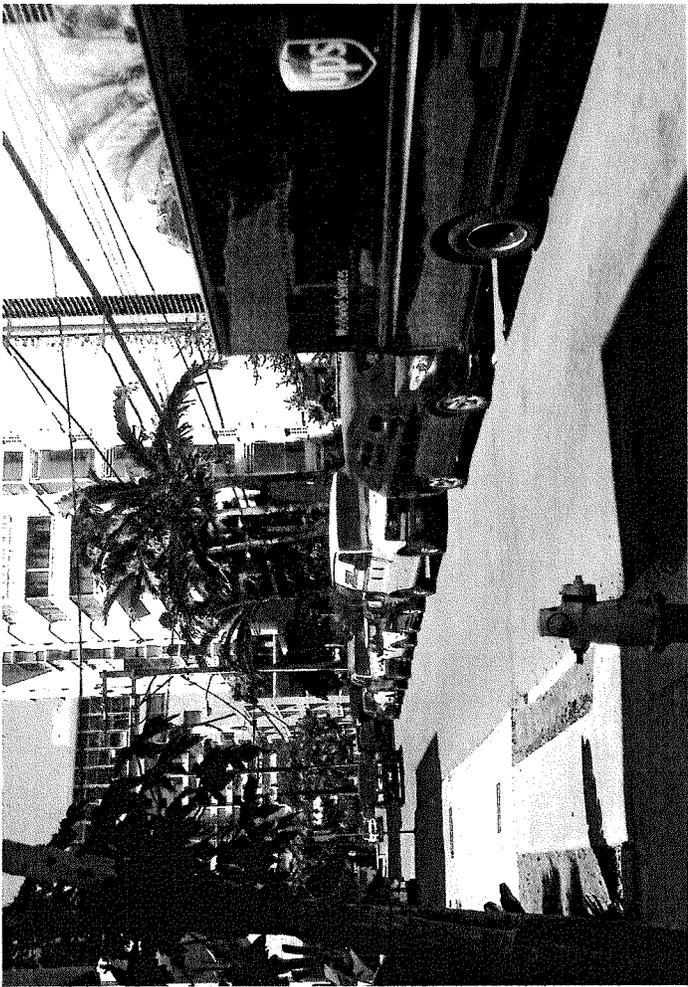
I dispute Julian Ng's conclusion at the end of Appendix 5 of the EA that the "project is not expected to have a significant impact on traffic or transportation". The *Driveway Traffic Due to Project* chart may be a good estimate for the driveway traffic, but it completely ignores the traffic increase of service vehicles the project will bring to Tusitala Street itself. There is a daily influx of trucks to pick up rubbish, deliver parcels and people, service the utilities, and provide emergency services. There is no place for these large vehicles to park. At present some of these vehicles park in one of the two no-parking zones (for fire truck turning clearance) near either corner, or at the fire hydrant; but mostly they park on the sidewalks. As a result all the curbs and sidewalks are busted up. These large vehicles do not routinely use Ainahau Vista's off street parking because they are too large to fit in the spot, can't maneuver in the area, or the drivers are too lazy to take the time.

It is not unusual to have two dumpster trucks and their helper trucks on the street and USPS trying to deliver with the cable truck looking for a parking place. FedEx and UPS routinely park on the side walk opposite the Ainahau Vista driveway. Traffic backs up around the block waiting for the service traffic to clear on Tusitala or Kapili.

Every additional household is going to generate more deliveries, rubbish removal, airport shuttle trips, cable and TV service calls, Roto Rooter visits, and Handi-Van pickups. The Ainahau Vista is already a popular destination for the City ambulance. When it brings the ladder truck with it, it blocks the street for the duration. I will admit the ladder truck sometimes parks on the two way portion of Cleghorn and the men walk in to assist the ambulance.

Basically a 62 unit apartment building is being built right on Ala Wai Blvd. and all access is being funneled through the already overburdened, one way-one lane Tusitala Street. If the State and County are really behind building these very small apartments to make them affordable then put the access to them on Ala Wai Blvd. Don't ask for a density exemption for an already very dense area, then expect the residents that are already wholly dependent on Tusitala Street for access to bear all the burden.

  
Dan Murray



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Alec Wong, P.E., Chief  
Clean Water Branch  
Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Wong:

Thank you for your letter dated March 9, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant understands and will comply with the State's anti-degradation policy (HAR Chapter 11-554-1.1, designated uses (HAR Chapter 11-554-1-3) and applicable water quality criteria (HAR Chapter 11-554-4 through 11-554-8).
2. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance will be less than an acre.
3. The Department of the Army has been contacted through this DEA process and since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project is not expected to require a Department of the Army Permit (401 Water Quality Certification).
4. The applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.
5. The applicant understands the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters.
  - a. Landscaped open space on the Project site will allow the natural percolation of some rain and storm water for irrigation and reduce storm water flowing into drainage

ways. However, the Project will result in a reduction in open space and a drainage plan will be prepared to ensure that there will be no increase in runoff from the property.

- b. The applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems.
- c. The applicant will consider storm water Best Management Practice (BMP) approaches to minimize the use of potable water for irrigation.
- d. The applicant will significantly increase landscape areas on the property reducing excessive runoff, resulting in an improvement to stormwater quality by allowing percolation of storm water to recharge groundwater to revitalize natural hydrology.
- e. The City provides existing storm water infrastructure. The applicant's drainage plan will maintain existing flows from the property.

Your letter and this response will be included in the FEA.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation

DAVID Y. IGE  
GOVERNOR OF HAWAII



VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

In reply, please refer to:  
EMD/CWB

03021PNN.16

March 9, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Marketplace  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Comments on the Draft Environmental Assessment for  
Ainahau Vista II Affordable Senior Rental Project  
TMK: 2-6-024:070 and 071  
Waikiki, Island of Oahu, Hawaii**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your transmittal, dated February 19, 2016, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>.

1. Any project and its potential impacts to State waters must meet the following criteria:
  - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
  - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like

community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at:  
<http://health.hawaii.gov/cwb>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

  
ALEC WONG, P.E., CHIEF  
Clean Water Branch

NN:ak

- c: DOH-EPO #16-057 [via e-mail [Noella.Narimatsu@doh.hawaii.gov](mailto:Noella.Narimatsu@doh.hawaii.gov) only]  
Mr. Stan Fujimoto, Hawaii Housing Finance & Development Corporation



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: kkurahashi@hawaii.rr.com

June 14, 2016

Louis M. Kealoha, Chief of Police  
Honolulu Police Department  
City and County of Honolulu  
801 So. Beretania Street  
Honolulu, Hawaii 96813

Attention: Major Clyde Ho, District 6 (Waikiki)

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Chief Kealoha:

Thank you for your letter dated March 8, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comment that "Based on the information provided, this project should have no significant impact on the services or operations of the Honolulu Police Department at this time."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



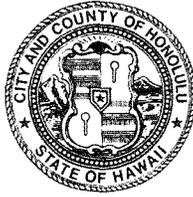
Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813  
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulu.org



KIRK CALDWELL  
MAYOR

LOUIS M. KEALOHA  
CHIEF

MARIE A. McCAULEY  
CARY OKIMOTO  
DEPUTY CHIEFS

OUR REFERENCE MT-DK

March 8, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Planning and Zoning Consultants  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in response to your letter of February 19, 2016, requesting comments on a Draft Environment Assessment for the Ainahau Vista II, an affordable senior rental development in Waikiki.

Based on the information provided, this project should have no significant impact on the services or operations of the Honolulu Police Department at this time.

If there are any questions, please call Major Clyde Ho of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA  
Chief of Police

By   
MARK TSUYEMURA  
Management Analyst VI  
Office of the Chief

cc: Mr. Stan Fujimoto, Hawaii Housing  
Finance & Development Corporation  
Department of Business, Economic  
Development & Tourism



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

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E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Mr. Robert Visali  
2428 Tusitala Street, Apt. 704  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Mr. Visali:

Thank you for your letter dated March 4, 2016 regarding the Draft Environmental Assessment (“DEA”) for Ainahau Vista II Affordable Senior Rental Project (“Project”).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The open space area is not a park, but a private landscaped open space for use by tenants and their guests. We are providing relaxing outdoor landscaped areas for the seniors, although not as large as the existing open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

The applicant has provided a plaque on the property in honor of Princess Victoria Ka’iulani Cleghorn. However, most of the Ainahau Vista II development site is not part of the former Ainahau Estate. The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuakehau Stream portion of the Ainahau Estate.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

The applicant will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

In cases where construction noise exceeds, or is expected to exceed the State's "maximum permissible" property line noise levels, a permit will be obtained from DOH to allow the operation of vehicles, cranes, construction equipment, power tools, etc., which emit noise levels in excess of the "maximum permissible" levels. The contractor will use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, using properly tuned and balanced machines, etc. Compliance with DOH construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

The following measures will be considered by the applicant, as appropriate, to control fugitive dust:

- a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of least impact;
- b) Providing an adequate water source at the site prior to construction activities;
- c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d) Minimizing dust from shoulders and access roads;

Mr. Robert Visali  
Page 3

- e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f) Controlling dust from debris being hauled away from the project site.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

  
Keith Kurahashi

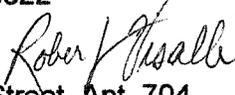
cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



DATE: March 4, 2016

TO: Stan Fujimoto  
Hawaii Housing Finance and Development Corporation  
677 Queen Street  
Honolulu, HI 96813

✓ Kusao & Kurahashi Inc.  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, HI 96822

FROM: Robert Visalli   
2428 Tusitala Street, Apt. 704  
Honolulu, HI 96815

Current Ainahau Vista apartment residents and neighboring building residents on  
Tusitala Street in Waikiki

SUBJECT: Construction of a Second Tower to Ainahau Vista

COMMENT: During the Waikiki Neighborhood Board's statutory 30-day public review and comment period, we wish to express our opposition to the construction of a second tower to Ainahau Vista for the following reasons:

- This site is a park that is very well maintained and professionally landscaped; it is one of the very last remaining green spaces along the Ala Wai Boulevard.
- Princess Victoria Ka'iulani Cleghorn resided here and this garden site contains a memorial plaque dedicated to her.
- This site is considered by many to be sacred `aina; believed by some to contain Hawaiian iwi.
- Tusitala Street is located in a very dense neighborhood; it's a narrow one-way street which often backs up with traffic, throughout the day. from multiple trash collecting trucks and many other delivery trucks. This construction project would be very upsetting to the entire neighborhood.
- Construction traffic, noise, dust is of great concern for the health, safety and welfare of the current senior residents at Ainahau Vista.



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
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BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Laura Leialoha Phillips McIntyre, AICP  
Environmental Planning Office Manager  
Environmental Health Administration  
Department of Health (DOH)  
919 Ala Moana Blvd., Suite 312  
Honolulu, Hawaii 96814

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. McIntyre:

Thank you for your letter dated February 25, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

The Applicant has reviewed the Standard Comments you referenced and offer the following related to the Standard Comments specifically applicable to our proposal:

**Clean Air Branch**

1. Construction/Demolition Involving Asbestos.

No demolition will be required for the Project development area which is presently open space. Asbestos will not be used in the new construction.

2. Control of Fugitive Dust

The Applicant will prepare a dust control management plan and understands that the plan does not require DOH approval.

Activities will comply with the provisions of Hawaii Administrative Rules, Section 11-60.1-33 on Fugitive Dust.

The following measures will be considered as appropriate to control fugitive dust:

- a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of least impact;
- b) Providing an adequate water source at the site prior to construction activities;
- c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d) Minimizing dust from shoulders and access roads;
- e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f) Controlling dust from debris being hauled away from the project site.

### **Clean Water Branch**

1. The Applicant understands and will comply with the State's antidegradation policy (HAR Chapter 11-554-1.1, designated uses (HAR Chapter 11-554-1-3) and applicable water quality criteria (HAR Chapter 11-554-4 through 11-554-8).
2. The Department of the Army has been contacted and since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project will not require a Department of the Army Permit.
3. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance will be less than an acre.
4. The Applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.
5. The Applicant understands and will comply with the monitoring requirements, if applicable and further understands the enforcement and penalties that could occur.
6. The Applicant does not expect this Project to involve a Polluted Runoff Control Project through your office seeking federal grants.

### **Hazard Evaluation & Emergency Response Office (HEER)**

1. A Phase I Environmental Site Assessment (ESA) was conducted for the property in January 2004 by Global Environmental Services Group, LLC (GESG). GESG noted that "This assessment has revealed no evidence of recognized environmental conditions as defined by ASTM, in connection with the property.
2. The Project site does not involve lands formerly used in the production of sugar cane.

### **Noise Radiation & Indoor Air Quality Branch Standard Comments**

The project will comply with applicable requirements of the following Administrative Rules of the Department of Health:

- Chapter 11-39 Air Conditioning and Ventilating
- Chapter 11-45 Radiation Control
- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal & Certification
- Chapter 11-504 Asbestos Abatement Certification Program

### **Safe Drinking Water Branch**

The Project does not involve development or actions affecting a Public Water System, except for a water line lateral (connection) for service off the municipal system; does not involve Underground Injection Control or injection wells; and does not involve development of a Golf Course and therefore it is not subject to these comments.

### **Solid and Hazardous Waste Branch**

#### Hazardous Waste Program

The Applicant does not expect to deal with hazardous waste but will comply with state regulations for hazardous waste in Chapters 11-260 to 11-280, Hawaii Administrative Rules (HAR) if necessary.

#### Solid Waste Section

The Applicant will not be developing solid waste disposal, recycling, reclamation or transfer systems. The Applicant may have a small on-site recycling program. As a generator of solid waste the Applicant will ensure that their wastes are delivered to permitted solid waste management facilities.

#### Office of Solid Waste Management

The Applicant will develop a solid waste management plan encouraging recycling and reuse of construction materials, including designated trash bins for recycling.

#### Underground Storage Tanks

The Applicant does not plan to have underground storage tanks.

### **Wastewater Branch**

The Applicant will be connecting to the City's municipal sewer system and has submitted a sewer connection permit application that is under review by the Wastewater Branch.

**Other Comments**

1. Noise – If noise created during the construction phase may exceed the maximum allowable levels, as set forth in Hawaii Administrative Rules, Chapter 11-46 “Community Noise Control”, a permit will be obtained before commencement of work.
2. Sugar Cane Map – Sugar cane was not grown on the Project site.
3. Hawaii Environmental Health Portal

The Environmental Health Warehouse does not indicate any listed sites near the Project site.

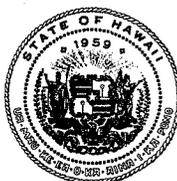
Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

In reply, please refer to:  
File:

EPO 16-057

February 25, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
2752 Woodlwn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

**SUBJECT: Draft Environmental Assessment (DEA) for Ainahau Vista II Senior Affordable Rental Development at 2428 Tusitala Street and 2423 and 2429 Ala Wai Boulevard, Waikiki, Oahu  
TMK: 2-6-24: 70 and 71**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link:

[http://oeqc.doh.hawaii.gov/Shared%20Documents/EA and EIS Online Library/Oahu/2010s/2016-02-23-OA-5E-DEA-Ainahau-Vista-II.pdf](http://oeqc.doh.hawaii.gov/Shared%20Documents/EA%20and%20EIS%20Online%20Library/Oahu/2010s/2016-02-23-OA-5E-DEA-Ainahau-Vista-II.pdf)

EPO strongly recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: <http://health.hawaii.gov/epo/landuse>. Projects are required to adhere to all applicable standard comments. EPO has recently prepared draft Environmental Health Management Maps for each county. They are online at: <http://health.hawaii.gov/epo/egis>

We suggest you review the requirements for the National Pollutant Discharge Elimination System (NPDES) permit. We recommend contacting the Clean Water Branch at (808) 586-4309 or [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov) after relevant information is reviewed at:

1. <http://health.hawaii.gov/cwb>
2. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/standard-npdes-permit-conditions>
3. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/forms>

EPO recommends you review the need and/or requirements for a Clean Air Branch permit. The Clean Air Branch can be consulted via e-mail at: [Cab.General@doh.hawaii.gov](mailto:Cab.General@doh.hawaii.gov) or via phone: (808) 586-4200.

If noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at: <http://health.hawaii.gov/irhb/noise>

EPO encourages you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: <https://eha-cloud.doh.hawaii.gov>

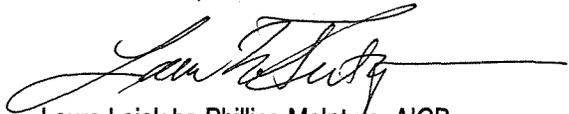
Mr. Keith Kurahashi  
Page 2  
February 25, 2016

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: <http://eha-web.doh.hawaii.gov/oeqc-viewer> This viewer geographically shows where previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

In order to better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: <http://www2.epa.gov/ejscreen>

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,



Laura Leialoha Phillips McIntyre, AICP  
Program Manager, Environmental Planning Office

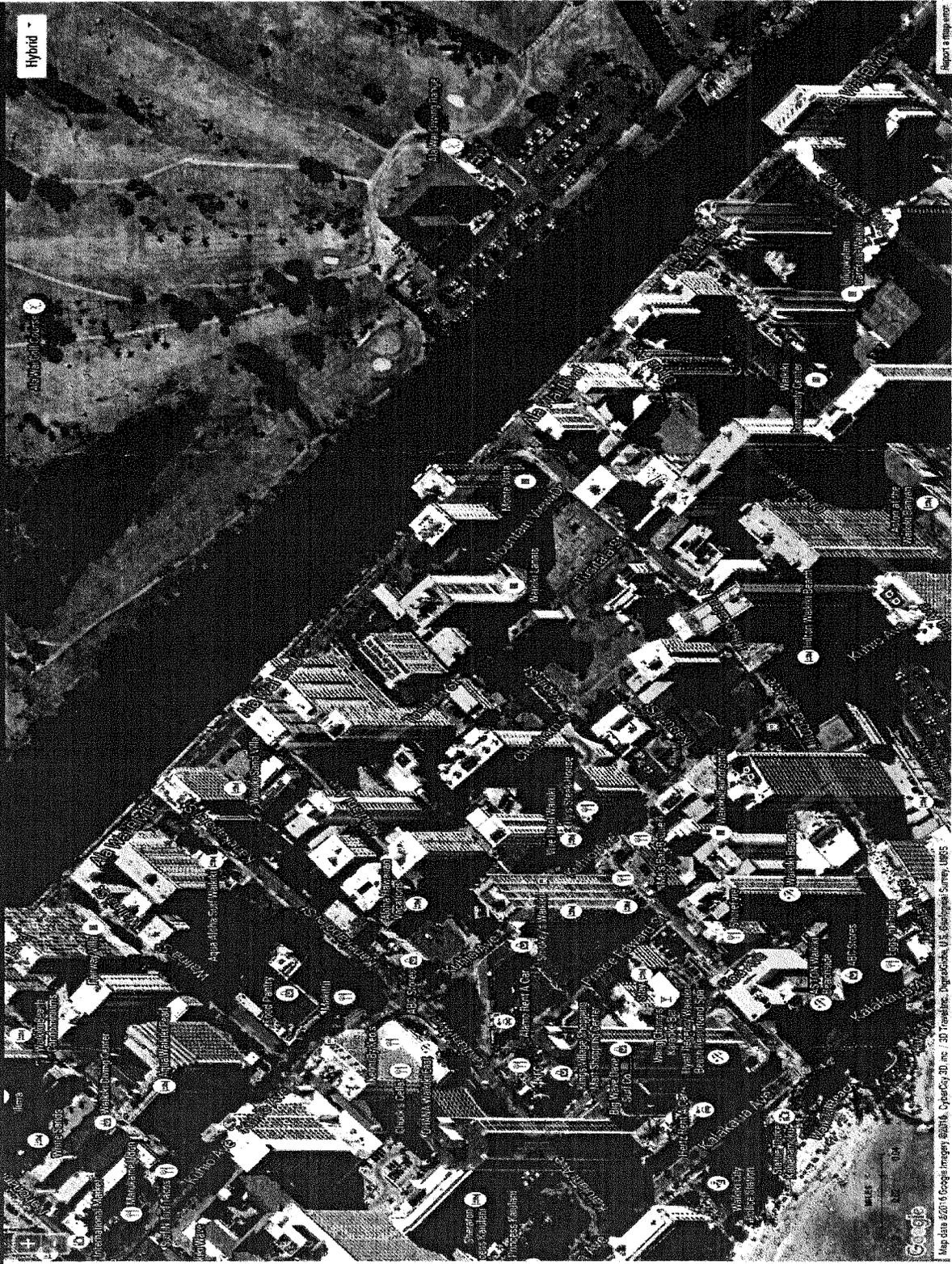
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Attachment 1: EPO Draft Environmental Health Management Map  
Attachment 2: OEQC Viewer Map of Area  
Attachment 3: U.S. EPA EJSCREEN Report

c: Applicant: Gary S. Furuta, Hawaii Housing Development Corporation  
Stan S. Fujimoto, DBEDT, Hawaii Housing Finance & Development Corporation  
DOH: CWB, CAB, IRHB {via email only}



Hybrid



Luciala

1 sites found

Results

Filter

Show sites with no location

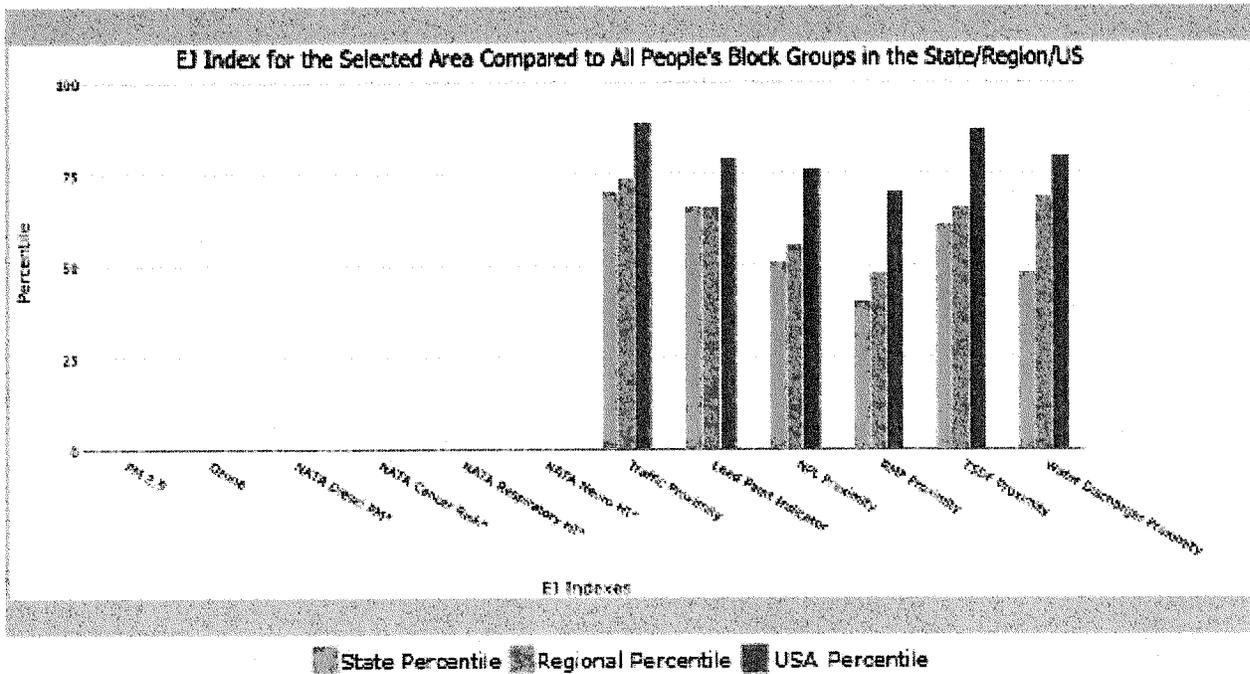
Tuicila Vista Affordable Elderly Rental  
Apartment (FEA-FONS)  
Environmental Assessment (Applicant)



for 1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 55960

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>EJ Indexes</b>			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	70	74	88
EJ Index for Lead Paint Indicator	68	68	79
EJ Index for Proximity to NPL sites	51	58	76
EJ Index for Proximity to RMP sites	40	48	70
EJ Index for Proximity to TSDFs	61	66	87
EJ Index for Proximity to Major Direct Dischargers	48	69	80



This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.





Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
<b>Environmental Indicators</b>							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$ )	N/A	N/A	N/A	9.95	N/A	9.78	N/A
Ozone (ppb)	N/A	N/A	N/A	49.7	N/A	48.1	N/A
NATA Diesel PM ( $\mu\text{g}/\text{m}^3$ ) <sup>*</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Cancer Risk (lifetime risk per million) <sup>*</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index <sup>*</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index <sup>*</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	230	280	74	190	78	110	88
Lead Paint Indicator (% Pre-1960 Housing)	0.25	0.17	70	0.25	60	0.3	54
NPL Proximity (site count/km distance)	0.046	0.092	43	0.11	40	0.096	48
RMP Proximity (facility count/km distance)	0.086	0.18	44	0.41	18	0.31	29
TSDF Proximity (facility count/km distance)	0.098	0.092	70	0.12	66	0.054	87
Water Discharger Proximity (facility count/km distance)	0.23	0.33	56	0.19	79	0.25	72
<b>Demographic Indicators</b>							
Demographic Index	51%	51%	49	46%	58	35%	75
Minority Population	72%	77%	31	57%	63	38%	81
Low Income Population	29%	25%	65	35%	45	34%	46
Linguistically Isolated Population	12%	6%	85	9%	69	5%	86
Population With Less Than High School Education	7%	10%	46	18%	31	14%	34
Population Under 5 years of age	4%	6%	28	7%	26	7%	28
Population over 64 years of age	16%	14%	62	12%	77	13%	72

\* The National-scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <http://www.epa.gov/ttn/atw/natamain/index.html>.

For additional information, see: [www.epa.gov/environmentaljustice](http://www.epa.gov/environmentaljustice)

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.



**KUSAO & KURAHASHI, INC.**  
*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
HONOLULU, HAWAII 96822

BUS. (808) 988-2231  
FAX. (808) 988-1140  
E-mail: [kkurahashi@hawaii.rr.com](mailto:kkurahashi@hawaii.rr.com)

June 14, 2016

Ms. Michele Nekota, Director  
Department of Parks and Recreation  
City and County of Honolulu  
1000 Uluohia Street, Suite 309  
Kapolei, Hawaii 96707

**Subject: Draft Environmental Assessment  
133 Kaiulani Condo-Hotel Project  
Tax Map Key: 2-6-23: 29, 37 and 76**

Dear Ms. Nekota:

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

**Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71**

Dear Ms. Nekota:

Thank you for your letter dated February 25, 2016 regarding the Draft Environmental Assessment ("DEA") for Ainahau Vista II Affordable Senior Rental Project ("Project").

The applicant appreciates that you have no comment or objection to the Project and your statement that the Project "will have no impact on any of our programs and facilities".

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

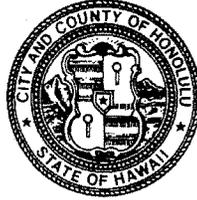
cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation



DEPARTMENT OF PARKS & RECREATION  
**CITY AND COUNTY OF HONOLULU**

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707  
Phone: (808) 768-3003 • Fax: (808) 768-3053  
Website: www.honolulu.gov

KIRK CALDWELL  
MAYOR



MICHELE K. NEKOTA  
DIRECTOR

JEANNE C. ISHIKAWA  
DEPUTY DIRECTOR

February 25, 2016

Mr. Keith Kurahashi  
Kusao & Kurahashi, Inc.  
Manoa Market Place  
2752 Woodlawn Drive, Suite 5-217  
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment  
Ainahau Vista II  
2428 Tusitala Street and 2433 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24:70 and 71

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the subject 62 unit Ainahau Vista II senior affordable rental apartment project.

The Department of Parks and Recreation has no comment and no objection to the Hawaii Housing Finance and Development Corporation processing a 201H permit application requesting exemption from the Park Dedication Ordinance. The proposed project will have no impact on any of our programs and facilities and you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact John Reid, Planner at 768-3017.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Nekota", is written over a faint, larger version of the same signature.

Michele K. Nekota  
Director

MKN:jr  
(643728)

cc: Stan Fujimoto, Hawaii Housing Finance & Development Corporation



**KUSAO & KURAHASHI, INC.**

*Planning and Zoning Consultants*

MANOA MARKET PLACE  
2752 WOODLAWN DRIVE, SUITE 5-217  
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FAX. (808) 988-1140  
E-mail: kkurahashi@hawaii.rr.com

June 14, 2016

Ms. Josephine L. Keanu  
2421 Tusitala Street,  
Honolulu, Hawaii 96815

**Subject: Chapter 343 Hawaii Revised Statutes  
Draft Environmental Assessment**

Project: Ainahau Vista II, Affordable Senior Rental  
Applicant: Hawaii Housing Development Corporation  
Agent: Kusao & Kurahashi, Inc.  
Location: 2428 Tusitala and 2423 and 2429 Ala Wai Boulevard  
Tax Map Key: 2-6-24: 70 and 71

Dear Ms. Keanu:

Thank you for the additional signatures on the petition, submitted for inclusion in the Draft Environmental Assessment (“DEA”) for Ainahau Vista II Affordable Senior Rental Project (“Project”).

In response to the concerns raised by the Petition:

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista. None of the tenants will be taking up limited on-street parking in the area. This is the only use that I am aware of that requires all tenants that own vehicles to have a parking stall. If the on-site parking fills up, only tenants that do not own vehicles will be allowed to rent.

The applicant, based on concerns raised at the first Waikiki Neighborhood Board meeting, is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. At the present time, there is only a smaller loading zone on the property (just slightly larger than a standard parking stall). This should help take the loading vehicles servicing the existing Ainahau Vista I project off Tusitala Street. The larger loading zone will be 12 feet by 35 feet, with a vertical clearance over 14 feet, actually open to the sky.

Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see

if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space. The seniors also have a multi-purpose room available for a variety of uses, which may include exercise and/or yoga classes, case management counseling, etc.

The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuakehau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

Our archaeological consultant has noted that human skeletal remains (bone fragments) found in project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

The Primary Urban Center Development Plan section on “**Protecting and Enhancing Natural, Cultural and Scenic Resources**” has a policy section that states as follows:

*“ Policies to protect and enhance these resources include:*

- **Preserve historic and cultural sites:** Special emphasis should be placed on sites and associated settings that are unique, of special significance, or are in good condition.*
- **Preserve and protect natural resource and constraint areas:** Establish an urban community boundary to define urban development and protect areas outside the boundary for their open space, scenic, and resource values.*
- **Preserve panoramic views of natural landmarks and the urban skyline:** This includes important vistas and focused views of significant natural and urban features and skyline profiles that make up or frame the PUC from publicly accessible places.*
- **Improve access to shoreline and mountain areas:** This includes continuous public access along Oahu’s southern shoreline as well as access to its mauka natural environments and features.*
- **Develop stream greenbelts:** Keep or create mauka-makai connections and views up and down important streams and create public walkways where possible and appropriate.*
- **Provide parks and active recreation areas:** Create or strengthen parks, plazas and other conveniences throughout the PUC, especially in more populated areas as a balance to the built environment, for recreation, social*

*interaction and leisure interludes.”*

- ***Preserve and protect natural resource and constraint areas***

In order to determine and address the historic and cultural nature of this site, the Project has undergone an archaeological review and that review resulted in the following:

The Department of Land and Natural Resources (DLNR) in a letter dated October 18, 2005, indicated their concurrence with Cultural Survey Hawaii on their recommendation of “no further work” in regards to SIHP sites -6682, -6706 – 6707. The letter also concurs with the archaeologist recommendation of “monitoring” in view of the discovery of historic properties and fragmental human remains in the fill. Another letter from DLNR, dated November 28, 2005, states their acceptance of burial plans for the non-native Hawaiian fragments of human skeletal remains encountered during the archaeological inventory. On November 29, 2005 two bound copies of the accepted burial treatment plan were delivered to SHPD. The burial treatment plan was approved and a burial site at the northeast corner of the Project was approved.

- ***Preserve panoramic views of natural landmarks and the urban skyline:***

This Project will not affect panoramic views of natural landmarks or the urban skyline. The Project is an infill development, surrounded by urban development.

- ***Improve access to shoreline and mountain areas:***

This Project will not affect access to the shoreline or mountain areas.

- ***Develop stream greenbelts:***

The Project is not located in a stream greenbelt. It is situated makai of the Ala Wai Drainage Canal and is separated from the canal by Ala Wai Boulevard. There is a promenade area along the makai side of the canal.

- ***Provide parks and active recreation areas:***

This private open space provided on the Project site would not be considered a park and active recreation area, nor would this Project be expected to provide such.

In response to concerns about:

- **Increased traffic:**

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Aina Hau Vista. The applicant based on concerns raised

at the first Waikiki Neighborhood Board meeting is providing a full (large) size loading zone and a smaller loading zone on the property to minimize impacts to Tusitala Street. Affordable senior housing is one of the lower traffic generators, during the morning and afternoon peak hours and the traffic study indicates that the Project is not expected to have a significant impact on the surrounding streets, including Tusitala Street.

In order to provide additional access to the property and reduce impact and traffic on Tusitala Street, the applicant will work with the Department of Planning and Permitting (DPP) to see if a second access (driveway) can be provided at Ala Wai Boulevard. Preliminary talks with DPP staff indicate that it may be possible to have the second driveway.

- **Decreased parking availability**

The applicant plans to provide parking on site for every tenant that owns a car, this is a requirement for the existing Ainahau Vista.

- **Denser population**

There is a strong demand for affordable senior rental units in Waikiki and elsewhere on the island. Seniors tend to have minimal impact on surrounding neighbors, as far as traffic, with lower trip generation rates. Our population will continue to increase with the influx of new residents and the island's birthrate versus mortality rate. Many of the seniors occupying these units, similar to Ainahau Vista I are expected to be existing residents of Honolulu looking for affordable housing.

- **Construction on Royal lands**

The makai portion of the Project site included only about 5% of the former Ainahau Estate. The mauka portion planned for development of Ainahau Vista II included only the Apuakehau Stream portion of the Ainahau Estate. Most of the Ainahau Vista development site is not part of the former Ainahau Estate.

- **Desecration or removal of iwi**

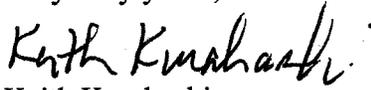
Our archaeological consultant has noted that human skeletal remains (bone fragments) found in the project area, comprised of previously disturbed fragments in fill sediments that was potentially brought into the project area from somewhere else, were moved to the Diamond Head/Mauka corner of the project area—per the Oahu Island Burial Council and State Historic Preservation Division approved burial treatment plan. Based on current information, it is not true to call the Ainahau Vista II site a “sacred burial land”—it is more a location where some previously disturbed human remains were found in one specific location (one archaeological inventory survey trench).

- **Loss of last green space on Tusitala Street**

We are providing landscaped areas for the seniors, although not as large as the existing open space. About 30 to 35% of the property will be in landscaped open space. It's a matter of establishing priorities and the applicant feels that there is a dire need for affordable senior rentals and a reduction in open space to create these rentals is a small price to pay.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Finance and Development Corporation  
Hawaii Housing Development Corporation







Opposition to Ainahau Vista II

We, the undersigned residents of Tusitala St. area and South Waikiki, oppose the construction of a 9 story, 62 unit tower on sacred burial land located on the Ala Wai side of 2428 Tusitala St., adjacent to the existing Ainahau Vista. The proposed building site is accessible by only one, narrow one-way street and is bordered by three other one-way streets; Kapili, Cleghorn and Kaiulani. This area is already densely populated, with heavy traffic and extreme inadequate street and building parking. The new building plan irresponsibly provides only 22 stalls for 62 units.

Additionally, in the event that emergency police, fire or ambulance services are needed, residents would have increased difficulty entering or exiting their homes, apartments and high rises due to roadblock those emergency vehicles can create.

Moreover, this site is the last remaining green space on Tusitala St. It was once the home of Princess Kaiulani, Heir to the Throne and her family. The site was a Hawaiian burial ground and contains ancient iwi (bones). This paradise garden should remain intact and preserved for its cultural and historic value in accordance with the Primary Urban Center Development Plan vision for 2025 that, "Honolulu's natural, cultural and scenic resources are protected and enhanced".

We, the undersigned community members oppose:

- Increased traffic
- Decreased parking availability
- Denser population
- Construction on Royal lands
- Desecration or removal of iwi
- Loss of the last green space on Tusitala

Print Name	Phone	Email	Signature	Address	
Hauana Kekai	230-0941		<i>[Signature]</i>	1927 E Luwene St	96819
Mapiana Kekai Young	636-7357		<i>[Signature]</i>		
Puna Kekai			<i>[Signature]</i>	2026 9th Ave	96816
Yuki Kekai			<i>[Signature]</i>		
TINO WAFUJE			<i>[Signature]</i>	1977 E Luwene St	96819
David Hecht	923-2111			2428 Tusitala St.	
DAVID L. WILKINS	295-5655		<i>[Signature]</i>	2428 " HNL, HI	
THOMAS N. SAMPTON	926-8385		<i>[Signature]</i>	2428 WESTMA	96811
Y. Cynthia Lee	921-0307				

Opposition to Ainahau Vista II

PRINT NAME	PHONE	EMAIL	SIGNATURE	ADDRESS
Charles Mylon	282-9299		Charles Mylon	2340 Hanalei Ala 968
Meredyn Haines	373-3060		Meredyn Haines	1782 Luu Kahi St 968
Andrea Hamilton	734-5058		Andrea Hamilton	1330 KAMINAKA ST 9681
James Hamilton			James Hamilton	
Patty Dunn	373-5183		Patty Dunn	436 Mamaki St. 96821
Paul Dunn			Paul Dunn	
Josephine Watts	377-5821		Josephine Watts	2215 Likou St
EMMA KAANAKAHO	955-4600		Emma Kaanakaoho	810 UNIVERSITY AVE 9682
ORA MAE KAANAKAHO			ORA MAE KAANAKAHO	
MAY PUNOHANU	988-2813		MAY PUNOHANU	6789 auhai 96819
Karen Punohau	259-6331		Karen Punohau	
Myron Punohau	698-6299		Myron Punohau	
Tommy Punohau	693-0490		Tommy Punohau	Waimanalo
Margret Punohau			Margret Punohau	
Andy Peepoe	987-0409		Andy Peepoe	Kona, HI
Mark Rochlen	623-9500		Mark Rochlen	941-347-KAM10
Mulle Rochlen			Mulle Rochlen	96789
Trans Rochler	450-4869		Trans Rochler	
Wayne Rochlen			Wayne Rochlen	
Nolan Seto	225-9252		Nolan Seto	
MAELIN Seto			MAELIN Seto	
ZENA MATHANU	542-6250		ZENA MATHANU	2285 Keanu St 96811
Maek Mathanu			Maek Mathanu	
David Abellira	922-1685		David Abellira	
RONO Abellira	222-9192		RONO Abellira	

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Opposition to Ainalau Vista II  
PRINT NAME

PHONE

SIGNATURE

ADDRESS

PRINT NAME	PHONE	SIGNATURE	ADDRESS
Raylene Koonui	375-9997	Raylene Koonui	2021 Waiolu St 9682
Ruth Koonui	782-0527	Ruth Koonui	
Faith Koonui	953-4557	Faith Koonui	
Florence Koonui	375-9997	Florence Koonui	
Keone Koonui		Keone Koonui	
Kaliko Bray	782-3340		707 Olokele 96816
Rona Bray			
Kim Kaeo Kahali	777-9534	Kim Kahali	
Hannah Kahali	548-8403	Hannah Kahali	
Henry Kahali		Henry Kahali	
Keith Kekai-Huddy	384-6597	Keith Huddy	3853 Nicolast 96815
Rip Huddy	285-8579	Rip Huddy	
Moana Huddy	955-5651	Moana Huddy	
Zino Huddy		Zino Huddy	
Albert Kekai	285-8519	Albert Kekai	
Susan Kekai	381-9672	Susan Kekai	
Manu Kekai		Manu Kekai	
Alex Kekai	783-0036	Alex Kekai	485 Kanan Pl 96819
Susan Kekai	485-9677	Susan Kekai	
Cyndi Kekai	275-7993	Cyndi Kekai	
Nohia Rochen	895-2815	Nohia Rochen	238 Nomilo Pl 96825
Mauna Kea Tamura	356-9980	Mauna Kea Tamura	
Sher Tamura	343-9495	Sher Tamura	
Paul Rochen	396-6662	Paul Rochen	267 Portlock Rd 9682
Heather Forti		Heather Rochen	
SAVANNAH FORTI		Savannah Forti	
DAVID ROCHEN		David Rochen	
FRANCESCO FORTI		Francesco Forti	
Jenna Forti		Jenna Forti	
Pumehau Rochen		Pumehau Rochen	

Opposition to Aiehau Vista II

NAME PRINT	PHONE	EMAIL	SIGNATURE	ADDRESS
JOBIE KAEO			Jobie Kaero	5808 PARK AVE, 96815
CYD ACRES			Cyd Acres	" " " "
QUEENIE KAEO	371-1671		Queenie Kaero	" " " "
PAOLO KAEO	953-7999		Paolo Kaero	" " " "
KOLEN KAEO	953-2816		Kolen Kaero	" " " "
BROCK KAM			Brock Kam	" " " "
DARLENE HACOBA	271-4446		Darlene Haco	" " " "
KATHY HACOBA			Kathy Haco	" " " "
DARLENE HACOBA			Darlene Haco	" " " "
JAMES KAEO	373-2471		Jayme Kaero	" " " "
KEONE KAEO	699-0974		Iggie Kaero	" " " "
KALAN KAEO	777-7499		Kalan Kaero	" " " "
WILLIAM KAEO IV	(608) 547-0013		William Kaero IV	" " " "
WILLIAM KAEO III			William Kaero III	" " " "
SUZANNE CHOTE	(505) 410-7768		Suzanne Chote	2826 Lilea St 96817
Sergei Agalzoff	(620) 627-1735		Sergei Agalzoff	5800 KNOXWOOD DR, ALBUQU, NM 871
LARIKAC LAUANI	382-2808		Larikac Lauani	47-700 HAIKEBU, 96-74
LONO LAUANI			Lono Lauani	" " " "
ERIN LINCOLN	878-8974		Erin Lincoln	700 PLYMOUTH, Kula, Maui
PHYLLIS LAMBERT	(909) 472-6387		Phyllis Lambert	3978 Francis, Chino 91711
JASON LAMBERT	(909) 627-1684		Jason Lambert	" " " "
Leslie Clark				1512 CACCAS CIR 93806
Jack Clark				

Aggie Quigg	394-1841		Aggie Quigg	354 Awini Way 96826
Jose Quigg	" "		Jose Quigg	" " " "
William Long	808 766 4438		William Long	2438 Tinsdale St 205 96811
Darlene E. Nakagawa	808-926-6501		Darlene E. Nakagawa	501 Tuaitala St #661

DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA  
FIRST DEPUTY

JEFFREY T. PEARSON  
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

June 13, 2016

Russell Y. Tsuji, Land Administrator  
Land Division  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

Log No. 2016.00405  
Doc No. 1604GC12  
Archaeology  
History & Culture

Stanley S. Fujimoto  
Hawaii Housing Finance & Development Corporation  
Department of Business Economic Development & Tourism  
677 Queen Street  
Honolulu, Hawaii 96813

Dear Sirs:

**SUBJECT: Chapter 6E-42 Historic Preservation Review**  
**Draft Environmental Assessment for the Ainahau Vista II Affordable Senior Rental Project**  
**Waikiki Ahupua'a, Honolulu (Kona District), Island of O'ahu**  
**TMK: (1) 2-6-024:070 and 071**

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the proposed construction of Ainahau Vista II Affordable Senior Rental Project (Kusao & Kurahashi, Inc. 2016). The proposed project involves development and construction of a nine story apartment building with appurtenances. Development of the apartment complex will occur on a 0.29-acre *mauka* portion of the 0.82-acre parcel owned by the Ainahau Vista II LP, identified as TMK: (1) 2-6-024:070 and 071. The SHPD received this submittal on February 22, 2016.

Our SHPD records review indicates that numerous archaeological studies have been conducted within Waikiki Ahupua'a. The results of these studies documented various surface and subsurface traditional and historic properties, including human burial remains, cultural deposits, former wetland remnants (*lo'i*), and former fishpond walls. An archaeological inventory survey (AIS) was conducted for this project (formerly referred to as the Tusitala Vista Elderly Apartments project) by Cultural Surveys Hawaii, Inc. (Chiogioji et al. 2004). The AIS report was reviewed and accepted by the SHPD on October 18, 2005 (Log No. 2005.2251; Doc No. 0510DB05). The AIS identified, documented, assessed site signi (pursuant to Hawaii Administrative Rules [HAR] §13-284-6, Criteria a through e), and made mitigation recommendations for each of the following four historic properties within the project parcels: Site 50-80-14-6705, human skeletal fragments, assessed as significant under Criterion "e" (cultural significance); Site 6682, a buried A Horizon, representing the nineteenth century ground surface of 'Ainahau (Cleghorn Estate) assessed significant under Criterion "b" (associated with lives of persons significant in our past); Site 6706, a segment of 'Āpuakēhau Stream bed assessed as significant under Criterion d (likely to yield information); and Site 6707, a buried dry-stacked basalt stone wall believed to be part of a traditional *lo'i* which was assessed as significant under Criteria a (events), b (important persons), c (construction), and d (information). The report recommended no further archaeological work for Site 6682 and Site 6706, archaeological data recovery for Site 6707, and archaeological monitoring for Site 6705. The SHPD concurred with these recommendations. Subsequently, a data recovery and archaeological monitoring plan was submitted and accepted by SHPD on July 25, 2005 (Log No. 2005.1459; Doc No. 0507MC09). The data recovery report was reviewed and accepted by the SHPD on October 27,

Mr. Tsujii and Mr. Fujimoto

June 13, 2016

Page 2

2008 (Log No. 2007.2521, Doc No. 0810WT54). Additionally, a burial treatment plan (O'Hare et al., October 2005) was accepted by the SHPD on November 28, 2005 (Log No. 2005.2563; Doc No. 0511SG04).

On August 17, 2015, SHPD (Susan Lebo) and CSH (Matt McDermott) consulted regarding the Hawaii Revised Statutes (HRS) Chapter 6E process for the current project. At this meeting, it was agreed that the project would proceed with (1) additional consultation with appropriate agencies and with Native Hawaiian Organizations (NHOs), particularly recognized lineal or cultural descendants and the O'ahu Island Burial Council (OIBC); (2) the project proponents would redesign the building foundation to preserve the Site 6705 wall; (3) that on-site archaeological monitoring would be conducted during project construction; and (4) that an archaeological monitoring plan (AMP) meeting the requirements of Hawaii Administrative Rules (HAR) §13-279-4 and a preservation plan (PP) for Site 6705 meeting the requirements of HAR §13-277 would be submitted to SHPD for review and acceptance prior to initiation of the project.

Based on the above, **SHPD's determination is no historic properties affected** with implementation of the SHPD-accepted AMP (June 8, 2016; Log No. 2015.04152, Doc. No. 1606JA02) and PP (June 13, 2016; Log No. 2015.04151, Doc. No. 1606JA09). The permit issuance process may continue.

Please contact Regina Hilo, Oahu Island Burial Sites Specialist, at (808) 692-8026 or at [Regina.Hilo@hawaii.gov](mailto:Regina.Hilo@hawaii.gov) for any questions regarding human burials and/or consultation with NHOs. Please contact me at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) for any questions or concerns regarding this letter.

Aloha,



Susan A. Lebo, PhD  
Archaeology Branch Chief

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