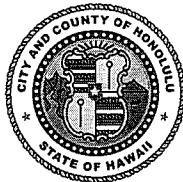


DEPARTMENT OF PLANNING AND PERMITTING  
KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEB: www.honolulu.gov/dpp

RICK BLANGIARDI  
MAYOR  
MEIA



DAWN TAKEUCHI APUNA  
DIRECTOR  
PO'O

JIRO A. SUMADA  
DEPUTY DIRECTOR  
HOPE PO'O

July 31, 2023

2023/ED-7(GT)

Ms. Mary Alice Evans  
Director  
State of Hawaii  
Office of Planning and Sustainable Development  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Dear Ms. Evans:

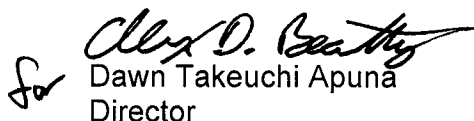
SUBJECT: Chapter 343, Hawaii Revised Statutes  
Draft Environmental Assessment (DEA)  
Project: Kalia Cultural Entertainment Venue  
Applicant: 2055 Kalakaua LLC (Will Nguyen)  
Agent: Wilson Okamoto Corporation (Dalton Beauprez)  
Location: 2055 Kalakaua Avenue - Waikiki  
Tax Map Keys: 2-6-006: 001 and 004

With this letter, the Department of Planning and Permitting hereby transmits the DEA and anticipated Finding of No Significant Impact for the Kalia Cultural Entertainment Venue Project, located at 2055 Kalakaua Avenue in Waikiki, Oahu, for publication in the August 8, 2023, edition of *The Environmental Notice*.

We have uploaded an electronic copy of this letter, the publication form, and the DEA to your online submittal site.

Should you have any questions, please contact Gerald Toyomura, of our Urban Design Branch, at (808) 768-8056 or by via email at [gtoyomura@honolulu.gov](mailto:gtoyomura@honolulu.gov).

Very truly yours,

  
Dawn Takeuchi Apuna  
Director

**From:** [webmaster@hawaii.gov](mailto:webmaster@hawaii.gov)  
**To:** [DBEDT OPSD Environmental Review Program](#)  
**Subject:** New online submission for The Environmental Notice  
**Date:** Tuesday, August 1, 2023 10:15:14 AM

---

**Action Name**

Kalia Cultural Entertainment Venue

**Type of Document/Determination**

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

**HRS §343-5(a) Trigger(s)**

- (5) Propose any use within the Waikīkī area of O'ahu

**Judicial district**

Honolulu, O'ahu

**Tax Map Key(s) (TMK(s))**

(1) 2-6-006: 001 and 004

**Action type**

Applicant

**Other required permits and approvals**

Federal: Federal Emergency Management Agency, Title 44 of the Code of Federal Regulations (44CFR) Compliance; Federal Aviation Administration, FAA Form 7460.1. State of Hawai'i: Department of Land and Natural Resources, Chapter 6E, HRS, State Historic Preservation Law; Department of Health, Disability and Communication Access Board, Pollution Control - Noise Permit. City and County of Honolulu: Department of Planning and Permitting, Building Permit, Grading Permit/Trenching Permit, Erosion and Sediment Control Plan, Certificate of Occupancy, Construction Dewatering, Wastewater Sewer Connection, Stormwater Drain Connection; Board of Water Supply, Water Connection, Water System Facilities Charges; Honolulu Fire Department, Plan Review; Department of Environmental Services, Sewer Connection

**Discretionary consent required**

Waikīkī Special District Major Permit

**Approving agency**

City and County of Honolulu, Department of Planning and Permitting

**Agency contact name**

Gerald Toyomura

**Agency contact email (for info about the action)**

[gtoyomura@honolulu.gov](mailto:gtoyomura@honolulu.gov)

**Email address or URL for receiving comments**

[gtoyomura@honolulu.gov](mailto:gtoyomura@honolulu.gov)

**Agency contact phone**

(808) 768-8056

**Agency address**

650 South King Street  
Honolulu, HI 96813  
United States  
[Map It](#)

**Applicant**

2055 Kalākaua LLC

**Applicant contact name**

Will Nguyen

**Applicant contact email**

[will@blacksandcapital.com](mailto:will@blacksandcapital.com)

**Applicant contact phone**

(808) 738-8400

**Applicant address**

2270 Kalākaua Avenue  
Honolulu, Hawaii 96815  
United States  
[Map It](#)

**Was this submittal prepared by a consultant?**

Yes

**Consultant**

Wilson Okamoto Corporation

**Consultant contact name**

Dalton Beauprez

**Consultant contact email**

[DBeauprez@wilsonokamoto.com](mailto:DBeauprez@wilsonokamoto.com)

**Consultant contact phone**

(808) 946-2277

**Consultant address**

1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
United States  
[Map It](#)

**Action summary**

The Applicant is proposing to construct the Kālia Cultural Entertainment Venue (Project) which is envisioned as an open-air cultural entertainment venue which will encompass a stage with dressing room areas for events; a large table seating area; Flex activity space for Hawaiian Style activities such as lei making, games, and other cultural activities; a two-story multi-purpose building including vendor booth, office, bar areas, food preparation and buffet, restrooms, enclosed seating areas, tech booth, and lānai; pick-up/drop-off area and a loading zone; and support

spaces including elevators, and janitorial rooms. The Project is anticipated to accommodate approximately 715 people and approximately 50 employees. Main access is anticipated from Kalakaua Avenue, and access from the adjacent Luana Hotel is being considered. The Project Site is occupied with the former Kyo-ya Restaurant and parking structure, which has not been operational since 2007 and will be demolished.

#### **Reasons supporting determination**

No significant impacts are anticipated to result from the Proposed Project. It is anticipated that the best management practices and mitigation measures discussed in Chapter 3 of the EA will minimize/reduce/eliminate any potential impacts to the various resource categories presented. Further, reference to Chapter 6, supports Anticipation Determination of Finding of No Significant Impact.

#### **Attached documents (signed agency letter & EA/EIS)**

- [OPSD-ERP-Transmittal-Letter.pdf](#)
- [Final-DEA-with-Appendices-7.27.23.pdf](#)

#### **Action location map**

- [Kalia-Project-Location-Shapefile.zip](#)

#### **Authorized individual**

Gerald Toyomura

#### **Authorization**

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

# Draft Environmental Assessment

Kalia Luau - 2055 Kalākaua Avenue

Waikiki, O'ahu, Hawai'i

---

Applicant: 2055 Kalākaua LLC

Approving Agency: City and County of Honolulu DPP

**August 2023**

Wilson Okamoto Corporation



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Draft Environment Assessment  
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Draft Environment Assessment  
**Kālia Cultural Entertainment Venue**

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- Appendix F Preliminary Engineering Report Civil Infrastructure
- Appendix G Early Consultation Comments and Response Letters

# PREFACE

## PREFACE

This Draft Environmental Assessment (EA) / Anticipated Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawai'i Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawai'i Administrative Rules (HAR), Department of Health, State of Hawai'i.

This EA is required because the Proposed Project is an "applicant action" that involves the use of land within Waikīkī pursuant §343-5(a)(5) Hawai'i Revised Statutes (HRS), "*Propose any use within the Waikiki area of Oahu, the boundaries of which are delineated in the land use ordinance as amended, establishing the "Waikiki Special District."*" Furthermore, the Proposed Project will also require the preparation and processing of a Waikīkī Special District Major (WSD Major) Permit application as the Proposed Project is situated in the Resort Mixed Use Precinct, as illustrated in Exhibit 21-9.13 of the City's Land Use Ordinance (LUO) (Chapter 21, Revised Ordinances of Honolulu (ROH)). Thus, the Applicant plans to submit a WSD Major Permit Application to the City and County Department of Planning and Permitting (DPP) for processing after the EA process. Hence, the EA will support the subsequent WSD Major Permit Application. The DPP will be the "Approving Agency" and will determine the significance of potential environmental impacts and if the Final EA can be filed as a Finding of No Significant Impact (FONSI).

The studies prepared in conjunction with this EA include a Traffic Impact Assessment Report, an Archaeological Literature Review and Field Investigation Report, a Ka Pa'akai Analysis, a Noise Study, Hazardous Materials Survey and a Preliminary Civil Engineering Report. The aforementioned studies are appended to this EA. This Draft EA has also been prepared in consideration of the comments received in response to the Early Consultation Package mailed out on April 10, 2023, to the respective stakeholders listed in Chapter 7 of this EA.

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# Summary

## SUMMARY SHEET

<b>Project Name:</b>	Kālia Cultural Entertainment Venue
<b>Applicant:</b>	2055 Kalākaua LLC
<b>Approving Agency:</b>	City and County of Honolulu Department of Planning and Permitting
<b>Location:</b>	Waikīkī, O‘ahu, Hawai‘i
<b>Tax Map Keys (TMKs):</b>	[1] 2-6-006: 001 and 004
<b>Recorded Fee Owner:</b>	2055 Kalākaua LLC
<b>Existing Use:</b>	The Project Site is currently occupied with the former Kyo-ya Restaurant and its associated parking structure which has not been operational since 2007. The Project Site is currently utilized to store rideshare vehicles, provide overflow parking for neighboring properties, and for other temporary uses.
<b>State Land Use Classification:</b>	Urban
<b>County Zoning Designation:</b>	According to the City and County of Honolulu Department of Planning and Permitting (DPP) zoning maps, the Project Site is situated within the Resort Mixed Use Precinct of the Waikīkī Special District
<b>Proposed Project:</b>	The Proposed Project is envisioned to be an open-air entertainment venue with various support spaces as fully described in Chapter 2 of the EA.
<b>Impacts:</b>	No significant impacts are anticipated to result from the Proposed Project. It is anticipated that the best management practices and mitigation measures discussed in Chapter 3 of the EA will minimize/reduce/eliminate any potential impacts to the various resource categories presented.
<b>Anticipated Determination:</b>	Finding of No Significant Impact (FONSI)
<b>Parties Consulted During Early Consultation:</b>	<u>Federal Agencies</u> U.S. Environmental Protection Agency

Draft Environment Assessment  
**Kālia Cultural Entertainment Venue**

---

U.S. Department of the Interior, Fish and Wildlife Service  
U.S. Department of Army

**Federal Representatives**

Senator Mazie Hirono  
Senator Brian Schatz  
Representative Jill Tokuda  
Representative Ed Case

**State Agencies**

Department of Accounting and General Services  
Department of Business, Economic Development and Tourism (DBEDT)  
DBEDT, Hawai'i State Energy Office  
DBEDT, Land Use Commission  
DBEDT, Creative Industries Division  
DBEDT, Office of Planning and Sustainable Development (OPSD)  
OPSD, Environmental Review Program  
DBEDT, Hawai'i Tourism Authority  
DBEDT, Business Development and Support Division  
Department of Defense  
Department of Health (DOH)  
DOH, Clean Water Branch  
DOH, Environmental Management Division  
DOH, Hazard Evaluation and Emergency Response Office  
DOH, Wastewater Branch  
DOH, Safe Drinking Water Branch  
Department of Land and Natural Resources (DLNR)  
DLNR, Office of Coastal and Conservation Lands  
DLNR, Historic Preservation Division  
Department of Hawaiian Home Lands  
Department of Transportation (DOT)  
DOT, Highways Division  
DOT, Airports Division  
Office of Hawaiian Affairs

**State Representatives**

Senator Sharon Moriwaki  
Representative Adrian Tam

**City and County of Honolulu Agencies**

Board of Water Supply  
Department of Community Services  
Department of Design and Construction  
Department of Environmental Services  
Department of Facility Maintenance  
Department of Parks and Recreation  
Department of Planning and Permitting

Draft Environment Assessment  
**Kālia Cultural Entertainment Venue**

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Department of Transportation Services  
Honolulu Fire Department  
Honolulu Police Department  
Office of Climate Change, Sustainability, and Resiliency  
Office of the Mayor

**City Council**

Councilmember Tommy Waters

**Utility Companies**

Hawai'i Gas  
Spectrum Hawai'i  
Hawaiian Telcom  
Hawaiian Electric Company

**Other Interested Parties and Individuals**

Hawai'i State Library  
Waikīkī-Kapahulu Public Library  
Waikīkī Neighborhood Board No. 9

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# CHAPTER 1: INTRODUCTION

## 1. INTRODUCTION

### 1.1 Background Information

The landowner, 2055 Kalākaua LLC (herein referred to as “Applicant”) is proposing to construct the proposed Kālia Cultural Entertainment Venue (Proposed Project) on several adjoining Tax Map Key (TMK) parcels: [1] 2-6-006: 001 and 004 located in Waikīkī on the island of O’ahu (Project Site) -- See Figure 1-1.

As the Project Site is located within the City and County of Honolulu’s Waikīkī Special District (WSD), development of the Proposed Project is subject to the permitting requirements of Chapter 21, Revised Ordinances of Honolulu (ROH). Thus, this EA will support the subsequent WSD Major Permit Application that will be subject to review and approval by the DPP.

The EA process commenced on April 10, 2023, when the Early Consultation Package was mailed out to the various Federal, State, City and County, government officials, and other stakeholders as described in Section 7.1 of this EA. Moreover, a meeting was held with the DPP on May 25, 2023, to discuss the Proposed Project. The comments received on the Early Consultation, as well as the discussions had with the DPP regarding the Proposed Project has informed the scope of this EA document.

This Draft Environmental Assessment (EA) assesses the anticipated environmental effects of the Proposed Project may have on a host of environmental resources. Specifically, this effort encompasses an evaluation of primary, secondary, and cumulative effects, in alignment with Chapter 343, Hawai’i Revised Statutes (HRS), Title 11, Chapter 200.1, Hawai’i Administrative Rules (HAR), and Chapter 21, ROH. The EA also identifies feasible means of avoiding or substantially lessening potential significant adverse impacts and evaluates a range of reasonable alternatives to the Proposed Project, including the required No Action alternative. As noted in the Preface of this document, this EA is being prepared as an “applicant action.”

In summary, this EA serves as a disclosure and informational document intended to identify the anticipated environmental effects of implementing the Proposed Project and evaluate the potential of their significance. This EA has been prepared for the Proposed Project for the following purposes:

- To inform and provide the general public, the local community, Federal, State, and City and County of Honolulu (CCH) agencies, as well as any other interested stakeholders, an opportunity to comment on the Proposed Project and its environmental effects, feasible measures to mitigate those effects, as well as the reasonable and feasible alternatives;
- To enable the Applicant to consider the potential environmental consequences of implementing the Proposed Project and pursue the responsible development of the Project Site;

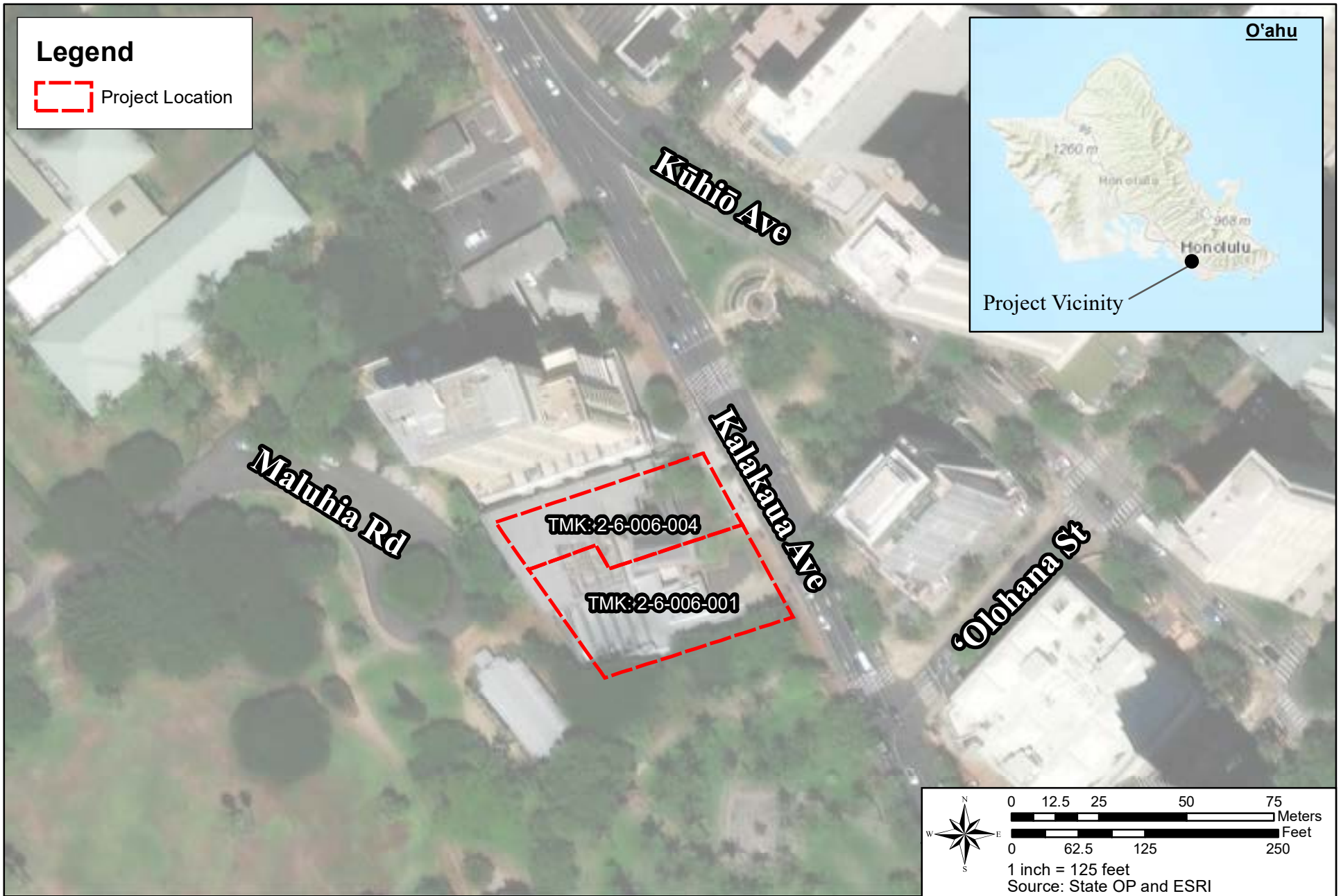


FIGURE 1-1

PROJECT LOCATION MAP

KĀLIA CULTURAL ENTERTAINMENT VENUE  
 WAIKĪKĪ, O'AHU, HAWAII

Draft Environment Assessment  
**Kālia Cultural Entertainment Venue**

---

- To enable appropriate agencies to consider the environmental consequences of the Proposed Project for which they have a role in approving or issuing permits; and
- To satisfy Chapter 343, HRS, Chapter 200.1, HAR, and Chapter 21, ROH requirements.

## **1.2 Project Location and Surrounding Uses**

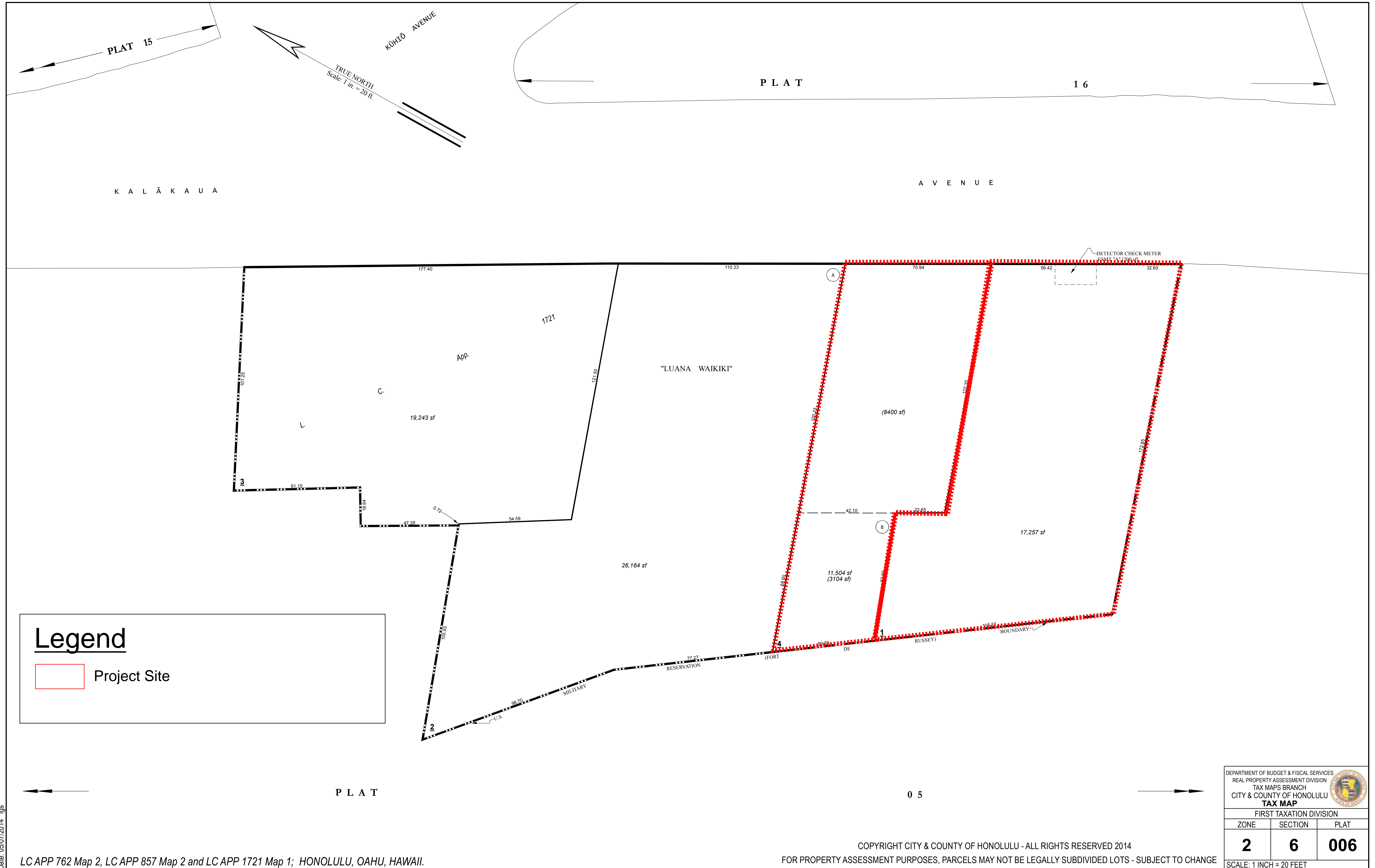
The Project Site is located on the western edge of Waikīkī, on the island of O‘ahu. Waikīkī stretches along more than two miles from the Ala Wai Yacht Harbor to the Waikīkī Wall Walkway at Kūhiō Beach Park near and is a little more than one half mile at its widest point. The Project Site encompasses two adjoining Tax Map Key (TMK) parcels: [1] 2-6-006: 001 and 004 (See Figure 1-2). Combined, these parcels cover an area of approximately 0.66 acres or approximately 28,750 SF. The Project Site is bounded by the Luana Waikiki Hotel and Suites to the north, Kalakaua Avenue to the east, the Fort DeRussy Army Chapel and Brother in Valor Memorial to the south, and Maluhia Road to the west.

The surrounding area can be characterized as an urban resort area marked by diversity and contrast in building forms, uses, densities, and treatment of open spaces. Waikīkī is designated as a special district by the City and County of Honolulu and is organized by various precincts. As the Proposed Project is situated in the Resort Mixed Use Precinct, several hotels and commercial uses are situated due east along Kalakaua Avenue. To the north, is the Apartment Precinct and the Apartment Mixed-Use Precinct with several condotels, apartment buildings, and other commercial uses that continue along Kuhio Avenue and towards the Ala Wai Canal. To the west, is the Public Precinct which contains the larger Fort DeRussy Park Complex and Beach Park (See Figure 1-3).

The Project Site is located in close proximity to several recreational resources in the Waikīkī area.

The Fort DeRussy Beach Park is located to the west of the site, across Maluhia Road. The park offers a wide range of recreational activities, including picnicking, swimming, sunbathing, surfing, volleyball, and tennis. The park also includes walking paths, a children's playground, and a historical World War II Museum.

The site is also situated within walking distance of the Waikīkī Beach Walk, which is a pedestrian-friendly shopping and entertainment district located along Lewers Street. The Waikīkī Beach Walk features a variety of retail shops, restaurants, and entertainment venues, and is further adjacent to the Royal Hawaiian Center, which offers over 310,000 square feet of retail and dining space.



Date: 05/07/2014 lgs

LC APP 762 Map 2, LC APP 857 Map 2 and LC APP 1721 Map 1; HONOLULU, OAHU, HAWAII.

COPYRIGHT CITY & COUNTY OF HONOLULU - ALL RIGHTS RESERVED 2014  
 FOR PROPERTY ASSESSMENT PURPOSES, PARCELS MAY NOT BE LEGALLY SUBDIVIDED LOTS - SUBJECT TO CHANGE

DEPARTMENT OF BUDGET & FISCAL SERVICES  
 REAL PROPERTY ASSESSMENT DIVISION  
 TAX MAPS BRANCH  
 CITY & COUNTY OF HONOLULU  
**TAX MAP**

FIRST TAXATION DIVISION		
ZONE	SECTION	PLAT
2	6	006

SCALE: 1 INCH = 20 FEET

Figure 1-2 Tax Plat Map

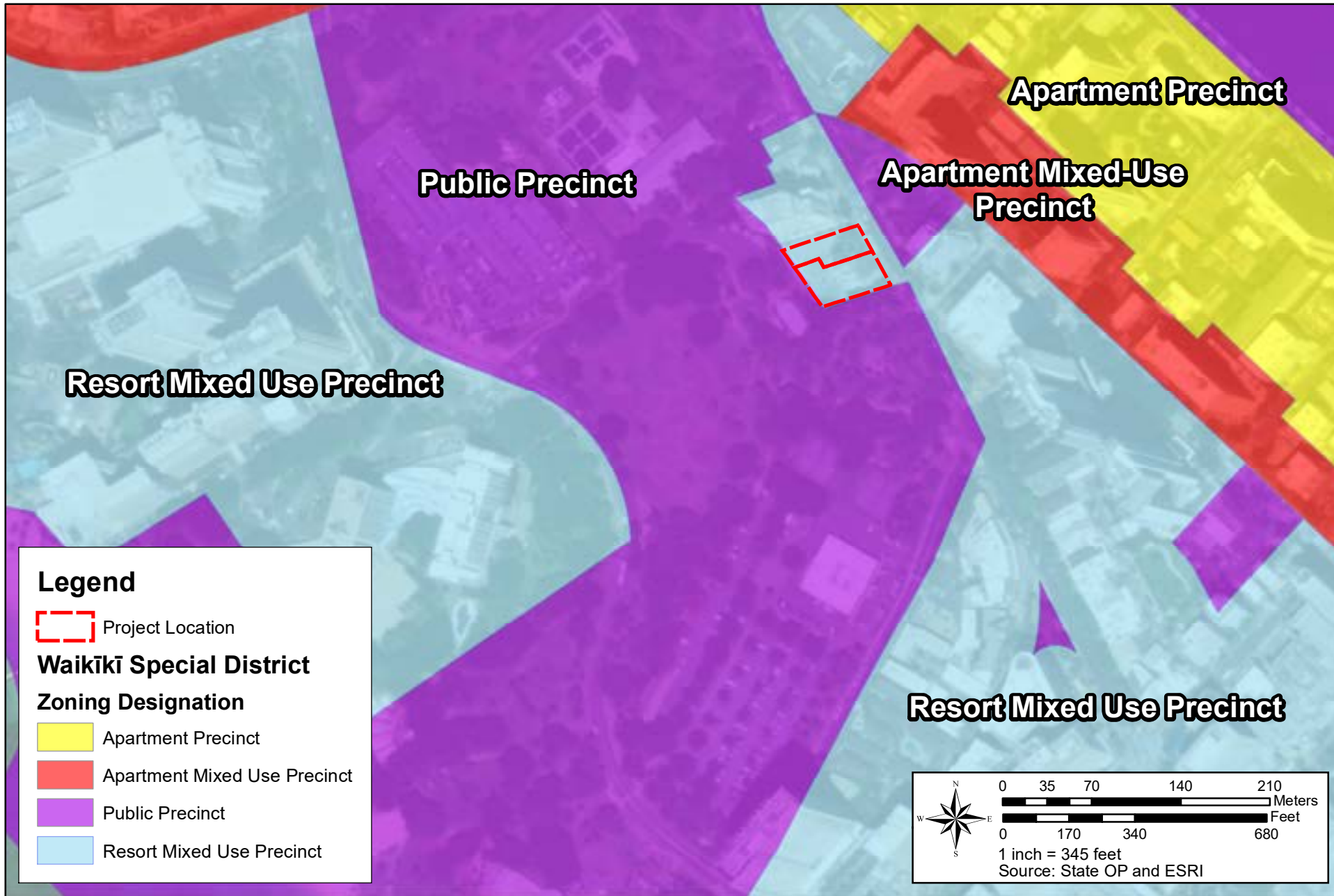


FIGURE 1-3

WAIKIKI SPECIAL DISTRICT MAP

KĀLIA CULTURAL ENTERTAINMENT VENUE  
 WAIKIKI, O'AHU, HAWAII



Draft Environment Assessment

**Kālia Cultural Entertainment Venue**

---

Overall, the Project Site is located in an area that is well-suited to recreational activities, with several popular parks, beaches, and entertainment venues situated nearby.

Historically, the Project Site is situated within the ahupua'a of Waikīkī which was known as a place of political prominence due to the concentration of chiefs that lived and frequented the area. Waikīkī translates as “spouting water,” in reference to the wetlands and abundant freshwater resources that existed in the region. Waikīkī was a watery expanse fed by mountain streams, underground springs, and tidal interaction with the waters of the Pacific.

The traditions of Waikīkī and its place names indicate its significance as a nexus of interconnected ali'i histories and as a highly productive agricultural region. Waikīkī was famous for its extensive irrigated taro fields and fishponds that covered the coastal plain. During the early post-contact era, early Asian immigrants continued to raise fish in Waikīkī, along with livestock, while cultivating rice patties and other forms of agriculture. Starting in the second half of the 19<sup>th</sup> century, changes to the Waikīkī landscape entailed improvements to transportation connections between Waikīkī and Honolulu, and the development of Kapi'olani Park and associated residential neighborhoods.

The 20<sup>th</sup> century saw the definitive transformation of Waikīkī from quiet retreat and agricultural breadbasket to a bustling tourist destination. As the popularity of Waikīkī among residents— particularly the foreign/haole population—and visitors grew, the region was eyed for development. The primary impetus for landscape change was construction of the Ala Wai Canal in the 1920s.

The canal effectively cut off Waikīkī from the rest of the Honolulu urban and suburban landscape and created developable lands where before there were expansive wetland agricultural fields. During the post-war boom, Waikīkī was transformed into what can be considered as the economic engine of the State currently, driving the State's core tourism economy. The 1950s were the take-off point with visitor counts perennially hitting new highs each year at levels never experienced before. As more visitors frequented Waikīkī, the following decades saw more new buildings constructed and more properties developed along the coast. Shoreline improvements were also made to enhance the visitors' beach experience, which further transformed the area into the resort destination it is known as today.

### **1.3 Land Ownership**

The Project Site is privately owned by 2055 Kalākaua LLC. The Applicant acquired the properties in December 2022.

# CHAPTER 2: PROJECT DESCRIPTION

## 2. PROJECT DESCRIPTION

### 2.1 PURPOSE AND NEED

As the Project Site has not been fully utilized since 2007, the Applicant purchased the property in December 2022 to implement the Proposed Project at the “gate” of Waikīkī and revitalize the area. Historically and culturally, Waikīkī’s appeal has been a place of hospitality – a place where people gather and are attracted by a wide variety of recreational and cultural activities. Waikīkī’s physical attractiveness and desirability as a destination for residents, employees, and visitors relies greatly on the aesthetics and experiences that make it unique.

When Waikīkī was designated as a special district in 1976, Waikīkī was in danger of losing what made it a uniquely Hawaiian resort destination as it was losing its Hawaiian sense of place. A Hawaiian sense of place is not just a particular architectural style which echoes our historical past, but is also a reflection of attitudes, experiences, place, spaces, and symbols that we have embraced as reminders of and contributors to a uniquely Hawaiian experience.

Moreover, in direct response to the critical value of Hawai‘i’s tourism industry to the economic health of the State, it has become abundantly evident that the protection of Hawai‘i’s unique natural environment and host culture is critical. The Proposed Project is aimed to contribute towards sustainable tourism as well as cultural tourism. Sustainable tourism is largely defined as tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities. The Hawaii Tourism Authority defines sustainable tourism as a way to maximize social and economic benefits to Hawai‘i’s communities and businesses while respecting, nourishing, preserving and enhancing Hawai‘i’s natural, cultural and human assets. Cultural tourism is defined as tourism related to multi-ethnic cultures that provide residents and visitors with enriching experiences and insights into the history, customs, arts, and traditions.

The Proposed Project is intended to pursue the responsible development of the Project Site, while aligning with and promoting the core tenets of sustainable and cultural tourism as defined above while also creating a Hawaiian sense of place. Specifically, the Proposed Project and its associated programming will seek to celebrate, promote, and perpetuate Hawai‘i’s natural environment and host culture while fostering local collaboration and strengthening community resilience. The Proposed Project will provide a venue that encourages social interaction by creating spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai‘i.

## **2.2 PROJECT DESCRIPTION**

The Applicant is proposing to construct the Kālia Cultural Entertainment Venue (Proposed Project) which is envisioned as an open-air cultural entertainment venue (See Figure 2-1).

The Proposed Project is anticipated to encompass the following programming elements:

- A large lawn for guest seating
  - This space will feature a large expansive lawn that will serve as the gathering place for the guests of the venue. It will provide ample space for table seating where spectators can enjoy the events hosted by the Proposed Project.
- Flex activity spaces with landscaping
  - The Proposed Project will have flexible activity spaces suitable for Hawaiian Style activities such as lei making, games, and other cultural activities that can be customized to meet the needs of any event and will be further supported by landscaping that adds a touch of the natural beauty that Hawai'i has to offer.
- Stage with dressing room areas to support events
  - The Proposed Project will feature a state-of-the-art stage that will be used to showcase cultural performances and entertainment. Dressing room areas located will be conveniently nearby, where performers can prepare and rest before and after their performances in comfort and privacy.
- A two-story multi-purpose building with the following:
  - Vendor Booth;
  - Office;
  - Bar Areas;
  - Food Preparation and Buffet;
  - Restrooms;
  - Enclosed seating areas;
  - Tech Booth; and
  - Lānai
- Pick-up/drop-off area and a loading zone
  - The Proposed Project will feature a port cochere that will function as a pick-up/drop-off area. The Project Site will not include any parking stalls for guests.
- Other support spaces such as elevators, janitorial rooms, etc.

In addition to the programming elements mentioned above, the Proposed Project's space program inventory also encompasses a range of support areas to ensure safety, comfort, and functionality. Elevators, janitorial rooms, and other amenities will be designed and incorporated to enhance the overall experience of hosting or attending an event in our space.

The Proposed Project will be efficiently designed to enable flexibility of use within all areas. Moreover, the Proposed Project is anticipated to be designed to provide seating that could accommodate approximately 715 people on both the lawn as well enclosed areas on the second level of the two-story structure (See Figure 2-2 and 2-3). The Proposed Project is also anticipated to create jobs for approximately 50 employees.



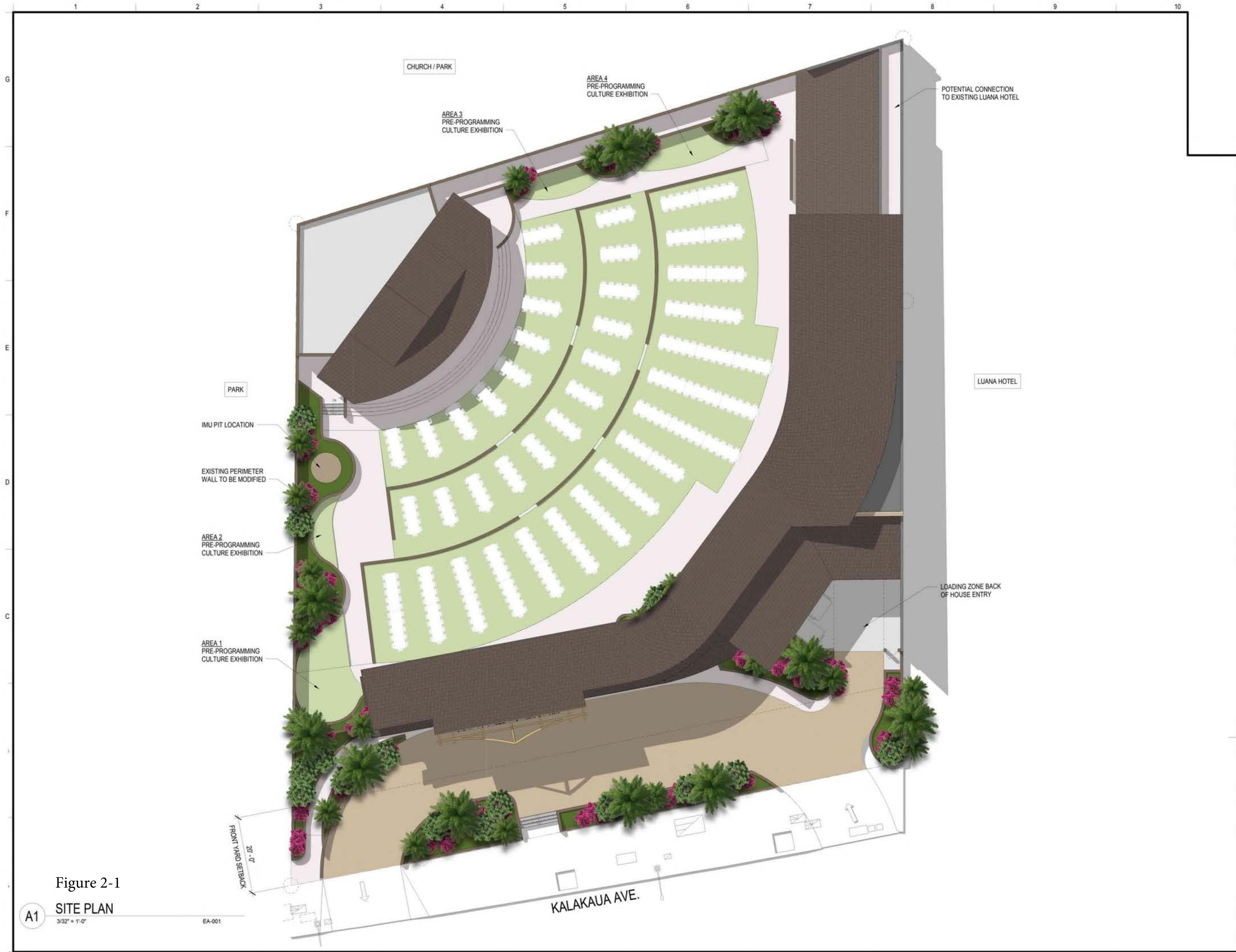


Figure 2-1

A1

SITE PLAN

3/32" = 1'-0"

EA-001



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INCORPORATED

ARCHITECTURE • PLANNING  
CIVIL • CONSTRUCTION MANAGEMENT

Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Revision Number	Description

# Kālia Cultural Entertainment Venue

Project Title  
EA EXHIBIT-SITE PLAN

Project Number	Date
Drawn	Checked

Drawing Number  
**EA-001**

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

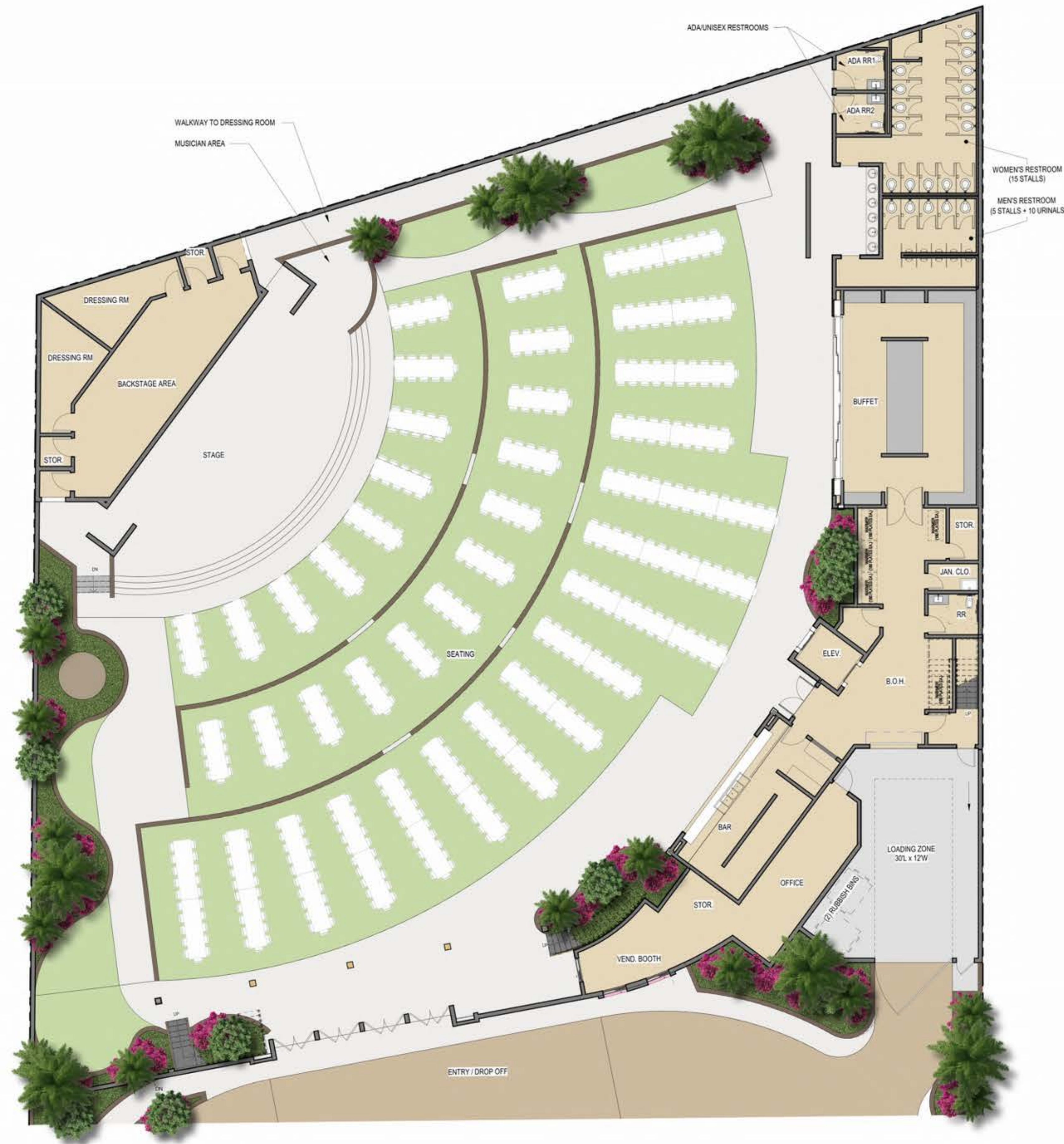


Figure 2-2

A1 OVERALL FIRST FLOOR PLAN  
1" = 10'-0" EA-002



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ARCHITECTURE • PLANNING • INTERIORS  
CIVIL • CONSTRUCTION MANAGEMENT

Signature

Expiration Date of the License

This work was prepared by me  
or under my supervision and  
construction of this project will  
be under my observation.

Revision Number/ Description

**Kāiā Cultural  
Entertainment Venue**  
2055 KALAKAUA AVE.  
HONOLULU, HI 96815  
TMK: 2-8-018: 001

Project Name

Drawing Title  
EA EXHIBIT-OVERALL FIRST FLOOR PLAN

Project Number

Date

Drawn

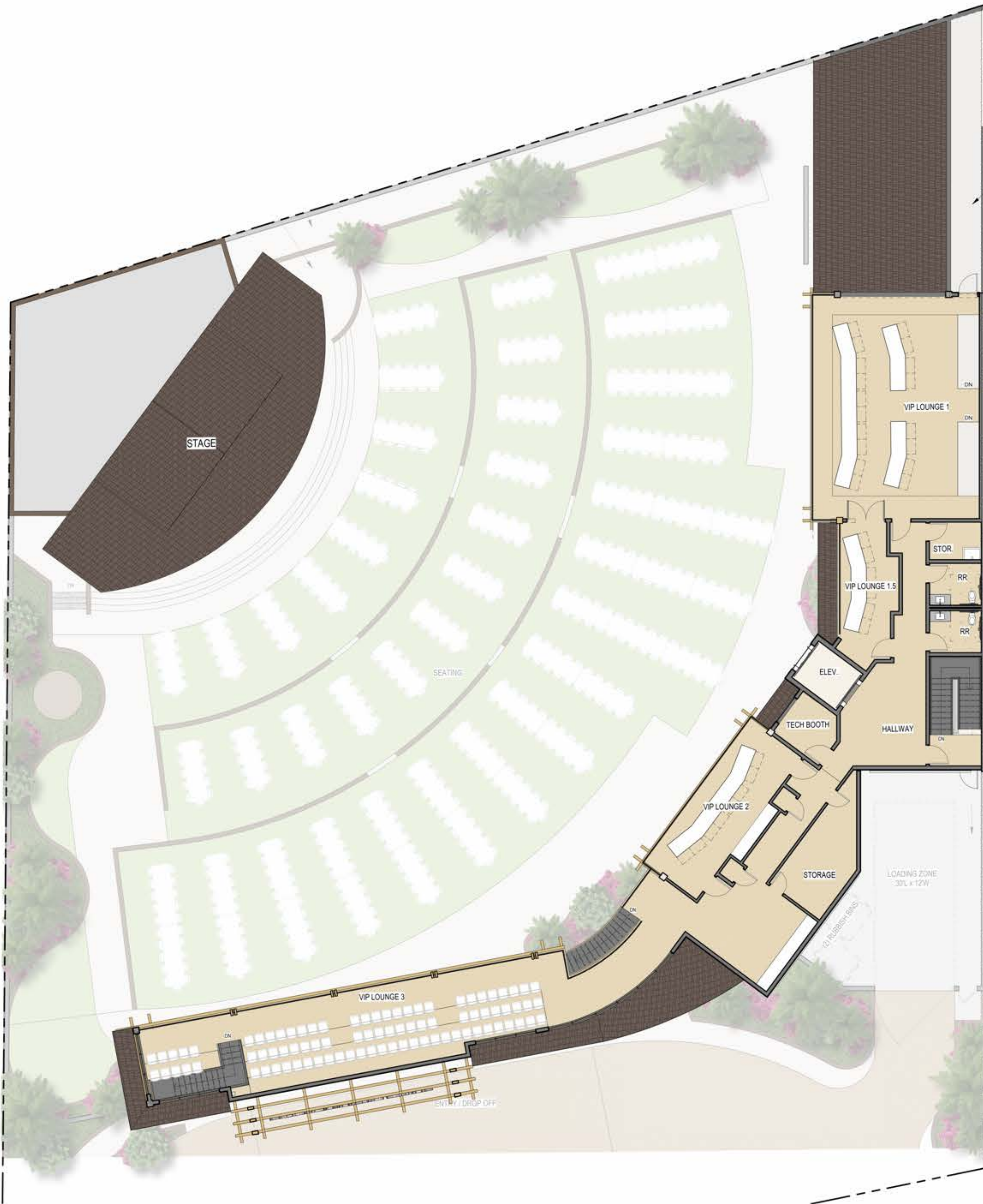
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Designed

Drawing Number

**EA-002**

Sheet No. of



LUANA HOTEL CONNECTION (POTENTIAL)

STAGE

SEATING

VIP LOUNGE 1

VIP LOUNGE 1.5

STOR

RR

RR

ELEV.

HALLWAY

VIP LOUNGE 2

STORAGE

LOADING ZONE 30'L x 12'W

VIP LOUNGE 3

ENTRY / DROP OFF

Figure 2-3

A1

OVERALL SECOND FLOOR PLAN

1" = 10'-0"

EA-003



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Revision Number/Description

Project Name

**Kālia Cultural Entertainment Venue**

2055 KALAKAUA AVE.  
HONOLULU, HI 96815

TMK: 2-8-018: 001

Drawing Title

EA EXHIBIT-OVERALL SECOND FLOOR PLAN

Project Number

21058

Date

Drawn

Checked

Designed

Drawing Number

**EA-003**

Sheet No. of

Draft Environment Assessment

**Kālia Cultural Entertainment Venue**

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Access to the venue is anticipated to be via driveway off Kalakaua Avenue. The Proposed Project is envisioned to provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikīkī, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikīkī workers, businesses, residents, and tourists. This provides an opportunity for the Applicant to maximize and optimize the current space available to implement the Proposed Project in line with the objectives of the Waikīkī Special District.

A secondary access point from the existing Luana Hotel is also being considered. While not fully negotiated, the concept design that considers leveraging an access point from the Luana Hotel allows for a potential connection between the existing hotel and the Project Site. This connectivity would allow guests and users of the hotel to enter the venue through the hotel grounds and create the potential for a more collaborative entertainment venue, building off of synergy with the neighboring Luana Hotel property. This additional accessway will continue to be explored by the design team, as project design efforts continue to progress.

The Project Site is currently occupied with the former Kyo-ya Restaurant and its associated parking structure, which has not been operational since 2007. However, the Project Site is currently utilized to store rideshare vehicles, provide overflow parking for neighboring properties, and for other temporary uses. Construction of the Proposed Project will require the demolition of most of the existing building and parking structure. It is anticipated that these uses will no longer be in place once the Project Site's existing structure is demolished and will not return once the Proposed Project is operational.

The Proposed Project is anticipated to be privately funded, and no Federal, State, or County funds are anticipated to be utilized.

### **2.2.1 Hours of Operation**

The current concept for project operations anticipates that the Proposed CEV will operate seven days a week during the evening hours.

The doors are expected to open up to the public at 4:30 P.M. with events lasting until 8:00 P.M. and doors closing at 8:30 P.M. when guests have vacated the Project Site. A typical event is anticipated to have the following schedule:

- 4:30 P.M.: Doors open/ pre-show activities;
- 5:30 P.M.: Dinner/music begins;
- 6:30 P.M.: Entertainment show begins;
- 7:30 P.M. to 8:00 P.M.: Show ends; and
- 8:00 P.M. to 8:30 P.M.: Guests depart the property.

### **2.3 Development Schedule**

Following design, permitting, and construction of the Proposed Project, the venue is anticipated to begin operating in 2024.

# CHAPTER 3: DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

## 3. DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

### 3.1 Climate, Greenhouse Gas Emissions, and Climate Change

The climate of O‘ahu is characterized as semi-tropical with two seasons. The summer season runs from May through September and is generally warm and dry, with predominantly northeast trade winds. Contrastingly, the winter season runs from October through April and is associated with lower temperatures, higher rainfall, and less prevalent trade winds. According to the National Weather Service Honolulu Office, normal monthly high temperatures range from 80 degrees Fahrenheit (F) in January to 89 degrees F in August for an annual average of 84 degrees F over a period of 30 years. Monthly precipitation typically ranges from 0.44 inches in August to a high of 3.8 inches in December. The annual average rainfall in Honolulu is 70 inches per year.

The Project Site is located in Waikīkī, which has a climate typical of the leeward coastal lowlands of O‘ahu. The region is characterized by abundant sunshine, persistent trade winds, relatively constant temperatures, moderate humidity, and the infrequency of severe storms. Northeasterly trade winds prevail throughout the year with varying frequency. The semi-permanent subtropical high-pressure ridge causes a stronger persistence of winds in the spring and summer months, with a lower persistence of winds being more prevalent in the fall and winter months due to the interruption of trade winds. Typical wind velocities range between 8 and 15 miles per hour.

Acknowledgement that the State of Hawai‘i is being impacted by diverse climatic changes has become widely supported as rising sea levels, increasing ocean acidity, changing rainfall patterns, decreasing stream base flow, changing wind and wave patterns, and changing habitats and species distribution are becoming more evident. Research agrees that anthropogenic greenhouse gas emissions continue to be a key contributor to such unprecedented changes. There is an expectation of a rise in air and sea surface temperatures, a decrease in the prevailing northeasterly trade winds, a decline in average rainfall resulting in the continued decline in stream base flow as well as groundwater levels, an increase in ocean acidity, extreme weather events, and sea level rise (SLR) that is projected to pose considerable challenges to Hawai‘i (Climate Change Commission, 2018).

The rate of warming air temperature in Hawai‘i has significantly increased over 0.3°F (0.17°C) per decade in the last 40 years, four times faster than half a century ago. Statewide, average air temperature has risen by 0.76°F (0.42°C) over the past 100 years with the most recent years being the warmest years on record (Climate Change Commission, 2018). This warming causes thermal stress for plants and animals, as well as heat-related illnesses in humans. Additionally, increased temperatures cause the range of pathogens and invasive species to surge. Risk of avian disease transmission will escalate and impact endemic bird species, such as the Hawaiian honeycreeper, causing a decline in population due to the warming of high-elevation forests where risk was previously low. Increasing temperatures could also lead to changing habitat ranges for various species of wildlife while also impeding precipitation at the highest elevations, the source of Hawai‘i’s freshwater. Four representative cases of the climate response to GHG emissions levels from socioeconomic scenarios referred to as

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Representative Concentration Pathways (RCPs) were provided by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5). These RCPs estimate that global mean temperature will increase by at least 2.7°F (1.5°C) by the end of the century for intermediate to high future scenarios. The range of nightly low and daytime high temperatures, an important factor for many terrestrial species, is decreasing more rapidly in Hawai'i than the global mean (Safeeq et al., 2012). Hawai'i temperature is projected to increase, with a range of +4-5°F (2.2-2.8°C) for high emissions scenarios by the year 2085 (Keener et al., 2013).

The most severe ocean warming is projected to be felt in tropical and Northern Hemisphere subtropical regions, with increases up to 3.6°F (2.0°C) in the upper ocean levels above 650 ft. (200 m) by the end of the century. In the last 40 years, sea surface temperatures have warmed between 0.13°F and 0.41°F (0.07°C and 0.23°C) per decade in the Pacific. This trend is projected to accelerate, warming by 2.3°F to 4.9°F (1.3°C to 2.7°C) before the end of the century. As an island, O'ahu has both a heavy economic and cultural dependency on the ocean. This warming can have an effect on ocean circulation and nutrient distribution having major impacts on ocean habitats such as coral reefs.

Coral reefs are vital to the global ecosystem by absorbing carbon dioxide and producing oxygen. However, as the water around Hawai'i continues to warm, rising temperatures harm the symbiotic algae within coral that allow such capabilities. The algae are the main source of nutrients for the coral; therefore, a loss of algae weakens the coral causing eventual death and a major loss of surrounding biodiversity. This process is known as "Coral Bleaching", because the expelling of algae causes the coral to lose its color. Events of mass coral bleaching are increasing in frequency throughout Hawai'i and the rise of sea temperatures has additionally been linked to coral disease outbreaks. In addition to the damaging effects of rising sea temperatures, increases in ocean acidity are another threat to coral reefs. As ocean acidity increases, corals and shellfish that depend on the minerals in the water weaken. Pacific Ocean acidity has increased by approximately 25 percent in the past three centuries and is likely to increase another 40 to 50 percent by 2100.

Rainfall in Hawai'i significantly varies based on trade winds, topography, mid-latitude weather systems, storms and cyclones, El Niño-Southern Oscillation and Pacific Decadal Oscillation phases, and more (Schroeder, 1993). Climate change, natural variability, complex topography, land uses, and other factors combine to present a challenge to the accurate projection of future rainfall and runoff patterns. While trends and projections vary from island to island, the overarching trend across the islands has shown a decrease in total rainfall over the past 30 years (Climate Change Commission, 2018). Declining rainfall has occurred in both the wet and dry seasons and has affected all the major islands. On O'ahu, the largest declines have occurred in the northern Ko'olau mountains. Future potential projections propose an increase in frequency of extreme rain events, which have implications for stormwater infrastructure, sustainable yield from aquifers, and runoff into coastal waters. The total annual average rainfall in Hawai'i, represented by the Hawai'i Rainfall Index, has decreased over the last century (Hawai'i Climate Data Portal, 2023). Over the last century, streamflow records also show a decline in base flow by 20-70% depending on the watershed suggesting a decrease in groundwater levels. Rainfall intensity has decreased for the western islands (O'ahu and Kaua'i) over the last 60 years but increased for the island of Hawai'i. High intensity rainfall can cause flash flooding, which has occasionally resulted in multimillion dollars of damage to infrastructure, due to the steep terrain and concrete stream channels. It can also impact

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nearshore ecosystems. Hawai'i has experienced longer droughts in recent years, as all of the populated islands show an increasing trend in length of dry periods during 1980-2011, as compared with 1950-1970 (Chu et al., 2010). In Hawai'i, prevailing northeasterly trade winds driving orographic precipitation on windward coasts have decreased in frequency since 1973 (Collins et al., 2010; Tokinaga et al., 2012; Garza et al., 2012).

There is disagreement regarding precipitation at the end of the century. Model projections range from small increases to increases of up to 30% in wet areas, and from small decreases to decreases of up to 60% in dry areas (Climate Change Commission, 2018). Timm et al., (2014) applied a statistical downscaling method described by Timm and Diaz (2009) in order to find a connection between the large-scale atmospheric circulation over the Pacific with the rainfall over Hawai'i. It is concluded from this six-model analysis that by the late 21<sup>st</sup> century, the most likely scenario for Hawai'i is a 5-10% reduction of precipitation during the winter season, and a 5% increase during the dry season, as a result of circulatory changes (Timm and Diaz, 2009). It is still uncertain how this data will reflect on the highly variable terrain in Hawai'i. If drought events continue to increase, dry areas could see more fire and issues with decreased water supplies.

Research indicates that two centuries of unabated greenhouse gas (GHG) emissions, which includes carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), and fluorinated gases, from anthropogenic sources are responsible for increases in global atmospheric temperatures and ocean warming over the past century. GHGs absorb and “trap” solar radiation instead of reflecting it back into space causing what many know as, the greenhouse gas effect. While a fraction of GHG emissions is released from natural sources, a majority result from human activity in the following economic sectors, in order from most emissions to least: electricity and heat production; agriculture, forestry and other land-use activities; industrial activity; transportation; other energy production processes; and buildings (IPCC, 2014). According to the U.S. Energy Information Administration, the United States was responsible for approximately 15% of global carbon dioxide emissions in 2019.

Planning for climate change is challenging as climate change is defined by constantly changing and largely undefined factors. The risks of climate change, as discussed earlier, include changes in rainfall intensity, SLR, temperature, groundwater levels, saltwater intrusion, and impacts from storm hazards. In response to the Paris Agreement, Hawai'i is under the directive of the Hawai'i Climate Change Mitigation and Adaptation Commission (Commission), which aims to reduce ground transportation emissions and adapt to sea level rise, including disaster recovery preparedness on the statewide level. The CCH has taken action in order to plan for the effects of climate change as outlined in the CCH's Climate Change Commission's Climate Change Brief which establishes the impacts of climate change for the CCH. In July of 2018, the Mayor of CCH issued Directive 18-02, which requires each CCH department and agency to:

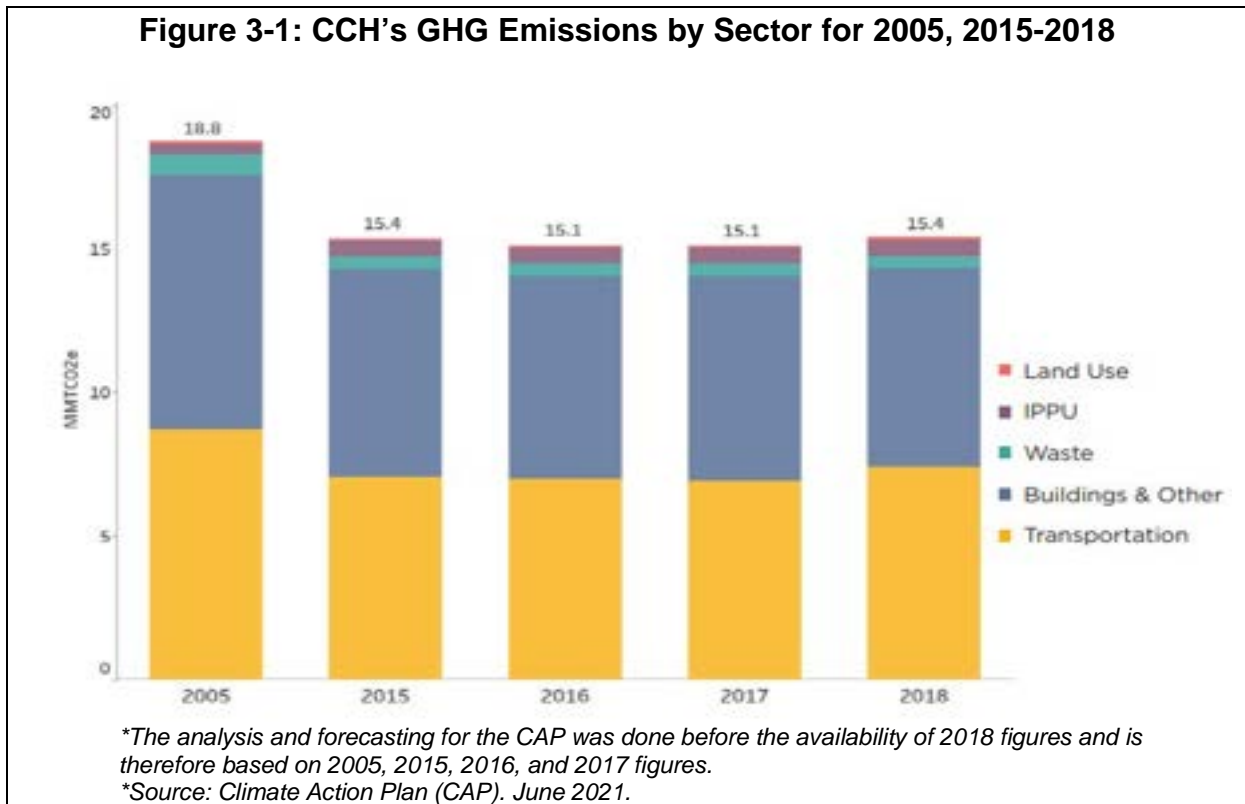
- Consider the need for both climate change mitigation and adaptation as pressing and urgent matters;
- Take a proactive approach in both reducing GHG and adapting to impacts caused by SLR; and

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- Align programs whenever possible to help protect and prepare the infrastructure, assets, and citizens of the CCH for the physical and economic impacts of climate change.

In June 2021, the CCH City Council passed its first-ever Climate Action Plan (CAP). This CAP is a science-based, community-driven strategy for O’ahu to combat climate change and eliminate fossil fuel emissions. The CAP outlines that the CCH’s GHG emissions have declined nearly 18% between 2005 and 2018. However, transportation-related GHG emissions caused an increase from 2017 to 2018 as illustrated by Figure 3-1 below. The figure represents the CCH’s GHG emissions by sector, which includes Land-Use, Industrial Processes and Product Use (IPPU), Waste, Buildings & Other, and Transportation.



In summary, CAP outlines a detailed list of programs, policies, and actions that the CCH can implement, alongside with State and Federal actions, to reduce GHG emissions by 45% over the next five years and to achieve carbon neutrality by 2045.

**Impacts and Mitigation Measures**

No significant impacts on climate at the Project Site are anticipated to result from the development and operation of the Proposed Project. Annual and daily variations of climate are dependent on numerous factors including elevation, distance inland, and exposure to trade winds. The Proposed Project will be appropriately designed to take into consideration the context of the surrounding environment and are not anticipated to significantly influence or affect temperatures, wind, or rainfall levels at the Project



Site or within the greater region. Moreover, the Proposed Project will not exacerbate the impacts associated with climate change at the Project Site, greater region, or State from the development and operation of the Proposed Project.

In the short-term, it is anticipated that activities related to the construction of the Proposed Project may result in minimal GHG emissions. Construction related emissions include tailpipe emissions from construction equipment, delivery trucks, and workers commuting to and from the construction site. It is anticipated that the quantities of GHGs released from construction related activities will be negligible and usage of each piece of equipment would be sporadic and not simultaneous. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control.

In the long-term, the Proposed Project is anticipated to reduce GHG emissions associated with transportation due to the venue access which will be designed to emphasize the pedestrian-oriented nature of Waikīkī. The Proposed Project will not provide any on-site parking, promoting the use of multi-modal transportation choices, such as the bus, rideshare, and city bikes, over private automobiles which will also contribute to the reduction in transportation-related GHG emissions.

However, it is acknowledged that the exact nature of how the climate will change in the coming years is unknown. On a broader policy level, new information will continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaptation strategies to climatic changes. It is anticipated that the Proposed Project will be flexible in order to conform with guidance set forth by best practices outlined by policies and research based on the best scientific data at the time as climate change science, technology, and policies evolve over time.

## **3.2 Physiography**

### **3.2.1 Geology and Topography**

The island of O‘ahu was created approximately 3.0 – 1.78 million years ago by basaltic lava flows forming the Wai‘anae Range to the west and the Ko‘olau Range to the east. The Ko‘olau lavas are divided into the Ko‘olau Basalt and Honolulu Volcanics. Waikīkī is located in the Honolulu Volcanics of the Ko‘olau Volcanic Series that included a set of one-time volcanic eruptions in the Honolulu area between 800,000 and 30,000 years ago. These individual eruptions created notable island features including Diamond Head, Punchbowl Crater, and Hanauma Bay. The composition of these volcanic outflows is significantly different from those of the original volcanoes.

The Project Site is relatively flat with elevations ranging around 0 to 5 feet above mean sea level (MSL). Generally, the site slopes from the northeast to the southwest (See Figure 3-2).

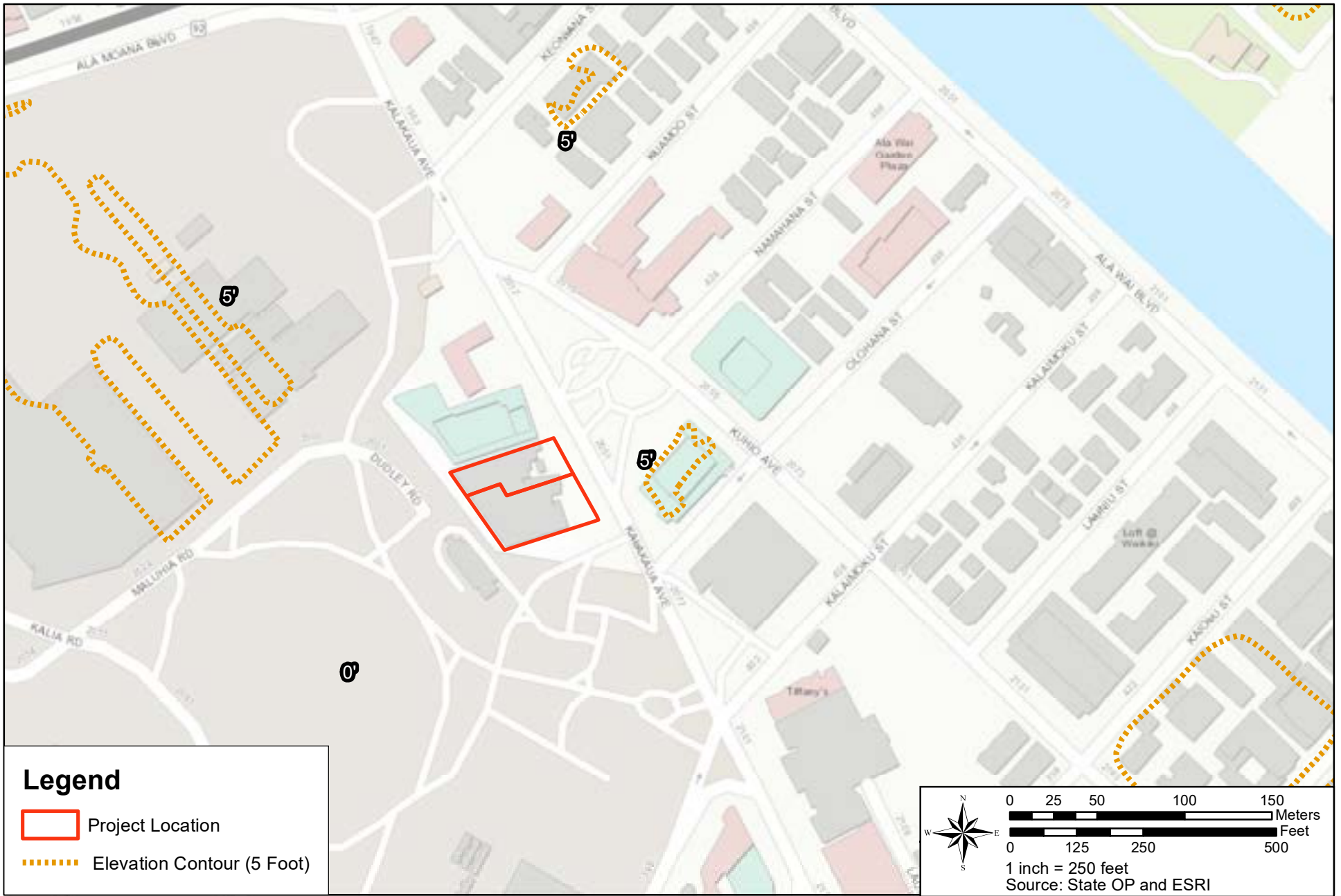


FIGURE 3-2

TOPOGRAPHIC MAP

**Impacts and Mitigation Measures**

Construction of the Proposed Project may result in soil erosion as a result of the clearing, grubbing, grading, excavation, and infilling of soil. Soil erosion will be minimized through compliance with the City's grading ordinance, and the applicable provisions of the HDOH Water Quality Standards (HAR, Section 11-54) and Water Pollution Control requirements (HAR, Section 11-55). With the implementation of BMPs, potential impacts including the phasing of construction activities, replacing ground cover of the disturbed area, providing adequate water sources at the site, and the use of temporary silt fencing and screens will be mitigated.

**3.2.2 Soils**

The U.S. Department of Agriculture, Natural Resource Conservation Service, classified soils at the Project Site and close proximity as Fill Land, Mixed (0 to 3 percent slopes) (FL) (See Figure 3-3). This soil typically occurs at elevations from sea level to 500 feet on flats. Consisting of a well-drained soil profile of gravelly sandy loam, fine sandy loam, and bedrock, FL soils have slopes of 0 to 3 percent.

**Impacts and Mitigation Measures**

The Proposed Project is not anticipated to have long-term, secondary, or cumulative adverse impacts to soils at the Project Site. The Project Site is a previously developed site within the urban core of Honolulu. In the short-term, relatively minor grading activities may be required. Grading will be limited to the Project Site and will not impact the surrounding area. All excavation and grading activities will be regulated by applicable provisions of the CCH's grading ordinances (Chapter 14, Articles 13-16, HAR). Due to low elevation, the design of the site will reflect groundwater level and the potential for its rise during the design phase. The Proposed Project's construction will not involve any major land disturbing activities involving mass grading or significant revisions to site contours. A National Pollutant Discharge Elimination System (NPDES) permit for stormwater runoff from construction activities would be required as individual and/or cumulative soil disturbances in a project area should it exceed one acre of land area.

**3.3 Hydrology**

**3.3.1 Surface and Coastal Waters**

The Project Site is located within the Ala Wai watershed (See Figure 3-4). The Ala Wai Canal is located approximately 0.2 miles to the north of the Project Site, which discharges into Māmala Bay. Prior to entering Māmala Bay, the Ala Wai Canal also receives waters flowing from the Mānoa, Pālolo, and Makiki Streams.

The nearest coastal water to the Project Site is Fort DeRussy Beach, located approximately 0.34 miles to the south. Pursuant to HAR Title 11, Chapter 54, Water Quality Standards, the coastal waters in the vicinity of the Project Site are classified as Class A marine waters (See Figure 3-5). Class A marine waters are recognized as waters to be used for "*recreational purposes and aesthetic enjoyment to be protected. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.*"

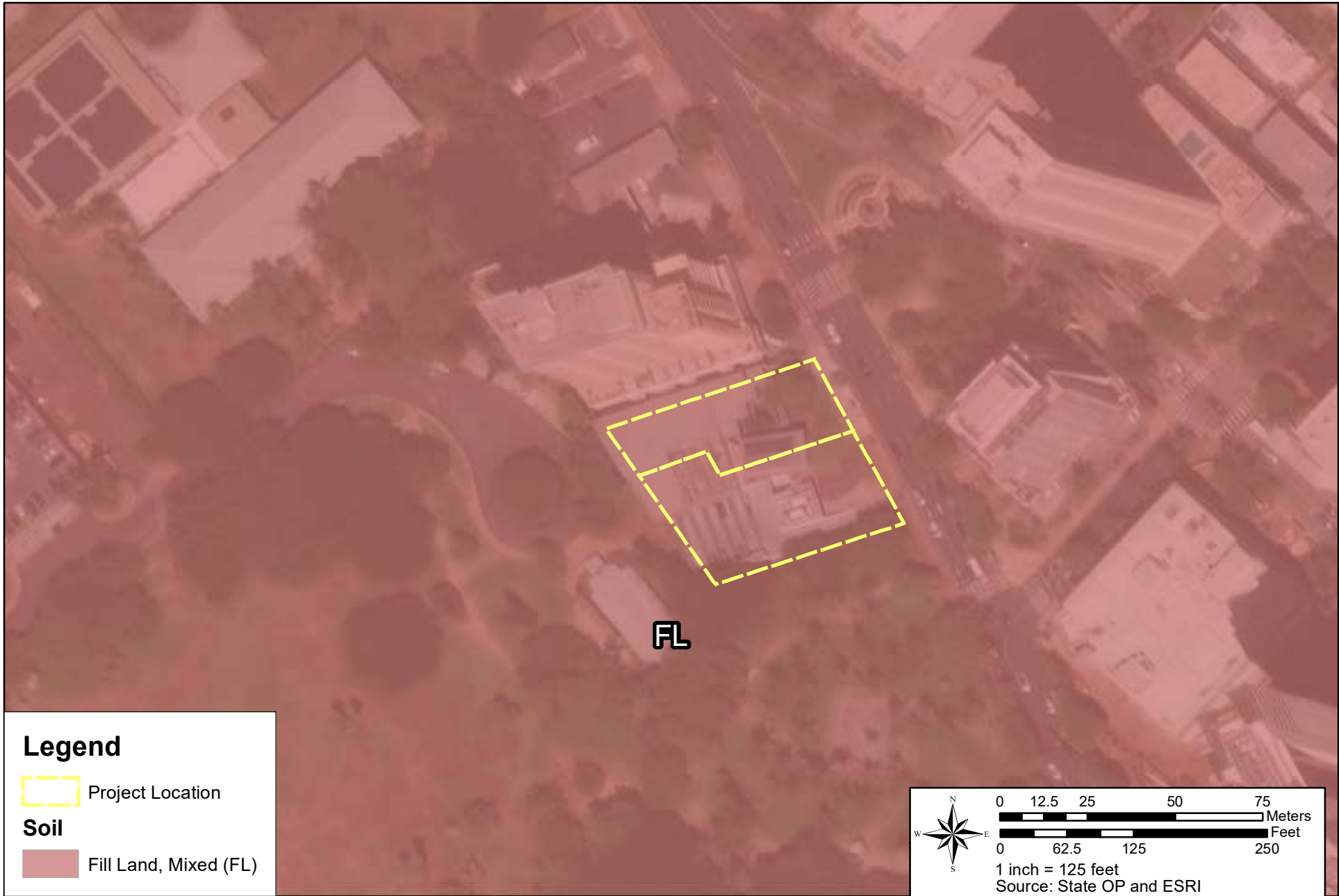


FIGURE 3-3

SOILS MAP





FIGURE 3-4

**SURFACE AND COASTAL WATERS MAP**





FIGURE 3-5

MARINE WATER CLASSIFICATION MAP



**Impacts and Mitigation Measures**

The Proposed Project is not expected to significantly impact surface water quantity or quality within the site. Potential impacts to surface waters are related to construction activities and storm water runoff. Stormwater runoff will be minimized through compliance with HDOH and City regulations. Any discharged water encountered and removed while digging foundations for the Proposed Project must comply with federal requirements as well as applicable State Water Quality Standards specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, State Department of Health (DOH). Standard BMPs will be employed to mitigate impacts of inadvertent spills or releases of contaminants. Standard BMPs may include the phasing of construction activities, use of temporary silt fencing and screens, use of a stabilized construction ingress/egress, inlet protection, and temporary filter sock controls.

**3.3.2 Groundwater**

A groundwater hydrologic unit and coding system has been established by the State Department of Land and Natural Resources (DLNR) Commission on Water Resource Management (CWRM) for groundwater resource management. According to the CWRM, the Project Site is located within the Honolulu Sector Area of Southern O’ahu which is comprised of six aquifer system areas identified as Wai’alae – East, Wai’alae – West, Pālolo, Nu’uanu, Kalihi and Moanalua. The Project Site is located within the Pālolo Aquifer System area (aquifer code: 30101) which has an estimated yield of 5 million gallons per day (mgd) (See Figure 3-6). Users of this aquifer include residential, commercial, industrial, manufacturing, government, tourism, parks, schools, and other public facilities. The Southern O’ahu groundwater flow consists of basal groundwater due to its early development near the basalt-caprock contact and flowing artesian wells open to confined parts of the aquifers.

**Impacts and Mitigation Measures**

The Proposed Project is not expected to have significant impacts on groundwater quantity or quality within the site. Significant impacts to the coastal environment due to groundwater inputs are not expected from the Proposed Project. Due to the location of the site, any water is more likely to infiltrate seawater instead of groundwater aquifers.

**3.4 Natural Hazards**

The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations, Hazard Mitigation Planning, required States and Counties to have approved hazard mitigation plans as of November 1, 2004 to receive Pre-Disaster Mitigation funding. The development of State and local hazard mitigation plans remains critical for maintaining eligibility for future Federal Emergency Management Agency (FEMA) mitigation and disaster recovery funding.

The State has maintained and implemented a comprehensive, multi-hazard mitigation strategy to reduce loss of life and property damage. The strategy embodied in the *2018 State Multi-Hazard Mitigation Plan* identifies the major natural hazards that affect the State, assesses the risk that each hazard poses, analyzes the vulnerability of the State’s population, property and infrastructure to the specific hazard, and recommends actions that can be taken to reduce the risk and vulnerability to the hazard.



FIGURE 3-6

**AQUIFER MAP**





The State Hazard Mitigation Plan also contains a description of programs, policy, statutes and regulations applicable to hazard mitigation. It should be noted that the 2023 update to this plan has begun and is expected to be released at the end of 2023.

The CCH also maintains a Local Hazard Mitigation Plan, that the State of Hawai'i Emergency Management Agency reviews in accordance with The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations and coordinates with the CCH to ensure compliance with the federal regulations.

The identified major natural hazards that could affect the State, as well as the CCH are Climate Change Effects (including SLR/coastal erosion), floods, tsunamis, strong windstorms / hurricanes, earthquakes, landslides/rockfalls, wildfires, and volcanic hazards.

### **3.4.1 Sea Level Rise**

Section 3.1 discusses climate change impacts in detail, as this section will focus on SLR and coastal erosion impacts.

SLR is an inevitable outcome of climate change that will increasingly threaten human structures in addition to natural ecosystems near coastlines globally. The island of O'ahu is susceptible to flooding and SLR as it is home to the State's most populous city, Honolulu, which also serves as the State's capital. With approximately one million residents, O'ahu accounts for approximately 70% of the State's entire population. O'ahu possesses many of the State's critical resources, infrastructure, and services, therefore a major impact from SLR could reverberate and result in major statewide economic and social impacts.

Rising sea levels in the spring and summer of 2017 provided a glimpse of the near future when coastal flooding events are expected to occur more frequently and severely with continued SLR. Findings by the UH Sea level Center showed that the 2017 anomalously high-water levels resulted from an unprecedented combination of Pacific wide climate and ocean variability. The water levels in 2017 presented record highs causing localized flooding and coastal erosion throughout the State during the spring and summer of 2017.

The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) provides global mean projections of SLR for four cases representing the climate response to GHG emission levels from socioeconomic scenarios, referred to as Representative Concentration Pathways (RCPs). The RCPs describe possible climate futures based on the amount of GHGs that are emitted. The 'baseline' scenario without additional efforts to constrain GHG emissions (RCP6.0 – 8.5) predicts a rise of 0.5 feet in 2030, 1.1 feet in 2050, 2.0 feet in 2075, and 3.2 feet in 2100. The RCP8.5 scenario is regarded as the most likely scenario and is used as the basis for modeling coastal hazards in the 2017 *Hawai'i Sea Level Rise Vulnerability and Adaptation Report* ("SLR Report"). The Hawai'i Climate Change Mitigation and Adaptation Commission ("Commission") published the SLR Report in December 2017 and it provides the first state-wide assessment for documenting Hawai'i's vulnerability to SLR. The report recommends planning for up to 3.2 feet of SLR by the year 2100 with potential increased adjustments based on new data and improved modeling.

Although coastal erosion is a naturally occurring event, rising sea levels indicate a growing vulnerability in Hawai'i. Over the next 30 to 70 years, as sea level rises, homes and businesses located on or near the shoreline throughout the State will become exposed to chronic flooding and erosion.

A recent National Oceanic and Atmospheric Administration (NOAA) report has concluded that global SLR in the range of 6.4 ft. (2.0 m) to 8.8 ft (2.7 m) is “physically plausible” by the end of the 21<sup>st</sup> century (Sweet et. al, 2017). SLR guidance was released from the CCH Climate Commission for the County to use for areas exposed to 3.2 ft. of SLR as a planning benchmark for most developments, with consideration of 6 ft. of SLR as a planning benchmark for critical infrastructure with long expected lifespans and low risk tolerance (Climate Change Commission, 2018). The Proposed Project is located within the 3.2 ft. or 6 ft. SLR exposure areas (See Figure 3-7).

#### **Impacts and Mitigation Measures**

The Proposed Project will not constitute a source of impact to the Project Site through SLR or associated coastal impacts. As stated above, the Project Site is located within the 3.2 feet and 6.0 feet SLR exposure areas. Sea level rise mitigation measures may be considered during the Project's design phase to address sea level rise impacts under the 5-6 foot NOAA SLR condition. Future inundation of the Project Site and surrounding areas will result in limited accessibility and use of the site.

#### **3.4.2 Flood and Tsunami Hazards**

Floods are the temporary, partial or complete inundation of dry land area from excessive rainfall or other sources. Although floods are caused by natural events, most flood damage is a result of human occupation and development of lands without adequate protection to flooding. The CCH is vulnerable to flooding from storms, storm surge, high surf, and on rarer occasions, tsunamis. In the CCH, from about 1915 to 2018, floods caused by rainstorms, tsunamis, and hurricanes have claimed more than 140 lives and inflicted more than \$200 million dollars of direct and indirect damage (DEM, 2020). The *2018 State of Hawai'i Multi-Hazard Mitigation Plan* determines that flood control and floodplain management is to include the reduction of repetitive loss properties.

According to the Flood Hazard Assessment Tool (FHAT), prepared by the National Flood Insurance Program (NFIP), the Project Site is situated within the Zone AO designation (See Figure 3-8). Zone AO includes areas subject to inundation by the 1-percent-annual-chance shallow flood events where average depths are between 1 and 3 feet. Zone AO is also within the Special Flood Hazard Area where mandatory flood insurance and floodplain management regulations apply.

With regards to tsunami hazards, since the early 1800's, approximately 50 tsunamis have inundated the State of Hawai'i's shores, with the most current being reported in 2011 causing extensive damage estimated worth \$8.725 million today. Generated by a M9.0 earthquake off the coast of Honshu, Japan, peak heights between 7 and 11 feet were reported in the counties of Honolulu, Maui, and Hawaii. Additional tsunamis to impact O'ahu shores occurred in 1952, 1957, 1960, and 1964. The project's relationship to delineated Tsunami Evacuation Zones are shown in Figure 3-9.

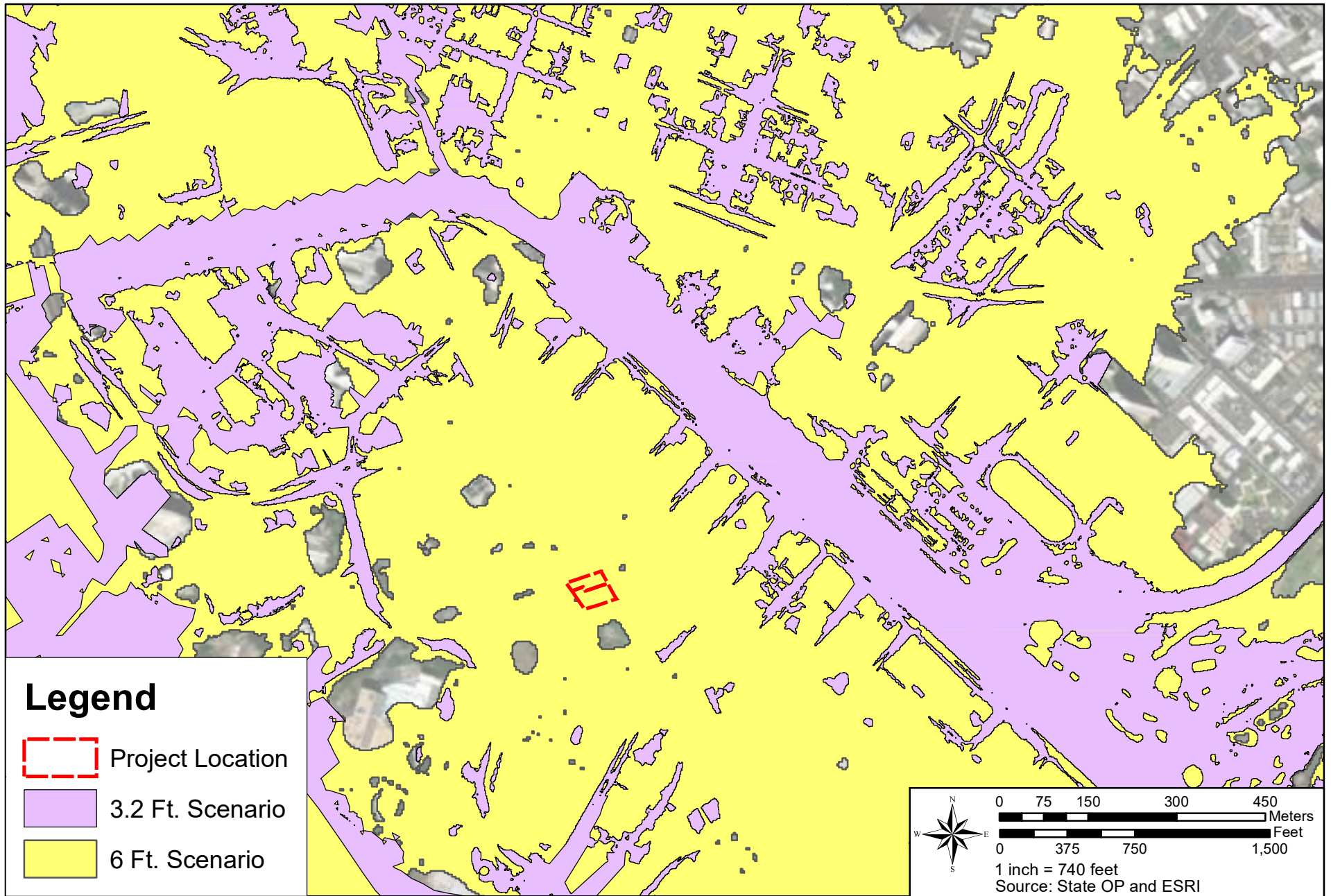


FIGURE 3-7

SEA LEVEL RISE EXPOSURE AREA MAP

KĀLIA CULTURAL ENTERTAINMENT VENUE  
 DRAFT ENVIRONMENTAL ASSESSMENT





FIGURE 3-8  
**FLOOD INSURANCE RATE MAP**  
*KĀLIA CULTURAL ENTERTAINMENT VENUE  
 DRAFT ENVIRONMENTAL ASSESSMENT*

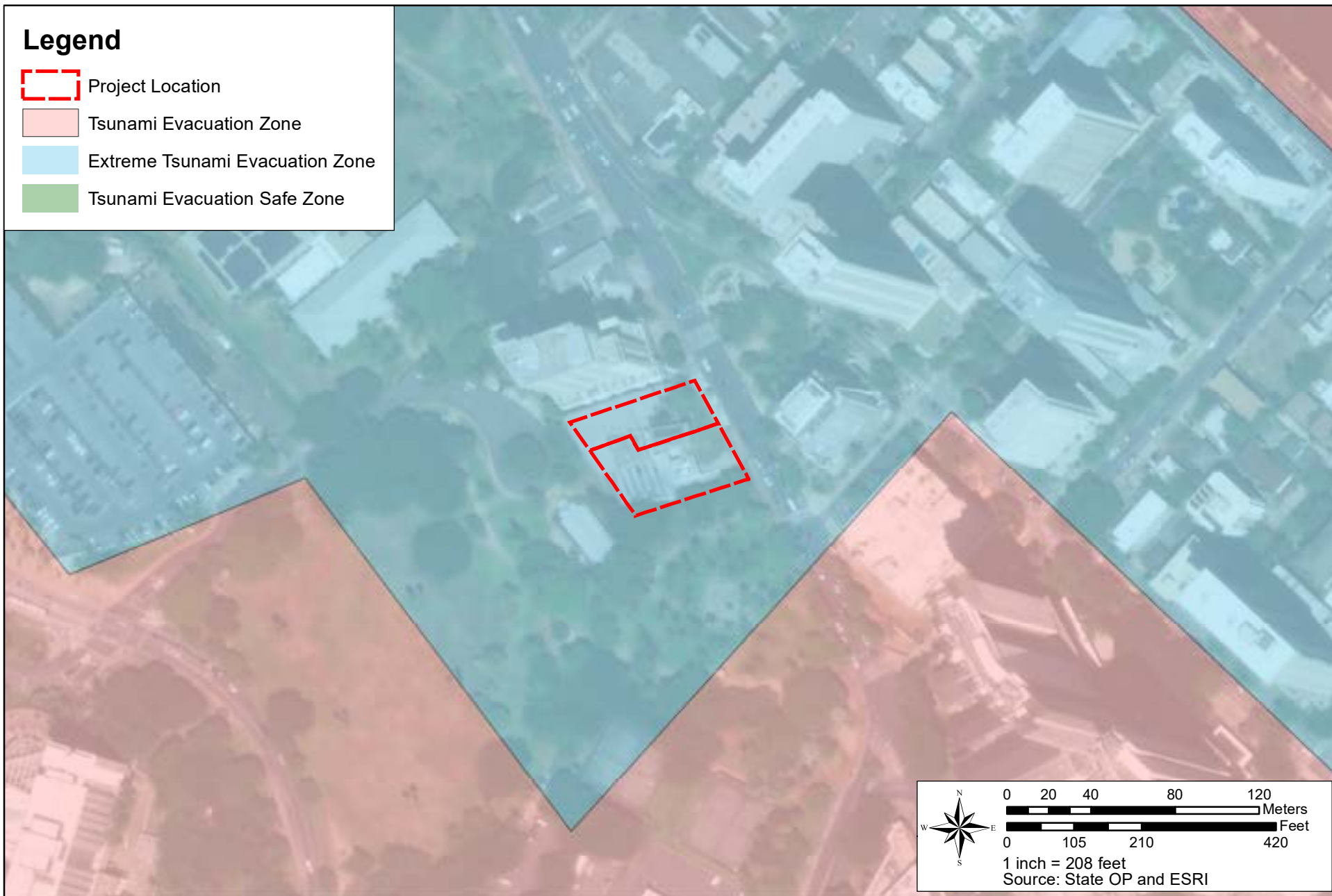


FIGURE 3-9

**TSUNAMI EVACUATION MAP**

*KĀLIA CULTURAL ENTERTAINMENT VENUE  
DRAFT ENVIRONMENTAL ASSESSMENT*



**Impacts and Mitigation Measures**

The Proposed Project is located within Flood Zone AO and is not expected to significantly affect flood impacts. The open-air design should not impact the floodway. Construction of the Proposed Project will adhere to design standards set forth in ROH, Chapter 21A (*Section 5.3.7*).

The CCH has emergency operations plans for evacuating areas potentially affected by a tsunami. Due to the Proposed Project being located within the Extreme Tsunami Evacuation Zone as defined by the Tsunami Evacuation Zone maps for O’ahu, citizens will evacuate during Tsunami Warnings. The closest shelter to the Project Site is located at the Hawai’i Convention Center. The capacity of a structure to withstand impacts of tsunamis is dependent on numerous factors including: the size and speed of the wave, the type of structure, the amount of debris that is swept in the movement of the wave, as well as the site design and orientation of the structure. The Proposed Project will ensure that improvements are designed to use current building codes.

**3.4.4 Hurricane and Wind Hazard**

Pacific hurricanes seasonally affect the Hawaiian Islands from the late summer to early winter months. The State has been affected twice since 1982 by significant hurricanes, ‘Iwa in 1982 and ‘Iniki in 1992. During hurricanes and storm conditions, high winds can cause strong uplifting forces on structures, particularly on roofs. Debris driven by wind can attain high velocity and cause damage to property and harm to life. It is difficult to predict how hurricane-induced storm surge may impact any specific location due to variance in atmospheric pressure, tidal stage, coastal topography, location, and overall climate conditions relative to the eye of the hurricane. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The Proposed Project is, however, no more or less vulnerable than the rest of the island to such impacts of hurricanes.

**Impacts and Mitigation Measures**

While rare, the threat of hurricanes is present across the State of Hawai’i. Construction activities could potentially exacerbate the effect of hurricanes if loose materials are not secured prior to the event of a storm and become flying debris. To minimize this hazard, construction materials and equipment would be stored properly when not in use, consistent with construction best management practices.

To safeguard against hurricane damage in the long-term, the Proposed Project improvements would be designed in compliance with American Society of Civil Engineers and International Building Code standards for wind exposure.

**3.4.5 Earthquake and Seismic Hazard**

Seismic hazards are those related to ground shaking including landslides, ground cracks, rock falls and tsunamis. The majority of earthquakes that occur in Hawai’i are associated with volcanic activity below Kīlauea and Mauna Loa on the island of Hawai’i. Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. However, with the exception of the island of Hawai’i, the Hawaiian Islands are not situated in a high seismic area subject to frequent earthquakes (Macdonald et al. 1983). Most of the earthquakes that occur in the island chain are closely related to volcanic

processes that are so small they can only be detected by seismometers. The most recent earthquake occurred off the coast of Naalehu, Hawaii on the southern point of Hawai'i island in October 2021. The earthquake measured 6.2 on the Richter Scale and caused minor damages to structures and buildings.

A system of classifying seismic hazards has been implemented by engineers on the basis of predicted ground shaking strength and the probability of the shaking actually occurring within a specified time. Under the International Building Code (IBC) seismic provisions the likelihood of seismic activity is classified into zones ranging from 0 to 4. Seismic Zone 0 represents no chance of severe ground shaking and Seismic Zone 4 represents a 10 percent chance of severe shaking in a 50-year interval. The U.S. National Seismic Hazard Model for Hawai'i, redesigned a Uniform Building Code which designates the Project Site within the region of O'ahu classified as Seismic Zone 2A under the IBC (2018). Earthquakes that occur in this zone are associated with strong shaking and may result in negligible damage to buildings in good design and construction, slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built structures. Accordingly, the Proposed Project is assessed to have low vulnerability to earthquakes.

Volcanic hazards on O'ahu are considered minimal due to the extinct status of former volcanoes; however, the effects of earthquakes occurring on the islands of Hawai'i and Maui may be felt on the island of O'ahu.

#### **Impacts and Mitigation Measures**

Seismic hazards are typically associated with causing landslides, ground cracks, rock falls, and tsunamis. As assessed above the Proposed Site is within Zone 2A designation under the IBC, therefore damage to structures on the Project Site is negligible. The development of the Proposed Project would be subject to adherence to strict design requirements, to ensure that all developments of the Proposed Project would comply with geotechnical recommendations for seismic hazards and meet prevailing building codes by incorporating specifications to reduce vulnerability to earthquakes at that time.

#### **3.4.6 Wildfire Hazards**

Wildfires threaten irreplaceable natural resources, damage economic and municipal infrastructure, and threaten lives, homes, and human health. Although some wildfires have natural causes, most of Hawai'i's wildfires are human-caused. The term "wildfire" refers to any unwanted and unplanned fire burning in forest, shrub or grass regardless of whether it is naturally or human induced (DEM, 2020).

All of the Hawaiian Islands are susceptible to wildfires, particularly during prolonged drought and high winds. Each year, 0.5% of Hawai'i's total land area burns, which is greater than the proportion burned in any other state (Hawai'i Wildfire Management Organization (HWMO), 2019). Recently, the average annual cost to suppress wildfires in Hawai'i is about \$1,100,000 - making it a Statewide risk (DEM, 2020). The greatest danger of fire is where the USDA Forest Service defines as the Wildland-Urban Interface (WUI). This term is used to describe the area where homes meet with undeveloped wildland vegetation. Almost all of Hawai'i's developments fall within WUI areas (HWMO, 2019). Through August 2018, wildfires in Hawai'i

have burned approximately 30,000 acres (about double the annual average). Historically, the majority of these fires have been directly caused by humans, either intentionally or by negligence. According to hazard assessments conducted by Hawai'i Wildfire Management Organization (HWMO), the Project Site is considered to be within a low-risk area for wildfires.

#### **Impacts and Mitigation Measures**

The Proposed Project is not anticipated to have impacts that could result in wildfire events as the Proposed Project is within a low-risk area. The Fire Management Handbook adopted by the State Department of Land and Natural Resources-Division of Forestry and Wildlife (DLNR-DOFAW), specifies standards for wildfire prevention, pre-suppression, and suppression. A structured approach is provided within the document for public/firefighter safety and minimizing damage to Hawai'i's environment. Funding for the fire management program is provided by the State's general fund and federal cost share programs through the U.S. Forest Service. These programs include the Rural Community Fire Protection and Rural Fire Protection and Control programs. Additionally, the DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands and honor its partnership with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression and suppression measures by way of the current Memorandum of Agreements.

#### **3.4.7 Volcanic Hazards**

Recurring eruptions and earthquakes in Hawai'i create a unique combination of natural hazards across the Hawaiian Islands. Two principal volcanoes formed the island of O'ahu: Wai'anae and Ko'olau about 2.2 – 3.8 million years and 1.8 – 2.6 million years ago respectively. Smaller volcanic features present on O'ahu include Diamond Head, Koko head, Punchbowl and many others, which are believed to have occurred between 70,000 and 500,000 years ago. Data suggests that the volcanic activity sourced from O'ahu may be concluded. Hence, volcanic hazards on O'ahu are considered minimal due to the extinct status of former volcanoes.

The Island of Hawai'i is composed of five volcanoes, four of which are classified as active (Mauna Loa, Kīlauea, Hualālai, and Mauna Kea). Mauna Loa and Kīlauea have been most active in the past 100 years and pose the most immediate threat to life and property. Hualālai, last erupted in 1801 and has the potential to erupt again within our lifetime. Mauna Kea last erupted approximately 3,500 years ago and is classified as dormant, but not extinct. Kohala, classified extinct, is the oldest volcano on the island and last erupted approximately 60,000 years ago. Lava flow hazard zones have been identified using records of past lava flows, which detail Kīlauea Volcano as having long periods of dominantly effusive or dominantly explosive eruptions. A change in the current effusive period at Kīlauea will present significant hazards from future explosive eruptions. However, Hawaiian volcanoes are generally not as explosive as continental margin volcanoes (e.g., Rainier, Mt. St. Helens, Mt. Shasta) and are characterized by relatively quiet outflow of relatively fluid lava, therefore the probability of harmful volcanic rock debris and ashfall on O'ahu from the volcanoes on Maui and Hawai'i is



unlikely. Consequently, the only credible volcanic hazard on O'ahu is "VOG," short for "volcanic smog," released during ongoing eruptions on Hawai'i.

VOG is a term used in Hawai'i to describe hazy air pollution caused by volcanic emissions from Kīlauea Volcano primarily consisting of water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>) gas). VOG is created when SO<sub>2</sub> gas reacts with sunlight, oxygen, and moisture in the atmosphere converting to fine particles that scatter sunlight causing the visible haze. The VOG plumes from Kīlauea contain mostly SO<sub>2</sub> and acid particles, in contrast to urban pollution sources (ozone and hydrocarbons), at varying concentrations that could have adverse impacts on the downwind communities and environment. During slack or southerly winds, the entire island chain can be affected by VOG. The VOG is most prevalent in the winter when Kona winds are most frequent (Hawaii Interagency Vog Dashboard, 2023).

### **Impacts and Mitigation Measures**

The Proposed Project will not have an impact on volcanic hazards nor exacerbate the impacts associated with volcanic hazards. Any former volcanoes on O'ahu are now considered inactive and the probability of eruption on O'ahu is negligible. Therefore, only neighboring volcanoes on the Island of Hawai'i, which have been actively erupting since 2018, and possibly Haleakalā on Maui, which last erupted in the 1700's, are expected to have any impact on O'ahu. The main impact from volcanic hazards on O'ahu would occur from VOG.

VOG impacts are highly dependent on both proximity of the source to the affected area as well as the day-to-day climatic conditions. During trade-wind weather, VOG is carried from the Kīlauea vents is carried toward the southwest, around the southern tip of the island where some is trapped within an eddy system on the Leeward side of the island. Hence, during normal trade-wind conditions the southern and Kona communities on Hawai'i Island are most heavily impacted by VOG. During slack or southerly winds, the entire island chain can be blanketed in VOG. However, due to the short half-life of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid in the environment, O'ahu is not expected to experience the elevated SO<sub>2</sub> levels that may be experienced on Hawai'i island (DEM, 2020). SO<sub>2</sub> levels are greatly reduced further away or upwind from the vents as the gas disperses and reacts with water to form sulfuric acid and then with ammonia to form ammonium sulfate which is eventually washed or settles out of the atmosphere. The visible "hazy" appearance of VOG is often intensified when the gases and particulate matter combine with high humidity due to the warmer tropical temperatures when brought up from the south.

## **3.5 Natural Environment**

### **3.5.1 Flora and Fauna**

The Project Site is located in a highly altered urban environment with landscaping primarily consisting of maintained grass and cultivated ornamental plants. Species most commonly frequenting the site and vicinity are typical of urbanized areas and consist of common introduced flora and fauna. Terrestrial fauna present at the Project Site primarily consist of introduced, alien species that have adapted to the urban environment, which include domestic

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cats (*Felis catus*), domestic dogs (*Canis familiaris*), chickens (*Gallus domesticus*), mongoose (*Herpestes auropunctatus*), rats (*Rattus spp.*), and mice (*Mus domesticus*).

According to the *Bird and Mammal survey of Army lands in Hawaii*, the highly urbanized environment provides considerable habitat for exotic avifauna including the house sparrow, common mynah, and several species of dove. The manu-o-kū or white tern (*Gygis alba rothschildi*) is known to fly and nest in the vicinity of the Proposed Project in small numbers. As a State-recognized indigenous seabird, they are listed by the State as Threatened, and as a protected species under the 50 Code of Federal Regulations, 10.13, Migratory Bird Treaty Act (MBTA). Additionally, the Hawaiian Hoary Bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*), Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), and Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*) are acknowledged as Endangered or Threatened species by the State Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR-DOFAW) and may occur in the Project vicinity.

**Impacts and Mitigation Measures**

The Proposed Project is not anticipated to have adverse impacts on flora and fauna. No listed or protected plant species are located within the Project Site; however, it is recommended that the movement of plant or soil be minimized. Soil and plant material may contain invasive fungal pathogens (e.g., Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm native species and ecosystems. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Gear that may contain soil, such as work boots and vehicles, should be thoroughly cleaned with water and sprayed with 70% alcohol solution to prevent the spread of Rapid 'Ōhi'a Death and other harmful fungal pathogens. It is also recommended that native plant species be used for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.).

Rare, threatened, or endangered fauna are not known to utilize the site for either habitat or foraging purposes. Construction activities may temporarily disrupt routine behavior of common faunal species in the immediate vicinity of the Project Site, but will not result in permanent displacement, or adversely affect regional distribution of affected fauna. Once project activities are complete, faunal activity in the vicinity of the work site is expected to return to pre-existing conditions.

No adverse impacts resulting from the project are anticipated. However, measures to prevent adverse effects to protected species include the following:

- Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.

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- During construction activities, all nighttime lighting will be shielded and angled downward to reduce glare and disruption of bird flight. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Following construction, permanent light sources will be shielded and angled downward to eliminate glare that could disturb or disorient birds in flight.
- If tree trimming or removal is planned, DLNR-DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees.
- If any of the State-listed waterbirds are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord.

### **3.6 Historic and Archaeological Resources**

Honua Consulting (Honua) prepared an Archaeological Literature Review and Field Inspection (LRFI) report in November 2022 to evaluate the presence of historic and archaeological resources at the Project Site (See Appendix A). The LRFI was designed to determine the likelihood that any potential historic and archaeological resources could be affected by the Proposed Project and, based on findings, consider suggest mitigation recommendations. The LRFI is intended to facilitate the Proposed Project’s planning and support the environmental review required for the Proposed Project.

The LRFI provides an analysis of the natural and built environment at the Project Site, a comprehensive review of traditional and historic background information in the region, a review of previous archaeological reports and findings in the vicinity, and a field inspection of the Project Site. The inspection sought to identify any sensitive areas that may require further investigation or mitigation before the project proceeds. Documentation of the field inspection includes descriptions and photographs of the Project Site. The field inspection consisted of pedestrian survey of exterior portions. Since most of the Project Site consists of existing buildings, Honua did not walk or record survey transects (“track log”), which would typically be documented using a hand-held Trimble GeoXT (or other GPS) device. No archaeological historic properties, or potential historic properties, were observed at the Project Site during the field inspection.

The following is a brief discussion and summary of the LRFI and the archaeology-focused research within the context of the traditional background and history of the Project Site in Waikīkī.

The Project Site is situated within the traditional boundaries of the ahupua’a of Waikīkī. Waikīkī, traditionally, was a population center with extensive inland agricultural fields, fishponds and a fertile fringing reef. Waikīkī translates as “spouting water,” said to be named for the number freshwater springs and wetlands that once covered the region (Pukui et al. 1974). Multiple streams flowed from the valleys of Makiki, Mānoa and Pālolo and provided fresh water to

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irrigated taro fields (lo'i) and other cultivants such as sweet potatoes, bananas, and sugar cane. The coastal areas were generally drier than inland zones and therefore the irrigation systems provided the means for wetland agricultural complexes throughout the plains of Waikīkī. Inland fresh springs were available in Mō'ili'ili and Punahou. The coast of Waikīkī had coconut groves, fishponds, abundant marine resources, and excellent canoe landings and surfing.

Waikīkī has long been a residence for Hawaiian royalty or Ali'i Nui including O'ahu-born Mā'ilikūkahi, a late pre-Contact supreme ruler of O'ahu birthed at Kūkaniloko. In historic times, the area was home to Kamehameha the Great, Queen Ka'ahumanu, King Kamehameha II (Liholiho), Kamehameha IV (Alexander Liholiho) and Queen Emma, Kamehameha V (Lot Kamehameha), King Lunalilo (William C. Lunalilo), Princess Ruth (Ruth Keanolani Kanahohoa Ke'elikolani), Princess Pauahi (Bernice Pauahi Bishop), King David Kalākaua and Queen Kapi'olani, Princess Likelike (Miriam Likelike Cleghorn), Archibald Cleghorn and Princess Ka'iulani (Victoria Kawekiu Ka'iulani) (Beckwith 1970; Kamakau 1992; Kanahole 1995; Fornander 1996).

Regarding places names in Waikīkī, 'ili (a common type of land division typically smaller than an ahupua'a) were numerous and sometimes changed frequently depending on political and economic factors. Historical maps indicate that the Project Site was west of the 'ili of Helumoa and Keōmuku in Kālia 'ili. Helumoa, translated by Pukui et al. (1974) as "chicken scratch," was centered on the Royal Hawaiian Hotel and Shopping Center area. The reference to the moa, or chicken, alludes to the supernatural chicken Ka'au-hele-moa that flew between Ka'au Crater in Pālolo and Waikīkī. Keōmuku, just east of the Project Site, translates as "the shortened sand" (Pukui et al., 1974). Kālia, "waited for", was a relatively large 'ili and the name of a stream in the region.

The Project Site is also located along the eastern boundary of a fishpond known as Loko Paweo (or Pāweo) II in an area of wetlands and many other fishponds with an extensive network of 'auwai (traditional irrigation ditches) used to manage surface water in this area.

Western accounts and historical maps also confirm that Waikīkī was a bountiful land with a large population, extensive agricultural production, and a dense concentration of fishponds.

In the 1840s, private property was introduced into Hawaiian society through formation of the Board of Commissioners to Quiet Land Titles and the adoption of the Māhele (the division of Hawaiian lands). In 1845 King Kamehameha III waived his right to full authority over the land, portioning out land for his personal use (crown lands) and then dividing the rest of his territory into land for the government, land for the ali'i (chiefs) and konohiki (land overseers), and land for tenants or commoners (kuleana land) (Alexander 1891; Board of Commissioners 1929; Moffat and Fitzpatrick, 1995). Following thereafter Land Commission Awards (LCAs) were awarded to commoners as kuleana parcels for fee ownership. Kuleana land claims required proof of residency on the land and continued land improvements. LCAs, therefore, record who resided on the land and how the land was used. Fort Lands (FLs) were also set apart throughout Kalihi, Honolulu and Waikīkī for the garrison of the Fort of Honolulu. In 1851, the Fort Lands were surveyed and sold in auction as LCAs (Alexander 1891). In the ahupua'a of Waikīkī, there were 437 land claims of which only 243 were awarded. One LCA was awarded within the Project Site.

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However, in the early 20<sup>th</sup> century Waikīkī begun to change drastically. It was estimated that, in the first decades of the 20<sup>th</sup> century, approximately 85% of modern Waikīkī, west of Lewers Street and inland of Kalākaua Avenue, was under water. In 1906, due to the continued threat of disease from mosquitoes, the Territorial Board of Health decided that an area well over 600-acres in size throughout Waikīkī be filled and the Ala Wai Canal be built to drain the area as part of a Waikīkī Land Reclamation project (Pinkham 1906; Feeser 2006). Historical maps show the fishponds in and adjacent to the Project Site were still in existence at this time, but were filled in during the 1920s.

The Ala Wai Canal was constructed from 1921 to 1924 (Hibbard and Franzen 1986); with the landscape of Waikīkī dramatically altered to be more commercial, further development quickly followed. Also in the early 20<sup>th</sup> century, more than 70 acres in Kālia—bordering the Project Site to the west—was acquired by the U.S. War Department for the Fort DeRussy military reservation. It served as a coastal defense base to protect Honolulu and Pearl Harbor (Char n.d.). The reservation was constructed in the area of several Hawaiian fishponds, which were soon filled in.

The early 1900s also saw the construction of grand residential houses, bathhouses, and hotels in Waikīkī. The Moana Hotel was opened in 1901. The Seaside Hotel opened in 1906 at Helumoa, which later became the location of the Royal Hawaiian Hotel in 1927 (Hibbard and Franzen, 1986). The ancient trail into Waikīkī was made into a formal carriageway in the 1860s, eventually becoming Kalākaua Avenue. With these amenities and easy access, Waikīkī began to be a preferred destination.

It appears that only one previous archaeological study (Stark et al., 2015) has included the Project Site. No other archaeological studies have been conducted in the area. Stark et al.'s (2015) report, part of a preliminary due diligence assessment for a different proposed project (Park Kālia Waikīkī Condo-Hotel Project) that was eventually canceled, included the excavation and interpretation of one (5.2 meter-long) backhoe trench parallel with and along the Kalākaua Avenue side of the Project Site. The trench exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbms); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbms. No traditional Hawaiian materials were observed.

In the immediate vicinity of the Project Site, other studies have documented subsurface remnant sediments from several traditional Hawaiian loko (fishponds) that used to dominate the area as well as an extensive network of 'auwai (i.e., traditional Hawaiian irrigation ditches) used to manage the wetlands that used to dominate this area. These fishponds include: State Inventory of Historic Places (SIHP) #s 50-80-14-4573 (Loko Kaipuni), -4574 (Loko Paweo I), -4575 (Loko Ka'ihikapu), -4576 (Paweo II), and -4577 (Loko Kapu'uiki). The network of 'auwai has been designated SIHP # 50-80-14-4970. In addition to these numerous subsurface cultural layers from both pre-Contact and historic-period times, some of which contain human skeletal remains and/or in situ burials, are known to occur discontinuously throughout the area around the current Project Site. At least three known burial sites (SIHP # 50-80-14-4890, -9500 and BPBM OA0419) are within 200-250 meters of the Project Site. Nearby subsurface cultural layers include SIHP # 50-80-14-6407—just to the east of the Project Site between Kalākaua

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and Kūhiō avenues, and SIHP # 50-80-14-4579, just to the southwest; an old (currently subsurface) wetland paleosol (SIHP # 50-80-14-5796) is located southeast of the Project Site.

Table 3-1 below provides a summary of archaeological studies and their results in the vicinity of the Project Site.

**Table 3-1 Summary of Nearby Archaeological Studies**

Author(s)	Type of Study	Location And Notes	Results And Comments
McAllister 1933 Sterling & Summers 1978	ARS	O'ahu – Island-wide	No McAllister sites identified near Project Site
Kimble 1976	Burial treatment	Hale Koa Hotel construction at Fort DeRussy	SIHP # -9500 (Five pre-Contact to early historic period bundle burials plus one additional [possibly 20th century] burial found during construction)
Davis 1989	AIS	Fort DeRussy	Presence of subsurface sedimentary deposits from several fishponds (including SIHP #s -4573, -4574, -4576 & -4577) as well as remnant subsurface cultural deposit (-4570) near shoreline at Fort DeRussy
Rosendahl 1989	AIS	Fort DeRussy	Documented disturbed cultural layer with historic artifacts (no SIHP # designated)
Davis 1991	AM	Fort DeRussy	Subsurface features and artifacts dating to early historic period (circa 1780s to 1790s) through mid-19th century
Streck 1992	DR	Fort DeRussy	Human skeletal remains of one individual designated SIHP # -9500
Carlson et al. 1994	DR	Fort DeRussy	Human skeletal remains (SIHP # -4570) found during realignment of Kālia Rd.; remains of 2-3 dozen individuals in a common pit feature just southeast of Paoa Pl. / Kālia Rd. intersection, ~¼-mile west of

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Author(s)	Type of Study	Location And Notes	Results And Comments
			Project Site; additional burials found south of Project Site near Army Museum
McMahon 1994	Burial Treatment	Kalākaua Ave. just north of Project Site	Burial of one individual of indeterminate age / ethnicity during construction
Simons et al. 1995	DR	Fort DeRussy	Three previously-identified sites encountered: Loko Paweo I (SIHP # - 4574), Loko Paweo II (SIHP # - 4576) & SIHP # -4579 (subsurface cultural layer containing fragmented skeletal remains); newly-identified 'auwai system also discovered (SIHP # -4970)
Cleghorn 1996	AIS	King Kalākaua Plaza block just southeast Project Site	No historic properties identified in seven backhoe trenches
Denham & Pantaleo 1997a	AM	Fort DeRussy	Three historic properties observed: SIHP # -4574 (sediments of Loko Paweo I, three historic trash pits & two burials); SIHP # -4570 (historic trash pit, four fire pits, ash lens & multiple human burials); & SIHP # - 4966 (pre-Contact features & human burials representing at least five individuals)
Denham & Pantaleo 1997b	DR	Fort DeRussy	Five previously-identified sites investigated: SIHP # - 4570 (coastal area of pre-Contact to early historic period occupation – newly-documented features included a firepit, coral rock concentration with associated posthole & cultural deposit); also SIHP # -4575 (Loko Ka'ihikapu); SIHP # -4576 (Loko Paweo II); SIHP # - 4579 (LCA 1758:3 containing five fire pits, one other pit,

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Author(s)	Type of Study	Location And Notes	Results And Comments
			one human burial & historic as well as possible pre-Contact midden deposits); & SIHP # -4970 ('auwai system)
LeSuer et al. 2000	AIS	Northeast side of Kalākaua Ave. southeast of Project Site	SIHP # -5796 (disturbed / modified wetland sediments) & additional portions of SIHP # -4970 ('auwai system)
Roberts & Bower 2001	AM	Fort DeRussy	No historic properties identified
Borthwick et al. 2002	AIS	Parcel on north side of Kūhiō Ave.	Subsurface cultural layer identified (SIHP # -6407)
Tulchin et al. 2004	DR	Parcel on north side of Kūhiō Ave.	Pollen & radiocarbon dating samples collected from traditional Hawaiian use of Kuāuna & Paukū fishponds
Bush et al. 2002	AM	Linear corridor of Kalākaua Ave.	Documented several burials (SIHP #s -5856, -5860 & -5864), fishpond sediments, wetland sediments, an imu & multiple trash pits
Elmore & Kennedy 2002	AM	Fort DeRussy	No historic properties identified
Putzi & Cleghorn 2002	AM	Linear corridor of Kalākaua Ave. & Ala Moana Blvd.	Identified fishpond sediments, organic sediments & Jaucas sand below fill; portion of Loko Kaipuni (SIHP # -4573) & basalt alignment of indeterminate date; five historic-period pit features documented at Hilton Hawaiian Hotel grounds (SIHP # -6399)
Rasmussen 2005	AM	Fort DeRussy	No historic properties identified
Esh & Hammatt 2006	AM	Linear corridor of Kūhiō Ave	No historic properties identified
Yucha et al. 2011	AM	Linear corridor of Saratoga Rd.	Four human burials (SIHP #s -7015, 7016, 7017 & 7018) identified near Trump Tower southeast of Project Site



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Author(s)	Type of Study	Location And Notes	Results And Comments
Yucha & McDermott 2013	AIS	Linear corridor of Kalākaua Ave. & Ala Moana Blvd.	Recorded portions of five sites: SIHP #-4570 (see above); SIHP # -2870 (subsurface cultural deposit with historic pit features & human burials; SIHP # -7087 (inadvertent find of human skeletal remains); SIHP # -4573 (Loko Kaipuni); & SIHP # -4970 (see above)
Stark et al. 2015	ARS	Project Site	Excavation of a 5.2 meter-long trench along Kalākaua Ave. exposed Jaucas sand from 95-165 centimeters below surface; ceramic vessel interpreted as possibly Chinese & wooden knife handle recovered in back dirt from upper 50 cm

**Impacts and Mitigation Measures**

The Proposed Project is not anticipated to result in significant impacts to known historic and archaeological resources located at the ground surface of the Project Site or in the vicinity of the Project Site. The Proposed Project will largely remain within the same footprint of the existing building at the Project Site and will not go beyond the existing depth of disturbance. Due to the lack of new subsurface activity, no significant impacts are anticipated.

A previous archaeological investigation (Stark et al. 2015) that included limited subsurface testing at the Project Site exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs), but no traditional Hawaiian materials were observed in excavation. Jaucas sands, in particular, are known to be among the most sensitive soil types in Hawai'i since they frequently contain traditional (pre-contact) Hawaiian burials and other historically-significant materials (e.g., artifacts and features in subsurface context representing traditional use of the shoreline such as fishing camps). It is also known that the surrounding area of the Project Site was once part of an extensive network of Hawaiian fishponds and 'auwai (irrigation ditches and berms, which were eventually drained and filled in around the turn of the 20<sup>th</sup> century. Moreover, previous archaeological studies in the immediate vicinity of the Project Site have identified numerous subsurface cultural layers from both pre-Contact and historic-period times representing habitations and including human burials and finds of previously disturbed (by historic-period development) human skeletal remains.

The Proposed Project is subject to the requirements of Chapter 6E, HRS. The LRFI will be used to support the Proposed Project's consultation with the State Historic

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Preservation Division (SHPD) in compliance with § 6E-8, HRS, and § 13-284, HAR. Hence, any potential impacts that could result from new ground disturbance will be mitigated through appropriate measures outlined by the SHPD through compliance with Chapter 6E, HRS. In general, to minimize any potential impact on these resources, construction contractors would be required to adhere to standard best management practices regarding the protection of archeological resources, including identification, stop work, and SHPD notification measures. Should archeological resources be discovered, all appropriate measures would be adhered to for their protection; and as a result, long-term impacts to archeological resources would be expected to be negligible.

### **3.7 Cultural Resources and Practices**

Honua also prepared a Ka Pa‘akai Analysis for the Proposed Project (See Appendix B). Cultural resources are defined for the purposes of this EA as those associated with cultural practices and traditions. Cultural practices are activities imbued with cultural or spiritual meaning; they can be traditional or modern. They may include traditional Hawaiian practices, but also the cultural practices of other communities and ethnic groups. Assessment of the Proposed Project’s impacts on cultural practices, per HRS 343, Hawai‘i Register of Historic Places Criterion E, and Act 50, consider effects on a cultural practitioners’ ability to access the locations and resources needed to undertake cultural practices. Also, considered here are the wahi pana (storied places) that are imbued with cultural significance through their appearance in mo‘olelo, mele (songs), oli (chants), and other oral history traditions associated with the Project Site.

The State and its agencies have an obligation to preserve and protect Native Hawaiians’ customarily and traditionally exercised rights to the extent feasible.<sup>1</sup> State law further recognizes that the cultural landscapes provide living and valuable cultural resources where Native Hawaiians have and continue to exercise traditional and customary practices, including hunting, fishing, gathering, and religious practices. In *Ka Pa‘akai*, the Hawai‘i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through:

- 1) The identification of valued cultural, historical, or natural resources in the Project Site, including the extent to which traditional and customary Native Hawaiian rights are exercised in the Project Site;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the Proposed Project; and
- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

The following analysis was prepared by Honua under this three-part test established by the Hawai‘i State Supreme Court. The appropriate information concerning Waikīkī ahupua‘a was collected, focusing on areas near or adjacent to the Project Site.

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<sup>1</sup> Article XII, Section 7 of the Hawai‘i State Constitution, *Ka Pa‘akai O Ka ‘Āina v. Land Use Commission*, 94 Haw. 31 [2000] (Ka Pa‘akai), Act 50 HSL, 2000.

## **Analysis**

In *Ka Pa‘akai*, the Hawai‘i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through the following three-part test:

- 1) The identification of valued cultural, historical, or natural resources in the Project Site, including the extent to which traditional and customary Native Hawaiian rights are exercised in the Project Site;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the Proposed Project; and
- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

*The identification of valued cultural, historical, or natural resources in the Project Area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the Project Area.*

Through the research and ethnographic data collected for this memo, numerous cultural resources were identified in the surrounding geographic extent, but few were identified in the Project Site itself. Previous interviews with highly knowledgeable cultural practitioners from the area were interviewed and none identified traditional or customary practices that occur in the Project Site. There are numerous identified traditions or customs in the surrounding area, including canoe paddling, surfing, fishing and other activities in the Ala Wai and in the coastal area. Waikīkī was also known for its kalo cultivation and as an area lived in by Hawaiian ali‘i. While it is likely that historically traditional activities occurred in the Project Site, there are no cultural resources or traditional or customary practice that currently occur in the immediate Project Site. Due to the use of the Project Site as a Japanese restaurant for the past few decades, there is no evidence that traditional or customary practices have occurred in the Project Site since the 1950s when the original Kyo-ya Resturant was built.

*The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the Proposed Project.*

Of the identified cultural resources and traditional and customary practices that occur in the surrounding Project Site, the potential that the Proposed Project would affect or impair these resources is negligible.

*The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.*

As the potential for effect or impairment of cultural resources (including practices) is negligible, no action is required to protect Native Hawaiian rights. Nonetheless, best management practices should be implemented to ensure that no unanticipated affects to cultural resources occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the Proposed Project.

**Impacts and Mitigation Measures**

Based on the above, potential adverse impacts to traditional and cultural practices in the vicinity of the Project Site are not anticipated.

Construction of the Proposed Project will not disturb traditional sacred sites or traditional cultural objects; will not result in the degradation of resources used by Native Hawaiians for subsistence or traditional cultural practices; will not obstruct culturally significant landforms or way-finding features; and will not result in loss of access to the shoreline or other areas customarily used by Native Hawaiians or others for resource gathering or traditional cultural practices. No mitigation measures are proposed. As noted above in Section 3.6, should any unidentified archaeological resources be encountered during construction, all work will cease, and the State Historic Preservation Office will be contacted for review and approval of mitigation measures. Although due to the lack of new subsurface activity, no such encounters are anticipated.

**3.8 Air Quality**

The State of Hawai'i DOH, Clean Air Branch, monitors the ambient air quality in the State for various gaseous and particulate air pollutants. Ambient air quality is characterized in terms of whether it complies with National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality Standards (SAAQS). The Clean Air Act requires the U.S. Environmental Protection Agency to set national ambient air quality standards (NAAQS) for seven criteria pollutants that are considered harmful to public health and the environment. The seven criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead (Pb), ozone (O<sub>3</sub>), and particulate matter (PM<sub>10</sub> and PM<sub>2</sub>). Additionally, Hawai'i has established a state ambient air standard for hydrogen sulfide (H<sub>2</sub>S) related to volcanic activity on Hawai'i Island. The primary purpose of the statewide monitoring network is to measure ambient air concentrations of such pollutants to ensure that the air quality standards are met. Areas where concentrations of criteria pollutants are below the NAAQS are designated by the EPA as being in "attainment", whereas areas where concentrations of criteria pollutants exceed the NAAQS are designated as being in "nonattainment." Based on air monitoring data, Hawai'i is currently classified as in "attainment" for all Federal and State standards.

Air pollution in Hawai'i is caused by a variety of anthropogenic and natural sources. There are industrial sources of pollution, such as power plants and petroleum refineries; mobile sources fed by motor vehicles; agricultural sources, such as crop burning, and natural sources, such as windblown dust and volcanic activity. The DOH Clean Air Branch regulates and monitors pollution sources to ensure that the levels of criteria pollutants remain well below the State and Federal ambient air quality standards. At the State level, air quality standards ("HIAQS") are defined in Section 11-59, HAR, Ambient Air Quality Standards.

The State of Hawai'i DOH, Clean Air Branch maintains and operates three air quality monitoring sites on the island of O'ahu: Honolulu, Pearl City, and Kapolei. The HDOH Air Monitoring Station closest to Waikīkī is located on the roof top of the HDOH main building at 1250 Punchbowl Street. The monitoring sites measure ground-level concentrations of criteria pollutants where most commercial, industrial and transportation activities and their associated air quality effects occur. Natural sources of air pollution emissions that may affect the Project

Site include the ocean (sea spray), plants (aero-allergens), wind-blown dust, or distant volcanoes on Hawai'i Island. A downtown power plant owned by Hawaiian Electric Company is the primary stationary source, while vehicular traffic represents the principal mobile contributor. Emissions from the power plant are in compliance with State and Federal air pollution control regulations. Air quality at the Project Site is generally considered to be good due to its location in relation to the typical flow of fairly constant northeasterly trade winds that disperse pollutants seaward.

#### **Impacts and Mitigation Measures**

No detrimental short- nor long-term impacts to air, water, or acoustic quality are anticipated from the Proposed Project. While stationary and mobile sources of emissions slightly increase as a result of the Proposed Project, significant adverse impact on air quality is not anticipated.

In the short-term, intermittent air quality impacts of the Proposed Project are related to construction activities, including demolition of existing structures, site preparation, grading, structure construction, paving, and architectural coatings. Emissions of the criteria pollutants and GHGs may be generated from Project construction, but are anticipated to be minimal due to the relatively small scale and low intensity of construction activities. Maximum annual emissions of criteria pollutants from construction activities are estimated to be less than one ton per year with such impacts being temporary and localized. Wind erosion of inactive areas of the site that have been disturbed could be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks should be covered when traveling on roadways to prevent windage. As deemed appropriate, planting of landscaping will be done as soon as possible on completed areas to also help control dust. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control. To mitigate potential impacts to air quality during construction, a dust control management plan will be prepared and BMPs will be implemented. Construction BMPs may include replacing ground cover of the disturbed area, providing adequate water sources at the site, and reducing speed on unpaved roads. The Project will be compliant with HDOH CAB recommended BMPs which include the phasing of construction, locating potential dust-generating equipment in areas of the least impact, minimizing airborne and visible fugitive dust from shoulders and access roads, and controlling airborne and visible fugitive dust from debris hauled away from the Project Site.

### **3.9 Noise**

Several studies that serve to evaluate current and projected noise conditions were conducted by Y. Ebisu & Associates and are included herein as Appendix C. The objective of the first study, conducted in November 2022, was to investigate the potential spillover of crowd noise and amplified voice and music from the Proposed Project to neighboring receptor locations in Waikīkī (See Appendix C-1). The objective of the second study, conducted in May 2023, was to describe the existing and future noise environment in the environs of the Proposed Project under the context of traffic generated noise (See Appendix C-2). The results of both acoustic studies are summarized below:

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**Noise Descriptors and Their Relationship to Land Use Compatibility**

The noise descriptor currently used by Federal Housing Administration (FHA) / Housing and Urban Development (HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor.

As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high-speed freeway. In Waikīkī, DNL levels of 70 or higher are common. Table 3-2 below categorizes the various DNL levels of outdoor noise exposure with severity classifications for residential land use.

Table 3-2 Exterior Noise Exposure Classifications (Residential Land Use)

<b>Noise Exposure Class</b>	<b>Day-Night Sound Level</b>	<b>Equivalent Sound Level</b>	<b>Federal (1) Standard</b>
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable (2)
Significant Exposure	Above 65 DNL But Not Above 75 DNL	Above 65 Leq But Not Above 75 Leq	Normally Acceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable
Source: Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation			

Table 3-3 below, presents land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system pursuant to DOH limits on the level of noise allowed in different zoning districts.

**Table 3-3 Noise Standards**

<b>Zoning District</b>	<b>Zoning Equivalent</b>	<b>Daytime (7 a.m. to 10 p.m.)</b>	<b>Nighttime (10 p.m. to 7 a.m.)</b>
<b>Class A</b>	Residential, Conservation, Preservation, Public	55	45

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	Space, Open Space, or Similar Type		
<b>Class B</b>	Multi-family Dwellings, Apartment, Business, Commercial, Hotel, Resort, or Similar Type	60	50
<b>Class C</b>	Agriculture, Country, Industrial, or Similar Type	70	70
Source: HAR Title 11, DOH, Chapter 46 Community Noise Control			

The sound levels associated with entertainment events at establishments which require liquor licenses, such as the Proposed Project, are currently regulated by the Honolulu Liquor Commission. The applicable noise limits are identical to those of the State DOH and are 60 dBA during the daytime period of 7:00 AM to 10:00 PM, and 50 dBA during the nighttime period of 10:00 PM to 7:00 AM.

**General Study Methodology**

For the Facility Noise Report (Appendix C-1), existing background noise levels were measured at the neighboring Luana Waikīkī Hotel and at ground level fronting Kalākaua Avenue during the anticipated dinner show times of the Proposed Project between 6:00 pm and 10:00 pm. Traffic noise measurements were performed and used to estimate background noise levels for the Project Site. Results from measurement Location A located on the 6<sup>th</sup> floor lānai (approximately 100 feet above street level) of Luana Waikīkī Hotel were compared with measurement Location B at ground level.

Sound levels of the Proposed Project’s programming and crowd noise levels at receptors at Luana Waikīkī were predicted using noise modeling. It was assumed that the sound levels of the Proposed Project would need to be at least 15 to 20 dBA higher than anticipated background or traffic levels. The sound levels of the Proposed Project were estimated based on actual sound measurements at other open and semi-enclosed theaters in Hawai’i. With the assumption that anticipated ground floor seating capacity of the Proposed Project would be 685, the spillover of crowd noise during cheering and/or shouting from the seated audience was also predicted based on measurements during outdoor football games and lū’au program events.

For the Traffic Noise Report (Appendix C-2), existing traffic and background ambient noise levels were measured at 5 locations (A, B, C, D, and E). The results of the traffic noise measurements were compared with calculations of existing traffic noise levels to validate the computer model used. The traffic noise measurement results, and their comparisons with computer model predictions of existing traffic noise levels are summarized in Table 3-4.

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**Table 3-4: Traffic and Background Noise Measurement Results**

Location	Time of Day	Avg. Speed	Hourly Traffic Volume			Measured	Predicted
	(HRS)	(MPH)	Auto	M.Truck	H. Truck	Leg(dB)	Leg (dB)
50 FT from the centerline of Kalākaua Ave (5/4/23)	1541 to 1641	29	1,640	19	28	66.0	65.9
	1545 to 1645	25	1,779	26	17	63.6	63.6
145 FT slant distance from the centerline of Kalākaua Ave (11/2/22)	1600 to 1700	N/A	N/A	N/A	N/A	63.3	N/A
85 FT from the centerline of Kalākaua Ave (11/2/22)	1745 to 1800	N/A	N/A	N/A	N/A	61.8	N/A
	1852 To 1907	N/A	N/A	N/A	N/A	62.7	N/A
	1953 to 2008	N/A	N/A	N/A	N/A	68.7	N/A
78 FT from the centerline of Kalākaua Ave (11/2/22)	1805 to 1850	N/A	N/A	N/A	N/A	66.6	N/A
	1911 to 1926	N/A	N/A	N/A	N/A	67.9	N/A
	2010 to 2025	N/A	N/A	N/A	N/A	63.6	N/A
228 FT from the centerline of Kalākaua Ave (11/2/22)	1829 to 1844	N/A	N/A	N/A	N/A	50.2	N/A
	1932 to 1947	N/A	N/A	N/A	N/A	49.1	N/A

Traffic noise calculations for the existing conditions as well as noise predictions for 2024 were performed using the FHWA Traffic Noise Model. Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Hard Soil" propagation loss factor. The traffic data and forecasts for the project, plus the published traffic counts along Kalākaua Avenue were the primary sources of data inputs to the model. For existing and future traffic along the streets surrounding the Project Site, it was assumed that the average noise levels, or Leq(h), during the PM peak traffic hour were 3.5 dB less than the 24-hour DNL.

Traffic noise calculations for both the existing and future conditions in the project environs were developed for ground level receptors. Traffic noise levels were also calculated for future conditions with and without the Proposed Project. The forecasted changes in traffic noise levels over existing levels were calculated with and without the project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air-conditioned dwellings. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed. Potential noise impacts from pile driving operations were also discussed, and mitigation measures recommended.



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**Existing Noise Environment**

The existing noise environment at the Project Site is characteristic of an urban setting. Ambient noise in the area is predominantly attributed to vehicular traffic traveling on Kalākaua Avenue and the intermittent sirens of emergency vehicles.

Using the Federal Highway Administration's traffic noise model (TNM), the noise levels over the Project Site without shielding from existing structures on the site were estimated at 65 to 67 dBA (LAeq) along the rearmost Diamond Head corner seating area closest to Kalākaua Avenue, and at 57 to 62 dBA (LAeq), in the front row seating area closest to the planned stage. Existing background noise levels at the 2<sup>nd</sup> floor lānais of Luana Waikīkī Hotel range from 62 LAeq to 59 LAeq. Background levels during the Proposed Project's anticipated dinner show hours of 7:00 PM and 10:00 PM ranged from 62 to 59 dBA.

It was concluded that existing traffic noise levels at the Project Site currently exceed the FHA/HUD 65 DNL standard for noise sensitive receptors, with dominant noise source being traffic on Kalākaua Avenue. Because the majority of the existing front row buildings are commercial rather than residential or resort, the higher existing traffic noise levels of 70 to 75 DNL should be acceptable.

**Impacts and Mitigation Measures**

Spillover sound from the Proposed Project is not expected to exceed current Federal noise impact thresholds for residential, hotel, business, and educational land uses. However, for establishments which serve alcoholic beverages, the Honolulu Liquor Commission requires them to comply with their noise limits, which are much more difficult to meet for outdoor entertainment venues. Results from the noise assessments indicate that worst case sound spillover during operation of the Proposed Project will most likely occur at or near the second-floor level of the adjacent Luana Waikīkī Hotel where sightline distances to the potential location of the house speaker will be the shortest.

Both existing residences and hotel guests are presently located at the hotel. Worst case scenario results indicate that the 60 dBA limit will likely be exceeded for more than two minutes in a 20-minute interval. For DNL values, results indicate that exceedance of the 65 DNL noise standard will most likely not be exceeded. However, results indicate that the exceedance of 60 dBA limit for two minutes in any 20-minute interval were more likely to occur than exceedance of the 65 DNL standard. It should be that this result is based on the worst-case scenario of all guests shouting simultaneously which is unlikely. Crowd noise levels may be intermittently higher than the program sound levels, but their actual levels will depend on how many simultaneous shouting voices occur together, and their frequency of occurrence are not expected to exceed the allowable time limit under the Liquor Commission regulations. However, existing background traffic noise may require the Proposed Project to increase program sound levels to be increased above 71 dBA to be acceptable to the events guests.

Sound spillover may also occur at the existing military chapel south of the Project Site. However, the operation of the Proposed Project is not anticipated to interrupt operations at the military chapel. Worst case results indicate that maximum crowd noise levels of 73.7 dBA without noise shielding effects from the rear stage structure. Average

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event sound levels of 60.1 dBA and 62 dBA are possible at the military chapel with 15 dBA of speaker directivity plus additional shielding effects, and noise mitigation measures may be needed should the Proposed Project frequently conflict with the operations of the military chapel.

In order to mitigate noise exceedance, various design concepts can be implemented. Modeling indicates that a planned one-story structure (at least 12 feet in height) extending from the southwest corner of the Project Site to the entrance is capable of reducing average traffic noise levels within the entire planned lawn area to 60 dBA or less, provided that the entrance to the Project Site is closed during events. Increasing the height can further reduce background traffic noise levels reducing the need to increase program sound. As it relates to reduction of predicted sound levels at the second floor of the Luana Waikīkī Hotel will be dependent on speaker placement which will need to be modeled and tested. The design goal of the Proposed Project should be able to reduce the average program sound level to approximately 55 dBA so as to not exceed the 60 dBA limit during more than two minutes in any 20-minute interval of any event. This may be achieved through the use of multiple distributed speakers throughout the Project Site instead of a single or dual house speakers located near the stage due to the lack of a ceiling or roof structure to suspend distributed speakers closer to the seated audience with speakers pointing angles toward the rear seating area. However, it is unclear if a system of distributed speakers will be able to achieve the desired vision for events due to the ability of distributed speakers to have low frequency capabilities. The lawn orientation which would allow for pointing a single house speaker cluster away from the Luana Waikīkī Hotel instead of including the hotel within the speaker projection cone may be able to reduce program sound spillover at the Luana Waikīkī Hotel. Reduction would depend upon any additional attenuation that would result from speaker front-to-back directivity and local shielding effects and maintenance of the directivity pattern at the low frequencies. Location of a house speaker may also have the capability to reduce crowd noise during simultaneous shouting. A facility floor and seating plan coupled with speaker placement will need to be modeled and tested to reduce any impacts due to spillover. An objective of the Proposed Project is to minimize noise associated with the standard operation of the venue during events through the design and placement of the stage and sound equipment.

In the long-term, no significant increases in traffic noise are predicted to occur along Kalākaua Avenue as result of the Proposed Project. Traffic noise from Kalākaua Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing and future resort and commercial establishments which front Kalākaua Avenue. Mitigation of the high traffic noise levels is typically available in the form of closure and air conditioning of the resort and commercial establishments along Kalākaua Avenue.

Proposed Project traffic will not add more than 0.1 DNL additional units of noise along Kalākaua Avenue after project build out and beyond. These levels of traffic noise increases resulting from Proposed Project generated traffic are not considered to be significant and will be difficult to measure.

In the short-term, the potential for adverse noise impacts from short-term construction activities exist within the Project Site and adjoining properties. Unavoidable, but temporary, noise impacts may occur during the construction of the Proposed Project. Construction noise levels are typically highest during earthwork (75 to 85 dBA at 100 feet). Mitigation measures to reduce construction noise impacts may include the use of properly muffled and quieted equipment. The use of drilling and cast-in-place piles for foundation may also minimize risks of potential noise and vibration impacts on the surrounding area during the construction phase.

In addition to the BMPs mentioned above, construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations. Current regulations require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. Noisy construction activities are restricted to hours between 7:00 AM and 6:00 PM, from Monday through Friday, which excludes certain holidays. On Saturdays, construction activities are restricted to hours between 9:00 AM and 6:00 PM and construction is not permitted on Sundays. Guidelines set forth by the DOH noise control rules for heavy equipment operation and noise curfew times will be adhered to; or, if necessary, a noise permit shall be obtained. In the long-term, operation of the Proposed Project is not anticipated to result in adverse noise impacts.

### **3.10 Hazardous Materials**

Hazardous materials are any substance or material (physical, chemical, or biological) that contains properties that pose unreasonable risk to human health, safety, and environment either independently or through interaction with other factors. This categorically includes hazardous substances, wastes, marine pollutants, and elevated temperature materials. Toxic materials refer to the capacity in which a substance may cause harm. Hazardous wastes are specifically determined based on their ignitability, corrosiveness, reactivity, and toxicity. The potential impacts of hazardous materials and waste on human health and the environment are largely dependent upon their types, quantities, toxicities, and management practices.

Hazardous wastes are generated from a variety of sources including industrial manufacturing process wastes to batteries, and take the form of a solid, liquid, contained gas, or semi-solid. In general, any combination of wastes that poses a substantial present or potential hazard to human health or the environment that has been discarded or abandoned is considered a hazardous waste.

EPA and Hawai'i universal waste regulations identify five specific categories of materials that can be managed as federally designated "universal wastes," which include: batteries, pesticides, mercury-containing materials, lamps, and aerosol cans. Universal wastes are considered hazardous; however, they are subject to less restrictive waste disposal regulations than for hazardous wastes.

Hazardous wastes, including used oils, antifreeze and solvents associated with construction are handled and disposed of by licensed contractors. EPA regulation for hazard waste

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management aims to provide adequate protection of human health and the environment while at the same time:

- Fostering environmentally friendly recycling and resource conservation;
- Making regulations easier to understand;
- Facilitating better compliance; or,
- Providing flexibility in hazardous waste management.

Construction activities associated with the implementation of the Proposed Project improvements may involve the use of materials and processes typical to construction that could be considered hazardous. These materials are primarily associated with vehicle and/or equipment maintenance that typically include flammable and combustible liquids, acids, aerosols, batteries, corrosives, solvents, paints, and hydraulic fluids.

ENPRO Environmental prepared an Environmental Hazardous Materials Assessment Survey in conjunction with a Phase I Environmental Site Assessment (ESA) in October 2022 (included herein as Appendix D), at the former Kyo-ya Restaurant, located at 2057 Kalākaua Avenue, which includes an assessment of the overall Project Site. Concluding from the Phase I ESA, no recognized environmental conditions, controlled recognized environmental conditions, or significant data gaps were identified at the Project Site. Based on the investigations, ENPRO Environmental concluded that the risk of contamination at the Project Site is minimal and that no further investigation is warranted.

**Impacts and Mitigation Measures**

The Proposed Project is not anticipated to result in significant impacts regarding hazardous materials. Design features specific to the reduction of the potential effects of hazardous spills will be implemented, where appropriate. Hazardous chemicals and petroleum products used on site will be handled in accordance with applicable Federal, State, and City regulations and stored in appropriate locations within the site. No significant impacts to hazardous waste disposal are anticipated to result from the implementation and operation of the Proposed Project.

In the long-term, development of the Project will remove potential hazardous materials from the site, resulting in a safer environment. No mitigation measures are proposed.

**3.11 Traffic**

A Traffic Impact Report (TIR) was prepared by Wilson Okamoto Corporation (WOC) in May 2023 to identify and assess the traffic related impacts resulting from the implementation of the Proposed Project in Wahiawā Town. The findings of this report are summarized below, and included herein as Appendix E.

**Area Roadway System**

The Project Site is located adjacent to Kalākaua Avenue near the western edge of Waikīkī on the island of O'ahu. Bounded by the Luana Waikīkī Hotel and Suites to the west, Kalākaua Avenue to the north, and the Fort DeRussy Park facilities to the east and south, the Project

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Site houses the former Kyo-ya restaurant and its associated parking structure. The parking structure is currently being utilized as a parking area for Hui Carshare.

Kalākaua Avenue is a one-way roadway oriented in the east direction forming a couplet system with Ala Wai Boulevard and providing east-west access through Waikīkī. Northeast of the Project Site, Kalākaua Avenue intersects Olohana Street, a predominantly two-lane, one-way (southbound) roadway between Kalākaua Avenue and Ala Wai Boulevard. At this signalized T-intersection, the Kalākaua Avenue approach of the intersection has four through lanes while the southbound approach on Olohana Street has two left-turn lanes.

East of the intersection with Olohana Street, Kalākaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalākaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way (northbound) roadway generally oriented in the north-south direction between Kalākaua Avenue and Ala Wai Boulevard while Saratoga Road is generally a two-lane, two-way roadway oriented in the north-south direction between Kalia Road and Kalākaua Avenue. At the intersection with Kalākaua Avenue, the Saratoga Road approach has one northbound through lane and two channelized right-turn lanes. It should be noted that there are posted signs at the intersection indicating that right-turn movements from the northbound approach are prohibited on red. Kalaimoku Street has two northbound departure lanes.

### **Transit Facilities**

There are existing transit resources within the vicinity of the Kalia Cultural Entertainment Venue. It should be noted that these facilities are generally located north and east of the Project Site along Kūhiō Avenue and Saratoga Road. The majority of these facilities are provided by “The Bus” which is O’ahu Transit Services (OTS) operated by the City and County of Honolulu Department of Transportation Services. Within quarter mile-radius of the Project Site, there are several bus stop locations serving a total of 12 unique routes.

### **Bike Facilities**

In the vicinity of the project, there are designated bike lanes provided along Kalākaua Avenue and Ala Wai Boulevard serving east-west travel within Waikīkī (Figure 11 of Appendix E). The bike lane along Kalākaua Avenue serves eastbound bicyclists and extends between Ala Moana Boulevard and Dukes Lane, where it transitions to a shared roadway lane until Kaiulani Avenue, then reverts back to a designated bike lane until its terminus at Kapahulu Avenue. Conversely, the dedicated bike lane along Ala Wai Boulevard serves westbound bicyclists and extends between Keoniana Street and Kapahulu Avenue. Dedicated bicycle facilities serving north-south travel are currently limited. In addition to on-street bicycle facilities, the Project Site is located in close proximity to BIKI bike share stations (Figure 12 of Appendix E). The nearest bike share station is located north of the Project Site along Kalākaua Avenue within Waikīkī Gateway Park. There is also another station east of the Project Site at the southwest corner of the intersection of Kalākaua Avenue with Kalaimoku Street and Saratoga Road.

### **Pedestrian Facilities**

The Proposed Project is located in the Waikīkī district where there is limited parking, a high density of attractive destinations, and high volumes of pedestrian traffic. Along Kalākaua Avenue, sidewalks are provided along both sides of the roadway with pedestrian crossings facilitated by curb ramps, marked crosswalks, and protected pedestrian signal phases at the intersections with Olohana Street and Kalaimoku Street and Saratoga Road. In addition, there are also signalized midblock crossings west of Olohana Street and east of Beach Walk. North of the Project Site, similar pedestrian facilities are also provided along Olohana Street, Kalaimoku Street, and Kūhiō Avenue. In addition, the Project Site is located adjacent to Fort DeRussy Park which includes a network of pedestrian walkways that provide connections to destinations south of the Project Site. It should be noted that a pedestrian connection is being considered to the adjacent Luana Hotel to provide additional off-street connections to the Project Site.

### **Parking Facilities**

Parking will not be provided on-site and as such, vehicular trips in the vicinity of the Project Site associated with guests of the Kalia Cultural Entertainment Venue are assumed to be comprised of pick-up and drop-off within the project's porte cochere. It should be noted that any guests requiring parking are assumed to be facilitated within the public parking facilities within Waikīkī with guests then walking to/from these facilities. As such, they would be included as part of the pedestrian trips associated with the Proposed Project. Primary access to the Project Site will be provided via one-way driveways off Kalākaua Avenue and all site-generated vehicular trips accessing the Project Site are assumed to utilize Kalākaua Avenue to travel to the Project Site from areas to west and depart to areas to the east since that roadway is a one-way (eastbound) roadway.

### **Existing Traffic Conditions**

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Synchro" software, developed by Trafficware. It should be noted that the HCM 2016 methodology is available with the Synchro software; however, analysis conducted using that methodology is unable to accommodate all the lane use configurations in the study area. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak periods of traffic.

LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road's carrying capacity.

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Field investigations were conducted in May 2023 and consisted of manual turning movement count surveys during the weekday and Saturday afternoon peak hours between 4:00 PM and 7:00 PM at the following intersections:

- Kalākaua Avenue Midblock
- Kalākaua Avenue and Olohana Street
- Kalākaua Avenue, Kalaimoku Street, and Saratoga Road
- Kalākaua Avenue and Beach Walk

Kalākaua Avenue and Olohana Street

At the intersection with Olohana Street, Kalākaua Avenue carries 1,749 vehicles and 1,662 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. The Kalākaua Avenue approach operates at LOS “B” during the weekday PM peak period and LOS “A” during the Saturday PM peak period. Field observations indicate traffic queues from the downstream intersections periodically extended through this intersection during both peak periods. These queues were primarily observed within the outside (right lanes) with maximum queue lengths of 7-8 vehicles observed during both peak periods. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle.

The Olohana Street approach carries 193 vehicles and 190 vehicles southbound during the weekday and Saturday PM peak periods, respectively. The Olohana Street approach operates at LOS “D” during both peak periods. Traffic queues occasionally formed on the Olohana Street approach of the intersection. Average queue lengths of 4-6 vehicles were observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Crosswalks are provided across Kalākaua Avenue on the west side of the intersection and across Olohana Street on the north side of the intersection. During the weekday PM peak period, 234 pedestrians were observed crossing Kalākaua Avenue, while 101 pedestrians were observed crossing Olohana Street. During the Saturday PM peak period, 103 pedestrians were observed crossing Kalākaua Avenue, while 110 pedestrians were observed crossing Olohana Street during the same peak period.

In addition, there is a midblock crosswalk provided across Kalākaua Avenue approximately 350 feet west of the intersection with Olohana Street in front of the Luana Waikīkī Hotel and Suites. During the weekday PM peak period, 122 pedestrians were observed crossing Kalākaua Avenue while 121 pedestrians were observed crossing at the same location during the Saturday PM peak period.

Kalākaua Avenue, Kalaimoku Street, and Saratoga Road

At the intersection with Kalaimoku Street and Saratoga Road, Kalākaua Avenue carries 1,939 vehicles and 1,852 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. The Kalākaua Avenue approach operates at LOS “A” during both peak periods. As previously discussed, eastbound queues at this intersection periodically extended through the upstream intersection with Olohana Street. Field observations indicate that more extensive

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queues formed along the curbside lanes due to the high volume of conflicting pedestrians at the crosswalks on Kalaimoku Street and Saratoga Road. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle.

The Saratoga Road approach of the intersection carries 770 vehicles and 575 vehicles northbound during the weekday and Saturday PM peak periods, respectively. This approach operates at LOS “F” and LOS “E” during the weekday and Saturday PM peak periods, respectively. Traffic queues periodically formed on the Saratoga Road approach of the intersection with average queue lengths of 7-9 vehicles observed during the weekday and Saturday PM peak periods. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle. The high volume of conflicting traffic, fixed traffic signal timing at the intersection, and the restriction of right-turn movements on red contribute to the low levels of service and queueing at this approach.

Crosswalks are provided across Kalākaua Avenue on the west side of the intersection, as well as across Kalaimoku Street on the north side of the intersection and across Saratoga Road on the south side of the intersection. During the weekday PM peak period, 179 pedestrians were observed crossing Kalākaua Avenue on the west side of the intersection, while 194 pedestrians and 630 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively. During the Saturday PM peak period, 190 pedestrians were observed crossing Kalākaua Avenue on the west of the intersection, while 186 pedestrians and 704 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively.

Kalākaua Avenue and Beach Walk

At the intersection with Beach Walk, Kalākaua Avenue carries 2,052 vehicles and 1,880 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. It should be noted that this approach does not have a level of service since there are no conflicting traffic movements at this intersection. Field observations indicate that traffic queues along Kalākaua Avenue from the downstream intersection with Lewers Street occasionally extended through this intersection influencing traffic operations at the upstream intersections with Kalaimoku Street/Saratoga Road and Olohana Street. In addition, field observations also indicate queueing along the outer right lane may be attributed to vehicles yielding to the high volume of conflicting pedestrians at the crosswalk on Beach Walk.

A crosswalk is provided across Beach Walk on the south side of the intersection. During the weekday PM peak period, 556 pedestrians were observed crossing Beach Walk on the south side of the intersection, while 661 pedestrians were observed crossing Beach Walk on the south side of the intersection. In addition, a signalized midblock crosswalk is also provided across Kalākaua Avenue just east of the intersection with Beach Walk. During the weekday PM peak period, 237 pedestrians were observed crossing Kalākaua Avenue at this midblock crossing, with 250 pedestrians observed crossing at the same crossing location during the Saturday PM peak period.



## **Impacts and Mitigation Measures**

### **Transit Facilities**

No significant impacts are expected to occur as a result of the Proposed Project. The existing transit routes serving this roadway are expected to be maintained with the implementation of the Proposed Project. It is anticipated that most guests (approximately 90%) will travel from areas within Waikīkī given the Project Site, programming, and targeted users. As such, approximately 10% of the guests are expected to travel from areas outside of Waikīkī. In addition, due to the Project Site's proximity to hotel accommodations, the availability of improved pedestrian facilities, and convenient access to nearby transit stops, all generated trips to/from the Project Site are expected to primarily walk.

It should be noted that the City and County of Honolulu has plans to include bus-priority lanes along Kūhio Avenue from Olohana Street to Kapahulu Avenue. Currently, the planned bus-priority lanes are anticipated to be installed in late 2023.

### **Bike Facilities**

The City and County of Honolulu has plans to enhance the existing bicycle facilities in the vicinity of the project. These improvements are included in the "Oahu Bike Plan" (Updated 2019), published by the City and County of Honolulu Department of Transportation Services and include the following:

- Protected bike lanes on Kalakaua Avenue from Kapiolani Boulevard to Kapahulu Avenue.
- Bike lanes on Ala Moana Boulevard from Fort Street Mall to Kalakaua Avenue
- Bike lanes Pau Street from Kalakaua Avenue to Ala Wai Boulevard.
- Bike lanes on Saratoga Road from Kalia Road to Kalakaua Avenue.
- Protected bike lanes on Kalaimoku Street from Kalakaua Avenue to Ala Wai Boulevard.

The incorporation of these bicycle facilities are expected to increase access to dedicated bicycle facilities and reduce the level of traffic stress for bicyclists along the roadways in the project area. However, the timeline for these improvements are not known at this time.

### **Pedestrian Levels of Service / Facilities**

Pedestrian levels of service at the study intersections are also generally expected to remain similar to existing and without project conditions due to fixed traffic signal timing at intersections along Kalakaua Avenue. However, the levels of service based on pedestrian space at the corner areas of the intersections may deteriorate with the anticipated pedestrian volumes under with project conditions. As such, it is recommended that the project coordinate with the City and County of Honolulu to explore the feasibility of implementing turning restrictions at the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road to facilitate pedestrian

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crossings and minimize potential conflicts with turning vehicles. In addition, the preparation of a Transportation Management Plan that addresses circulation, loading, and traffic demand management strategies is recommended to further minimize the potential impact of the proposed project to the surrounding roadways (see further, below under Recommendations and Conclusions).

**Parking Facilities**

In terms of programming and design, no parking facilities will be provided on-site. Guests are largely expected to utilize alternative modes of transportation to access the site, and the Proposed Project will be marketed specifically to visitors already staying in Waikiki.

**Total Traffic Volumes Without Project**

The projected Year 2024 weekday and Saturday PM peak period traffic volumes and operating conditions without the proposed Kalia Cultural Entertainment Venue are shown in Figures 6 and 7 of Appendix E and summarized in Table 3-5 below. The analysis incorporates other developments in the vicinity of the project including the redevelopment of the King Kalākaua Plaza and ambient growth in traffic. The existing levels of service are provided for comparison purposes. LOS calculations are included in Appendix E.

**Table 3-5: Existing and Projected Year 2024 (Without Project)  
LOS Traffic Operating Conditions**

Intersection	Approach	Weekday PM		Saturday PM	
		Exist	Year 2024 w/o Proj	Exist	Year 2024 w/o Proj
Kalākaua Ave/ Olohana St	Eastbound	B	B	A	A
	Southbound	D	D	D	D
Kalākaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	A	A	A	A

Under Year 2024 without project conditions, traffic operations in the vicinity of Kalia Cultural Entertainment Venue are expected to remain similar to existing conditions. Along Kalākaua Avenue, the approaches at the intersection with Olohana Street are expected to continue operating at LOS “D” or better during both peak periods. At Kalaimoku Street and Saratoga Road, the eastbound approach on Kalākaua Avenue is expected to continue operating at LOS “A” during both peak periods, while the northbound approach is expected to continue operating at LOS “F” and LOS “E” during the weekday and Saturday PM peak periods. The high volume of conflicting vehicular and pedestrian traffic is expected to continue influencing traffic operations at this intersection.

**Total Traffic Volumes with Project**

Figures 8 and 9 of Appendix E shows the Year 2024 cumulative weekday and Saturday PM peak hour traffic conditions resulting from the projected external traffic and the proposed Kalia Cultural Entertainment Venue. The cumulative volumes consist of site-generated traffic superimposed over the Year 2024 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

The Year 2024 cumulative weekday and Saturday PM peak hour traffic conditions with the proposed Kalia Cultural Entertainment Venues are summarized in Table 3-6. The existing and projected Year 2024 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

With the proposed Kalia Cultural Entertainment Venue, traffic operations in the project vicinity are generally expected to remain similar to without project conditions. At Olohana Street, traffic operations at the intersection with Kalākaua Avenue are anticipated to continue operating at LOS “D” or better during both peak periods. At the intersection of Kalākaua Avenue with Kalaimoku Street and Saratoga Road, the eastbound approach is expected to continue operating at LOS “A” or better during both peak periods, whereas the northbound approach on Saratoga Road is expected to continue operating at LOS “F” and LOS “E” during weekday and Saturday PM peak periods. Existing queues formed along Kalākaua Avenue are expected to continue influencing traffic operations in the vicinity of the project. As previously discussed, these queues are influenced by the high volume of conflicting pedestrians with queues extending through the intersection with Olohana Street. Given the high volumes of pedestrian and vehicular traffic in the vicinity of the project, the preparation of a traffic management plan that includes circulation, loading and traffic demand management strategies is recommended to further minimize the potential impact of the proposed project.

**Table 3-6 Baseline and Year 2024 (Without and With Project)  
 LOS Traffic Operating Conditions**

Intersection	Approach	Weekday PM Peak			Saturday PM Peak		
		Exist	Year 2024		Exist	Year 2024	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalākaua Ave/ Olohana St	Eastbound	B	B	B	A	A	A
	Southbound	D	D	D	D	D	D
Kalākaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	A	A	A	A	A	A
	Northbound	F	F	F	E	E	E

**Recommendations and Conclusions**

With the proposed Kalia Cultural Entertainment Venue, traffic operations in the project vicinity are generally expected to remain similar to without project conditions.

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- 1) Provide sufficient sight distance for motorists to safely enter and exit all project driveways to ensure pedestrians, bicyclists, and motorists are aware of the presence of each other at these conflict points.
- 2) Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
- 3) Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the Project Site to avoid vehicle-reversing maneuvers onto adjacent roadways.
- 4) Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
- 5) Coordinate with the City and County of Honolulu Department of Transportation Services the feasibility of prohibiting right-turn on red movements from Kalākaua Avenue to Saratoga Road and left-turn on red movements to Kalaimoku Street to facilitate pedestrian crossings at this location and minimize potential conflict with turning vehicles.
- 6) Provide additional assessments to determine if the proposed frontage design provides adequate queueing areas and sidewalk widths to accommodate the anticipated volume of pedestrian traffic along Kalākaua Avenue. These assessments should be prepared during the design phase when the layout of the project porte cochere and frontage are determined. All pedestrian facilities should be made accessible in conformance with the Americans with Disabilities Act (ADA). Coordinate such designs with the appropriate design review agencies.
- 7) Provide adequate passing areas along the porte cochere to accommodate all anticipated vehicle types (i.e. buses, vans, etc.) to ensure through traffic flow and minimize potential queueing onto the adjacent roadway.
- 8) Prepare an update to the Traffic Impact Analysis Report (TIAR) should there be significant changes to the anticipated event programming used as the basis of this report. In addition, it should be noted that valet operations are not expected to be implemented with the project at this time. However, the TIAR should be updated should valet operations be undertaken in the future.
- 9) Prepare a Transportation Management Plan (TMP) that includes traffic circulation, parking, loading, and traffic demand management strategies to minimize the project's potential impact to the surrounding roadways given the project's location within an area with high pedestrian and vehicular traffic. Some of these strategies could include:
  - Preparation of informational brochures or packets provided to guests in advance of the event that include information with regards to the multiple access routes available to/from the Project Site;

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- Use of staggered arrival times based on ticket type to distribute pedestrian demand and reduce peaking;
  - Use of special duty officers (SDOs) at the intersection of Kalākaua Avenue and Kalaimoku Street/Saratoga Road to facilitate traffic flow and assist with pedestrian crossings; and
  - Use of on-site personnel to monitor operations within the project's porte cochere, enforce vehicle size restrictions within the porte cochere, if appropriate, and ensure queues do not extend onto the adjacent roadway.
- 10) Coordinate with the City and County of Honolulu Department of Transportation Services regarding their plans for additional bike facilities along the roadways in the project vicinity.
- 11) Prepare a Construction Management Plan (CMP) to minimize the impact of construction traffic and activities on the surrounding roadway network.
- 12) Reevaluate traffic conditions after project completion and occupancy to verify projected conditions.

### **3.12 Visual Resources**

Hawai'i's visual resources are important to the State's tourism industry and the quality of life enjoyed by the State's residents. Within the State's Land Use Ordinance (LUO), Honolulu emphasizes the maintenance of views from public viewing areas and streets in Waikīkī. The State's visual resources include a broad range of natural and developed areas and a wide variety of land uses, water bodies, and vegetation types. These visual resources also include urbanized areas that range from small rural towns to the metropolitan center of Honolulu. Significant public views of Waikīkī are identified by the PUC DP that include a variety of landmarks, the ocean, and the mountains from public vantage points that are to be maintained and preserved. Prominent view corridors as identified by the PUC DP are as follows:

- Maintain a visual relationship with the ocean from Kalākaua Avenue, Kālia Road, and Ala Moana Boulevard.
- Views of Diamond Head from the Punchbowl Lookout.
- Ocean views from Ala Wai Yacht Harbor.
- Ocean views from Kūhiō Beach Park.
- Continuous ocean views along Kalākaua Avenue, from Kūhiō Beach to Kapahulu Avenue.
- Views of the Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park).
- Mauka views from the portions of Nohonani Street, Nāhua Street, Kānekapōlei Street, Kai'olu Street, Lewers Street, Walina Street, and Seaside Avenue.
- View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue.
- Intermittent ocean views from Kālia Road across Fort DeRussy Park from the Ala Wai Bridge on Ala Moana Boulevard.

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The visual characteristics of the Project Site are typical of the urban setting of Waikīkī. The surrounding environment includes several mid-sized structures that accommodate classrooms, offices, recreational facilities, and residential activities in the vicinity. Scenic resources accessible from the Project Site include views of the Ko’olau Mountain Range.

**Impacts and Mitigation Measures**

In the short-term, the presence of construction equipment may impact the view from the surrounding environment. Mitigation measures may include construction fencing and the confining of equipment to work areas. All construction-related equipment will be removed following the completion of work.

Existing structures at the Project Site will be demolished and replaced by the Proposed Project, which complies with development standards set forth in the LUO.

The Proposed Project will enhance the visual appeal of the site at street level by replacing existing dated structures with the Proposed Project, which features modern design utilizing material that complements the surrounding environment. The Proposed Project will produce an open, safe, and inviting pedestrian experience that supports connectivity with the broader Waikīkī neighborhood.

**3.13 Socio-Economic Characteristics**

68.8% of the State's total resident population is concentrated in the CCH, down from 69.7% just a few years ago. Based on the latest population projections, Honolulu’s population is expected to continue climbing at a slower rate in comparison to other counties. By 2045, the CCH is projected to be home to nearly 1.074 million residents. However, the average annual growth rate is predicted to slow from 0.4% between 2020 and 2030 to 0.1% by 2045. The projected increases in population will result in greater demand for housing and public services across the island. In 2020, the residential population of Waikīkī was estimated at approximately 25,940 persons (U.S. Census Bureau, 2020). The average daily population of the region fluctuates based on a transient visitor population. According to the State Department of Business, Economic Development, and Tourism (DBEDT) April 2022, the average daily visitor population of Waikīkī consisted of approximately 99,023 visitors (DBEDT, 2022).

Table 3-7 demonstrates Waikīkī’s residential population is generally older with proportionately more Caucasians and fewer Native Hawaiian or Pacific Islanders in contrast to the rest of O’ahu. The median household income of Waikīkī residents was \$64,977, which is lower compared to the O’ahu average of \$87,722.

<b>Table 3-7: Urban Honolulu CDP (Waikīkī) and O'ahu Demographic Characteristics</b>				
Subject	Urban Honolulu CDP (Waikīkī)		City and County of Honolulu	
	Number	Percent	Number	Percent
<b>Total Population</b>	<b>345,532</b>	<b>100</b>	<b>1,000,890</b>	<b>100</b>
<b>AGE</b>				
Under 5 years				
5-19 years	16,005	4.6	58,801	5.9

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<b>Table 3-7: Urban Honolulu CDP (Waikīkī) and O'ahu Demographic Characteristics</b>				
Subject	Urban Honolulu CDP (Waikīkī)		City and County of Honolulu	
	Number	Percent	Number	Percent
<b>Total Population</b>	<b>345,532</b>	<b>100</b>	<b>1,000,890</b>	<b>100</b>
20-64 years	42,876	12.4	173,167	17.3
65 years and over	207,836	60.1	507,830	50.7
	78,815	22.8	187,885	18.8
<b>RACE</b>				
White (alone)	65,378	18.92	185,542	18.5
Black or African American (alone)	5,454	1.6	24,788	2.5
American Indian and Alaskan Native (alone)	761	0.2	2,962	0.3
Asian (alone)	174,192	50.4	418,614	41.8
Native Hawaiian or other Pacific Islander (alone)	28,602	8.3	97,409	9.7
Two or more races	66,283	19.2	253,310	25.3
Other	4,862	1.4	18,265	1.8
<b>HOUSEHOLD (BY TYPE)</b>				
<b>TOTAL HOUSEHOLDS</b>	<b>138,398</b>	<b>100</b>	<b>338,093</b>	<b>100</b>
Family households (families)	78,565	56.8	232,228	68.7
Married-couple family	55,941	40.4	174,866	51.7
With own children under 18 years	24,183	17.4	85,618	25.3
Female householder, no husband present	16,336	11.8	40,682	12.0
With own children under 18 years	4,632	3.3	13,334	3.9
Nonfamily household	59,833	43.2	105,865	31.3
Average household size	2.4	--	2.85	--
<b>HOUSING OCCUPANCY AND TENURE</b>				
<b>Total Housing Units</b>	<b>157,427</b>	<b>100</b>	<b>372,602</b>	<b>100</b>
Occupied Units	138,398	87.9	338,093	90.7
By owner	68,458	43.5	200,544	53.8
By renter	69,940	44.4	137,549	36.9
Vacant Units	19,029	12.1	34,509	9.3

The Urban Honolulu CDP has a slightly older population than the City and County of Honolulu according to the data shown on the table. The median age of the population for the Urban Honolulu CDP was 41.3 versus 37.8 for the County.

As shown in Table 3-7, Waikīkī's residential population is generally older and has a racial mix with proportionately more Caucasians and fewer Native Hawaiian or Pacific Islanders as compared to the rest of O'ahu. The proportion of owner-occupied units is lower compared to the rest of the island, with many of the vacant units held for occasional use as short-term

vacation rentals. The Urban Honolulu CDP has a higher percentage of Asians (50.4%) and Whites (18.92%) than the County (41.8% and 18.5% respectively), with a lower percentage of those of two or more races (19.2%) than the County (25.3%). These three races (Asian, Whites, and those with two or more races) make up the majority of proportion than the County as a whole, with 8.4% and 9.5%, respectively.

According to the 2021 American Community Survey, the Urban Honolulu CDP has a slightly lower occupancy rate, 87.9%, than the County, 90.7%. At 44.4%, housing units in the Urban Honolulu CDP are largely occupied by renters. The County data slightly differs from that of the Urban Honolulu CDP in that a larger proportion of housing units are occupied with owners.

#### **Impacts and Mitigation Measures**

Significant impacts are not anticipated to result from the construction or operation of the Proposed Project. In the short-term, development of the project may provide temporary construction jobs in addition to construction expenditures. Activities related to the development of the Proposed Project will generate positive benefits to the local economy through indirect sales associated with supplying goods and services to construction companies and to the families of construction workers.

In the long-term, the Proposed Project is not expected to impact population growth on O'ahu. The Project is not anticipated to affect land and housing speculation, property values of area homes, or affordable housing in the area.

### **3.14 Public Services and Facilities**

#### **3.14.1 Police, Fire, and Medical Services**

Police protection in the Waikīkī region is provided by the Honolulu Police Department. The Project Site is located within District 6 of Honolulu Police Department's Patrol locality. District 6 is the smallest police district on O'ahu, which encompasses the Waikīkī peninsula approximately 1.5 square miles between the Ala Wai Canal and Diamond Head. The district uses the department's Waikīkī Police Substation on Kalākaua Avenue and the Alapai headquarters on Beretania Street as its headquarters, as well as for dispatching its patrol vehicles on emergency calls.

The Honolulu Fire Department provides emergency service to the Project Site from three fire stations including the Waikīkī Fire Station located approximately 1.5 miles southeast of the Project Site. The Pāwa'a Fire Station on Makaloa Street, located approximately 0.8 miles northwest of the Project Site and the Mō'ili'ili Fire Station on Date Street, approximately 0.6 miles northeast of the Project Site also serve this region.

The nearest full-service hospital is Straub Hospital, located approximately 1.75 miles from the Project Site.

Pre-hospital emergency medical care and emergency ambulance service on O'ahu is provided by the City's Emergency Services Department, Emergency Medical Services (EMS) Division. The Department has 22 ambulance units under two districts. The Project Site is within District



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2 and is covered by an EMS unit at the Waikīkī Fire Station. All ambulance units are designated as advanced life support units, meaning they are staffed by at least two paramedics.

**Impacts and Mitigation Measures**

In the short- and long-term, no significant impacts on police, fire, and medical services are anticipated.

Regarding police protection, BMPs will be implemented to mitigate potential impacts to the public safety of the surrounding environment. BMPs may include, necessary signs, lights, barricades, and other safety equipment installed and maintained by the contractor, as well as adequate notification made to business and residents in the Project vicinity.

Regarding fire protection, construction drawings will be submitted to the Honolulu Fire Department for review to ensure the provision of fire apparatus access per the requirements of the National Fire Protection Association (NFPA) One fire code. The Proposed Project will be designed and built-in compliance with the applicable County fire code requirements.

Regarding emergency services, no mitigation measures are required.

In the long-term, the Proposed Project may require occasional police and fire protection, as well as medical services; however, it would likely not represent a significant amount relative to the overall regional demand.

**3.14.2 Education**

Waikīkī is part of the State Department of Education's (DOE) Kaimukī-McKinley-Roosevelt Complex area. The school boundaries include the communities of Kaimukī, Kapahulu, Mō'ili'ili, McCully, Pālolo Valley, St. Louis Heights, and Waikīkī. The area is comprised of apartment buildings, high-rise condominiums, small businesses, older residential neighborhoods, and community parks. The State DOE public schools closest to the Proposed Project include:

- Ala Wai Elementary School
- Hōkūlani Elementary School
- Jefferson Elementary School
- Washington Middle School
- Kaimukī High School
- Mckinley High School

**Impacts and Mitigation Measures**

The Proposed Project does not involve construction of residential units; therefore, it is not expected to affect existing educational facilities near the Project Site. No mitigation measures are required.

### **3.14.3 Recreational Facilities**

The City and County Department of Parks and Recreation operates parks and recreational facilities across O‘ahu. Recreational facilities provide recreational opportunities accessible to the public. The nearest City and County facilities to the Project Site include the following:

- Fort DeRussy Beach Park to the southwest approximately 0.35 miles from the Project Site; the Beach Park is located to the west of the site, across Maluhia Road. The park offers a wide range of recreational activities, including picnicking, swimming, sunbathing, surfing, volleyball, and tennis. The park also includes walking paths, a children's playground, and a historical World War II museum.
- Ala Wai Golf Community Park located to the north, separated by the Ala Wai Canal;
- Ala Moana Regional Park located to the east approximately one mile from the Project Site.

The Duke Kahanamoku Lagoon is situated to the southeast of the site, just across Kalākaua Avenue. The lagoon is a popular spot for swimming, kayaking, and stand-up paddleboarding. There are also several shops and restaurants situated around the lagoon.

The Project Site is also situated within walking distance of the Waikīkī Beach Walk, which is a pedestrian-friendly shopping and entertainment district located along Lewers Street. The Waikīkī Beach Walk features a variety of retail shops, restaurants, and entertainment venues, including the Royal Hawaiian Center, which offers over 310,000 square feet of retail and dining space.

Moreover, Waikīkī Beach is located just across Kalākaua Avenue from the site. The beach is one of the most popular tourist destinations in Hawaii, offering opportunities for swimming, sunbathing, surfing, and other water activities.

#### **Impacts and Mitigation Measures**

No significant impacts are anticipated to occur from the construction or operation of the Proposed Project; therefore, no mitigation measures are proposed.

### **3.14.4 Solid Waste Collection and Disposal**

In accordance with HRS Chapter 342G, solid waste refers to any garbage, refuse, and other residential or commercial discarded materials, including solid, liquid, semisolid, or contained gaseous materials resulting from industrial, commercial, mining, and agricultural operations. This includes sludge from waste treatment plants and residues from air pollution control facilities and community activities. Solid waste collection and disposal service is provided by the ENV for incineration at the Campbell Industrial Park H-POWER Plant that generates electricity, followed by disposal of ash and non-combustibles at the Waimanalo Gulch Sanitary Landfill.

Construction and demolition material is disposed of at the privately-owned PVT landfill in Wai‘anae. PVT Land Company conducts material recovery and recycling in addition to its C&D landfill operations.

**Impacts and Mitigation Measures**

In the short-term, no significant impacts to municipal solid waste collection and disposal facilities are anticipated due to the construction and operation of the Proposed Project. The construction contractor will be responsible for the disposal of construction debris and solid waste generated, which may include any hazardous materials, to an acceptable waste disposal facility in accordance with Federal, State, and City and County of Honolulu regulations.

In the long-term, the Proposed Project is anticipated to impact the waste generation in the area, however, it is not expected to overtax current capacity as operations of all of the proposed elements of the project will include recycling measures. The project will generate some level of demand for solid waste management services, including trash collection and disposal. It is anticipated that the project will generate waste, including food waste, packaging, and other materials.

**3.15 Infrastructure and Utilities**

A Preliminary Engineering Report (PER) was prepared by WOC in May 2023 to inform and serve as a basis for the EA's disclosure of existing conditions and the evaluation of the Proposed Project's relationship to regional infrastructure and utilities. The PER serves to identify and evaluate infrastructure and utility systems that serve the Project Site (and their capability to serve the Proposed Project). Moreover, the PER also outlines the potential need for improvements to existing utilities / infrastructure. This PER is included herein as Appendix F, and its findings are summarized in the sections below.

**3.15.1 Water System**

The City and County Board of Water Supply (BWS) municipal water system provides water for domestic use and fire protection to the Project Site and surrounding area, which draws only from groundwater sources. The Project Site is situated within the boundaries of the Primary Urban Center Water Plan area, which ensures water-saving efforts to reduce the need for costly infrastructure upgrades by identifying essential infrastructure upgrades to maintain a safe and reliable water supply. The BWS water system in the vicinity of the Project Site consists of a system of distribution mains and fire hydrants.

On May 2, 2023, the BWS provided a response to the Early Consultation Package to better understand the existing water system in the vicinity of the Project Site. According to the BWS, the offsite BWS water system in the vicinity of the Project Site consists of 8-inch cast iron cylinder pipe running along Kalākaua Avenue. The Project Site is served by the existing 8-inch main via a 5/8" meter (M/N#0720844465) with a 1-inch lateral. BWS records also indicate an additional 2-inch meter (M/N#8383346215) with a 2.5-inch lateral. The closest existing fire hydrant to the project site frontage is located on the mauka side of Kalākaua Ave near the intersection of Kalākaua Ave and Kalaimoku Street.

Average daily water demand is based on BWS Water System standards, Domestic Consumption Guidelines. The zoning designations of the proposed site was determined to be Commercial Only with an associated demand of 3000 gals/acre. The average daily water demand for the Proposed Project is 1980 gallons per day.

**Impacts and Mitigation Measures**

No short- nor long-term significant impacts are anticipated to result from the development and operation of the Proposed Project. On-site water system improvements will be required to accommodate the Proposed Project. The final line size and location will be determined during the design phase of the project. Proposed connections and improvements will be confirmed when construction drawings for the Proposed Project are developed and submitted to BWS for review and approval. Waterlines are to be sited in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements. Moreover, the BWS has indicated that the existing water system is currently adequate to accommodate the Proposed Project. However, the ongoing issues at the Navy's Red Hill Bulk Storage Tank fuel releases has reduced the overall system and BWS reserves the right to change its position.

A letter dated June 29, 2015, indicated that the existing system could not provide adequate fire protection for the previously planned development. However, lesser demand of the currently proposed development may result in more favorable determination regarding water availability by BWS. During the design process, construction drawings should be submitted to BWS for review approval and on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. BWS will require the implementation of water conservation measures.

**3.15.2 Wastewater System**

Information obtained via record drawings and GIS map data provided by the City and County of Honolulu indicate that each parcel has a 6-inch sewer lateral that connects to an existing 8-inch gravity sewer line that runs within the sidewalk fronting the project site along Kalākaua Avenue. The existing sewer main connects to the Fort DeRussy pump station located along Kalākaua Avenue, north of the project site.

Average daily sanitary sewer rates are based on the City and County of Honolulu, Design Standards of the Department of Wastewater Management. The quantity of wastewater was determined as 21,120 gallons per day based on a 264 capita and average per capita flow of 80 gallons per day.

**Impacts and Mitigation Measures**

No significant impacts are anticipated on the existing wastewater system as a result of the construction and operation of the Proposed Project. The Proposed Project will not have any anticipated impacts to existing sewer flow.

A sewer connection application was submitted to the City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch in May 2023. The City approved the sewer connection application on June 2, 2023 (See Appendix F).

A sewer connection application in support of the previously planned development was submitted in June 2015. As of November 2015, the application was being reviewed by

the Department of Environmental Services. In summary, coordination between the City and the EPA and DOH spanning from 2010-2014 regarding required improvements to the Fort DeRussy wastewater pump station which serves the project site has not been resolved. Since then, the City has not been able to approve new sewer connection applications served by the pump station.

Pending approval of the May 2023 sewer connection application, sewage flows from the proposed development is anticipated to be collected by one or more of the existing laterals adjacent to the parcels. Locations of the lateral connections and its ability to be utilized in the Proposed Project should be verified during the design process.

Trenching and backfilling of the proposed sewer lines will follow CCH standards and the Soils Engineer's recommendations.

Following City approvals of the Sewer Connection Application(s), and constructions plans, along with payment of the sewer facilities charges, the proposed system can be connected to the City sewer system.

### **3.15.3 Drainage System**

A review of site storm drainage systems was conducted based on City and County of Honolulu GIS Map Data and available record drawings. Along Kalākaua Avenue there is an existing catch basin located approximately in line with the boundary between Parcels 1 and 4. The catch basin is connected to the City underground drainage system that discharges into the Ala Wai Canal at the mauka end of Kalaimoku Street.

The existing site is comprised of both impervious and pervious surfaces. The installation of the large open lawn area will significantly increase the amount of pervious area onsite, which may serve to decrease storm water peak flow runoff quantities. Additional drainage improvements may include the installation of drain inlets, manholes, and treatment devices as required by the proposed layout of the site.

#### **Impacts and Mitigation Measures**

No short- nor long-term significant impacts on the quantity or quality of drainage in the project vicinity are anticipated during construction or operation of the Proposed Project. Construction of the Proposed Project will not involve major land disturbing activities that will significantly alter site contours. Applicable erosion control measures and best management practices will be implemented to minimize and mitigate possible adverse effects relating to runoff. As applicable, these may include but are not limited to the following: temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, truck wash down areas, and use of compost filter socks. Planting of landscaping also will be done as soon as possible on completed areas to help control erosion. As stated herein, the existing site is comprised of both impervious and pervious surfaces, and the installation of the large open lawn area is anticipated to increase the amount of pervious area on-site. Additional drainage improvements (to be implemented) may also include the installation of drain inlets, manholes, and treatment devices as required by the proposed layout of the site.

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The final sizing and location of drainage improvements / structures will be determined during the design phase of the project, and will seek to maintain existing discharge points to the City's drainage system. As required by the Storm Drainage Standards, DPP, CCH, dated August 2017, storm water quality measures will be enacted.

Coordination will be undertaken with appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant drainage impacts.

### **3.15.4 Electrical and Communications Systems**

Hawaiian Electric Company (HECO) power plant is the largest supplier of electricity in the State, supplying 95% of Hawai'i's electrical power. A significant electrical source for the area is the Downtown Power Plant, Alakea, which extends service from Waikīkī to Kāne'ōhe.

Telephone and cable service in the area is provided by Hawaiian Telcom and Spectrum. Spectrum is the local CATV provider in the region.

#### **Impacts and Mitigation Measures**

In the short- and long-term, the Proposed Project is not anticipated to impact or increase overall demand on electrical and communication systems in the area. Connection(s) and service capacity for electrical and communications should be verified with the appropriate service provider during the design process.

### **3.15.5 Gas System**

The natural gas system within the the Project Site is serviced by Hawai'i Gas (HiGas). Record drawings received from HiGas indicate there are two 2-insh gas lines servicing the project site, fed by a main along Kalākaua Acenue.

#### **Impacts and Mitigation Measures**

In the short- and long-term, the Proposed Project is not anticipated to impact or increase overall demand on electrical and communication systems in the area. Further coordination with Hawaii Gas by the mechanical engineer will be required during the design phase to confirm fuel system service connections. The fuel system demand required by the Proposed Project will be needed at that time and determine the proposed improvements required.

# CHAPTER 4: RELATIONSHIP TO PLANS, POLICIES AND CONTROLS

## 4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Pursuant to HAR Section 11-200.1-24, this section describes the relationship of the Proposed Project to “land use and natural or cultural resource plans, policies, and controls for the affected area.” Discussed is how the Proposed Project “may conform or conflict with objectives and specific terms of approved or proposed land use and resource plans, policies, and controls, if any, for the affected area.” Where a conflict or inconsistency exists, described is the extent to which the Proposed Project has been reconciled “with the plan, policy, or control, and the reasons why” the proposing agency (2055 Kalākaua LLC) “...has decided to proceed, notwithstanding the absence of full reconciliation.”

To facilitate describing the relationships of the Proposed Project to the numerous land use and natural or cultural resource plans, policies, and controls for the affected area, some of those plans, policies, and controls are presented in tabular form, and are described with text and/or the following letter code:

S = Supportive, NS = Not Supportive, N/A = Not Applicable

### 4.1. State Land Use Plans and Policies

#### 4.1.1. Hawai'i State Plan

The Hawai'i State Plan, Chapter 226, HRS, as amended, provides goals, objectives, policies, and priorities for the State. The purpose of the Hawai'i State Plan is to set forth a plan that shall serve as a guide for the future long-range development of the State; identify the goals, allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of Federal, State, and County plans, policies, programs, projects, and regulatory activities; and, to establish a system for plan formulation and program coordination to provide for an integration of all major State, and County activities. The State Plan is divided into three sections. Part 1 is Overall Theme, Goals, Objectives and Policies. Part 2 is Planning Coordination and Implementation. Part 3 is Priority Guidelines. The Proposed Project's consistency with applicable goals, objectives and policies of Part 1 is discussed in Table 4-1, and an assessment of conformance with Part 3 is discussed in Table 4-2. Part 2 of the State Plan, which primarily covers internal government affairs, is not related to the Proposed Project.

Table 4-1: The Hawai'i State Plan	S	NS	N/A
<p><b>§226-4 State goals.</b> In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:</p> <p>(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations.</p> <p>(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.</p>	X		
	X		

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(3) Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the State's goals for present and future generations, to ensure individuals and groups may approach their desired levels of self-reliance and self-determination. The Proposed Project endeavors to positively contribute to sustainable and cultural tourism -- which considers the current and future economic impacts on visiting and host communities. The Proposed Project and its associated programming will seek to perpetuate Hawai'i's culture while fostering local collaboration and strengthening community resilience. The Proposed Project will support the goals of the State of Hawai'i to achieve a strong and viable economy through the creation of construction, construction support jobs, and the purchase of local materials during development as well as the creation of employment opportunities during operation and maintenance of the venue. The Proposed Project seeks to maximize social and economic benefits to Hawai'i's communities while respecting and preserving Hawai'i's culture. Moreover, the Proposed Project intends to revitalize and enhance the project site located at the "gate" of Waikiki, which has not been fully utilized since 2007. The Proposed Project will incorporate a Hawaiian sense of place that embraces Hawai'i's historical past and reflects Hawai'ian attitudes, experiences, places, spaces, and symbols. The Proposed Project will also provide a venue that encourages social interaction by creating spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai'i.</p>			
<p><b>§226-5 Objectives and policies for population.</b></p> <p>(a) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.</p> <p>To achieve the population objective, it shall be the policy of this State to:</p>			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.			<b>X</b>
(2) Encourage an increase in economic activities and employment opportunities on the Neighbor Islands consistent with community needs and desires.			<b>X</b>
(3) Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.	<b>X</b>		
(4) Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.			<b>X</b>
(5) Encourage federal actions that will promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			<b>X</b>
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			<b>X</b>
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to population.</p> <p>The Proposed Project will not contribute to Hawai'i's residential population growth. The Proposed Project will, however, contribute to promoting sustainable and culturally-oriented tourism, which in principle, generally maximizes socio-economic benefits to Hawai'i's people. Implementation of the Proposed Project will add vibrancy to the "gate" of Waikiki, positively stimulate Hawai'i's tax base, and create new jobs both in the short-term construction phase and long-term operation. The Proposed Project is a coordinated effort to utilize available developed land and infrastructure as well as implement sustainable practices to ensure valuable resources are utilized in a prudent and efficient manner.</p>			
<p><b>§226-6 Objectives and policies for the economy--in general.</b></p> <p>(a) Planning for the State's economy in general shall be directed toward achievement of the following objectives:</p>			



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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people.			
(2) A steady growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.			
(b) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.			<b>X</b>
(2) Expand Hawai'i's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			<b>X</b>
(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.			<b>X</b>
(4) Transform and maintain Hawai'i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.	<b>X</b>		
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.			<b>X</b>
(6) Seek broader outlets for new or expanded Hawai'i business investments.			<b>X</b>
(7) Expand existing markets and penetrate new markets for Hawai'i's products and services.	<b>X</b>		
(8) Assure that the basic economic needs of Hawai'i's people are maintained in the event of disruptions in overseas transportation.			<b>X</b>
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	<b>X</b>		
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai'i's small scale producers, manufacturers, and distributors.			<b>X</b>
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			<b>X</b>
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.	<b>X</b>		
(13) Foster greater cooperation and coordination between the public and private sectors in developing Hawai'i's employment and economic growth opportunities.			<b>X</b>
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			<b>X</b>
(15) Maintain acceptable working conditions and standards for Hawai'i's workers.	<b>X</b>		
(16) Provide equal employment opportunities for all segments of Hawai'i's population through affirmative action and non-discrimination measures.			<b>X</b>
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			<b>X</b>
(18) Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy, particularly with respect to emerging industries in science and technology.			<b>X</b>
(19) Promote and protect intangible resources in Hawai'i, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	<b>X</b>		
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(21) Foster a business climate in Hawai'i- including attitudes, tax and regulatory policies, and financial and technical assistance programs-that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to the economy – in general.</p> <p>In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials.</p> <p>In the long-term, the Proposed Project will benefit Hawai'i's economy with the increase in revenue to the State's tax base as well as the creation of new career opportunities within the service, entertainment, and management fields. Additionally, the development of the Proposed Project will indirectly support other local businesses within the Waikiki visitor industry.</p>			
<p><b>§226-7 Objectives and policies for the economy—agriculture.</b></p> <p>(a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</p> <p style="margin-left: 40px;">(1) Viability of Hawaii's sugar and pineapple industries.  (2) Growth and development of diversified agriculture throughout the State.  (3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being</p> <p>To achieve the agriculture objectives, it shall be the policy of this State to:</p>			
(1) Establish a clear direction for Hawai'i's agriculture through stakeholder commitment and advocacy.			<b>X</b>
(2) Encourage agriculture by making the best use of natural resources.			<b>X</b>
(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			<b>X</b>
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			<b>X</b>
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.			<b>X</b>
(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.			<b>X</b>
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's food producers and consumers in the State, nation, and world.			<b>X</b>
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.			<b>X</b>
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			<b>X</b>
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			<b>X</b>
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			<b>X</b>
(12) In addition to the State's priority on food, expand Hawai'i's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			<b>X</b>
(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
food products by residents, businesses, and governmental bodies as defined under section 103D-104.			
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture			<b>X</b>
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			<b>X</b>
(16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			<b>X</b>
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko i'a, māla, and irrigated lo'i, and growth of traditional Hawaiian crops, such as kalo, 'uala, and 'ulu.			<b>X</b>
(18) Increase and develop small-scale farms.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan related to the economy and agriculture.			
<b>§226-8 Objective and policies for the economy—visitor industry.</b>			
(a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy.			
(b) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawai'i's visitor attractions and facilities.	<b>X</b>		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.	<b>X</b>		
(3) Improve the quality of existing visitor destination areas by utilizing Hawai'i's strengths in science and technology.			<b>X</b>
(4) Encourage cooperation between the public and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			<b>X</b>
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawai'i's people.	<b>X</b>		
(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.			<b>X</b>
(7) Foster a recognition of the contribution of the visitor industry to Hawai'i's economy and the need to perpetuate the aloha spirit.	<b>X</b>		
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.	<b>X</b>		
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan related to the economy and the visitor industry.			
The Proposed Project will promote the ongoing improvement and transformation of Waikiki for a global audience seeking to expand on cultural experiences. The Proposed Project is an exemplary representation of Hawai'i's host culture, which has become critical to the economic health of its tourism industry. The Proposed Project will contribute to visitor attractions and facilities in the tourism capital of Hawai'i at the "gate" of Waikiki. The Proposed Project will foster an understanding between visitors and Hawai'i's culture and values through its programming and entertainment.			
<b>§226 9 Objective and policies for the economy--federal expenditures.</b>			
(a) Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawai'i's economy.			
(b) To achieve the federal expenditures objective, it shall be the policy of this State to:			

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.			<b>X</b>
(2) Promote Hawaii's supportive role in national defense, in a manner consistent with Hawaii's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaii's economy.			<b>X</b>
(3) Promote the development of federally supported activities in Hawai'i that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment.			<b>X</b>
(4) Increase opportunities for entry and advancement of Hawai'i's people into federal government service.			<b>X</b>
(5) Promote federal use of local commodities, services, and facilities available in Hawai'i.			<b>X</b>
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawai'i.			<b>X</b>
(7) Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan related to the economy and federal expenditures.			
<b>§226-10 Objective and policies for the economy--potential growth and innovative activities.</b>			
(a) Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base.			
(b) To achieve the potential growth activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.			
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawai'i through the export of services or products or substitution of imported services or products.			<b>X</b>
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.			<b>X</b>
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.			<b>X</b>
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus.	<b>X</b>		
(6) Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.			<b>X</b>
(7) Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.	<b>X</b>		
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, and underground resources and solid waste.			<b>X</b>
(9) Promote Hawai'i's geographic, environmental, social, and technological advantages to attract new economic activities into the State.	<b>X</b>		

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawai'i's social, economic, physical, and environmental objectives.			<b>X</b>
(11) Increase research and the development of ocean related economic activities such as mining, food production, and scientific research.			<b>X</b>
(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.			<b>X</b>
(13) Foster a broader public recognition and understanding of the potential benefits of new, growth oriented industry in Hawai'i.			<b>X</b>
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.			<b>X</b>
(15) Increase research and development of businesses and services in the telecommunications and information industries.			<b>X</b>
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation			<b>X</b>
(17) Recognize and promote health care and health care information technology as growth industries.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to the economy, potential growth, and innovative activities.</p> <p>The Proposed Project will help maintain Waikiki as one of the world's most sought-after travel destinations by providing a cultural entertainment venue. The Proposed Project facilitates opportunities in the cultural, art, and entertainment industries and promotes Hawai'i's social advantages attracting economic activities to the State.</p>			
<p><b>226-10.5 Objectives and policies for the economy--information industry.</b></p> <p>(a) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawai'i as a leader in broadband and wireless communications and applications in the Pacific Region.</p> <p>(b) To achieve the information industry objective, it shall be the policy of this State to:</p>			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawai'i and between Hawai'i and the world, and make high speed communication available to all residents and businesses in Hawaii			<b>X</b>
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth and innovation in Hawaii's economy.			<b>X</b>
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii.			<b>X</b>
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state.			<b>X</b>
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry.			<b>X</b>
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			<b>X</b>
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry.			<b>X</b>
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy.			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(9) Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.			<b>X</b>
<b>Discussion</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan related to the economy and the information industry.			
<b>§226-11 Objectives and policies for the physical environment--land-based, shoreline, and marine resources.</b>			
(a) The land-based, shoreline, and marine resources objectives are:			
(1) Prudent use of Hawai'i's land-based, shoreline, and marine resources.			
(2) Effective protection of Hawai'i's unique and fragile environmental resources.			
(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.			<b>X</b>
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			<b>X</b>
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	<b>X</b>		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.			<b>X</b>
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			<b>X</b>
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.			<b>X</b>
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			<b>X</b>
(8) Pursue compatible relationships among activities, facilities, and natural resources.	<b>X</b>		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.	<b>X</b>		
<b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to the physical environment, land-based, shoreline, and marine resources.			
<p>The Project Site is located within a highly altered urban environment. No significant short- or long-term impacts to surface and/or coastal waters are anticipated to result from the construction and operation of the Proposed Project. The Proposed Project will adhere to planning benchmarks set forth by the CCH Climate Commission to mitigate impact in regard to predicted sea level rise.</p> <p>Additionally, applicable erosion control measures and best management practices will be implemented to mitigate any possible adverse effects relating to runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in any significant impacts.</p> <p>No listed or protected plant species are known to originate or existing within the project area. Rare, threatened, or endangered fauna are not known to utilize the project site or surrounding area for either habitat or foraging purposes. However, measures to prevent adverse effects to protected species are discussed in Section 3.5.1 of the EA.</p>			
<b>§226-12 Objective and policies for the physical environment--scenic, natural beauty, and historic resources.</b>			
(a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources			
(b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			<b>X</b>
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	<b>X</b>		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.			<b>X</b>
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to the physical environment, scenic, natural beauty, and historic resources.</p> <p>The Proposed Project is designed to complement the natural beauty of Hawai'i. The Proposed Project will maintain prominent view corridors as identified by the State's Land Use Ordinance (LUO), which emphasizes the preservation of visual resources including natural and developed areas as well as land uses. The visual characteristics of the Project Site align with the urban setting of Waikiki and its surrounding area, which include several mid-size structures that accommodate scenic resources such as the Ko'olau Mountain Range. Project design will comply with Waikiki Special District guidelines, and the overall design language will align with the natural beauty of the islands.</p>			
<p><b>§226-13 Objectives and policies for the physical environment--land, air, and water quality.</b></p> <p>(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:</p> <p style="padding-left: 20px;">(1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.</p> <p style="padding-left: 20px;">(2) Greater public awareness and appreciation of Hawai'i's environmental resources.</p> <p>(b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:</p>			
(1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.			<b>X</b>
(2) Promote the proper management of Hawai'i's land and water resources.			<b>X</b>
(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.			<b>X</b>
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.	<b>X</b>		
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			<b>X</b>
(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.	<b>X</b>		
(7) Encourage urban developments in close proximity to existing services and facilities.	<b>X</b>		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures and visitors.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to the physical environment, land, air, and water quality.</p> <p>The Proposed Project is sited in a highly urbanized environment (Waikīkī) that is in close proximity to many available services and facilities. The design of the Proposed Project emphasizes the pedestrian-orientation of Waikīkī and intends to encourage the environmentally beneficial and efficient use of multi-modal transportation choices over private automobiles.</p>			
<p><b>§226-14 Objective and policies for facility systems--in general.</b></p> <p>(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</p> <p>(b) To achieve the general facility systems objective, it shall be the policy of this State to :</p>			

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.			<b>X</b>
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.	<b>X</b>		
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			<b>X</b>
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan related to facility systems in general.</p> <p>The Proposed Project will provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikīkī, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikīkī workers, businesses, residents, and tourists. This provides an opportunity for the Applicant to maximize and optimize the current space available to implement the Proposed Project in line with the objectives of the Waikīkī Special District.</p>			
<p><b>§226-15 Objectives and policies for facility systems—solid and liquid wastes.</b></p> <p>(b) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:</p> <p>(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.</p> <p>(2) Provision of adequate sewerage facilities of physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.</p> <p>(c) To achieve solid and liquid waste objectives, it shall be the policy of this State to:</p>			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			<b>X</b>
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			<b>X</b>
(3) Promote research to develop more efficient and economical treatment and disposals of solid and liquid wastes.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact / support the objectives and policies outlined within the Hawai'i State Plan for facility systems related to solid and liquid wastes.</p>			
<p><b>§226-16 Objective and policies for facility systems--water.</b></p> <p>(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.</p> <p>(b) To achieve the facility systems water objective, it shall be the policy of the State to:</p>			
(1) Coordinate development of land use activities with existing and potential water supply.			<b>X</b>
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			<b>X</b>
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			<b>X</b>
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			<b>X</b>
(5) Support water supply services to areas experiencing critical water problems.			<b>X</b>



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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for facility systems related to water.			
<b>§226-17 Objectives and policies for facility systems--transportation.</b>			
(a) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			
(2) A statewide transportation system consistent with planned growth objectives throughout the State			
(b) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.	<b>X</b>		
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives.			<b>X</b>
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties.			<b>X</b>
(4) Provide for improved accessibility to shipping, docking, and storage facilities.			<b>X</b>
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs.	<b>X</b>		
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities.			<b>X</b>
(7) Encourage a variety of carriers to offer increased opportunities and advantages to inter-island movement of people and goods.	<b>X</b>		
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs.			<b>X</b>
(9) Encourage the development of transportation, systems and programs which would assist statewide economic growth and diversification.			<b>X</b>
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment.			<b>X</b>
(11) Encourage safe and convenient uses of low-cost, energy-efficient, non-polluting means of transportation.			<b>X</b>
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives.			<b>X</b>
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			<b>X</b>
<b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for facility systems related to transportation.			
The Proposed Project will promote the efficient use of multi-modal transportation choices over private automobiles. The Proposed Project will provide a port cochere for visitor pick-up and drop-off to support a reasonable level of mass transportation services offered by a variety of carriers.			
<b>§226-18 Objectives and policies for facility systems—energy.</b>			
(a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy and telecommunication systems capable of supporting the needs of the people.			

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<p>(2) Increased energy self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation;</p> <p>(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;</p> <p>(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and</p> <p>(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority..</p> <p>(b) To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand</p> <p>(c) To further achieve the energy objectives, it shall be the policy of this State to:</p>			
(1) Support research and development as well as promote the use of renewable energy sources.			<b>X</b>
(2) Ensure a sufficient supply of energy to enable power systems to support the demands of growth.			<b>X</b>
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits.			<b>X</b>
<p>(4) Promote all cost-effective conservation of power and fuel supplies through measures, including:</p> <p style="margin-left: 20px;">(A) Development of cost-effective demand-side management programs;</p> <p style="margin-left: 20px;">(B) Education;</p> <p style="margin-left: 20px;">(C) Adoption of energy-efficient practices and technologies; and</p> <p style="margin-left: 20px;">(D) Increasing energy efficiency and decreasing energy use in public infrastructure.</p>			<b>X</b>
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies.			<b>X</b>
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies.			<b>X</b>
(7) Promote alternate fuels and transportation energy efficiency.			<b>X</b>
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications.			<b>X</b>
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.			<b>X</b>
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects.			<b>X</b>
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources.			<b>X</b>
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for facility systems related to energy.			
<b>§226-18.5 Objectives and policies for facility systems--telecommunications.</b>			

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<p>(a) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.</p> <p>(b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand.</p> <p>(c) To further achieve the telecommunications objective, it shall be the policy of this State to:</p>			
(1) Facilitate research and development of telecommunication systems and resources.			<b>X</b>
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunication planning.			<b>X</b>
(3) Promote efficient management and use of existing telecommunication systems and services.			<b>X</b>
(4) Facilitate the development of education and training of telecommunication personnel.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for facility systems related to telecommunications.</p>			
<p><b>§226-19 Objectives and policies for socio-cultural advancement--housing.</b></p> <p>(a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:</p> <p>(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 rental and for sale affordable housing is made available to extremely low-, very low-, lower-, moderate-, and above moderate-income segments of Hawaii's population.</p> <p>(2) The orderly development of residential areas sensitive to community needs and other land uses.</p> <p>(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.</p> <p>(b) To achieve the housing objectives, it shall be the policy of this State to:</p>			
(1) Effectively accommodate the housing needs of Hawai'i's people.			<b>X</b>
(2) Stimulate and promote feasible approaches that increase affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income households.			<b>X</b>
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			<b>X</b>
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			<b>X</b>
(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.			<b>X</b>
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			<b>X</b>
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the cultures and values of the community.			<b>X</b>
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to housing.</p>			

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>§226-20 Objectives and policies for socio-cultural advancement--health.</b>			
(a) Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.			
(2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.			
(3) Elimination of health disparities by identifying and addressing social determinants of health.			
(b) To achieve the health objectives, it shall be the policy of this State to:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			<b>X</b>
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			<b>X</b>
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			<b>X</b>
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			<b>X</b>
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			<b>X</b>
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement			<b>X</b>
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to health.			
<b>§226-21 Objective and policies for socio-cultural advancement—education.</b>			
(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.			
(b) To achieve the education objective, it shall be the policy of this State to:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	<b>X</b>		
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			<b>X</b>
(3) Provide appropriate educational opportunities for groups with special needs.			<b>X</b>
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.	<b>X</b>		
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			<b>X</b>
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			<b>X</b>
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			<b>X</b>
(9) Support research programs and activities that enhance the education programs of the State.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to education.</p> <p>The Proposed Project will provide the opportunity to educate visitors on Hawai'i's cultural heritage through its programming and entertainment. The Proposed Project will incorporate a Hawaiian sense of place that embraces Hawai'i's historical past and reflects Hawai'ian attitudes, experiences, places, spaces, and symbols. The Proposed Project will also provide a venue that encourages social interaction by creating spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai'i.</p>			
<p><b>§226-22 Objective and policies for socio-cultural advancement—social services.</b></p> <p>(a) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.</p> <p>(b) To achieve the social services objective, it shall be the policy of this State to:</p>			
(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.			<b>X</b>
(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.			<b>X</b>
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities			<b>X</b>
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			<b>X</b>
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			<b>X</b>
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to social services.</p>			
<p><b>§226-23 Objective and policies for socio-cultural advancement—leisure.</b></p> <p>(a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.</p> <p>(b) To achieve the leisure objective, it shall be the policy of this State to:</p>			
(1) Foster and preserve Hawai'i's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.	<b>X</b>		
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			<b>X</b>
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			<b>X</b>
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved	<b>X</b>		

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(5) Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.			<b>X</b>
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs			<b>X</b>
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.			<b>X</b>
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.	<b>X</b>		
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.			<b>X</b>
(10) Assure adequate access to significant natural and cultural resources in public ownership.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to leisure.</p> <p>The Proposed Project will serve as a premier venue for artistic programs and performances that enhance public participation and appreciation for Hawai'i's culture. Furthermore, The Proposed Project is designed to complement the natural beauty of Hawai'i. As an open-air cultural entertainment venue, the Proposed Project will promote the educational potential of natural resources by having open space, ensuring their inherent values are preserved. The Proposed Project will create spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai'i.</p>			
<p><b>§226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being.</b></p> <p>(a) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.</p> <p>(b) To achieve the individual rights and personal wellbeing objective, it shall be the policy of this State to:</p>			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			<b>X</b>
(2) Uphold and protect the national and state constitutional rights of every individual.	<b>X</b>		
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			<b>X</b>
(4) Ensure equal opportunities for individual participation in society.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to individual rights and personal well-being.</p> <p>The Proposed Project will have trained staff and security to provide a safe and accommodating environment for all team members, guests, and local residents who visit the venue.</p>			
<p><b>§226-25 Objective and policies for socio-cultural advancement--culture.</b></p> <p>(a) Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.</p> <p>(b) To achieve the culture objective, it shall be the policy of this State to:</p>			
(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.	<b>X</b>		
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.			<b>X</b>
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawai'i.			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(4) Encourage the essence of the aloha spirit in people's daily-activities to promote harmonious relationships among Hawai'i's people and visitors.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to culture.</p> <p>The Proposed Project, in design and entertainment programs offered, will embrace the diverse cultural array and the aloha spirit that is celebrated in the islands. The Proposed Project will incorporate a Hawaiian sense of place that honors and respects Hawai'i's historical past as well as reflects Hawai'ian attitudes, experiences, places, spaces, and symbols. The Proposed Project will foster increased knowledge and understanding of Hawai'i's ethnic, cultural, and historical heritages as it aligns with core tenets of cultural tourism associated with the celebration, promotion, and perpetuation of Hawai'i's environment and culture.</p>			
<p><b>§226-26 Objectives and policies for socio-cultural advancement—public safety.</b></p>			
<p>(a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:</p>			
<p>(1) Assurance of public safety and adequate protection of life and property for all people.</p>			
<p>(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.</p>			
<p>(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's</p>			
<p>(b) To achieve the public safety programs objectives, it shall be the policy of this State to:</p>			
(1) Ensure that public safety programs are effective and responsive to community needs.			<b>X</b>
(2) Encourage increased community awareness and participation in public safety programs.			<b>X</b>
<p>(c) To achieve the public safety programs objectives, it shall be the policy of this State to:</p>			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			<b>X</b>
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			<b>X</b>
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			<b>X</b>
<p>(d) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:</p>			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war related, natural, or technological disasters and civil disturbances at all times.			<b>X</b>
(2) Enhance the coordination between emergency management programs throughout the State.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to public safety.</p>			
<p><b>§226-27 Objectives and policies for socio-cultural advancement--government.</b></p>			
<p>(a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</p>			
<p>(1) Efficient, effective, and responsive government services at all levels in the State.</p>			
<p>(2) Fiscal integrity, responsibility and efficiency in the state government and county governments.</p>			
<p>(b) To achieve the government objectives, it shall be the policy of this State to:</p>			
(1) Provide for necessary public goods and services not assumed by the private sector.			<b>X</b>

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<b>Table 4-1: The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			<b>X</b>
(3) Minimize the size of government to that necessary to be effective.			<b>X</b>
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawai'i.			<b>X</b>
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			<b>X</b>
(6) Provide for a balanced fiscal budget.			<b>X</b>
(7) Improve the fiscal budgeting and management system of the State.			<b>X</b>
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			<b>X</b>
<b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State Plan for socio-cultural advancement related to government. The Proposed Project will not involve Federal, State, or County funds, and will be entirely funded by private capital.			

**PART III. PRIORITY GUIDELINES**

Part III of the Hawai'i State Plan establishes the overall priority guidelines to address areas of statewide concern. Under HRS § 226-102, "The State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in seven major areas of Statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation."

<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>§226-103 Economic priority guidelines.</b>			
(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			<b>X</b>
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			<b>X</b>
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			<b>X</b>
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			<b>X</b>
(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety, and welfare would not be adversely affected.			<b>X</b>
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors.			<b>X</b>
(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.			<b>X</b>



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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics: (a) An industry that can take advantage of Hawai'i's unique location and available physical and human resources. (b) A clean industry that would have minimal adverse effects on Hawai'i's environment. (c) An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs. (d) An industry that would provide reasonable income and steady employment.			<b>X</b>
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.			<b>X</b>
(10) Enhance the quality of Hawai'i's labor force and develop and maintain career opportunities for Hawai'i's people through the following actions: (a) Expand vocational training in diversified agriculture, aquaculture, and other areas where growth is desired and feasible. (b) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities. (c) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired. (d) Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents. (e) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities. (f) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			<b>X</b>
<b>(b) Priority guidelines to promote the economic health and quality of the visitor industry:</b>			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawai'i's residents and visitors.	<b>X</b>		
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provides for adequate shoreline setbacks and beach access.	<b>X</b>		
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			<b>X</b>
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawai'i's significant natural, scenic, historic, and cultural resources.	<b>X</b>		
(5) Develop and maintain career opportunities in the visitor industry for Hawai'i's people, with emphasis on managerial positions.			<b>X</b>
(6) Support and coordinate tourism promotion abroad to enhance Hawai'i's share of existing and potential visitor markets.			<b>X</b>
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.	<b>X</b>		
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			<b>X</b>
<b>(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:</b>			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			<b>X</b>

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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.			<b>X</b>
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			<b>X</b>
<b>(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:</b>			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			<b>X</b>
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			<b>X</b>
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			<b>X</b>
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			<b>X</b>
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawai'i's agricultural community			<b>X</b>
(6) Seek favorable freight rates for Hawai'i's agricultural products from interisland and overseas transportation operators.			<b>X</b>
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			<b>X</b>
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			<b>X</b>
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			<b>X</b>
<b>(e) Priority guidelines for water use and development:</b>			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			<b>X</b>
(2) Encourage the improvement of irrigation technology and promote the use of non-potable water for agricultural and landscaping purposes.			<b>X</b>
(3) Increase the support for research and development of economically feasible alternative water sources.			<b>X</b>
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			<b>X</b>
<b>(f) Priority guidelines for energy use and development:</b>			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			<b>X</b>
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			<b>X</b>
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			<b>X</b>
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			<b>X</b>
<b>(g) Priority guidelines to promote the development of the information industry:</b>			
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			<b>X</b>
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			<b>X</b>
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals,			<b>X</b>

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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.			
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			<b>X</b>
(5) Encourage research activities, including legal research in the information and telecommunications fields.			<b>X</b>
(6) Support promotional activities to market Hawaii's information industry services.			<b>X</b>
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support the objectives and policies outlined within the Hawai'i State plan for economic priority guidelines – in general.</p> <p>The Proposed Project will promote the economic health and quality of the visitor industry by fostering an environment that enhances the Aloha Spirit and minimizes inconveniences to Hawai'i's residents and visitors. The Proposed Project will provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikīkī, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikīkī workers, businesses, residents, and tourists. This provides an opportunity for the Applicant to maximize and optimize the current space available to implement the Proposed Project in line with the objectives of the Waikīkī Special District.</p>			
<b>§226-104 Population growth and land resources priority guidelines.</b>			
(a) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to ensure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.			<b>X</b>
(2) Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.			<b>X</b>
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			<b>X</b>
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			<b>X</b>
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			<b>X</b>
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			<b>X</b>
(7) Support the development of high technology parks on the neighbor islands.			<b>X</b>
(b) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.	<b>X</b>		
(2) Make available marginal or non-essential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			<b>X</b>
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			<b>X</b>
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			<b>X</b>
(5) In order to preserve green belts, give priority to state capital improvement funds which encourage location of urban development within existing urban areas except			<b>X</b>

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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
where compelling public interest dictates development of a non-contiguous new urban core.			
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			<b>X</b>
(7) Pursue rehabilitation of appropriate urban areas.			<b>X</b>
(8) Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			<b>X</b>
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.	<b>X</b>		
(10) Identify critical environmental areas in Hawai'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			<b>X</b>
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			<b>X</b>
(12) Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.	<b>X</b>		
(13) Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support various objectives and policies related to population growth and land resources priority guidelines.</p> <p>The Proposed Project will be located on the western edge of Waikīkī in a highly altered urban resort area, avoiding critical environment areas. This utilization of developed land resources ensures the protection of the environment and shoreline by adhering to the State and County planning policies and guidelines. The Proposed Project's physical design and operations will be in harmony with the natural environment by promoting the use of established environmental best practices.</p>			
<p><b>§226-105 Crime and criminal justice</b></p> <p>Priority guidelines in the area of crime and criminal justice:</p>			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			<b>X</b>
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			<b>X</b>
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			<b>X</b>
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			<b>X</b>
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			<b>X</b>
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the priority guidelines outlined above related to crime and criminal justice.</p>			
<p><b>§226-106 Affordable housing</b></p> <p>Priority guidelines for the provision of affordable housing:</p>			

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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(1) Seek to use marginal or non-essential agricultural land and public land to meet housing needs of low and moderate-income and gap-group households.			<b>X</b>
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			<b>X</b>
(3) Improve information and analysis relative to land availability and suitability for housing.			<b>X</b>
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawai'i's low and moderate-income households, gap-group households, and residents with special needs.			<b>X</b>
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawai'i's people for the purchase of initial owner-occupied housing.			<b>X</b>
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			<b>X</b>
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			<b>X</b>
(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.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the priority guidelines outlined above related to affordable housing.			
<b>§226-107 Quality education.</b>			
Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			<b>X</b>
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs.			<b>X</b>
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force.			<b>X</b>
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			<b>X</b>
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for: (A) The electronic exchange of information; (B) Statewide electronic mail; and I Access to the Internet. Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives.			<b>X</b>
(6) Pursue the establishment of Hawai'i's public and private universities and colleges as research and training centers of the Pacific.			<b>X</b>
(7) Develop resources and programs for early childhood education.			<b>X</b>
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			<b>X</b>
(9) Strengthen and expand educational programs and services for students with special needs.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the priority guidelines outlined above related to quality education.			
<b>§226-108 Sustainability.</b>			
Priority guidelines and principals to promote sustainability:			
(1) Encouraging balanced economic, social, community, and environmental priorities.			<b>X</b>

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<b>Table 4-2: Part III of The Hawai'i State Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.			<b>X</b>
(3) Promoting a diversified and dynamic economy.			<b>X</b>
(4) Encouraging respect for the host culture.	<b>X</b>		
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.			<b>X</b>
(6) Considering the principles of the ahupua'a system.			<b>X</b>
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai'i.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support objectives and policies related to sustainability priority guidelines.</p> <p>The Proposed Project and its associated programming will seek to promote and perpetuate Hawai'i's host culture through local collaboration that will provide residents and visitors with enriching experiences and insights into the history, customs, arts, and traditions of Hawai'i.</p>			
<p><b>§226-109 Climate change adaption.</b></p> <p>Priority guidelines for climate change adaption:</p>			
(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities.			<b>X</b>
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies.			<b>X</b>
(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State.			<b>X</b>
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change.			<b>X</b>
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change.			<b>X</b>
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments.			<b>X</b>
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options.			<b>X</b>
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities.			<b>X</b>
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans.			<b>X</b>
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact the priority guidelines outlined above related to climate change adaptation.</p>			

**4.1.2. State Functional Plans**

The Hawai'i State Plan directs appropriate State agencies to prepare Functional Plans which address Statewide needs, problems, and issues, and recommend policies and actions to mitigate those problems. The Functional Plans are prepared to further define and implement statewide

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goals, objectives, policies, and priority guidelines contained in the Hawai'i State Plan. The thirteen Functional Plans outlined in Table 4-3 were prepared to implement the State Plan provisions in the areas of agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation.

<b>Table 4-3: Hawai'i State Functional Plans</b>		<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>1</b>	<b>Agricultural State Functional Plan (1991)</b>			
<b>Purpose:</b> Continued viability of agriculture throughout the State				<b>X</b>
<b>Discussion:</b> The Agricultural State Functional Plan is not directly applicable to the Proposed Project. The Project Site lies within the State Land Use District classified as Urban District and does not involve the use of agricultural lands.				
<b>2</b>	<b>Conservation Lands State Functional Plan (1991)</b>			
<b>Purpose:</b> Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry				<b>X</b>
<b>Discussion:</b> The Conservation Land State Functional Plan is not directly applicable to the Proposed Project. The Project Site lies within the State Land Use District classified as Urban District and does not involve the use of conservation lands.				
<b>3</b>	<b>Education State Functional Plan (1989)</b>			
<b>Purpose:</b> Improvements to Hawai'i's educational curriculum, quality of educational staff, and access to adequate facilities				<b>X</b>
<b>Discussion:</b> The Education State Functional Plan is not directly applicable to the Proposed Project.				
<b>4</b>	<b>Employment State Functional Plan (1990)</b>			
<b>Purpose:</b> Improve the qualifications, productivity, and effectiveness of the State's workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities				<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact the objectives and policies of the Employment State Functional Plan. However, in the short-term, project construction expenditures will confer positive benefits on the local economy. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. In the long-term, the Proposed Project will benefit Hawai'i's economy with the increase in revenue to the State's tax base as well as the creation of new career opportunities within service, entertainment, and management.				
<b>5</b>	<b>Energy State Functional Plan (1991)</b>			
<b>Purpose:</b> Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems				<b>X</b>
<b>Discussion:</b> The Energy State Functional Plan is not directly applicable to the Proposed Project.				
	<b>Health State Functional Plan</b>			
<b>Purpose:</b> Improve the health care system by providing for those who do not have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs				<b>X</b>
<b>Discussion:</b> The Health State Functional Plan is not directly applicable to the Proposed Project. Nonetheless, the development of the Proposed Project will not conflict with the policies of the State Functional Plan for Health.				
<b>7</b>	<b>Higher Education Functional Plan (1984)</b>			

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<b>Purpose:</b> Prepare Hawai'i's citizens for the demands of an increasingly complex world through providing technical and intellectual tools.				<b>X</b>
<b>Discussion:</b> The Higher Education Functional Plan is not directly applicable to the Proposed Project.				
8	<b>Historic Preservation State Functional Plan (1991)</b>			
<b>Purpose:</b> Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i		<b>X</b>		
<b>Discussion:</b> The Proposed Project conforms to the purpose and intent of the Historic Preservation State Functional Plan.				
The Proposed Project will provide the opportunity to educate visitors on Hawai'i's cultural heritage through its programming and entertainment. The				
The Project Site itself consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the Project Site and its surrounding environs do not represent a natural setting. The Proposed Project is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment.				
9	<b>Housing State Functional Plan (1989)</b>			
<b>Purpose:</b> Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system.				<b>X</b>
<b>Discussion:</b> The Housing State Functional Plan is not directly applicable to the Proposed Project.				
10	<b>Human Services State Functional Plan (1991)</b>			
<b>Purpose:</b> Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency.'				<b>X</b>
<b>Discussion:</b> The Human Services State Functional Plan is not directly applicable to the Proposed Project.				
11	<b>Recreation State Functional Plan (1991)</b>			
<b>Purpose:</b> Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management				<b>X</b>
<b>Discussion:</b> The Recreation State Functional Plan is not directly applicable to the Proposed Project.				
12	<b>Tourism State Functional Plan (1991)</b>			
<b>Purpose:</b> Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry		<b>X</b>		
<b>Discussion:</b> The Proposed Project conforms to the intent and purpose of the Tourism State Functional Plan.				
The Proposed Project aims to contribute towards sustainable tourism as well as cultural tourism. Sustainable and cultural tourism are largely defined by taking full account of current and future economic, social and environmental impacts, addressing the needs of visitors, the environment and host communities.				
The Proposed Project will enhance the continuously growing visitor industry of Waikīkī. Economic expansion will result from increased employment opportunities, increased tax revenues to the State and County governments, and overall increased visitor spending. The purposeful design of the venue's space as well as the emphasis on pedestrian orientation of the area will reinvigorate the Project Site located at the "gate" of Waikīkī, which has not been fully utilized since 2007.				
13	<b>Transportation State Functional Plan (1991)</b>			
<b>Purpose:</b> Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and				<b>X</b>



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infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand			
<b>Discussion:</b> The Transportation State Functional Plan is not directly applicable to the Proposed Project.			

**4.1.3. State Land Use District**

The State Land Use Law, Chapter 205, HRS, establishes an overall framework of land use management whereby all lands in the State of Hawai‘i are classified into one of four land use districts: Urban District, Agricultural District, Conservation District, and Rural District. The State Land Use Commission (LUC) is responsible for preserving and protecting Hawaii’s lands and encouraging those uses to which lands are best suited.

**Discussion:**

The Project Site is situated entirely in the Urban State Land Use District (See Figure 4-1). Urban District lands generally include lands characterized by “city-like” concentrations of people, structures, and services. This District also includes vacant areas for future development. Jurisdiction of Urban Districts lie primarily with the county. In general, lot sizes and uses permitted in the district area are established by the county through ordinances or rules. The purpose and intent of the Proposed Project are consistent with the Urban State Land Use District.

**4.1.4. Hawai‘i Coastal Zone Management Program**

The National Coastal Zone Management (CZM) Program was created through passage of the Coastal Zone Management Act of 1972. The U.S. Congress enacted the CZM Act to assist states in better managing coastal and estuarine environments. The CZM Act provides grants to states that develop and implement federally approved CZM plans. The goal of the CZM Act is to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone.” Hawai‘i’s CZM Act, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring and responsibly developing coastal communities and resources.

In Hawai‘i, the "coastal zone management area" refers to all lands within the area extending seaward from the shoreline to the furthest limit of the State's police power and management authority, including the territorial sea.

The Proposed Project's conformance with the ten objectives and numerous policies of the State of Hawai‘i CZMP is set forth in Table 4-5 below. The Proposed Project does not include the use of land that is within the Special Management Area (SMA) designated by the CCH (See Figure 4-2). Therefore, SMA permits are not needed to implement the Proposed Project.

<b>Table 4-4: Hawai‘i Coastal Zone Management Act</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Recreational Resources</b>			
<b>Objective:</b> Provide coastal recreational opportunities accessible to the public.			
<b>Policies:</b>			
(A) Improve coordination and funding of coastal recreational planning and management; and			<b>X</b>

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(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			<b>X</b>
i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			<b>X</b>
ii. Requiring restoration of coastal resources that have significant recreational and ecosystem value, including, but not limited to, coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when restoration is not feasible or desirable;			<b>X</b>
iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			<b>X</b>
iv. Providing an adequate supply of shoreline parks and other recreational facilities suitable public recreation;			<b>X</b>
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;			<b>X</b>
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;	<b>X</b>		
vii. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			<b>X</b>
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 that <del>such</del> dedication against the requirements of section 46-6.			<b>X</b>

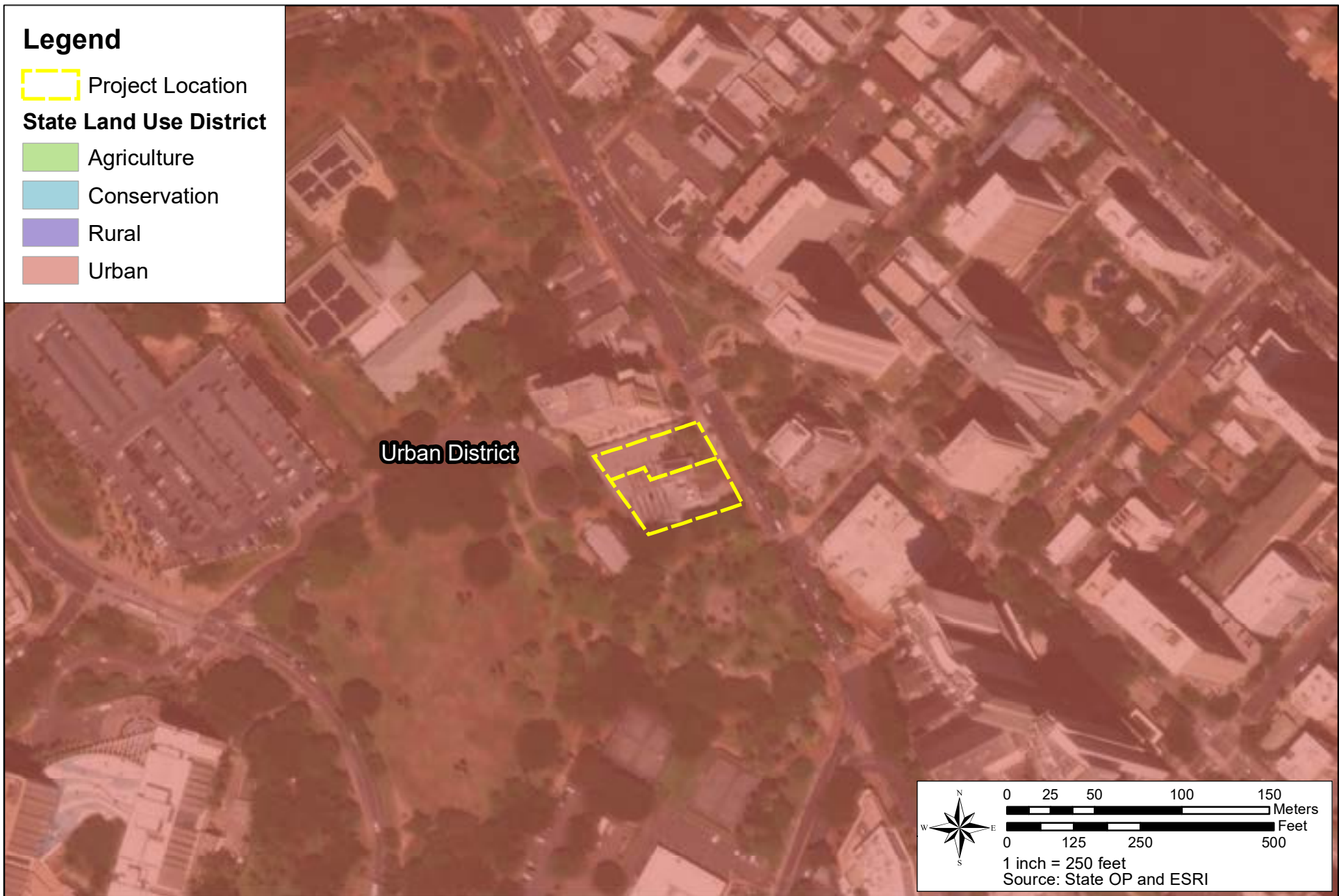


FIGURE 4-1  
STATE LAND USE DISTRICT MAP



FIGURE 4-2

**SPECIAL MANAGEMENT AREA MAP**



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<b>Table 4-5: Hawai'i Coastal Zone Management Act</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Recreational Resources</b>			
<b>Objective:</b> Provide coastal recreational opportunities accessible to the public.			
<p><b>Discussion:</b> The Proposed Project is not a coastal dependent development and will not adversely impact the shoreline and as such would not affect coastal recreational opportunities accessible to the public.</p> <p>The Project Site is not located along the coastline, and is not in the SMA; therefore, the policies regarding shoreline recreation resources are not applicable.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts in regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, to control storm water discharges. Any discharges related to Proposed Project's construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County's grading ordinance.</p>			
<b>Historic Resources</b>			
<b>Objective:</b> 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.			
<b>Policies:</b>			
(A) Identify and analyze significant archaeological resources;			<b>X</b>
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and			<b>X</b>
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	<b>X</b>		
<p><b>Discussion:</b> The Proposed Project will support the policies of historic resources.</p> <p>The Project Site consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the Project Site and its surrounding environs do not represent a natural setting. The Proposed Project is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment. Should any archaeological or cultural remains be encountered during construction, all work in the immediate vicinity of the find will cease and the State Historic Preservation Division will be contacted for establishment of appropriate mitigation in accordance with Chapter 6E, HRS.</p>			
<b>Scenic and Open Space Resources</b>			
<b>Objective:</b> Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
<b>Policies:</b>			
(A) Identify valued scenic resources in the coastal zone management area;			<b>X</b>
(B) Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;	<b>X</b>		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and	<b>X</b>		
(D) Encourage those developments that are not coastal dependent to locate in inland areas.			<b>X</b>
<p><b>Discussion:</b> The Proposed Site consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the site and its surrounding environs do not represent a natural setting. The Proposed Project is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment. The Proposed Project intends to perpetuate Hawai'i's natural</p>			

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environment, incorporating architectural design that reflects places and spaces that have been embraced by the host culture.

As discussed in Section 3.12 (Visual Resources) the Proposed Project is not expected to have an impact on the objectives and policies for the physical environment – scenic, natural beauty, and visual resources.

**Coastal Ecosystems**

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

**Policies:**

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			<b>X</b>
(B) Improve the technical basis for natural resource management;			<b>X</b>
(C) Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;			<b>X</b>
(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			<b>X</b>
(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.	<b>X</b>		

**Discussion:** The Proposed Project will not have an adverse effect on the coastal ecosystems.

The Project Site is not located along the coastline, and is not in the SMA; therefore, the policies regarding coastal ecosystems are not applicable.

Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts in regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, to control storm water discharges. Any discharges related to Proposed Project’s construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County’s grading ordinance.

**Economic Uses**

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

**Policies:**

(A) Concentrate coastal dependent development in appropriate areas;			<b>X</b>
(B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and			<b>X</b>
(C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of presently designated areas when:			<b>X</b>
i. Use of designated locations is not feasible;			<b>X</b>
ii. Adverse environmental effects and risks from coastal hazards are minimized; and			<b>X</b>
iii. The development is important to the State's economy;			<b>X</b>

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**Discussion:** The Proposed Project is not in the SMA and is not expected to have any adverse effects on any public or private facilities in coastal areas that are important to the State's economy.

**Coastal Hazards**

**Objective:** Reduce hazard to life and property from coastal hazards.

**Policies:**

(A) Develop and communicate adequate information about the risks of coastal hazards;			<b>X</b>
(B) Control development, including planning and zoning control, in areas subject to coastal hazards;			<b>X</b>
(C) Ensure that developments comply with requirements of the National Flood Insurance Program; and	<b>X</b>		
(D) Prevent coastal flooding from inland projects.			<b>X</b>

**Discussion:** As discussed in Section 3.4 (Natural Hazards) the Project Site is in an area vulnerable to erosion, flooding, tsunamis, and other hazards. However, the Proposed Project will not exacerbate any of these natural hazard conditions. Most of Waikīkī, including the Project Site, is located within the State's tsunami evacuation zone. The Project Site is located within Flood Zone AO. Coordination with both the State and City & County of Honolulu Civil Defense will be ongoing to ensure the project will be designed in accordance to standards for tsunami preparedness and flood proofing of permitted uses. The Proposed Project's structures will be designed in compliance with the CCH's building code. Impacts from natural hazards can be further mitigated by adherence to appropriate civil defense evacuation procedures.

**Managing Development**

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

**Policies:**

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			<b>X</b>
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			<b>X</b>
(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.	<b>X</b>		

**Discussion:** This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Project, will comply with the policy on managing development.

The Early Consultation Package discussed in Chapter 7 sought to inform interested parties of the Proposed Project and seek relevant public comment on subjects of concern for EA documentation. The filing and publication of the Draft EA with the ERP will be followed by a 30-day public comment period. All relevant public comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Final EA. Comments and responses are reproduced in Appendix C.

**Public Participation**

**Objective:** Stimulate public awareness, education, and participation in coastal management.

**Policies:**

(A) Promote public involvement in coastal zone management processes;	<b>X</b>		
(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	<b>X</b>		

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(C) Organize workshops, policy dialogues, and site-specific mitigation to respond to coastal issues and conflicts.			<b>X</b>
<p><b>Discussion:</b> This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Project, will comply with the policy on managing development.</p> <p>The Early Consultation Package discussed in Chapter 7 sought to inform interested parties of the Proposed Project and seek relevant public comment on subjects of concern for EA documentation. The filing and publication of the Draft EA with the ERP will be followed by a 30-day public comment period. All relevant public comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Final EA. Comments and responses are reproduced in Appendix C.</p>			
<b>Beach and Coastal Dune Protection</b>			
<p><b>Objective:</b> (A) Protect beaches and coastal dunes for:</p> <p>(i) Public use and recreation; (ii) The benefit of coastal ecosystems; and (iii) Use as natural buffers against coastal hazards; and</p> <p>(B) Coordinate and fund beach management and protection.</p>			
<b>Policies:</b>			
(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;			<b>X</b>
(B) Prohibit construction of private shoreline hardening including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities; and			<b>X</b>
(C) Minimize the construction of public shoreline hardening <del>erosion protection</del> structures including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;.			<b>X</b>
(D) Minimize grading of and damage to coastal dunes;			<b>X</b>
(E) 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			<b>X</b>
(F) 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.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project is not anticipated to have a significant impact on beach and coastal dune protection. The development of the Proposed Project does not occur on any public beaches.</p>			
<b>Marine and Coastal Resources</b>			
<p><b>Objective:</b> Promote the protection, use, and development of marine and coastal resources to assure their sustainability.</p>			
<b>Policies:</b>			
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			<b>X</b>
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			<b>X</b>
(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;			<b>X</b>



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(D) Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how coastal development activities relate to and impact ocean and coastal resources; and			<b>X</b>
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project is not anticipated to adversely affect marine, coastal, or aquatic resources.</p> <p>The Project Site is not located along the coastline, and is not in the SMA; therefore, the policies regarding marine and coastal resources are not applicable.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts in regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, will be required to control storm water discharges. Any discharges related to Proposed Project’s construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County’s grading ordinance.</p>			

**4.2. City and County of Honolulu Land Use Plans and Policies**

**4.2.1. City and County of Honolulu General Plan**

The CCH last updated its General Plan in January 2022. The General Plan is intended to be a dynamic document, expressing the aspirations of the residents of O’ahu. It sets forth the long-range objectives and policies for the general welfare and, together with the regional development plans, provides a direction and framework to guide the programs and activities of the CCH. It is a written commitment by the CCH government to a future for the island of O’ahu that it considers desirable and attainable. The General Plan is a two-fold document: First, it is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of O’ahu. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions that can be achieved within an approximately 20-year time horizon. Second, the General Plan is a statement of broad policies that facilitate the attainment of the objectives of the General Plan.

The General Plan is a guide for all levels of government, private enterprise, neighborhood and citizen groups, organizations, and individual citizens in eleven areas of concern:

- (1) Population;
- (2) Economic Activity;
- (3) Natural Environment;
- (4) Housing;
- (5) Transportation and utilities;
- (6) Energy;
- (7) Physical development and urban design;
- (8) Public safety;
- (9) Health and Education;
- (10) Culture and recreation; and
- (11) Government operations and fiscal management.

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The Proposed Project is relevant and consistent with the goals, objectives, policies, and actions of the *City and County of Honolulu General Plan* as outlined in Table 4-5 below:

<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>I. Population</b>			
<b>Objective A.</b> To plan for anticipated population in a manner that acknowledges the limits of O’ahu’s natural resources, protects the environment, and minimizes social, cultural, and economic disruptions.			
(1) Allocate efficiently the money and resources of the City in order to meet the needs of O’ahu’s current and future population.			<b>X</b>
(2) Provide adequate support facilities to accommodate future numbers of visitors to O’ahu while seeking to minimize disruption to residents and protect the natural environment.			<b>X</b>
(3) Seek a balanced pace of physical development in harmony with the City’s environmental, social, cultural, and economic goals by effecting and enforcing City regulations.			<b>X</b>
(4) Establish geographic growth boundaries to accommodate future population growth while at the same time protecting valuable agricultural lands, environmental resources, and open space.			<b>X</b>
(5) Support family planning and social equity.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not directly affect Objective A of Section I of the City and County of Honolulu’s General Plan related to population.			
<b>Objective B.</b> To establish a pattern of population distribution that will allow the people of O’ahu to live, work and play in harmony.			
(1) Facilitate the full development of the primary urban center through higher-density redevelopment and the provision of adequate infrastructure.			<b>X</b>
(2) Encourage development within the secondary urban center at Kapolei and the ‘Ewa and Central O’ahu urban-fringe areas to relieve developmental pressures in the remaining urban-fringe and rural areas and to meet housing needs not readily provided in the primary urban center.			<b>X</b>
(3) Manage land use and development in the urban-fringe and rural areas so that: a. Development is contained within growth boundaries; and b. Population densities in all areas remain consistent with the character, culture, and environmental qualities desired for each community.			<b>X</b>
(4) Direct growth according to Policies 1, 2, and 3 above by providing development capacity and needed infrastructure to support a distribution of O’ahu’s resident population.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not directly affect Objective B of Section I of the City and County of Honolulu’s General Plan related to the Population Distribution.			
<b>II. Economic Activity</b>			
<b>Objective A.</b> To promote diversified economic opportunities that enable all the people of O’ahu to attain meaningful employment and a decent standard of living.			
(1) Support a strong, diverse, and dynamic economic base that protects the natural environment and is resilient to changes in global conditions.			<b>X</b>
(2) Encourage the viability of businesses and industries, including support for small businesses, which contribute to the economic and social well-being of O’ahu resident			<b>X</b>
(3) Pursue opportunities to grow and strategically develop non-polluting industries such as healthcare, agriculture, renewable energy, and			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
technology in appropriate locations that contribute to O’ahu’s long-term environmental, economic, and social sustainability.			
(4) Support entrepreneurship and innovation through creative efforts such as partnerships with businesses and non-profit organizations, and by encouraging complementary policies that support access to capital markets.			<b>X</b>
(5) Foster a healthy business climate by streamlining regulatory processes to be transparent, predictable, and efficient.			<b>X</b>
(6) Encourage the development of local, national, and world markets for the products of O’ahu-based industries.			<b>X</b>
(7) Explore and encourage alternate economic models that reflect traditional cultural values and improve economic resilience, i.e., subsistence, barter and a culture of reciprocity and sharing.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not directly affect Objective A of Section II of the City and County of Honolulu’s General Plan related to population.			
<b>Objective B.</b> To maintain a successful visitor industry that creates living wage employment, enhances quality of life, and actively supports our unique sense of place, natural beauty, Native Hawaiian culture, and multi-cultural heritage.			
(1) Encourage the visitor industry to support the quality of the visitor experience, the economic and social well-being of communities, the environment, and the quality of life of residents.	<b>X</b>		
(2) Respect and emphasize the value that Native Hawaiian culture, its cultural practitioners, and other established ethnic traditions bring to enrich the visitor experience and appreciation for island heritage, culture, and values.	<b>X</b>		
(3) Guide the development and operation of visitor accommodations and attractions in a manner that avoids unsustainable increases in the cost of providing public services and infrastructure, and that respects existing lifestyles, cultural practices, and natural, cultural, and historic resources.	<b>X</b>		
(4) Partner with the private sector to support the long-term viability of Waikīkī as a world-class visitor destination and as O’ahu’s primary resort area, and to support adequate adaptation strategies against climate change impacts.	<b>X</b>		
(5) Provide related public expenditures for rural and urban-fringe areas that are highly impacted by the visitor industry.			<b>X</b>
(6) Provide for a high-quality, livable, and safe environment for visitors and residents in Waikīkī, and support measures to ensure visitors’ and residents’ safety in all areas of O’ahu.	<b>X</b>		
(7) Concentrate on the quality of the visitor experience in Waikīkī, rather than on development densities.	<b>X</b>		
(8) Facilitate the development of the following secondary resort areas: Ko ‘Olina, Turtle Bay, Hoakalei, and Mākaha Valley in a manner that respects existing lifestyles and the natural environment			<b>X</b>
(9) Preserve scenic qualities of O’ahu for residents and visitors alike.	<b>X</b>		
(10) Encourage physical improvements, social services, and cultural programs that contribute to a high-quality visitor experience, while seeking financial support of these improvements from the visitor industry.	<b>X</b>		
<b>Discussion:</b> The Proposed Project will support Objective B of Section II related to economic activity.			
The Proposed Project will be located on the western edge of Waikīkī in an urban resort area, establishing priority in visitor industry related public expenditures. The Proposed Project promotes the ongoing improvement and transformation of Waikīkī for a global audience seeking quality vacation experiences. The Proposed Project and its associated programming intend to promote sustainable			

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
and cultural tourism and seeks to perpetuate Hawai'i's culture while fostering local collaboration and strengthening community resilience. Responsible development of the Proposed Project will be undertaken to preserve and maintain existing lifestyles as well as the natural environment.			
<b>Objective C.</b> To ensure the long-term viability, continued productivity, and sustainability of agriculture on O'ahu			
(1) Foster a positive business climate for agricultural enterprises of all sizes, as well as innovative approaches to farming as a business, to ensure the continuation of agriculture as an important component of O'ahu's economy			<b>X</b>
(2) Support agricultural diversification to strengthen the agricultural industry and make more locally grown food available for local consumption.			<b>X</b>
(3) Foster market opportunities and increased consumer demand for safe, locally grown, fresh, processed, and value-added agricultural products.			<b>X</b>
(4) Streamline the implementation of regulations to enhance a producer's ability to develop, market, and distribute locally grown food and products.			<b>X</b>
(5) Identify the economic benefits of local food production for local markets. Provide economic incentives to encourage local food production and sustainability, and encourage agricultural and aquaculture occupations.			<b>X</b>
(6) Promote small-scale farming activities and other operations, such as truck farming, flower growing, aquaculture, livestock production, taro growing, subsistence farms, and community gardens.			<b>X</b>
(7) Encourage landowners to actively use agricultural lands for agricultural purposes, and to pursue the long-term preservation of agricultural land with high productivity potential for agricultural production.			<b>X</b>
(8) Encourage sustainable agricultural production to coexist on lands with renewable energy generation.			<b>X</b>
(9) Prohibit the urbanization of agricultural land located outside the City's growth boundaries.			<b>X</b>
(10) Support and encourage technologies and agricultural practices that conserve and protect water, soil, air quality, and drainage areas, reduce carbon emissions, and promote public health and safety.			<b>X</b>
(11) Support and encourage the availability and use of non-potable water for irrigation, where feasible			<b>X</b>
(12) Provide plans, incentives, and strategies to ensure the affordability of agricultural land for farmers.			<b>X</b>
(13) Encourage both public and private investments to improve and expand agricultural infrastructure, such as irrigation systems, agricultural processing centers, and distribution networks.			<b>X</b>
(14) Promote farming as a desirable and fulfilling occupation by encouraging agricultural education and training programs and by raising public awareness and appreciation for agriculture.			<b>X</b>
(15) Protect the right to farm by enforcing right-to-farm laws, enacting policies to protect agricultural operations, and imposing meaningful buffer zones.			<b>X</b>
(16) Seek ways to discourage agricultural theft and vandalism.			<b>X</b>
(17) Recognize the scenic value of agricultural lands as an open-space resource and amenity.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section II of the City and County of Honolulu General Plan related to economic activity.			

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Objective D.</b> To use the economic resources of the sea in a sustainable manner.			
(1) Encourage the fishing industry to maintain its viability at a level that does not degrade or damage marine ecosystems.			<b>X</b>
(2) Encourage the ongoing development of aquaculture, ocean research, and other oceanrelated industries.			<b>X</b>
(3) Encourage the expansion of ocean recreation activities for residents and visitors that are operated in a sustainable manner.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective D of Section II of the City and County of Honolulu General Plan related to economic activity.			
<b>Objective E.</b> To ensure meaningful employment and economic equity.			
(1) Support public and private training and employment programs to prepare residents for existing and future jobs, including those for historically marginalized communities.			<b>X</b>
(2) Make full use of State and Federal employment and training programs.			<b>X</b>
(3) Encourage the provision of retraining programs for workers in industries with planned reductions in their labor force.			<b>X</b>
(4) Identify emerging industries, encourage investments needed to support the industries, and develop a skilled workforce in these fields.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective E of Section II the City and County of Honolulu General Plan related to economic activity.			
<b>Objective F.</b> To maintain federal programs and economic activity on O’ahu consistent with the City’s infrastructure and environmental goals.			
(1) Take full advantage of Federal programs and grants which will contribute to the economic and social well-being of O’ahu’s residents.			<b>X</b>
(2) Encourage the Federal government to pay for the cost of public services used by Federal agencies.			<b>X</b>
(3) Encourage the Federal government to lease new facilities rather than construct them on tax-exempt public land.			<b>X</b>
(4) Encourage the military to purchase locally all needed services and supplies which are available on O’ahu .			<b>X</b>
(5) Encourage the continuation of a high level of military-related employment both on and off base in the Hickam-Pearl Harbor, Wahiawā, Kailua-Kāne’ohe, and ‘Ewa areas.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective F of Section II of the City and County of Honolulu General Plan related to economic activity as the Proposed Project does not involve any federal funds.			
<b>Objective G.</b> To bring about orderly economic growth on O’ahu.			
(1) Concentrate economic activity and government services in the primary urban center and in the secondary urban center at Kapolei.			<b>X</b>
(2) Advance the equitable distribution of City capital spending, employment opportunities, infrastructure investments, and other benefits throughout communities based on need and regardless of income level. Allow infrastructure and business activity in urban fringe areas appropriate to population needs			<b>X</b>
(3) Maintain sufficient land in appropriately located commercial and industrial areas to help ensure a favorable business climate on O’ahu.			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Discussion:</b> The Proposed Project will not impact Objective G of Section II of the City and County of Honolulu General Plan related to economic activity.			
<b>III. Natural Environment</b>			
<b>Objective A.</b> To protect and preserve the natural environment.			
(1) Protect O’ahu’s natural environment, especially the shoreline, valleys, and ridges, from incompatible development.			<b>X</b>
(2) Seek the restoration of environmentally damaged areas and natural resources.			<b>X</b>
(3) Preserve, protect, and restore stream flows and stream habitats to support aquatic and environmental processes and riparian, scenic, recreational, and Native Hawaiian cultural resources.			<b>X</b>
(4) Require development projects to give due consideration to natural features and hazards such as slope, inland and coastal erosion, flood hazards, water-recharge areas, and existing vegetation, as well as to plan for coastal hazards that threaten life and property	<b>X</b>		
(5) Require sufficient setbacks from O’ahu’s shorelines to protect life and property, preserve natural shoreline areas and sandy beaches, and minimize the future need for protective structures or relocation of structures.			<b>X</b>
(6) Design and maintain surface drainage and flood-control systems in a manner which will help preserve natural and cultural resources.			<b>X</b>
(7) Protect the natural environment from damaging levels of air, water, carbon, and noise pollution.	<b>X</b>		
(8) Protect plants, birds, and other animals that are unique to the State of Hawai’i and the Island of O’ahu.			<b>X</b>
(9) Increase tree canopy and ensure its integration into new developments, and protect significant trees on public and private lands.			<b>X</b>
(10) Increase public awareness, appreciation, and protection of O’ahu’s land, air, and water resources.			<b>X</b>
(11) Support the State and federal governments in the protection of the unique environmental, marine, cultural and wildlife assets of the Northwestern Hawaiian Islands.			<b>X</b>
(12) Plan, prepare for, and mitigate the impacts of climate change on the natural environment, including strategies of adaptation.			
<b>Discussion:</b> The Proposed Project will support the Objective A of Section III of the City and County of Honolulu General Plan related to natural environment.			
The Proposed Project gives due consideration to the natural features and environment of the site and surrounding area through this environmental assessment. Potential impacts to the natural setting will be mitigated through BMPs during the implementation of the Proposed Project. This will minimize any potential impacts to plants, birds, and other animals unique to the island of O’ahu and State of Hawai’i. The Proposed Project will adhere to County, State, and Federal guidelines for noise, air, and water pollution.			
<b>Objective B.</b> To preserve and enhance natural landmarks and scenic views of O’ahu for the benefit of both residents and visitors as well as future generations.			
(1) Protect the Island’s significant natural resources: its mountains and craters; forests and watershed areas; wetlands, rivers, and streams; shorelines, fishponds, and bays; and reefs and offshore islands.			<b>X</b>
(2) Protect O’ahu’s scenic views, especially those seen from highly developed and heavily traveled areas.			<b>X</b>
(3) Locate and design public facilities, infrastructure and utilities to minimize the obstruction of scenic views.			<b>X</b>
(4) Protect and expand public access to the natural and coastal environment for recreational, educational, and cultural purposes, and			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
maintain access in a way that does not damage natural, historic, or cultural resources.			
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section III of the City and County of Honolulu General Plan related to the natural environment.			
<b>IV. HOUSING AND COMMUNITIES</b>			
<b>Objective A.</b> To ensure a balanced mix of housing opportunities and choices for all residents at prices they can afford.			
(1) Support programs, policies, and strategies that will provide decent and affordable homes for local residents, especially those in the lowest income brackets.			<b>X</b>
(2) Streamline approval and permit procedures, in a transparent manner, for housing and other development projects.			<b>X</b>
(3) Encourage innovative residential developments that result in lower costs, sustainable use of resources, more efficient use of land and infrastructure, greater convenience and privacy, and a distinct community identity.			<b>X</b>
(4) Support and encourage programs to maintain and improve the condition of existing housing.			<b>X</b>
(5) Make full use of government programs that provide assistance for low- and moderate-income renters and homebuyers.			<b>X</b>
(6) Maximize local funding programs available for affordable housing.			<b>X</b>
(7) Provide financial and other incentives to encourage the private sector to build homes for low- and moderate-income residents.			<b>X</b>
(8) Encourage and participate in joint public-private development of low- and moderate- income housing.			<b>X</b>
(9) Encourage the replacement of low- and moderate-income housing in areas which are being redeveloped at higher densities.			<b>X</b>
(10) Promote the design and construction of dwellings which take advantage of O’ahu’s yearround moderate climate and use other sustainable design techniques.			<b>X</b>
(11) Encourage the construction of affordable homes within established low-density and rural communities by such means as ‘ohana units, duplex dwellings, and cluster development that embraces the ‘ohana concept by maintaining multi-generational proximity for local families			<b>X</b>
(12) Promote higher-density, mixed-use development where appropriate, including rail transit-oriented development, to increase the supply of affordable and market housing in convenient proximity to jobs, schools, shops, and public transit.			<b>X</b>
(13) Encourage the production and maintenance of affordable rental housing.			<b>X</b>
(14) Encourage the provision of affordable housing designed for the elderly and people with disabilities in locations convenient to critical services and to public transit.			<b>X</b>
(15) Encourage equitable relationships between landowners and leaseholders, between landlords and tenants, and between condominium developers and owners.			<b>X</b>
(16) Support collaborative partnerships that work toward immediate solutions to house and service homeless populations and also toward long-term strategies to prevent and eliminate homelessness.			<b>X</b>
(17) Support programs to address all facets of homelessness, so that every homeless person has a place to stay, along with the infrastructure and support services that are needed.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective A of Section IV of the City and County of Honolulu General Plan related to housing.			

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Objective B.</b> To minimize speculation in land and housing.			
(1) Encourage the State government to coordinate its urban-area designations with the developmental policies of the City.			<b>X</b>
(2) Discourage speculation in lands outside of areas planned for urban use, reduce the prevalence of vacant dwelling units, and reduce the use of residential dwelling units for short-term vacation rentals			<b>X</b>
(3) Seek public benefits from increases in the value of land owing to City and State developmental policies and decisions.			<b>X</b>
(4) Require government-assisted housing to be delivered to qualified purchasers and renters.			<b>X</b>
(5) Ensure that owners of housing properties, including government-subsidized housing, maintain housing affordability over the long term			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section IV of the City and County of Honolulu General Plan related to housing.			
<b>Objective C.</b> To provide residents with a choice of living environments that are reasonably close to employment, schools, recreation, and commercial centers, and that are adequately served by transportation networks and public utilities.			
(1) Ensure that residential developments offer affordable housing to people of different income levels and to families of various sizes to alleviate the existing condition of overcrowding.			<b>X</b>
(2) Encourage the fair distribution of low- and moderate-income housing throughout the island.			<b>X</b>
(3) Encourage the co-location of residential development and employment centers with commercial, educational, social, and recreational amenities in the development of desirable communities.			<b>X</b>
(4) Encourage residential development in suburban areas where existing roads, utilities, and other community facilities are not being used to capacity, and in urban areas where higher densities may be readily accommodated			<b>X</b>
(5) Support mixed-use development and higher-density redevelopment in areas surrounding rail transit stations.			<b>X</b>
(6) Discourage residential development in areas where the topography makes construction difficult or hazardous, where sea level rise and flooding are a hazard, and where providing and maintaining roads, utilities, and other facilities would be extremely costly or environmentally damaging.			<b>X</b>
(7) Encourage public and private investments in older communities as needed to keep the communities vibrant and livable.			<b>X</b>
(8) Encourage the military to provide housing for active duty personnel and their families on military bases and in areas turned over to military housing contractors.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section IV of the City and County of Honolulu General Plan related to housing.			
<b>V. Transportation &amp; Utilities</b>			
<b>Objective A.</b> To create a multi-modal transportation system that moves people and goods safely, efficiently, and at a reasonable cost and minimizes fossil fuel consumption and greenhouse gas emissions; serves all users, including limited income, elderly, and disabled populations; and is integrated with existing and planned development.			
(1) Develop a comprehensive, well-connected and integrated ground transportation system that reduces carbon emissions and enables safe, comfortable and convenient travel for all users, including motorists, pedestrians, bicyclists, and public transportation users of all ages and abilities			
(2) Provide multi-modal transportation services to people living within the 'Ewa, Central O'ahu, and Pearl City-Hawai'i Kai corridors primarily			<b>X</b>



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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
through a mass transit system including exclusive right-of-way rail transit and feeder-bus components as well as through the existing highway system.			
(3) Provide multi-modal transportation services outside the ‘Ewa, Central O‘ahu, and Pearl City-Hawai‘i Kai corridors primarily through a system of express- and feeder-buses as well as through the highway system with limited to moderate improvements sufficient to meet the needs of the communities being served.			<b>X</b>
(4) Work with the State to ensure adequate and safe access for communities served by O‘ahu's coastal highway system, and to plan for the relocation of highways and roads subject to sea level rise away from coastlines			<b>X</b>
(5) Support the rail transit system as the transportation spine for the urban core, with links to the airport and maritime terminals, which will work together with other alternative modes of transit and transit-oriented development to reduce automobile dependency and increase multi-modal travel.			<b>X</b>
(6) Support the development of transportation plans, programs, and facilities that are based on Complete Streets features. Maintain and improve road, bicycle, pedestrian, and micromobility facilities in existing communities to eliminate unsafe conditions.			<b>X</b>
(7) Design street networks to incorporate greater roadway and pathway connectivity.	<b>X</b>		
(8) Make transportation services safe and accessible to people with limited mobility: the young, elderly, disabled, and those with limited incomes			<b>X</b>
(9) Consider environmental, social, cultural, and climate change and natural hazard impacts, as well as construction and operating costs, as important factors in planning transportation system improvements			<b>X</b>
(10) Reduce traffic congestion and maximize the efficient use of transportation resources by pursuing transportation demand management strategies such as carpooling, telecommuting, flexible work schedules, and incentives to use alternative travel modes.	<b>X</b>		
(11) Enhance pedestrian-friendly and bicycle-friendly travel via public and private programs and improvements.			<b>X</b>
(12) Maintain separate aviation facilities for general aviation operations to supplement the capacity of the Daniel K. Inouye International Airport.			<b>X</b>
(13) Support improvements to Kalaeloa Barbers Point Harbor as O‘ahu's second deep-water harbor.			<b>X</b>
(14) Support the operation, maintenance and improvement of Honolulu Harbor as O‘ahu's primary cargo and ocean transportation hub.			<b>X</b>
(15) Advance the transition to electric and alternative fuel infrastructure to provide adequate and accessible charging spaces and renewal fueling stations for ground transportation on O‘ahu.			<b>X</b>
<b>Discussion:</b> The Proposed Project will support Objective A of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
The Proposed Project will provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikīkī, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikīkī workers, businesses, residents, and tourists.			
<b>Objective B.</b> Provide an adequate supply of water and environmentally sound systems of waste disposal for O‘ahu's existing population and for future generations, and support a one water approach that uses and manages freshwater, wastewater, and stormwater resources in an integrated manner.			

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(1) Develop and maintain an adequate, safe, and reliable supply of fresh water in a cost-effective way that supports the long-term sustainability of the resource and considers the impacts of climate change			<b>X</b>
(2) Help to develop and maintain an adequate, safe, and reliable supply of water for agricultural and industrial needs in a resource-integrated and cost-effective way that supports the long-term health of the resource.			<b>X</b>
(3) Use technologies that provide water, waste disposal, and recycling services at a reasonable cost and in a manner that addresses environmental and community impacts.			<b>X</b>
(4) Encourage the increased availability and use of recycled or brackish water to meet nonpotable demands.			<b>X</b>
(5) Pursue strategies and programs to reduce the per capita consumption of water and the per capita production of waste.			<b>X</b>
(6) Provide safe, reliable, efficient, and environmentally sound waste-collection, waste-disposal, and recycling services that consider the near- and long-term impacts of climate change during the siting and construction of new facilities.			<b>X</b>
(7) Pursue programs to expand on-island recycling and resource recovery from O’ahu’s solid-waste and wastewater streams.			<b>X</b>
(8) Support initiatives that educate the community about the importance of conserving resources and reducing waste streams through reduction, reuse, and recycling.			<b>X</b>
(9) Require the safe use and disposal of hazardous materials.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
<b>Objective C.</b> To ensure reliable, cost-effective, and responsive service for all utilities with equitable access for residents			
(1) Maintain and upgrade utility systems in order to avoid major breakdowns and service interruptions.			<b>X</b>
(2) Provide improvements to utilities in existing neighborhoods to reduce substandard conditions, and increase resilience to use fluctuations, natural hazards, extreme weather, and other climate impacts.			<b>X</b>
(3) Facilitate timely and orderly upgrades and expansions of utility systems.			<b>X</b>
(4) Increase the efficiency of public-serving utilities by encouraging a mixture of uses with peak periods of demand aligning with the availability of resources.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
<b>Objective D.</b> To maintain transportation and utility systems which support O’ahu as a desirable place to live and visit.			
(1) Provide adequate resources to ensure the maintenance and improvement of transportation systems and utilities.			<b>X</b>
(2) Evaluate the social, cultural, economic, and environmental impact of additions to the transportation and utility systems before they are constructed.			<b>X</b>
(3) Require the installation of underground utility lines wherever feasible.			<b>X</b>
(4) Seek improved taxing powers for the City in order to provide a more equitable means of financing transportation and utility services.			<b>X</b>
(5) Evaluate impacts of sea level rise on existing public infrastructure, especially sewage treatment plants, roads, and other public and			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
private utilities located along or near O’ahu’s coastal areas, and avoid the placement of future public infrastructure in threatened areas.			
<b>Discussion:</b> The Proposed Project will not impact Objective D of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
<b>VI. Energy</b>			
<b>Objective A. To increase energy self-sufficiency through renewable energy and maintain an efficient, reliable, resilient, and cost-efficient energy system.</b>			
(1) Encourage the implementation of a comprehensive plan to guide and coordinate energy conservation and renewable energy development and utilization programs.			<b>X</b>
(2) Support and encourage programs and projects, including economic incentives, regulatory measures, and educational efforts, and seek to eliminate O’ahu’s dependence on fossil fuels.			<b>X</b>
(3) Ensure access to an adequate reserve of fuel and energy supplies to aid disaster response and recovery			<b>X</b>
(4) Support the increased use of solid waste energy recovery and other biomass energy conversion systems			<b>X</b>
(5) Support and participate in research, development, demonstration, commercialization, and optimization programs aimed at developing cost-effective and environmentally sound renewable energy supplies.			<b>X</b>
(6) Support State and federal initiatives to utilize renewable energy sources.			<b>X</b>
(7) Manage resources and development of communities in line with long-term efficiency and sustainability goals and targets in the areas of energy, carbon emissions, waste streams, all utilities, and food security			<b>X</b>
(8) Encourage and equitably incentivize the use of commercially available renewable energy systems in public facilities, institutions, residences, and business developments.			<b>X</b>
(9) Consider health, safety, environmental, cultural, and aesthetic impacts, as well as resource limitations, land use patterns, and relative costs in all major decisions on renewable energy.			<b>X</b>
(10) Work closely with the State and federal governments in the formulation and implementation of all City energy-related programs and regulations, including updating building energy codes.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective A of Section VI of the City and County of Honolulu General Plan related to energy.			
<b>Objective B. To conserve energy through the more efficient management of its use and through more energy-efficient technologies.</b>			
(1) Ensure that the efficient use of energy is a primary factor in the preparation and administration of land use plans and regulations.			<b>X</b>
(2) Provide incentives and, where appropriate, mandatory controls to achieve energy-efficient and sustainable siting and design of new developments. Support the increased use of nationally recognized energy efficiency and resource conservation rating and certification systems.			<b>X</b>
(3) Provide incentives and, where appropriate, mandatory controls to reduce energy consumption in existing buildings and outdoor facilities, and in design and construction practices.			<b>X</b>
(4) Promote the development of a multi-modal transportation system that minimizes and seeks to eliminate fossil fuel consumption and greenhouse gas emissions.			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(5) Encourage the implementation of an adaptable and reliable electrical grid, energy transmission, energy storage, microgrids, and energy generation technologies.			<b>X</b>
(6) Support the availability and use of energy efficient vehicles, especially hybrid, fuel cell, and pure electrical vehicles.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section VI of the City and County of Honolulu General Plan related to energy.			
<b>Objective C.</b> To foster an ethic of energy conservation that inspires residents to engage in sustainable practices			
(1) Provide citizens with the information they need to fully understand severe climate change, supply chain issues, costs, security, and other issues associated with O’ahu’s dependence on imported fossil fuels.			<b>X</b>
(2) Increase consumer awareness of available renewable energy sources and their costs and benefits			<b>X</b>
(3) Provide information concerning the impact of public and private decisions on future energy generation, transmission, storage, and use.			<b>X</b>
(4) Provide communities with timely, relevant, and accurate information concerning renewable energy facilities proposed in their area, and ensure adequate buffer zones required for health or safety.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section VI of the City and County of Honolulu General Plan related to energy.			
<b>VII. Physical Development and Urban Design</b>			
<b>Objective A.</b> To coordinate changes in the physical environment of O’ahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.			
(1) Provide infrastructure improvements to serve new growth areas, redevelopment areas, and areas with badly deteriorating infrastructure.	<b>X</b>		
(2) Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and other public facilities and services.	<b>X</b>		
(3) Require new developments to provide or pay the cost of all essential community services, including roads, utilities, schools, parks, and emergency facilities that are intended to directly serve the development.	<b>X</b>		
(4) Facilitate and encourage compact, higher-density development in urban areas designated for such uses.			<b>X</b>
(5) Encourage the establishment of mixed-use town centers that are compatible with the physical and social character of their community	<b>X</b>		
(6) Facilitate transit-oriented development in rail transit station areas to create live/work/play multi-modal communities that reduce travel and traffic congestion	<b>X</b>		
(7) Encourage the clustering of development to reduce the cost of providing utilities and other public services.			<b>X</b>
(8) Locate new industries and new commercial areas so that they will be well-related to their markets and suppliers, and to residential areas and transportation facilities			<b>X</b>
(9) Locate community facilities on sites that will be convenient to the people they are intended to serve			<b>X</b>
(10) Discourage uses which are major sources of noise, air, and light pollution			<b>X</b>
(11) Implement siting and design solutions that seek to reduce exposure to natural hazards, including those related to climate change, flooding, and sea level rise.			<b>X</b>

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(12) Prohibit new airfields, high-powered electromagnetic-radiation sources, and storage places for fuel and explosives from locating on sites where they will endanger or disrupt nearby communities.			<b>X</b>
(13) Promote opportunities for the community to participate meaningfully in planning and development processes, including new forms of communication and social media.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support Objective A of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.</p> <p>The Proposed Project will be located in a highly urbanized area at the “gate” of Waikīkī thus encouraging compact development and intensive use of urban lands, reducing the cost of providing utilities and public services.</p>			
<b>Objective B.</b> To plan and prepare for the long-term physical impacts of climate change..			
(1) Integrate climate change adaptation into the planning, design, and construction of all significant improvements to and development of the built environment.	<b>X</b>		
(2) Coordinate plans in the private and public sectors that support research, monitoring, and educational programs on climate change.			<b>X</b>
(3) Prepare for the anticipated impacts of climate change and sea level rise on existing communities and facilities through mitigation, adaptation, managed retreat, or other measures in exposed areas			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support Objective B of Section VII of the City and County of Honolulu General Plan related to climate change.</p>			
<b>Objective C.</b> To develop Honolulu (Waialae-Kahala to Halawa), Aiea, and Pearl City as the Island’s primary urban center.			
(1) Provide downtown Honolulu and other major business centers with a well-balanced mixture of uses.			<b>X</b>
(2) Encourage the development of attractive residential communities in downtown and other business centers.			<b>X</b>
(3) Maintain and improve downtown as the financial and office center of the island, and as a major retail center			<b>X</b>
(4) Provide for the continued viability of the Hawai’i Capital District as a center of government activities and as an attractive park-like setting in the heart of the city.			<b>X</b>
(5) Encourage the development of attractive residential communities in downtown and other business centers.			<b>X</b>
(6) Foster the development of Honolulu’s waterfront as the State’s major port and maritime center, as a people-oriented mixed-use area, and as a major recreation area with accommodation for sea level rise.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact Objective B of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.</p>			
<b>Objective D.</b> To develop a secondary urban center in “Ewa with its nucleus in the Kapolei area.			
(1) Support public projects that are needed to facilitate development of the secondary urban center at Kapolei.			<b>X</b>
(2) Encourage the development of a major residential, commercial, and employment center within the secondary urban center at Kapolei.			<b>X</b>
(3) Encourage the continuing development of the area encompassing Campbell Industrial Park, Kalaeloa Barbers Point Harbor, and West Kapolei as a major industrial center.			<b>X</b>
(4) Coordinate plans for the development of the secondary urban center at Kapolei with the State and federal governments, major landowners and developers, and the community.			<b>X</b>
(5) Cooperate with the State and federal governments in the improvements to the deep-water harbor at Kalaeloa Barbers Point.			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(6) Encourage the development of the Ocean Pointe/Hoakalei Communities as a major residential and recreation area emphasizing recreational activities and a waterfront commercial center containing light-industrial, commercial, and visitor accommodation uses.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
<b>Objective E.</b> To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live.			
(1) Develop and maintain urban-fringe areas as predominantly residential areas characterized by generally lower-rise, lower-density development which may include significant levels of retail and service commercial uses as well as satellite institutional and public uses geared to serving the needs of households.			<b>X</b>
(2) Coordinate plans for developments within the 'Ewa and Central O'ahu urban-fringe areas with the State and federal governments, major landowners and developers, agricultural industries, and the community.			<b>X</b>
(3) Maintain a "green belt" of open space and agricultural land around developed communities in the 'Ewa and Central O'ahu areas of O'ahu.			<b>X</b>
(4) Maintain rural areas that reflect an open and scenic setting, dominated by small to moderate size agricultural pursuits, with small towns of low-density and low-rise character, and which allows modest growth opportunities tailored to address area residents' future needs			<b>X</b>
(5) Encourage the development of a variety of housing choices including affordable housing in rural communities, to give people the choice to continue to live in the community that they were raised in.			<b>X</b>
(6) Ensure the social and economic vitality of rural communities by supporting infill development and modest increases in heights and densities around existing rural town areas where feasible to maintain an adequate supply of housing for future generations.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective E of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
<b>Objective F.</b> To create and maintain attractive, meaningful, and stimulating environments throughout O'ahu.			
(1) Encourage distinctive community identities for both new and existing communities and neighborhoods.			<b>X</b>
(2) Require the consideration of urban design principles in all development projects.			<b>X</b>
(3) Require developments in stable, established communities and rural areas to be compatible with the existing communities and areas			<b>X</b>
(4) Provide design guidelines and controls that will allow more compact development and intensive use of lands in the primary urban center and along the rail transit corridor.			<b>X</b>
(5) Seek to protect residents' quality of life and to maintain the integrity of neighborhoods by strengthening regulatory and enforcement strategies that address the presence of inappropriate non-residential activities.	<b>X</b>		
(6) Promote public and private programs to beautify the urban and rural environments.			<b>X</b>
(7) Design public structures to meet high aesthetic and functional standards and to complement the physical character of the communities they will serve.	<b>X</b>		
(8) Design public street networks to be safe and accessible for users of all ages and abilities, to accommodate multiple modes of travel to be	<b>X</b>		

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visually attractive and to support sustainable ecological processes, such as stormwater infiltration.			
(9) Recognize the importance of using Native Hawaiian plants in landscaping to further the traditional Hawaiian concept of mālama ‘āina and to create a more Hawaiian sense of place			<b>X</b>
<b>Discussion:</b> The Proposed Project will support Objective E of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
The design approach of the Proposed Project will complement and align with the surrounding community of Waikīkī. As an open-air cultural entertainment venue, the Proposed Project will embrace and preserve the value of open space within the area.			
<b>Objective G.</b> To promote and enhance the social and physical character of O‘ahu's older towns and neighborhoods.			
(1) Encourage new construction in established areas to be compatible with the character and cultural values of the surrounding community.			<b>X</b>
(2) Encourage, wherever desirable, the rehabilitation of existing substandard structures.			<b>X</b>
(3) Provide and maintain roads, public facilities, and utilities without damaging the character of older communities			<b>X</b>
(4) Seek the satisfactory relocation of residents before permitting their displacement by new development, redevelopment, or neighborhood rehabilitation.			<b>X</b>
(5) Acknowledge the cultural and historical significance of kuleana lands, the ancestral ownership of kuleana lands, and promote policies that preserve and protect kuleana lands.			<b>X</b>
(6) Support and encourage cohesive neighborhoods which foster interactions among neighbors, promote vibrant community life, and enhance livability.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective F of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
<b>VIII. Public Safety</b>			
<b>Objective A.</b> To prevent and control crime and maintain public order.			
(1) Provide a safe environment for residents and visitors on O‘ahu.	<b>X</b>		
(2) Provide adequate, safe, and secure criminal justice facilities.			<b>X</b>
(3) Provide adequate training, staffing, and support for City public safety agencies.			<b>X</b>
(4) Emphasize improvements to police and prosecution operations which will result in a higher proportion of wrongdoers who are arrested, convicted, and punished for their crimes.			<b>X</b>
(5) Support policies and programs that expand access to treatment, rehabilitation, and reentry programs for adult and juvenile offenders			<b>X</b>
(6) Keep the public informed of the nature and extent of criminal activity on O‘ahu.			<b>X</b>
(7) Establish and maintain programs to encourage public cooperation in the prevention and solution of crimes, and promote strong community-police relationships.			<b>X</b>
(8) Seek the help of State and federal law-enforcement agencies to curtail the activities of organized crime syndicates on O‘ahu.			<b>X</b>
(9) Conduct periodic reviews of criminal laws to ensure their relevance to the community's needs and values.			<b>X</b>
(10) Cooperate with other law-enforcement agencies to develop new methods of addressing crime. Support communication and			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
coordination across federal, State and City law enforcement and corrections agencies.			
(11) Encourage the improvement of rehabilitation programs and facilities for criminals and juvenile offenders.			<b>X</b>
<b>Discussion:</b> The Proposed Project will support Objective A of Section VIII of the City and County of Honolulu General Plan related to public safety.			
The Proposed Project will be a safe and secure facility for all employees and attendees.			
<b>Objective B.</b> To protect residents and visitors and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions			
(1) Keep up-to-date and enforce all City and County safety regulations.	<b>X</b>		
(2) Require all developments in areas subject to floods and tsunamis, and coastal erosion to be located and constructed in a manner that will not create any health or safety hazards or cause harm to natural and public resources.	<b>X</b>		
(3) Participate with State and federal agencies in the funding and construction of floodcontrol projects, and prioritize the use of ecologically sensitive flood-control strategies whenever feasible.			<b>X</b>
(4) Collaborate with State and federal agencies to provide emergency warnings, protection, mitigation, response, and recovery, during and after major emergencies such as tsunamis, hurricanes, and other high-hazard events.			<b>X</b>
(5) Cooperate with State and federal agencies to provide protection from war, civil disruptions, pandemics, and other major disturbances.			<b>X</b>
(6) Reduce hazardous traffic conditions.			<b>X</b>
(7) Provide adequate resources to effectively prepare for and respond to natural and manmade threats to public safety, property, and the environment.			<b>X</b>
(8) Foster disaster-ready communities and households through implementation of resilience hubs and other resiliency strategies.			<b>X</b>
(9) Plan for the impacts of climate change and sea level rise on public safety, in order to minimize potential future hazards.	<b>X</b>		
(10) Develop emergency management plans, policies, programs, and procedures to protect and promote public health, safety, and welfare of the people.			<b>X</b>
(11) Provide educational materials on emergency management preparedness, fire protection, traffic hazards, and other unsafe conditions			<b>X</b>
<b>Discussion:</b> The Proposed Project will support Objective B of Section VIII of the City and County of Honolulu General Plan related to public safety.			
The Proposed Project will be conducted following all building codes and OSHA/HIOSH standards to ensure the security of public health and safety are protected during construction and through day-to-day operations			
<b>IX. Health and Education</b>			
<b>Objective A.</b> To protect the health and well-being of residents and visitors.			
(1) Encourage the provision of health-care facilities that are accessible to both employment and residential centers.			<b>X</b>
(2) Provide prompt and adequate ambulance and first-aid services in all areas of O’ahu.			<b>X</b>
(3) Coordinate City health codes and other regulations with State and federal health codes to facilitate the enforcement of air-, water-, and noise-pollution controls.			<b>X</b>



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(4) Integrate public health concerns such as air and water pollution as a consideration in land use planning decisions.			<b>X</b>
(5) Encourage healthy lifestyles by supporting opportunities that increase access to and promote consumption of fresh, locally grown foods.			<b>X</b>
(6) Encourage healthy lifestyles through walkable and livable communities, safe street crossings, safe routes to schools, and parks and pathways for pedestrians and bicyclists.			<b>X</b>
(7) Support efforts to make healthcare accessible and affordable for everyone.			<b>X</b>
(8) Support efforts to improve and expand access to mental health, drug treatment, community-based programs, and other similar programs for those requiring such services.			<b>X</b>
(9) Support becoming an age-friendly city that provides people of all ages with user-friendly parks and other public gathering places, that offers safe streets and multi-modal transportation options, that provides an adequate supply of affordable housing, that encourages growth in needed and desirable jobs, that provides quality health-care and support services, and that encourages civic participation, social inclusion, and respect between interest groups.			<b>X</b>
(10) Plan for our aging population’s growing health-care, personal service, and diverse daily activity needs, and encourage these services to be provided in a timely manner, including age-specific social activities.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective A of Section IX of the City and County of Honolulu General Plan related to health and education.			
<b>Objective B.</b> To provide a wide range of educational opportunities for the people of O’ahu.			
(1) Support education programs that encourage the development of employable skills.			<b>X</b>
(2) Encourage the provision of informal educational programs for people of all age groups.			<b>X</b>
(3) Encourage the after-hours use of school buildings, grounds, and facilities.			<b>X</b>
(4) Encourage the construction of school facilities that are designed for flexibility and high levels of use			<b>X</b>
(5) Facilitate the appropriate location of childcare facilities as well as learning institutions from the preschool through the university levels.			<b>X</b>
(6) Encourage outdoor learning opportunities and venues that reflect our unique natural environment and Native Hawaiian culture.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section IX of the City and County General Plan related to health and education.			
<b>Objective C.</b> To make Honolulu the center of higher education in the Pacific.			
(1) Encourage continuing improvement in the quality of higher education in Hawai’i, as well as ways to make higher education more affordable.			<b>X</b>
(2) Encourage the development of diverse opportunities in higher education.			<b>X</b>
(3) Encourage research institutions to establish branches on O’ahu.			<b>X</b>
(4) Establish Honolulu as a knowledge center and international Pacific crossroads hub.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective C of Section IX of the City and County of Honolulu General Plan related to health and education.			
<b>X. Culture and Recreation</b>			

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<b>Objective A.</b> To foster the multiethnic culture of Hawai'i and respect the host culture of the Native Hawaiian people.			
(1) Recognize the Native Hawaiian host culture, including its customs, language, history, and close connection to the natural environment, as a dynamic, living culture and as an integral part of O'ahu's way of life.	<b>X</b>		
(2) Promote the preservation and enhancement of local cultures, values and traditions.	<b>X</b>		
(3) Encourage greater public awareness, understanding, and appreciation of the cultural heritage and contributions to Hawai'i made by O'ahu's various ethnic groups.	<b>X</b>		
(4) Foster equity and increased opportunities for positive interaction among people with different ethnic, social, and cultural backgrounds.			<b>X</b>
(5) Preserve the identities of the historical communities of O'ahu.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support Objective A of Section X of the City and County of Honolulu General Plan related to culture and recreation.</p> <p>The Proposed Project aims to contribute towards cultural tourism in relation to multi-ethnic cultures that provides residents and visitors with enriching experiences and insights into the history, customs, arts, and traditions. The Proposed Project and its associated programs will encourage interaction among people of various ethnic backgrounds. The Proposed Project will also provide a venue that encourages social interaction by creating spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai'i.</p>			
<b>Objective B.</b> To protect, preserve and enhance O'ahu's cultural, historic, architectural, and archaeological resources.			
(1) Promote the restoration and preservation of early Hawaiian structures, artifacts, and landmarks.			<b>X</b>
(2) Identify and, to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.			<b>X</b>
(3) Cooperate with the State and federal governments in developing and implementing a comprehensive preservation program for social, cultural, historic, architectural, and archaeological resources.			<b>X</b>
(4) Promote the interpretive and educational use of cultural, historic, architectural, and archaeological sites, buildings, and artifacts			<b>X</b>
(5) Seek public and private funds, and encourage public participation and support, to protect, preserve and enhance social, cultural, historic, architectural, and archaeological resources.			<b>X</b>
(6) Provide incentives for the restoration, preservation, maintenance, and enhancement of social, cultural, historic, architectural, and archaeological resources.			<b>X</b>
(7) Encourage the protection of areas that are historically important to Native Hawaiian cultural practices and to the cultural practices of other ethnicities, in order to further preserve and continue these practices for future generations.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact Objective B of Section X of the City and County of Honolulu General Plan related to culture and recreation.</p>			
<b>Objective C.</b> To foster the visual and performing arts.			
(1) Encourage and support programs and activities for the visual and performing arts.	<b>X</b>		
(2) Encourage creative expression and access to the arts by all segments of the population.	<b>X</b>		
(3) Provide permanent art in appropriate City public buildings and places.			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<p><b>Discussion:</b> The Proposed Project will support Objective C of Section X of the City and County of Honolulu General Plan related to culture and recreation.</p> <p>The Proposed Project seeks to foster the visual and performing arts through its programming and entertainment as a cultural entertainment venue. The Proposed Project and its associated programming will seek to celebrate, promote, and perpetuate Hawai'i's natural environment and host culture while fostering local collaboration and strengthening community resilience.</p>			
<p><b>Objective D.</b> To provide a wide range of recreational facilities and services that are readily available to residents and visitors alike, and to balance access to natural areas with the protection of those areas.</p>			
(1) Develop, maintain, and expand a community-based park system to meet the needs of the diverse communities on O'ahu.			<b>X</b>
(2) Develop, maintain, and expand a system of regional parks and specialized recreation facilities, based on the cumulative demand of residents and visitors.			<b>X</b>
(3) Develop, maintain, and improve urban parks, squares, and beautification areas in high-density urban place			<b>X</b>
(4) Encourage public and private natural reserves and botanical and zoological parks to foster greater awareness and appreciation of the natural environment.			<b>X</b>
(5) Encourage the State to develop, improve, and maintain a system of natural resource-based parks, such as beach, shoreline, and mountain parks.			<b>X</b>
(6) Ensure that public recreational facilities balance the demand for facilities against capital and operating cost constraints so that they are adequately sized and properly maintained.			<b>X</b>
(7) Ensure and maintain convenient and safe access to beaches, ocean environments and mauka recreation areas in a manner that protects natural and cultural resources.			<b>X</b>
(8) Encourage ocean and water-oriented recreation activities that do not adversely impact the natural environment and cultural assets, or result in overcrowding or overuse of beaches, shoreline areas and the ocean.			<b>X</b>
(9) Require all new developments to provide their residents with adequate recreation space.			<b>X</b>
(10) Utilize our unique natural environment in a responsible way to promote cultural events and activities, and maintain cultural practices.			<b>X</b>
(11) Encourage the after-hours, weekend, and summertime use of public school facilities for recreation			<b>X</b>
(12) Provide for safe and secure use of public parks, beaches, and recreation facilities.			<b>X</b>
(13) Create and promote recreational venues for kūpuna and keiki and for kama'āina and malihini.			<b>X</b>
(14) Encourage the State and federal governments to transfer excess and underutilized land to the City for public recreation use.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will not impact Objective D of Section X of the City and County General Plan related to health and education.</p>			
<p><b>XI. Government Operations and Fiscal Management</b></p>			
<p><b>Objective A.</b> To promote increased efficiency, effectiveness, and responsiveness in the provision of government services by the City and County of Honolulu.</p>			
(1) Maintain and adequately fund City government services at the level necessary to be effective.			<b>X</b>

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<b>Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
(2) Promote alignment and consolidation of State and City functions whenever more efficient and effective delivery of government programs and services may be achieved			<b>X</b>
(3) Ensure that government attitudes, actions, and services are sensitive to community needs and concerns, and held accountable to the public trust			<b>X</b>
(4) Sufficiently fund and staff the timely preparation, maintenance, and update of public policies and plans to guide and coordinate City programs and regulatory responsibilities.			<b>X</b>
(5) Expand the adoption of technology across all City agencies to achieve greater transparency, efficiency, and accountability to the general public throughout government operations.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective A of Section XI of the City and County of Honolulu General Plan related to government operations and fiscal management.			
<b>Objective B.</b> To ensure fiscal integrity, responsibility, and efficiency by the City and County government in carrying out its responsibilities.			
(1) Provide for a balanced budget.			<b>X</b>
(2) Allocate fiscal resources of the City and County to efficiently implement the policies of the General Plan and Development Plans.			<b>X</b>
(3) Ensure accountability and transparency in government operations.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section XI of the City and County of Honolulu General Plan related to government operations and fiscal management.			
<b>Objective C.</b> To achieve equitable outcomes for City programs, policies, and allocation of resources throughout the O’ahu community.			
(1) Promote policies that actively address and eliminate disparate outcomes for historically underserved communities.			<b>X</b>
(2) Seek equitable distribution of City investments towards promoting employment opportunities, infrastructure, and other community benefits appropriate to the community needs and proportionate to the population size.			<b>X</b>
(3) Promote adherence to processes that advance procedural, distributional, structural, intergenerational, and cultural equity within the City.			<b>X</b>
(4) Provide resources for City employees to understand and actively advance equity solutions within all agencies of City government.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact Objective B of Section XI of the City and County of Honolulu General Plan related to government operations and fiscal management.			

**4.2.2. Primary Urban Center Development Plan**

The Proposed Project is located within the Primary Urban Center (PUC) Development Plan (DP) area, which extends from downtown Honolulu to Pearl City in the west to Wai’alae-Kahala in the east. The PUC is home to almost half of O’ahu’s population and three quarters of all jobs. The PUCDP (June 2004) provides a vision for the PUC in the areas of land use, transportation, infrastructure, and public facilities. It also provides policies and guidelines for achieving that vision. The City’s Land Use Map indicates that the Project Site lands are designated for Institutional uses. The proposed project is consistent with the guidelines, policies and principles contained in the PUC DP as outlined in Table 4-6:

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>3. Land Use and Transportation</b>			
<b>3.1 Protecting and Enhancing Natural, Cultural, and Scenic Resources</b>			
<b>3.1.2 Policies</b>			
Preserve historic and cultural sites. Preserve and protect sites that have high preservation value because of their good condition or unique features. Protection includes planning and design of adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site. Retain, whenever possible, significant vistas associated with historic, natural and man-made features. Allow adaptive reuse of historic buildings to serve a new function and/or enhance interpretive value without destroying the historic value of a site.			<b>X</b>
Preserve and protect natural resource and constraint areas. Establish an Urban Community Boundary to define the area for urban development. Place large contiguous areas of natural resource and constraint areas designated for Preservation, including all lands within the State Conservation District, outside of the Urban Community Boundary.			<b>X</b>
Preserve panoramic views of natural landmarks and the urban skyline. Preserve views of the Koolau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain important view corridors within and across urban Honolulu and keep Downtown as the most prominent feature of the urban skyline. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.	<b>X</b>		
Improve access to shoreline and mountain areas. Provide continuous lateral access along the Honolulu waterfront and around the East Loch of Pearl Harbor, where urban activity is most intense. Maintain access to mountain hiking trails and increase opportunities for nature education and camping.			<b>X</b>
Provide parks and active recreation areas. Develop and maintain parks and other outdoor public spaces in a manner that expands opportunities for both active and passive recreation. Increase and enhance recreational open space in the most densely settled parts of the PUC.			<b>X</b>
<p><b>Discussion:</b> The Proposed Project will support natural, cultural, and scenic resources related to Section 3.1.2 of the PUCDP.</p> <p>As discussed in Section 3.12 (Visual Resources) the Proposed Project is not expected to have an impact on the objectives and policies for the physical environment – scenic, natural beauty, and visual resources. The visual characteristics of the Proposed Project align with the urban setting of Waikīkī and its surrounding area which includes several mid-size structures that accommodate scenic resources such as the Ko’olau Mountain Range.</p>			
<b>3.2 Neighborhood Planning and Improvement</b>			
<b>3.2.2 Policies</b>			
<b>3.2.2.1 Neighborhood Planning</b>			
Develop a system for collaborative neighborhood planning. Planning for neighborhood improvement must be undertaken at the neighborhood level. Neighborhood planning is a collaborative enterprise involving residents, business and property owners, government agencies, and others who have a stake in the neighborhood.			<b>X</b>
Cultivate existing and new “neighborhood centers.” Neighborhoods need central places where people gather for shopping, entertainment, and/or recreation. The center of a neighborhood could be a public plaza or a recreation complex, or a commercial town center, with a grocery store and other shops and services. It could have a public park or a plaza linked to shops. Cultivating neighborhood centers entails investment in parks and pedestrian street improvements.			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
Promote mixed land uses. Office, retail, and community service uses can coexist with residential uses; and there are a number of opportunities for them to support each other. In traditional single-family neighborhoods, groupings of small stores provide convenient service and a place to meet neighbors. In the PUC's in-town neighborhoods, both residential and office development support retail and other services. Neighborhoods with a strong mix of uses have activity 24 hours a day. Residences providing "eyes on the street" contribute to neighborhood safety.			<b>X</b>
Create parks that draw people and activity. The PUC should have a range of parks. While all provide open space and relief from buildings and traffic, some should provide for organized sports and fitness activities, and others should function more as neighborhood gathering places. In the PUC, development of one or two large sports complexes with substantial parking could provide for league play of all kinds, while smaller parks could be used in inventive ways to meet the needs of their surrounding neighborhoods. Like other cities throughout the world, plazas and open spaces that attract people and activity are integrated with churches, shops, and other buildings.			<b>X</b>
Make streets "pedestrian-friendly." There are many opportunities to create street environments that invite pedestrian use, such as widening sidewalks, planting trees to provide shade and buffer pedestrians from vehicular traffic, and narrowing intersections to provide shorter and safer pedestrian crossings. The Land Use Maps (Maps A.4, A.5 and A.6) show primary pedestrian routes. These streets and others identified through neighborhood planning should be given high priority for pedestrian improvement.			<b>X</b>
Make major streets which connect communities convey neighborhood identity. The identifying characteristics that give neighborhoods their unique visual signatures or identities should be emphasized and conveyed by the streets that connect them to other places. To help accomplish this, landscape and other streetscape design for major streets which serve as principal routes connecting two or more neighborhoods should reflect the unique identities of each neighborhood and, where possible, should provide open spaces between them which create significant public views or access to mauka or shoreline resources.			<b>X</b>
<b>3.2.2.2 Mauka Residential Neighborhoods</b>			
Density. Lower-density residential areas may have single-family residences and townhouse apartments at a density of five to 12 dwelling units per acre, with predominantly two-story building heights. Areas zoned for apartment use may have higher densities.			<b>X</b>
Appropriate Building Design. For institutional and other nonresidential uses allowed within lower-density residential areas, provide guidelines for the location and design of buildings, service areas, and pedestrian and vehicular access. In general, street-facing building elements should be attractive, designed for human scale, and have clear points of entry. Service and utility elements should be located out of sight from the street and away from residences.			<b>X</b>
<b>3.2.2.3 In-Town Residential Neighborhoods</b>			
Density. Areas close to transit lines and the major east-west arterials should be zoned for medium-density residential, which may range from 13 to 90 units per acre, or high-density residential mixed use, which may range up to 140 units per acre. Neighborhoods in these zones would also include reinforcing uses which support resident lifestyle and livelihood choices, such as convenience or neighborhood stores, dining establishments, professional and/or business services, or other similar activities.			<b>X</b>
Building Heights. Establish maximum desired building heights in apartment-zoned districts on the basis of viewplane studies to preserve views of natural landmarks as indicated in Section 3.1. Otherwise, the maximum building height for districts zoned low-density apartment should be approximately four stories or 40 feet. For areas			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
zoned medium-density apartment, the maximum desired building height should be either 60 feet or the present height of the building occupying the lot. It is expected that with these criteria, building heights for most in-town residential neighborhoods, including Moiliili, McCully, and other established neighborhoods between Ala Moana and the University of Hawaii would not exceed currently allowed heights. Given market conditions, development feasibility, and future incentives and standards encouraging the enhancement and development of livable neighborhoods, such districts may experience lower than currently sanctioned building heights.			
Building Design and the Streetscape Environment. Neighborhood plans should distinguish between principal or “front door” streets that give a neighborhood the opportunity to “put on its best face,” and secondary or local streets where a variety of activities are appropriate or where service is the main function. Utilitarian elements such as service yards, parking lots, or utilities should be located on nonprincipled streets in ways that support efficient patterns of circulation.			<b>X</b>
<b>3.2.2.4 Shopping and Retail Business Districts</b>			
Community/Neighborhood Commercial. These commercial areas should be located within and should primarily serve lower-density residential neighborhoods. Generally 10 acres or less in land area, these districts or clusters of establishments typically have service stations, grocery and sundry stores, and other small businesses serving residential customers. Buildings are generally one or two stories in height. While they vary greatly in total size and number of business establishments, a Community/Neighborhood Commercial area typically has no more than 200,000 square feet of commercial floor area.			<b>X</b>
District Commercial. District Commercial includes a wide variety of commercial uses located in the core areas of the Primary Urban Center. These districts typically have larger facilities and serve larger populations than community/neighborhood commercial districts. They may include major office buildings, shopping centers, and older commercial streets that serve a district-wide, regional or island wide population. Mixed uses, including medium to higher density residential uses where appropriate, and higher densities are encouraged in these areas. Downtown should have the tallest buildings on Oahu. In other areas, maximum building heights should be established on the basis of viewplane studies to preserve views of natural landmarks.			<b>X</b>
Commercial streets. Enliven commercial streets by providing wide sidewalks and trees for shade and encouraging property owners to build to the sidewalk edge. Vital urban neighborhoods rely on high pedestrian activity. Storefronts create interest and stimulate pedestrian activity along the street, especially when they are built to the property line and meet the public sidewalk.			<b>X</b>
District-wide parking. Support older commercial districts and the continued use and rehabilitation of small commercial lots by providing conveniently located municipal parking. In the past, the City organized parking improvement districts and built centralized parking in Downtown and Kaimuki.			<b>X</b>
Integration of shopping centers with adjacent neighborhoods. Ensure that all shopping areas integrate well with adjacent residential neighborhoods. Require safe, pleasant, pedestrian connections between shopping establishments and their host neighborhoods. Encourage the planning and development of centers or clusters of shopping establishments to have their shops rather than parking lots face and be adjacent to abutting neighborhoods. Wherever possible and appropriate, encourage compatible or seamless design and landscape treatment of public routes and thoroughfares between residential and shopping areas. To the greatest extent possible, avoid placing service uses adjacent to resident areas and major frontages. Efforts should be made to appropriately locate and distinguish between front door and service zones.			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 3.2.2 of the PUCDP.			
<b>3.3 In-Town Housing Choices</b>			
<b>3.3.2 Policies</b>			
Promote people-scaled apartment and townhouse dwellings in low- or mid-rise buildings oriented to the street. Promote buildings that are modest in height and have a pedestrian entrance facing the street. Encourage the use of ground-floor space for shops that will serve residents and contribute to a pedestrian-oriented neighborhood. This policy entails revising zoning regulations.			<b>X</b>
Improve the feasibility of redeveloping small lots. Remove disincentives for townhouse and low-rise apartment development on smaller lots zoned for multifamily dwellings. This policy entails revising zoning regulations.			<b>X</b>
Reduce costs for apartment homes. Reduce construction costs and promote low-rise buildings by allowing less expensive building construction types while maintaining health and safety. Reduce land costs by allowing greater dwelling unit density while limiting building volume consistent with promoting livable neighborhoods. This policy entails revising building and zoning regulations.			<b>X</b>
Provide adequate parks and schools for in-town neighborhoods. Community parks and recreation facilities should be provided in and near residential neighborhoods. To attract young families, access to elementary schools must be assured.			<b>X</b>
Expand the capacity of infrastructure, including water supply, sewers, and storm drains. Government needs to lead both planning and investment in renewing and expanding infrastructure. To remedy district- or neighborhood-scale infrastructure constraints is beyond the capability of individual landowners. Likewise, paying for relief lines and larger-scale projects that will benefit multiple landowners requires government leadership in providing long-term financing and apportioning costs.			<b>X</b>
Support the retention, rehabilitation, and improvement of older, low-rent apartment buildings. Many older, walk-up apartment buildings constructed prior to the 1969 Comprehensive Zoning Code do not conform to current zoning or building standards but collectively comprise a valuable reservoir of low-cost rental housing. The City should relax zoning requirements to encourage the rehabilitation and improvement of these buildings.			<b>X</b>
Preserve 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 rentals.			<b>X</b>
Provide for special needs housing. Allow housing for people with special needs, such as group homes for the disabled or congregate living and care homes for the elderly, subject to special development standards or permit review. Promote the dispersal of special needs housing among various neighborhoods and avoid overconcentrating facilities in just a few areas.			<b>X</b>
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.			<b>X</b>
Provide for high-density housing options in mixed-use developments around transit stations. This type of "transit-oriented development" facilitates transit use and allows for increased densities without generating increased vehicular congestion.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 3.3.2 of the PUCDP.			
<b>3.4 The Pacific's Leading City</b>			
<b>3.4.2 Policies</b>			



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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>3.4.2.1 Honolulu and Pearl Harbor Waterfronts</b>			
Create public open space along the Pearl Harbor waterfront and strengthen the physical and visual connections between the urban center and the water			<b>X</b>
Improve mauka-makai pedestrian and bicycle circulation across Kamehameha Highway. Developing physical access to the Pearl Harbor waterfront demands substantial improvements to pedestrian and bicycle access across Kamehameha Highway.			<b>X</b>
Redevelop the Downtown/Iwilei waterfront. Reroute through traffic to a new Sand Island parkway and harbor tunnel thoroughfare, and replace the makai portion of Nimitz Highway with a new shoreline pedestrian promenade and mixed-use commercial/recreational/residential complexes. Adopt appropriate measures to enhance the attractiveness of the Nimitz corridor and public and private responsibilities to implement and maintain such improvements. By creating a new parkway across Sand Island and a tunnel beneath the Harbor entrance, Airport-to-Waikiki traffic (and all other through traffic not destined for the Iwilei/Downtown area) will bypass this unsightly industrial section and significantly reduce the traffic demand on Nimitz Highway through town. This will enable the Ewa-bound mauka section of the highway to be converted to a two-way local access street. It will also allow the Waikiki-bound makai section to be converted to a major shoreline promenade and waterfront activity area, providing space for restaurants, shops, indoor and outdoor entertainment, and recreation areas. This area would also hold potential for development of low- to mid-rise housing.			<b>X</b>
<b>3.4.2.2 Visitor Facilities</b>			
Adopt and implement a plan for a vibrant and livable Waikiki. This plan needs to address the quality of the resident experience as well as the quality of the visitor experience. Based on development parameters set by the Waikiki Special District, the plan should encompass mobility, the quality of the street environment for pedestrians, public spaces, the scale and design of new buildings, and Waikiki's relationship to the Convention Center and neighboring districts.			<b>X</b>
Support attractions that are of interest to both residents and visitors in the Ala Moana/Kakaako/Downtown corridor. Opportunities include State sponsored waterfront commercial and cultural attractions around the Kewalo Basin area; retail/entertainment facilities around Ala Moana Center, Victoria Ward Centers and Kamehameha Schools properties; and improvements to serve visitors in the Capitol District, Aloha Tower, and Chinatown.			<b>X</b>
Provide opportunities for the development of visitor units in the Ala Moana/Kakaako/Downtown corridor. Hotels serving the Convention Center should be within a 5-minute walk (one-quarter mile) and located on commercially zoned parcels along major thoroughfares. Those in the Downtown area should be in the area zoned BMX-4 or the Aloha Tower complex.			<b>X</b>
Provide a transit link along the Ala Moana/Kakaako/Downtown corridor. The City should assure that there is convenient transit service between visitor accommodations and the visitor attractions along the corridor. Visitor oriented transit should utilize at-grade trolley types of vehicles and could be publicly or privately operated.			<b>X</b>
Provide opportunities for the development of smaller-scale visitor accommodations (i.e., inns and lodges) in existing commercial centers. These could serve resident and business needs (visiting family, friends and business associates) as well as visitors looking for an alternative to the resort enclave. Potential areas include Kapahulu, Kaimuki, the King/Beretania corridor, Kapalama, Pearlridge, and Pearl City. Development of such facilities should consider the community's preferences and be integrated with the surrounding neighborhood.			<b>X</b>
Allow Bed & Breakfast establishments (but not transient vacation units or TVU's) in residential neighborhoods. With adequate parking, community involvement, and other regulatory controls, B&Bs provide a highly integrated, well-supervised, low-impact form of visitor accommodation. For residents, operating a B&B is a viable home occupation and a means to retain and reuse homes in older neighborhoods.			<b>X</b>
<b>3.4.2.3 Technology Business, Office Facilities</b>			

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
Stimulate development of high technology and knowledge-based industries. Take advantage of Honolulu’s active urban ambience to attract high-technology businesses. Use State lands in Kakaako for a campus dedicated to biomedical research and other high-technology businesses. Encourage investment in infrastructure in commercial buildings to accommodate and attract high-technology and biotechnology businesses.			<b>X</b>
Encourage street-front retail. Office buildings should have retail stores, entrances, and windows fronting the principal street.			<b>X</b>
Provide usable open space. Zoning requirements and bonus provisions for open space associated with larger office buildings should specify design guidelines for usable plazas, parks, and arcades. Key elements of usable open space are enclosure, shade, seating, and location at street level.			<b>X</b>
<b>3.4.2.4 Military, Airport, Harbor, and Industrial</b>			
Support continuation of military uses. National defense objectives and budget priorities determine the military bases and functions located in the Primary Urban Center and the state as a whole. The City should support long-range land use planning by the military services and coordinate with them to achieve common goals of employment, housing, and recreation.			<b>X</b>
Integrate civilian and military residential communities. The City should work with the military services to link adjacent residential communities through the use of connecting roadways, bikeways, walkways, landscape features, and/or architectural scale and character.			<b>X</b>
Allow a mix of industrial and commercial uses. Allow a broader mix of commercial uses in the Airport and Bougainville industrial districts. The Airport district should include office, hotel, and retail uses that are compatible with airport operations, as well as existing light industrial uses. The Bougainville district should include uses that support surrounding residential neighborhoods.			<b>X</b>
Enhance Honolulu Harbor and harbor-related uses. Reserve areas around Honolulu Harbor, particularly around Kapalama Basin and the Sand Island container yards, for harbor-related uses.			<b>X</b>
Support industrial uses in Kalihi-Palama industrial districts. Commercial uses along the Nimitz, Dillingham, King, Kalihi, and Waiakamilo corridors should be recognized and encouraged. In industrial districts where residential uses have endured for many years – i.e., Kalihi Kai and Kapalama – such uses should be allowed to continue, and should be rehabilitated and improved.			<b>X</b>
Promote compatibility with the surrounding urban and natural environment. Where industrial uses are mixed with or adjacent to residential communities or natural areas, mitigate visual, noise, and other environmental impacts by adopting performance standards.			<b>X</b>
Support development of adequate warehousing facilities to support increased economic activity. Encourage development and maintenance of warehouse space of sufficient quality to prevent shortages and support growing businesses.			<b>X</b>
<b>3.4.2.5 Aiea-Pearl City Town Centers</b>			
Define the role of town centers. Establish the “Pearlridge” area as the Pearl Harbor Regional Town Center, and strengthen the physical and visual connection between this urban activity center and the Pearl Harbor waterfront. Other town centers at Pearl City, Waimalu, Aiea, and Halawa should serve as more localized or specialized activity and service areas.			<b>X</b>
Promote mixed land use. Town centers should support some form of mixed land use to respond more flexibly to market needs and to reduce dependency on the private automobile for local travel. The Pearl Harbor Regional Town Center should be designated for a greater diversity of uses than the other town centers, emphasizing an integration of medium- or higher-density residential and commercial development. Land use designations and design standards should be oriented toward assuring compatibility of building forms and uses, creating street connections, and providing a smooth transition between town centers and adjacent residential neighborhoods.			<b>X</b>
Facilitate pedestrian, transit, and bicycle improvements. There should be major improvements to transportation facilities and services, with particular emphasis on			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
pedestrian, bicycle, and public transit modes along Kamehameha Highway, and commuter travel on the H-1 Freeway and in the Aloha Stadium vicinity (see Figure 3.17: Pedestrian Network Concept for Pearl Harbor). Design standards for new development in the town centers – especially the Pearl Harbor Regional Town Center – should encourage pedestrian and transit travel.			
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 3.4.2 of the PUCDP.			
<b>3.5 Develop a Balanced Transportation System</b>			
<b>3.5.2 Policies</b>			
Implement land use strategies to achieve a balanced transportation system. To improve the quality of life in the Primary Urban Center and to accommodate growth, development initiatives and regulatory controls should promote the growth of sustainable and appropriate alternative urban travel modes such as transit, walking, and bicycling.			<b>X</b>
Improve the public transit system, including development of a rapid transit component. Improvements to the transit system should be targeted to accommodating trans-PUC travel and making neighborhood service more convenient. A rapid transit component is needed to serve the high-volume east-west corridor, connect activity centers, and provide transportation capacity in place of increased roadways.			<b>X</b>
Implement Transportation Demand Management strategies. Due to limited land area and high costs, it is increasingly necessary to shift from increasing roadway and parking capacity to policies and practices that reward use of transit and other alternative modes.			<b>X</b>
Review existing plans and establish priorities for roads and road improvements. Conduct a comprehensive review of roads and designate those which should receive priority treatment for transit, bike routes, and pedestrian routes, as well as the principal arterial and collector network for automobile travel.			<b>X</b>
Implement the Honolulu Bicycle Master Plan. Institutionalize the policy that every street and highway on which bicycles are permitted to operate is a “bicycle street,” designated and maintained to accommodate shared use by bicycles and motor vehicles.			<b>X</b>
Enhance and improve pedestrian mobility. Create special pedestrian districts and corridors and a regional network of pedestrian facilities. Comprehensively address pedestrian safety concerns related to vehicle speeding and excessive volumes on local streets and neighborhood collector streets.			<b>X</b>
Encourage the full use of existing private and public parking garages. Encourage private parking garage owners to rent underused parking stalls within commercial buildings and large-scale residential projects.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 3.5.2 of the PUCDP.			
<b>4. Infrastructure and Public Facilities</b>			
<b>4.1 Water Allocation and System Development</b>			
<b>4.1.2 Policies</b>			
Integrate resource management of all potable and nonpotable water sources, including groundwater, stream water, storm water, and wastewater effluent.			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
Adapt water conservation practices in the design of new developments and modification of existing uses, including landscaped areas.			<b>X</b>
Implement upgrades and capacity improvements to serve projected population increases.			<b>X</b>
Protect and maintain watersheds to ensure an adequate supply of high quality water with sufficient infiltration recharge into groundwater aquifers.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.1.2 of the PUCDP.			
<b>4.2 Wastewater System</b>			
<b>4.2.2 Policies</b>			
Implement wastewater collection system improvements to provide adequate service and sound facilities to existing neighborhoods and timely increases in system capacity to areas planned to undergo improvement or change in use.			<b>X</b>
Implement adequate and timely upgrades/expansion of wastewater treatment facilities to meet the growth demands of the PUC.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.2.2 of the PUCDP.			
<b>4.3 Electrical Power</b>			
<b>4.3.2 Policies</b>			
Support retention and upgrade of the Waiau and Honolulu Power Plants as part of a strategic plan to improve the reliability of the Primary Urban Center's electrical power system.			<b>X</b>
Promote and implement energy conservation measures and integrated resource planning.			<b>X</b>
Planning and building of new or relocated transmission lines should take into consideration the system and cost concerns, and the impacts on the environment. Options to place utility lines underground should be considered, and priorities should be established.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.3.2 of the PUCDP.			
<b>4.4 Telecommunications Facilities</b>			
<b>4.4.2 Policies</b>			
Minimize the visual impacts and potential health hazard of new facilities.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.4.2 of the PUCDP.			
<b>4.5 Solid Waste</b>			
<b>4.5.2 Policies</b>			
Reduce the solid waste stream by encouraging recycling and reuse.			<b>X</b>
Reduce dependence on landfills by encouraging alternative waste disposal technologies.			<b>X</b>

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<b>Table 4-6: Primary Urban Center Development Plan</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.5.2 of the PUCDP.			
<b>4.6 Stormwater Systems</b>			
<b>4.6.2 Policies</b>			
Require methods of retaining or detaining stormwater for gradual release into the ground as the preferred strategy for the management of stormwater. Where feasible, utilize open spaces including parking lots, landscaped areas, parks, and golf courses to detain or infiltrate stormwater flows to reduce their volume and runoff rates. (City Council Resolution No. 94-296).			<b>X</b>
Manage stormwater flows through best management practices to minimize stormwater runoff and peak discharge rates.			<b>X</b>
Preserve stream and estuarine habitats.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.6.2 of the PUCDP.			
<b>4.7 School and Library Facilities</b>			
<b>4.7.2 Policies</b>			
Support the development of a high quality educational system of schools and post-secondary institutions that increase the attractiveness of the Primary Urban Center as a place to live and work.			<b>X</b>
Work with the Department of Education to develop innovative shared-use facilities, particularly on City-owned school properties.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.7.2 of the PUCDP.			
<b>4.8 Civic and Public Safety Facilities</b>			
<b>4.8.2 Policies</b>			
Provide adequate staffing and facilities to ensure effective and efficient delivery of basic governmental service and protection of public safety.			<b>X</b>
<b>Discussion:</b> The Proposed Project will not impact any of the objectives and policies outlined above related to Section 4.8.2 of the PUCDP.			

**4.2.3. Waikiki Special District**

Waikīkī serves as the foundation for the State’s tourism industry, identified as a major employment sector, and home for thousands of residents. The area is designated as a Special District, with specific design standards and guidelines implemented to directs its future growth (LUO, Sec. 21-9.80).

The Waikīkī Special District (WSD) was established as a response to its rapid development in the 1960s and 1970s, along with the physical and social changes thereby attributed to it. The LUO’s WSD Guidelines are a planning tool aimed at restoring the basic appeal of Waikīkī as a pedestrian-friendly environment. Developing creative and functional uses of ground-level open space is emphasized in accordance to the definition of a “Hawaiian sense of place” as stated in the WSD Guidelines that are enumerated in Section 7.80-1 of the LUO.

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Under ROH, Chapter 21, *Land Use Ordinance* (LUO), all developments within special districts are required to obtain a Special District Permit. The Proposed Project is within the WSD. In accordance with Table 4-7, below:

<b>Table 4-7 Waikiki Special District Guidelines</b>	<b>S</b>	<b>NS</b>	<b>N/A</b>
<b>§ 21-9.80-1 Waikiki Special District—Objectives</b>			
(1) Promote a Hawaiian sense of place at every opportunity	X		
(2) Guide development and redevelopment in Waikiki with due consideration to optimum community benefits. These shall include the preservation, restoration, maintenance, enhancement and creation of natural, recreational, educational, historic, cultural, community and scenic resources.	X		
(3) Support the retention of a residential sector in order to provide stability to the neighborhoods of Waikiki.	X		
(4) Provide for a variety of compatible land uses which promote the unique character of Waikiki, emphasizing mixed uses	X		
(5) Support efficient use of multimodal transportation in Waikiki, reflecting the needs of Waikiki workers, businesses, residents, and tourists. Encourage the use of public transit rather than the private automobile, and assist in the efficient flow of traffic.	X		
(6) Provide for the ability to renovate and redevelop existing structures which otherwise might experience deterioration. Waikiki is a mature, concentrated urban area with a large number of nonconforming uses and structures. The zoning requirements of this special district should not, therefore, function as barriers to desirable restoration and redevelopment lest the physical decline of structures in Waikiki jeopardize the desire to have a healthy, vibrant, attractive and well-designed visitor destination.	X		
(7) 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.	X		
(8) 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.	X		
(9) Encourage architectural features in building design which complement Hawaii's tropical climate and ambience, while respecting Waikiki's urbanized setting. The provision of building elements such as open lobbies, lanais, and sunshade devices is encouraged.	X		
(10) Maintain, and improve where possible: mauka views from public viewing areas in Waikiki, especially from public streets; and a visual relationship with the ocean, as experienced from Kalakaua Avenue, Kalia Road and Ala Moana Boulevard. In addition, improve pedestrian access, both perpendicular and lateral, to the beach and the Ala Wai Canal	X		
(11) Maintain a substantial view of Diamond Head from the Punchbowl lookouts by controlling building heights in Waikiki that would impinge on this view corridor.	X		

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<p>(12) Emphasize a pedestrian-orientation in Waikiki. Acknowledge, enhance and promote the pedestrian experience to benefit both commercial establishments and the community as a whole. Walkway systems shall be complemented by adjacent landscaping, open spaces, entryways, inviting uses at the ground level, street furniture, and human-scaled architectural details. Where appropriate, open spaces should be actively utilized to promote the pedestrian experience.</p>	<p><b>X</b></p>		
<p>(13) Provide people-oriented, interactive, landscaped open spaces to offset the high-density urban ambience. Open spaces are intended to serve a variety of objectives including visual relief, pedestrian orientation, social interaction, and fundamentally to promote a sense of “Hawaiianness” within the district. Open spaces, pedestrian pathways and other ground level features should be generously supplemented with landscaping and water features to enhance their value, contribute to a lush, tropical setting and promote a Hawaiian sense of place.</p>	<p><b>X</b></p>		
<p>(14) Support a complementary relationship between Waikiki and the convention center.</p>			<p><b>X</b></p>

**Discussion:** The Proposed Project will support the objectives and policies related to the Waikīkī Special District.

The Proposed Project intends to align with core tenets of sustainable and cultural tourism creating a Hawaiian sense of place. The Proposed Project will seek to celebrate, promote, and perpetuate Hawai‘i’s natural environment utilizing architectural features that reflect attitudes, experiences, place, spaces, and symbols which contribute to a Hawaiian sense of place. The Proposed Project will revitalize the Project Site, which has not been fully utilized since 2007. The Proposed Project will be developed with due consideration given to the existing ambience and character at the “gate” of Waikīkī. More specifically, the Proposed Project will provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikīkī, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikīkī workers, businesses, residents, and tourists. This provides an opportunity for the Applicant to maximize and optimize the current space available to implement the Proposed Project in line with the objectives of the Waikīkī Special District. In addition, the venue will be open-air, complementing the natural beauty of Hawai‘i and preventing significant public views from being blocked.

**§ 21-9.80-3 Prominent view corridors and historic properties**

<p>(1) Development should preserve, maintain, and enhance historic properties whenever possible. Special District Permit (Major) applications involving building over 50 years old shall be submitted to the State Department of Land and Natural Resources (DLNR) State Historic Preservation Division (SHPD) for review and comment.</p>	<p><b>X</b></p>		
<p>(2) Development should preserve, maintain, and enhance prominent view corridors whenever possible. Additional yard area and spacing between buildings may be required by the director, in connection with the issuance of special district permits, and the council or the director, in connection with planned development-resort and planned development-apartment approvals pursuant to § <a href="#">21-2.110-2</a>, to protect these significant views</p>	<p><b>X</b></p>		

**Discussion:** The Proposed Project will support the objectives and policies related to prominent view corridors and historic properties.

The Proposed Project intends to pursue responsible development of the Project Site, while preserving, maintaining, and enhancing prominent view corridors.

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### **4.2.4. City and County of Honolulu Zoning**

The purpose and intent of the City and County of Honolulu Land Use Ordinance (LUO) is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the O'ahu General Plan and development plans, and to promote and protect the public health, safety, and welfare. The LUO promotes and protects the public by:

- Minimizing adverse effects from the use of inappropriate location, use or design of sites and structures;
- Conserving the city's natural, historic, and scenic resources to encourage design which enhances the physical form of the city; and
- Assisting the public in identifying and understanding regulations affecting the development and use of land.

The LUO additionally provides reasonable development and design standards that are applicable to the location, height and size of structures, yard areas, off-street parking facilities, as well as open spaces, and the use of structures and land for agricultural, industrial, residential, and other uses (ROH, Chapter 21).

#### **Discussion:**

Waikīkī is designated as a special district by the City and County of Honolulu and is organized by various precincts. According to the CCH LUO, the Project Site is situated within the Resort Mixed-Use Precinct (Waikīkī Special District) zoning designation (See Figure 4-3). On O'ahu, the City & County of Honolulu, Department of Planning and Permitting would generally administer zoning regulations under its Land Use Ordinance. The Proposed Project is subject to development standards and requirements for the Resort Mixed-Use Precinct. The Proposed Project is required to go through the Waikīkī Special District design and permitting process. Thus, it will be designed appropriately to meet the intent of the district design guidelines and objectives.

### **4.3. Permits and Approvals**

The following is a list of permits, approvals, and reviews that may be required prior to construction and operation of the Proposed Project.

#### **Federal**

Federal Emergency Management Agency

- Title 44 of the Code of Federal Regulations (44CFR) Compliance

Federal Aviation Administration

- FAA Form 7460.1

#### **State of Hawaii**

Department of Land and Natural Resources

- Chapter 6E, HRS, State Historic Preservation Law

Department of Health

- Disability and Communication Access Board
- Pollution Control - Noise Permit

**City and County of Honolulu**



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Department of Planning and Permitting

- Building Permit
- Grading Permit/Trenching Permit
- Erosion and Sediment Control Plan
- Certificate of Occupancy
- Construction Dewatering
- Wastewater Sewer Connection
- Stormwater Drain Connection

Board of Water Supply

- Water Connection
- Water System Facilities Charges

Honolulu Fire Department

- Plan Review

Department of Environmental Services

- Sewer Connection

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# CHAPTER 5: ALTERNATIVES

## 5. ALTERNATIVES

Hawai'i Administrative Rules (HAR) § 11-200.1-18(d)(7) requires an environmental assessment to identify and consider alternative means to realize the purpose and need of the Proposed Project.

Under the context of the Proposed Action as evaluated under this Environmental Assessment, alternatives eliminated from further consideration include no action, alternative design schemes, and previously proposed developments.

### 5.1 No Action Alternative

Under the No Action Alternative, the Proposed Project would not be constructed, and the project site would remain in its existing condition.

The No Action Alternative would preclude permit approvals, as well as costs for design and construction which would otherwise be required for the Proposed Project. The No Action Alternative would also avoid insignificant construction- and operational-driven environmental impacts that could occur as the result of balance of implementing the Proposed Project and appropriate mitigation measures, as discussed in Chapter 3.

The No Action Alternative would also fail to align with purpose and need / goals and objectives of the Proposed Project that are intended to promote the core tenets of sustainable and cultural tourism while also reestablishing a Hawaiian sense of place within the Waikīkī area. Furthermore, the benefits associated with the Proposed Project in terms of fostering local collaboration and strengthening community resilience while celebrating, promoting, and perpetuating Hawai'i's natural environment and host culture would not be realized under the No Action Alternative.

### 5.2 Alternative Design Schemes

In the course of developing the Proposed Project, the design team considered several different alternative design schemes to meet the goals and objectives of the Proposed Project, while considering existing environmental conditions such as circulation and noise. Specifically, an alternative access point and various architectural schemes were considered under the scope of the Proposed Project; however, the proposed design scheme as defined in Chapter 2 of this DEA was selected to serve as the basis of impact assessment.

#### 5.2.1 Secondary Property Access

During preliminary / early design of the Proposed Project, a secondary vehicular access point was evaluated – this secondary access point was proposed to be constructed from Maluhia Road along the western portion of the Project Site and was intended to serve as a back of house entryway for daily operations and maintenance. However, construction of this driveway would necessitate obtaining an easement on the neighboring Fort DeRussy property, which is federally owned, and would result in the Proposed Action being subjected to a host of federal regulations and coordination with the United States Army Garrison. Pursuing this secondary access point further was deemed infeasible and was consequently abandoned, and was summarily dismissed from further consideration.

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By contrast, a secondary access point from the existing Luana hotel is also being considered. While not fully negotiated, the concept design that considers leveraging a Luana access point allows for a potential connection between the existing hotel and the Project Site. This connectivity would allow for guests of the hotel to enter the venue through the hotel grounds and create the potential for a more collaborative entertainment venue, building off of synergy with the neighboring Luana property. This additional accessway will continue to be explored by the design team, as project design efforts continue to progress.

### **5.2.2 Design and Acoustics**

The design and development team looked at several locations for the stage and the direction of the seating. Ultimately the arrangement proposed proved to be the best in terms of access and sound mitigation. Having the stage as far as possible from the street and neighboring buildings and moving away from the traditional large stage speakers allows the proposed project to utilize smaller speakers near the audience and mitigate sound at the property lines. Utilizing the building to block and deadened sound at the street and adjoining property provided additional sound mitigation and the optimal building configuration. This configuration also allows the neighboring park to provide a natural background to the venue and helps preserve the openness of the area. In terms of massing the park remains open and the building ramps up to the existing Luana high-rise providing a buffer between the open park and the existing building. The height and slope of the roof further emphasizes this and projects a design consistent with tropical design and the intent of the Waikiki Special District Design Guidelines. The projects use as a cultural entertainment venue encourages the use of tropical Hawaiian design to create the sense of place and traditional use of the area.

### **5.3 Previously Proposed Developments**

A Draft Environmental Assessment was published in 2016 for the Park Kālia Waikīkī Condo-Hotel project. The project, as proposed by Best Hospitality, LLC., included the demolition of the existing buildings on site and construction of a 26-floor, 325-foot high, 170-unit condo-hotel. The proposed design also included a restaurant, wedding chapel, and several other hotel amenities. Based on the DEA, a Finding of No Significant Impact was anticipated. However, a Final Environmental Assessment was not completed, and the proposed condo-hotel project was not pursued further. Notwithstanding, the impacts of this previously considered project would have been greater than the Proposed Action.

# CHAPTER 6: ANTICIPATED DETERMINATION OF FONSI

## 6. ANTICIPATED DETERMINATION OF FONSI

The Proposed Project involves the construction and operation of a new open-air cultural entertainment venue. Potential impacts of the Proposed Project have been evaluated in accordance with the significance criteria of §11-200.1-13, HAR. Discussion of the Proposed Project's conformance to the criteria is presented as follows:

(1) *Irrevocably commit a natural, cultural, or historic resource;*

The Project Site is the existing site for the former Kyo-Ya restaurant and parking structure. Since the Project Site is nearly entirely developed, it is unlikely that there are any natural, cultural, or historic resources and/or human skeletal remains potentially subject to irrevocable loss as a result of construction and operation of the Proposed Project as discussed in Section 3.5, 3.6, and 3.7 of this EA. In the event of an unexpected discovery of historic or archaeological resources, the SHPD will be immediately notified for appropriate response and action.

(2) *Curtail the range of beneficial uses of the environment;*

The Proposed Project will not curtail the range of beneficial uses of the environment. The operations and uses associated with the Proposed Project are generally consistent with the character of the surrounding region and are anticipated to seamlessly integrate into the Waikīkī district.

(3) *Conflict with the State's environmental policies or long-term environmental goals established by law;*

The State's environmental policies enumerated in Chapter 344, HRS promote the conservation of natural resources, and an enhanced quality of life for all citizens. The Proposed Project does not conflict with the State's long-term environmental policies, goals, or guidelines as expressed in Chapter 344, HRS, and will not significantly impact natural resources due to the fact that the Project Site is already disturbed and has been subject to intense human utilization since the Project Site was developed for current uses.

(4) *Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State;*

In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities, but not at a level that would generate any significant population expansion.

In the long-term, the Proposed Project will provide positive social and economic impacts to the community. The Proposed Project will seek to celebrate, promote, and perpetuate Hawai'i's natural environment through the practice of sustainable and

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cultural tourism. These practices will allow for the Hawaiian culture to be shared with visitors in such a way that respects Hawai'i's natural and human resources. Additionally, the Proposed Project is anticipated to provide new employment opportunities for the community.

(5) *Have a substantial adverse effect on public health;*

No identifiable adverse short- nor long-term impacts on public-health are anticipated to result from the construction and operation of the Proposed Project. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated; however, they will be temporary in nature and will comply with Federal, State, and County regulations. Moreover, the implementation of various mitigation measures as discussed in Chapter 3 will help to ensure that the Proposed Project will not negatively affect public health.

(6) *Involve adverse secondary impacts, such as population changes or effects on public facilities;*

Substantial impacts to public facilities are not anticipated to result from the construction and operation of the Proposed Project. Moreover, the Proposed Project is not anticipated to induce population growth in the area or region, nor will it increase overall tourism to the island of O'ahu. The Proposed Project is intended to provide entertainment opportunities to this section of Waikīkī. Existing public water, wastewater, drainage, and utility infrastructure have served the area for many years and are expected to have sufficient capacity to serve project demands. Agencies with jurisdiction over their respective infrastructure systems will be consulted as the Proposed Project proceeds to assure that it can be accommodated.

(7) *Involve a substantial degradation of environmental quality;*

The Proposed Project is not anticipated to substantially degrade environmental quality. Long-term impacts to air and water quality, noise levels and natural resources will be minimal. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, but will be temporary and will comply with State and County regulations. Moreover, the implementation of various mitigation measures as discussed in Chapter 3 will help to ensure that the Proposed Project will not result in the degradation of environmental quality.

(8) *Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;*

The Proposed Project will not have any substantial negative secondary impacts on the environment. Implementation of the Proposed Project will not commit the applicant to any other larger actions and will not generate any additional actions that could have a cumulative effect on the environment.

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- (9) *Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;*

No rare, threatened and/or endangered flora or fauna species are known to inhabit the project area. However, the White Tern (*Gygis alba*) is known to occur within the vicinity of the project area. White Terns are an indigenous species of sea bird which are recognized as threatened at the state level and are fairly common in the Waikīkī region. The Proposed Action is not anticipated to have any adverse effects on rare, threatened, or endangered species or any critical habitat areas.

- (10) *Have a substantial adverse effect on air or water quality or ambient noise levels;*

No long-term significant impacts to air quality, water quality, or noise levels within the Project Site are anticipated as a result of the construction and operation of the Proposed Project.

Land disturbing activities include demolition, foundation work, and potential utility repairs and upgrades. Construction and operation of the new facilities will be performed in accordance with Federal, State and County regulations, thereby minimizing potential impacts to air and water quality.

In the short-term, noise from construction activities such as demolition, clearing and paving will be unavoidable. The increase in noise level will vary according to the particular phase of construction. Noise may also increase as a result of operating power equipment during the construction period.

Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations. These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits.

In the long-term, significant noise impacts can be mitigated through design and speaker placement as discussed in Section 3.9.

- (11) *Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;*

No short- nor long-term significant impacts are anticipated as the Project Site is not located within an environmentally sensitive area.

According to the FIRM, the Project Site is situated within Zone AO. Zone AO includes areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. In the

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short- and long-term, no significant impacts on flood hazards on the Proposed Project are anticipated as the proposed improvements are not anticipated to increase flood risks or cause any adverse flood-related impacts at the project area. The Proposed Project will be designed and constructed to applicable flood zone requirements.

- (12) *Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies; or*

The Proposed Project will not result in significant impacts to view planes identified in County or State plans or studies. Moreover, the Proposed Project is not expected to adversely affect scenic and visual resources in the project area. The Proposed Project will not degrade lateral coastal views or mauka-makai views from areas in the vicinity of the site. The vertical components of the Proposed Project will be consistent with the visual character of the surrounding uses in terms of height and character of the surrounding region.

- (13) *Require substantial energy consumption or emit substantial greenhouse gases.*

The Proposed Project will not require substantial energy consumption nor produce substantial GHG emissions. Additionally, it is anticipated that the Proposed Project will implement energy efficient fixtures as feasible to reduce overall energy consumption.



# CHAPTER 7: CONSULTATION

## 7. CONSULTATION

### 7.1 Early Consultation/Pre-Assessment Package

The Early Consultation/Pre-Assessment process included efforts to inform the community and solicit input in scoping the EA for the Proposed Project. The Early Consultation/Pre-Assessment Package for the Proposed Project was mailed out on April 10, 2023, to the following agencies, organizations, and stakeholders listed below in preparation of the EA process. Consultation was conducted to solicit comments regarding potential concerns and requirements pursuant to refining the scope of EA documentation. Parties that formally replied during the Early Consultation/Pre-Assessment process are indicated by a “✓” below. All written comments are reproduced in Appendix G.

#### **Federal Agencies**

U.S. Army Corps of Engineers, Honolulu District  
U.S. Fish and Wildlife Services, Pacific Islands Fish and Wildlife Office  
U.S. Department of Army

#### **Federal Representatives**

Senator Mazie Hirono  
Senator Brian Schatz  
Representative Jill Tokuda  
Representative Ed Case

#### **State of Hawai'i Agencies**

- ✓ Department of Accounting and General Services
- Department of Business, Economic Development and Tourism (DBEDT)
- DBEDT, Hawai'i State Energy Office
- DBEDT, Land Use Commission
- DBEDT, Creative Industries Division
- DBEDT, Office of Planning and Sustainable Development (OPSD)
- OPSD, Environmental Review Program
- DBEDT, Hawaii Tourism Authority
- DBEDT, Business Development and Support Division
- ✓ Department of Defense
- ✓ Department of Education
- Department of Health (DOH)
- DOH, Clean Water Branch
- DOH, Environmental Management Division
- DOH, Hazard Evaluation and Emergency Response Office
- DOH, Wastewater Branch
- DOH, Safe Drinking Water Branch
- ✓ Department of Land and Natural Resources (DLNR)<sup>1</sup>
- DLNR, Office of Coastal and Conservation Lands
- DLNR, Historic Preservation Division

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<sup>1</sup> The DLNR, Engineering Division provided comments on the Early Consultation package through the DLNR.

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- ✓ Department of Hawaiian Home Lands
- ✓ Department of Transportation (DOT)
- DOT, Highways Division
- DOT, Airports Division
- Office of Hawaiian Affairs

**State Representatives**

Senator Sharon Moriwaki  
Representative Adrian Tam

**City and County of Honolulu Agencies**

- ✓ Board of Water Supply
- Department of Community Services
- ✓ Department of Design and Construction
- Department of Environmental Services
- ✓ Department of Facility Maintenance
- Department of Parks and Recreation
- ✓ Department of Planning and Permitting
- ✓ Department of Transportation Services
- ✓ Honolulu Fire Department
- ✓ Honolulu Police Department
- Office of Climate Change, Sustainability, and Resiliency
- Office of the Mayor

**City Council**

Councilmember Tommy Waters

**Other Parties**

- Neighborhood Board No. 9 - Waikīkī
- Hawai'i State Library
- Waikīkī – Kapahulu Public Library
- Hawaiian Telcom
- Hawai'i Gas
- ✓ Hawaiian Electric Company
- ✓ Spectrum Hawai'i

# CHAPTER 8: REFERENCES

## 8. REFERENCES

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## Appendix A:

Archaeological Literature Review and Field  
Inspection of a 0.66-Acre Project Area,  
Waikīkī Ahupua'a, Waikīkī District, O'ahu  
Island TMK: [1] 2-6-006:001 & 004

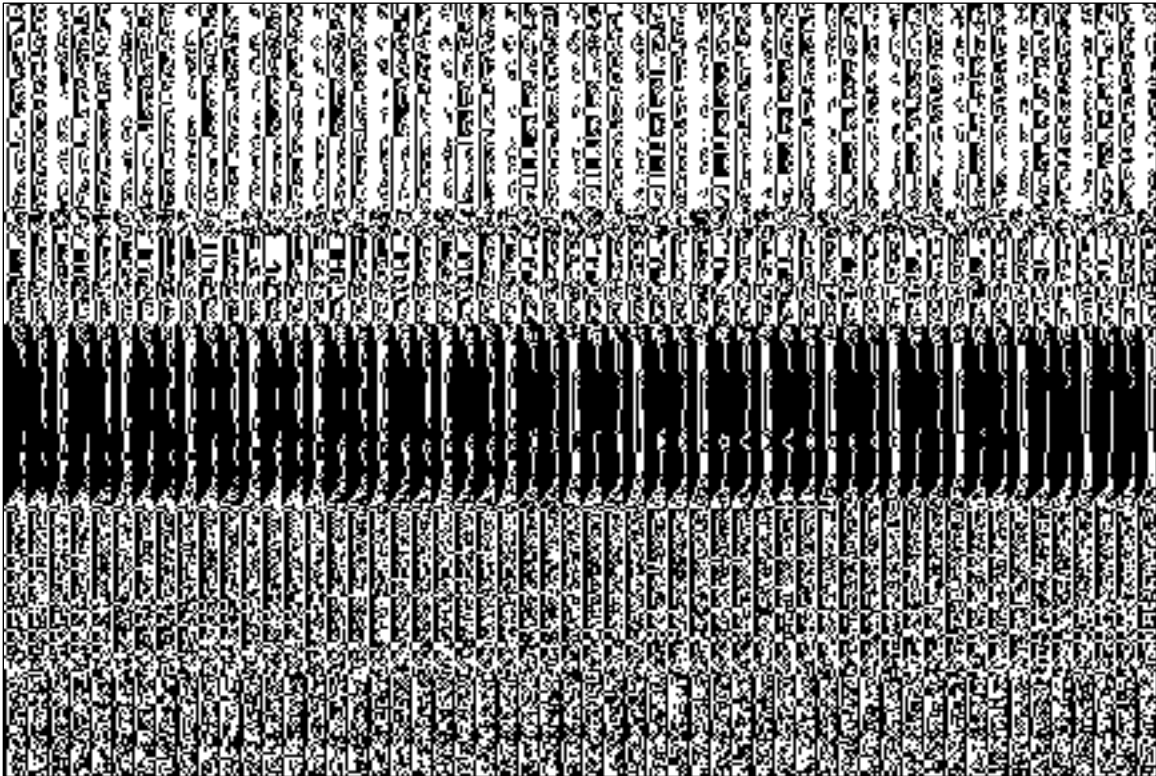




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**DRAFT**

**Archaeological Literature Review and Field Inspection  
of a 0.66-Acre Project Area,  
Waikīkī Ahupua‘a, Waikīkī District, O‘ahu Island  
TMK: [1] 2-6-006:001 & 004**



Overview of the project area (facing west)

Prepared for  
Wilson Okamoto Corporation  
Honolulu, Hawai‘i

Prepared by  
Christopher M. Monahan, Ph.D., and  
Trisha K. Watson, Ph.D.



Honolulu, Hawai‘i  
November 2022

## Management Summary

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This report was completed for Wilson Okamoto Corporation in support of its environmental review process for a proposed Outdoor Lū‘au / Celebration Venue at 2057 Kalākaua Avenue, Waikīkī Ahupua‘a, Waikīkī District, Island of O‘ahu, Hawai‘i. The project area consists of two parcels totaling 0.66 acres at TMK (1) 2-6-006:001 and 004. The private landowner is Best Hospitality LLC. The project area is in the western end of Waikīkī on the west (makai) side of Kalākaua Avenue, about one block south of its intersection with Kūhiō Avenue (the other main avenue through the heart of Waikīkī); the subject parcels are bounded to the east by Kalākaua Avenue, to the south and west by the Fort DeRussy Military Reservation and to the north by the Luana Waikiki Condominium / Hotel (TMK: [1] 2-6-006:002).

The objectives of this Archaeological Literature Review and Field Inspection (ALRFI) were: (1) documentation and description of the parcel’s land-use history in the context of its traditional Hawaiian character as well as its historic-period changes; (2) identification of any historic properties or component features in the project area; and (3) providing information relevant to the likelihood of encountering historically-significant cultural deposits in subsurface context during future construction. This ALRFI is not an archaeological inventory survey (AIS), and it is not intended for formal review by the State Historic Preservation Division (SHPD). It may be used, however, to support the project proponent’s consultation with the SHPD in compliance with Hawai‘i Revised Statutes (HRS) § 6E-8 and Hawai‘i Administrative Rules (HAR) § 13-284.

The results of this ALRFI are: (1) A previous archaeological investigation of the current project area that included limited subsurface testing (i.e., one backhoe trench) exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbs; no traditional Hawaiian materials were observed by this prior study (Stark et al. 2015); (2) The immediate vicinity of the project area was once part of an extensive network of Hawaiian fishponds and ‘auwai (irrigation ditches and berms, which were eventually drained and filled in around the turn of the twentieth century); (3) Previous archaeological studies in the immediate vicinity have identified numerous subsurface cultural layers from both pre-Contact and historic-period times representing habitations and including human burials and finds of previously-disturbed human skeletal remains; and, (4) No archaeological historic properties were identified during the field inspection, which did not include subsurface testing (excavation).

Based on all available evidence, our recommendations are: (1) The proposed project will have “no effect” on archaeological historic properties located at the ground surface; and (2) The SHPD-Archaeology Branch should be consulted on archaeological matters regarding any subsurface ground disturbance associated with the proposed development project, since numerous historic properties and component features—including fishpond sediments and an ‘auwai system, cultural layers and artifacts from pre-Contact to historic-period times and intact human burials as well as disturbed human skeletal remains—have been documented in subsurface contexts all around the project area.

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## Section 1 Introduction

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### 1.1 Project Background

This report was completed on behalf of Wilson Okamoto Corporation in support of its environmental review process for a proposed Outdoor Lū‘au / Celebration Venue at 2057 Kalākaua Avenue, Waikīkī Ahupua‘a, Waikīkī District, Island of O‘ahu, Hawai‘i (Figure 1 and Figure 2). The project area consists of two parcels totaling 0.66 acres at TMK (1) 2-6-006:001 and 004 (Figure 3). The private landowner is Best Hospitality LLC.

The project area is located in the western end of Waikīkī on the west (makai) side of Kalākaua Avenue, about one block south of its intersection with Kūhiō Avenue (the other main avenue through the heart of Waikīkī); the subject parcels are bounded to the east by Kalākaua Avenue, to the south and west by the Fort DeRussy Military Reservation and to the north by the Luana Waikiki Condominium / Hotel (TMK: [1] 2-6-006:002). The Ala Wai Canal is about 1,000 feet to the east; the shoreline beaches of Waikīkī are about 0.5 miles to the southwest.

The objectives of this Archaeological Literature Review and Field Inspection (ALRFI) are: (1) documentation and description of the parcel’s land-use history in the context of its traditional Hawaiian character as well as its historic-period changes; (2) identification of any historic properties or component features in the project area; and (3) providing information relevant to the likelihood of encountering historically-significant cultural deposits in subsurface context during future construction.

#### 1.1.1 Regulatory Context

This ALRFI is not an archaeological inventory survey (AIS), and it is not intended for formal review by the State Historic Preservation Division (SHPD). It may be used, however, to support the project proponent’s consultation with the SHPD in compliance with Hawai‘i Revised Statutes (HRS) § 6E-8 and Hawai‘i Administrative Rules (HAR) § 13-284.

In 2015, the project area was being considered for a different proposed project (Park Kālia Waikīkī Condo-Hotel Project) that was eventually canceled. In support of an Environmental Assessment (EA) for this previous project, a Cultural Impact Assessment (CIA) and preliminary archaeological review—including the excavation and interpretation of one subsurface trench—were completed (Ishihara et al. 2015; Stark et al. 2015). These reports also provide a thorough review of the cultural and historical and archaeological context of the subject project area.

#### 1.1.2 Overview of Findings

Several relevant findings are summarized in this report: (1) A previous archaeological investigation of the current project area (Stark et al. 2015) that included limited subsurface testing (i.e., one backhoe trench) exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbs; no traditional Hawaiian materials were observed in excavation by Stark et al. (2015); (2) The immediate vicinity of the project area was once part of an extensive network of Hawaiian fishponds and ‘auwai (irrigation ditches and berms, which were eventually drained and filled in around the turn of the twentieth century); (3) Previous archaeological studies in the immediate

vicinity of the project area have identified numerous subsurface cultural layers from both pre-Contact and historic-period times representing habitations and including human burials and finds of previously-disturbed (by historic-period development) human skeletal remains; (4) No archaeological historic properties were identified during the field inspection, which did not include subsurface testing (excavation).

## 1.2 Environmental Setting

### 1.2.1 Natural Environment

The area directly in and around the subject parcel consists of level terrain at an elevation of approximately 5 feet (1.5 meters) above mean sea level.

There are currently no natural streams in or around the subject parcel; drainage in this area was completely changed about 100 years ago—from its traditional Hawaiian character (i.e., wetlands transformed into many fishponds)—by completion of the Ala Wai Canal to the northeast. Mean annual rainfall in the project area is approximately 25–30 inches (635–762 millimeters) (Giambelluca et al. 2013), which equates in Hawai‘i to a semi-arid climate. According to the U.S. Department of Agriculture data, naturally-occurring soils in the project area (Figure 4) consist of Fill land (FL) but Jaucas sand (JaC) is located nearby to the southeast and southwest (Foote et al. 1972; Macdonald et al. 1983). Jaucas sands, in particular, are known to be among the most sensitive soil types in Hawai‘i since they frequently contain traditional (pre-Contact) Hawaiian burials and other historically-significant materials (e.g., artifacts and features in subsurface context representing traditional use of the shoreline such as fishing camps). The archaeological trench excavated in the subject project area by Stark et al. (2015:6) exposed Jaucas sand from 95 centimeters below the ground surface (cmbs) down to 165 cmbs.

There are no naturally-occurring plant varieties in the project area, which was completely cleared (grubbed and graded) in the 1970s and perhaps earlier. All of the plants in the project area have been introduced via landscaping efforts over the past several decades (Guinther and David 2015). As of 2015 (ibid.), one native species was present (i.e., moa [fern] [*Psilotum nudum*]); a few Polynesian introductions were also present (i.e., ‘ōhi‘a ‘ai [*Syzygium malaccense*], kī or ti leaf [*Cordyline fruticosa*] and niu [coconut palm] [*Cocos nucifera*]). Many other introduced (including invasive) species (post-1778) were also noted.

### 1.2.2 Built Environment

The project area is mostly built-out in this densely developed part of Waikīkī. The parcel contains a single, one- and two-story structures with an attached parking garage. Brick and concrete walkways and sidewalks as well as asphalt driveways are also present.



Figure 1. Portion of U.S. Geological Survey (USGS) topographic map (Honolulu quadrangle) showing project area (base map source: USGS online at <http://ngmdb.usgs.gov/topoview>)



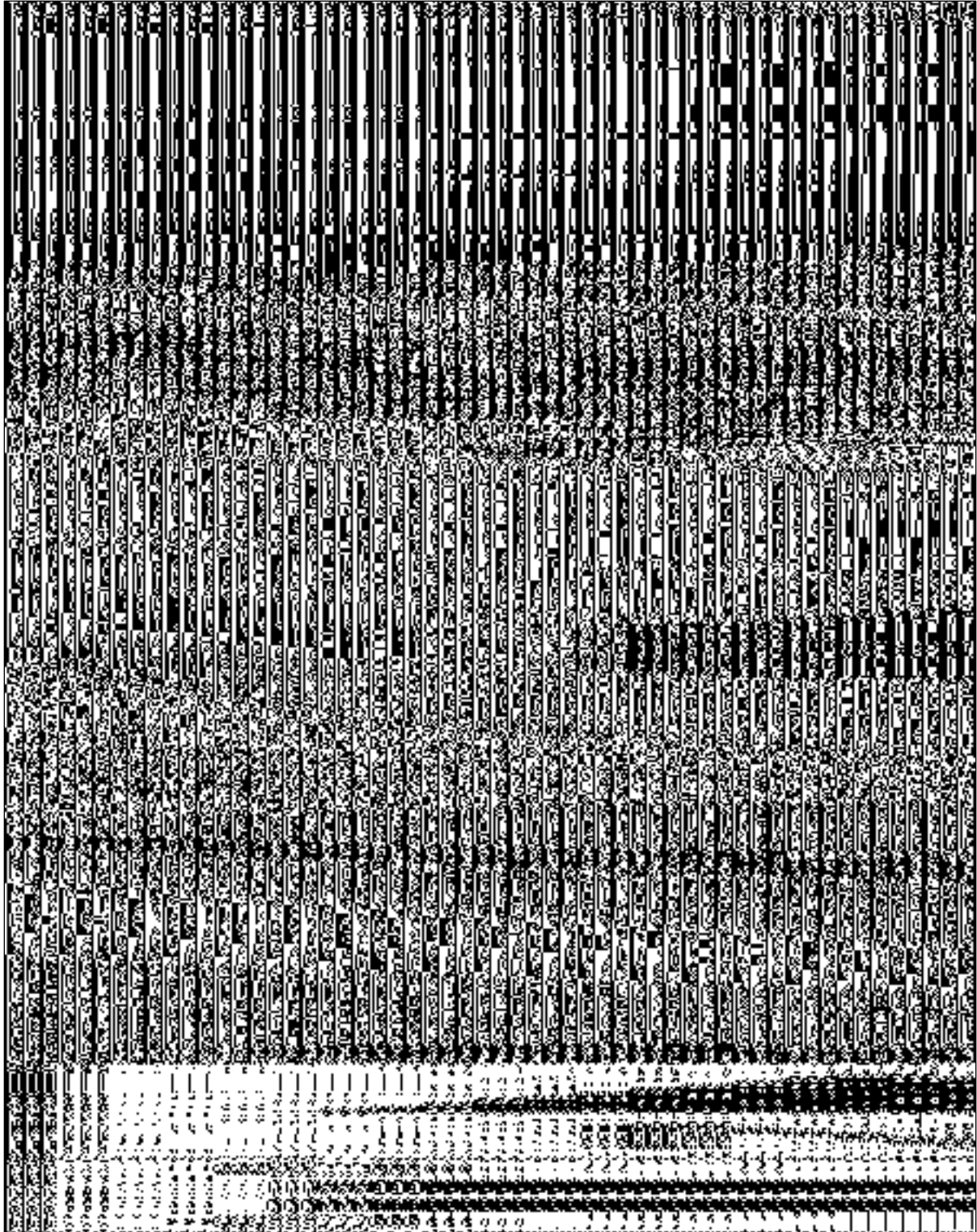


Figure 2. Aerial photograph showing location of project area (base image source: ESRI's ArcMap 10.2)

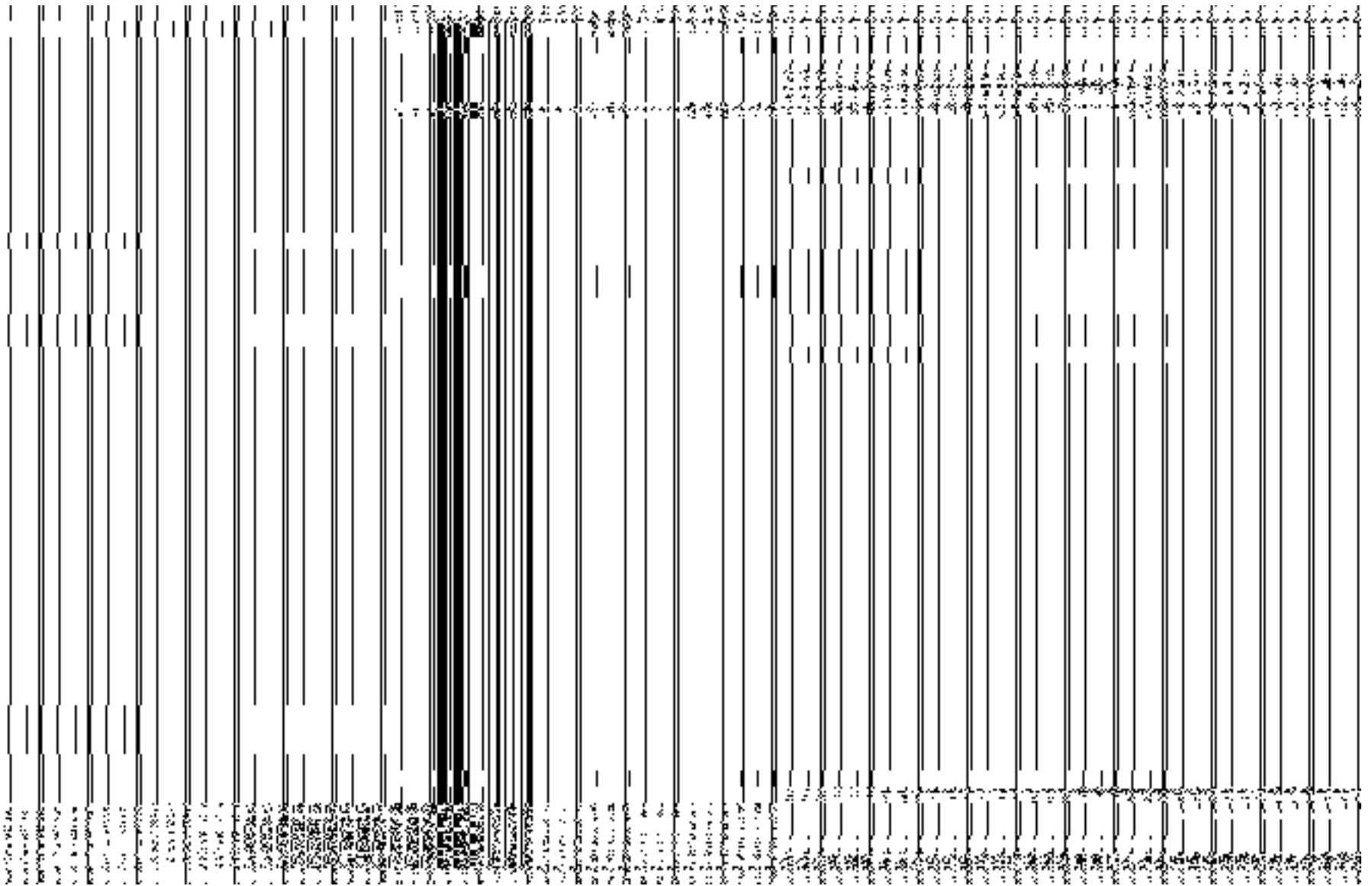


Figure 3. Tax Map Key (TMK): [1] 2-6-006 showing project area (base map source: Hawai‘i TMK Service n.d.)

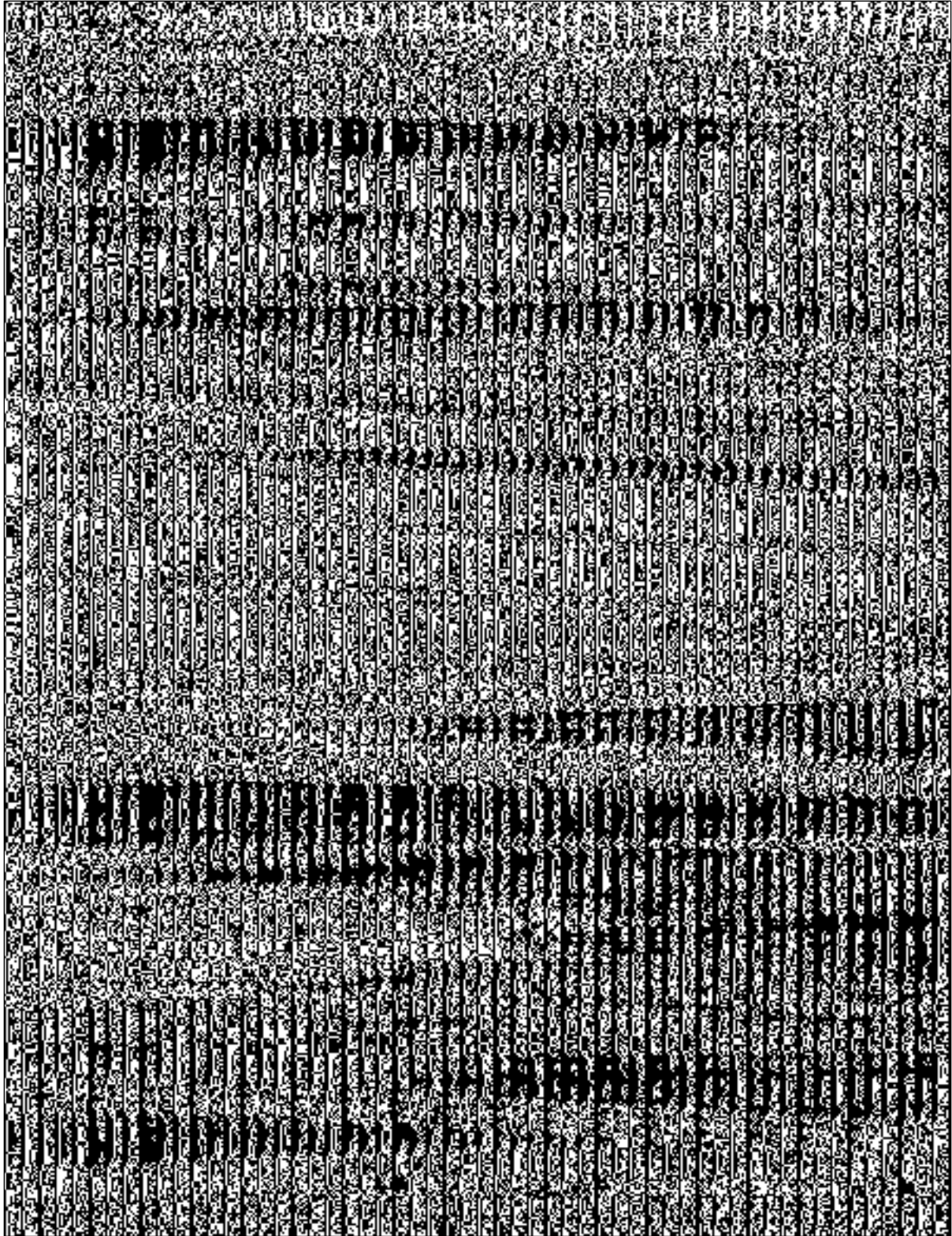


Figure 4. Soil survey data for the project area and environs (soils data from Foote et al. 1972)

## Section 2 Cultural and Historical Context

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This section includes a brief synthesis of relevant cultural and historical information related to the types of land uses in and around the project area from pre-Contact, traditional Hawaiian times into the historic period. Note that this section may be expanded if a formal archaeological inventory survey (AIS) is required.

The main objective of this section, primarily through the analysis of historical documents, maps and aerial images, as well as secondary sources (i.e., other cultural resource management reports), is to provide a project area-specific picture of land use and modification over time. Portions of this section make reference to Ishihara et al.'s (2015) and Stark et al.'s (2015) prior studies of the project area, which provide a chronological framework for major changes in the general area from pre-Contact to late historic-period times.

In addition to conducting a records search at the SHPD, as well as the on-line database of the Environmental Review Program (Office of Planning and Sustainable Development), and referencing Honua's proprietary database, we also utilized these on-line sources to obtain cultural, historical and archaeological data:

- OHA's Papakilo database (<http://papakilodatabase.com/main/main.php>)
- OHA's Kipuka database (<http://kipukadatabase.com/kipuka/>)
- Bernice P. Bishop Museum archaeological site database (<http://has.bishopmuseum.org/index.asp>)
- Bishop's Hawaii Ethnological Notes (<http://data.bishopmuseum.org/HEN/browse.php?stype=3>)
- University of Hawai'i-Mānoa's digital maps (<http://magis.manoa.hawaii.edu/maps/index.html>)
- DAGS' State Land Survey (<http://ags.hawaii.gov/survey/map-search/>)
- Waihona 'Aina website ([www.waihona.com](http://www.waihona.com))
- Digital newspaper archive "Chronicling America, Historic American Newspapers" (<http://chroniclingamerica.loc.gov/lccn/sn82014681/>)
- Hawai'i State Archives digital collections (<http://archives1.dags.hawaii.gov/>)
- U.S. Library of Congress digital map collections (<https://www.loc.gov/maps/>)
- USGS Information Service, including digital map collections (<https://nationalmap.gov/historical/index.html>)
- AVA Konohiki's website (<http://www.avakonohiki.org/>)

### 2.1 Hawaiian Cultural Landscape

Traditionally, Waikīkī was a population center with extensive inland agricultural fields, fishponds and a fertile fringing reef. Waikīkī translates as "spouting water," said to be named for the pūnāwai (fresh-water springs) and wetlands that once covered the area (Pukui et al. 1974:223). Multiple streams flowed from the valleys of Makiki, Mānoa and Pālolo and provided fresh water to irrigated taro fields (lo'i) and other cultivants such as sweet potatoes, bananas, and sugar cane. The coastal areas were generally drier than inland zones and therefore the irrigation systems provided the means for wetland agricultural complexes throughout the plains of Waikīkī. Inland fresh springs were available in Mō'ili'ili and Punahou. The coast of Waikīkī had coconut groves, fishponds, abundant marine resources, and excellent canoe landings and surfing. Inhabitants of Waikīkī lived near the coast, on the fringes of lowland fields, and in the inland valleys, generally farming the areas in between. Waikīkī's bounty made it a popular area from pre-Contact times to the modern era (Handy 1940; Handy and Handy 1972).

Waikīkī has long been a residence of Hawaiian royalty or Ali'i Nui (Beckwith 1970; Kamakau 1992; Kanahale 1995; Fornander 1996), including O'ahu-born Mā'ilikūhāhi, a late pre-Contact supreme ruler of O'ahu birthed at Kūkaniloko. In historic times, the area was home to Kamehameha the Great, Queen Ka'ahumanu, King Kamehameha II (Liholiho), Kamehameha IV (Alexander Liholiho) and Queen Emma, Kamehameha V (Lot Kamehameha), King Lunalilo (William C. Lunalilo), Princess Ruth (Ruth Keanolani Kanahohoa Ke'elikolani), Princess Pauahi (Bernice Pauahi Bishop), King David Kalākaua and Queen Kapi'olani, Princess Likelike (Miriam Likelike Cleghorn), Archibald Cleghorn and Princess Ka'iulani (Victoria Kawekiu Ka'iulani).

Because of its excellent canoe landings and relatively calm offshore swells and surf, Waikīkī has also been the location of several key battles in Hawaiian history. Some famous battles included the forces of Mā'ilikūhāhi, Kahekili of Maui (who ruled O'ahu briefly starting in the 1780s) and Kamehameha I in 1795 (see Thurman et al. 2020:10–12 for more details).

Regarding place names in Waikīkī, 'ili (a common type of land division smaller than an ahupua'a) were numerous and sometimes changed frequently depending on political and economic factors. Historical maps indicate the current project area was west of the 'ili of Helumoa and Keōmuku in Kālia 'Ili. Helumoa, translated by Pukui et al. (1974:44) as "chicken scratch," was centered on the Royal Hawaiian Hotel and Shopping Center area. The reference to the moa, or chicken, alludes to the supernatural chicken Ka'au-hele-moa (ibid.) that flew between Ka'au Crater in Pālolo and Waikīkī. Keōmuku, just east of the current project, translates as "the shortened sand" (ibid.:108). Kālia, "waited for" (ibid.:77), was a relatively large 'ili and the name of a stream.

As discussed in more detail below, the project area is also located along the eastern boundary of a fishpond known as Loko Paweo (or Pāweo) II in an area of wetlands and many other fishponds with an extensive network of 'auwai (traditional irrigation ditches) used to manage surface water in this area. Pukui et al. (1974:182) do not include this fishpond name (i.e., Loko Pāweo) but translate a place name in Kaua'i known as Pāweo as "turn aside."

Waikīkī was described by early European explorers as bountiful land with large villages, ponds teeming with wildlife, and a high degree of agricultural cultivation (Vancouver 1978; Menzies 1920). The first record of Europeans visiting Waikīkī, which they referred to as "Whitette Bay," was in 1786 during the voyage of Portlock and Dixon (Fitzpatrick 1987:34). Waikīkī was again visited by Vancouver in 1793 (see Thurman et al. 2020:17 for more details).

Figure 5, a portion of 1817 map (which is not particularly accurate and difficult to georeference with specificity), shows the project area adjacent to a major trail traversing this part of western Waikīkī. This map also shows a dense concentration of habitation, agricultural and aquacultural features throughout the general vicinity.

Figure 6, a portion of 1825 map (also relatively difficult to accurately georeference) shows the project area adjacent to what may be a coconut grove, in the context of multiple fishponds.

Figure 7, a portion of 1855 map, shows the project in a dense concentration of fishponds.

Figure 8, an undated historic-period photograph, shows the fishponds in Kālia 'Ili in and around the current project area.

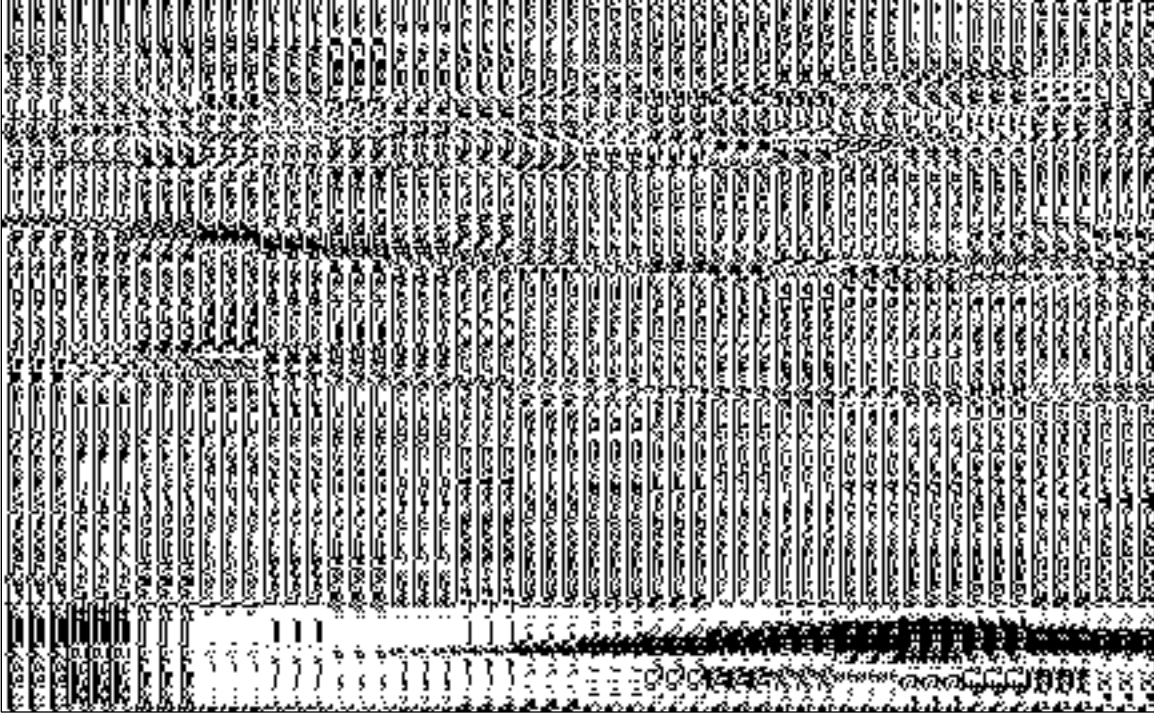


Figure 5. Portion of 1817 Kotzebue map (Fitzpatrick 1987:48-9) with project area location

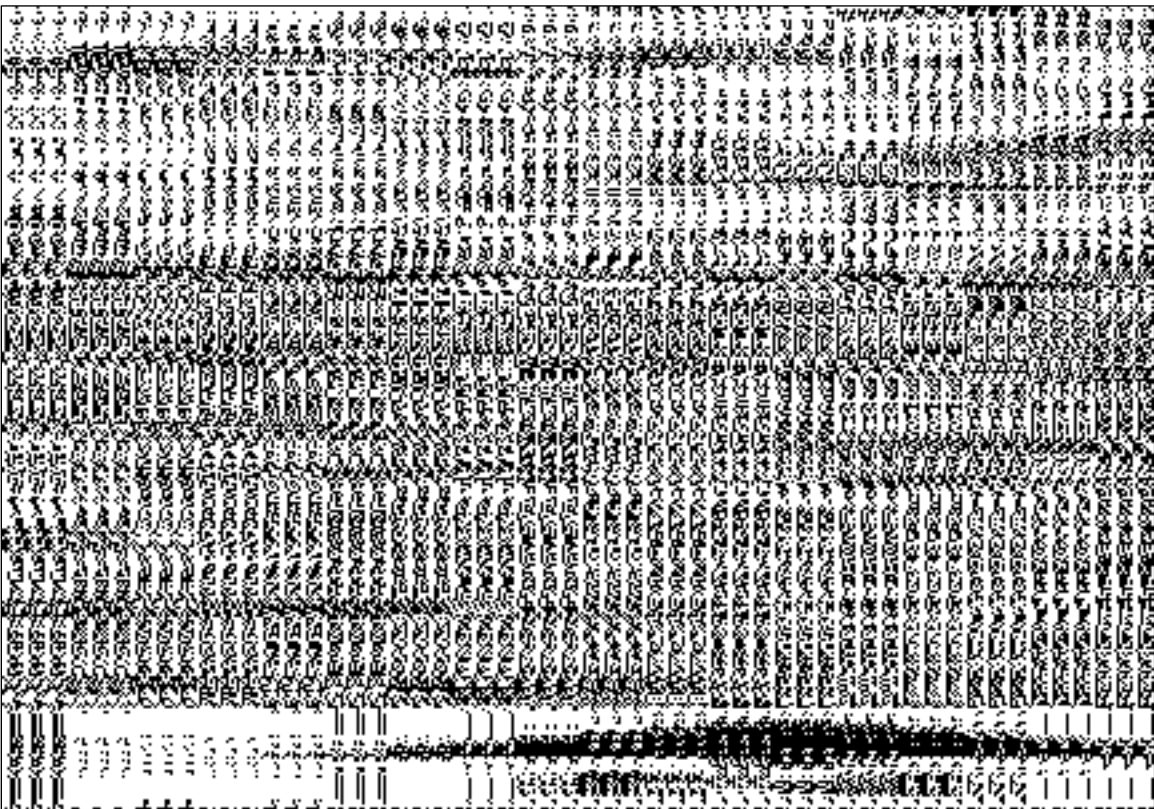


Figure 6. Portion of 1825 Malden map (Fitzpatrick 1987:62-3) with project area location



Figure 7. Portion of 1855 La Passe map (Fitzpatrick 1987:82–3) with project area location

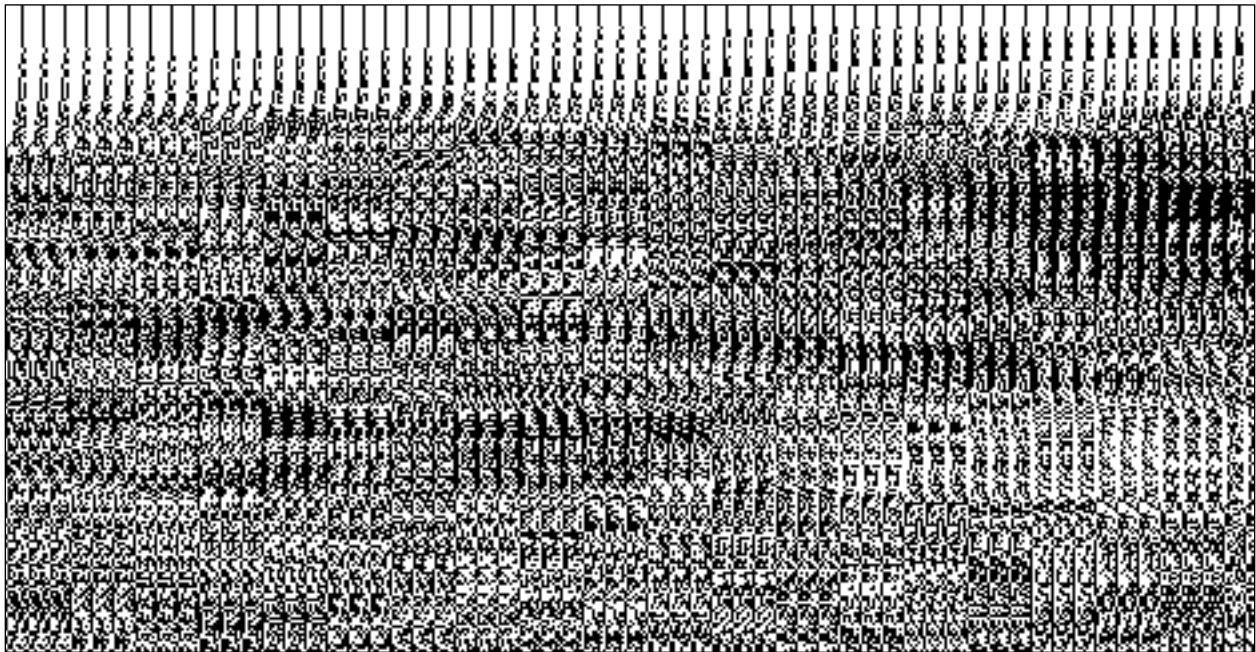


Figure 8. View facing east (Diamond Head) of fishponds in Kālia 'Ili (vicinity of project area); undated photograph from Hawai'i State Archives

## 2.2 Historic Period

In 1809, Kamehameha I moved his base of operations from Helumoa in Waikīkī to near the mouth of Nu‘uanu Stream in Honolulu (Daws 2006); thereafter, a large portion of the population moved from Waikīkī to Honolulu. Coupled with the decrease in the native Hawaiian population due to the effects of introduced European and Asian diseases, the lands of Waikīkī were not being maintained or as well managed as they had once been. In the mid- to late- 1800s, Chinese and Japanese rice farmers revived the use of the old agricultural lands to grow rice and raise certain varieties of fish and ducks in the wetlands of Waikīkī (Hibbard and Franzen 1986).

A summary of the Māhele and other nineteenth-century land awards, sales and tenancy for Waikīkī in its entirety is extremely complex and beyond the scope of this report. Relevant data for the project area and immediate surrounding land are discussed below (see Section 2.2.1).

The natural environment of Waikīkī changed drastically in the early twentieth century, as the many fishponds and wetlands proved to be a breeding grounds for introduced mosquitoes. It was estimated that, in the first decades on the twentieth century, approximately 85% of modern Waikīkī, west of Lewers Street and inland of Kalākaua Avenue, was under water. In 1906, due to the continued threat of disease from mosquitoes, the Territorial Board of Health decided that an area well over 600-acres in size throughout Waikīkī be filled and the Ala Wai Canal be built to drain the area as part of a Waikīkī Land Reclamation project (Pinkham 1906; Feeser 2006). Historical map shows the fishponds in and adjacent to the current project area were still in existence at this time, but were filled in during the 1920s.

The Ala Wai Canal was constructed from 1921 to 1924 (Hibbard and Franzen 1986:93); with the landscape of Waikīkī dramatically altered to be of more commercial use, further development quickly ensued.

Also in the early twentieth century, more than 70 acres in Kālia—bordering the current project area to the west—was acquired by the U.S. War Department for the Fort DeRussy military reservation. It served as a coastal defense base to protect Honolulu and Pearl Harbor (Char n.d.). The reservation was constructed in the area of several Hawaiian fishponds, which were soon filled in.

Ishihara et al. (2015:36, 40) provide some details on Fort DeRussy’s origins and its impact on the Hawaiian landscape:

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 Brigadier General 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 . . .

Initial development of Fort DeRussy focused on the filling in of fishponds near the coast (Loko Kaihikapu, Loko Kapu‘uiki, a portion of Loko Paweo I, and possibly Loko Waiku‘apu‘u) . . . A 1910 U.S. Engineer’s map of Waikīkī shows the development of roads and open space in the southern half of Fort DeRussy, although the northern ponds were still present . . . Filling and development proceeded at a rapid pace; a 1919 War Department map shows a network of roads and buildings on Fort DeRussy, with only a portion of the Kaipuni fishponds still remaining . . . In 1928, the last of the fishponds (a portion of the Kaipuni complex) at Fort DeRussy were filled with coral spoil from the reef areas at the mouth of the Ala Wai Canal . . . Between 1943 and 1953 the northern portion of Fort DeRussy had been further developed and Ala Moana Boulevard (previously known as Beach Road) had been extended from Kālia Road to Kalākaua Avenue. The west and southwest portions of the project area are bordered by a pre-Contact and post-Contact *‘auwai* (irrigation ditch) and bund system.

The early 1900s also saw the construction of grand residential houses, bathhouses, and hotels in Waikīkī. The Moana Hotel was opened in 1901. The Seaside Hotel opened in 1906 at Helumoa, which later became the location of the Royal Hawaiian Hotel in 1927 (Hibbard and Franzen 1986). The ancient trail into Waikīkī was made into a formal carriageway in the 1860s, eventually becoming Kalākaua Avenue (ibid.:22). With these amenities and easy access, Waikīkī began to be a preferred destination.

Many structures of the Seaside Hotel and Outrigger Canoe Club were demolished in the 1920s to make way for the Royal Hawaiian Hotel, which opened on February 1, 1927. The Royal Hawaiian Hotel became the tallest privately owned building in the Territory at that time, with a maximum height of 150 feet (ibid.:99).

The era of opulence ended on December 7, 1941, when Japanese planes flew alongside Waikīkī Beach on their way to Pearl Harbor. During World War II, under martial law, the Navy recreation and morale office leased The Royal Hawaiian, transforming the resort into a major rest and relaxation center for the Navy personnel. The resort was eventually restored to its pre-war elegance in 1947.

### **2.2.1 Māhele Documentation**

In the 1840s, private property was introduced into Hawaiian society through formation of the Board of Commissioners to Quiet Land Titles and the adoption of the Great Māhele (the division of Hawaiian lands). In 1845 King Kamehameha III waived his right to full authority over the land, portioning out land for his personal use (crown lands) and then dividing the rest of his territory into land for the government, land for the ali‘i (chiefs) and konohiki (land overseers), and land for tenants or commoners (kuleana land) (Alexander 1891; Board of Commissioners 1929; Moffat and Fitzpatrick 1995). Following thereafter Land Commission Awards (LCAs) were awarded to commoners as kuleana parcels for fee ownership. Kuleana land claims required proof of residency on the land and continued land improvements. LCAs, therefore, record who resided on the land and how the land was used. Fort Lands (FLs) were also set apart throughout

Kalihi, Honolulu and Waikīkī for the garrison of the Fort of Honolulu. In 1851, the Fort Lands were surveyed and sold in auction as LCAs (Alexander 1891).

Ishihara et al. (2015:33) provide the following summary of LCA data for Waikīkī, in general, and the project area, in particular:

In the *ahupua'a* of Waikīkī, there were 437 land claims of which only 243 were awarded. One LCA was awarded within the project area. LCA 8559B was awarded to [Ali'i Nui, or high chief] William C. Lunalilo whose lands spanned island-wide. It is unclear what his Waikīkī lands were used for. However, a land dispute was filed by Charles Kanaina, Lunalilo's father, for land in Pau 'Ili, which suggests the land was most likely used for *lo'i kalo* (irrigated terrace of taro). A resident by the name of Pahau acquired a parcel that consisted of nine *lo'i kalo* after the death of Kaaha. However, when all claimants who had land in Pau 'Ili died, they were returned to Lunalilo. Therefore, Kanaina felt those patches belonged to Lunalilo. (brackets added for clarity)

## 2.2.2 Analysis of Historical Maps and Aerial Images

Figure 9, a portion of 1881 map, shows the project area along the northeast boundary of the fishpond (loko) of Pāweo II, as well as the dense collection of other fishponds along the makai (seaward) side of Kalākaua Avenue. A network of 'auwai (irrigation ditches) and bunds (soil berms) between the fishponds is also depicted. This map also clearly shows the density of house sites along the seashore.

Figure 10, a portion of 1887 map, shows the same basic physiographic setting as depicted in the previous map.

Figure 11, a portion of 1893 map, indicates that the fishponds of Kālia were still in operation at this relatively late period. The area mauka (inland) of Kalākaua Avenue was being used to grow commercial rice, which would have used or repurposed the old Hawaiian *lo'i* (irrigated taro) infrastructures of ditches, soil berms and traditional water maintenance.

Figure 12, a photograph of the general vicinity of the project area along Kalākaua Avenue in 1895, shows a large number of tall coconut palms and fencing along either side of the avenue.

Figure 13, a portion of 1910 map, shows an early depiction of Fort DeRussy; here, the inland waters of Kālia appear to have been diverted past the makai boundary of the project area to the southwest and outlets to the ocean. This configuration of surface water predates the 1920s construction of the Ala Wai Canal. As such, the area in and around the project area was probably prone to flooding before the 1920s.

Figure 14, a portion of 1919 map, shows early development of Fort DeRussy but still no structures or features within the current project area.

Figure 15, a portion of 1933 map, shows the first structures in the project area.

Figure 16, a portion of 1953 map, shows the extensive development along the edges of Fort DeRussy and the makai side of Kalākaua Avenue, including within and around the current project area.

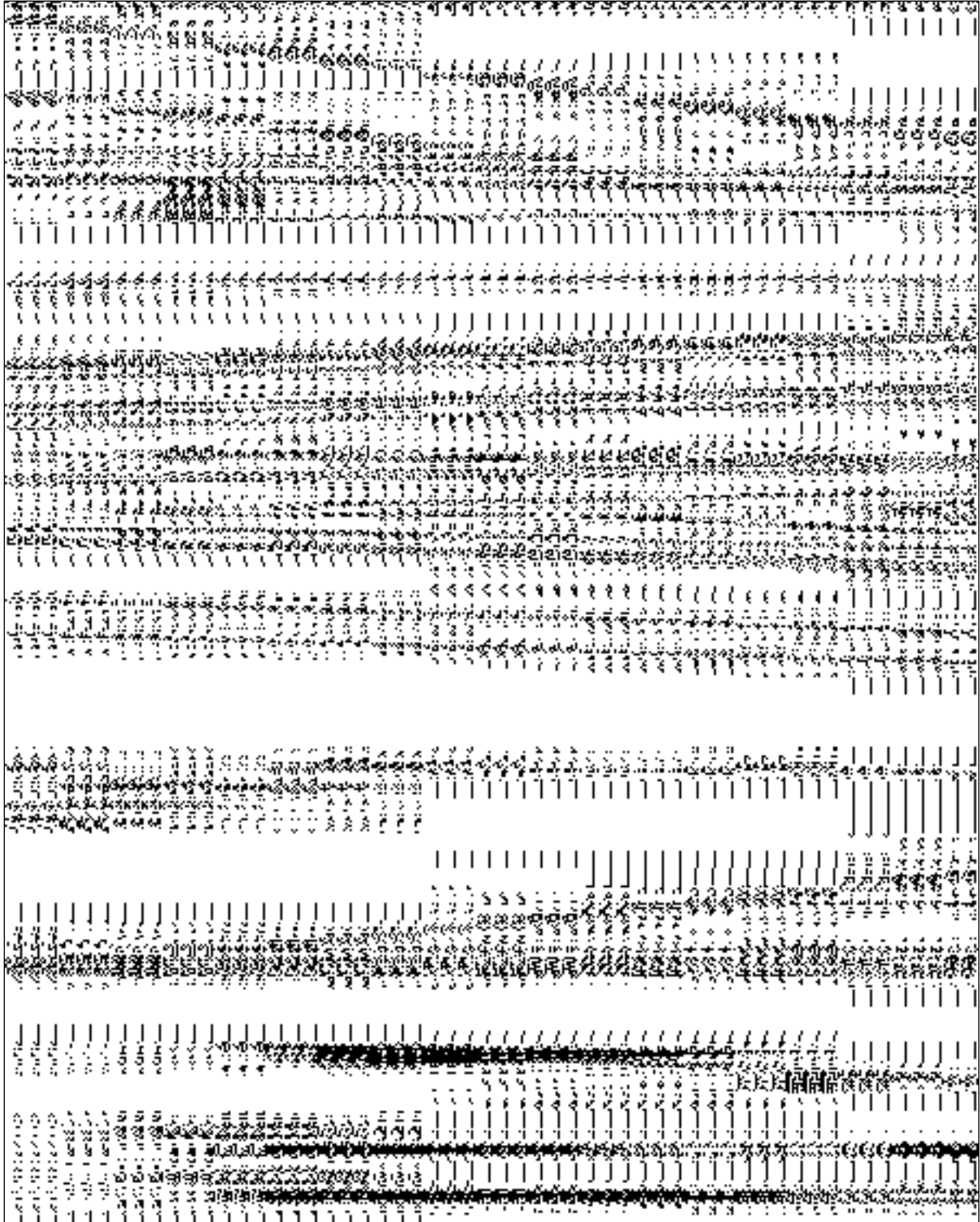


Figure 9. Portion of 1881 Bishop map showing project area location (Registered Map 1398)  
(base map source: DAGS Land Survey Map Search, <http://ags.hawaii.gov/survey/map-search/>)

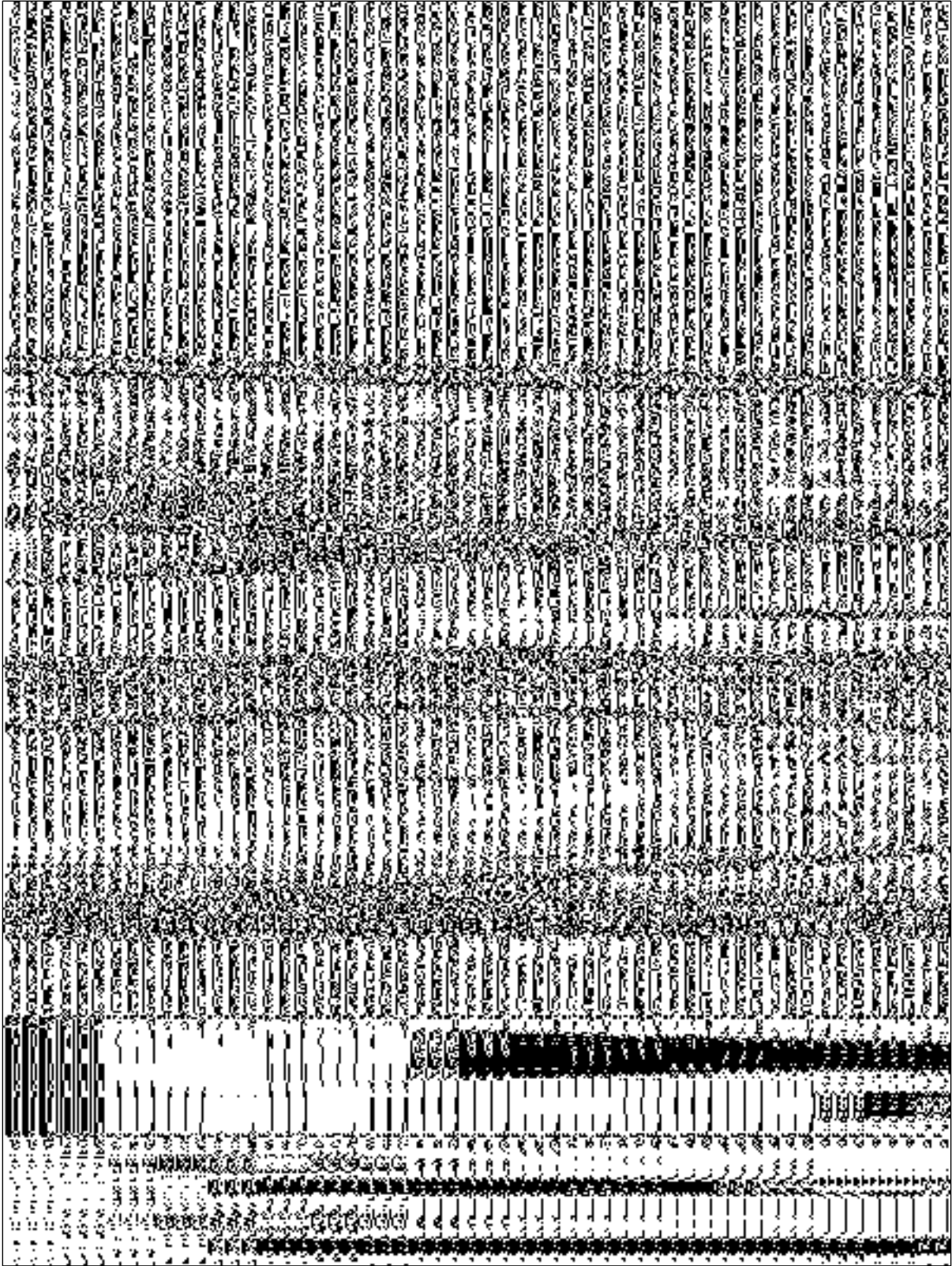


Figure 10. Portion of 1887 Wall map showing project area location (base map source: University of Hawai‘i-Mānoa’s digital maps, <http://magis.manoa.hawaii.edu/maps/index.html>)

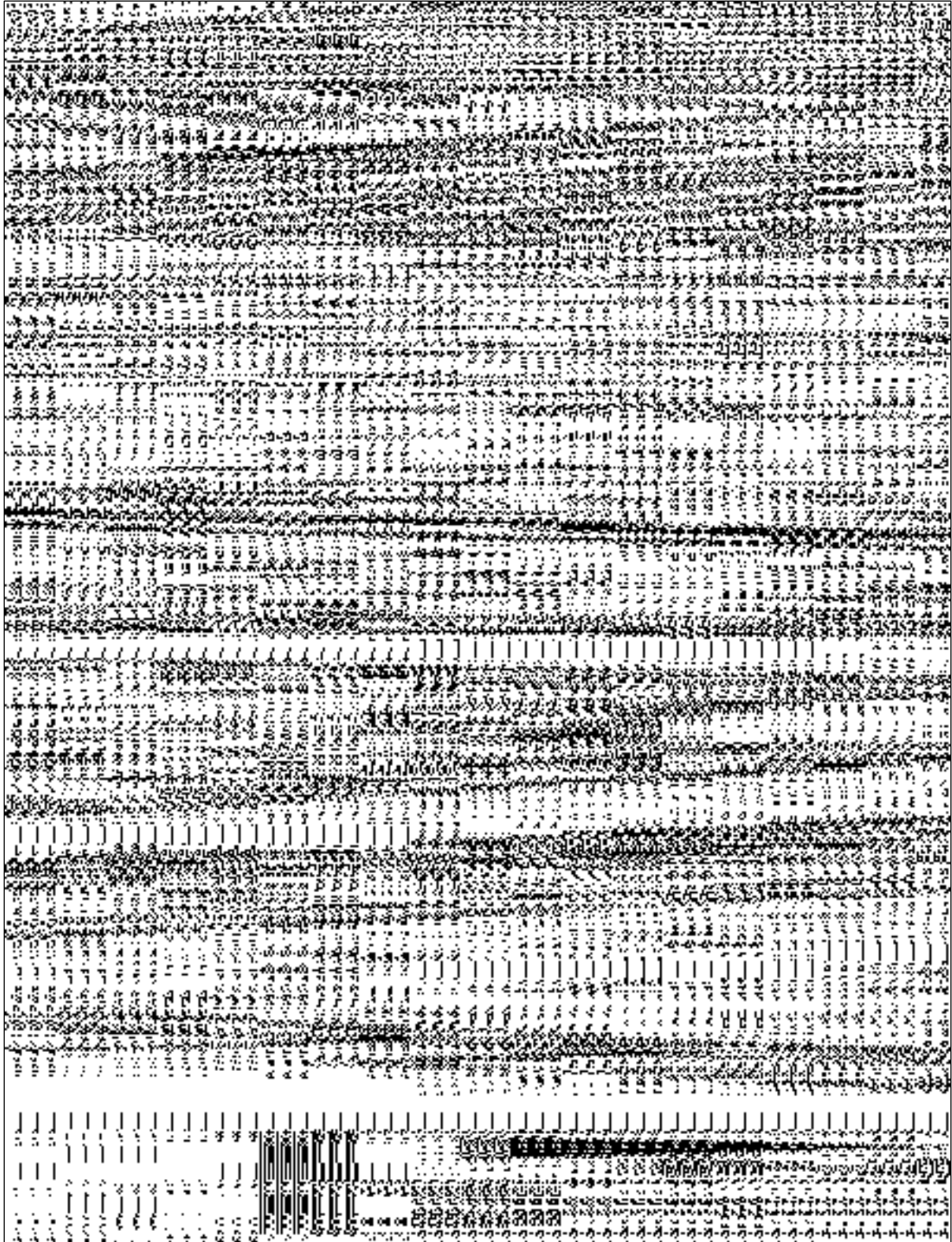


Figure 11. Portion of 1893 Wall map showing project area location (Registered Map 1690) (base map source: DAGS Land Survey Map Search, <http://ags.hawaii.gov/survey/map-search/>)

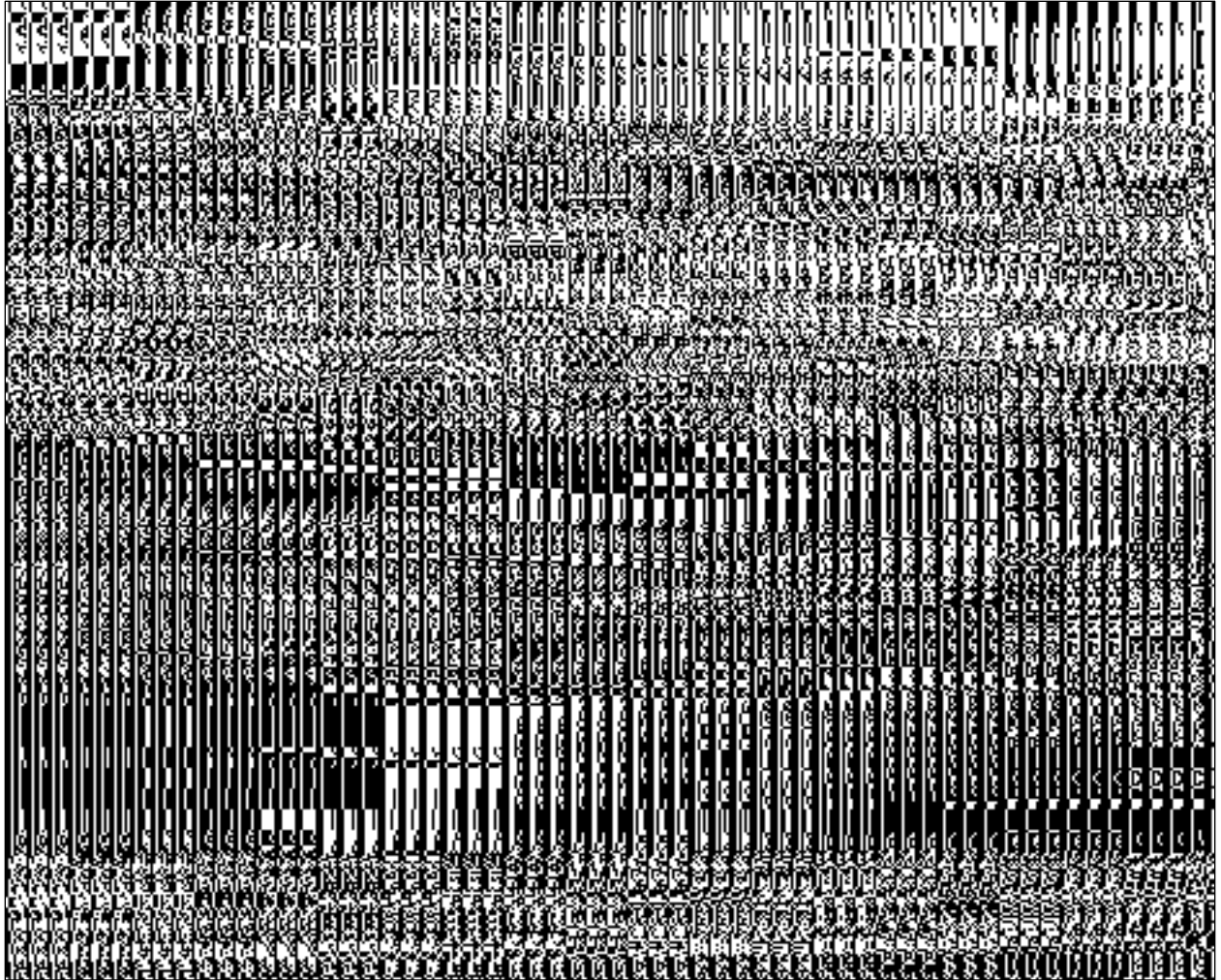


Figure 12. Kalākāua Avenue 1895 in the vicinity of the project area (source: U.S. Library of Congress)



Figure 13. Portion of 1910 U.S. Coast Guard / U.S. Engineering map (base map source: University of Hawai‘i-Mānoa’s digital maps, <http://magis.manoa.hawaii.edu/maps/index.html>)

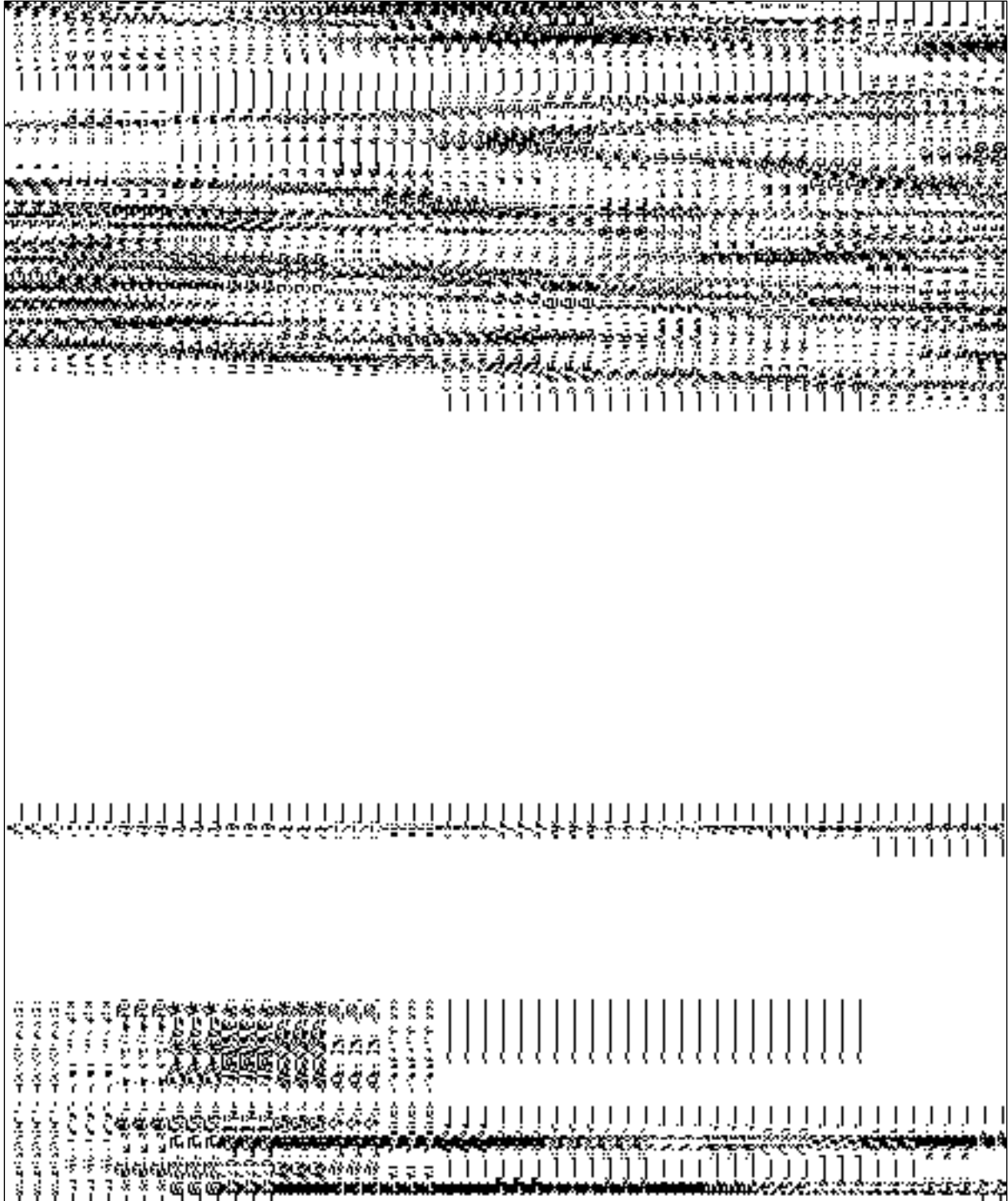


Figure 14. Portion of 1919 U.S. Army War Department map (Honolulu quadrangle) showing project area location (base map source: University of Hawai‘i-Mānoa’s digital maps, <http://magis.manoa.hawaii.edu/maps/index.html>)



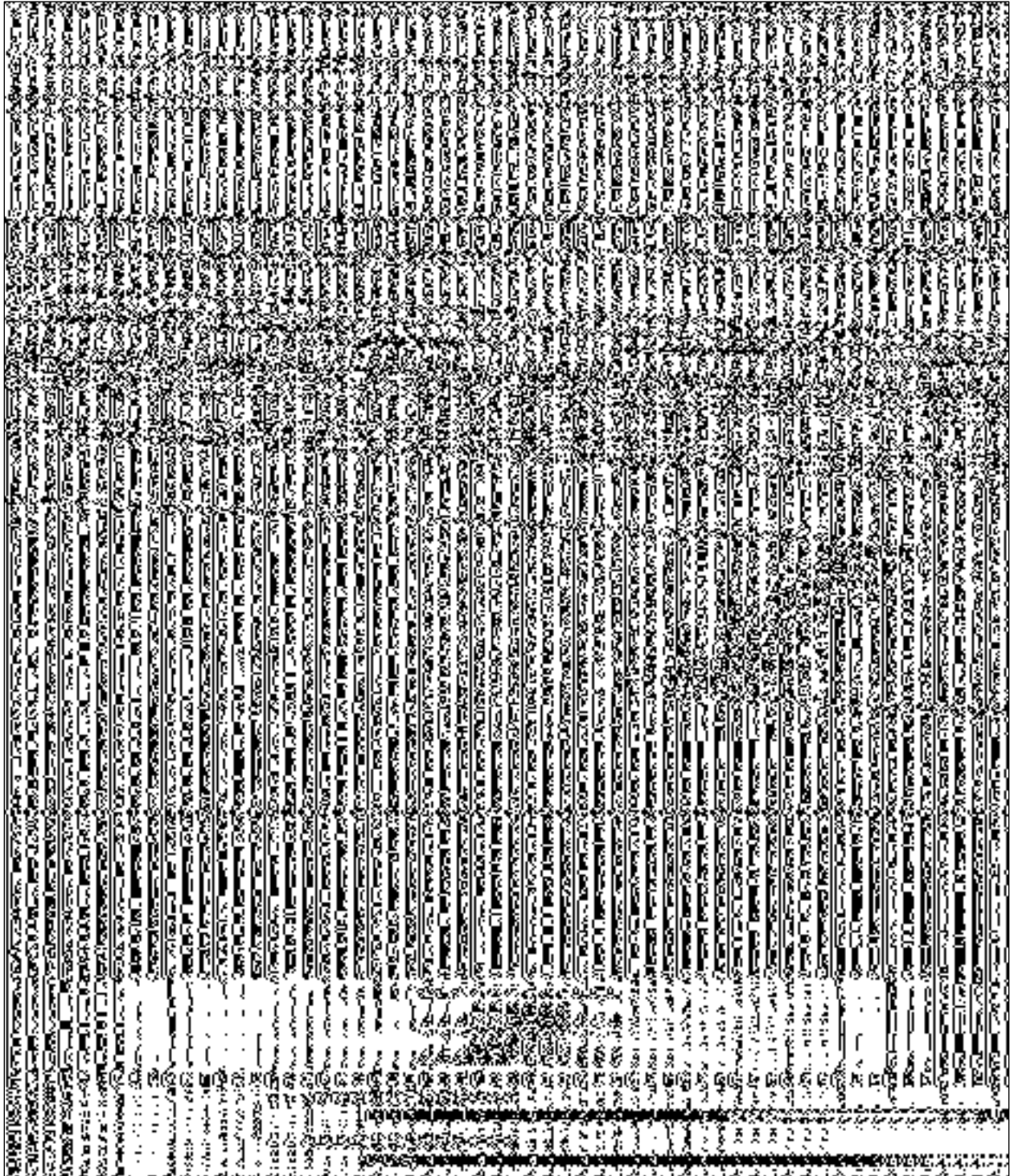


Figure 15. Portion of 1933 USGS topographic map (Honolulu quadrangle) showing project area location (base map source: University of Hawai‘i-Mānoa’s digital maps, <http://magis.manoa.hawaii.edu/maps/index.html>)

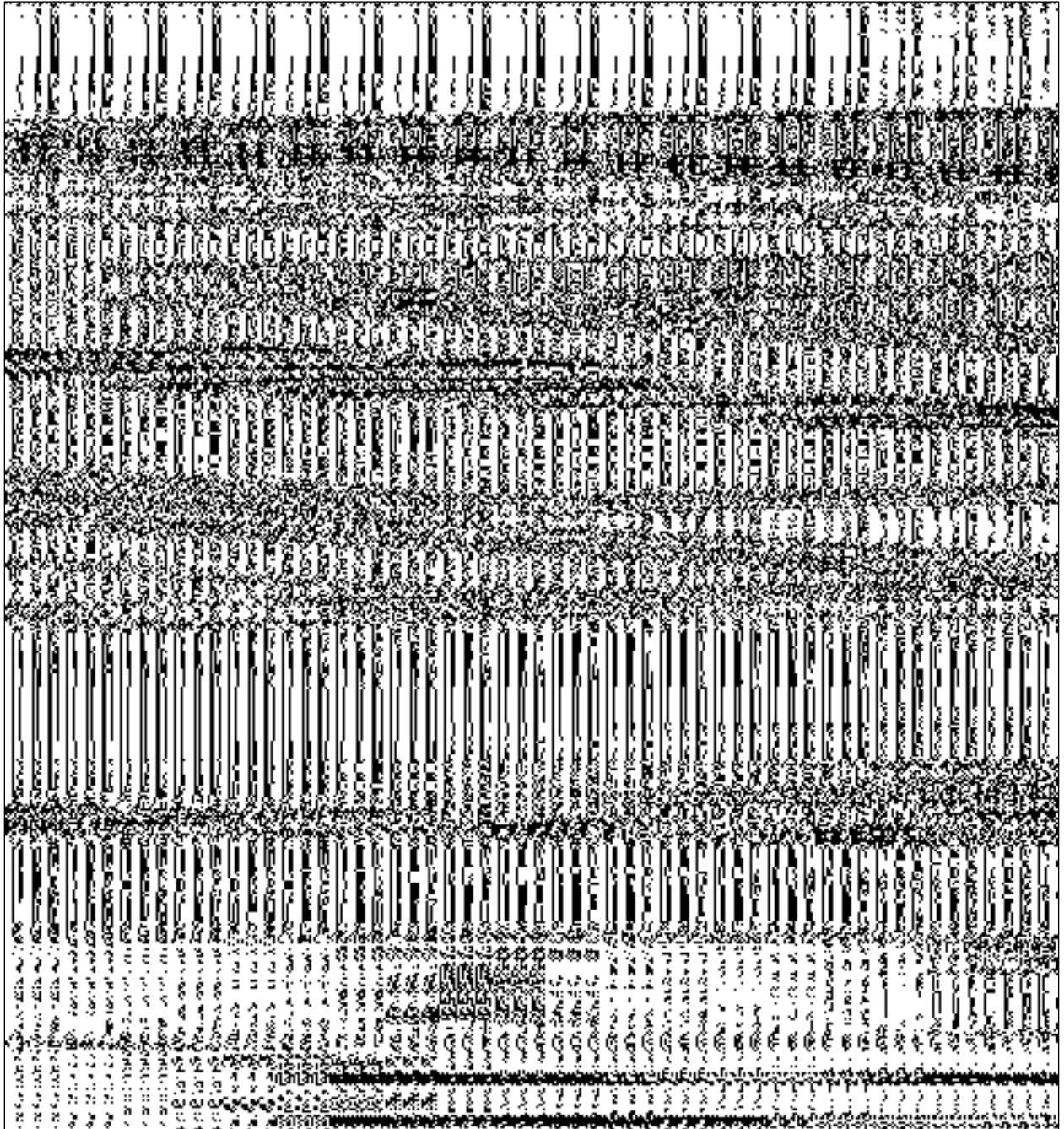


Figure 16. Portion of 1953 USGS topographic map (Honolulu quadrangle) showing project area location (base map source: University of Hawai‘i-Mānoa’s digital maps, <http://magis.manoa.hawaii.edu/maps/index.html>)

## Section 3 Previous Archaeological Studies

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In this section, we summarize relevant previous archaeological studies in order to reconstruct human use and modification of the land in and near the project area. The main purpose of presenting this information is to develop predictive data about the types and distribution of historic properties and their component features we expected to encounter during the field inspection; and to assist interpretation of any new findings.

Table 1 and Figure 17 and Figure 18 summarize and depict the location and results of previous archaeological studies in and near the project area. For the purposes of this study, this discussion of previous work and results is limited to a radius of approximately 0.25-miles around the project area.

Several dozen prior studies and reports have been produced for Fort DeRussy and the western end of Waikīkī. The focus below is on identifying patterns in the data that may be representative of the current project area, rather than summarizing every report that has been completed in the area.

### 3.1 Overview

To the best of our knowledge, only one previous archaeological study (Stark et al. 2015) has included the project area (see Figure 17). No other archaeological studies have been conducted in the project area. Stark et al.'s (2015) report, part of a preliminary due diligence assessment for a different proposed project (Park Kālia Waikīkī Condo-Hotel Project) that was eventually canceled, included the excavation and interpretation of one (5.2 meter-long) backhoe trench parallel with and along the Kalākaua Avenue side of the subject parcel (Figure 19). The trench exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbs. No traditional Hawaiian materials were observed.

In the immediate vicinity of the project area, other studies have documented subsurface remnant sediments from several traditional Hawaiian loko (fishponds) that used to dominate the area as well as an extensive network of 'auwai (i.e., traditional Hawaiian irrigation ditches) used to manage the wetlands that used to dominate this area. These fishponds include: State Inventory of Historic Places (SIHP) #s 50-80-14-4573 (Loko Kaipuni), -4574 (Loko Paweo I), -4575 (Loko Ka'ihikapu), -4576 (Paweo II), and -4577 (Loko Kapu'uiki). The network of 'auwai has been designated SIHP # 50-80-14-4970. In addition to these numerous subsurface cultural layers from both pre-Contact and historic-period times, some of which contain human skeletal remains and/or *in situ* burials, are known to occur discontinuously throughout the area around the current project area. At least three known burial sites (SIHP # 50-80-14-4890, -9500 and BPBM OA0419) are within 200-250 meters of the project area (see Figure 18). Nearby subsurface cultural layers include SIHP # 50-80-14-6407—just to the east of the project area between Kalākaua and Kūhiō avenues, and SIHP # 50-80-14-4579, just to the southwest; an old (currently subsurface) wetland paleosol (SIHP # 50-80-14-5796) is located southeast of the project area.

### 3.2 Results of Previous Studies near the Project Area

As summarized in Table 1, the rest of this section is an overview of the results of nearby archaeological studies.

In a description of inadvertent discoveries made during construction of the Hale Koa Hotel on the beach at Fort DeRussy, Kimble (1976) reported five pre-Contact or early historic period bundle burials from a sand deposit. A sixth burial, from a different depositional context and much more recent than the others, was also mentioned. According to Neller (1980:7) these remains were reburied (i.e., re-located) near the hotel. Denham and Pantaleo (1997a:33) indicate the reburial site is north of the Hale Koa Hotel and is marked by a stand of red ti (kī) plants.

Davis (1989) conducted an archaeological investigation that included 11 test trenches throughout inland (to the north) portion of Fort DeRussy; and nine trenches in the south (makai or coastal) portion. Results near the current project area documented buried fishpond sediments attributed to the so-called Kālia fishponds (i.e., SIHP #s 50-80-14-4573 through -4577) and 'auwai features. Davis' test excavation also sampled SIHP # 50-80-14-4570, remnants of a subsurface cultural layer in the coastal portion.

Rosendahl (1989) carried out an archaeological inventory survey including subsurface testing for a new pool location at the Hale Koa Hotel. Finds were minimal and no human skeletal remains were encountered. A later study for a Hale Koa Hotel lū'au facility encountered a disturbed buried cultural layer with associated historic artifacts. No SIHP #s were assigned to any of these finds.

Davis (1991) reported on archaeological monitoring of an environmental baseline survey for a Fort DeRussy Military Reservation. No archaeological remains were observed in 12 bore holes from two general areas. Subsurface features and artifacts dating to the early historic period (circa 1780s to 1790s) through mid-19<sup>th</sup> century were noted in the area between Battery Randolph and the beach.

Streck (1992) discovered the human skeletal remains of one individual (SIHP # 50-80-14-9550) dated to the historic period at the mauka end of the Kuroda Parade Ground at Fort DeRussy mauka of Kālia Road.

Carlson et al. (1994) excavated human skeletal remains found during the realignment of Kālia Road. Burial Area 6 included 27–34 individuals in a common pit feature southeast of the intersection of Paoa Place and Kālia Road. Denham and Pantaleo (1997a) provide SIHP # 50-80-14-4570 (Feature 8) for Carlson et al.'s (1994) "Burial Area 6," interpreted as a mass burial event that "may well represent the remains of Hawaiian warriors who died in one of the battles of the interisland wars of conquest which occurred during the reign of King Kamehameha I" (Carlson et al. 1994:70). Another feature, "Burial Area 7," contained four individuals in association with a cultural layer located near the Army Museum southwest of the intersection of Kālia Road and Saratoga Road. Sediments associated with Loko Paweo I (SIHP # -4574) were also encountered.

McMahon (1994) reported an inadvertent discovery of human skeletal remains representing one individual uncovered in a back dirt pile during a water-line excavation at the intersection of Kalākaua Avenue and Kuamo'ō Street just mauka (inland) of the current project area. Ethnicity was deemed indeterminate for this find.

Simons et al.'s (1995) data recovery excavations at Fort DeRussy encountered three historic properties: Loko Paweo I (SIHP # -4574), Loko Paweo II (SIHP # -4576) and SIHP # -4579, a subsurface cultural layer associated with Land Commission Award (LCA) 1785 and including one set of fragmented human skeletal remains. In addition, portions of an extensive 'auwai system (SIHP # -4970) were identified.

Cleghorn's (1996) archaeological inventory survey of the block bounded by Kalākaua Avenue, Kūhiō Avenue, 'Olohana Street and Kālainoku Street included excavation of seven backhoe trenches. The subsurface testing indicated that the area was once "extremely wet and probably marshy" (ibid.:15). Cleghorn (1996) concluded that no further archaeological investigations 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" (ibid.).

Denham and Pantaleo's (1997a) archaeological monitoring of the Kālia Road Realignment project at Fort DeRussy Military Reservation resulted in the identification of 10 subsurface features and nine burials and burial areas. Identified site-features included: subsurface sediments attributed to Loko Paweo I (SIHP # -4574), three historic-period trash pits and two burials of indeterminate age. The two burials (designated as Feature 5) appear to have been north of the intersection of Kālia and Saratoga Roads and not in the immediate vicinity of the current study area (Denham and Pantaleo 1997a:19–20). SIHP # -4570 consisted of a historic-period trash pit (Feature 1) dating to the late nineteenth to early twentieth century, four fire pits (Feature 2 and Features 4–6), an ash lens (Feature 3) and an unknown number of human burials (in six distinct features designated Features 7–12) in sand deposits on the makai side of Loko Paweo I. The burials were previously-disturbed, incomplete and some features appeared to contain multiple individuals.

Denham and Pantaleo (1997b) also conducted archaeological data recovery at Fort DeRussy. Five previously-identified sites were investigated further. Work at SIHP # -4570 yielded additional features such as a fire pit, a coral rock concentration and multiple postholes. The 'auwai system (SIHP # -4970) revealed two channels, three bunds (soil embankments or berms adjacent to the ditches) and a charcoal stain. Another site (SIHP # -4579) yielded a number of features related to permanent historic-period occupation and possible intermittent pre-Contact use (e.g., fire pits, historic-period midden deposits and a human burial). In addition, subsurface sediments from three fishponds were exposed: Loko Paweo I (SIHP # -4574), Loko Ka'ihikapu (SIHP # -4575) and Loko Paweo II (SIHP # -4576).

LeSuer et al. (2000) conducted an archaeological inventory survey, which included subsurface testing, exposed portions of 'Auwai o Pau and areas of possible fishpond and agricultural cultivation. No habitation areas or human burials were identified during excavation. The pre-Contact to early twentieth-century wetland ground surface, which was exposed throughout LeSeur et al.'s entire project area, was designated SIHP # 50-80-14-5796.

Roberts and Bower (2001) monitored excavations associated with the installation of a security fence for the Asia-Pacific Center of Fort DeRussy. Seventeen fence postholes (12 inches in diameter and 24 to 36 inches in depth) were excavated. No archaeological resources were identified.

Borthwick et al. (2002) conducted an archaeological inventory survey of project area bounded by Olohana Street, Kūhiō Avenue, Kalaimoku Street and Ala Wai Boulevard. Ten backhoe

trenches were excavated. One historic property (SIHP # 50-80-14-6407), a subsurface cultural layer, was documented. Radiocarbon analysis of recovered charcoal samples yielded a calibrated (2 sigma, or 95% probably) date range of AD 1400-1660.

Tulchin et al. (2004) completed data recovery work on the Borthwick et al. (2002) project area with work focused on research questions pertaining to paleoenvironmental change at Waikīkī, establishment of a chronology of occupation at Waikīkī, and Hawaiian use of the project area. Pollen and carbon dating results and the Hawaiian use of kuāuna (berms) and paukū (agricultural land) features were discussed in their data recovery report.

Bush et al. (2002) described the results of archaeological monitoring for Phase II of the Waikīkī Anti-Crime Lighting Improvements project, located between Ala Moana Boulevard and the Honolulu Zoo. They documented several burials as well as pond sediments, muliwai sediments, an imu pit and various pockets of trash and trash pits. Within the vicinity of the current project, archaeological monitoring documented a trash pit containing historic and modern trash at the intersection of Kalākaua Avenue and Ala Moana Boulevard (that was not assigned an SIHP #), several basalt boulders in the vicinity of the trash pit believed to be associated with the in-filling of the Fort DeRussy wetlands and pond sediments (likely Loko Kaipuni) on the mauka side of Kalākaua Avenue between Pau and Kuamo‘o Streets.

Elmore and Kennedy (2002) conducted archaeological monitoring for the installation of a security fence at the Asia-Pacific Center at Fort DeRussy. Construction activities requiring monitoring consisted of the excavation of 90 postholes. The maximum depth of posthole excavation ranged between 41-90 cmbs. No natural sediments or historic properties were encountered during the project.

Putzi and Cleghorn (2002) completed archaeological monitoring of sewer connections associated with Hilton Hawaiian Village improvements. Along the Ala Moana Boulevard portion of the sewer line, varying layers of fill deposits overlay extensive, but discontinuous, areas of fishpond sediments. Along the Kalākaua Avenue portion of the sewer line, an area of fishpond sediment (Feature 1) was documented (SIHP # -4573) as well as extensive areas of sand and a section of black organic silty clay containing ash and charcoal. A basalt cobble and boulder alignment of indeterminate age (Feature 2) was also documented in subsurface context. Other sediments observed indicated that the area excavated along Ala Moana Boulevard and Kalākaua Avenue represented the border of the Kaipuni Fishpond complex and/or the area between Loko Kaipuni and Auwai Alanaio. Areas of sand deposits and other soils were interpreted as representative of the ends of ‘auwai that flowed into Kahawai Alanaio.

Rasmussen (2005) conducted an archaeological monitoring program for the Asia-Pacific Center for Security Studies Perimeter Barrier Wall project. No significant finds were documented. Stratigraphy observed within the deeper auger excavations for bollard installation consisted mostly of coralline fill overlying either clay (pond sediment) or sand deposits.

Esh and Hammatt (2006) conducted archaeological monitoring along Kūhiō Avenue related to the installation of a new median. No significant finds were documented, but Jaucas sand deposits were noted in many sections of the lower portions of monitored excavations.

Yucha et al. (2011) conducted monitoring for the Trump Tower and along Saratoga and Kālia Roads. Four human burials were found (designated SIHP #s 50-80-14-7015, -7016, -7017 and -

7018). The authors suggested that the burials had been previously disturbed during excavation of culverts and utility lines, and reburied by construction workers during earlier utility/road work.

Yucha and McDermott (2013) conducted a surface survey, a ground penetrating radar survey, monitoring of geotechnical borings and limited subsurface excavations for the Kālia-Fort DeRussy Wastewater System Improvements project on Kālia Road. Five historic properties were identified: SIHP #s -4570 (pre-Contact and historic period subsurface cultural layer with human burials); SIHP # -2870 (subsurface cultural layer with historic pit features and human burials); SIHP # -7087 (inadvertent discovery of human skeletal remains preserved in place); SIHP # -4573 (remnants of the Loko Kaipuni complex of fishponds); and SIHP # -4970 ('auwai system associated with Loko Kaipuni and Loko Paweo).

Stark et al. (2015) reported on the excavation and interpretation of one (5.2 meter-long) backhoe trench parallel with and along the Kalākaua Avenue side of the subject parcel (see Figure 19). The trench exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbs. No traditional Hawaiian materials were observed.

Table 1. Previous Archaeological Studies and Results in and near the Project Area

Author(s)	Type of Study	Location & Notes	Results & Comments <sup>1</sup>
McAllister 1933 Sterling & Summers 1978	ARS	O‘ahu – Island-wide	No McAllister sites identified near project area
Kimble 1976	Burial treatment	Hale Koa Hotel construction at Fort DeRussy	SIHP # -9500 (5 pre-Contact to early historic period bundle burials plus 1 additional [possibly 20 <sup>th</sup> century] burial found during construction)
Davis 1989	AIS	Fort DeRussy	Presence of subsurface sedimentary deposits from several fishponds (including SIHP #s -4573, -4574, -4576 & -4577) as well as remnant subsurface cultural deposit (-4570) near shoreline at Fort DeRussy
Rosendahl 1989	AIS	Fort DeRussy	Documented disturbed cultural layer w. historic artifacts (no SIHP # designated)
Davis 1991	AM	Fort DeRussy	Subsurface features and artifacts dating to early historic period (circa 1780s to 1790s) through mid-19 <sup>th</sup> century
Streck 1992	DR	Fort DeRussy	Human skeletal remains of one individual designated SIHP # -9500
Carlson et al. 1994	DR	Fort DeRussy	Human skeletal remains (SIHP # -4570) found during realignment of Kālia Rd.; remains of 2-3 dozen individuals in a common pit feature just SE of Paoa Pl. / Kālia Rd. intersection, ~¼-mile W of current project area; additional burials found S of project area near Army Museum
McMahon 1994	Burial treatment	Kalākaua Ave. just N of current project area	Burial of 1 individual of indeterminate age / ethnicity during construction
Simons et al. 1995	DR	Fort DeRussy	3 previously-identified sites encountered: Loko Paweo I (SIHP # -4574), Loko Paweo II (SIHP # -4576) & SIHP # -4579 (subsurface cultural layer containing fragmented skeletal remains); newly-identified ‘auwai system also discovered (SIHP # -4970)
Cleghorn 1996	AIS	King Kalākaua Plaza block just SE of current project area	No historic properties identified in 7 backhoe trenches
Denham & Pantaleo 1997a	AM	Fort DeRussy	3 historic properties observed: SIHP # -4574 (sediments of Loko Paweo I, 3 historic trash pits & 2 burials); SIHP # -4570 (historic trash pit, 4 fire pits, ash lens & multiple human burials); & SIHP # -4966 (pre-Contact features & human burials representing at least 5 individuals)



Author(s)	Type of Study	Location & Notes	Results & Comments <sup>1</sup>
Denham & Pantaleo 1997b	DR	Fort DeRussy	5 previously-identified sites investigated: SIHP # -4570 (coastal area of pre-Contact to early historic period occupation – newly-documented features included a firepit, coral rock concentration w. associated posthole & cultural deposit); also SIHP # -4575 (Loko Ka'ihikapu); SIHP # -4576 (Loko Paweo II); SIHP # -4579 (LCA 1758:3 containing 5 fire pits, 1 other pit, 1 human burial & historic as well as possible pre-Contact midden deposits); & SIHP # -4970 ('auwai system)
LeSuer et al. 2000	AIS	NE side of Kalākaua Ave. SE of project area	SIHP # -5796 (disturbed / modified wetland sediments) & additional portions of SIHP # -4970 ('auwai system)
Roberts & Bower 2001	AM	Fort DeRussy	No historic properties identified
Borthwick et al. 2002	AIS	Same parcel on N side of Kūhiō Ave.	Subsurface cultural layer identified (SIHP # -6407)
Tulchin et al. 2004	DR		Pollen & radiocarbon dating samples collected from traditional Hawaiian use of Kuāuna & Paukū fishponds
Bush et al. 2002	AM	Linear corridor of Kalākaua Ave.	Documented several burials (SIHP #s -5856, -5860 & -5864), fishpond sediments, wetland sediments, an imu & multiple trash pits
Elmore & Kennedy 2002	AM	Fort DeRussy	No historic properties identified
Putzi & Cleghorn 2002	AM	Linear corridor of Kalākaua Ave. & Ala Moana Blvd.	Identified fishpond sediments, organic sediments & Jaucas sand below fill; portion of Loko Kaipuni (SIHP # -4573) & basalt alignment of indeterminate date; 5 historic-period pit features documented at Hilton Hawaiian Hotel grounds (SIHP # -6399)
Rasmussen 2005	AM	Fort DeRussy	No historic properties identified
Esh & Hammatt 2006	AM	Linear corridor of Kūhiō Ave.	No historic properties identified
Yucha et al. 2011	AM	Linear corridor of Saratoga Rd.	4 human burials (SIHP #s -7015, 7016, 7017 & 7018) identified near Trump Tower SE of project area
Yucha & McDermott 2013	AIS	Linear corridor of Kalākaua Ave. & Ala Moana Blvd.	Recorded portions of 5 sites: SIHP #-4570 (see above); SIHP # -2870 (subsurface cultural deposit w. historic pit features & human burials); SIHP # -7087 (inadvertent find of human skeletal remains); SIHP # -4573 (Loko Kaipuni); & SIHP # -4970 (see above)
Stark et al. 2015	ARS*	<b>Current project area</b>	Excavation of a 5.2 meter-long trench along Kalākaua Ave. exposed Jaucas sand from 95-165 centimeters below surface; ceramic vessel interpreted as possibly Chinese & wooden knife handle recovered in back dirt from upper 50 cm

<sup>1</sup> SIHP = State Inventory of Historic Places, and all SIHP #s in this table are formally preceded by "50-80-14-".

Abbreviations: AIS = archaeological inventory survey, AM = archaeological monitoring, ARS = archaeological reconnaissance survey, DR = data recovery

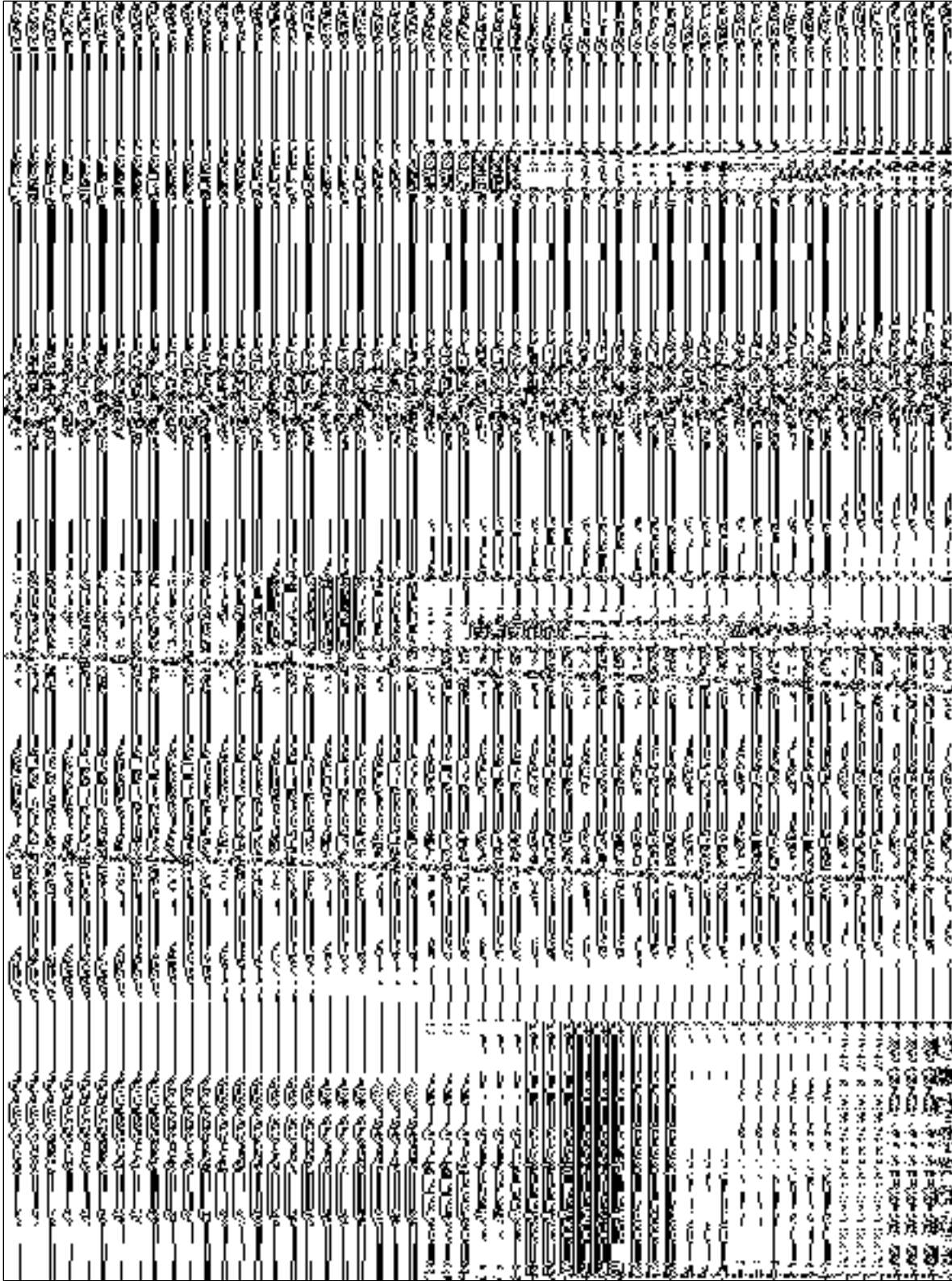


Figure 17. Previous historic-preservation studies in and near the project area (see table and text above for details)

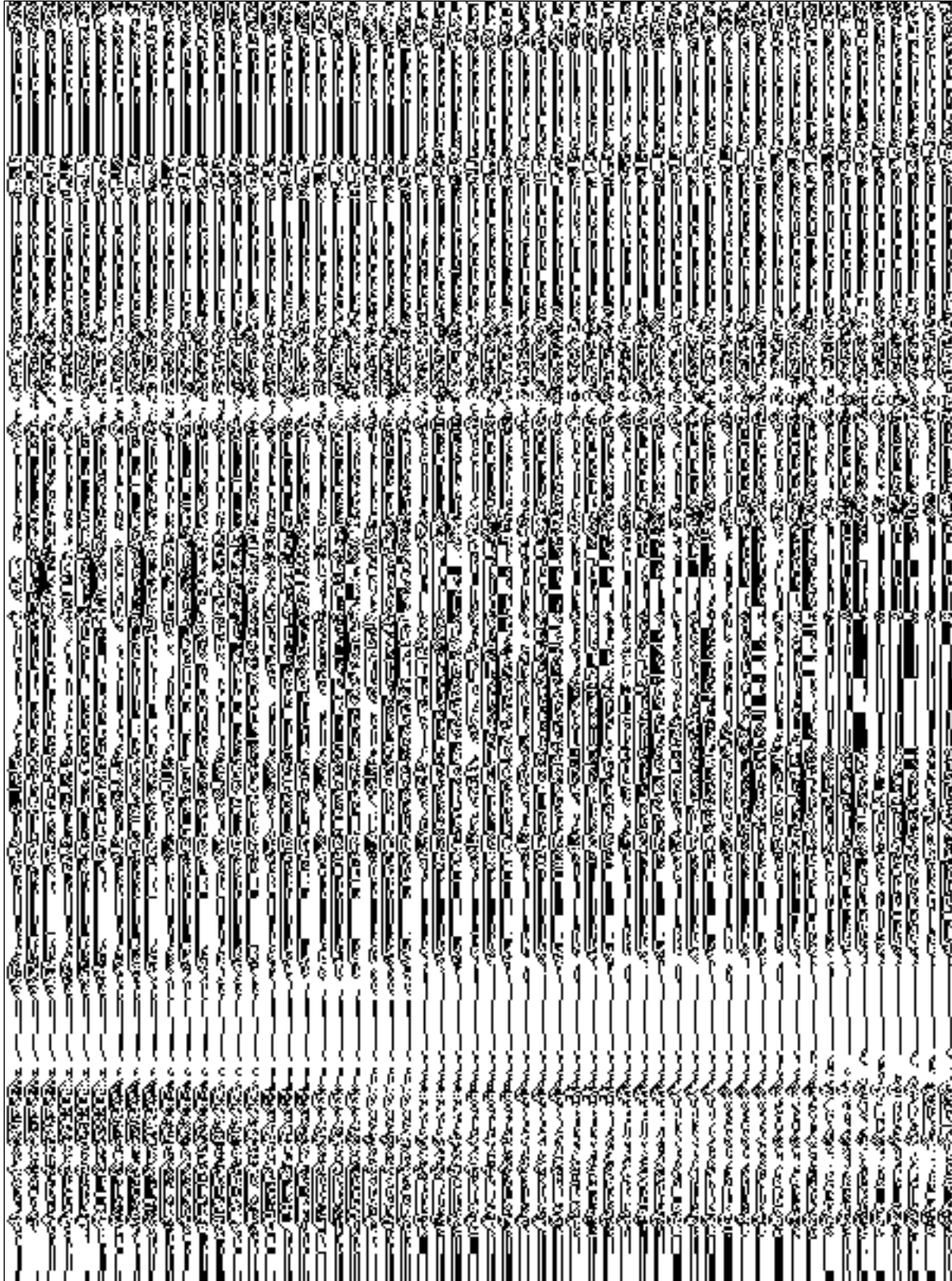


Figure 18. Known historic properties in and near the project area (see table and text above for details)

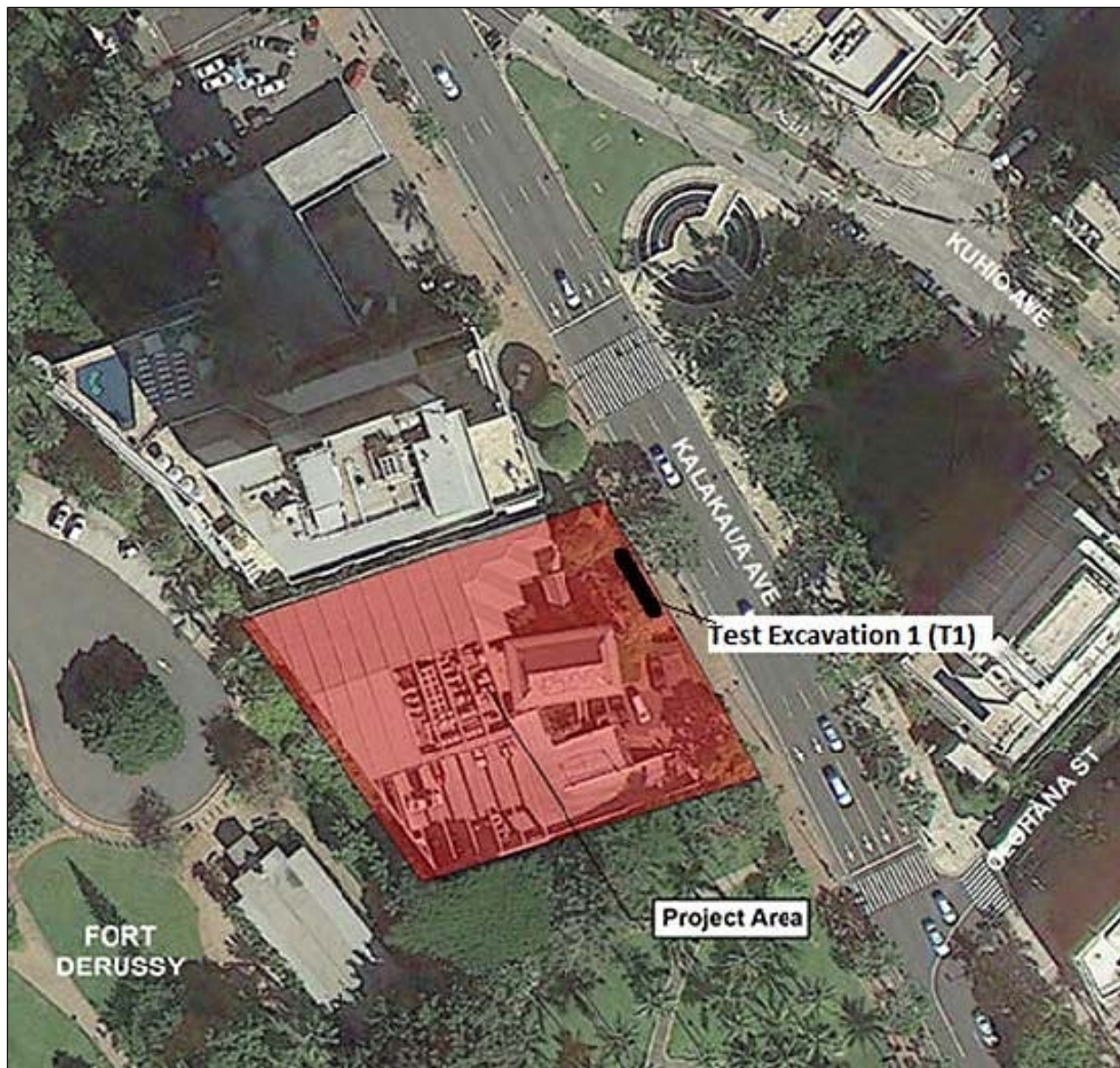


Figure 19. Test excavation location by Stark et al. (2015:4) from their report (note, Stark et al.'s [2015] figure does not include a scale or north arrow)

## **Section 4 Results of Field Inspection**

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Fieldwork for this project was conducted on October 15, 2022, by Nathan DiVito, B.A., under the supervision of Christopher M. Monahan, Ph.D. (principal investigator). Fieldwork required about 4.0 hours to complete. Fieldwork for this project was performed under the archaeological permit number 22-26 issued to Honua Consulting by the SHPD/DLNR in accordance with HAR Chapter 13-282.

### **4.1 Methodology**

The archaeological field inspection consisted of pedestrian survey of exterior portions of the project area. The main focus was on identifying any potential historic properties or component features in the project area.

Figure 19 depicts the location of all project-area photographs. The numbers in this graphic are keyed into the photo captions below.

Since most of the project area consists of existing buildings, we did not walk or record survey transects (“track log”), which would typically be documented using a hand-held Trimble GeoXT (or other GPS) device.

Field notes were recorded, about a dozen photographs were taken, and a detailed photo log (captions) was created.

All data are stored and backed-up in Honua’s database.

### **4.2 Survey Results**

No archaeological historic properties, or potential historic properties, were observed in the project area.

Figure 20 to Figure 30 are photographs of the project area (their locations in the project area are depicted in Figure 19 by cross-referencing information in the captions and photo key).

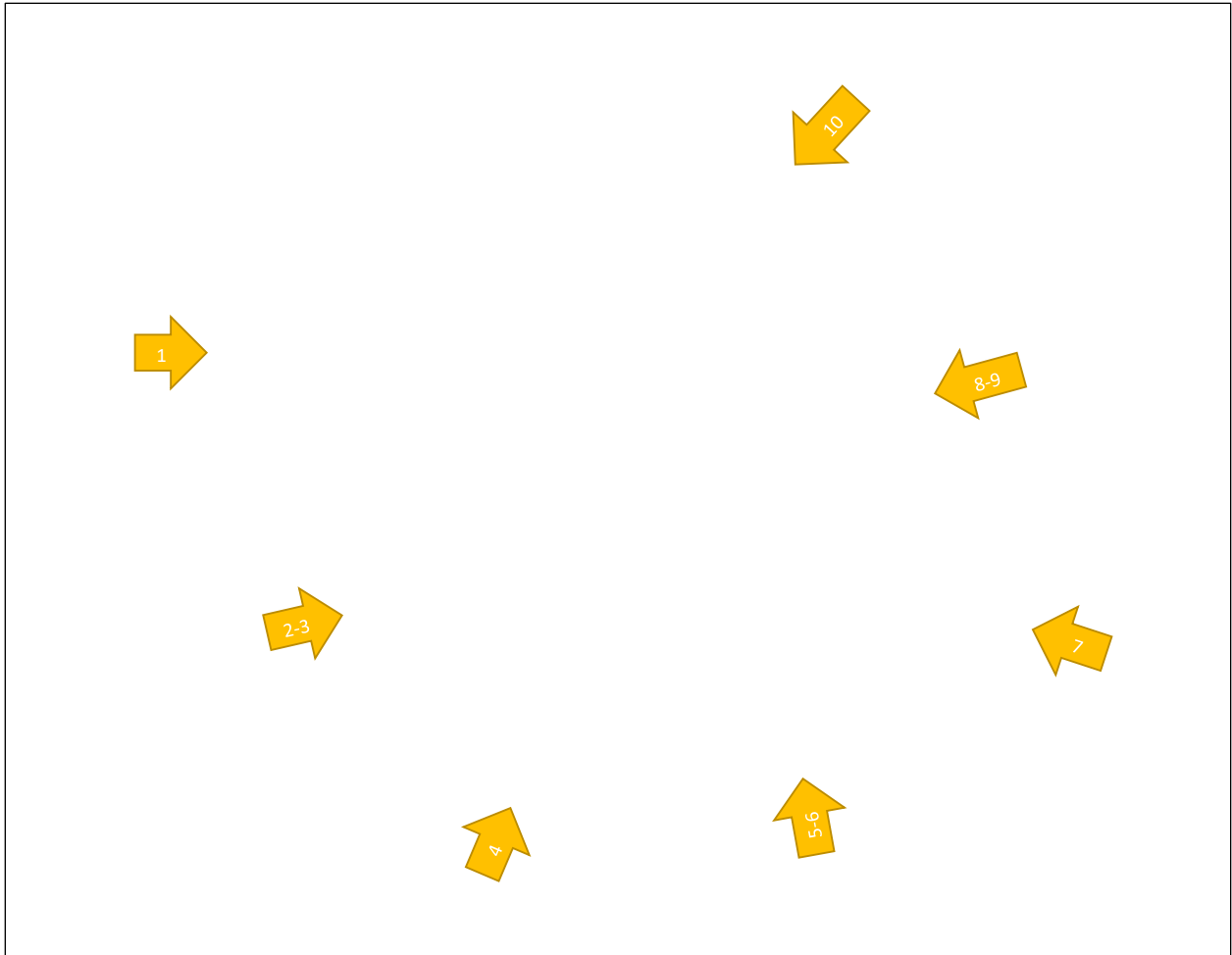


Figure 20. Key to numbered photographs that follow this image below

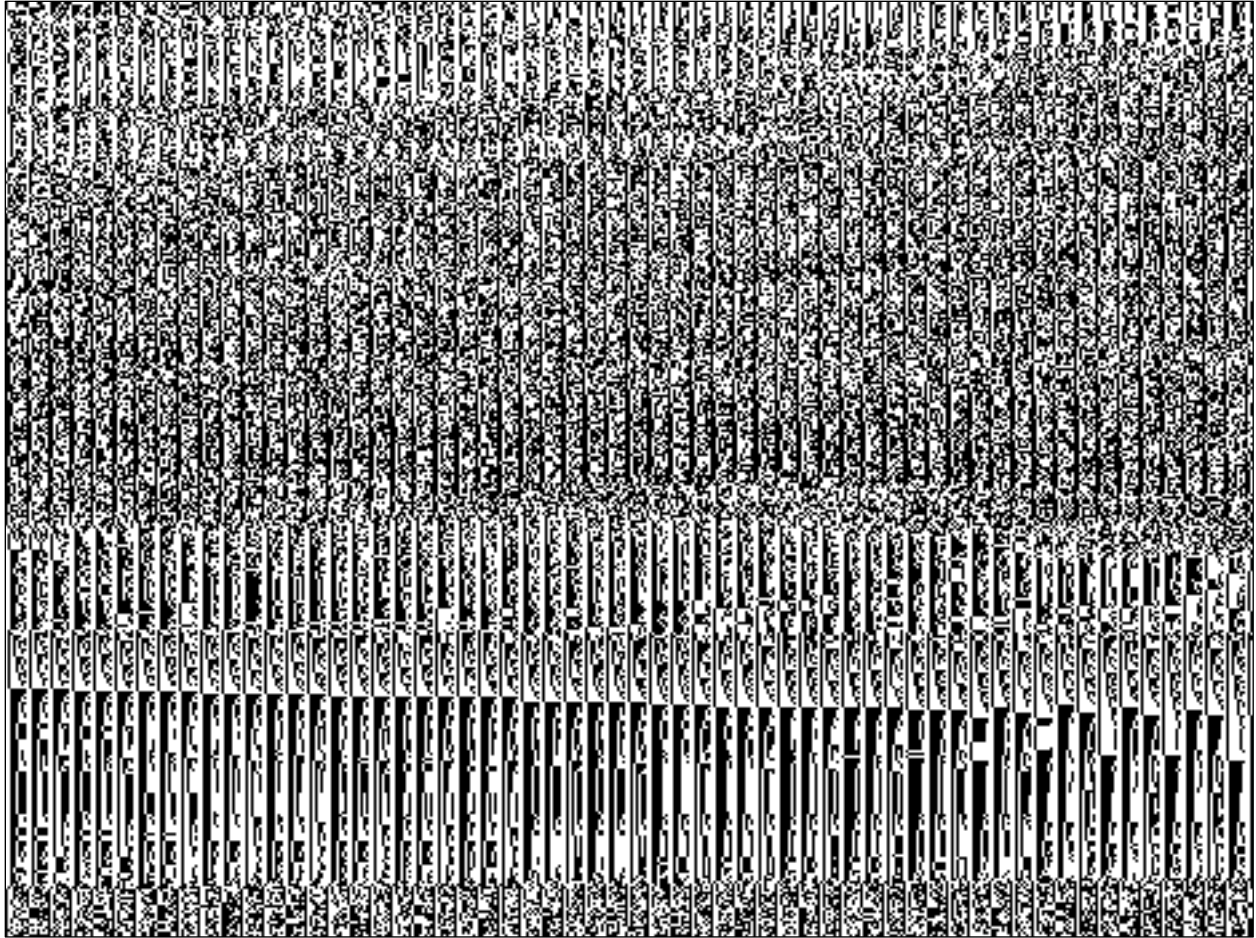


Figure 21. Project-area overview (west corner) facing east (Photo 1 in Figure 20)

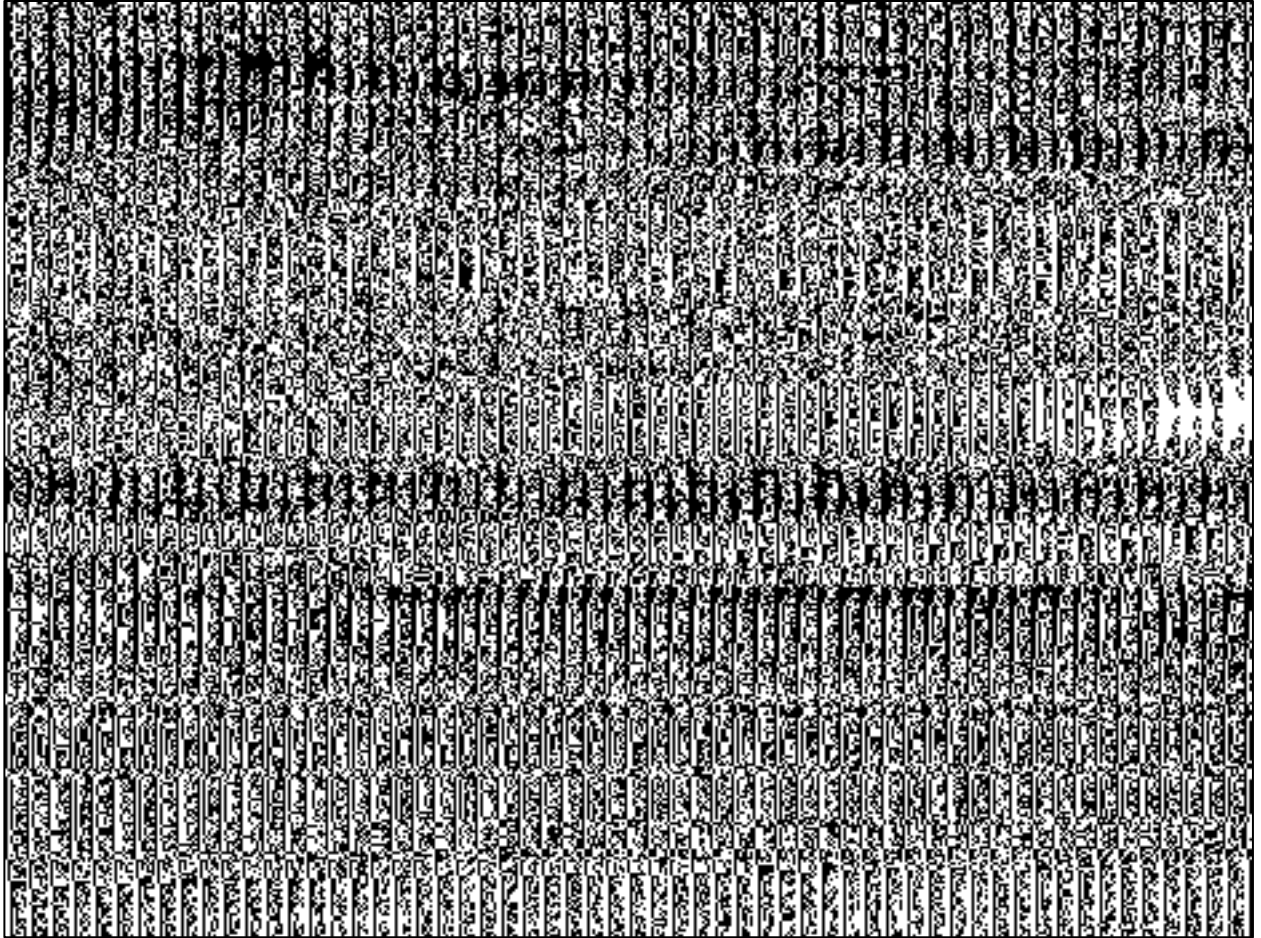


Figure 22. West side of the project area facing east (Photo 2 in Figure 20)



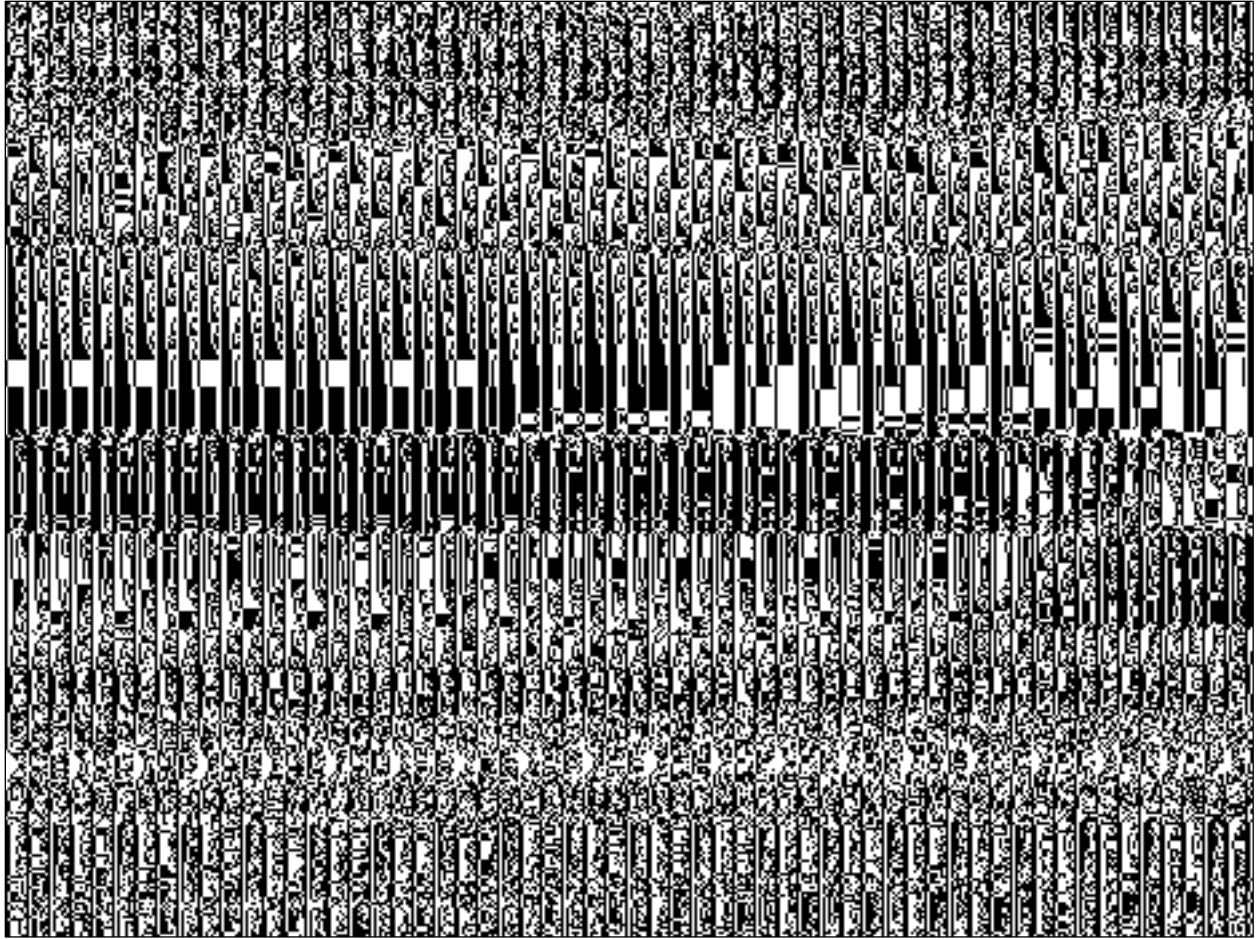


Figure 23. Another view of the west side of the project area, facing southeast (Photo 3 in Figure 20)

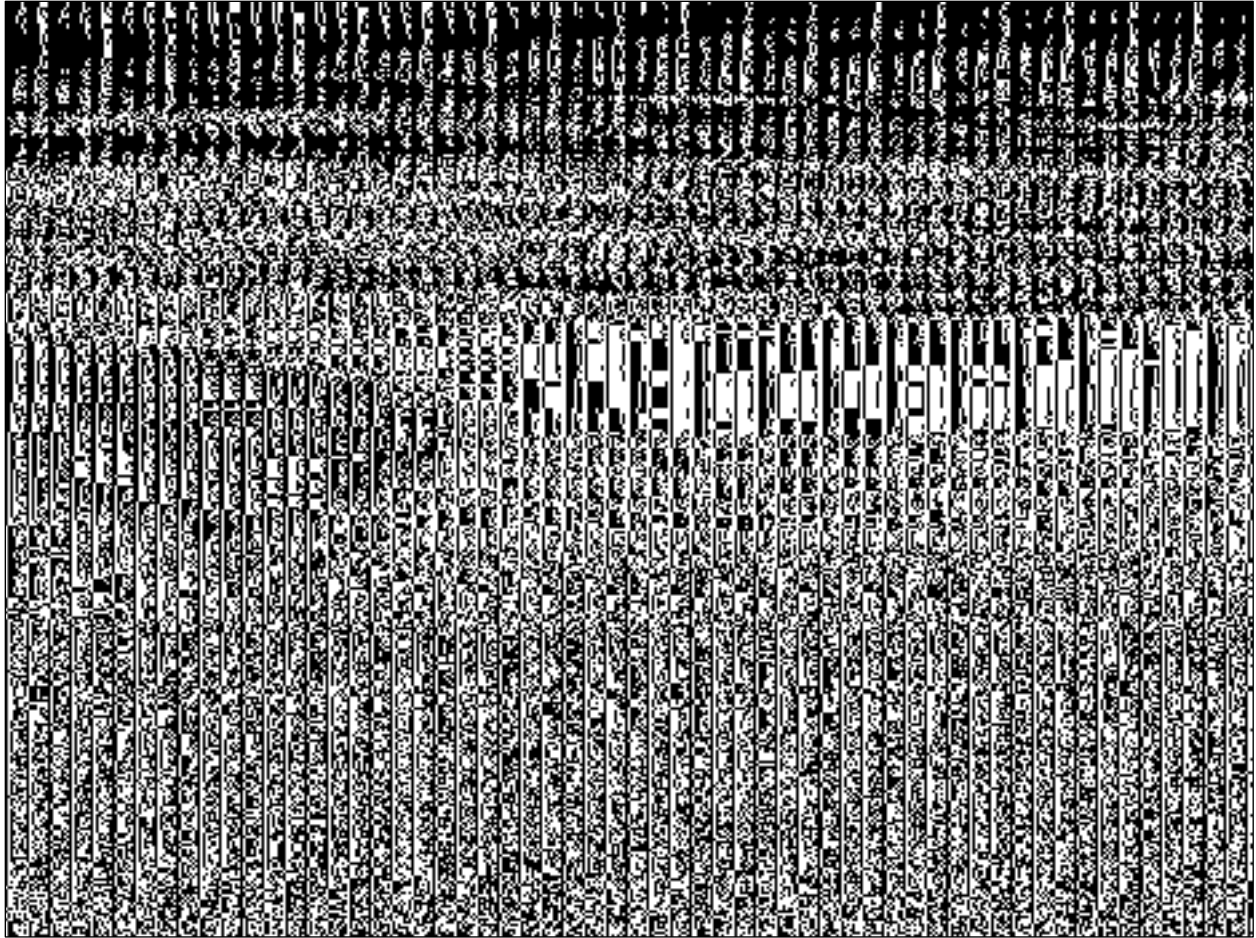


Figure 24. View of south corner of the project area, facing north-northeast (Photo 4 in Figure 20)

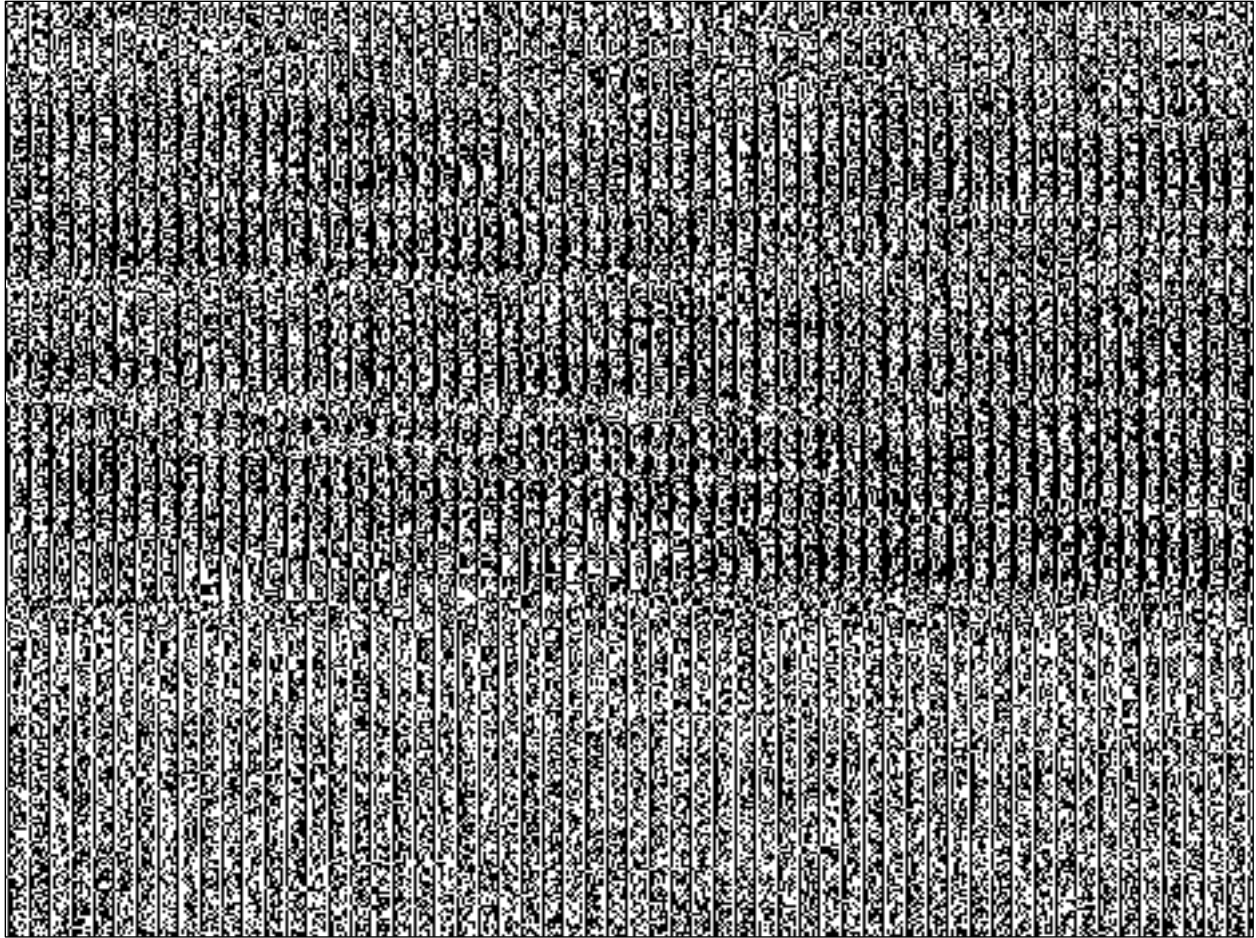


Figure 25. View of south side of the project area, facing north-northwest (Photo 5 in Figure 20)

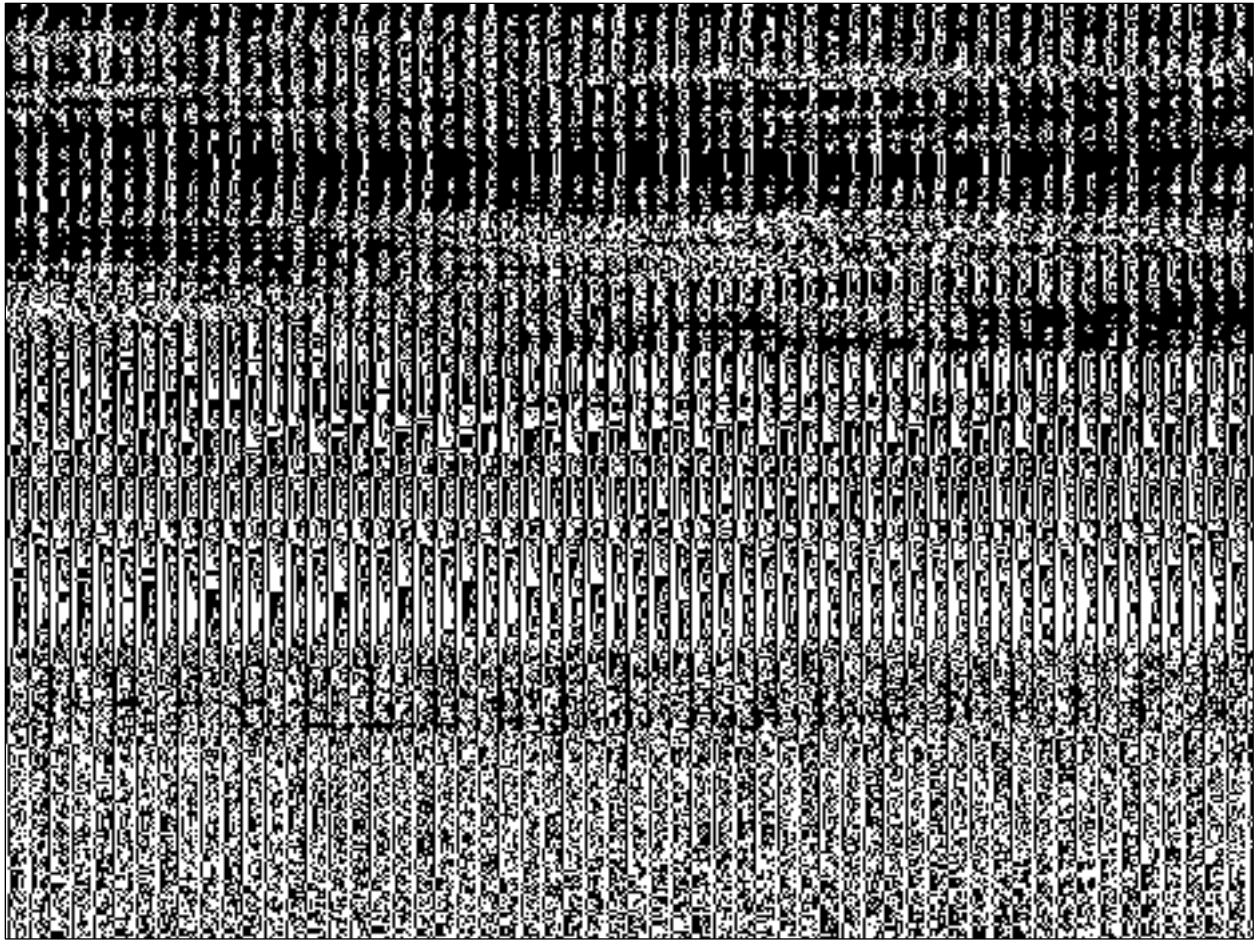


Figure 26. View of south aide of project area facing northwest (Photo 6 in Figure 20)

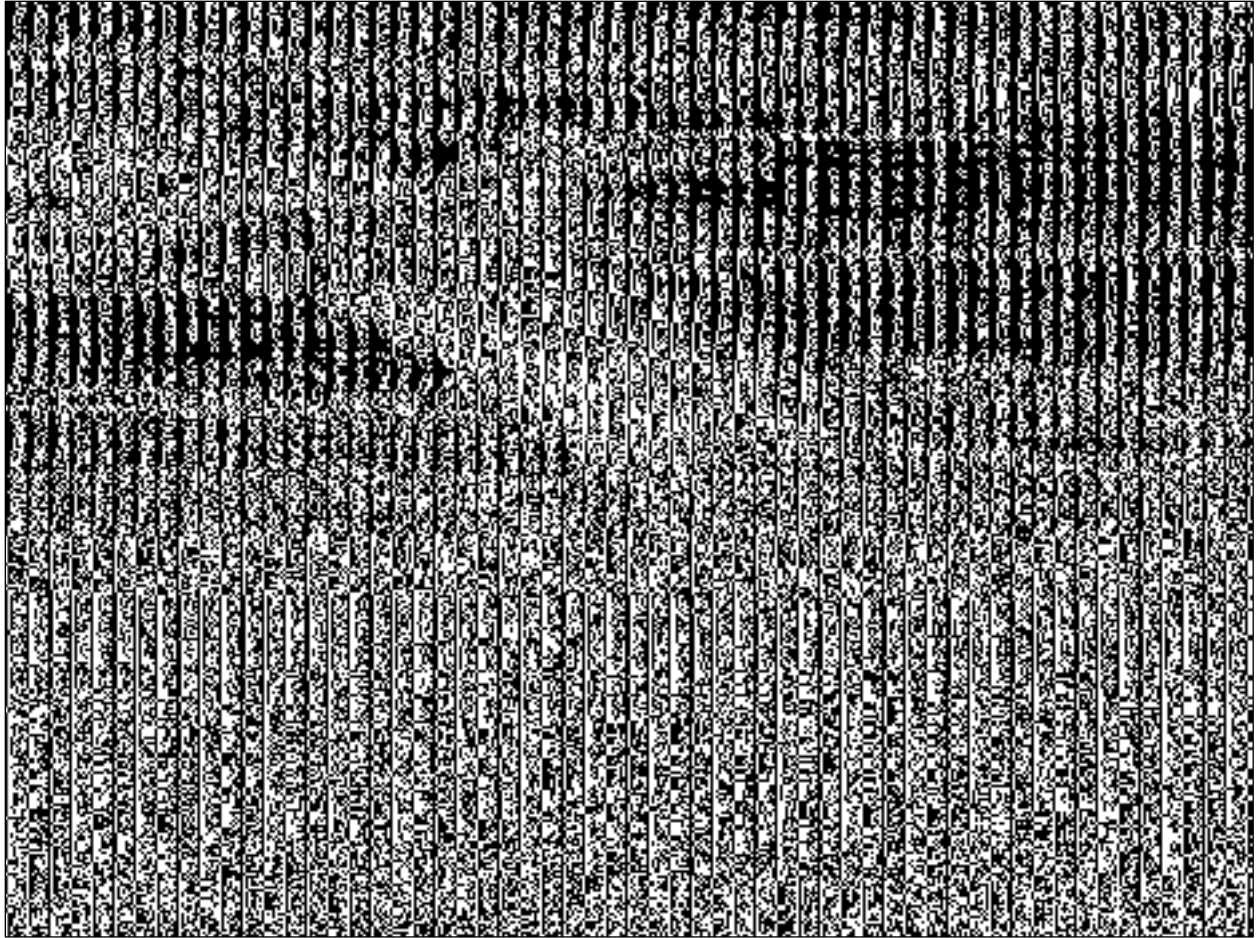


Figure 27. Southeast corner of project area facing west (Photo 7 in Figure 20)

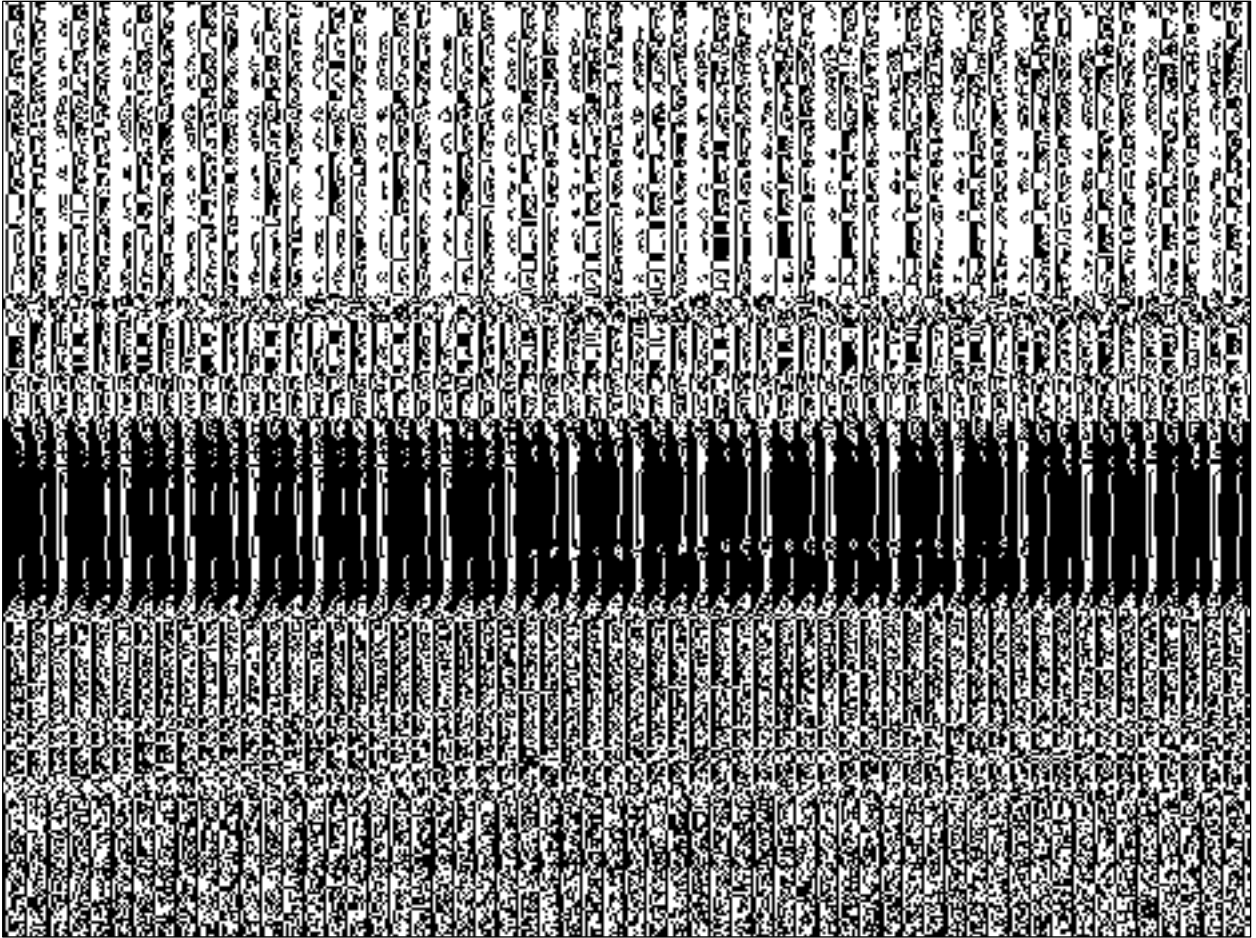


Figure 28. East side of project area facing west (Photo 8 in Figure 20)

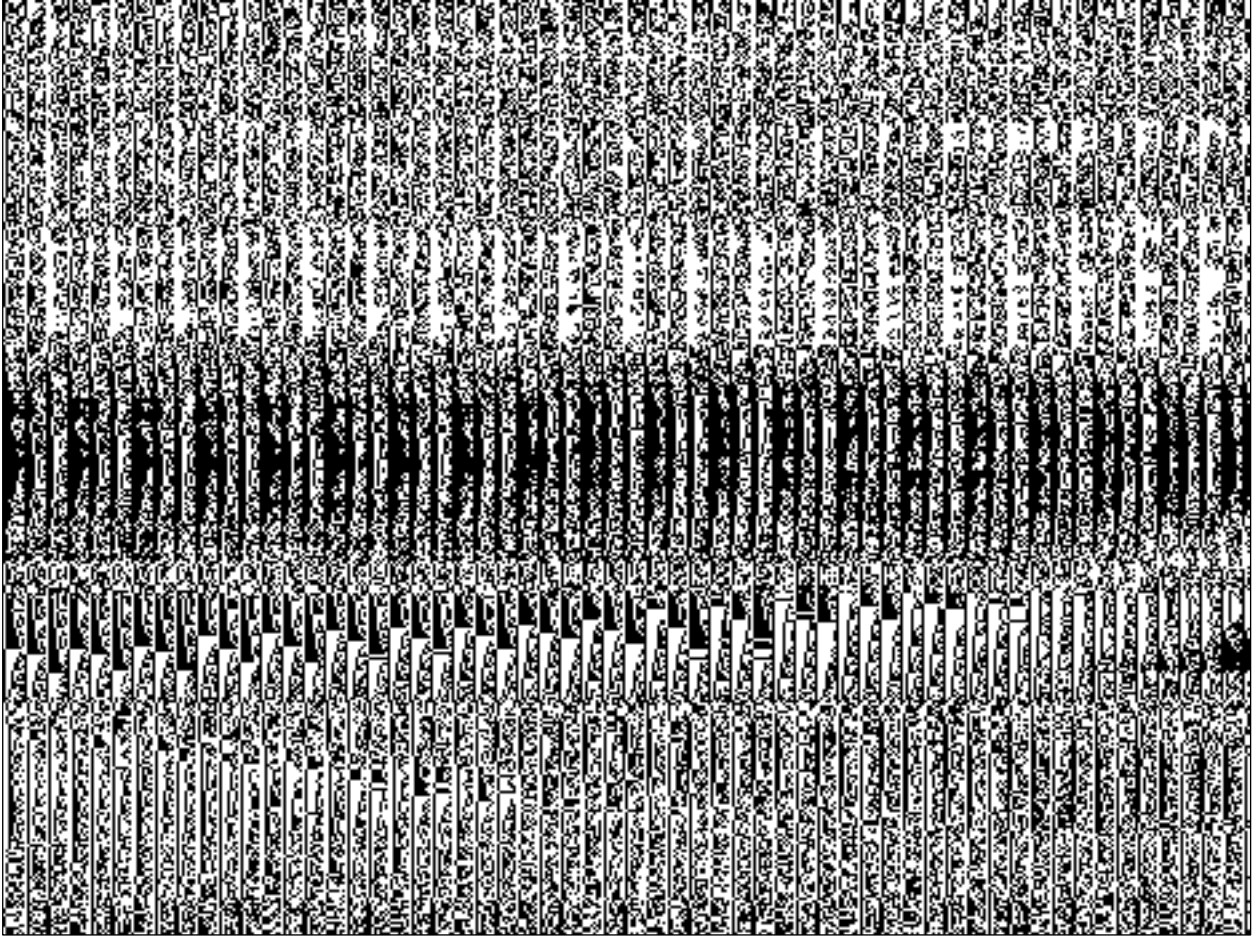


Figure 29. Northeast side of project area facing southwest (Photo 9 in Figure 20)

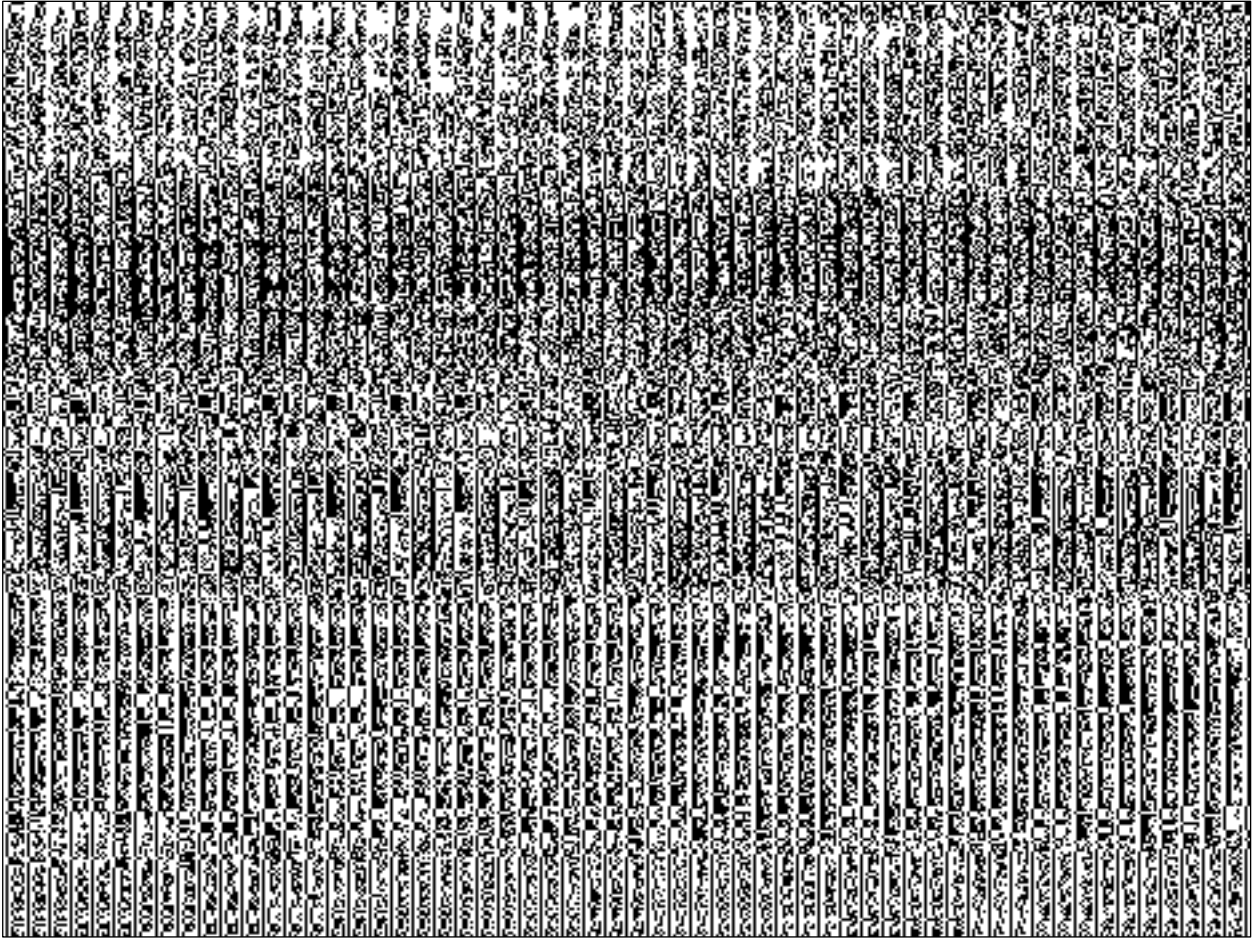


Figure 30. North corner of project area facing south (Photo 10 in Figure 20)



## Section 5 Conclusion

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This report was completed on behalf of Wilson Okamoto Corporation in support of its environmental review process for a proposed Outdoor Lū‘au / Celebration Venue at 2057 Kalākaua Avenue, Waikīkī Ahupua‘a, Waikīkī District, Island of O‘ahu, Hawai‘i. The project area consists of two parcels totaling 0.66 acres at TMK (1) 2-6-006:001 and 004. The private landowner is Best Hospitality LLC.

The project area is located in the western end of Waikīkī on the west (makai) side of Kalākaua Avenue, about one block south of its intersection with Kūhiō Avenue (the other main avenue through the heart of Waikīkī); the subject parcels are bounded to the east by Kalākaua Avenue, to the south and west by the Fort DeRussy Military Reservation and to the north by the Luana Waikiki Condominium / Hotel (TMK: [1] 2-6-006:002).

The objectives of this Archaeological Literature Review and Field Inspection (ALRFI) were: (1) documentation and description of the parcel’s land-use history in the context of its traditional Hawaiian character as well as its historic-period changes; (2) identification of any historic properties or component features in the project area; and (3) providing information relevant to the likelihood of encountering historically-significant cultural deposits in subsurface context during future construction.

This ALRFI is not an archaeological inventory survey (AIS), and it is not intended for formal review by the State Historic Preservation Division (SHPD). It may be used, however, to support the project proponent’s consultation with the SHPD in compliance with Hawai‘i Revised Statutes (HRS) § 6E-8 and Hawai‘i Administrative Rules (HAR) § 13-284.

In 2015, the project area was being considered for a different proposed project (Park Kālia Waikīkī Condo-Hotel Project) that was eventually canceled. In support of an Environmental Assessment (EA) for this previous project, a Cultural Impact Assessment (CIA) and preliminary archaeological review—including the excavation and interpretation of one subsurface trench—were completed (Ishihara et al. 2015; Stark et al. 2015).

The results of this ALRFI are as follows:

1. A previous archaeological investigation of the current project area (Stark et al. 2015) that included limited subsurface testing (i.e., one backhoe trench) exposed natural, undisturbed Jaucas sand from 95-165 centimeters below ground surface (cmbs); and fragments of a ceramic vessel interpreted as possibly Chinese as well as a wooden knife handle recovered in back dirt from upper 50 cmbs; no traditional Hawaiian materials were observed in excavation by Stark et al. (2015);
2. The immediate vicinity of the project area was once part of an extensive network of Hawaiian fishponds and ‘auwai (irrigation ditches and berms, which were eventually drained and filled in around the turn of the twentieth century);
3. Previous archaeological studies in the immediate vicinity of the project area have identified numerous subsurface cultural layers from both pre-Contact and historic-period times representing habitations and including human burials and finds of previously-disturbed (by historic-period development) human skeletal remains; and,
4. No archaeological historic properties were identified during the field inspection, which did not include subsurface testing (excavation).

## 5.1 Recommendations

Based on all available evidence, our recommendations are as follows:

1. The proposed project will have “no effect” on archaeological historic properties located at the ground surface.
2. The SHPD-Archaeology Branch should be consulted on archaeological matters regarding any subsurface ground disturbance associated with the proposed development project, since numerous historic properties and component features—including fishpond sediments and an ‘auwai system, cultural layers and artifacts from pre-Contact to historic-period times and intact human burials as well as disturbed human skeletal remains—have been documented in subsurface contexts all around the project area.

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# Appendix B:

Ka Pa'akai Analysis Memo for Kālia Luau





## MEMORANDUM

Fr: Trisha Kehaulani Watson, J.D., Ph.D.  
Honua Consulting, LLC  
Re: *Ka Pa'akai* Analysis Memo for Kālia Luau  
Date: May 13, 2023

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### Executive Summary

The Kobayashi Group is proposing to design, build, finance, operate and maintain a new outdoor, open air lū'au grounds in Waikīkī. The primary purpose of the Proposed Action is to hold lū'au for visitors and residents.

A *Ka Pa'akai* analysis was completed by Honua Consulting. There are no cultural resources (archaeological resources) identified in the project area, but the region is known to have cultural resources, including burials. There are currently no traditional or customary practices identified in the project area, as the project area has been the location of a Japanese restaurant for decades. Nonetheless, the region enjoys a wide range of practices. The potential that the proposed action would affect or impair these resources or practices is negligible.

As the potential for effect or impairment of cultural resources (including practices) is negligible, no action is required to protect Native Hawaiian rights. Nonetheless, best management practices should be implemented to ensure that no unanticipated affects to cultural resources occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the project.

## Proposed Action

The Kobayashi Group is proposing to design, build, finance, operate and maintain a new outdoor, open air lū'au grounds in Waikīkī. The primary purpose of the Proposed Action is to hold lū'au for visitors and residents. The project will require a number of various state permits. This memo was developed to help the permitting agencies comply with their *Ka Pa'akai* obligations.

## Background and Compliance Standards

The State and its agencies have an obligation to preserve and protect Native Hawaiians' customarily and traditionally exercised rights to the extent feasible.<sup>1</sup> State law further recognizes that the cultural landscapes provide living and valuable cultural resources where Native Hawaiians have and continue to exercise traditional and customary practices, including hunting, fishing, gathering, and religious practices. In *Ka Pa'akai*, the Hawai'i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through:

- 1) The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and
- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

This memo was prepared under this three-part test established by the Hawaii State Supreme Court. The appropriate information concerning Waikīkī ahupua'a was collected, focusing on areas near or adjacent to the project area.

## Analysis

In *Ka Pa'akai*, the Hawai'i Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through the following three-part test:

---

<sup>1</sup> Article XII, Section 7 of the Hawai'i State Constitution, *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, 94 Haw. 31 [2000](*Ka Pa'akai*), Act 50 HSL 2000.

- 1) The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area;
- 2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and
- 3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.

*The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area.*

Through the research and ethnographic data collected for this memo, numerous cultural resources were identified in the surrounding geographic extent, but few were identified in the project area itself. Previous interviews with highly knowledgeable cultural practitioners from the area were interviewed and none identified traditional or customary practices that occur in the project area. There are numerous identified traditions or customs in the surrounding area, including canoe paddling, surfing, fishing and other activities in the Ala Wai and in the coastal area. Waikīkī was also known for its kalo cultivation and as an area lived in by Hawaiian ali'i. While it is likely that historically traditional activities occurred in the project area, there are no cultural resources or traditional or customary practice that currently occur in the immediate project area. Due to the use of the project area as a Japanese restaurant for the past few decades, there is no evidence that traditional or customary practices have occurred in the project area since the 1950s when the original Kyo-ya Resturant was built.

*The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action.*

Of the identified cultural resources and traditional and customary practices that occur in the surrounding project area, the potential that the proposed action would affect or impair these resources is negligible.

*The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist.*

As the potential for effect or impairment of cultural resources (including practices) is negligible, no action is required to protect Native Hawaiian rights. Nonetheless, best management practices should be implemented to ensure that no unanticipated affects to cultural resources

occur and that there is a mechanism in place for practitioners to report any such potential occurrences to the project.

# Appendix C:

Acoustic Studies For the Proposed Kalia  
Cultural Entertainment Venue  
(November 2022 and May 2023)





**ACOUSTIC STUDY FOR THE  
PROPOSED KALIA CULTURAL  
ENTERTAINMENT VENUE FACILITY**

**WAIKIKI, OAHU**

Prepared for:

**BSC ACQUISITIONS II, LLC**

Prepared by:

**Y. EBISU & ASSOCIATES  
1126 12th Avenue, Room 305  
Honolulu, Hawaii 96816**

**NOVEMBER 2022**

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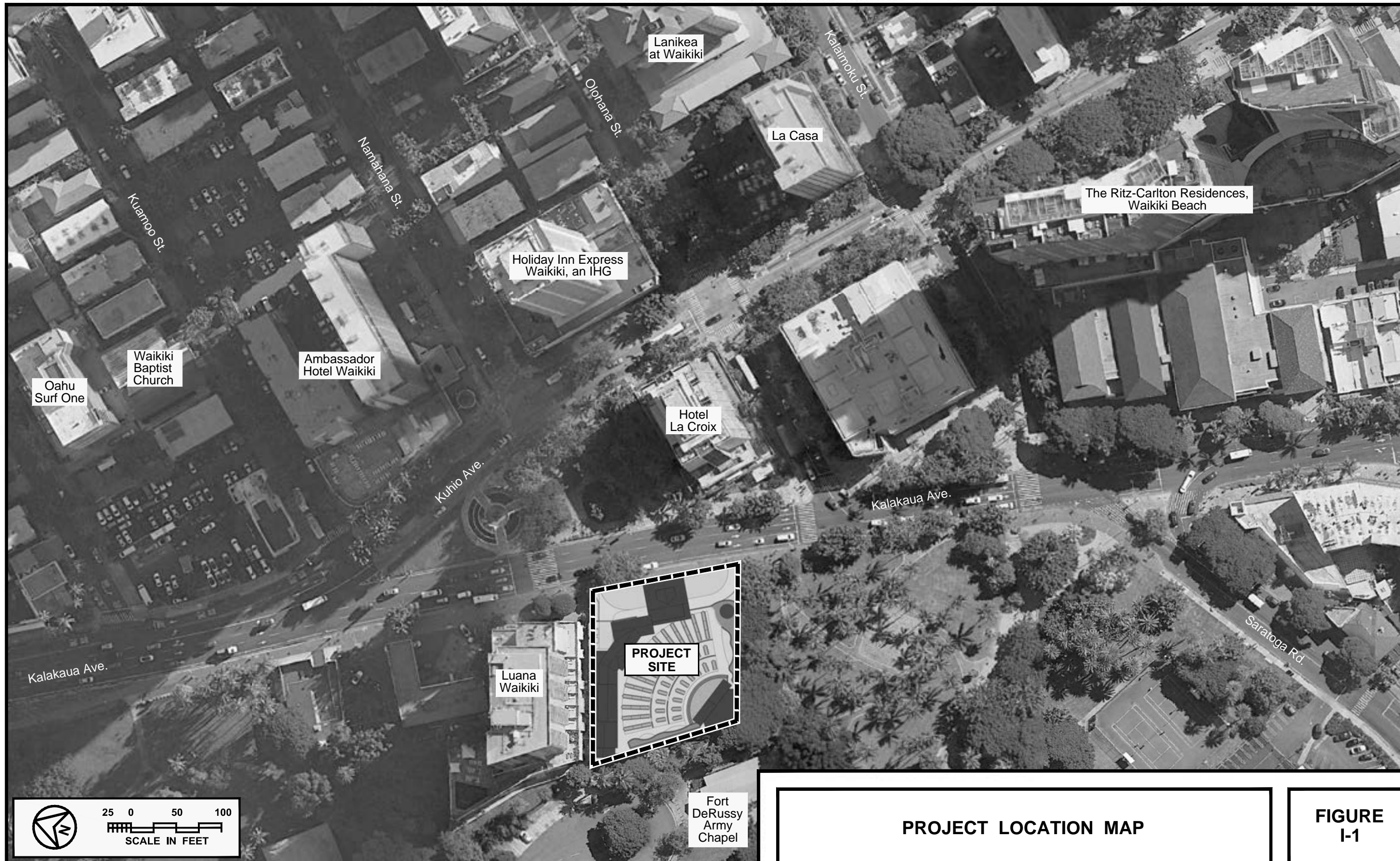
## CHAPTER I. SUMMARY

The potential for adverse noise impacts from dinner luau show events at the proposed Kalia Cultural Entertainment Venue facility were investigated due to potential spillover of crowd noise and amplified voice and music from the facility to neighboring receptor locations in Waikiki. The available buffer distance to the neighboring Luana Waikiki Hotel is relatively small, with relatively large buffer distances to hotels to the west, east, and south. Figure I-1 is a project location map which shows the surrounding land uses within 600 feet on the mauka and makai sides of the project site, which are primarily nonresidential (except for private residential units at Luana Waikiki). In the makai direction, park space, and military education/conference facility, and the U.S. Post Office are the closest existing developments.

The proposed open air, dinner luau show facility was evaluated for the amount of spillover sound possible during a dinner luau show, with minimum program sound levels provided within the open dining area for acceptable listening conditions. The influence of existing traffic noise levels on listening conditions within the luau show seating area as well as on the required minimum luau program's amplified sound levels were used to calculate anticipated spillover sound levels at the adjacent Luana Waikiki Hotel.

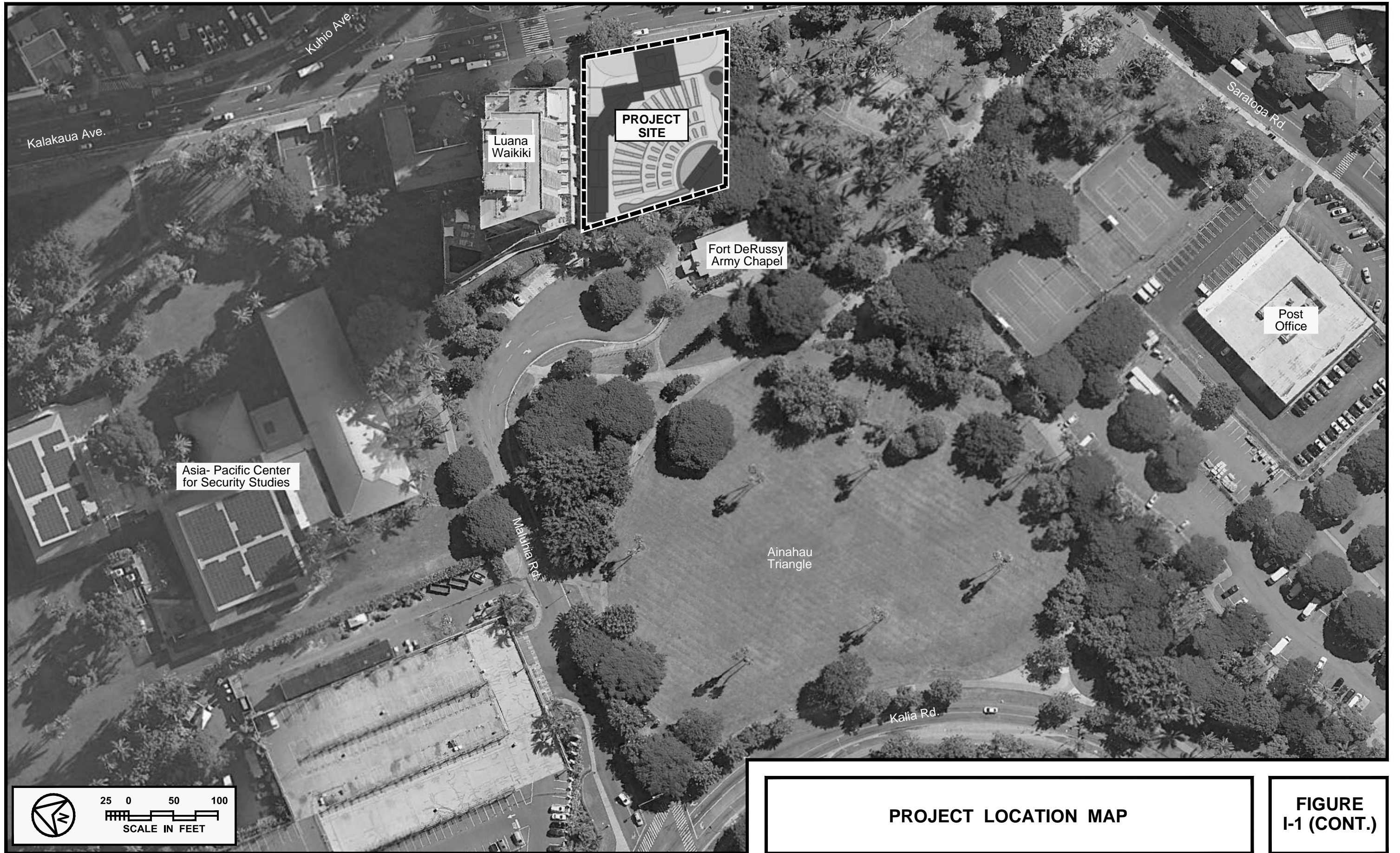
Spillover sound from the luau show is not expected to exceed current federal noise impact thresholds for residential, hotel, business, and educational land uses. However, for establishments which serve alcoholic beverages, the Honolulu Liquor Commission requires them to comply with their noise limits, which are much more difficult to meet by outdoor entertainment venues. Evaluations of the potential spillover noise from both crowd noise and amplified luau program sounds indicate that there is a very high risk of exceeding the 60 dBA limit of the Liquor Commission during the luau program, with approximately 75 dBA of luau program sound level at the luau audience seating areas. Crowd noise levels may be intermittently higher than program sound levels, but their actual levels will depend on how many simultaneous shouting voices occur together, and their frequency of occurrence are not expected to exceed the allowable time limit under the Liquor Commission regulations.

The application of various noise mitigation measures to meet the 60 dBA limit were evaluated conceptually, with only the conversion of the outdoor venue to an indoor venue considered capable of meeting the 60 dBA limit with minimal risk. Minimum acoustical sound attenuation properties of the exterior envelope of this indoor luau facility were provided using the facility's available conceptual plan, and range from STC (Sound Transmission Class) 25 to 35, which are not extraordinary.



**PROJECT LOCATION MAP**

**FIGURE I-1**



**PROJECT LOCATION MAP**

**FIGURE I-1 (CONT.)**

## CHAPTER II. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies to assess environmental noise is the Day-Night Average Sound Level (DNL or Ldn). These federal agencies include the Federal Aviation Administration (FAA), U.S. Federal Housing Administration, Housing and Urban Development (FHA/HUD), Department of Defense (DOD), Veterans Administration (VA), and Environmental Protection Administration (EPA). This descriptor incorporates a 24-hour average of instantaneous A-Weighted sound levels as read on a standard Sound Level Meter. The maximum A-Weighted sound level occurring while a noise source such as a heavy truck or aircraft is moving past a listener (i.e., the maximum sound level from a "single event") is referred to as the "Lmax value". The mathematical product (or integral) of the instantaneous sound level times the duration of the event is known as the "Sound Exposure Level", or Lse, which is analogous to the energy of the time-varying sound levels associated with a single event.

By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. Because of the averaging used, DNL values in urbanized areas typically range between 50 and 75 DNL. In comparison, the typical range of intermittent noise events may have maximum Sound Level Meter readings between 75 and 105 dBA. A more complete list of noise descriptors is provided in Appendix B to this report. In Appendix B, the Ldn descriptor symbol is used in place of the DNL descriptor symbol.

Table II-1, extracted from Reference 1, categorizes the various DNL levels of outdoor noise exposure with severity classifications. Table II-2, also extracted from Reference 1, presents the general effects of noise on people in residential use situations. Figure II-1 presents suggested land use compatibility guidelines for residential and nonresidential land uses. As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway, such as H-1 Freeway. In Waikiki, DNL levels of 70 or higher are common. Due to noise shielding effects from intervening structures, interior lots are usually exposed to 3 to 10 DNL lower noise levels than the front lots which are not shielded from the traffic noise.

For the purposes of determining noise acceptability for funding assistance from federal agencies, an exterior noise level of 65 DNL or lower is considered acceptable. This standard is applied nationally (see Reference 2), including Hawaii.



**TABLE II-1**

**EXTERIOR NOISE EXPOSURE CLASSIFICATION  
(RESIDENTIAL LAND USE)**

<b>NOISE EXPOSURE CLASS</b>	<b>DAY-NIGHT SOUND LEVEL</b>	<b>EQUIVALENT SOUND LEVEL</b>	<b>FEDERAL (1) STANDARD</b>
<b>Minimal Exposure</b>	<b>Not Exceeding 55 DNL</b>	<b>Not Exceeding 55 Leq</b>	<b>Unconditionally Acceptable</b>
<b>Moderate Exposure</b>	<b>Above 55 DNL But Not Above 65 DNL</b>	<b>Above 55 Leq But Not Above 65 Leq</b>	<b>Acceptable(2)</b>
<b>Significant Exposure</b>	<b>Above 65 DNL But Not Above 75 DNL</b>	<b>Above 65 Leq But Not Above 75 Leq</b>	<b>Normally Unacceptable</b>
<b>Severe Exposure</b>	<b>Above 75 DNL</b>	<b>Above 75 Leq</b>	<b>Unacceptable</b>

**Notes:** (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation.

(2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if: (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours. The noise mitigation threshold used by FHWA for residences is 67 Leq.

**TABLE II-2  
EFFECTS OF NOISE ON PEOPLE  
(Residential Land Uses Only)**

EFFECTS <sup>1</sup>	Hearing Loss	Speech Interference		Annoyance <sup>2</sup>	Average Community Reaction <sup>4</sup>	General Community Attitude Towards Area
		Indoor	Outdoor			
DAY-NIGHT AVERAGE SOUND LEVEL IN DECIBELS	Qualitative Description	% Sentence Intelligibility	Distance in Meters for 95% Sentence Intelligibility	% of Population Highly Annoyed <sup>3</sup>		
75 and above	May Begin to Occur	98%	0.5	37%	Very Severe	Noise is likely to be the most important of all adverse aspects of the community environment.
70	Will Not Likely Occur	99%	0.9	25%	Severe	Noise is one of the most important adverse aspects of the community environment.
65	Will Not Occur	100%	1.5	15%	Significant	Noise is one of the important adverse aspects of the community environment.
60	Will Not Occur	100%	2.0	9%	Moderate to	Noise may be considered an adverse aspect of the community environment.
55 and below	Will Not Occur	100%	3.5	4%	Slight	Noise considered no more important than various other environmental factors.

quietest surroundings. One reason is the difficulty all people have in intergrating annoyance over a very long time.

4. Attitudes or other non-acoustic factors can modify this. Noise at low levels can still be an important problem, particularly when it intrudes into a quiet environment.

NOTE: Research implicates noise as a factor producing stress-related health effects such as heart disease, high-blood pressure and stroke, ulcers and other digestive disorders. The relationships between noise and these effects, however, have not as yet been quantified.

1. "Speech interference" data are drawn from the following tables in EPA's "Levels Document": Table 3, Fig. D-1, Fig. D-2, Fig. D-3. All other data from National Academy of Science 1977 report "Guidelines for Preparing Environmental Impact Statements on Noise, Report of Working Group 69 on Evaluation of Environmental Impact of Noise."

2. Depends on attitudes and other factors.

3. The percentages of people reporting annoyance to lesser extents are higher in each case. An unknown small percentage of people will report being "highly annoyed" even in the

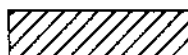
LAND USE	ADJUSTED YEARLY DAY - NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS				
	50	60	70	80	90
Residential - Single Family, Extensive Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Residential - Multiple Family, Moderate Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Residential - Multi - Story Limited Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Hotels, Motels Transient Lodging	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
School Classrooms, Libraries, Religious Facilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Hospitals, Clinics, Nursing Homes, Health Related Facilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Auditoriums, Concert Halls	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Music Shells	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible	Incompatible
Sports Arenas, Outdoor Spectator Sports	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Neighborhood Parks	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Playgrounds, Golf courses, Riding Stables, Water Rec., Cemeteries	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Office Buildings, Personal Services, Business and Professional	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Commercial - Retail, Movie Theaters, Restaurants	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Commercial - Wholesale, Some Retail, Ind., Mfg., Utilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Marginally Compatible
Livestock Farming, Animal Breeding	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Marginally Compatible
Agriculture ( Except Livestock )	Compatible	With Insulation per Section A.4	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible



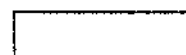
Compatible



Marginally Compatible



With Insulation per Section A.4



Incompatible

LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY - NIGHT SOUND LEVEL ( DNL ) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.  
( Source: American National Standards Institute S12.9 - 1988/Part 5 )

FIGURE II-1

Because of our open-living conditions, the use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise (see Reference 3). For typical, naturally ventilated structures in Hawaii, an exterior noise level of 55 DNL results in an interior level of approximately 45 DNL, which is considered to be the "Unconditionally Acceptable" (or "Near-Zero Risk") level of interior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 DNL are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 DNL.

In the State of Hawaii, the State Department of Health (DOH) regulates noise from fixed machinery and on-site construction activities. State DOH noise regulations are expressed in maximum allowable property line noise limits rather than DNL (see Reference 4). The noise limits apply on all islands of the State, including Oahu. Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for preservation/residential, apartment/resort/commercial, and agricultural/industrial lands equate to approximately 55, 60, and 76 DNL, respectively. However, the DOH noise regulations apply primarily to fixed machinery sources and not to crowd noise or public address systems.

The sound levels associated with entertainment events at establishments which require liquor licenses, such as may be required for luau dinner shows, are currently regulated by the Honolulu Liquor Commission (see Reference 5). The applicable noise limits are identical to those of the State DOH, and are 60 dBA during the daytime period of 7:00 AM to 10:00 PM, and 50 dBA during the nighttime period of 10:00 PM to 7:00 AM. Exceedance of the applicable noise limit for 2 or more minutes in any 20 minute (or for 10 percent of the time) interval is applied as the regulatory threshold. Where the background noise level is equal to or exceed these noise limits, the applicable noise limits are raised to the background noise level. The Honolulu Liquor Commission noise regulations are not limited to fixed machinery, and may be applied to crowd noise or public address systems.

Spillover sound into neighboring properties from luau shows or other entertainment events in Waikiki occur, and may or may not generate complaints depending on the circumstances and receptor reactions to the audible sounds. According to research results reported in Reference 3, the likelihood of a noise complaint can occur well below the noise compatibility thresholds shown in Tables II-1 and II-2 or Figure II-1, or below 65 DNL, because an individual's noise complaint threshold is influenced not only by the actual sound level (in decibels, or dB), but also

by other attitudinal factors such as: personal relationships between individual and noise maker; or the individual's belief that noise is very necessary and will not continue indefinitely. Recognizing the influence of these factors, this noise study attempted to quantify the anticipated spillover sound levels during luau shows at various neighboring receptor locations, and in particular, at the neighboring Luana Waikiki Hotel.

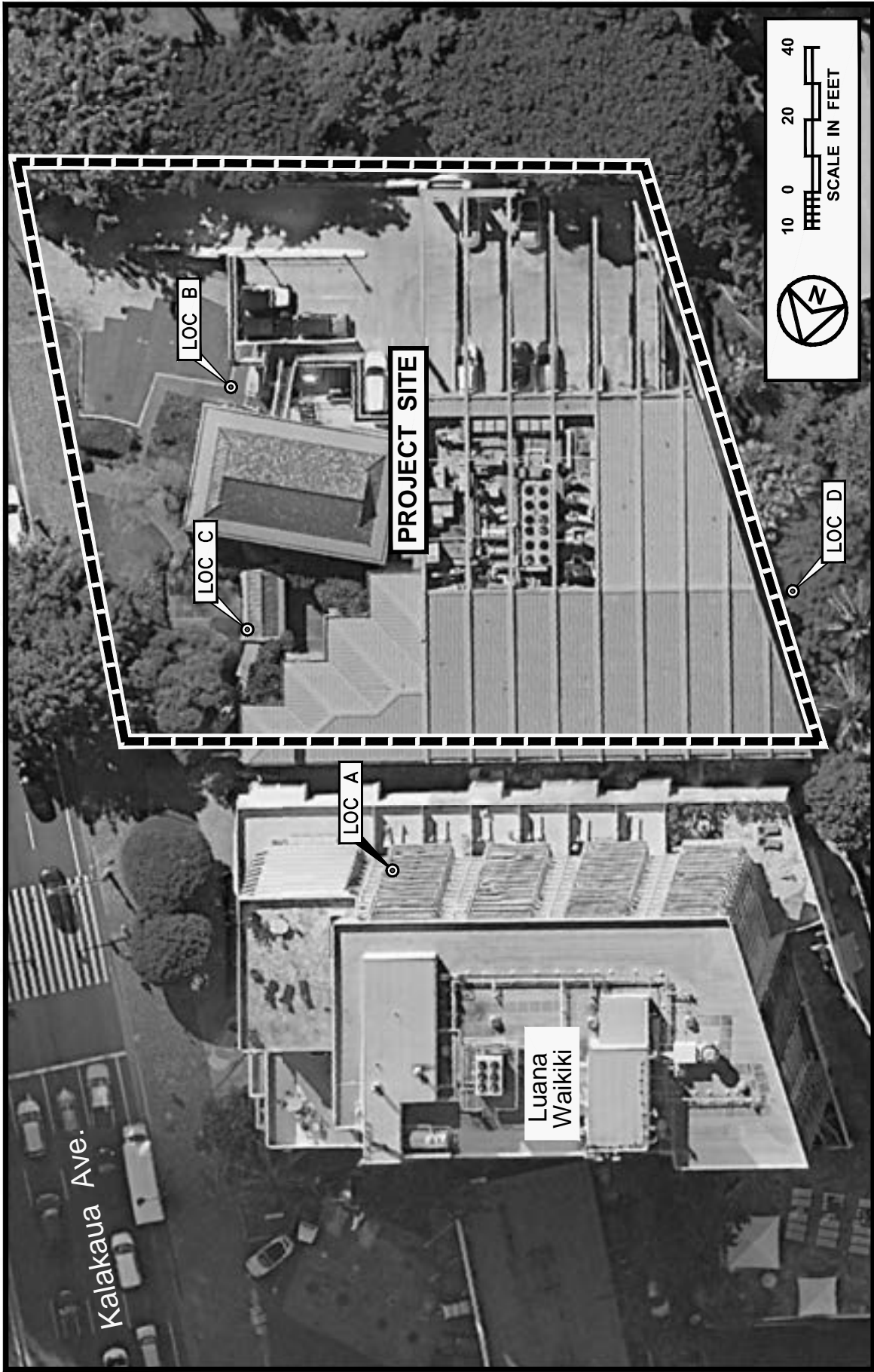
### CHAPTER III. GENERAL STUDY METHODOLOGY

Potential noise impacts from the dinner luau show events at the facility were evaluated, using the noise metrics (DNL and dBA) currently used by federal and local government agencies. The scope of the noise study included evaluations of potential noise impacts on existing noise sensitive receptors within the project environs resulting from spillover of luau program sound levels and crowd noise. For outdoor venues, the amount of spillover sound at a neighboring receptor location is controlled by the program sound levels required in the audience seating area, the audience seating capacity, and the buffer distance between the sound source(s) and receptor.

Existing background noise levels were obtained at the Luana Waikiki Hotel and at ground level fronting Kalakaua Avenue during the anticipated dinner show times between 6:00 pm and 10:00 pm. The existing traffic noise levels from Kalakaua Avenue were used to estimate the background noise levels to be expected in the rear seating area of the luau theater (see Figure III-1). Measurement Location A was an anchor location on the 6th Floor lanai (approximately 100 feet above street level) of the Luana Waikiki, with background noise measurements obtained for a 24-hour period from November 2, 2022 to November 3, 2022 in order to document the hourly variations of traffic noise from Kalakaua Avenue and other noise sources. Ground level measurement Locations B, C, and D were used to establish their dBA relationships to those measured at Location A, for estimating the hourly variations of background noise levels at the mauka and makai perimeters of the project site. The results at measurement Location B were considered to be representative of anticipated worst case background noise levels at the planned Kalia Cultural Entertainment Venue facility during a luau show. The measured background noise levels at these perimeter locations were then used to determine the minimum sound levels required of the luau program sound system at the most distant audience seats from the luau program stage.

It was assumed that the average luau show program sound levels would need to be at least 15 to 20 dBA higher than anticipated background or traffic noise levels at the most distant theater seat for audience satisfaction and successful performer to listener communication, with minimum background noise levels of 60 dBA resulting from steady crowd generated noise (or din) at the quieter seating areas removed from Kalakaua Avenue. Table III-1 summarizes the measured hourly background noise levels at the Luana Waikiki Hotel Location A. Table III-2 compares the short term background noise levels at perimeter Locations B, C, and D, and estimates the hourly noise levels during the luau show times at the perimeter locations shown in Figure III-2.

After determining the minimum program sound levels at the farthest listener seating area of approximately 85 to 90 feet from the center of the stage, predictions of spillover luau program sound levels at worst case (Luana Waikiki) and distant neighboring receptor locations were made. These luau program sound levels were estimated based on actual sound measurements at other open and semi-enclosed luau theaters in Hawaii. These predicted sound levels were expressed in both the DNL and



**FIGURE  
III-1**

**PROPOSED KALIA CULTURAL ENTERTAINMENT VENUE SITE  
AND BACKGROUND NOISE MEASUREMENT LOCATIONS**

**TABLE III - 1**  
**24-HOUR NOISE MEASUREMENTS AT**  
**LOCATION A, LUANA WAIKIKI HOTEL**

Date	Hour	LAeq	LAmx	LAmn	LA10	LA50	LA90	Event Description
11/03/22	1000-1100	64.6	84.3	58.6	65.5	63.0	60.7	
11/02/22	1100-1200	64.0	84.6	59.2	65.2	62.9	60.8	
11/02/22	1200-1300	62.8	79.3	57.9	64.6	62.0	59.7	
11/02/22	1300-1400	63.4	79.6	58.1	65.2	62.2	59.9	
11/02/22	1400-1500	63.3	78.8	58.2	64.8	62.2	59.8	
11/02/22	1500-1600	63.1	79.5	58.3	64.6	62.1	59.6	
11/02/22	1600-1700	63.3	86.8	58.0	64.4	61.6	59.4	
11/02/22	1700-1800	64.2	86.6	57.8	64.3	61.2	59.2	
11/02/22	1800-1900	63.2	85.2	57.7	63.7	61.2	59.0	
11/02/22	1900-2000	63.0	85.0	57.5	63.7	60.8	58.8	
11/02/22	2000-2100	64.0	89.2	57.5	63.1	60.5	58.5	
11/02/22	2100-2200	62.9	82.8	57.5	63.5	60.2	58.2	
11/02/22	2200-2300	61.8	86.1	57.2	62.8	59.5	58.0	
11/02/22	2300-0000	60.0	76.2	56.3	61.4	58.5	57.2	
11/03/22	0000-0100	59.7	78.7	56.4	60.7	58.3	57.4	
11/03/22	0100-0200	58.2	68.4	56.5	59.3	57.8	57.2	
11/03/22	0200-0300	58.0	70.6	55.8	58.9	57.2	56.5	
11/03/22	0300-0400	57.9	66.3	56.0	59.3	57.4	56.5	
11/03/22	0400-0500	59.5	77.3	55.9	61.3	57.9	56.6	
11/03/22	0500-0600	61.1	77.5	56.0	63.4	59.2	57.3	
11/03/22	0600-0700	62.1	79.0	56.9	64.4	60.8	58.4	
11/03/22	0700-0800	63.0	85.4	57.0	64.7	61.8	59.0	
11/03/22	0800-0900	63.3	83.0	57.8	64.9	62.4	60.0	
11/03/22	0900-1000	65.7	93.5	58.8	66.5	63.6	61.1	
	DNL:	67.1						

**Notes:**

- a. LAeq = Average A-Weighted Sound Level (in dBA)
- b. LAmx = Maximum A-Weighted Sound Level (in dBA)
- c. LAmn = Minimum A-Weighted Sound Level (in dBA)
- d. LA10 = A-Weighted Sound Level (in dBA) which was exceeded 10 percent of the time.
- e. LAxx = A-Weighted Sound Level (in dBA) which was exceeded xx percent of the time.



**TABLE III - 2**  
**RELATIONSHIPS BETWEEN NOISE LEVELS AT ANCHOR**  
**LOCATION A AND THOSE AT REMOTE MEASUREMENT LOCATIONS**

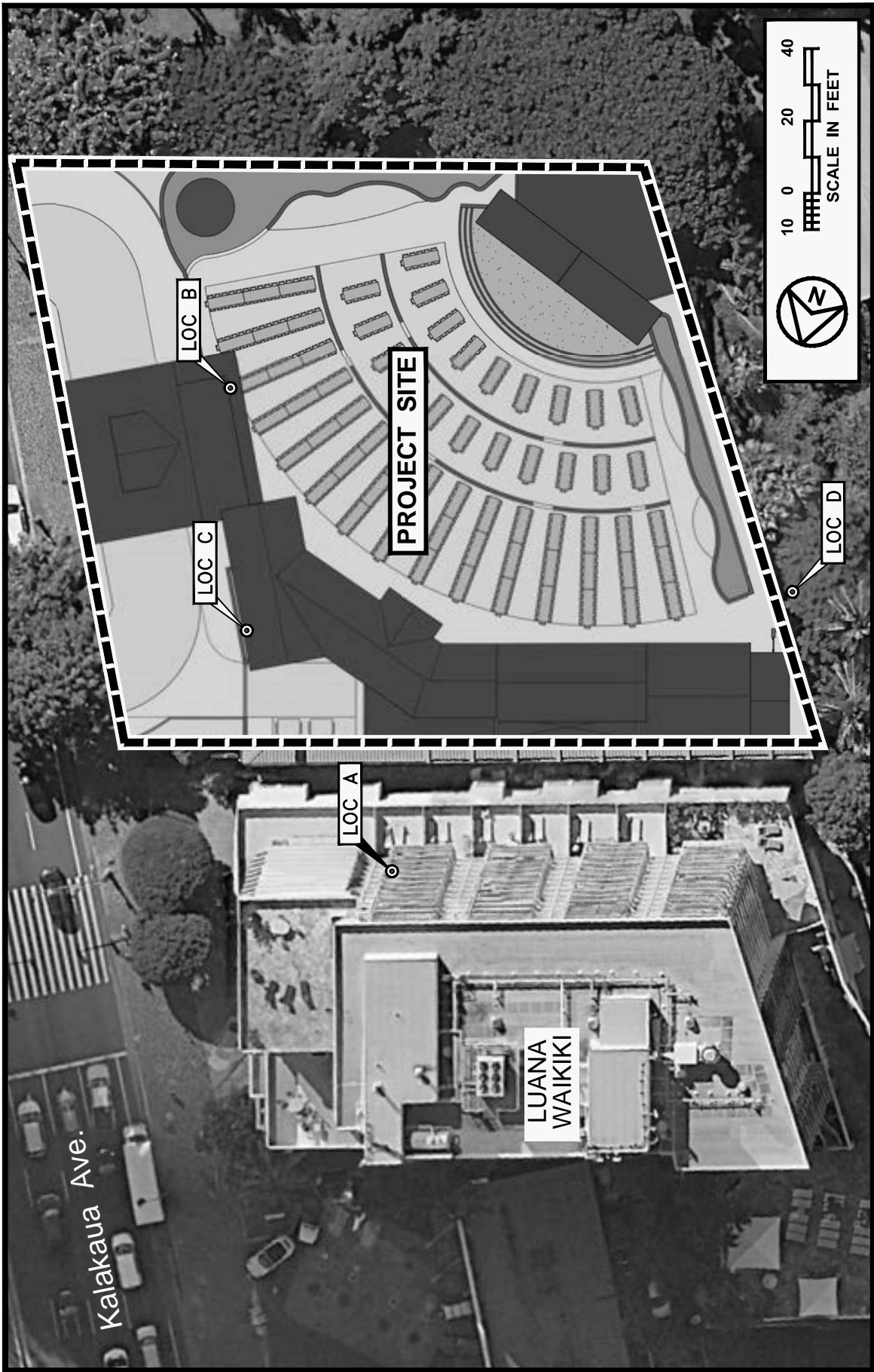
LOCATION: Various Anchor and Remote Noise Monitoring Sites At Project

DATE: November 2, 2022

Start Time	End Time	LOC	LAm <sub>ax</sub>	LA <sub>eq</sub>	LAm <sub>in</sub>	Delta			
<u>Anchor Location:</u>									
1745:00	1800:00	A	64.1	61.1	58.0	N/A			
1805:00	1820:00	A	72.9	62.2	58.3	N/A			
1829:00	1844:00	A	72.1	62.5	58.4	N/A			
1852:00	1907:00	A	76.6	62.3	58.1	N/A			
1911:00	1926:00	A	77.0	63.0	58.0	N/A			
1932:00	1947:00	A	80.5	63.0	57.8	N/A			
1953:00	2008:00	A	85.9	66.0	58.0	N/A			
2010:00	2025:00	A	64.9	60.7	58.0	N/A			
<u>Remote Locations:</u>									
1745:00	1800:00	B	71.6	61.8	54.5	0.7			
1805:00	1820:00	C	83.9	66.6	55.1	4.4			
1829:00	1844:00	D	59.0	50.2	46.8	-12.3			
1852:00	1907:00	B	80.6	62.7	53.1	0.4			
1911:00	1926:00	C	88.3	67.9	54.8	4.9			
1932:00	1947:00	D	61.5	49.1	46.3	-14.0			
1953:00	2008:00	B	92.3	68.7	52.5	2.7			
2010:00	2025:00	C	72.5	63.6	54.3	2.9			

Notes:

- a. LA<sub>eq</sub> = Average A-Weighted Sound Level (in dBA)
- b. LAm<sub>ax</sub> = Maximum A-Weighted Sound Level (in dBA)
- c. LAm<sub>in</sub> = Minimum A-Weighted Sound Level (in dBA)
- d. Delta = LA<sub>eq</sub> at Remote location minus LA<sub>eq</sub> at Location A during the same time period



**FIGURE  
III-2**

**PROJECT FLOOR PLAN AND BACKGROUND  
NOISE MEASUREMENT LOCATIONS**

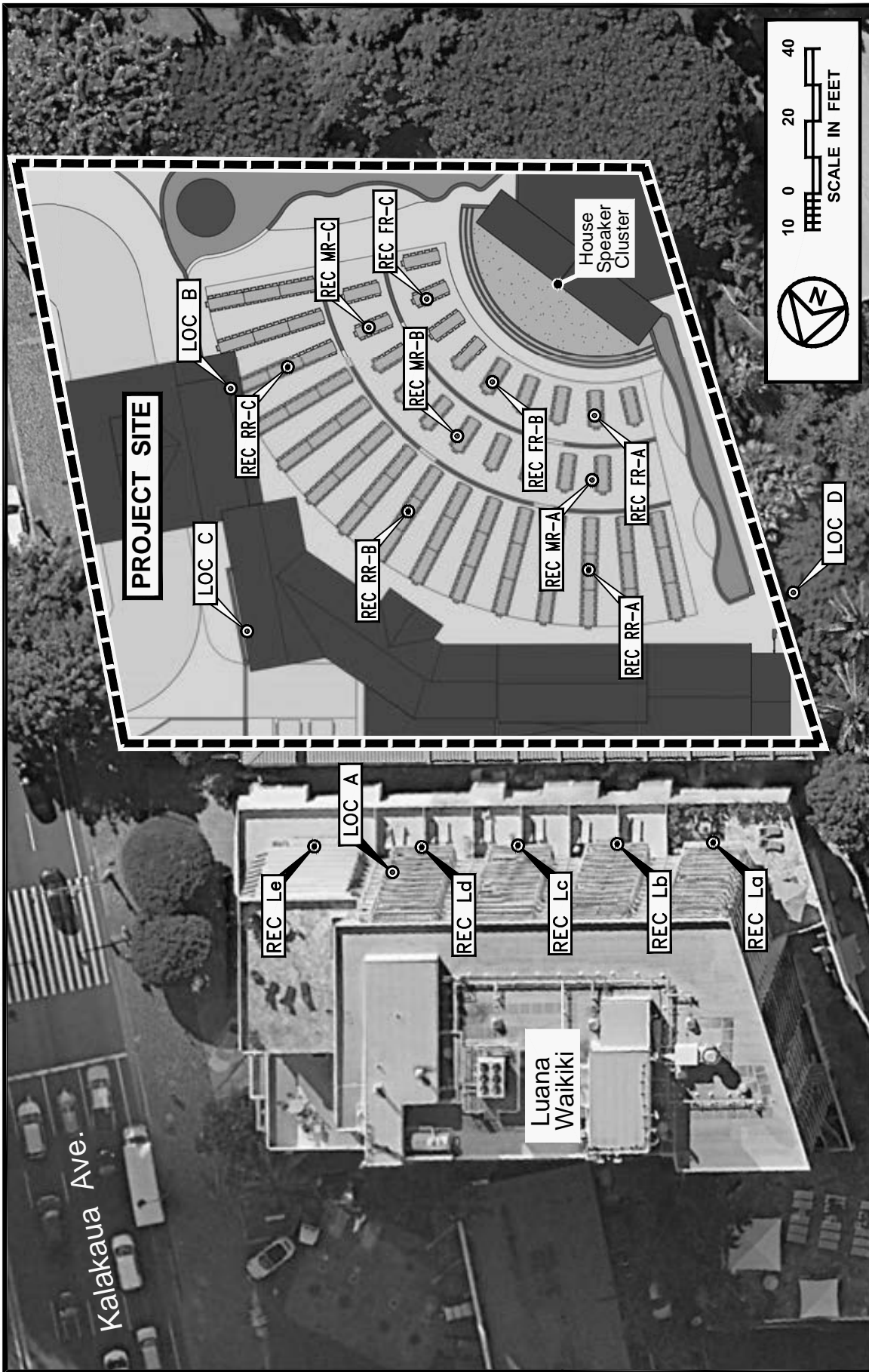
dBA metrics for comparison with the regulatory sound levels (FHA/HUD and Honolulu Liquor Commission). A potential noise impact was identified if the spillover sound levels exceeded the FHA/HUD 65 DNL threshold, or if it exceeded the Liquor Commission 60 dBA threshold more than 10 percent of the time.

The spillover of crowd noise during cheering and/or shouting from the seated audience was also predicted based on crowd noise measurements during outdoor football games and luau program events. The anticipated seating capacity of the Kalia Cultural Entertainment Venue facility was assumed to be 685 in the lower main seating area, with 60 seats in the upper covered area. The dominant crowd noise levels were assumed to be from the 685 ground floor luau show guests, each simultaneously shouting (48 dBA at 100 feet on axis), with adjustments made for 180 degree (or rear) aspect to 90 degree (or side) aspect from the shouting individual. Crowd noise at maximum shouting level from 685 guests during less than 10 percent of the luau show was assumed for very worst case conditions. The actual opportunity for crowd reaction during pauses between different performances was assumed to be less than 10 percent of the time.

For crowd noise and luau program sound levels expressed in the dBA metric, the maximum (L<sub>Amax</sub>), average (L<sub>Aeq</sub>), and 10 percent exceedance (LA<sub>10</sub>) A-Weighted sound levels were predicted at each receptor location. For luau program sound levels expressed using the DNL metric, it was assumed that the average program sound levels (L<sub>Aeq</sub>) would be maintained during a 2-hour long show, 4.5 days per week, and 52 weeks per calendar year. All shows would not extend past 10:00 pm. For crowd noise, it was assumed that the maximum (L<sub>Amax</sub>) crowd noise level would persist for less than 10 percent of the time during a 2-hour long show.

Sound levels of the luau program and crowd noise levels at receptors at the Luana Waikiki were predicted using noise modeling. Figure III-3 depicts the noise modeling locations used for the luau program single cluster, house speaker and for the grouping of crowd noise sources within the ground floor seating area. The house speaker was assumed to be at least 20 feet above street level. The crowd noise sources were grouped at the centers of three pie-shaped floor areas (A, B, and C), and located in the front row (FR), middle row (MR) and rear row (RR) seating areas. The numbers of crowd noise sources were adjusted for the applicable percentage of the 685 total seats assumed in the audience area. Figure III-3 also shows the locations of the Diamond Head lanai receptors at Luana Waikiki for various floor elevations, where the First Floor elevation was estimated to be 60 feet above Kalakaua Avenue, and 8 feet per floor above the First Floor level. The mauka most tower (Le) contains lanai receptors on Floors 1 to 10, and the main tower (La through Ld) contains receptors on Floors 1 to 16). Figure I-1 shows the locations of the other closest receptors to the proposed Kalia Cultural Entertainment Venue facility.

Background noise levels at the Diamond Head face of Luana Hotel were estimated using the Federal Highway Administration (FHWA) Traffic Noise Model, Version 2.5 (TNM, see Reference 6) based on measurements obtained at Locations A



**FIGURE III-3**

**PROJECT FLOOR PLAN AND CROWD NOISE SOURCE AND LUANA WAIKIKI RECEPTOR LOCATIONS**

through C. In addition, the TNM was used to estimate the traffic noise reductions possible from a tall sound attenuating wall located along the Kalakaua Avenue side of the Kalia Cultural Entertainment Venue site in order to reduce traffic noise levels in the luau audience seating area, which would reduce the required luau program sound levels at the most distant listener.

Where adverse noise impacts were identified, possible noise mitigation measures were evaluated, including the most effective sound attenuating option of total closure of the luau theater with a roof and walls and air conditioning. The sound attenuation requirements of the luau theater's exterior envelope were developed so as to eliminate risks of exceeding current regulatory limits. These risks are typically linked to risks of noise complaints at noise sensitive receptor locations where the luau program or crowd noise are audible. Other less productive options, such as using a new sound wall or building structure to reduce the background noise levels within the luau theater area; rotating the entire stage and seating area in combination with the sound attenuating barrier described above; and using distributed speakers throughout the seating area were evaluated to see if they could be effective noise mitigation measures.

## CHAPTER IV. EXISTING NOISE ENVIRONMENT

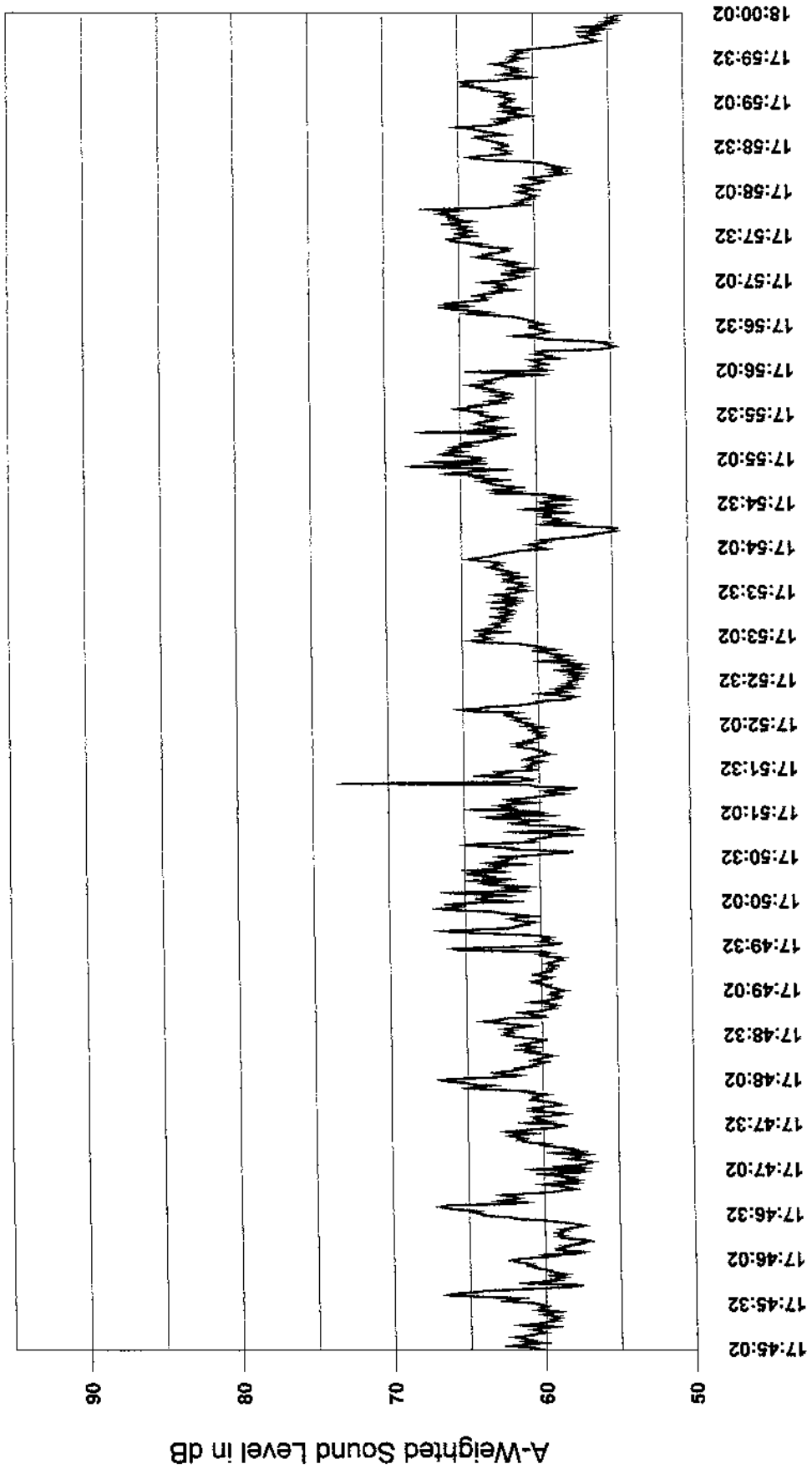
The existing background ambient noise levels in the project environs are controlled by traffic on Kalakaua Avenue and the intermittent sirens of emergency vehicles. The sounds of automobiles, heavy trucks, motorcycles, mopeds, and buses, and the sirens, control the background ambient noise levels on the project site and at the Luana Waikiki Hotel. Table III-1, Table III-2, and Figure III-1 present the results of short term noise measurements at Locations B, C, and D, and the continuous noise monitoring at a 6th Floor Diamond Head lanai of Luana Waikiki Hotel (Location A). Spot noise measurements on the ground near Kalakaua Avenue and near the planned rear seating area for the luau shows were also obtained as shown in Table III-2, with differences ("Delta") also shown between the ground level and 6th Floor lanai measurements. Because the project site is currently developed, traffic noise shielding effects are probably occurring at the interior and makai (Location D) location at the site. The background noise measurements at Locations A, B, and C, and traffic noise modeling using the FHWA TNM were used to predict future traffic noise levels on the project site with and without noise shielding effects from the existing structures on the site, as well as at 2nd Floor receptor locations at the lanais of Luana Waikiki. These noise levels over the project site without noise shielding from the existing structures on the site were estimated at 65 to 67 dBA (LAeq) along the rearmost Diamond Head corner seating area closest to Kalakaua Avenue, and at 57 to 62 dBA (LAeq), in the front row seating area closest to the planned stage.

Existing background noise levels at the 2nd Floor lanais and on the Diamond Head face of Luana Waikiki Hotel probably range from 62 LAeq at guest units closest to Kalakaua Avenue to 59 LAeq at guest units farthest from Kalakaua Avenue. DNL levels at units on the Diamond Head face of Luana Waikiki Hotel probably ranged from 65 to 62 DNL, or approximately 3 dB higher than the PM peak hour traffic noise level. These DNL levels are in the "Moderate Exposure, Acceptable" noise exposure categories using the 65 DNL FHA/HUD threshold for noise sensitive receptors. Background LA10 levels during the anticipated dinner show hours of 7:00 PM to 10:00 PM ranged from 62 to 59 dBA.

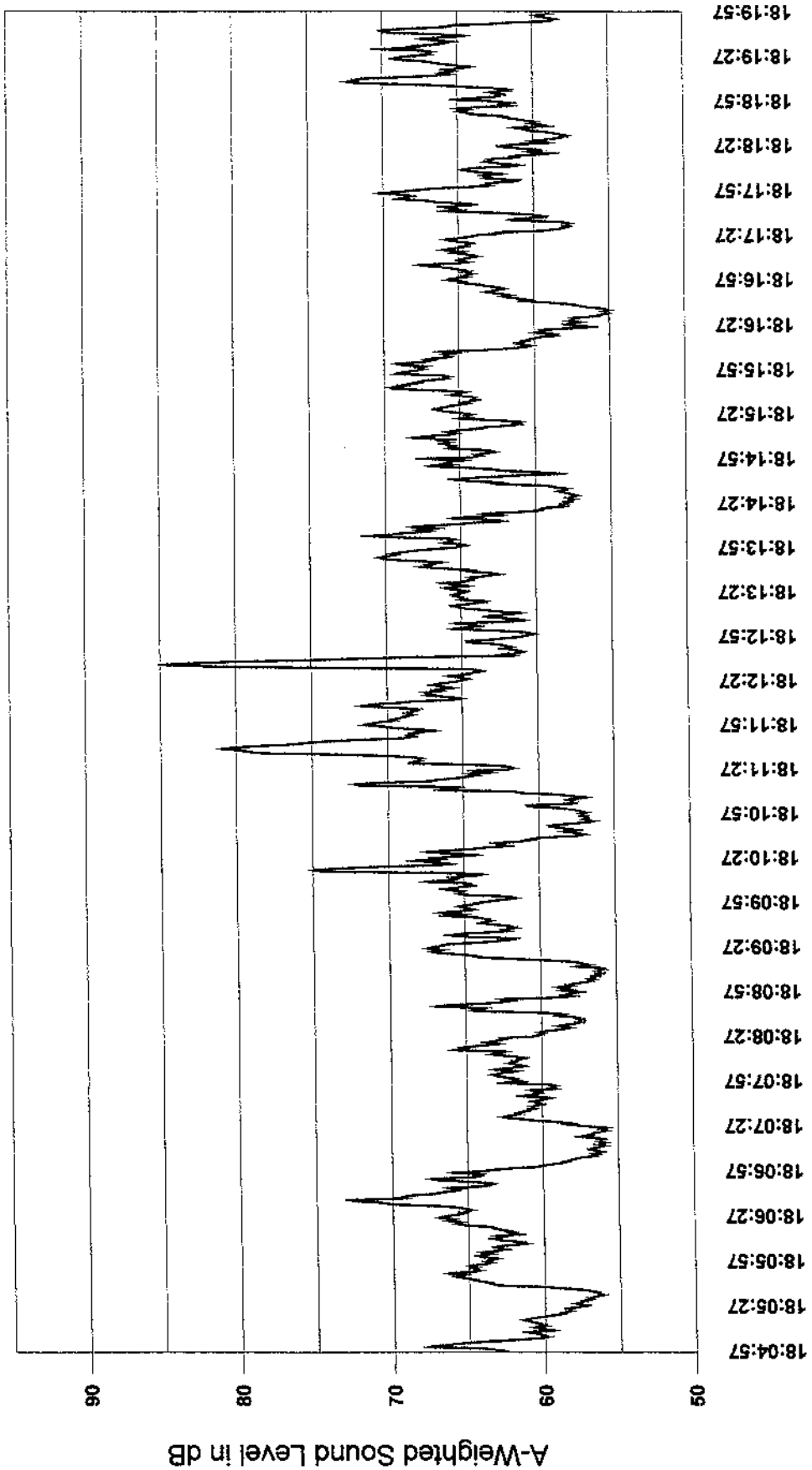
Measured dBA vs. Time background noise levels at Locations B, C, and D are shown in Figures IV-1 through IV-8, and depict the intermittent nature of the very loud noise events, which were typically caused by motorcycles or mopeds traveling on Kalakaua Avenue. The very loud moped noise event measured at Location B at 2006:57 was the cause of the large increase in the LAeq value at Location B for that measurement period.

Measured background noise levels at Locations A, B, and C are believed to be representative of those at other hotel receptors on the mauka side of Kalakaua Avenue or along Kuhio Avenue. Measured background noise levels at Location D are believed to be representative of those park areas immediately makai of the project site.

FIGURE IV-1. 15 MINUTE DBA VS. TIME RECORD AT LOC B  
(1745 TO 1800 HOURS; NOVEMBER 2, 2022)



**FIGURE IV-2. 15 MINUTE DBA VS. TIME RECORD AT LOC C  
(1805 TO 1820 HOURS; NOVEMBER 2, 2022)**





**FIGURE IV-3. 15 MINUTE DBA VS. TIME RECORD AT LOC D  
(1829 TO 1844 HOURS; NOVEMBER 2, 2022)**

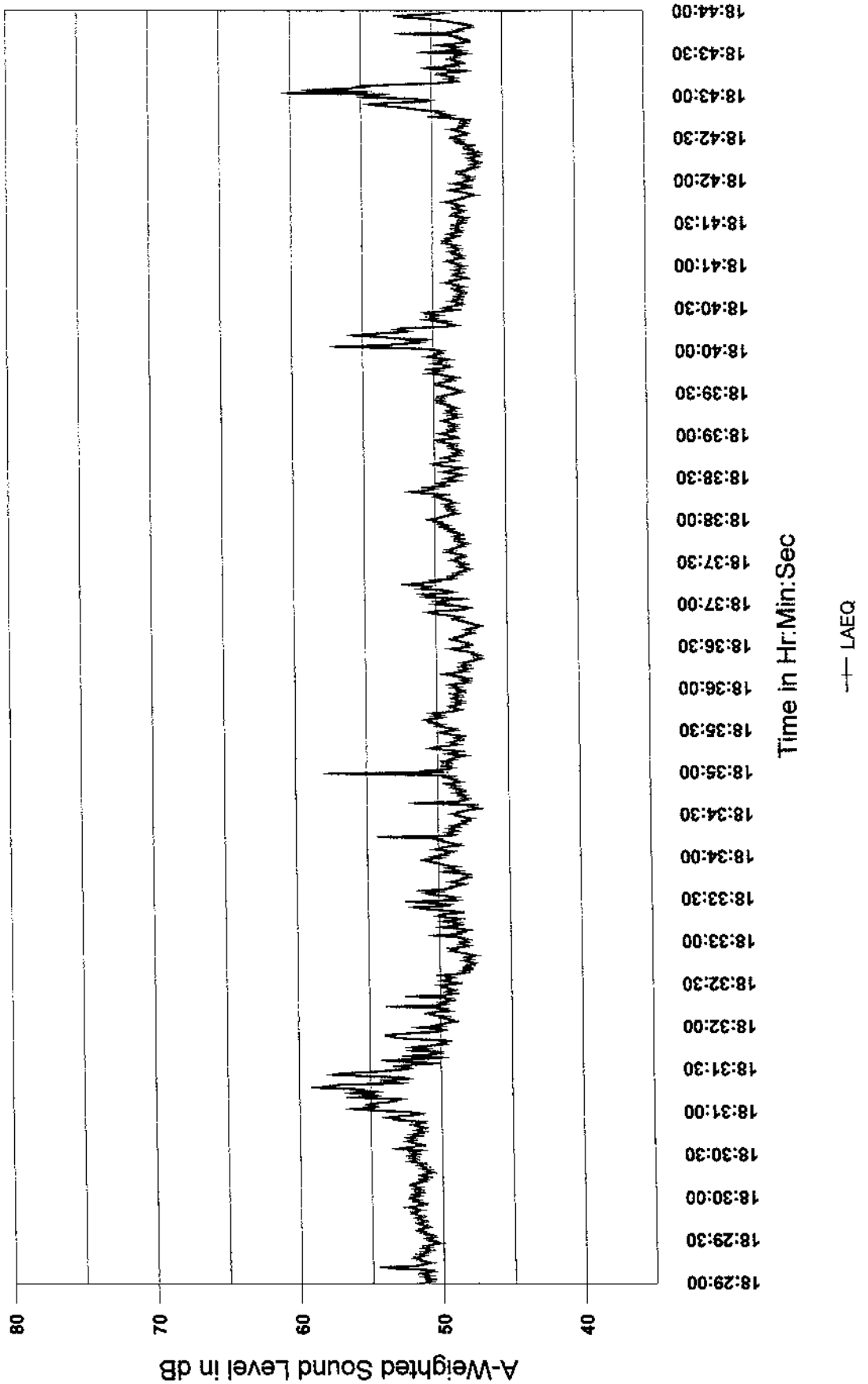
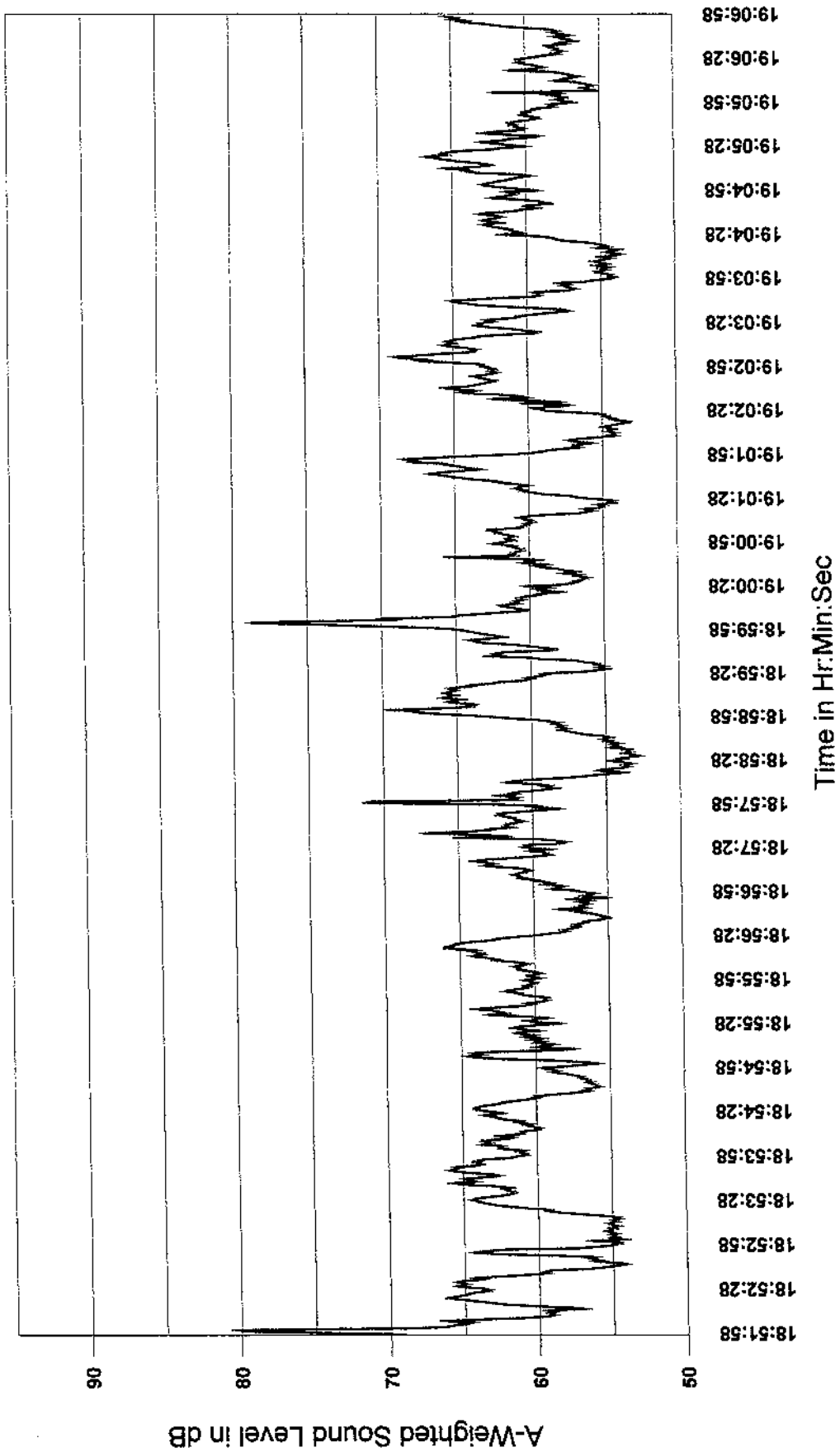
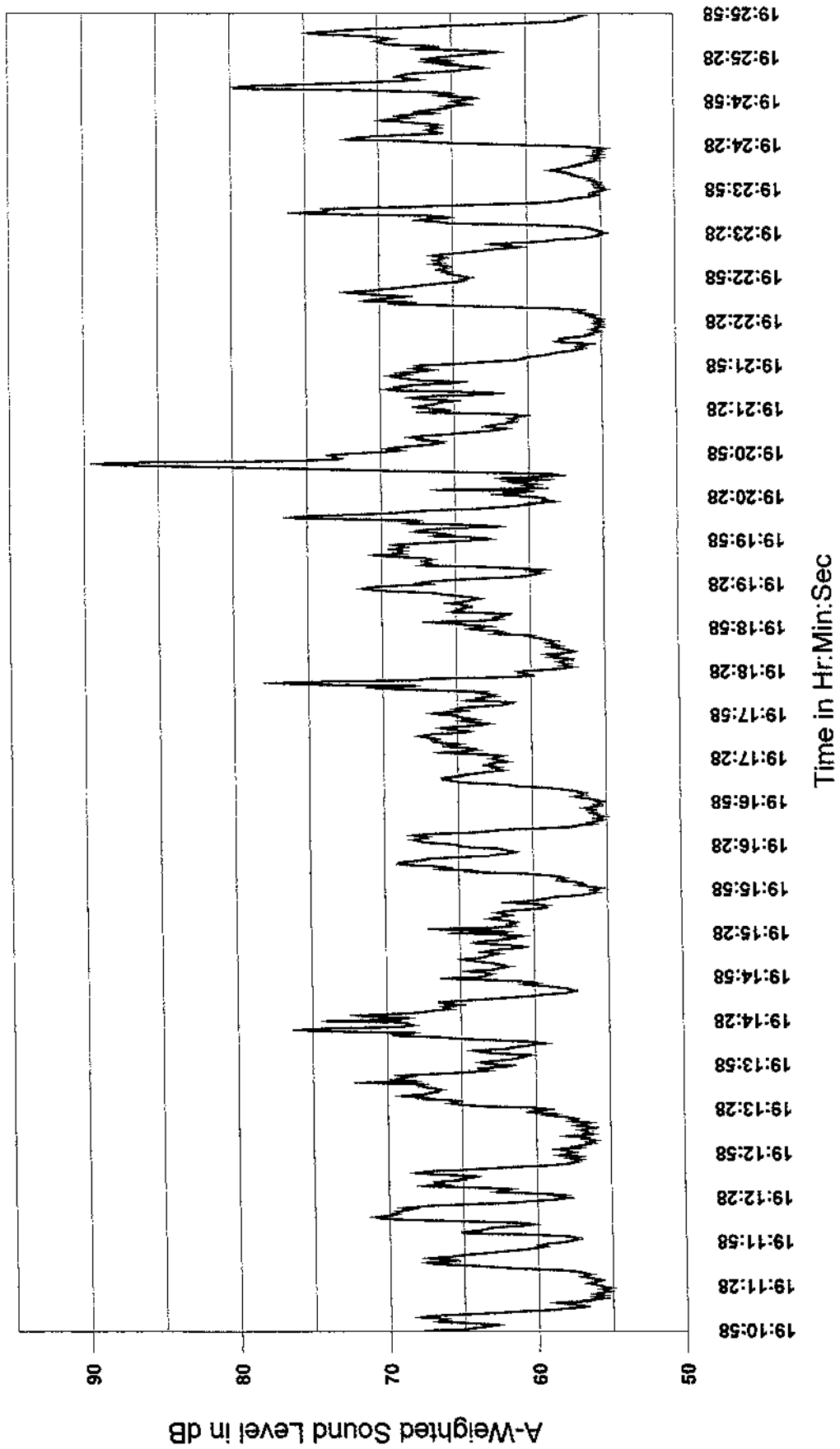


FIGURE IV-4. 15 MINUTE DBA VS. TIME RECORD AT LOC B  
(1852 TO 1907 HOURS; NOVEMBER 2, 2022)



LAEQ

FIGURE IV-5. 15 MINUTE DBA VS. TIME RECORD AT LOC C  
(1911 TO 1926 HOURS; NOVEMBER 2, 2022)



**FIGURE IV-6. 15 MINUTE DBA VS. TIME RECORD AT LOC D  
(1932 TO 1947 HOURS; NOVEMBER 2, 2022)**

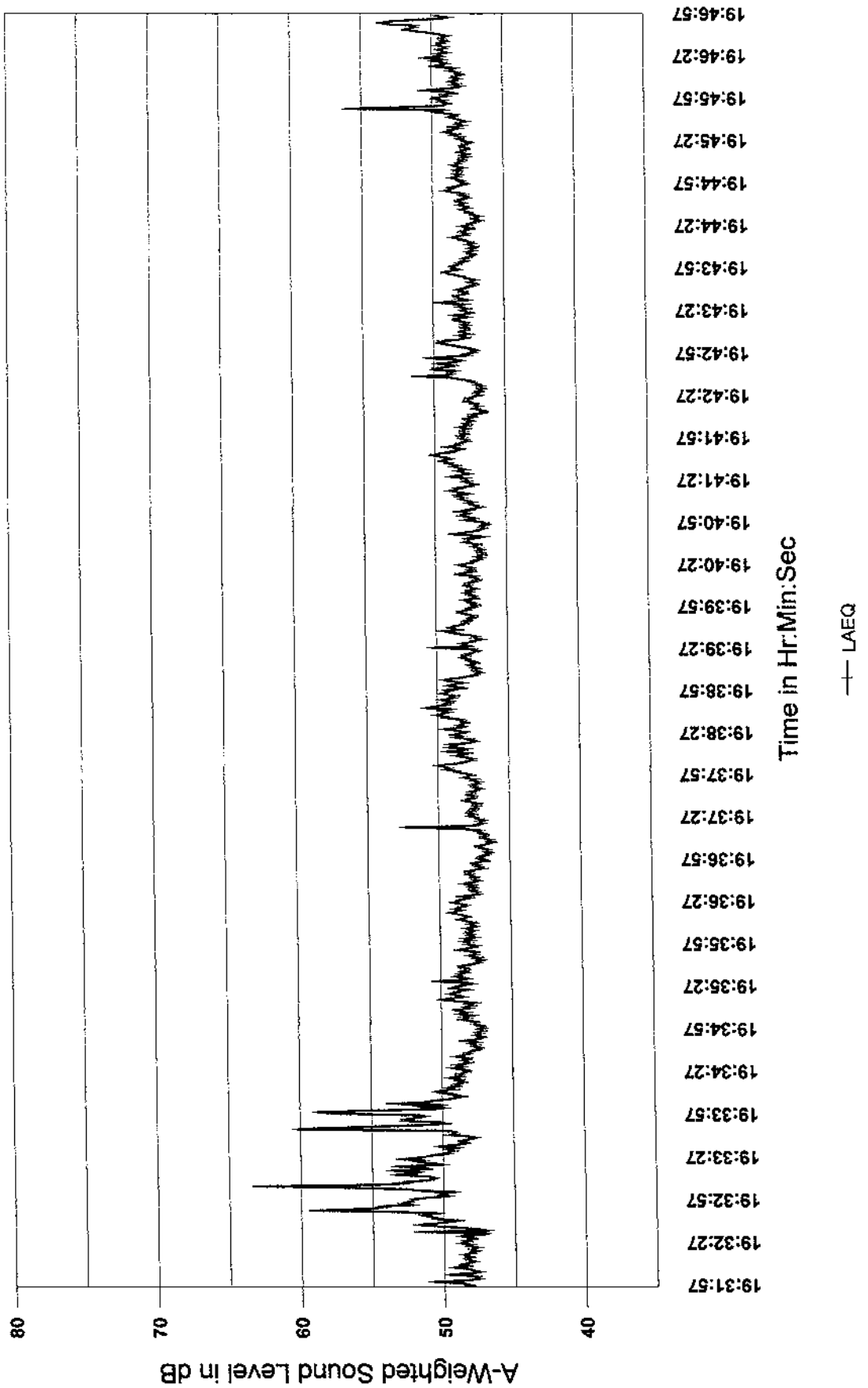
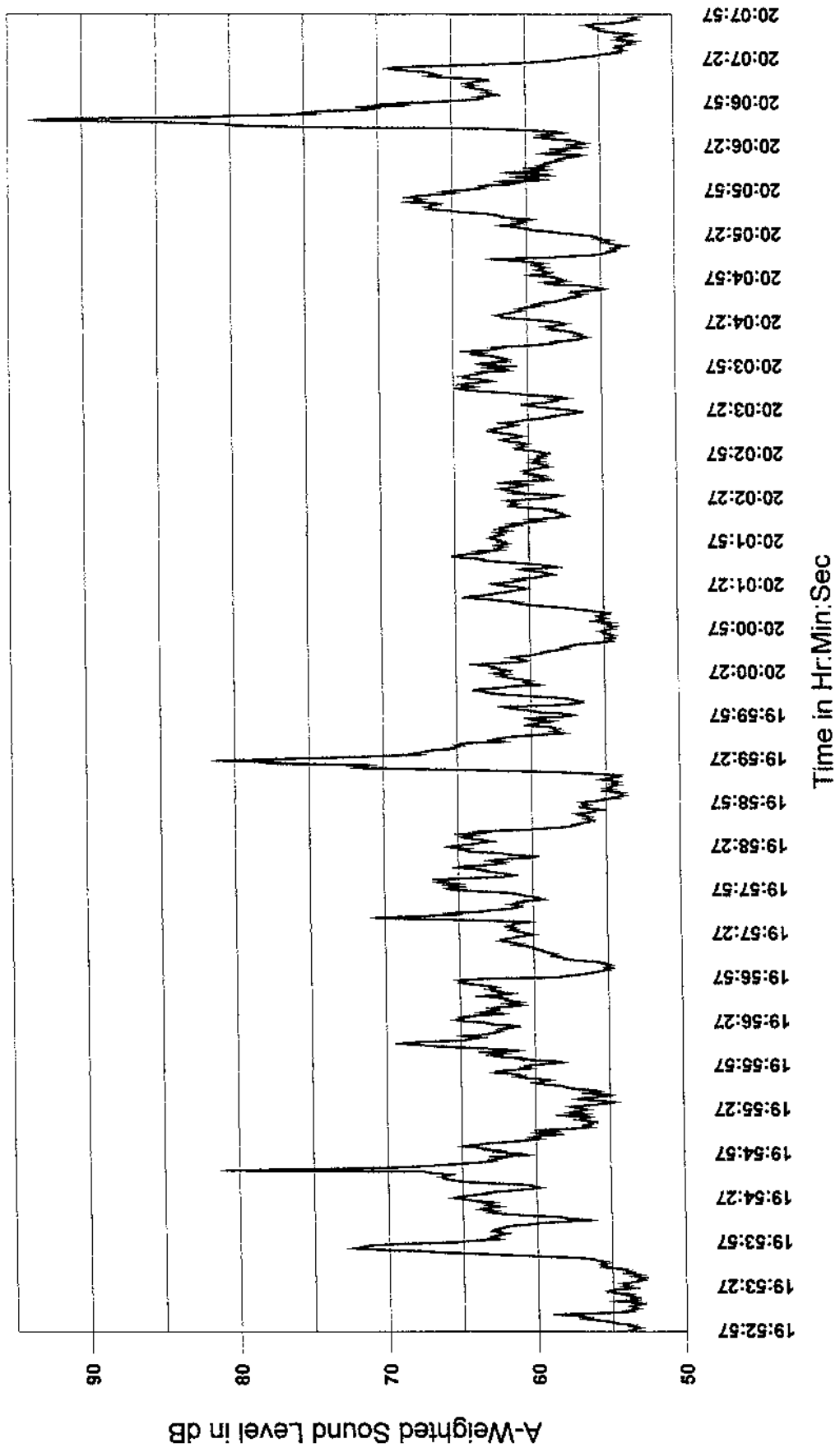
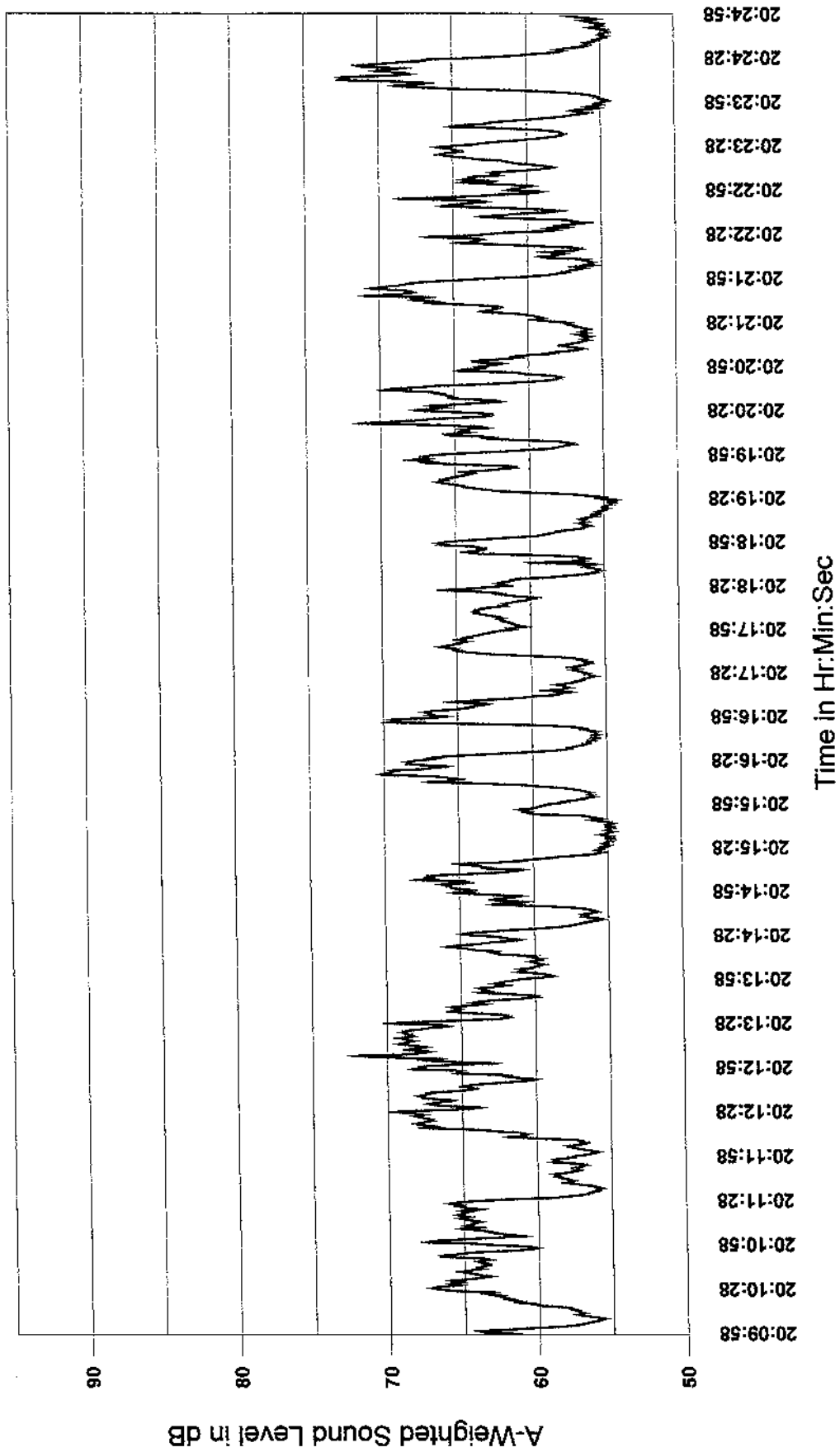


FIGURE IV-7. 15 MINUTE DBA VS. TIME RECORD AT LOC B  
(1953 TO 2008 HOURS; NOVEMBER 2, 2022)



LAEQ

FIGURE IV-8. 15 MINUTE DBA VS. TIME RECORD AT LOC C  
(2010 TO 2025 HOURS; NOVEMBER 2, 2022)



— LAEQ

## CHAPTER V. SPILLOVER SOUND LEVELS DURING LUAU SHOWS

The Kalia Cultural Entertainment Venue site plan associated with the proposed facility is shown in Figure III-3, and its relationship to the existing land uses is shown in Figure I-1. The most significant acoustical constraints on the proposed facility are the relatively high levels of background noise from Kalakaua Avenue traffic (and sirens of emergency vehicles), and the location of noise sensitive receptors at the Luana Waikiki Hotel. Luau show program sound levels should not be less than 15 to 20 dBA above background noise levels at the seated listeners to overcome the adverse affects of background noise on program audio quality at a seated listener. Luau show sound level spillover at the adjacent Luana Waikiki should also be limited to noise levels associated with land use compatibility standards and regulatory limits. Predictions of potential sound levels associated with luau audience crowd noise and luau show amplified program sound levels were made to identify acoustical issues which may require mitigation.

Noise modeling of the sound source and receptor locations used for predicting crowd noise and luau program sound levels are shown in Figure III-3. A program sound source cluster of speakers was located above center stage where shown in Figure III-3, with volume adjusted to provide approximately 71 dBA average (LAeq) program sound level at Location B. This program sound level at Location B was considered to be "marginal" because it would not meet the minimum 15 to 20 dBA sound level required above background noise from Kalakaua Avenue. At other receptor locations in the ground floor seating area, the minimum 15 to 20 dBA minimum program level above background noise could possibly be met due to shorter listener distances to the speaker cluster and greater distance and shielding effects from Kalakau Avenue traffic noise. Nevertheless, the 71 dBA program sound level at Location B was used as a reference level for evaluation of potential noise levels at Luana Waikiki Hotel receptors.

Worst case, predicted crowd noise levels will all 684 seated luau guest shouting simultaneously are shown in Table V-1 for 2nd Floor receptors at Luana Waikiki, whose lanais are located where shown in Figure III-3. Based on the results shown in Table V-1, there is an absolute worst case potential for crowd noise to exceed the 60 dBA daytime noise limit applicable for the luau facility, but the likelihood of it being as high as 73 dBA is considered to be low because all guests during an at capacity luau show would need to shout simultaneously to achieve that sound level. A 73 dBA sound level at the Luana Hotel, if it could occur from crowd noise alone, would be more likely to result from amplified luau show program sound levels, which are typically greater and more frequently occurring than crowd noise. This is because average program sound levels should be greater than background noise levels, whether the background noise levels are dominated by traffic noise or the normal steady noise level from the luau guests. With a reference program sound level of 71 dBA at Location B, it was assumed to be a "marginal" program sound level because average background noise levels exceeded 56 dBA (or 15 dBA less than 71 dBA) at that Location. Nevertheless, luau program sound level predictions were made at the 2nd through 14th Floor lanais at Luana Waikiki as shown in Table VI-2 using that 71 dBA reference level at Location B.

**TABLE V - 1**  
**MAXIMUM (LAMAX) GROUND FLOOR CROWD NOISE LEVELS AT**  
**SECOND FLOOR LUANA WAIKIKI HOTEL DIAMOND HEAD LANAIS**

<u>Crowd Noise (Luau Show)</u>	----- CROWD NOISE AT VARIOUS RECEPTORS -----					
	Recep. La,2	Recep. Lb,2	Recep. Lc, 2	Recep. Ld,2	Recep. Le,2	Recep. Le,2
Front Row A (31.2 seats)	59.8	60.0	59.9	59.4	58.6	58.6
Front Row B (31.2 seats)	58.7	59.2	59.4	59.3	58.9	58.9
Front Row C (31.2 seats)	53.9	54.4	54.8	54.9	54.7	54.7
Middle Row A (41.5 seats)	62.0	62.3	62.2	61.6	60.7	60.7
Middle Row B (41.5 seats)	52.0	52.6	53.0	53.0	52.7	52.7
Middle Row C (41.5 seats)	55.1	55.7	56.2	56.5	56.5	56.5
Rear Row A (155.8 seats)	69.2	69.6	69.5	68.8	67.6	67.6
Rear Row B (155.8 seats)	66.6	67.6	68.3	68.5	68.3	68.3
Rear Row C (155.8 seats)	60.6	61.4	62.1	62.5	62.8	62.8
<b>TOTAL CROWD NOISE AT RECEPTOR:</b>	<b>72.6</b>	<b>73.1</b>	<b>73.4</b>	<b>73.1</b>	<b>72.6</b>	<b>72.6</b>



**TABLE V-2**  
**CALCULATED LUAAU PROGRAM LAEQ AND LA10 SOUND LEVELS**  
**AT DIAMOND HEAD LANAIIS OF LUANA WAIKIKI HOTEL**

<u>LUANA HOTEL FLOOR</u>	---- LUAAU PROGRAM LEQ SOUND LEVELS AT LUANA HOTEL LANAIIS ----			
	<u>LUANA LeEQ</u>	<u>LUANA LdEQ</u>	<u>LUANA LcEQ</u>	<u>LUANA LbEQ</u>
2ND FLOOR (70 FT)	64.1	64.5	64.8	64.8
6TH FLOOR (102 FT)	63.5	63.9	64.1	64.1
10TH FLOOR (134 FT)	62.7	63.1	63.3	63.3
14TH FLOOR (166 FT)	61.9	62.2	62.3	62.3
				64.5
				63.9
				63.1
				62.1

<u>LUANA HOTEL FLOOR</u>	---- LUAAU PROGRAM L10 SOUND LEVELS AT LUANA HOTEL LANAIIS ----			
	<u>LUANA Le10</u>	<u>LUANA Ld10</u>	<u>LUANA Lc10</u>	<u>LUANA Lb10</u>
2ND FLOOR (70 FT)	66.9	67.3	67.6	67.6
6TH FLOOR (102 FT)	66.3	66.7	66.9	66.9
10TH FLOOR (134 FT)	65.5	65.9	66.1	66.1
14TH FLOOR (166 FT)	64.7	65.0	65.1	65.1
				67.3
				66.7
				65.9
				66.4

**NOTE:**  
 These dB values should be increased by 4 dB to represent conditions with luau program levels adjusted to minimum 75 dB (LAeq) at luau dinner tables.

The results shown in Table V-2 indicate that worst case spillover sound during the luau show will probably occur at or near the 2nd floor level of the Luana Waikiki, where sightline distances to the luau show house speaker will be shortest. The results also indicate that the 60 dBA limit will probably be exceeded for more than 2 minutes in a 20-minute interval.

Table V-3 compares the estimated background traffic noise levels at the 2nd Floor lanais of the Luana Waikiki, with the predicted worst case (entire audience shouting simultaneously) crowd noise, and the average and L10 sound levels associated with the luau program speaker operating at 71 dBA average level at Location B. From Table V-3, it was concluded that the crowd noise and program sound levels during a luau show at the Luana Waikiki 2nd Floor lanais will probably be similar, but that the background traffic noise levels will probably diminish toward the makai direction and be lower than the program sound levels.

Table V-4 shows the calculated DNL values of the worst case crowd noise and luau program sound levels at the 2nd Floor receptors of the Luana Waikiki. From these results, it was concluded that exceedance of the FHA/HUD 65 DNL noise standard will probably not be exceeded, unless average (LAeq) luau program speaker levels are increased by 14 dB above those assumed at Location B. It was also concluded from these DNL results that risks of exceeding the 60 dBA limit for 2 minutes in any 20 minute interval were more likely to occur than exceedance of the FHA/HUD 65 DNL standard.

Assuming that acceptable background traffic noise levels could be achieved by the addition of sound attenuating walls around the north and east sides of the project site, with the front entrance opening closed during luau show performances, a minimum program sound level of 15 dBA above average background noise level will probably be required for guest satisfaction. A steady crowd noise level of 60 dB (LAeq) should be assumed during the dinner show because voice communication will probably occur between the seated guests at that average level. With this assumption, a minimum luau program sound level of 75 dBA (LAeq) should probably be assumed at all seats, which will result in luau program sound level predictions which are approximately 4 dBA higher than those shown in Tables V-2, V-3, and V-4 at Luana Waikiki. These adjustments to the program sound level values shown in the tables should be made when developing mitigation measures for the anticipated exceedances of the 60 dBA limit at the Luana Waikiki receptor locations.

At hotel locations mauka of Kalakaua Avenue, where buffer distances of 250 to 450 are available from the luau program speaker cluster, anticipated average luau program sound levels of 63 to 59 dB (LAeq) are predicted when speaker volume levels are set at 75 dBA at Location B. Risks of exceeding both the 65 DNL and 60 dBA regulatory levels are considered to be much lower than those associated with the Luana Waikiki, primarily because anticipated background noise levels at these receptor locations are expected to be similar to or exceed the predicted luau program sound levels.

**TABLE V-3  
CALCULATED WORST CASE CROWD NOISE AND PROGRAM SOUND LEVELS  
WITH PROGRAM SPEAKER SOUND LEVEL SET TO 71 DBA AT LOCATION B**

<u>Receptor Location</u>	<u>SHOW TIME LEQ</u> Background	<u>SHOW TIME LMAX</u> Crowd Noise	<u>SHOW TIME L10</u> Crowd Noise	<u>SHOW TIME LEQ</u> Program Level	<u>SHOW TIME L10</u> Program Level
REC Le,2	62	73	N/A (Unless over 10% Frequency)	64	67
REC Ld,2	60	73	"	65	67
REC Lc,2	60	73	"	65	68
REC Lb,2	59	73	"	65	68
REC La,2	59	73	"	65	67

Notes:

1. Approximately 685 simultaneous shouting spectators causing worst case crowd noise.
2. 71 dBA at Location B assumed from single house speaker during luau program.
3. Crowd noise assumed to be continuous for less than 10 percent of the time before 10:00 pm
4. 4.5 show days per week, 52 weeks per year
5. Program Leq and L10 dB values should be increased by 4 dB to represent conditions with luau program levels adjusted to minimum 75 dB (LAeq) at luau dinner tables.

**TABLE V-4**  
**CALCULATED MAXIMUM DNL; 2 HRS / DAY; 4.5 DAYS / WEEK; 52 WEEKS / YEAR;**  
**LUAU SHOW OR CROWD NOISE 9% OF SHOW TIME**

<u>Receptor Location</u>	<u>SHOW TIME LAEQ</u> <u>Background</u>	<u>SHOW TIME LMAX</u> <u>Crowd Noise</u>	<u>Annual Ave. DNL</u> <u>Crowd Noise</u>	<u>SHOW TIME LEQ</u> <u>Program Level</u>	<u>Annual Ave. DNL</u> <u>Program Level</u>
REC Le,2	62	73	49	64	51
REC Ld,2	60	73	49	65	52
REC Lc,2	60	73	49	65	52
REC Lb,2	59	73	49	65	52
REC La,2	59	73	49	65	52

Notes:

1. Approximately 685 simultaneous shouting spectators causing crowd noise.
2. 71 dBA at Location B assumed from single house speaker during luau program.
3. Crowd Noise Assumed To Be Continuous At 73 dBA Level for 0.15 hours per show before 10:00 pm
4. PA System Assumed To Be Continuous At Table Vi-2 dB Leq Levels for 2 hours per show before 10:00 pm
5. 4.5 show days per week, 52 weeks per year
6. Program Leq and DNL dB values should be increased by 4 dB to represent conditions with luau program levels adjusted to minimum 75 dB (LAeq) at luau dinner tables.

The existing military chapel building makai of the project site will also experience sound spillover during luau shows, but it is not known if conflicts could occur between the luau shows and the use of the chapel. Predicted worst case maximum crowd noise levels of 73.7 dBA (LAmax) were predicted without noise shielding effects from the rear stage structure. Predicted average luau program sound levels of 60.1 dBA (LAeq) and 62.9 dBA (LA10) are possible at the chapel building with 15 dBA of speaker directivity plus additional shielding effects, and noise mitigation measures may be required if frequent program conflicts are anticipated to occur between the two facilities during the late evening hours.

## **CHAPTER VI. DISCUSSION OF PROJECT RELATED NOISE IMPACTS AND POSSIBLE NOISE MITIGATION MEASURES**

The predicted sound levels associated with dinner luau shows from an outdoor theater on project site has the potential for causing future noise impacts on noise sensitive receptors at the neighboring Luana Waikiki Hotel. Both existing residences and hotel guests are presently located at that hotel, with risks of noise complaints from existing residences considered to be higher than those from hotel guests, who may enjoy the luau program. In order to mitigate risks of complaints from all receptors at the hotel, spillover sound levels associated with the dinner luau show will need to be reduced. Additionally, existing traffic noise levels at the planned luau show table near Location B, are high enough to require that luau show program sound levels be increased above the assumed 71 dBA level to be acceptable to luau show guests at or near that table.

FHWA TNM traffic noise modeling indicates that a planned 1-story structure (assumed to be approximately 12 feet in height) which extends from the southwest corner of the Kalia Cultural Entertainment Venue property to the theater entrance structure is capable of reducing average traffic noise levels within the entire planned seating area to to 60 dBA or less for seated guests, providing that the entrance doorway to the theater seating area is closed during the luau show. Increasing the height of the structure above 12 feet will probably further reduce the background traffic noise levels in the luau show seating area, but will probably not provide the desired benefit of reducing the luau program sound level. The reason for this is that the steady background noise floor during the luau show will probably be controlled by guests talking or communicating at their tables (or crowd noise without screaming or shouting). So, one benefit of the sound attenuating wall and entrance door closure will be to limit the amount of luau show program level to approximately 75 dBA rather than 78 dBA (63 dBA background plus 15 dBA of additional program sound level). The other benefit of the sound attenuating wall will be to reduce the very loud (from motorcycle, moped, sirens, etc.) noise events which will occur during a luau show.

The amount of required reduction of the predicted sound levels at the 2nd Floor lanais of Luana Waikiki will be approximately 10 dBA with the 71 dBA luau program sound level assumed at Location B. Raising the luau program sound level to 75 dBA at Location B will increase the required reduction of luau program spillover to Luana Waikiki from 10 to 14 dBA. This required amount of 14 dBA net reduction of the program sound level plus any additional reduction resulting from locating any additional speakers closer to Luana Waikiki and/or the addition of more than a single speaker to the luau theater will need to be modeled and tested. But the ultimate design goal should be to reduce the average luau program sound level to approximately 55 dBA (LAeq) so as to not exceed the 60 dBA limit during more than 2 minutes in any 20 minute interval of a luau program show.

The use of multiple distributed speakers instead of a single or dual house speakers located near the luau stage will be awkward to implement because of the lack

of a ceiling or roof structure to suspend the distributed speakers closer to the seated audience with speaker pointing angles toward the rear seating area. Maintaining the balance between low, mid, and high frequency components of the music may be difficult because the perimeter speakers will probably not have the low frequency radiating capability as the larger front subwoofer speakers. Without this overhead suspension of the distributed speakers, the source location of the luau program musicians and vocalist at the luau stage will be difficult to maintain because the distributed speakers will be located at the perimeter of the seating area. Maintaining a uniform program sound level of 75 dBA (LAeq) throughout the seating area may also be difficult because perimeter speakers located near the west property line will also need to rely on their front-to-back sound radiating patterns to control spillover to Luana Waikiki while those located on the east side will not. It is not clear that the required 14 dBA of spillover reduction can be achieved with change from the single speaker cluster configuration to a distributed speaker configuration. Noise modeling of a distributed speaker configuration which does not result in an unacceptable performer localization capability will need to be performed.

The use of more highly directional (in the horizontal plane) speakers located near the presently planned stage area will probably not be successful in achieving the minimum 14 dBA of program sound level spillover reduction required at Luana Waikiki because the hotel is currently within a common sound projection cone of the single stage speaker cluster toward the luau guests. Use of highly directional speakers would be beneficial in minimizing spillover outside the sides of the sound projection cone to the seated audience, but not in minimizing spillover to the Luana Waikiki. However, at the low program frequencies associated with the subwoofers and bass speakers, use of highly directional speakers will probably not be an applicable option.

Reorienting the luau facility by rotating its fan shaped floor seating plan would allow for pointing a single house speaker cluster away from the Luana Waikiki instead of including the hotel within the speaker projection cone. This may or may not result in a 14 dBA reduction in program sound level spillover to Luana Waikiki., depending on whether or not the reduced distance effects between the speaker and the hotel receptors can be overcome by any additional attenuation resulting from speaker front-to-back directivity and local shielding effects. The success of this mitigation option will depend on the front-to-back directivity pattern of the house speaker, and the maintenance of the directivity pattern at the low frequencies. One of the beneficial effects resulting from reorienting the main projection axis of the house speaker is that the larger portion of the shouting audience will be located at a greater distance from the Luana Waikiki, and probably result in lower crowd noise levels during simultaneous shouting than shown in Table V-1. Shouting voice levels per individual are anticipated to be slightly higher because of the changed orientation of the audience faces toward the Luana Waikiki rather than away from the hotel, but the net reduction in crowd noise level is anticipated due to the larger buffer distance between the majority of the shouting audience and the hotel. The military chapel may also experience higher luau program sound levels because of the orientation of the house speaker projection cone

toward the southeast. A revised facility floor and seating plan will be required to quantitatively and fully evaluate this mitigation option.

A simple example of the potential reduction in spillover noise was examined with a center speaker cluster located approximately 20 feet from the west property line and pointing toward the east property line with a maximum speaker to farthest listener throw distance of 85 feet, and producing approximately 75 dBA luau program level at the farthest listener. Without consideration of front-to-back speaker directivity or other additional shielding effects, predicted luau program sound level at Luana Waikiki was also 75 dBA. So, for this mitigation measure to reduce luau program sound levels to 55 dBA LAeq at the Luana Waikiki, approximately 20 dB of speaker front-to-back directivity plus additional shielding effects would be required at the relocated speaker cluster to reduce spillover sound at the hotel to 55 dBA. This may be difficult, particularly at the low frequencies, where achieving high speaker directivity values is not common.

Enclosure of the entire luau facility can reliably provide the outside-to-inside sound attenuation desired for traffic and high level noise sources from Kalakaua Avenue, while providing the required inside-to-outside sound attenuation required for compliance with the 60 dBA limit at Luana Waikiki. The sound attenuation requirements for traffic noise are relatively simple, with wall facing Kalakaua Avenue and roof components having a minimum STC rating of STC 25 to 30. For the walls facing Luana Waikiki, and for the roof, a minimum STC 35 rating should be adequate to meet the 55 dBA limit at Luana Waikiki. These STC ratings also apply to the exterior doors and windows facing Luana Waikiki. In addition, complete closure (and air conditioning) will be required to prevent sound leaks from the facility's exterior envelope. The noise levels from the outdoor air conditioning equipment will also need to comply with the property line noise limits of the DOH.



## APPENDIX A. REFERENCES

(1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.

(2) "Environmental Criteria and Standards, Noise Abatement and Control, 24 FR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; July 12, 1979.

(3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.

(4) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.

(5) Rules of the Liquor Commission; Para. 3-82-38.23, Compliance with Allowable Noise Levels; City and County of Honolulu, November 2018.

(6) "FHWA Traffic Noise Model User's Guide;" FHWA-PD-96-009, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).

## APPENDIX B

### EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

#### Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E.....). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

#### Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB. Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., deci).

#### Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

## APPENDIX B (CONTINUED)

TABLE I  
A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

<u>TERM</u>	<u>SYMBOL</u>
1. A-Weighted Sound Level	$L_A$
2. A-Weighted Sound Power Level	$L_{WA}$
3. Maximum A-Weighted Sound Level	$L_{max}$
4. Peak A-Weighted Sound Level	$L_{Apk}$
5. Level Exceeded x% of the Time	$L_x$
6. Equivalent Sound Level	$L_{eq}$
7. Equivalent Sound Level Over Time (T) <sup>(1)</sup>	$L_{eq(T)}$
8. Day Sound Level	$L_d$
9. Night Sound Level	$L_n$
10. Day-Night Sound Level	$L_{dn}$
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$
12. Sound Exposure Level	$L_{SE}$

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is  $L_{eq(1)}$ ). Time may be specified in non-quantitative terms (e.g., could be specified as  $L_{eq(WASH)}$  to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

## APPENDIX B (CONTINUED)

### TABLE II RECOMMENDED DESCRIPTOR LIST

TERM	ALTERNATIVE <sup>(1)</sup>		OTHER <sup>(2)</sup>	
	A-WEIGHTING	A-WEIGHTING	WEIGHTING	UNWEIGHTED
1. Sound (Pressure) <sup>(3)</sup> Level	$L_A$	$L_{pA}$	$L_B, L_{pB}$	$L_p$
2. Sound Power Level	$L_{WA}$		$L_{WB}$	$L_W$
3. Max. Sound Level	$L_{max}$	$L_{Amax}$	$L_{Bmax}$	$L_{pmax}$
4. Peak Sound (Pressure) Level	$L_{Apk}$		$L_{Bpk}$	$L_{pk}$
5. Level Exceeded x% of the Time	$L_x$	$L_{Ax}$	$L_{Bx}$	$L_{px}$
6. Equivalent Sound Level	$L_{eq}$	$L_{Aeq}$	$L_{Beq}$	$L_{peq}$
7. Equivalent Sound Level <sup>(4)</sup> Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
8. Day Sound Level	$L_d$	$L_{Ad}$	$L_{Bd}$	$L_{pd}$
9. Night Sound Level	$L_n$	$L_{An}$	$L_{Bn}$	$L_{pn}$
10. Day-Night Sound Level	$L_{dn}$	$L_{Adn}$	$L_{Bdn}$	$L_{pdn}$
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$	$L_{Adn(Y)}$	$L_{Bdn(Y)}$	$L_{pdn(Y)}$
12. Sound Exposure Level	$L_S$	$L_{SA}$	$L_{SB}$	$L_{Sp}$
13. Energy Average Value Over (Non-Time Domain) Set of Observations	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
14. Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	$L_{x(e)}$	$L_{Ax(e)}$	$L_{Bx(e)}$	$L_{px(e)}$
15. Average $L_x$ Value	$L_x$	$L_{Ax}$	$L_{Bx}$	$L_{px}$

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E,.....weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is  $L_{eq(1)}$ ). Time may be specified in non-quantitative terms (e.g., could be specified as  $L_{eq(WASH)}$  to mean the washing cycle noise for a washing machine.

**ACOUSTIC STUDY FOR THE  
KALIA CULTURAL ENTERTAINMENT VENUE  
WAIKIKI, HONOLULU, HAWAII**

Prepared for:

**WILSON OKAMOTO CORPORATION**

Prepared by:

**Y. EBISU & ASSOCIATES  
1126 12th Avenue, Room 305  
Honolulu, Hawaii 96816**

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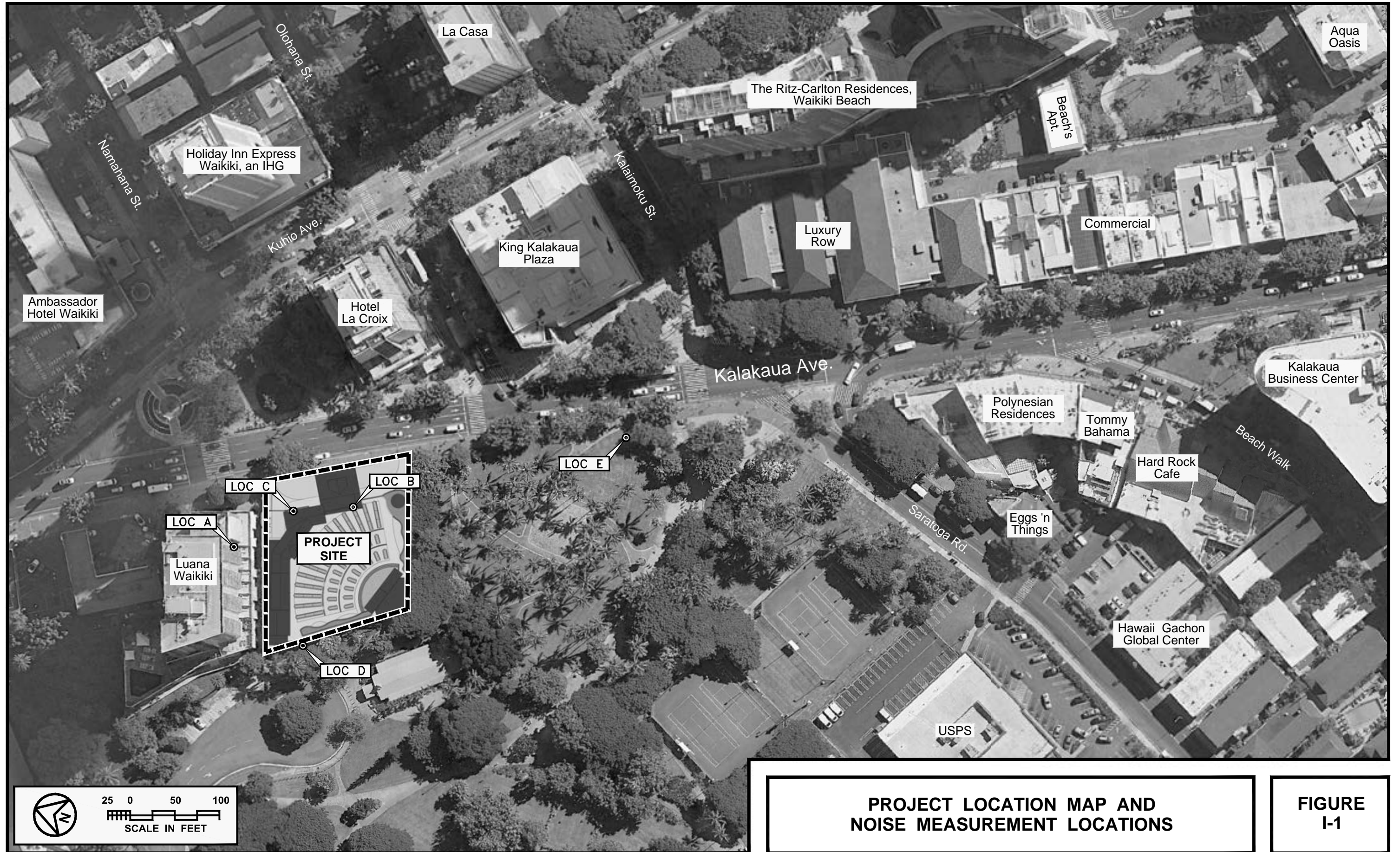


## CHAPTER 1. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed Kalia Cultural Entertainment Venue (CEV) Project in Waikiki (see Figure I-1) were evaluated for their potential impacts and their relationship to current FHA/HUD noise standards. The traffic noise level increases along Kalakaua Avenue (the primary access roadway to and from the project site) were calculated. No significant increases in traffic noise are predicted to occur along Kalakaua Avenue as a result of project plus non-project traffic following project build-out by CY 2024. Traffic noise from Kalakaua Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing and future resort and commercial establishments which front Kalakaua Avenue. Mitigation of the high traffic noise levels is typically available in the form of closure and air conditioning of the resort and commercial establishments along Kalakaua Avenue.

Project traffic will not add more than 0.1 DNL additional units of noise along Kalakaua Avenue after project build out and beyond. These levels of traffic noise increases resulting from project generated traffic are not considered to be significant and will be difficult to measure.

Unavoidable, but temporary, noise impacts may occur during construction of the proposed project, particularly during the demolition and site preparation activities on the project site. Because construction activities are predicted to be audible within the project site and at adjoining properties, the quality of the acoustic environment may be degraded to unacceptable levels during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment is recommended as a standard mitigation measure. The implementation of Hawaii State Department of Health permit procedures and curfew periods for construction activities is also expected for this project.



**PROJECT LOCATION MAP AND  
NOISE MEASUREMENT LOCATIONS**

**FIGURE  
I-1**

## **CHAPTER II. PURPOSE**

The primary objective of this study was to describe the existing and future traffic noise environment in the environs of the proposed Kalia Cultural Entertainment Venue Project in Waikiki on the island of Oahu. Traffic noise level increases and impacts associated with the proposed development were to be determined along the public roadways which are expected to service the project traffic. A specific objective was to determine future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases.

Assessments of possible future impacts from short term construction noise at the project site were also included as noise study objectives. Recommendations for minimizing identified noise impacts were also to be provided as required.

### **CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY**

The noise descriptor currently used by federal agencies (such as FHA/HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. A more complete list of noise descriptors is provided in Appendix B to this report.



Land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system are shown in Figure III-1. As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Receptors which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway. In the project area, traffic noise levels associated with Kalakaua Avenue are greater than 70 DNL along the Right-of-Way due to the large volume of traffic on that major thoroughfare.



For purposes of determining noise acceptability for funding assistance from federal agencies (FHA/HUD and VA), an exterior noise level of 65 DNL or less is considered acceptable for residences. This standard is applied nationally (Reference 1), including Hawaii. Because of our open-living conditions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 2, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 DNL (see Figure III-1) are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 DNL.

On the island of Oahu, the State Department of Health (DOH) regulates noise from fixed mechanical equipment and construction activities. State DOH noise regulations are expressed in maximum allowable noise limits rather than DNL (see Reference 3). Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for single family residential lands equate to approximately

LAND USE	ADJUSTED YEARLY DAY - NIGHT AVERAGE SOUND LEVEL (DNL) IN DECIBELS				
	50	60	70	80	90
Residential - Single Family, Extensive Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Residential - Multiple Family, Moderate Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Residential - Multi - Story Limited Outdoor Use	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Hotels, Motels Transient Lodging	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
School Classrooms, Libraries, Religious Facilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Hospitals, Clinics, Nursing Homes, Health Related Facilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Auditoriums, Concert Halls	Compatible	With Insulation per Section A.4	Marginally Compatible	Incompatible	Incompatible
Music Shells	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible	Incompatible
Sports Arenas, Outdoor Spectator Sports	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Neighborhood Parks	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Playgrounds, Golf courses, Riding Stables, Water Rec., Cemeteries	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Office Buildings, Personal Services, Business and Professional	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Commercial - Retail, Movie Theaters, Restaurants	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Incompatible
Commercial - Wholesale, Some Retail, Ind., Mfg., Utilities	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Marginally Compatible
Livestock Farming, Animal Breeding	Compatible	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible	Marginally Compatible
Agriculture ( Except Livestock )	Compatible	With Insulation per Section A.4	With Insulation per Section A.4	Marginally Compatible	Marginally Compatible

 Compatible  
 With Insulation per Section A.4

 Marginally Compatible  
 Incompatible

**LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY - NIGHT SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.**  
 ( Source: American National Standards Institute S12.9 - 1988/Part 5 )

**FIGURE III-1**

55 DNL. For multifamily residential, commercial, and resort lands, the State DOH noise limits equate to approximately 60 DNL. For light and heavy industrial lands, the State DOH noise limits equate to approximately 76 DNL. Construction activities, which are typically noisier than the State DOH noise limits, are regulated through the issuance of permits for allowing excessive construction noise during limited time periods.

## CHAPTER IV. GENERAL STUDY METHODOLOGY

Existing traffic and background ambient noise levels were measured at 5 locations (A, B, C, D, and E) in the project environs to provide a basis for describing the existing noise environment in the project environs. The locations of the measurement sites are shown in Figure I-1. Measurement Location A was on the 6th Floor lanai (approximately 100 feet above street level) of the Luana Waikiki, with background noise measurements obtained for a 24-hour period from November 2, 2022 to November 3, 2022 in order to document the hourly variations of traffic noise from Kalakaua Avenue and other noise sources. Ground level measurement Locations B, C, and D were used to establish their dBA relationships to those measured at Location A, for estimating the hourly variations of background noise levels at the mauka and makai perimeters of the project site. The results at measurement Location B were considered to be representative of anticipated worst case background noise levels at the planned Kalia Cultural Entertainment Venue facility during a luau show.

Weekday and weekend traffic noise measurements during the PM peak traffic hour were performed during the month of May 2023 at Location E, which was 50 feet from the centerline of Kalakaua Avenue. The results of the traffic noise measurements were compared with calculations of existing traffic noise levels to validate the computer model used for traffic noise predictions along Kalakaua Avenue. The traffic noise measurement results at Location E, and the comparisons of the measured traffic noise levels with computer model predictions of existing traffic noise levels are summarized in Table IV-1. The other background noise level measurement results are also included in Table IV-1, with the 24-hour measurement results at Location A shown in Table IV-2.

Traffic noise calculations for the existing conditions as well as noise predictions for the Year 2024 were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (Reference 4). Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Hard Soil" propagation loss factor. The traffic data and forecasts for the project (Reference 5), plus the published traffic counts along Kalakaua Avenue (Reference 6) were the primary sources of data inputs to the model.

Appendix C summarizes the PM peak hour traffic volumes for CY 2023 and 2024 which were used to model existing and future traffic noise along Kalakaua Avenue at the project site. For existing and future traffic along the streets servicing the project site, it was assumed that the average noise levels, or  $Leq(h)$ , during the PM peak traffic hour were 3.5 dB less than the 24-hour DNL along those roadways. This assumption was based on the traffic noise measurements obtained in November 2023 at Location A as well as on the traffic counts contained in Reference 6 (see Figures IV-1 and IV-2).

**TABLE IV-1  
TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS**

<u>LOCATION</u>	<u>Time of Day</u>		<u>Ave. Speed (MPH)</u>			<u>Hourly Traffic Volume</u>			<u>Measured</u>	<u>Predicted</u>
	<u>(HRS)</u>	<u>(MPH)</u>	<u>AUTO</u>	<u>M.TRUCK</u>	<u>H.TRUCK</u>	<u>Leg (dB)</u>	<u>Leg (dB)</u>	<u>Leg (dB)</u>	<u>Leg (dB)</u>	
E. 50 FT from the center-line of Kalakaua Ave. (5/4/23 Weekday)	1541	29	1,640	19	28	66.0	65.9			
	TO 1641									
E. 50 FT from the center-line of Kalakaua Ave. (5/7/23 Weekend)	1545	25	1,779	26	17	63.6	63.6			
	TO 1645									
A. 145 FT slant distance from the centerline of Kalakaua Ave. (11/2/22)	1600	N/A	N/A	N/A	N/A	63.3	N/A			
	TO 1700									
B. 85 FT from the center-line of Kalakaua Ave. (11/2/22)	1745	N/A	N/A	N/A	N/A	61.8	N/A			
	TO 1800									
B. 85 FT from the center-line of Kalakaua Ave. (11/2/22)	1852	N/A	N/A	N/A	N/A	62.7	N/A			
	TO 1907									
B. 85 FT from the center-line of Kalakaua Ave. (11/2/22)	1953	N/A	N/A	N/A	N/A	68.7	N/A			
	TO 2008									



**TABLE IV-1 (CONTINUED)**  
**TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS**

<u>LOCATION</u>	<u>Time of Day</u>			<u>Ave. Speed</u>			<u>Hourly Traffic Volume</u>			<u>Measured</u>		<u>Predicted</u>	
	<u>(HRS)</u>	<u>(MPH)</u>	<u>AUTO</u>	<u>M.TRUCK</u>	<u>H.TRUCK</u>	<u>Leg(dB)</u>	<u>Leg(dB)</u>	<u>Leg(dB)</u>	<u>Leg(dB)</u>	<u>Leg(dB)</u>	<u>Leg(dB)</u>		
C. 78 FT from the center-line of Kalakaua Ave. (11/2/22)	1805	N/A	N/A	N/A	N/A	N/A	66.6	N/A	N/A	N/A	N/A		
	TO 1850												
C. 78 FT from the center-line of Kalakaua Ave. (11/2/22)	1911	N/A	N/A	N/A	N/A	N/A	67.9	N/A	N/A	N/A	N/A		
	TO 1926												
C. 78 FT from the center-line of Kalakaua Ave. (11/2/22)	2010	N/A	N/A	N/A	N/A	N/A	63.6	N/A	N/A	N/A	N/A		
	TO 2025												
D. 228 FT from the center-line of Kalakaua Ave. (11/2/22)	1829	N/A	N/A	N/A	N/A	N/A	50.2	N/A	N/A	N/A	N/A		
	TO 1844												
D. 228 FT from the center-line of Kalakaua Ave. (11/2/22)	1932	N/A	N/A	N/A	N/A	N/A	49.1	N/A	N/A	N/A	N/A		
	TO 1947												

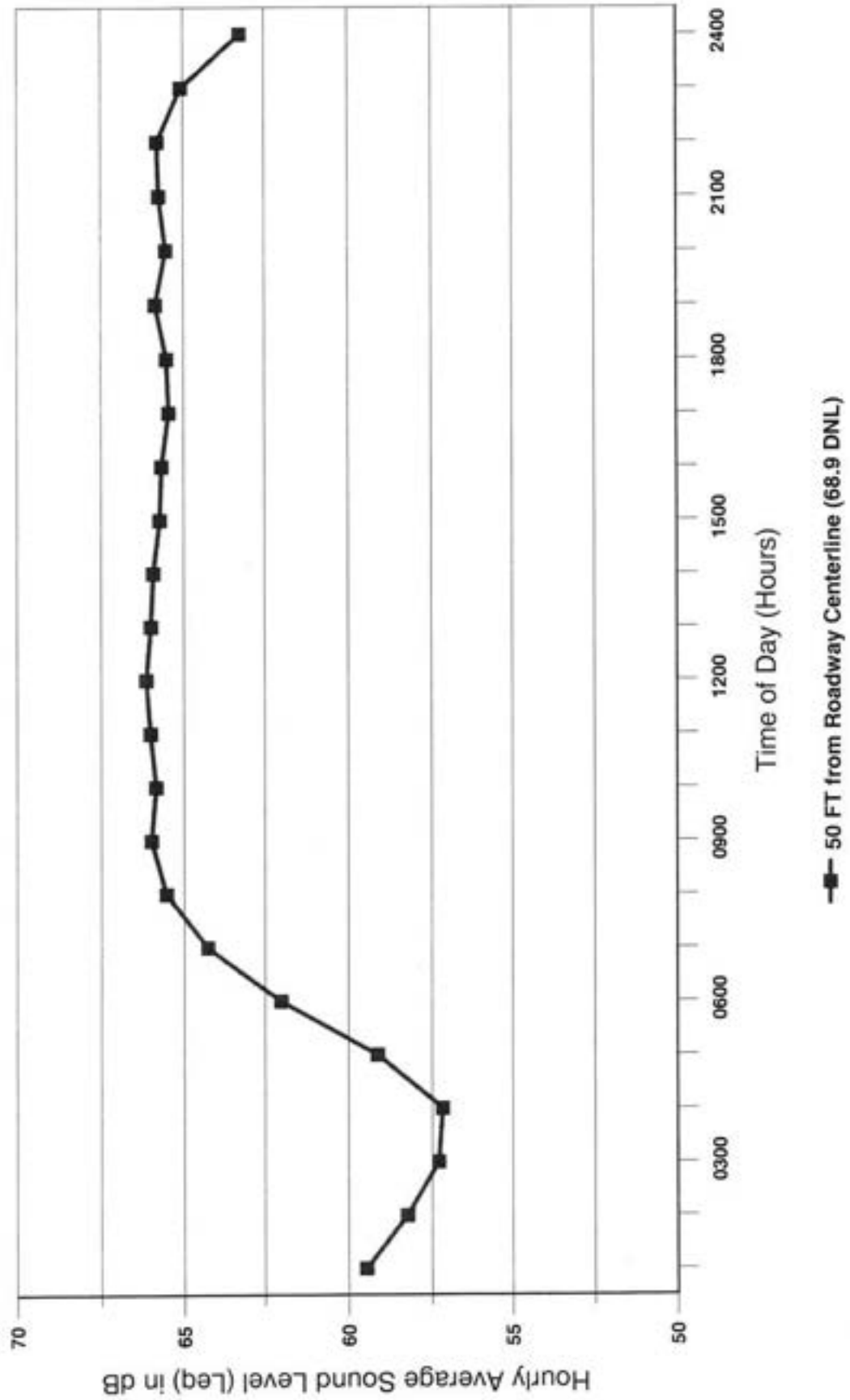
**TABLE IV-2  
24-HOUR NOISE MEASUREMENTS AT  
LOCATION A, LUANA WAIKIKI HOTEL**

Date	Hour	LAeq	LAmx	LAmn	LA10	LA50	LA90	Event Description
11/03/22	1000-1100	64.6	84.3	58.6	65.5	63.0	60.7	
11/02/22	1100-1200	64.0	84.6	59.2	65.2	62.9	60.8	
11/02/22	1200-1300	62.8	79.3	57.9	64.6	62.0	59.7	
11/02/22	1300-1400	63.4	79.6	58.1	65.2	62.2	59.9	
11/02/22	1400-1500	63.3	78.8	58.2	64.8	62.2	59.8	
11/02/22	1500-1600	63.1	79.5	58.3	64.6	62.1	59.6	
11/02/22	1600-1700	63.3	86.8	58.0	64.4	61.6	59.4	
11/02/22	1700-1800	64.2	86.6	57.8	64.3	61.2	59.2	
11/02/22	1800-1900	63.2	85.2	57.7	63.7	61.2	59.0	
11/02/22	1900-2000	63.0	85.0	57.5	63.7	60.8	58.8	
11/02/22	2000-2100	64.0	89.2	57.5	63.1	60.5	58.5	
11/02/22	2100-2200	62.9	82.8	57.5	63.5	60.2	58.2	
11/02/22	2200-2300	61.8	86.1	57.2	62.8	59.5	58.0	
11/02/22	2300-0000	60.0	76.2	56.3	61.4	58.5	57.2	
11/03/22	0000-0100	59.7	78.7	56.4	60.7	58.3	57.4	
11/03/22	0100-0200	58.2	68.4	56.5	59.3	57.8	57.2	
11/03/22	0200-0300	58.0	70.6	55.8	58.9	57.2	56.5	
11/03/22	0300-0400	57.9	66.3	56.0	59.3	57.4	56.5	
11/03/22	0400-0500	59.5	77.3	55.9	61.3	57.9	56.6	
11/03/22	0500-0600	61.1	77.5	56.0	63.4	59.2	57.3	
11/03/22	0600-0700	62.1	79.0	56.9	64.4	60.8	58.4	
11/03/22	0700-0800	63.0	85.4	57.0	64.7	61.8	59.0	
11/03/22	0800-0900	63.3	83.0	57.8	64.9	62.4	60.0	
11/03/22	0900-1000	65.7	93.5	58.8	66.5	63.6	61.1	
	DNL:	67.1						

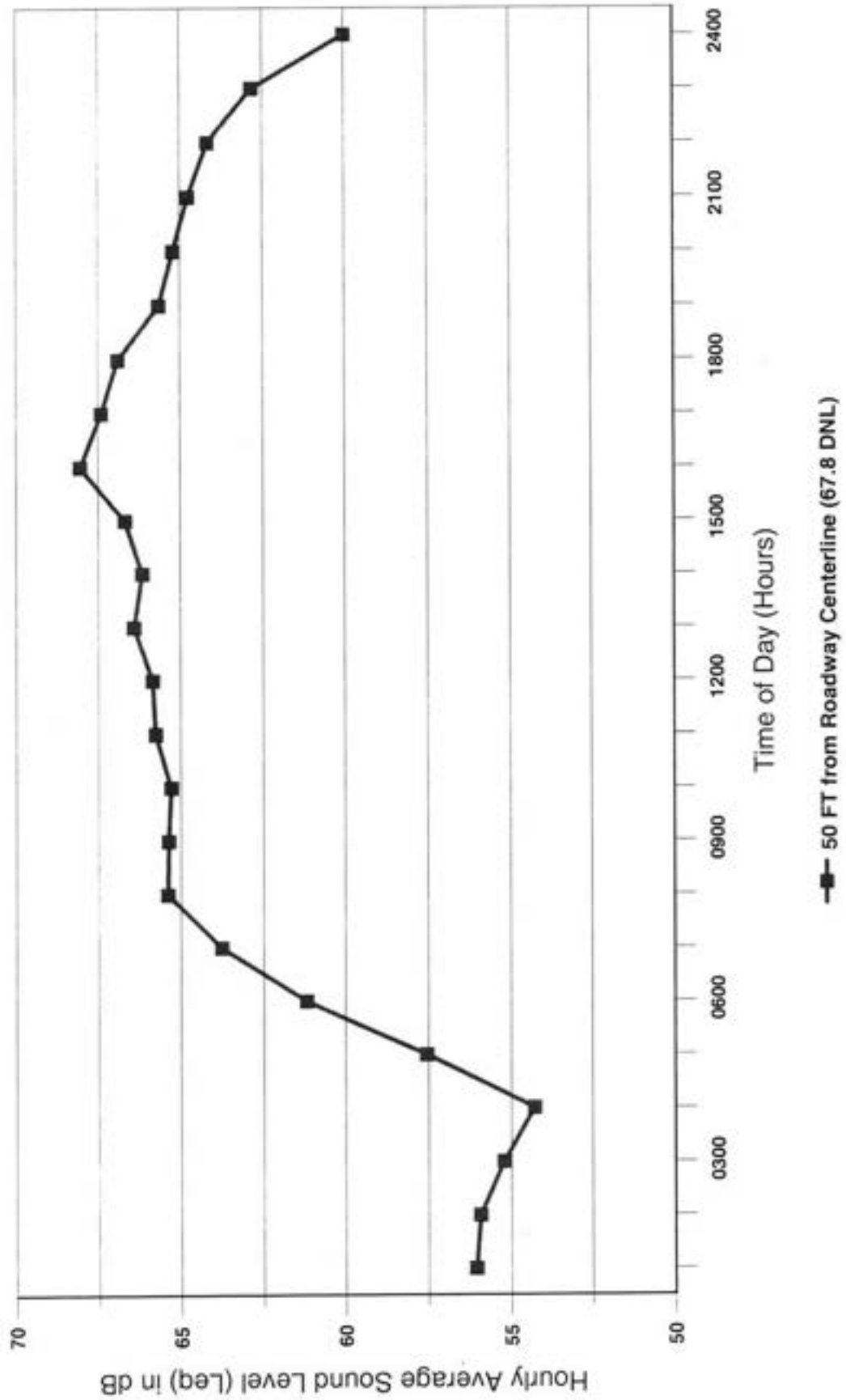
**Notes:**

- a. LAeq = Average A-Weighted Sound Level (in dBA)
- b. LAmx = Maximum A-Weighted Sound Level (in dBA)
- c. LAmn = Minimum A-Weighted Sound Level (in dBA)
- d. LA10 = A-Weighted Sound Level (in dBA) which was exceeded 10 percent of the time.
- e. LApp = A-Weighted Sound Level (in dBA) which was exceeded xx percent of the time.

**FIGURE IV-1**  
**HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY**  
**STA. B72761200132 KALAKAUA AVENUE BETWEEN BEACHWALK AND LEWERS ST.; 3/30/18**



**FIGURE IV-2**  
**HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY**  
**STA. B72761200132 KALAKAUA AVENUE BETWEEN BEACHWALK AND LEWERS ST.; 10/6/22**



Traffic noise calculations for both the existing and future conditions in the project environs were developed for receptors without the benefit of shielding from existing buildings. Traffic noise levels were also calculated for future conditions with (Build Alternative) and without (No Build Alternative) the proposed project. The forecasted changes in traffic noise levels over existing levels were calculated with and without the project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned buildings. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed.

## CHAPTER V. EXISTING ACOUSTICAL ENVIRONMENT

Primary contributors to the existing background ambient noise levels within the project area are traffic along Kalakaua Avenue. The traffic noise contributions from Kalakaua Avenue were measured at Locations A through E, and the results of these measurements are shown in Tables IV-1 and IV-2. The very high, but intermittent noise levels recorded were caused by the noise from very loud mopeds and motorcycles and the sirens of emergency vehicles on Kalakaua Avenue. Table IV-2 contains the hourly average, maximum, and minimum sound levels recorded at Location A on the 6th floor lanai of the Luana Waikiki Hotel.

Tables V-1A and V-1B present the calculations of average noise levels during the PM peak hour on a weekday and weekend, respectively, along the various roadways in the project environs and at various setback distances from the roadways' centerlines. Tables V-2A and V-2B present the existing setback distances to the 65, 70, and 75 DNL contours for unobstructed field of views to the vehicles on each roadway during a weekday and weekend, respectively. As indicated in Tables V-2A and V-2B, as much as 126 feet of buffer space would be required from the centerline of Kalakaua Avenue in the project area to be clear of the 65 DNL traffic noise contour for noise sensitive receptors. For the majority of commercial receptors, existing setback distances of at least 49 feet from the centerline of Kalakaua Avenue should be adequate to not exceed 70 DNL.

Based on these measurement and noise modeling results, it was concluded that existing traffic noise levels at the project site currently exceed the FHA/HUD 65 DNL standard for noise sensitive receptors, with the dominant noise source being traffic on Kalakaua Avenue. Because the majority of the existing front row buildings are commercial rather than residential or resort, the higher existing traffic noise levels of 70 to 75 DNL should be acceptable (see Figure III-1).

At receptor locations which are at larger setback distances from Kalakaua Avenue and/or are shielded from traffic noise by buildings, such as at Location D, existing background ambient noise levels are typically lower due to the larger setback distances and/or the noise shielding effects of the buildings. Noise reductions of 5 to 20 dBA can be expected from these traffic noise reducing effects. In general, these noise shielding effects are greatest at receptors near ground level, and tend to diminish at high rise receptor elevations. Receptor locations which front roadways typically experience the least amount of noise shielding effects, and tend to have the highest traffic noise levels due to both the detrimental effects of smaller buffer distances and the lack of noise shielding effects from intervening buildings.

TABLE V-1A

EXISTING (CY 2023) TRAFFIC VOLUMES AND NOISE LEVELS  
ALONG ROADWAYS IN PROJECT AREA  
(WEEKDAY, PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	***** VOLUMES (VPH) *****			50' Leg	100' Leg	200' Leg
			AUTOS	MTRUCKS	HTRUCKS			
Kalakaua Ave. Fronting Kalia CEV Project	29	1,749	1,700	19	30	65.7	62.1	58.3
Kalakaua Ave. Between Olohana & Kalaimoku	29	1,941	1,887	21	33	66.2	62.5	58.7
Kalakaua Ave. Between Kalaimoku & Beachwalk	29	2,054	1,996	23	35	66.4	62.8	58.9
Kalakaua Ave. East of Beachwalk	29	1,875	1,822	21	32	66.1	62.4	58.6
Olohana St.	25	193	189	2	2	55.6	52.0	48.2
Kalaimoku St.	25	444	434	5	5	59.3	55.8	51.9
Saratoga Rd.	25	550	538	6	6	61.1	57.1	53.2
Beachwalk	25	177	173	2	2	55.4	51.8	48.0

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard soil and unobstructed field-of-view conditions assumed.

TABLE V-1B

EXISTING (CY 2023) TRAFFIC VOLUMES AND NOISE LEVELS  
ALONG ROADWAYS IN PROJECT AREA  
(WEEKEND, PM PEAK HOUR)

<u>LOCATION</u>	<u>SPEED</u> (MPH)	<u>TOTAL</u> <u>VPH</u>	***** VOLUMES (VPH) *****			<u>50' Leg</u>	<u>100' Leg</u>	<u>200' Leg</u>
			<u>AUTOS</u>	<u>MTRUCKS</u>	<u>HTRUCKS</u>			
Kalakaua Ave. Fronting Kalia CEV Project	25	1,680	1,643	22	15	62.7	59.1	55.3
Kalakaua Ave. Between Olohana & Kalaimoku	25	1,853	1,812	24	17	63.2	59.5	55.7
Kalakaua Ave. Between Kalaimoku & Beachwalk	25	1,880	1,839	24	17	63.2	59.5	55.8
Kalakaua Ave. East of Beachwalk	25	1,709	1,672	22	15	62.7	59.1	55.3
Olohana St.	25	190	186	2	2	54.0	50.4	46.7
Kalaimoku St.	25	361	353	4	4	56.8	53.3	49.6
Saratoga Rd.	25	464	454	5	5	58.6	54.8	50.9
Beachwalk	25	171	167	2	2	53.7	50.1	46.4

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard soil and unobstructed field-of-view conditions assumed.



TABLE V-2A

EXISTING AND CY 2024 DISTANCES TO 65, 70, AND 75 DNL CONTOURS  
(WEEKDAY)

STREET SECTION	65 DNL SETBACK (FT)		70 DNL SETBACK (FT)		75 DNL SETBACK (FT)	
	EXISTING	CY 2024	EXISTING	CY 2024	EXISTING	CY 2024
Kalakaua Ave. Fronting Kalia CEV Project	112	115	45	47	22	23
Kalakaua Ave. Between Olohana & Kalaimoku	120	124	48	49	24	25
Kalakaua Ave. Between Kalaimoku & Beachwalk	126	129	49	51	24	25
Kalakaua Ave. East of Beachwalk	118	120	47	48	24	24
Olohana St.	16	17	6	6	2	2
Kalaimoku St.	32	35	12	13	4	5
Saratoga Rd.	47	47	20	19	8	8
Beachwalk	15	15	6	6	2	2

**Notes:**

- (1) All setback distances are from the roadways' centerlines.
- (2) See Tables V-1A and VI-1A for traffic volume, speed, and mix assumptions.
- (3) Setback distances are for ground level receptors with unobstructed fields-of-view.
- (4) "Hard Soil" conditions assumed along all roadways.

**TABLE V-2B**

**EXISTING AND CY 2024 DISTANCES TO 65, 70, AND 75 DNL CONTOURS  
(WEEKEND)**

<u>STREET SECTION</u>	<u>65 DNL SETBACK (FT)</u>		<u>70 DNL SETBACK (FT)</u>		<u>75 DNL SETBACK (FT)</u>	
	<u>EXISTING</u>	<u>CY 2024</u>	<u>EXISTING</u>	<u>CY 2024</u>	<u>EXISTING</u>	<u>CY 2024</u>
Kalakaua Ave. Fronting Kalia CEV Project	65	65	29	30	14	15
Kalakaua Ave. Between Olohana & Kalaimoku	69	72	32	32	16	16
Kalakaua Ave. Between Kalaimoku & Beachwalk	69	72	32	32	16	16
Kalakaua Ave. East of Beachwalk	65	67	29	30	14	15
Olohana St.	12	12	5	4	2	2
Kalaimoku St.	20	21	7	8	3	3
Saratoga Rd.	29	29	12	12	5	5
Beachwalk	11	11	4	4	2	2

**Notes:**

- (1) All setback distances are from the roadways' centerlines.
- (2) See Tables V-1B and VI-1B for traffic volume, speed, and mix assumptions.
- (3) Setback distances are for ground level receptors with unobstructed fields-of-view.
- (4) "Hard Soil" conditions assumed along all roadways.

## CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 5 for CY 2024 with and without the proposed project. The future projections of non-project and project traffic volumes for the No Build and Build Alternatives are shown in Appendix C.

Tables VI-1A and VI-1B contain the CY 2024 traffic volumes and noise levels during the PM peak hour for the Build Alternative at various distances from the roadways' centerlines during a weekday and weekend, respectively. Tables V-2A and V-2B contain the CY 2024 setback distances to the 65, 70, and 75 DNL contours under the Build Alternative for unobstructed visual line of sight conditions during a weekday and weekend, respectively. Future average vehicle speeds and traffic vehicle mixes along all roadways were assumed to be identical to those used for CY 2023 (see Tables V-1A and V-1B).

Tables VI-2A and VI-2B show the expected increases in traffic noise levels from CY 2023 to CY 2024 under the No Build and Build Alternatives due to the projected increases in future traffic volumes along the roadways shown during a weekday and weekend, respectively. As shown in Tables VI-2A and VI-2B, the projected increases in future traffic noise levels with or without the project should not exceed 0.2 dB at all roadways shown in the tables.

The dominant traffic noise source in the project area will continue to be traffic noise from Kalakaua Avenue. Increases in traffic noise levels along Kalakaua Avenue by CY 2024 are expected to be 0.0 to 0.2 dB under the No Build Alternative and 0.0 to 0.2 dB under the Build Alternative. Significant increases in traffic noise levels along Kalakaua Avenue are not expected to result from the Kalia Cultural Entertainment Venue Project. Similar conclusions were possible for future traffic noise along Olohana Street, Kalaimoku Street, Saratoga Road, and Beachwalk, where future traffic noise increases associated with the Kalia Cultural Entertainment Venue Development were predicted to be 0.0 dB for the Build Alternative. Overall, due to the dominating influence of existing and future non-project traffic, significant increases in future traffic noise levels should not occur as a result of the Kalia Cultural Entertainment Venue Project.

TABLE VI-1A

FUTURE (CY 2024) TRAFFIC VOLUMES AND NOISE LEVELS  
ALONG ROADWAYS IN PROJECT AREA  
(WEEKDAY, PM PEAK HOUR, WITH THE PROJECT)

LOCATION	SPEED (MPH)	TOTAL VPH	***** VOLUMES (VPH) *****			50' Leg	100' Leg	200' Leg
			AUTOS	M TRUCKS	H TRUCKS			
Kalakaua Ave. Fronting Kalia CEV Project	29	1,833	1,782	20	31	66.0	62.3	58.4
Kalakaua Ave. Between Olohana & Kalaimoku	29	2,033	1,976	22	35	66.4	62.7	58.9
Kalakaua Ave. Between Kalaimoku & Beachwalk	29	2,119	2,060	23	36	66.6	62.9	59.1
Kalakaua Ave. East of Beachwalk	29	1,942	1,888	21	33	66.2	62.5	58.7
Olohana St.	25	203	199	2	2	55.8	52.2	48.4
Kalaimoku St.	25	475	465	5	5	59.6	56.0	52.2
Saratoga Rd.	25	553	541	6	6	61.1	57.2	53.2
Beachwalk	25	177	173	2	2	55.4	51.8	48.0

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard soil and unobstructed field-of-view conditions assumed.

TABLE VI-1B

FUTURE (CY 2024) TRAFFIC VOLUMES AND NOISE LEVELS  
ALONG ROADWAYS IN PROJECT AREA  
( WEEKEND, PM PEAK HOUR, WITH THE PROJECT )

LOCATION	SPEED (MPH)	TOTAL VPH	***** VOLUMES (VPH) *****			50' Leg	100' Leg	200' Leg
			AUTOS	MTRUCKS	HTRUCKS			
Kalakaua Ave. Fronting Kalia CEV Project	25	1,744	1,705	23	16	62.9	59.2	55.5
Kalakaua Ave. Between Olohana & Kalaimoku	25	1,943	1,901	25	17	63.3	59.7	55.9
Kalakaua Ave. Between Kalaimoku & Beachwalk	25	1,943	1,901	25	17	63.3	59.7	55.9
Kalakaua Ave. East of Beachwalk	25	1,772	1,733	23	16	62.9	59.3	55.5
Olohana St.	25	200	196	2	2	54.1	50.6	46.8
Kalaimoku St.	25	391	383	4	4	57.1	53.5	49.8
Saratoga Rd.	25	467	457	5	5	58.6	54.8	50.9
Beachwalk	25	171	167	2	2	53.7	50.1	46.4

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard soil and unobstructed field-of-view conditions assumed.

TABLE VI-2A

CALCULATIONS OF PROJECT AND NON-PROJECT  
TRAFFIC NOISE CONTRIBUTIONS (CY 2024)  
(WEEKDAY, PM PEAK HOUR LEQ OR DNL)

<u>STREET SECTION</u>	<u>NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC</u>	<u>PROJECT TRAFFIC</u>
Kalakaua Ave. Fronting Kalia CEV Project	0.1	0.1
Kalakaua Ave. Between Olohana & Kalaimoku	0.1	0.1
Kalakaua Ave. Between Kalaimoku & Beachwalk	0.0	0.1
Kalakaua Ave. East of Beachwalk	0.1	0.0
Olohana St.	0.2	0.0
Kalaimoku St.	0.2	0.0
Saratoga Rd.	0.1	0.0
Beachwalk	0.0	0.0

TABLE VI-2B

CALCULATIONS OF PROJECT AND NON-PROJECT  
TRAFFIC NOISE CONTRIBUTIONS (CY 2024)  
(WEEKEND, PM PEAK HOUR LEQ OR DNL)

<u>STREET SECTION</u>	<u>NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC</u>	<u>PROJECT TRAFFIC</u>
Kalakaua Ave. Fronting Kalia CEV Project	0.0	0.1
Kalakaua Ave. Between Olohana & Kalaimoku	0.1	0.1
Kalakaua Ave. Between Kalaimoku & Beachwalk	0.1	0.1
Kalakaua Ave. East of Beachwalk	0.1	0.1
Olohana St.	0.2	0.0
Kalaimoku St.	0.2	0.0
Saratoga Rd.	0.0	0.0
Beachwalk	0.0	0.0

## CHAPTER VII. DISCUSSION OF PROJECT RELATED NOISE IMPACTS AND POSSIBLE MITIGATION MEASURES

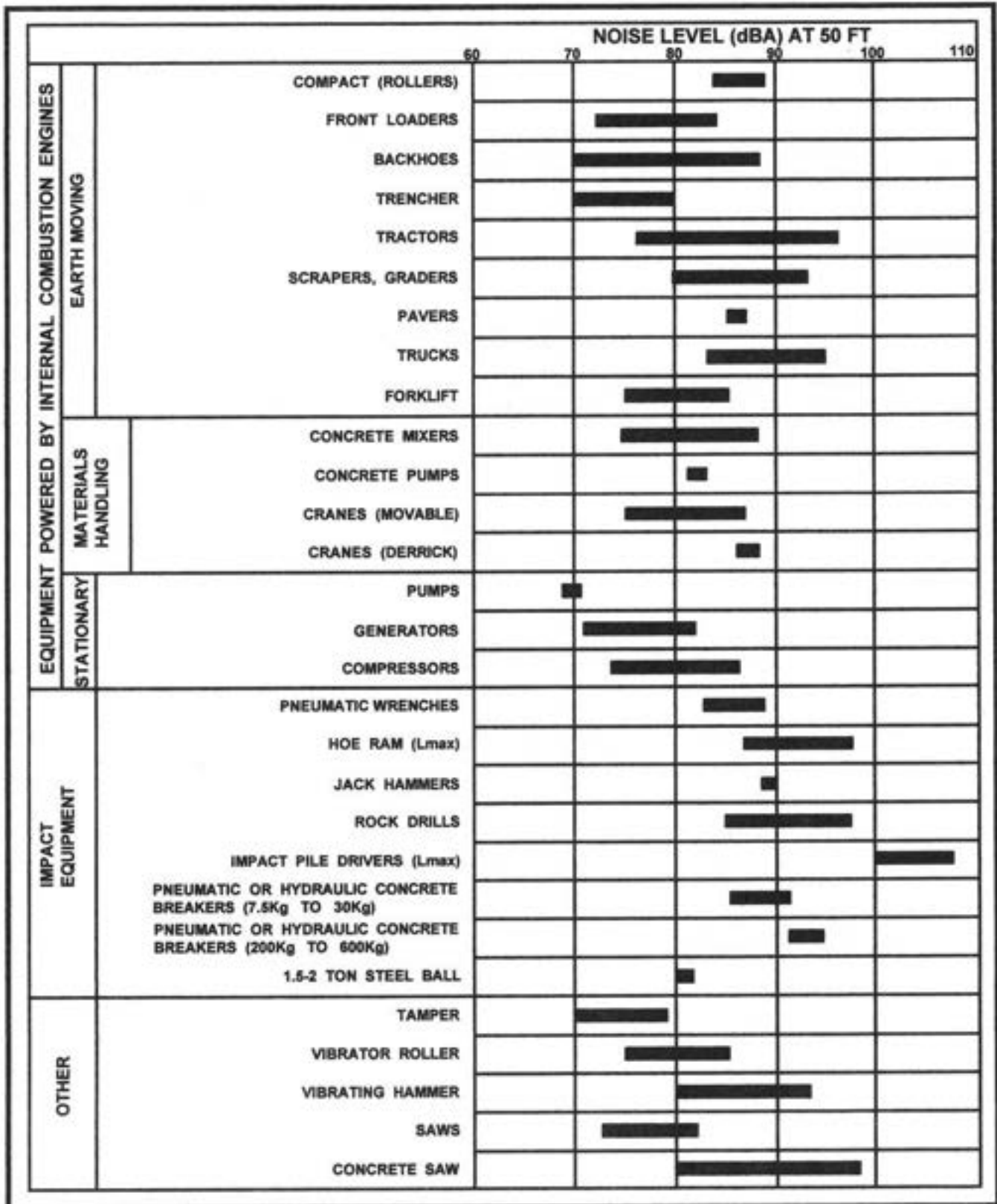
Traffic Noise. Noise impacts from project traffic along the roadways which are expected to service the project traffic are not expected due to the relatively low levels of project traffic noise when compared to the noise levels of non-project traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project along Kalakaua Avenue are currently provided with air conditioning.

General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction is unknown, but it is anticipated that the actual work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. Figure VII-1 depicts the range of noise levels of various types of construction equipment when measured at 50 FT distance from the equipment. Typical levels of exterior noise from construction activity (excluding pile driving activity) at various distances from the job site are shown in Figure VII-2. The impulsive noise levels of impact pile drivers are approximately 15 dB higher than the levels shown in Figure VII-2, while the intermittent noise levels of vibratory pile drivers are at the upper end of the noise level ranges depicted in the figure.

Figure VII-2 is useful for predicting exterior noise levels at short distances (within 100 FT) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing resort, military, and commercial buildings will range from 20 FT to 300 FT, with corresponding average noise levels of 94 to 70 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of Figure VII-2 should be reduced by approximately 8 dBA when the work is occurring at the intersection with the cross street, and should be reduced by 15 dBA when work is occurring at least 100 FT from the intersection (and the visual line-of-sight is blocked by intervening buildings). Typical levels of construction noise inside naturally ventilated and air conditioned structures are approximately 10 and 20 dB less, respectively, than the levels shown in Figure VII-2.

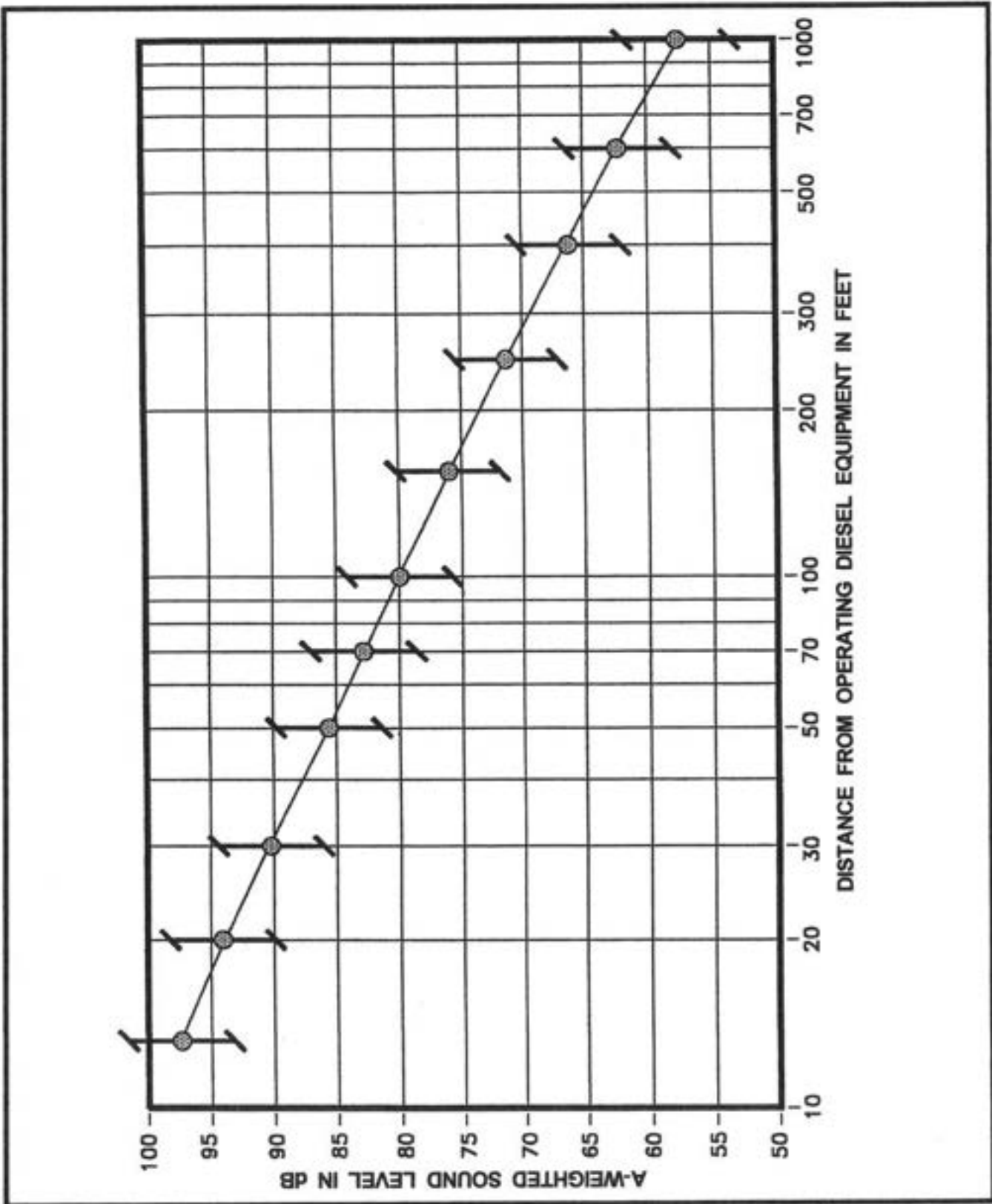
The existing resort units at the east face of the Luana Waikiki Hotel are predicted to experience the highest noise levels during construction activities due to their close proximity (within 63 FT to 190 FT slant distance) to the construction site. Predicted construction noise levels may intermittently exceed 83 dBA during demolition and earthwork activities and exceed 74 dBA during building erection activities. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work, the availability of closure and air conditioning for noise mitigation at the resort building, and due to the administrative controls available for regulation of construction noise. Instead, these





**RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS**

**FIGURE VII-1**



**ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE**

**FIGURE VII-2**

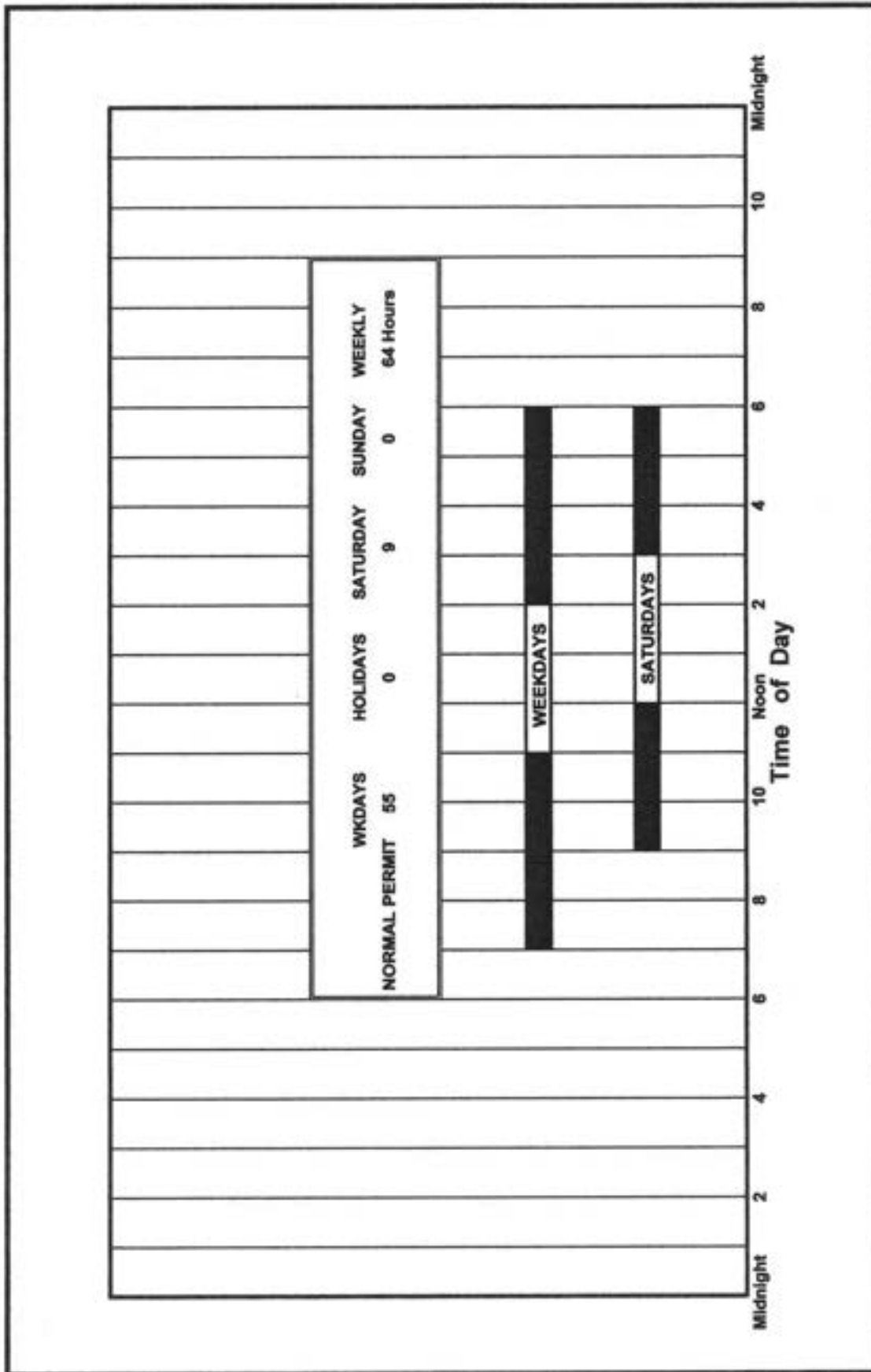
impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dBA at 50 FT distance), and due to the exterior nature of the work (grading and earth moving, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 FT of the project construction site. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 FT to 450 FT distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA. With windows and doors closed, the highest construction noise levels of 94 dBA at 20 FT should decrease to approximately 74 dBA indoors.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 3), is another noise mitigation measure which is normally applied to construction activities. Figure VII-3 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.

New On Site Activities. Potential noise impacts from the luau shows at the Kalia Cultural Entertainment Venue represent new activities on the project site. Evaluations of potential noise impacts at surrounding land uses were provided in Reference 7, and the implementation of mitigation measures are planned to be incorporated into the new facility.



**FIGURE VII-3**

**AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE**

## APPENDIX A. REFERENCES

- (1) "Environmental Criteria and Standards, Noise Abatement and Control, 24 FR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; July 12, 1979.
- (2) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.
- (3) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.
- (4) "FHWA Traffic Noise Model User's Guide;" FHWA-PD-96-009, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).
- (5) Existing and Future Traffic Turning Movements, Kalia Cultural Entertainment Venue; Wilson Okamoto Corporation; May 2, 2023.
- (6) 24-Hour Traffic Counts, Station B72761200132, Kalakaua Avenue Between Beachwalk and Lewers Street; March 3, 2018 and October 5, 2022; Hawaii State Department of Transportation.
- (7) Acoustic Study for the Proposed Kalia Cultural Entertainment Venue Facility; November 2022; Y. Ebisu & Associates.

## APPENDIX B

### EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

#### Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E.....). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

#### Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB, Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., deci).

#### Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

## APPENDIX B (CONTINUED)

TABLE I  
A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

<u>TERM</u>	<u>SYMBOL</u>
1. A-Weighted Sound Level	$L_A$
2. A-Weighted Sound Power Level	$L_{WA}$
3. Maximum A-Weighted Sound Level	$L_{max}$
4. Peak A-Weighted Sound Level	$L_{Apk}$
5. Level Exceeded x% of the Time	$L_x$
6. Equivalent Sound Level	$L_{eq}$
7. Equivalent Sound Level Over Time (T) <sup>(1)</sup>	$L_{eq(T)}$
8. Day Sound Level	$L_d$
9. Night Sound Level	$L_n$
10. Day-Night Sound Level	$L_{dn}$
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$
12. Sound Exposure Level	$L_{SE}$

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is  $L_{eq(1)}$ ). Time may be specified in non-quantitative terms (e.g., could be specified as  $L_{eq(WASH)}$  to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

## APPENDIX B (CONTINUED)

### TABLE II RECOMMENDED DESCRIPTOR LIST

<u>TERM</u>	<u>A-WEIGHTING</u>	<u>ALTERNATIVE<sup>(1)</sup> A-WEIGHTING</u>	<u>OTHER<sup>(2)</sup> WEIGHTING</u>	<u>UNWEIGHTED</u>
1. Sound (Pressure) <sup>(3)</sup> Level	$L_A$	$L_{pA}$	$L_B, L_{pB}$	$L_p$
2. Sound Power Level	$L_{WA}$		$L_{WB}$	$L_W$
3. Max. Sound Level	$L_{max}$	$L_{Amax}$	$L_{Bmax}$	$L_{pmax}$
4. Peak Sound (Pressure) Level	$L_{Apk}$		$L_{Bpk}$	$L_{pk}$
5. Level Exceeded x% of the Time	$L_x$	$L_{Ax}$	$L_{Bx}$	$L_{px}$
6. Equivalent Sound Level	$L_{eq}$	$L_{Aeq}$	$L_{Beq}$	$L_{peq}$
7. Equivalent Sound Level <sup>(4)</sup> Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
8. Day Sound Level	$L_d$	$L_{Ad}$	$L_{Bd}$	$L_{pd}$
9. Night Sound Level	$L_n$	$L_{An}$	$L_{Bn}$	$L_{pn}$
10. Day-Night Sound Level	$L_{dn}$	$L_{Adn}$	$L_{Bdn}$	$L_{pdn}$
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$	$L_{Adn(Y)}$	$L_{Bdn(Y)}$	$L_{pdn(Y)}$
12. Sound Exposure Level	$L_S$	$L_{SA}$	$L_{SB}$	$L_{Sp}$
13. Energy Average Value Over (Non-Time Domain) Set of Observations	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
14. Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	$L_{x(e)}$	$L_{Ax(e)}$	$L_{Bx(e)}$	$L_{px(e)}$
15. Average $L_x$ Value	$L_x$	$L_{Ax}$	$L_{Bx}$	$L_{px}$

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E,.....weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is  $L_{eq(1)}$ ). Time may be specified in non-quantitative terms (e.g., could be specified as  $L_{eq(WASH)}$ ) to mean the washing cycle noise for a washing machine.



**APPENDIX C**

**SUMMARY OF BASE YEAR AND FUTURE YEAR  
TRAFFIC VOLUMES**

<b>ROADWAY LANES</b>	<b>CY 2022 PM VPH</b>	<b>CY 2024 (NO BUILD) PM VPH</b>	<b>CY 2024 (BUILD) PM VPH</b>
Kalakaua Ave. Fronting Kalia Luau Project (Weekday, EB)	1,749	1,804	1,833
Kalakaua Ave. Fronting Kalia Luau Project (Weekend, EB)	1,680	1,715	1,744
Kalakaua Ave. Between Olohana & Kalaimoku (Weekday, EB)	1,941	2,004	2,033
Kalakaua Ave. Between Olohana & Kalaimoku (Weekend, EB)	1,853	1,914	1,943
Kalakaua Ave. Between Kalaimoku & Beachwalk (Weekday, EB)	2,054	2,090	2,119
Kalakaua Ave. Between Kalaimoku & Beachwalk (Weekend, EB)	1,880	1,914	1,943
Kalakaua Ave. East of Beachwalk (Weekday, EB)	1,875	1,913	1,942
Kalakaua Ave. East of Beachwalk (Weekend, EB)	1,709	1,743	1,772
Olohana St. (Weekday, SB)	193	203	203
Olohana St. (Weekend, SB)	190	200	200
Kalaimoku St. (Weekday, NB)	444	475	475
Kalaimoku St. (Weekend, NB)	361	391	391
Saratoga Rd. (Weekday, NB)	340	343	343
Saratoga Rd. (Weekday, SB)	210	210	210
Total:	550	553	553
Saratoga Rd. (Weekend, NB)	277	280	280
Saratoga Rd. (Weekend, SB)	187	187	187
Total:	464	467	467
Beachwalk (Weekday, SB)	177	177	177
Beahwalk (Weekend, SB)	171	171	171



## Appendix D:

# Phase I Environmental Site Assessment and Limited Asbestos and Lead-Based Paint Sampling and Analysis



**Phase I  
Environmental Site  
Assessment**

Project No. 2209-00263-PH1

**2057 Kalakaua Avenue  
TMK (1) 2-6-005: 001 & 004  
Honolulu, Hawaii**



prepared for

*Kobayashi Group*

1288 Ala Moana Boulevard

Suite 291

Honolulu, Hawaii 96814

October 28, 2022

Prepared for:  
Kobayashi Group  
1288 Ala Moana Boulevard  
Suite 291  
Honolulu, Hawaii 96814

---

## *Phase I Environmental Site Assessment*



### **Kyo-ya Restaurant**

2057 Kalakaua Avenue  
Honolulu, Hawaii

Tax Map Key (1) 2-6-005: 001 and 004

**Prepared by:**

ENPRO Environmental  
151 Hekili Street, Suite 210  
Kailua, Hawaii 96734  
808.262.0909  
808.262.4449 (fax)  
www.enproenvironmental.com

**ENPRO Environmental Contact:**

Alexis Aguilar  
Project Manager  
808.748.2108  
aaguilar@enproenvironmental.com

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ENPRO Project Number: 2209-00263-PH1  
Date of Report: October 28, 2022  
On-Site Investigation: October 6, 2022



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Environmental Year

## PROJECT AT A GLANCE™

Assessment Component	Not Requested	Acceptable <sup>(†)</sup>	Routine Solution	Phase II ESA	Report Reference Section	
					Subject Property	Adjoining Property
Historical Review		X				
Regulatory Review		X				
Operations		X				
Hazardous Materials		X				
Underground Storage Tanks		X				
Aboveground Storage Tanks		X				
Solid Waste		X				
Surface Areas		X				
Wells		X				
PCBs		X				
Asbestos	Other Study					
Lead Based Paint	X					
Lead in Drinking Water	X					
Radon	X					
Mold	X					
Significant Data Gaps		X				

(†) = Based on this preliminary study, it appears that further investigation in this area is not a priority concern for this site at the present time.

Conditions noted in the Project at a Glance™ table represent the overall conditions of the Site. More specific details on assessment components may be included in the text of this report; therefore the Project at a Glance™ should not be used as a stand-alone document.

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## ACTION ITEMS

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Based on our investigations, ENPRO Environmental (ENPRO) has concluded that the risk of contamination at the Subject Property is so minimal that no further investigation is warranted.

Details regarding ENPRO's conclusions may be found in the body of this report.



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## 1.0 EXECUTIVE SUMMARY

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ENPRO Environmental (ENPRO) was retained to conduct a Phase I Environmental Site Assessment (ESA) of the former Kyo-ya Restaurant located at 2057 Kalakaua Avenue in Honolulu, Hawaii (Subject Property).

We have performed a Phase I ESA of the Subject Property in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject Property.

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## 2.0 INTRODUCTION

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### 2.1 LOCATION AND LEGAL DESCRIPTION

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The Subject Property consists of two parcels of land totaling approximately 28,760 square feet. The parcels are improved with a parking structure on the east half of the site and a multi-level commercial building once used as a restaurant covering the west half of the site. The structures are surrounded by grass, shrubs, trees, pedestrian walkways, and a hotel.

**Table 1**  
**Location and Legal Description of the Subject Property**

Location Description	Subject Property
Address	2057 Kalakaua Avenue, Honolulu, Hawaii
TMK	(1) 2-6-005: 001 and 004
Latitude (North)	21.2832175
Longitude (West)	157.83193181
Elevation	3 feet above sea level
Distance and Direction to Surface Waters	Pacific Ocean, approximately 2,000 feet South Ala Wai Canal, approximately 1,000 feet North

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### 2.2 PURPOSE OF THE PHASE I ENVIRONMENTAL SITE ASSESSMENT

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This Phase I ESA was performed in accordance with ASTM International (ASTM) Standard E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (herein referred to as the Practice) (ASTM, 2021).

The Practice was used to satisfy the requirements for the Landowner Liability Protections (innocent landowner defense, contiguous property owner liability protection, and bona fide prospective purchaser liability protection) provided by the Comprehensive Environmental Response, Compensation, and Liability Act All Appropriate Inquiries (AAI) Rule (40 Code of Federal Regulations [CFR] Part 312.10).

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## 2.3 PHASE 1 ENVIRONMENTAL SITE ASSESSMENT PROCESS

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ASTM is the recognized standards organization that has developed the Phase I ESA Standard E1527-21. AAI which includes 40 CFR Part 312, §312.21 and §312.31, further defines the Phase I ESA process.

Furthermore, this Practice allows for the identification of RECs affecting the Subject Property.

ASTM E1527-21 defines three categories of RECs.

- A REC is defined as:
  - the presence of hazardous substances or petroleum products in, on or at the Subject Property due to a release to the environment
  - the likely presence of hazardous substances or petroleum products in, on or at the Subject Property due to a release or likely release to the environment; or
  - the presence of hazardous substances or petroleum products in, on or at the Subject Property under conditions that pose a material threat of a future release to the environment.
- Historical RECs (H-RECs) are defined as a previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities, without subjecting the property to any controls.
- Controlled RECs (C-RECs) are defined as a recognized environmental condition affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of controls.

Additionally, ASTM E1527-21 allows for the identification of *de minimis* conditions. A *de minimis* condition is defined as a condition that generally does not represent a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies. A condition determined to be *de minimis* is not a REC.

ENPRO's scope of services in conducting this assessment included:

## Records Review

- A review of:
  - environmental records
  - regulatory agency reports
  - consultant's reports
- A review of historical uses of the Subject Property by examining locally available:
  - aerial photographs
  - fire insurance maps
  - recorded land title records
  - USGS topographical maps
  - other readily available historical information
- A review of an environmental database search report of federal and state regulatory agency records.
- A review of regulatory agency files and records if the Subject Property, or any of the adjoining properties, is identified on one or more of the standard environmental record sources in the database search.
- A review of readily available information describing the general geology and topography of the Subject Property, local groundwater characteristics, sources of water, power and sewer, and proximity to ecologically sensitive receptors.

## Site Reconnaissance

- A walkthrough inspection of the Subject Property for visible evidence of RECs.
- A property line visual assessment of adjoining properties for evidence of potential offsite RECs that may affect the Subject Property.

## Interviews

Interviews with available key site personnel regarding current and previous activities on the Subject Property, especially those involving the use of hazardous substances and petroleum products.

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## 2.4 ENGAGEMENT

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Kobayashi Group (Client) retained ENPRO to conduct a Phase I ESA of the Subject Property.

This assessment was performed under the conditions of, and in accordance with ENPRO's Proposal 22I-0219-HNL dated September 13, 2022.

Any exceptions, additions to, or deletions from the ASTM E1527-21 standard practice or AAI practice, details of the work performed, sources of information, and findings are presented in the report.

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## **2.5 LIMITING CONDITIONS**

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This Phase 1 ESA was conducted in accordance with and limited to the methods described by the Practice.

Access was provided to all areas of the Subject Property.

ENPRO did not conduct subsurface soil, water, groundwater, or soil vapor sampling to evaluate contamination; therefore, ENPRO cannot give any assurance as to the presence or absence of soil, water, groundwater, air, or soil vapor contamination.

No investigation is thorough enough to exclude the potential presence of hazardous substances on a given parcel of property. All hazardous substances or hazardous conditions at the Subject Property may not have been identified during the completion of the scope of services. However, the lack of such a finding should not be construed as a guarantee or representation, either expressed or implied, that such substances or conditions are absent.

Any data, opinions, or recommendations presented in this report apply to the Subject Property conditions existing when services were provided. ENPRO cannot report on, nor accurately predict, events that may change conditions of the Subject Property after the described services were provided, whether occurring naturally or caused by external forces. ENPRO assumes no responsibility for conditions that were not authorized to investigate, that were not deemed to be reasonably accessible, or that were not covered by the scope of work.

As a matter of necessity, ENPRO relies largely on readily available sources of information such as from the Client, public records, interviews, and contracted research firms for recognizing potential environmental liabilities at a property/facility. Requests for information resources are made to collect relevant data on current and past practices conducted at the property/facility. ENPRO may not receive all information requested or be able to confirm received information during the ESA. Therefore, ENPRO will not be held responsible for errors, omissions, or misrepresentations resulting from missing documentation or from inaccurate information provided by such sources.

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## 2.6 DEVIATIONS, EXCEPTIONS, AND SIGNIFICANT ASSUMPTIONS

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### **Deviations; Exceptions; Special Terms or Conditions**

This Phase 1 ESA did not include any:

- Deviations
- Exceptions
- Special terms
- Conditions

### **Significant Assumptions**

In preparing this report, ENPRO has relied on certain information provided by the client, by federal, state, and local officials, and by other parties referenced herein, and on information contained in the files of governmental agencies that was reasonably ascertainable at the time of this assessment. Although there may have been some degree of overlap in the information provided by these various sources, ENPRO did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment, except where a reasonable person with similar experience or background would or should have known of the inaccuracy of the information provided.

ENPRO has based its conclusions in this report upon readily available data, information, or statements supplied by third parties as cited in this Phase 1 ESA. Conclusions in this Phase 1 ESA are subject to change if additional, more reliable information becomes available.

ENPRO, in part, has relied on information supplied by the Client or the Client's agent(s), and assumes such information to be factual. Unless otherwise discovered during review, all other sources of information, whether verbal or written, are assumed to be factual.

The Computer Environmental Report (CER), summarizing federal and state regulatory agency records, is provided by a contracted data research firm. The information provided is assumed to be correct unless otherwise noted.



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## **3.0 USER PROVIDED INFORMATION**

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A User questionnaire was completed by Ms. JoAnn Nelson, the property operations manager for Best Bridal Hawaii, Inc., which currently occupies the building on the Subject Property. A copy of the completed User questionnaire is included in the appendix section of this report.

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### **3.1 ENVIRONMENTAL LIENS AND ACTIVITY AND USE LIMITATIONS**

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Per ASTM, environmental liens and activity and use limitations (AULs), commonly found within recorded land title records, are to be provided to the environmental professional by the User.

This search for environmental liens and AULs is in addition to ENPRO's search of institutional and engineering controls discussed in Section 4, if discovered during the regulatory records review.

Ms. Nelson did not provide environmental liens or AULs information associated with the Subject Property.

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### **3.2 SPECIALIZED KNOWLEDGE**

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Ms. Nelson did not report any specialized knowledge of any RECs in connection with the Subject Property.

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### **3.3 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION**

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Ms. Nelson did not provide commonly known areas of environmental concern.

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### **3.4 VALUATION REDUCTION FOR ENVIRONMENTAL IMPAIRMENT**

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Ms. Nelson did not provide information on any reduction of valuation due to environmental impairment.

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### **3.5 OBVIOUS INDICATORS OF PRESENCE OR LIKELY PRESENCE OF CONTAMINATION AT THE SITE**

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Ms. Nelson stated that there were no obvious indicators that point to the presence or likely presence of contamination at the Subject Property.

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### **3.6 REASONS FOR PERFORMING PHASE I ENVIRONMENTAL SITE ASSESSMENT**

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Ms. Nelson stated that the purpose for conducting the Phase I ESA was to perform adequate due diligence before transferring ownership of the Subject Property.

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## **4.0 RECORDS REVIEW**

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### **4.1 PHYSICAL SETTING**

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#### **4.1.1 SUBJECT PROPERTY, VICINITY GENERAL CHARACTERISTICS, CURRENT USE; AND DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS**

The Subject Property consists of two parcels of land totaling approximately 28,760 square feet. The parcels are improved with a parking structure on the east half of the site and a multi-level commercial building once used as a restaurant covering the west half of the site. The structures are surrounded by grass, shrubs, trees, pedestrian walkways and a hotel.

The Subject Property is bordered by Kalakaua Avenue on the north. Luana Waikiki Hotel and Suites adjoins the restaurant structure to the west. Maluhia Road is South of the Subject Property and Fort DeRussy Park is south and east of the Subject Property.

The area immediately surrounding the Subject Property consists of commercial businesses, hotels, and retail.

#### **4.1.2 ENVIRONMENTAL SETTING**

##### **Topography**

Review of the topographic map published by the United States Geological Survey (USGS) (2017) indicated the Subject Property elevation was less than ten feet above mean sea level, and the region is topographically flat.

##### **Soils**

The soil survey of the island of Oahu is published by the United States Department of Agriculture (USDA). USDA soil survey data is available at <http://websoilsurvey.nrcs.usda.gov/app/>.

The Subject Property was situated on soil classified as Fill Land.

Fill Land consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage and general material from other sources. This land type occurs in Honolulu, adjacent to the ocean.

Due to the heterogeneous nature of this material, physical parameters such as permeability, porosity and corrosivity cannot be accurately estimated.

### **Geology/Hydrogeology**

Groundwater beneath the Site occurs in two distinct aquifers within the Palolo Aquifer System of the Honolulu Aquifer Sector. The shallow aquifer is classified as a basal, unconfined, sedimentary aquifer, occurring in non-volcanic lithology. The groundwater status is reported as potentially usable but not for drinking water. It also is not ecologically important. The groundwater within this aquifer is described as having moderate salinity (1,000-5,000 milligrams per liter Cl<sup>-</sup>). The groundwater is further described as replaceable, with a high vulnerability to contamination (Mink and Lau, 1992).

The deeper aquifer is classified as a basal, confined, flank aquifer, occurring in horizontally extensive lavas. The groundwater status is reported as usable for drinking water purposes but is not ecologically important. The groundwater within this aquifer is described as fresh (<250 milligrams per liter Cl<sup>-</sup>). The groundwater is further described as irreplaceable, with a low vulnerability to contamination (Mink and Lau, 1992).

The Subject Property is located below the underground injection control line and the underlying aquifer is not considered a potential drinking water resource. Further, a review of the State of Hawaii Department of Health (DOH) Safe Drinking Water Branch contamination maps (<https://eha-cloud.doh.hawaii.gov/sdwb/#!/viewer>) identified no contaminated water wells in the vicinity of the Subject Property.

Five wells were identified within a half mile of the Subject Property, all associated with the Hilton Hawaiian Village, located southwest of the Subject Property. Two wells were installed in 1955 (3-1750-007 and 3-1750-006). There was no additional information available on these wells. A third well (3-1750-014) was installed in 2003 and subsequently closed for redevelopment of the area. The fourth and fifth wells (3-1750-015 and 3-1750-020) were installed in 2005 and are used to supply salt water to the property's lagoon.

The hydrogeologic gradient in the vicinity of the Subject Property is anticipated to be slight, with a general trend to the southwest. Depth to groundwater is approximately 5.5 to 8.5 feet below ground surface ([USGS Groundwater for USA: Water Levels](#)). Groundwater levels may be influenced by leaking infrastructure and tidal fluctuations, and human activity.

### **Surface Waters**

The nearest body of water is the Ala Wai Canal, approximately 1,000 feet to the North. The Subject Property is within 150 meters of a surface water body.

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## 4.2 STANDARD ENVIRONMENTAL RECORD SOURCES

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A CER was acquired in the form of an ERIS Report (ERIS, 2022). The CER provides a listing of sites identified on select federal and state standard source environmental databases within the approximate minimum search distance (AMSD) prescribed by the Practice. ENPRO reviewed each environmental record from the database search provided in the CER to determine whether (1) The Subject Property has regulatory environmental records, (2) certain sites identified in the CER are suspected to represent a potential or identified environmental impact to the Subject Property.

The assessment used several factors to determine whether each site is (1) likely to affect the environmental condition of the Subject Property, (2) has the potential to affect the environmental condition of the Subject Property, or (3) is not likely to affect the environmental condition of the Subject Property. Those factors included the following:

- The distance from the Subject Property.
- The hydrogeologic position relative to the Subject Property, that is, upgradient, cross gradient, or downgradient.
- Available information on the nature of identified releases, including what chemical was released and how mobile it is, as well as the volume of chemical released to the subsurface. It was assumed that releases of chemicals such as petroleum constituents or volatile organic compounds (e.g., chlorinated solvents) would have relatively higher mobility than other chemicals (e.g., metals) potentially released to the subsurface. If a release was confirmed to have encountered groundwater, it was assumed that mobility would increase. Likewise, a documented low volume release was assumed to be significantly less mobile and, therefore, have a lower impact on a Subject Property than a large volume release.

To assess the likelihood of properties in the CER to affect the Subject Property using the factors noted above, a proximity search was performed to identify which sites in the CER were near enough to the Subject Property. Guidelines were then created and applied to each site to determine its likelihood to affect the Subject Property.

Historical environmental sites that have No Further Action (NFA) determination from the CER and are located on the Subject Property were further assessed. Compliance with current unrestricted use action levels and other applicable regulatory requirements that could not be readily confirmed from the CER data was evaluated. Closure documents were reviewed to determine the basis for the NFA determination and confirm it is consistent with the current unrestricted action levels and regulatory sampling requirements.

In instances where current unrestricted action levels or regulatory requirements are not met or a determination cannot be made, NFA sites also meeting the definition of “likely to affect” or “has the potential to affect” were identified as RECs or controlled RECs (as applicable). If the closure on the Subject Property is confirmed to meet current unrestricted action levels and regulatory requirements, the environmental site was identified as an historical REC.

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### 4.3 PREVIOUS ENVIRONMENTAL REPORTS

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ENPRO reviewed the following environmental reports:

*Phase I Environmental Site Assessment – Kyo-ya Restaurant, ATC Associates, Inc., May 2006*

The Phase I ESA concluded there was no evidence of recognized environmental conditions, historical recognized environmental conditions, or controlled recognized environmental conditions associated with the subject property.

*Phase I Environmental Site Assessment – 2057 Kalakaua Avenue, Environmental Risk Analysis, LLC, March 2014*

The Phase I ESA concluded there was no evidence of recognized environmental conditions, historical recognized environmental conditions, or controlled recognized environmental conditions associated with the subject property.

The report did point out the existence of a potential REC on a property approximately 100 feet to the northwest. This property has operated as a gasoline station since 1963 and there are multiple historic releases. Records indicate each release was remediated and the case closed with a “no further action” status. Future leaks from this property have the potential to impact the Subject Property.

*Phase I Environmental Site Assessment, 2051 and 2057 Kalakaua Avenue, TRC Environmental Corporation, July 2015*

The Phase I ESA concluded there was no evidence of recognized environmental conditions, historical recognized environmental conditions, or controlled recognized environmental conditions associated with the Subject Property.

Site Assessment Report – 2051 and 2057 Kalakaua Avenue, TRC Environment Corporation, July 2015

This Phase II ESA was conducted to determine if the site had been impacted from historical use of the property or from adjacent properties. Soil and groundwater sampling was conducted. Lead was detected in one sample at a concentration of 250 mg/kg which exceed the Tier 1 EAL of 200 mg/kg. There were no other compounds detected in the remaining samples above their respective Tier 1 EALs.

Arsenic was detected in three groundwater samples at concentrations above the Tier 1 EAL of 10µg/L. There were no other compounds detected above their respective Tier 1 EALs.

The report did not provide insight into the potential source of these contaminants.

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#### **4.4 HISTORICAL USE INFORMATION ON THE SUBJECT PROPERTY**

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The objective of consulting historical sources is to identify the likelihood that past uses have resulted in RECs.

The first known developed use of the Subject Property was residential in 1927.

The following table summarizes relevant historical uses based on our review of the historical sources available for this assessment. Such sources may include topographic maps, Sanborn maps, aerial photographs, and city directories. Relevant documentation is found in the appendix.

**Table 2**  
**Historical Uses of the Subject Property**

<b>Date</b>	<b>Observation/Use</b>	<b>Source</b>
1927, 1949	Developed with a residential structure and three small structures on the southwest end of the property	Fire Insurance Map Aerial Photographs
1952, 1956, 1959, 1963, 1968 -1982	The Subject Property is depicted on the topographic maps and Fire Insurance Maps indicate the residential structures have been cleared and a building labeled “REST” constructed, presumably a restaurant.	Fire Insurance Map Topographic Maps Aerial Photographs
1969, 1982, 1976, 1981, 1989	The Subject Property is depicted on the topographic maps and is listed as occupied by “Kyo-ya” in the City Directory	City Directory
1991	The Subject Property is listed as “Under Constn”	City Directory
1992 - 2017	The current building and parking structure are visible	Aerial Photographs

**Table 2 (continued)**  
**Historical Uses of the Subject Property**

Date	Observation/Use	Source
1997, 2002, 2005, 2007, 2011	The Subject Property is listed as “Kyo-ya Restaurant” and “Hanabi Corner	City Directory
2016	The Subject Property is listed as “Auto Detail Masters”	City Directory
2020	The Subject Property is listed as “Dearheart International, LLC”	City Directory

The review of historical data indicated the Subject Property was originally developed as residential. The property was converted to commercial in the early 1950’s when the residential structures were demolished, and a presumed restaurant was constructed. According to the ATC Associates, Inc. 2006 Phase I ESA, the first lease for the Kyo-ya Restaurant was signed in October 1963 and the Kyo-ya Company Limited purchased the property in May 1970. The restaurant was rebuilt in 1991 when the current building and parking structure were erected. From approximately 2016 until today, the Subject Property has been used for other commercial businesses including an auto detail facility, a consulting firm, and presently as a bridal boutique.

The review of historical uses did not identify potential RECs.

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## **4.5 VAPOR ENCROACHMENT SCREENING**

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The ERIS Database Report provided an initial search of all standard government record databases and ERIS historical records within the ASTM E1527-21 recommended radii. ENPRO reviewed those sites related to former dry cleaners, gas stations and manufactured gas plants which met the criteria for vapor encroachment screening as provided by the ASTM E2600-10 *Standard Guide for Vapor Encroachment Screening of Property Involved in Real Estate Transactions* (ASTM E2600-10).

ENPRO reviewed the CER for sites with recorded releases of contaminants of potential concern (COPCs) that were also within the 1/3-mile and 1/10-mile approximate minimum distances as defined in ASTM E2600-10 for vapor encroachment from COPC-contaminated sites. This measurement is based upon the distance from the known or suspect contaminated property to the Subject Property boundary. ENPRO’s review of ERIS’s database search for potential vapor encroachment conditions (VECs) accounts for the following factors:

- The land use of the Subject Property
- Type of COPC(s)



- Location of known or suspect contaminated property relative to the area of concern
- Characteristics of the soil
- Depth to groundwater
- Vapor conduits that may result in significant preferential pathways
- Cleanup status of contaminated property

Potential VECs evaluated included all RECs, including H-RECs and C-RECs, with identified releases of petroleum products or other potentially volatile contaminants of concern. As is provided by ASTM E2600-10, ENPRO also considered the predicted hydrogeological gradient around the Subject Property when determining the potential for VECs to impact the site.

ENPRO did not identify any potential VECs within the recommended radii provided in ASTM E2600-10 with the potential to impact the Subject Property.

#### **4.6 HISTORICAL USE OF INFORMATION ON ADJOINING PROPERTIES**

Information regarding the potential for historical uses on adjoining properties to environmentally impact the Subject Property is presented below.

**Table 3  
Historical Uses of Adjoining and Surrounding Properties**

<b>Date</b>	<b>Observation/Use</b>	<b>Source</b>
1927	Largely undeveloped. A few residential structures northwest of the Subject Property, undeveloped parcels north and east, and Fort DeRussy Military Reservation to the south.	Fire Insurance Map
1949, 1952, 1953, 1956, 1959, 1968, 1969, 1983	Majority of parcels north and east of the Subject Property are developed with a mix of commercial and residential structures	Fire Insurance Map Aerial Photographs Topographic Maps
1957-2020	Listings along Kalakaua Avenue are a mix of commercial, shopping, and hotel properties	City Directory
1978, 1982	Fort DeRussy has been further developed with structures, parking areas and landscaping	Aerial Photographs
1992	Some of the low-rise structures north and east have been replaced by high-rise hotels and condominiums including the adjacent property to the north	Aerial Photographs
2000-2017	Portions of Fort DeRussy are redeveloped into an open space park	Aerial Photographs

The review of historical uses did not identify potential RECs.

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**4.7 ADDITIONAL ENVIRONMENTAL RECORD RESOURCES: STATE AND LOCAL AGENCIES**

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ENPRO requested files from the following agencies:

- DOH Solid and Hazardous Waste Branch (SHWB)
- DOH Hazard Evaluation and Emergency Response (HEER) Office

ENPRO did not identify any records indicating possible evidence of RECs associated with the Subject Property, adjoining properties, or surrounding properties.

## 5.0 SITE RECONNAISSANCE

Site reconnaissance was performed on foot by Alexis Aguilar on October 6, 2022. All areas of the Subject Property were available for inspection.

### 5.1 CURRENT USES OF THE SITE

The Subject Property was comprised of a two-story building, built in 1991 and an accompanying two-level parking structure.

The following uses were observed:

- Bridal Shop (first floor of building)

#### Site Environmental Conditions

Table 4 summarizes the site inspection and findings of environmental conditions at the Subject Property.

**Table 4**  
**Site Environmental Conditions**

Item	Observation	Findings
Aboveground Storage Tanks (ASTs)	Two AST(s) were observed on the roof of the structure. One tank held water, the second was for compressed air.	Not a REC
Underground Storage Tanks (USTs)	No USTs or associated dispensers and piping were observed.	Not a REC
Odors	No unusual odors were noted.	Not a REC
Pools of Liquid	Standing surface water, pools, catchment structures, and/or sumps containing liquids or oily sheen likely to be hazardous substances or petroleum products were not observed.	Not a REC
Pits, Ponds, or Lagoons	No pits, ponds, stormwater catchment basins, retention structures, or lagoons were observed.	Not a REC
Drums	No drums were observed.	Not a REC

**Table 4 (continued)**  
**Site Environmental Conditions**

Item	Observation	Findings
Hazardous Substances or Petroleum Products	A small volume of cleaning supplies was observed. The containers were properly labeled and stored.	Not a REC
Unidentified Substance Containers	No containers containing unidentified substances suspected of being hazardous substances or petroleum products were observed.	Not a REC
Polychlorinated Biphenyls (PCBs)	Fluorescent light ballasts potentially containing PCBs were observed throughout the building.	De minimis
	Electrical equipment that has the potential to contain PCBs was visually observed. A pad-mounted transformer (V20072), owned by HECO, was observed on the south side of the property adjoining the Subject Property. The transformer appeared in good condition with no staining observed. A “No PCB” sticker was affixed to the cabinet. ENPRO submitted a request for verification of the transformer’s PCB status to HECO, but had not received a response at the time of the completion of this report. Should the transformer contain PCBs, HECO is responsible for cleanup of any release of PCBs.	Not a REC
Surface Stains or Corrosion	Minimal stains indicative of petroleum products were observed in the parking structure. Stains were consistent with minor oil leaks associated with parked cars.	De minimis
Drains, Sumps, or Other Discharge Features	Four dry wells, presumably dried sumps, were observed in the parking structure: two on the ground level and two on the second level. The discharge locations of these wells were unable to be determined.	De minimis
Stained Soil or Stressed Vegetation	No stained soil or stressed vegetation was observed.	Not a REC
Solid Waste or Fill Dirt	A single dumpster was observed on the ground level of the parking structure, presumably belonging to Honolulu Disposal Service.	Not a REC
	Human waste and miscellaneous trash were also observed in the parking structure and on the building’s roof associated with the local homeless population.	De minimis
Sewer	The City and County of Honolulu Wastewater Branch operate the sewer servicing the Subject Property	Not a REC
Water	The Honolulu Board of Water Supply provides water service to the Subject Property.	Not a REC

**Table 4 (continued)**  
**Site Environmental Conditions**

<b>Item</b>	<b>Observation</b>	<b>Findings</b>
Elevators/ Hydraulic Lifts	There was a single elevator present on the Subject Property. It is currently not in use and is serviced by HECO. There were no leaks or staining observed in the vicinity of the elevator equipment.	Not a REC
Wastewater	No wastewater or other liquids, including stormwater that discharges into a drain, ditch, or underground injection systems were observed. The nearest storm drain was located north/northeast of the Subject Property on Kalakaua Avenue and was determined to be part of the City and County of Honolulu system.  Storm water runoff from the Subject Property flows to the north/northeast via engineered drainage and should be expected to flow into storm drains along the adjoining street Kalakaua Avenue and eventually discharges to the Pacific Ocean.	Not a REC
Wells	No dry wells, irrigation wells, injection wells, abandoned wells, or monitoring wells were observed.	Not a REC
Sewer or Septic Systems	The Subject Property discharged sewage waste through the municipal system.	Not a REC
Wet Areas or Surface Waters	Areas that may be wetlands or nearby surface water bodies were not observed.	Not a REC

There were no limiting conditions present during the site reconnaissance.

There were no observed RECs at the Subject Property.

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## **5.2 OBSERVED USES OF ADJOINING AND SURROUNDING PROPERTIES**

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The area surrounding the Subject Property consisted of commercial and open space properties. Adjoining and surrounding properties were observed from the Subject Property and from public access lands to identify features, activities, uses and conditions that may indicate recognized conditions at the Subject Property. These properties are listed in the table below:

**Table 5**  
**Summary of Surrounding Property Use**

Direction	Property	Use
North	Luana Waikiki Hotel and Suites, Asia Pacific Center for Security Studies, Aloha Island Mart, Kalakakua Avenue, Waikiki Gateway Park	Tourism, recreation, gas station
South	Fort DeRussy Park, Fort DeRussy Army Chapel	Tourism/Museum, recreation
East	Kalakaua Avenue, Hotel La Croix, ABC Store, King Kalakaua Plaza	Tourism, retail
West	Maluhia Road, Fort DeRussy Park, Hale Koa Hotel Parking Garage	Recreation, tourism

RECs were not observed on adjoining or surrounding properties. The Aloha Island Mart, located approximately 100 feet northwest of the Subject Property is a gas station with historic releases, now considered a historic REC. Environmental records indicate this HREC does not appear to have impacted the Subject Property.

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## 6.0 INTERVIEWS

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Interviews with individuals having past or present knowledge of the Subject Property and adjoining/surrounding properties, such as owners, key site managers, occupants, and neighbors are routinely conducted to obtain information indicating RECs in connection with the Subject Property. The following individual was interviewed:

**Table 6**  
**Key Site Interviews**

Interviewee Name	Relationship to Site	Length of Time Familiar with Site	Date of Interview
Ms. JoAnn Nelson	Building Occupant/Key Site Manager	7 Years	10/10/22

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### 6.1 KEY SITE MANAGER/BUILDING OCCUPANT

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Ms. JoAnne Nelson, property operations manager of Best Bridal Hawaii, Inc. and current occupant of the Subject Property, was interviewed in person at the time of the site visit and completed a site questionnaire supplied by ENPRO. A copy of the completed site questionnaire is included in the appendix section of this report.

Ms. Nelson has been familiar with the Subject Property for seven years and reported the following relevant information regarding the Subject Property:

- Lawn equipment containing oil and gasoline are stored on the Subject Property
- There is a partially functioning HVAC system servicing the building
- There is a non-functioning elevator in the two-story building

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## **7.0 EVALUATION**

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### **7.1 DATA GAPS**

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Data gaps are not uncommon in ESAs. A data gap by itself is not inherently significant. The significance is determined by other information and professional experience as to whether the data gap raises reasonable concerns about activities that may present a REC. According to ASTM E1527-21 and AAI, the Phase I ESA report will identify and comment on significant data gaps that affect the ability of the environmental professional to identify RECs and name the sources of information that were consulted to address the data gap.

ENPRO did not encounter any significant data gaps.

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### **7.2 FINDINGS AND OPINIONS**

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This assessment has revealed no recognized environmental conditions, controlled recognized environmental conditions or significant data gaps in connection with the Subject Property.

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### **7.3 CONCLUSIONS**

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We have performed a Phase I ESA of the Subject Property in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report. Based on our investigations, ENPRO has concluded that the risk of contamination at the Subject Property is so minimal that no further investigation is warranted.

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### **7.4 CERTIFICATIONS**

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ENPRO has completed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-21 of the Subject Property. Any exceptions to, deletions from, this practice are described in Section 2.5 of this report. This assessment was performed at the request of the Client, using the methods and procedures consistent with good commercial and customary practices designed to conform to acceptable industry standards.

The information and opinions rendered in this report are intended for the Client for the purposes stated herein (see Section 2.2). This report is not for the use or benefit of, nor may it be relied upon by any other person or entity, for any purpose except as described below



without the advance written consent of ENPRO. ENPRO will not distribute nor publish this report without the consent of the Client except as required by law or court order. The information and opinions expressed in this report are given in response to a limited assignment and should be considered and implemented considering that assignment.


In expressing the opinions stated in this report, ENPRO has exercised a degree of skill and care ordinarily exercised by a reasonable prudent environmental professional in the same community and in the same time frame given the same or similar facts and circumstances. Documentation and data provided by the Client, designated representatives of the Client or other interested third parties, or from the public domain, and referred to in the preparation of this assessment, have been used and referenced with the understanding that ENPRO assumes no responsibility or liability for their accuracy.

The independent conclusions represent our professional judgment based on information and data available to us during the course of this assignment. Factual information regarding operations, conditions, and test data provided by the Client or their representatives has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations, and conditions that existed on the date of the Subject Property visit.

**Researched by:** Alexis Aguilar, Environmental Consultant  
**Surveyed by:** Alexis Aguilar, Environmental Consultant  
**Written by:** Stacey Croghan, Environmental Consultant  
**Supervised by:** Randy Herold, President  
**Reviewed by:** Randy Herold, President

I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR Part 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Randy Herold  
President, ENPRO Environmental

## 9.0 REFERENCES

### Publications:

- Names of Publication: Soil Survey for the Island of Oahu, State of Hawaii  
Author of Publication: Foote, Donald E. et al.  
Published by: U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station.  
Date of Publication: 1972  
Information Obtained: Soil classification
- Names of Publication: Groundwater Levels for the Nation  
Author of Publication: USGS  
Date of Publication: 1995  
Information Obtained: Groundwater data
- Names of Publication: Aquifer Identification and Classification for the Island of Oahu: Groundwater Protection Strategy For Hawaii  
Author of Publication: Mink, J.F. and L.S. Lau  
Published by: Water Resources Research Center, University of Hawaii at Manoa, Honolulu, Hawaii  
Date of Publication: 1993  
Information Obtained: Groundwater data
- Names of Publication: Groundwater Well Index  
Author of Publication: State of Hawaii, Department of Natural Resources, Commission on Water Management  
Date of Publication: January 2001  
Information Obtained: Groundwater wells
- Names of Publication: ERIS Database Report  
Author of Publication: Environmental Risk Information Services  
Date of Publication: September 26, 2022  
Information Obtained: Regulatory database records
- Names of Publication: Aerial Photograph  
Published by: ERIS World Imagery  
Date of Publication: 2022  
Information Obtained: Historical use
- Names of Publication: Topographic Maps, Honolulu Quadrangle, Hawaii

Author of Publication: USGS

Date of Publication: 2017

Information Obtained: Historical use

Names of Publication: Code of Federal Regulations, Title 40, Part 761, Rules for Controlling PCBs under the Toxic Substance Control Act,

Author of Publication: U.S. Environmental Protection Agency

Date of Publication: December 14, 1990

Information Obtained: PCB regulations

Names of Publication: Phase I Environmental Site Assessment – Kyo-ya Restaurant

Author of Publication: ATC Associates, Inc.

Date of Publication: May 2006

Information Obtained: Historical information

Names of Publication: Phase I Environmental Site Assessment – 2057 Kalakaua Avenue

Author of Publication: Environmental Risk Analysis, LLC

Date of Publication: March 2014

Information Obtained: Historical information

Names of Publication: Phase I Environmental Site Assessment – 2051 and 2057 Kalakaua Avenue

Author of Publication: TRC Environmental Corporation

Date of Publication: July 2015

Information Obtained: Historical Information

Names of Publication: Site Assessment Report – 2051 and 2057 Kalakaua Avenue

Author of Publication: TRC Environmental Corporation

Date of Publication: July 2015

Information Obtained: Historical Information

Names of Publication: Summary of Pesticide and Dioxine Contamination Associated with Former Sugarcane Operations

Author of Publication: Hawaii DOH

Date of Publication: December 2011

Information Obtained: Environmental considerations on former agricultural lands.

## Contacts:

Agency or Business: Best Bridal Hawaii, Inc.  
Representative: Ms. JoAnne Nelson  
Telephone Number: 808-722-5539  
Date Received: October 10, 2022  
Information Obtained: Historical and current site use

Agency or Business: SHWB  
Location of Agency: 2827 Waimano Home Road, Suite 100, Pearl City  
Telephone Number: 808-586-4226  
Date Received: October 20, 2022  
Information Obtained: Regulatory information

Agency or Business: HEER  
Location of Agency: 2385 Waimano Home Road, Suite 100, Pearl City  
Telephone Number: 808-586-4249  
Date Received: October 20, 2022  
Information Obtained: Regulatory information

Agency or Business: Hawaiian Electric Company  
Location of Agency: 820 Ward Ave, Honolulu, HI 96814  
Telephone Number: (808) 548-7311  
Date Received:  
Information Obtained: Transformer Information

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## 11.0 APPENDICES

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Subject Property Figures  
Subject Property Photographs  
Historical Research  
Regulatory Records Documentation  
Records of Communication/Interview  
Qualifications of Environmental Professionals

## *SITE PHOTOGRAPHS*

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**Photo 1**

Subject Property Overview



Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022



**Photo 2**

Northern Adjoining Property



Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 3**

Eastern Adjoining Property

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 4**

Southern Adjoining Property

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 5**

Western Adjoining Property

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 6**  
Parking Garage



**Photo 7**

Subject Property Refuse

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 8**

Fort DeRussy Pad Mounted Transformer – Western Boarder of the Subject Property

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022





**Photo 9**

Roof overview – Facing North

Project Number: 2209-00263-PH1

2057 Kalakaua Avenue

Date of Photo: October 6, 2022



# *HISTORICAL RESEARCH*

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# HISTORICAL AERIALS

**Project Property:** Kobayashi Group - Former  
Kyo-ya Restaurant  
2057 Kalakaua Avenue  
Honolulu HI 96815

**Project No:** 2209-00263-PH1

**Requested By:** ENPRO Environmental

**Order No:** 22092600550

**Date Completed:** September 28, 2022

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

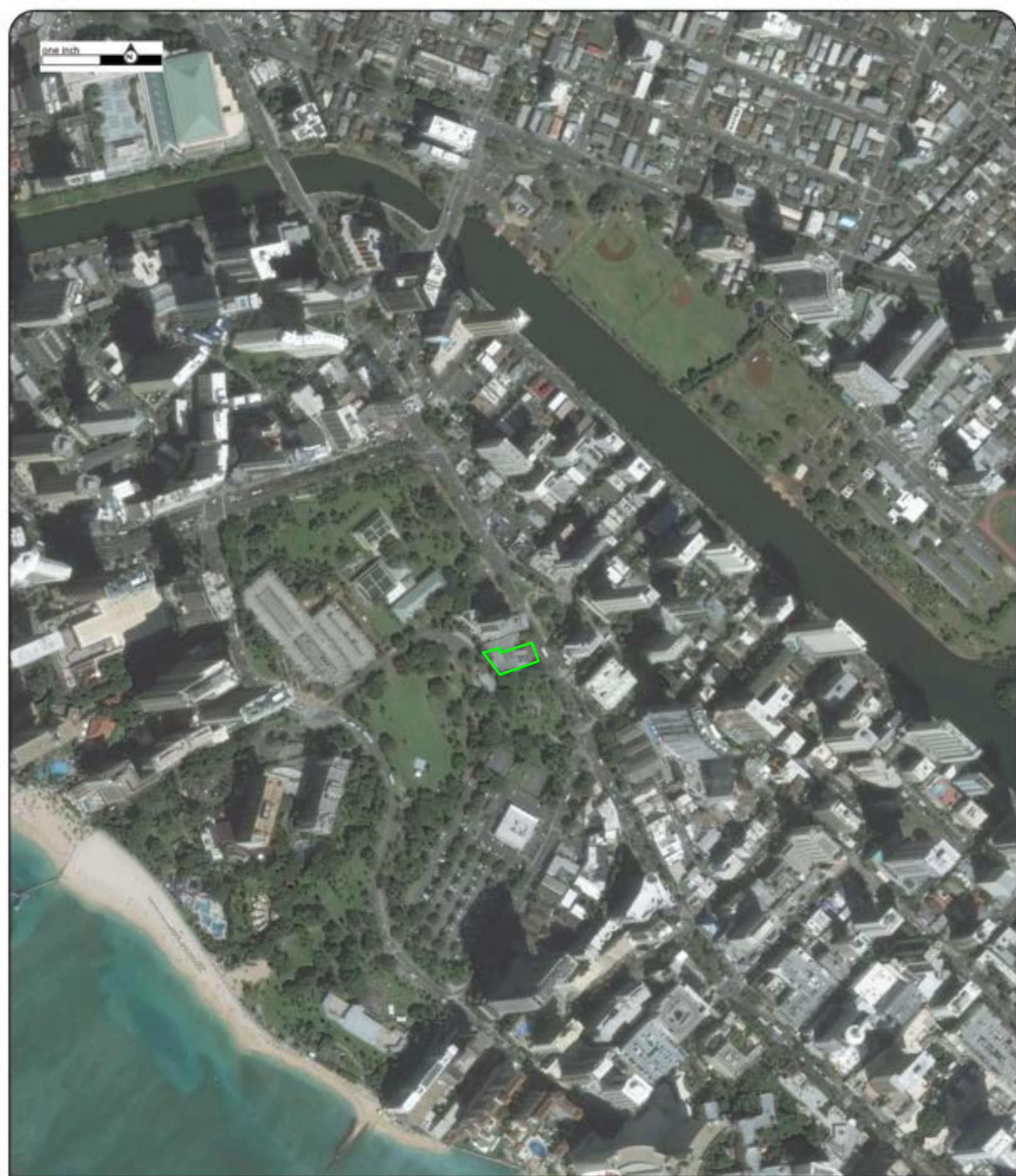
## Environmental Risk Information Services

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<b>Date</b>	<b>Source</b>	<b>Scale</b>	<b>Comments</b>
2017	United States Department of Agriculture	1" = 500'	
2015	United States Department of Agriculture	1" = 500'	
2011	United States Department of Agriculture	1" = 500'	
2006	Urban Area Photography	1" = 500'	
2004	Urban Area Photography	1" = 500'	
2000	National Oceanic And Atmospheric Admin	1" = 500'	
1992	United States Geological Survey	1" = 500'	
1982	United States Geological Survey	1" = 500'	
1978	United States Geological Survey	1" = 500'	
1968	United States Geological Survey	1" = 500'	
1959	United States Geological Survey	1" = 500'	
1952	United States Geological Survey	1" = 500'	
1949	Agricultural Stabilization & Conserv. Service	1" = 500'	Adjacent Frame Unavailable

one inch



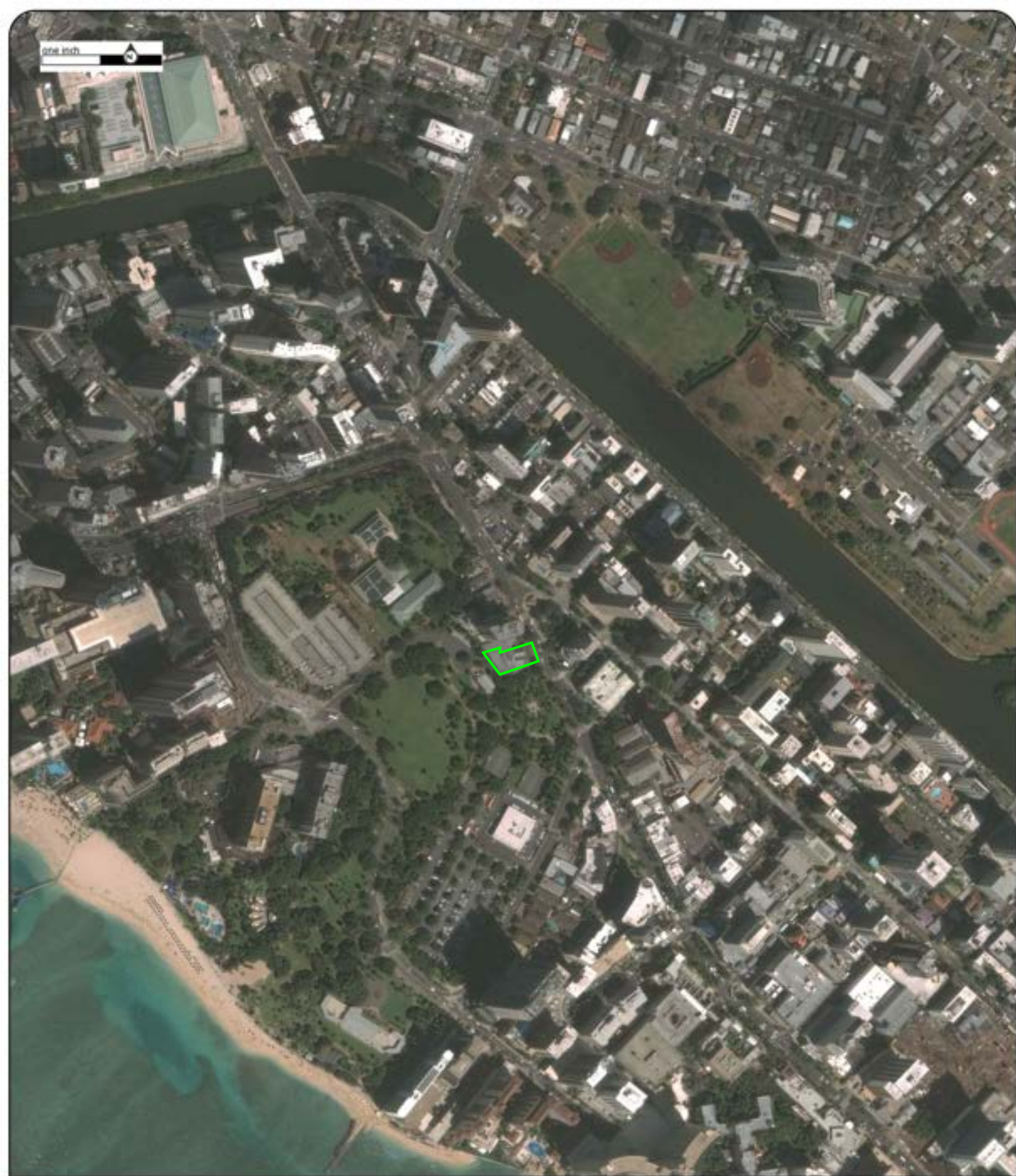
Year: 2017  
Source: USDA  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch

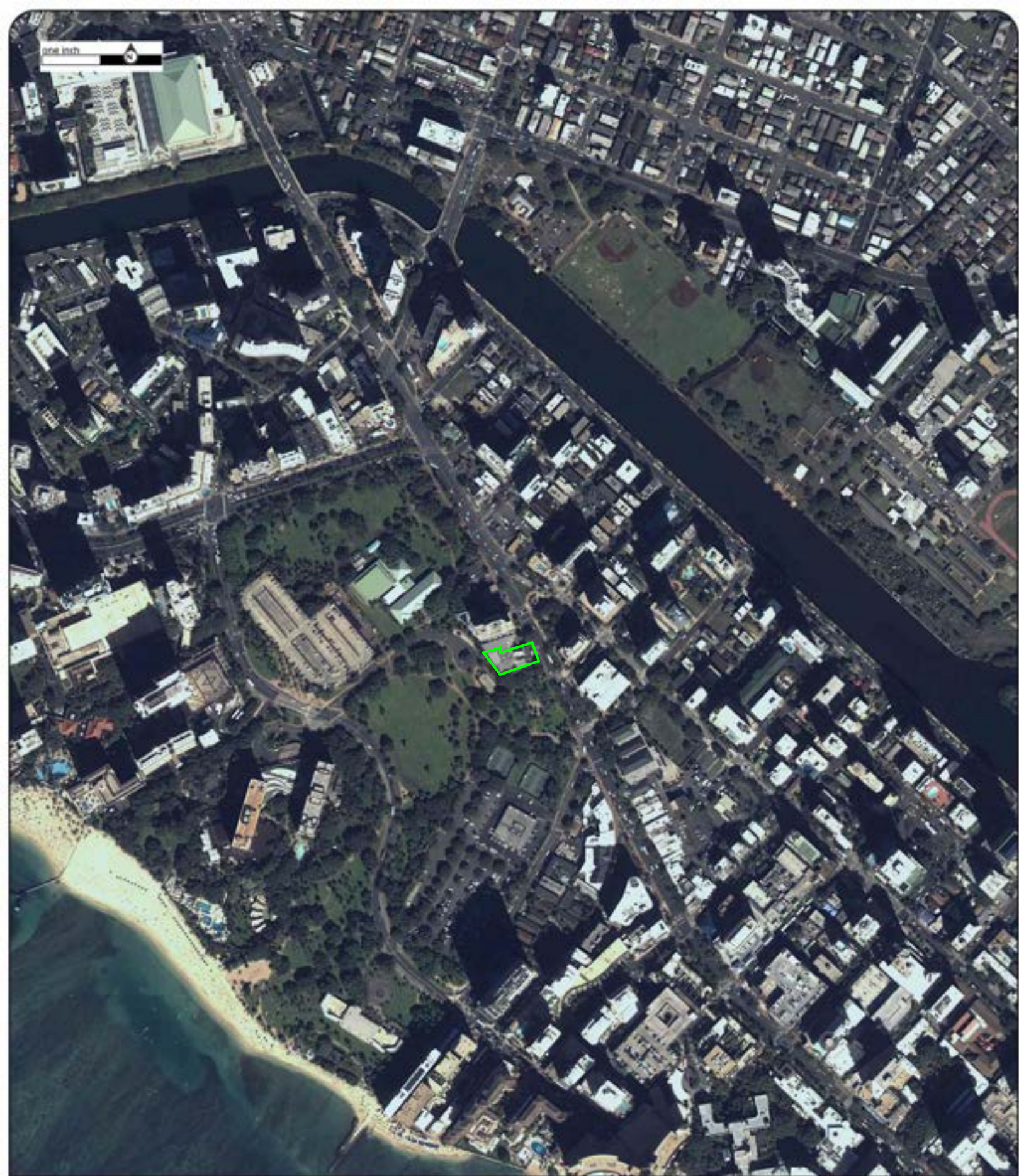


Year: 2015  
Source: USDA  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550





Year: 2011  
Source: USDA  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550





Year: 2006  
Source: UAP  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 2004  
Source: UAP  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 2000  
Source: NOAA  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550







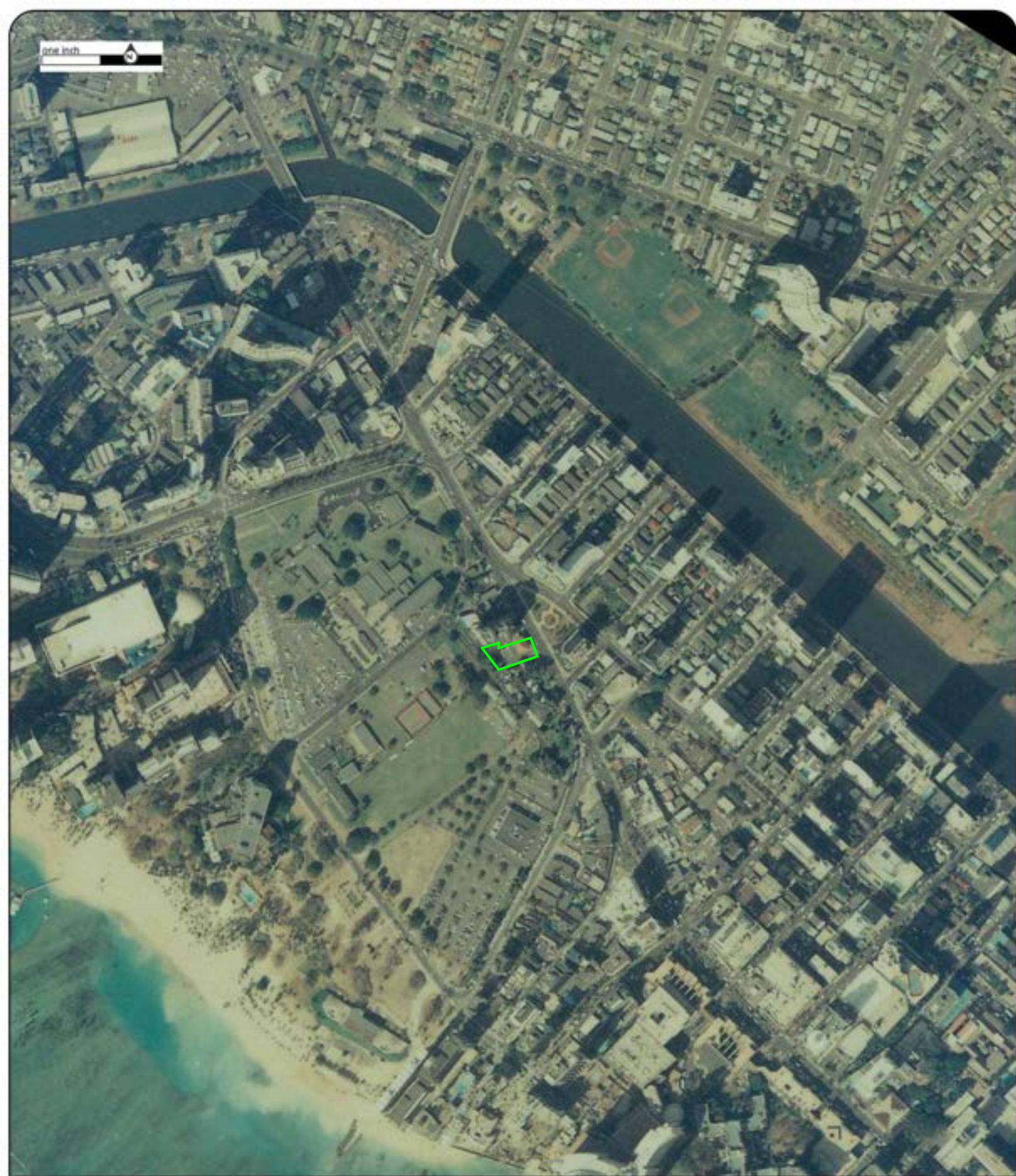
Year: 1992  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 1982  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 1978  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 1968  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 1959  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550





Year: 1952  
Source: USGS  
Scale: 1" = 500'  
Comment:

Address: 2057 Kalakaua Avenue, Honolulu, HI  
Approx Center: -157.83193181,21.2832175

Order No: 22092600550



one inch



Year: 1949      Address: 2057 Kalakaua Avenue, Honolulu, HI  
Source: ASCS      Approx Center: -157.83193181,21.2832175  
Scale: 1" = 500'  
Comment: Adjacent Frame Unavailable

Order No: 22092600550





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# TOPOGRAPHIC MAPS

**Project Property:** Kobayashi Group - Former Kyo-ya Restaurant  
2057 Kalakaua Avenue  
Honolulu HI 96815

**Project No:** 2209-00263-PH1

**Requested By:** ENPRO Environmental

**Order No:** 22092600550

**Date Completed:** September 27, 2022



We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2017	7.5
2013	7.5
1998	7.5
1983	7.5
1978	7.5
1969	7.5
1959	7.5
1953	7.5

**Topographic Map Symbology for the maps may be available in the following documents:**

*Pre-1947*

[Page 223 of 1918 Topographic Instructions](#)

[Page 130 of 1928 Topographic Instructions](#)

*1947-2009*

[Topographic Map Symbols](#)

*2009-present*

[US Topo Map Symbols](#)

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

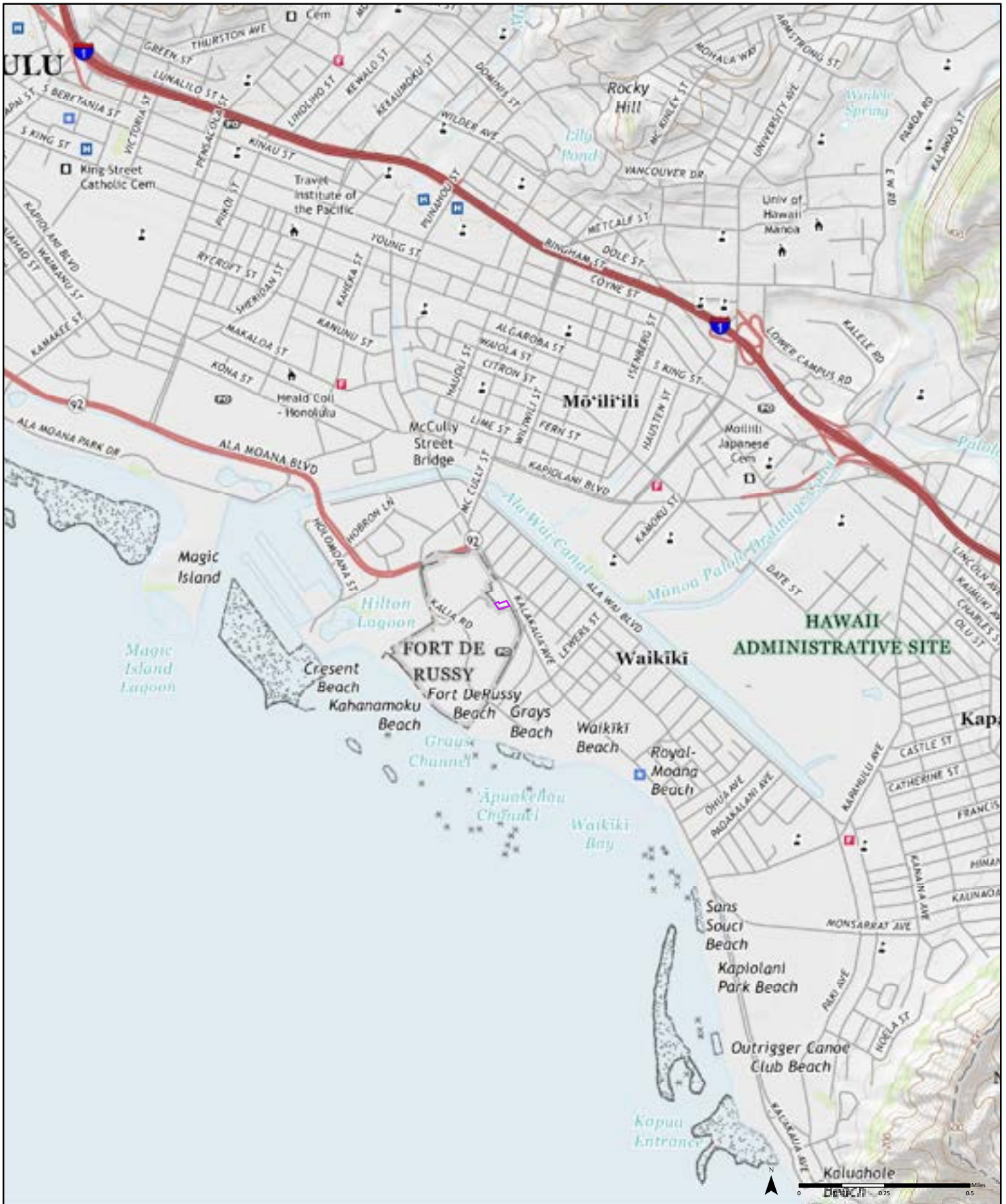
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

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**Environmental Risk Information Services**

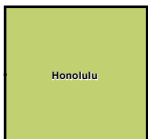
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2017

Order No. 22092600550



Available Quadrangle(s): Honolulu, HI

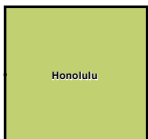
Source: USGS 7.5 Minute Topographic Map





Order No. 22092600550

2013



Available Quadrangle(s): Honolulu, HI

Source: USGS 7.5 Minute Topographic Map

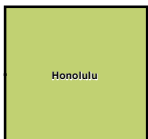




1998

(1-1998)  
Aerial Photo Year: 1998

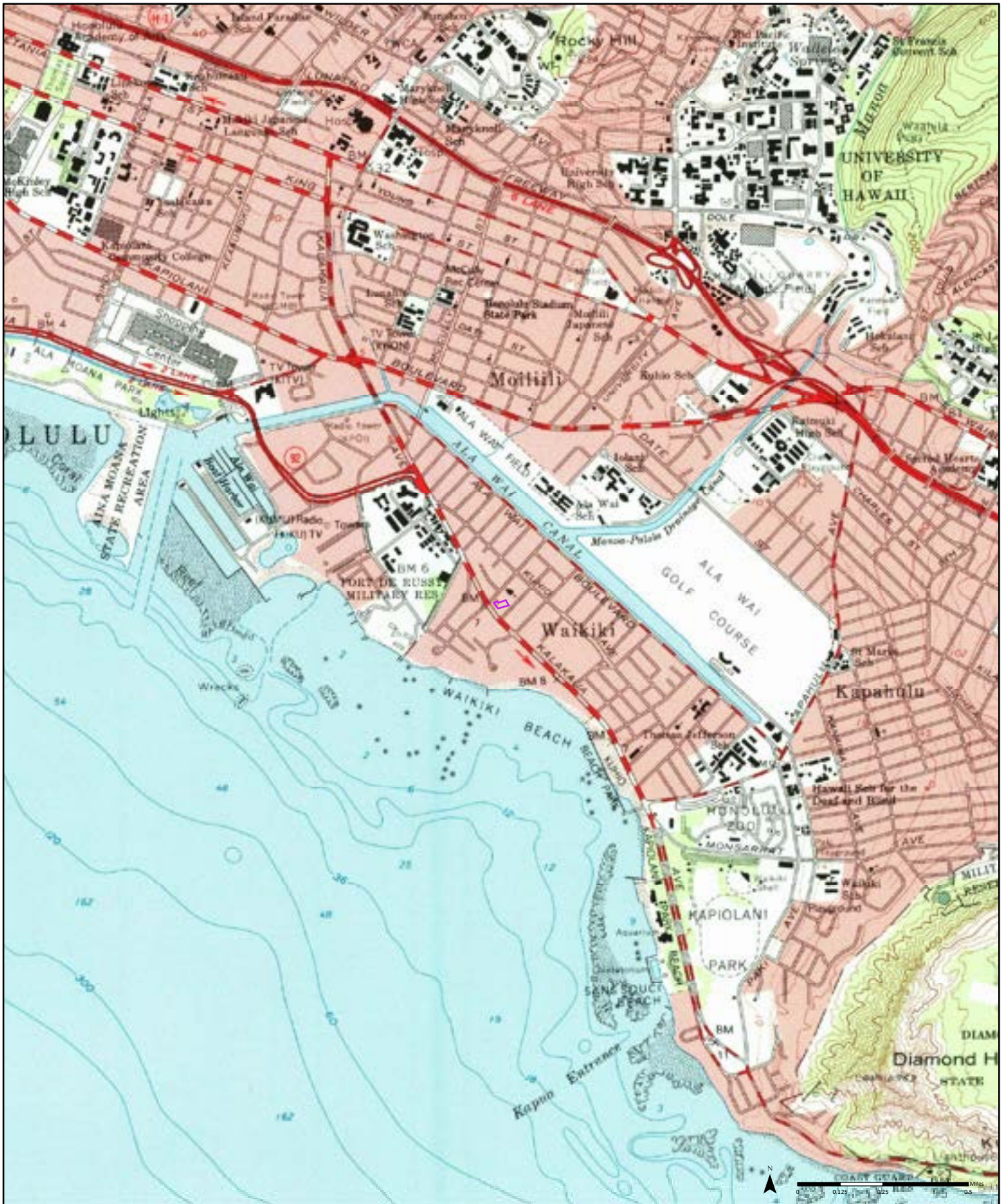
Order No. 22092600550



Available Quadrangle(s): Honolulu, HI(1-1998)

Source: USGS 7.5 Minute Topographic Map

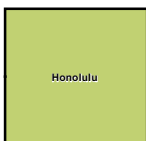




1983

(1-1983)  
Aerial Photo Year: 1978

Order No. 22092600550



Available Quadrangle(s): Honolulu, HI(1-1983)

Source: USGS 7.5 Minute Topographic Map

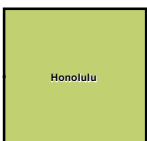




1978

(1-1978)  
Aerial Photo Year: 1976

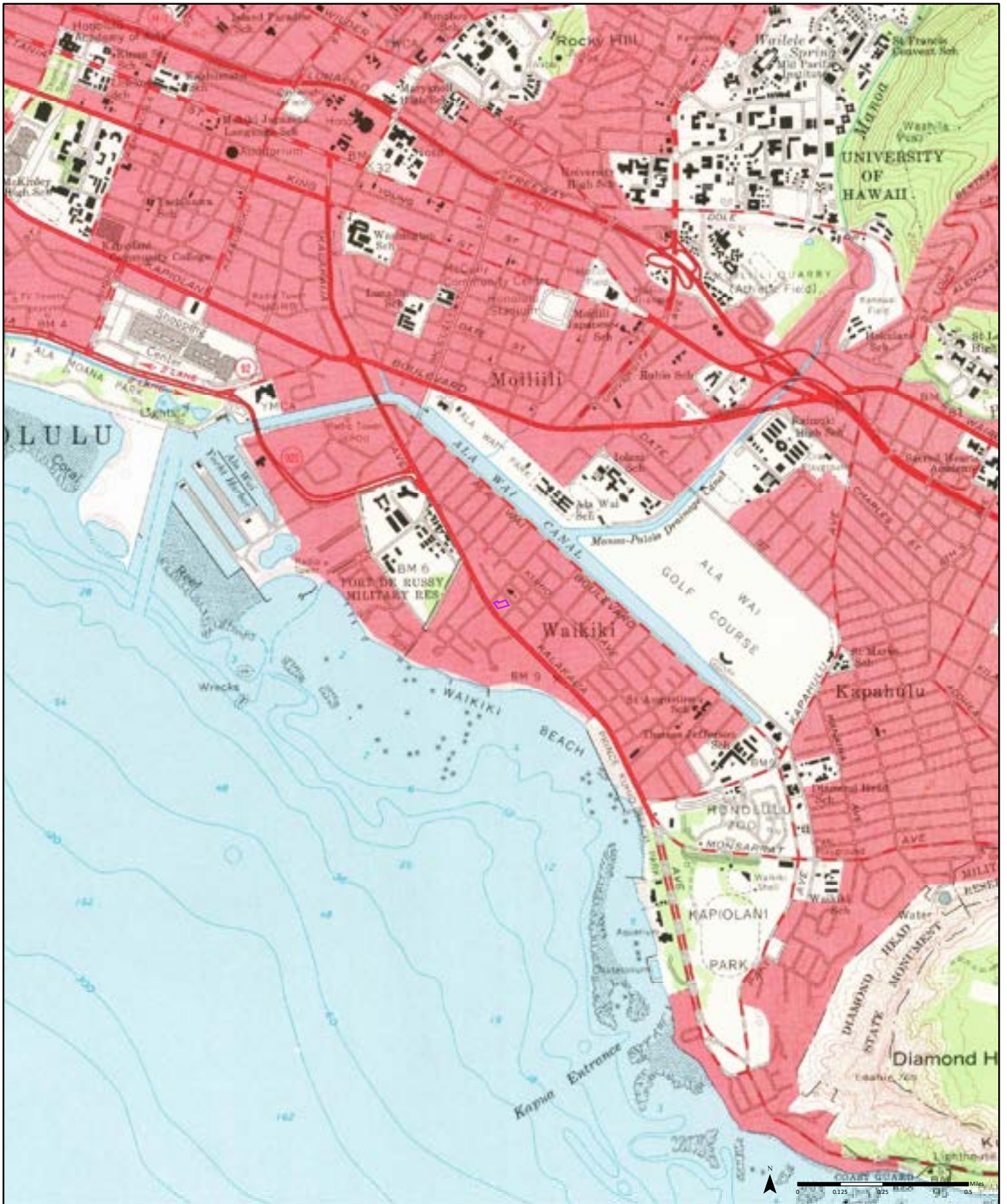
Order No. 22092600550



Available Quadrangle(s): Honolulu, HI<sub>(1-1978)</sub>

Source: USGS 7.5 Minute Topographic Map

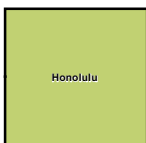




1969

(1-1969)  
Aerial Photo Year: 1968

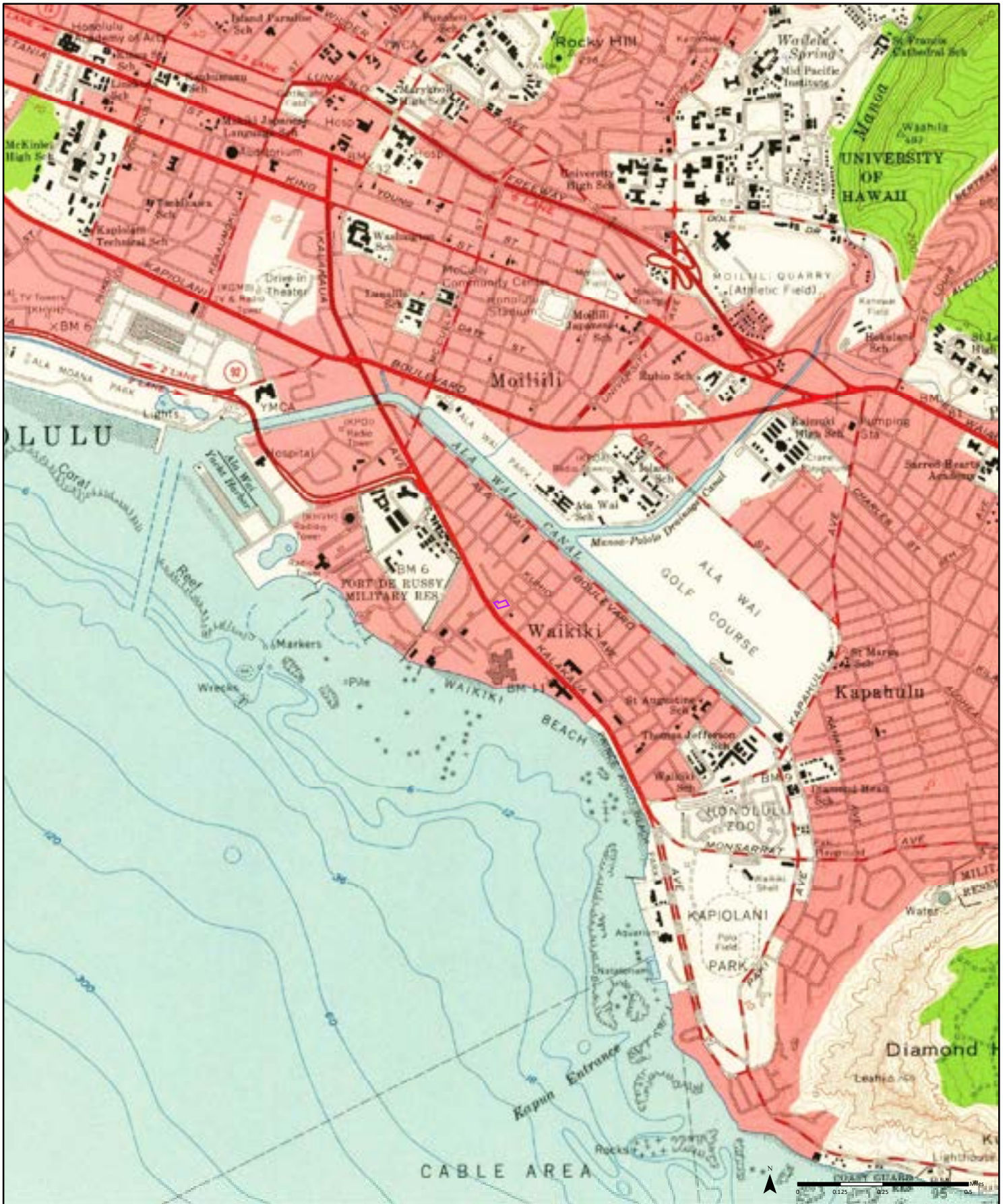
Order No. 22092600550



Available Quadrangle(s): Honolulu, HI(1-1969)

Source: USGS 7.5 Minute Topographic Map

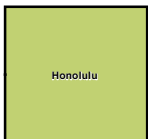




1959

(1-1959)  
Aerial Photo Year: 1959

Order No. 22092600550

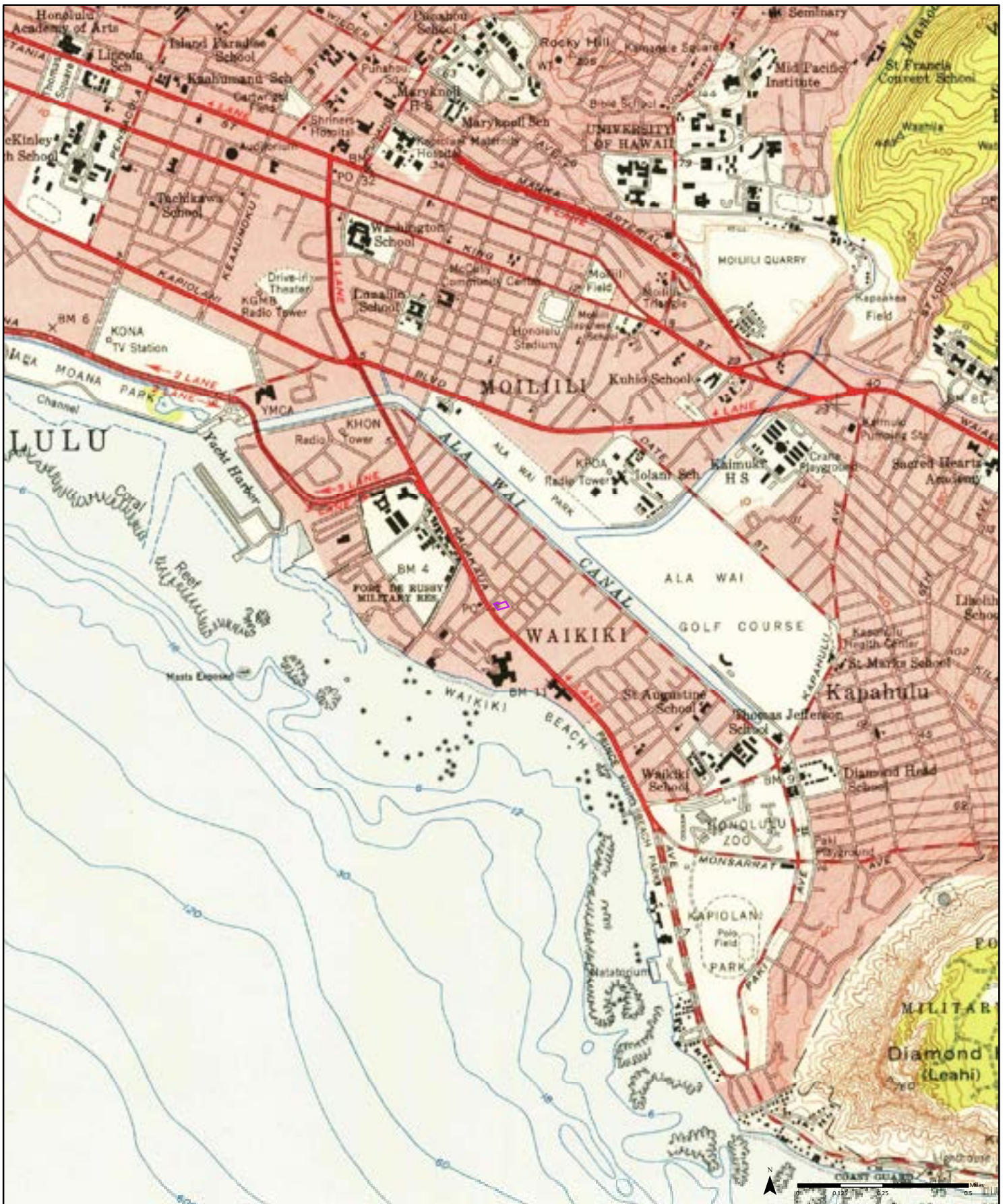


Available Quadrangle(s): Honolulu, HI(1-1959)

Source: USGS 7.5 Minute Topographic Map



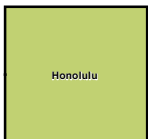




1953

(1-1953)  
Aerial Photo Year: 1952

Order No. 22092600550



Available Quadrangle(s): Honolulu, HI(1-1953)

Source: USGS 7.5 Minute Topographic Map





—  
FIRE  
INSURANCE  
**MAPS**

**Project Property:** Kobayashi Group - Former Kyo-ya Restaurant  
2057 Kalakaua Avenue  
Honolulu HI 96815

**Project No:** 2209-00263-PH1

**Requested By:** ENPRO Environmental

**Order No:** 22092600550

**Date Completed:** September 27, 2022

Listed below, please find the results of our search for historic fire insurance maps from our in-house collection, performed in conjunction with your ERIS report.

<b>Date</b>	<b>City</b>	<b>State</b>	<b>Volume</b>	<b>Sheet Number(s)</b>
1956	Honolulu	Hawaii	3a	373, 374, 375, 376
1949	Honolulu	Hawaii	3a	373, 374, 375, 376
1927	Honolulu	Hawaii	3	373, 374, 376

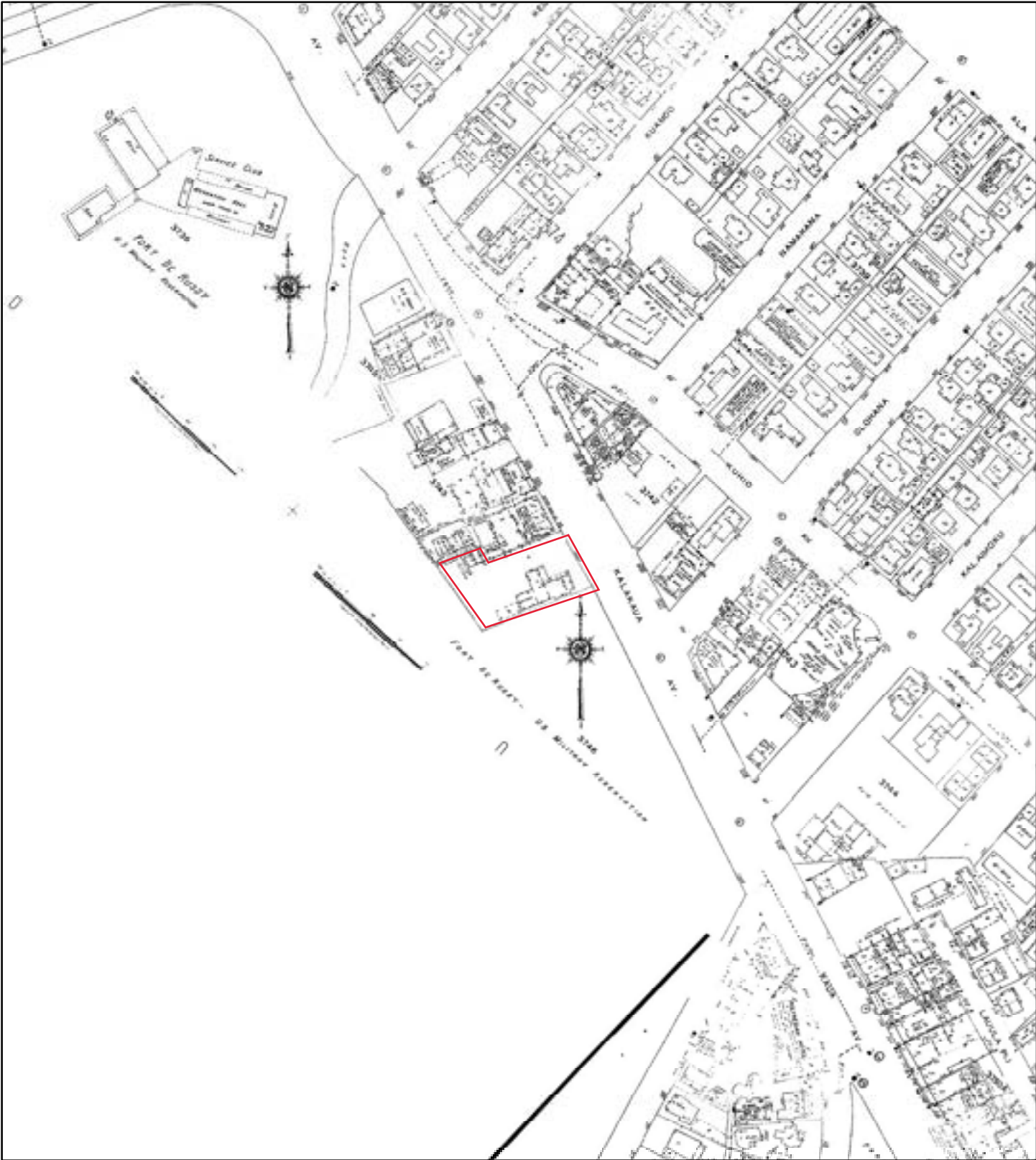
Individual Fire Insurance Maps for the subject property and/or adjacent sites are included with the ERIS environmental database report to be used for research purposes only and cannot be resold for any other commercial uses other than for use in a Phase I environmental assessment.

**Environmental Risk Information Services**

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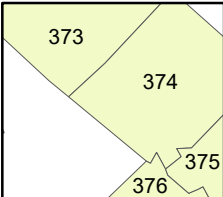
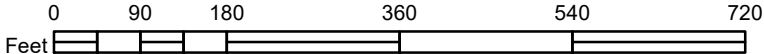
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# Fire Insurance Map



**1956**

**Address: 2057 Kalakaua Avenue Honolulu HI 96815**



Map sheet(s):  
Volume 3a: 373,374,375,376;

Order Number 22092600550

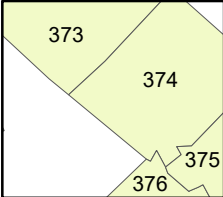
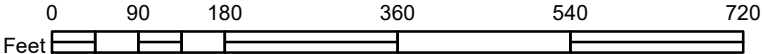


# Fire Insurance Map



**1949**

Address: 2057 Kalakaua Avenue Honolulu HI 96815

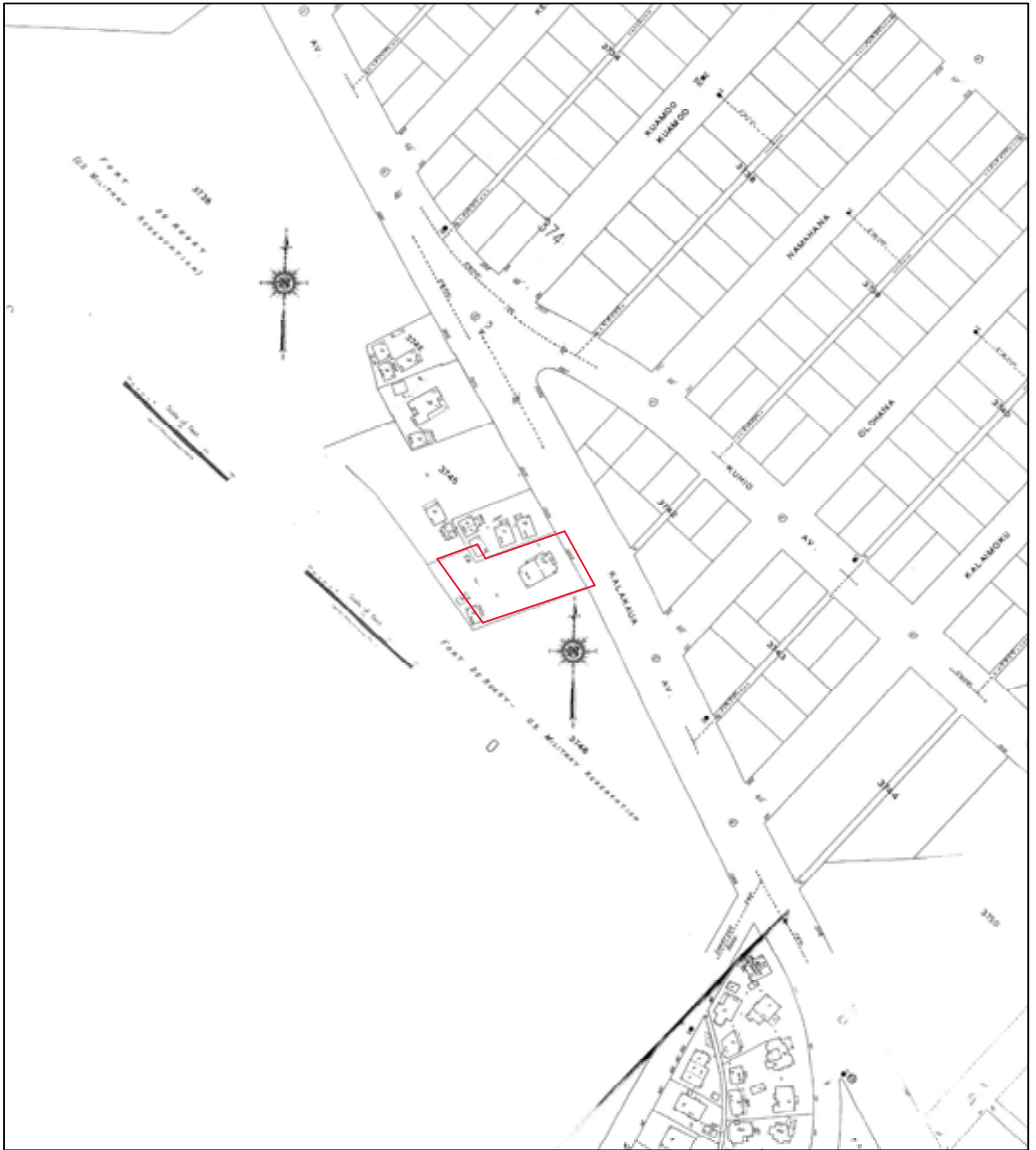


Map sheet(s):  
Volume 3a: 373,374,375,376;

Order Number 22092600550

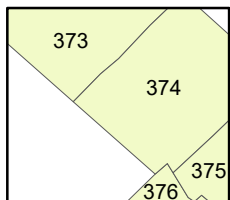
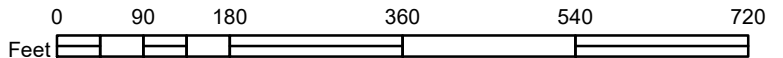


# Fire Insurance Map



**1927**

**Address: 2057 Kalakaua Avenue Honolulu HI 96815**



Map sheet(s):  
Volume 3: 373,374,376;

Order Number 22092600550





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CITY  
**DIRECTORY**

**Project Property:** *Kobayashi Group - Former Kyo-ya Restaurant  
2057 Kalakaua Avenue  
Honolulu, HI 96815*

**Project No:** *2209-00263-PH1*

**Requested By:** *ENPRO Environmental*

**Order No:** *22092600550*

**Date Completed:** *September 28, 2022*

September 28, 2022  
RE: CITY DIRECTORY RESEARCH  
2057 Kalakaua Avenue  
Honolulu, HI 96815

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

**Search Criteria:**

2025-2085 of Kalakaua Avenue  
ALL of Maluhia Road

**Search Notes:**

Maluhia Road is also known as Fort Derussy. Maluhia Road is also known as Kalia Road.



## Search Results Summary

Date	Source	Comment
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2011	DIGITAL BUSINESS DIRECTORY	
2009	DIGITAL BUSINESS DIRECTORY	
2005	DIGITAL BUSINESS DIRECTORY	
2002	DIGITAL BUSINESS DIRECTORY	
1996-97	POLKS	
1991	POLKS	
1989	HAWAIIAN TELE CO	
1981	HAWAIIAN TELE CO	
1976	HAWAIIAN TELE CO	

2025 ALOHA ISLAND MART...CONVENIENCE STORES  
 2025 ALOHA ISLAND MART...ALTERNATIVE FUELS  
 2025 ALOHA ISLAND MART...SERVICE STATIONS-GASOLINE & OIL  
 2025 FERRARI ADVENTURES INC...AUTOMOBILE LEASING  
 2025 HAWAII LUXURY CAR RENTALS...AUTOMOBILE RENTING  
 2025 INTERISLAND RENTALS INC...MOPEDS  
 2025 INTERISLAND RENTALS INC...UNCLASSIFIED ESTABLISHMENTS  
 2025 MAHALO EXPRESS...STORAGE  
 2025 MAHALO EXPRESS...SERVICE STATIONS-GASOLINE & OIL  
 2025 MAHALO EXPRESS...ALTERNATIVE FUELS  
 2025 MAHALO EXPRESS...MOVERS  
 2045 EXPEDIA LOCAL EXPERT CONCIERGE...ALL OTHER PERSONAL SERVICES  
 2045 FISH HOOK CAFE...RESTAURANTS  
 2045 HOTEL LUANA WAIKIKI...ECOMMERCE  
 2045 HOTEL LUANA WAIKIKI...HOTELS & MOTELS  
 2045 MALAMA REALTY LLC...REAL ESTATE  
 2057 DEARHEART INTERNATIONAL LLC...DELIVERY SERVICE  
 2070 ABC STORES...CONVENIENCE STORES  
 2070 NOMURA FINANCIAL LTD...FINANCIAL ADVISORY SERVICES  
 2070 WAIKIKI GATEWAY HOTEL...HOTELS & MOTELS  
 2070 WAIKIKI GATEWAY HOTEL...ECOMMERCE  
 2080 DUKE'S LANE PROPERTIES LLC...REAL ESTATE  
 2080 ROBERTSON PROPERTIES GROUP...REAL ESTATE

2058 ACTIONET INC...COMPUTER RELATED SERVICES NEC  
 2058 ASIA PCF CTR FOR SEC STUDIES...NONCLASSIFIED ESTABLISHMENTS

2025 ALOHA ISLAND MART...CONVENIENCE STORES  
 2025 ALOHA ISLAND MART...SERVICE STATIONS-GASOLINE & OIL  
 2025 HAWAII LUXURY CAR RENTALS...AUTOMOBILE RENTING  
 2025 INTER ISLAND RENTALS INC...MOPEDS  
 2025 INTERISLAND RENTALS INC...UNCLASSIFIED ESTABLISHMENTS  
 2025 MAHALO EXPRESS...SERVICE STATIONS-GASOLINE & OIL  
 2025 MAHALO EXPRESS...MOVERS  
 2045 ATM...AUTOMATED TELLER MACHINES  
 2045 EXPEDIA LOCAL EXPERT CONCIERGE...ALL OTHER PERSONAL SERVICES  
 2045 HOTEL LUANA WAIKIKI...HOTELS & MOTELS  
 2045 MALAMA REALTY LLC...REAL ESTATE  
 2045 VILLE DE COCO...MANICURING  
 2057 AUTO DETAIL MASTERS...AUTOMOBILE DETAIL & CLEAN-UP SERVICE  
 2070 ABC STORES...CONVENIENCE STORES  
 2070 BAMBOOZE...NONCLASSIFIED ESTABLISHMENTS  
 2070 NICK'S FISHMARKET...FULL-SERVICE RESTAURANTS  
 2070 NOMURA FINANCIAL LTD...FINANCIAL ADVISORY SERVICES  
 2070 WAIKIKI GATEWAY HOTEL...HOTELS & MOTELS  
 2080 DUKE'S LANE PROPERTIES LLC...REAL ESTATE  
 2080 ROBERTSON PROPERTIES GROUP...REAL ESTATE

2058 ASIA PCF CTR FOR SEC STUDIES...UNCLASSIFIED ESTABLISHMENTS  
 2058 ASIA-PACIFIC CENTER-SECURITY...FEDERAL GOVERNMENT-NATIONAL SECURITY

2025 ALOHA QUALITY GASOLINE...GASOLINE SV STATION  
 2025 FERRARI ADVENTURES INC...RENT-A-CAR SERVICE  
 2025 FERRARI RENTALS...AUTOMOBILE RENTING  
 2025 MAHALO EXPRESS...FURN MOVE,STORAGE LOC  
 2025 MAHALO EXPRESS...CONVENIENCE STORES  
 2043 KINGSTONE GALLERY...ANTIQUES-DEALERS  
 2045 MALAMA REALTY LLC...REAL ESTATE  
 2045 NATIONAL HOUSING CORP-HAWAII...REAL ESTATE INVT TR  
 2045 OHANA GIFT & JEWELRY INC...JEWELERS-RETAIL  
 2045 OUTRIGGER LUANA WAIKIKI...BEAUTY SHOPS  
 2045 OUTRIGGER LUANA WAIKIKI...DATA PROC & PREP  
 2045 OUTRIGGER LUANA WAIKIKI...REAL ESTATE AGT,MGR  
 2045 OUTRIGGER LUANA WAIKIKI...HOTELS & MOTELS  
 2045 OUTRIGGER LUANA WAIKIKI...FAMILY CLOTHING STR  
 2045 SHAKANET...INTERNET SERVICE  
 2045 TERRACE STORE...GENERAL MERCHANDISE-RETAIL  
 2045 WAIKIKI TERRACE...HOTEL/MOTEL OPERATIONS  
 2057 HANABI CORNER...RESTAURANTS  
 2057 HANABI CORNER...EATING PLACES  
 2057 KYO-YA RESTAURANT...EATING PLACE  
 2070 ABC DISCOUNT STORE...CONVENIENCE STORES  
 2070 ABC STORE...CONVEN STORES CHAIN  
 2070 ABC STORE 49...CONVENIENCE CHAIN STORE  
 2070 ALOHA VIP TOURS INC...TOURS-OPERATORS & PROMOTERS  
 2070 B ARTS...COSMETICS & PERFUMES-RETAIL  
 2070 BLOOM MASSAGE THERAPY...MISC PERSONAL SVS  
 2070 NAIL SALON BLOOM...MANICURING  
 2070 NAIL SALON BLOOM...BEAUTY SHOPS  
 2070 NICK'S FISHMARKET...RESTAURANTS  
 2070 NICKS FISHMARKET...EATING PLACES  
 2070 NOMURA FINANCIAL LTD...INVESTMENT ADVICE  
 2070 WAIKIKI GATEWAY HOTEL...HOTEL & RESORT  
 2070 WAIKIKI GATEWAY HOTEL...HOTELS & MOTELS  
 2080 ALL STAR HAWAII...RESTAURANTS  
 2080 KING KALAKAUA PLZ...SHOPPING CENTERS & MALLS  
 2080 KING KALAKAUA PLZ...SHOPPING CTR OPER  
 2080 NIKE TOWN...SHOES-RETAIL  
 2080 NIKETOWN...SHOE STORES  
 2080 STANDARD PARKING...AUTOMOBILE PARKING  
 2080 STANDARD PARKING...PARKING STATIONS & GARAGES  
 2080 STANDARD PARKING CORPORATION...AUTOMOBILE PARKING

2058 ARMY RESERVE INSTALLATION...ARMY RESERVE INSTALLATION  
 2058 ASIA PCF CTR FOR SEC STUDIES...GOVERNMENT SECURITIES  
 2058 ASIA-PACIFIC CENTER-SECURITY...SECURITY GUARD & PATROL SERVICE  
 2058 ASIA-PACIFIC CENTER-SECURITY...GUARD & PATROL SERV  
 2058 US DEFENSE DEPT...NATIONAL SECURITY

2025 FERRARI ADVENTURES INC...RENT-A-CAR SERVICE  
 2025 FERRARI RENTALS...AUTOMOBILE RENTING  
 2025 MAHALO EXPRESS...CONVENIENCE STORES  
 2043 KINGSTONE GALLERY...ANTIQUES-DEALERS  
 2045 MALAMA REALTY LLC...REAL ESTATE  
 2045 OHANA GIFT & JEWELRY INC...JEWELERS-RETAIL  
 2045 OUTRIGGER LUANA WAIKIKI...HOTELS & MOTELS  
 2045 SHAKANET...INTERNET SERVICE  
 2045 TERRACE STORE...GENERAL MERCHANDISE-RETAIL  
 2045 WAIKIKI TERRACE...HOTEL/MOTEL OPERATIONS  
 2057 HANABI CORNER...RESTAURANTS  
 2057 KYO-YA RESTAURANT...EATING PLACE  
 2070 ABC DISCOUNT STORE...CONVENIENCE STORES  
 2070 ABC STORE 49...CONVENIENCE CHAIN STORE  
 2070 ALOHA VIP TOURS INC...TOURS-OPERATORS & PROMOTERS  
 2070 B ARTS...COSMETICS & PERFUMES-RETAIL  
 2070 NAIL SALON BLOOM...BEAUTY SHOP  
 2070 NAIL SALON BLOOM...MANICURING  
 2070 NICK'S FISHMARKET...RESTAURANTS  
 2070 WAIKIKI GATEWAY HOTEL...HOTEL & RESORT  
 2080 ALL STAR HAWAII...RESTURANT  
 2080 ALL STAR HAWAII...RESTAURANTS  
 2080 BANANA REPUBLIC...RET MEN'S & WOMEN'S CLOTHING  
 2080 KING KALAKAUA PLZ...SHOPPING CENTERS & MALLS  
 2080 NIKE TOWN...SHOES-RETAIL  
 2080 STANDARD PARKING...PARKING STATIONS & GARAGES  
 2080 STANDARD PARKING CORPORATION...AUTOMOBILE PARKING

2058 ARMY RESERVE INSTALLATION...ARMY RESERVE INSTALLATION  
 2058 ASIA PCF CTR FOR SEC STUDIES...GOVERNMENT SECURITIES  
 2058 ASIA-PACIFIC CENTER-SECURITY...SECURITY GUARD & PATROL SERVICE

2025 FERRARI ADVENTURES  
2025 KALAKAUA FOOD MART  
2045 EASTERN GARDEN CHINESE SEAFOOD...*STEAK AND BARBECUE RESTAURANTS*  
2045 OHANA GIFT & JEWELRY INC  
2045 PLEASANT HAWAIIAN HOLIDAYS  
2045 TERRACE STORE  
2045 WAIKIKI TERRACE HOTEL...*MOTELS*  
2057 HANABI CORNER...*STEAK AND BARBECUE RESTAURANTS*  
2057 KYO-YA RESTAURANT...*STEAK AND BARBECUE RESTAURANTS*  
2070 ABC DISCOUNT STORES  
2070 ALOHA VIP TOURS INC  
2070 ATM CASH SYSTEMS  
2070 NAIL SALON BLOOM...*BEAUTY SCHOOLS*  
2070 NICK'S FISHMARKET...*STEAK AND BARBECUE RESTAURANTS*  
2070 WAIKIKI GATEWAY HOTEL...*MOTELS*  
2080 ALL STAR HAWAII...*STEAK AND BARBECUE RESTAURANTS*  
2080 KING KALAKAUA PLZ...*COMMERCIAL AND INDUSTRIAL BUILDING OPERATION*  
2080 NIKE TOWN...*CUSTOM AND ORTHOPEDIC SHOES*

2058 US DEFENSE DEPT

2025 ARCO BRANDED MOTOR FUELS  
2025 FERRARI ADVENTURES  
2045 OHANA GIFT & JEWELRY INC  
2045 PLEASANT HAWAIIAN HOLIDAYS  
2045 SUNDRIES TERRACE...RESIDENTIAL  
2045 TERRACE STORE  
2045 WAIKIKI TERRACE HOTEL...MOTELS  
2057 HANABI CORNER...STEAK AND BARBECUE RESTAURANTS  
2057 KYO-YA RESTAURANT...STEAK AND BARBECUE RESTAURANTS  
2070 ABC DISCOUNT STORES  
2070 ALOHA VIP TOURS INC  
2070 FISHMARKET NICKS...RESIDENTIAL  
2070 HAWAII NANILOA HOTEL...MOTELS  
2070 NAIL SALON BLOOM...BEAUTY SCHOOLS  
2070 NICK'S FISHMARKET...STEAK AND BARBECUE RESTAURANTS  
2070 WAIKIKI GATEWAY HOTEL...MOTELS  
2080 ALL STAR CAFE...STEAK AND BARBECUE RESTAURANTS  
2080 APCOA INC  
2080 KING KALAKAUA PLZ...COMMERCIAL AND INDUSTRIAL BUILDING OPERATION  
2080 NIKE TOWN...CUSTOM AND ORTHOPEDIC SHOES

2058 US DEFENSE DEPT

READING ROOM ..... 949-1421  
**+KEONIANA INTERSECTS**  
 2002 AVIS RENT-A-CAR automobile  
 renting..... 973-2622  
 2020 A B C DISCOUNT STORE  
 NO 26 convenience stores  
 ..... 941-3371  
 2025 KALAKAUA TEXACO  
 SERVICE gasoline stations  
 conv store ..... 947-9216  
**+KUAMOO ST INTERSECTS**  
 2045 ASTON WAIKIKI TERRACE  
 HOTEL..... 955-6000  
 FUKUYA BOUTIQUE women's  
 clothing-acces .... 944-6063  
 PAK HAWAIIAN CORP gift  
 shop ..... 951-6219  
 DISCOVERY ALOHA INC  
 ..... 955-6000  
 N T A PACIFIC travel  
 agencies & bureaus  
 ..... 941-8584  
 BALLRM HONOLULU  
 COMEDY CLUB  
 entertainment ..... 922-5998  
 DISCOVERY ALOHA tour &  
 travel agcy ..... 955-8215  
 MEZZANINE RESTAURANT  
 restaurants ..... 942-0118  
 2057 KYO-YA RESTAURANT  
 ..... 947-3911  
**+OLOHANA INTERSECTS**  
 2080 KING KALAKAUA PLAZA  
 shopping plazas..... 941-4484  
 2100 WAIKIKI POLICE DEPT SUB  
 STATION govt c & c. 971-2553  
 2112 POPO'S MEXICAN FOOD  
 restr..... 923-7355  
 SOUTH SEAS VILLAGE  
 VARIOUS GIFT SHOPS  
 ..... 923-8484  
 2113 Vacant

LITTLE SHOP THE  
 convenience stores  
 sundries re ..... 946-2567  
**+PAOA PL INTERSECTS**  
 2055 FORT DE RUSSY HALE KOA  
 EXCHANGE convenience store  
 sundries ret..... 955-0060  
 U S ARMY MUSEUM OF  
 HAWAII military museum  
 ..... 438-2821  
 HALE KOA HOTEL .... 955-0555  
 POINT THE hith club. 955-0555  
 BIBAS ..... 955-0555  
 HALE KOA ROOM..... 955-0555  
 KOKO CAFE restr..... 955-0555  
 WESTERN UNION .... 946-4063  
 JEWELS AT HALE KOA  
 ..... 955-7171  
 EVE'S BEAUTY & BARBER  
 HALE KOA beauty  
 salons) ..... 944-3699  
 PLEASANT HAWAIIAN  
 HOLIDAYS tour & travel  
 agencies ..... 944-4060  
 HAPPY'S snack bar ... 955-0555  
 PRIME TIME SPORTS  
 ..... 942-4544  
 2161 WAIKIKI SHORE  
 APARTMENTS ..... 923-7245  
 APARTMENTS (260 UNITS)



## KEONIANA INTERSECTS

2002 Tropical Rent A Car Systems Inc 942-4293

2020 A B C Discount Store No 26 941-3371

2025 Kalakaua Texaco Service 947-9216

V I P Car Rentals 948-1671

Aloha Funway Rentals 948-2768

## KUAMOO ST INTERSECTS

2045 Waikiki Terrace Hotel 955-6000

Plaza Restaurant under constn 955-6363

For Pete's Sake Bar

2053 No Return

2057 Under Constn

2070 Waikiki Gateway Hotel 955-3741

A B C Discount Stores retails 945-3609

Nick's Fishmarket 955-6333

Aloha V I P travel agencies 922-4985

## OLOHANA INTERSECTS

2080-2100 Vacant (5 Hses)

## BEACH WALK INTERSECTS

2112 Popo's Mexican Food restr 923-7355

South Seas Village Restaurant 923-8484

2119 National Car Rental 923-8777

Markis Swimwear 947-9094

Liberty House specialty shop 945-5902

Whalers General Store 945-3966

## PAOA PL INTERSECTS

2055 Beretanla Florist Inc florist shop 942-9833

Winter Sports Unltd

Ft De Russy Hale Koa Exchange 955-0060

2060 U S Army Museum

## SARATOGA RD INTERSECTS

2161 Waikiki Shore Apartments 923-7245

200 Enimoto

200 Enimoto

✓ 2002	DAIO USA CORP	947-4578
2020	ABC DISCOUNT STORES	949-1010
2025	ALOHA FUNWAY RENTALS	941-3371
2025	KALAKAUA TEXACO	948-2788
2025	VIP CAR RENTALS INC	955-2541
2025	WAIKIKI TEXACO	948-1871
2045	BARONS	955-2541
2045	MAKAI TAX FREE GIFT SHOP	948-0277
✓ 2045	PLAZA RESTAURANT	955-4302
✓ 2045	SPLISH SPLASH	955-6363
2045	WAIKIKI PLAZA HOTEL	948-2813
2045	WAIKIKI PLAZA HOTEL	949-3477
✓ 2045	WAIKIKI PLAZA HOTEL	949-8578
✓ 2045	WAIKIKI PLAZAS SHOWROOM	955-8383
2051	BAILEYS ANTIQUE CLOTHING SHOP	941-8884
2057	KYO YA RESTAURANT	949-8172
✓ 2057	KYO YA RESTAURANT	947-3911
2057	KYO YA RESTAURANT	944-8188
2070	ABC DISCOUNT STORES	948-1121
2070	ALOHA UNLIMITED INC	945-3808
✓ 2070	DIAMOND HEAD RESTAURANTS	944-1105
✓ 2070	HAWAIIAN 101 GOLF SHOP	949-1001
✓ 2070	HAWAIIAN 101 GOLF SHOP	942-0101
✓ 2070	HAWAIIAN 101 GOLF SHOP	942-1881
2070	NICKS FISHMARKET	947-5995
✓ 2070	Sherrell Warren	955-6333
✓ 2070	WAIKIKI GATEWAY	947-2359
2080	AOKI MINI MART	955-3741
2098	HAWAIIAN HOLIDAY MACADAMIA	949-5978
2098	HAWAIIAN HOLIDAY MACADAMIA NUT CO INC	942-7798
2098	THE MACNUTTERY	942-7769

.....	
<b>FT DERUSSY</b>	
.....	
<b>FT DERUSSY</b>	
	<b>96815</b>
107	UNITED STATES GOVERNMENT
✓ 108	Collins Stanley Jr
✓ 108	TROA HAWAIIAN NATIONAL CONVENTION INC
✓ 108	TROA HAWAIIAN NATIONAL CONVENTION INC
✓ 108	Westfall Timothy R
✓ 109	Benson Johnny J
✓ 109	Tucker Otis

2005	VILLAGE SPORTS	941-8274
2005	WAIKIKI VILLAGE FLOWERS & GIFTS	941-8274
2005	WHALERS GENERAL STORE	945-3988
2005	WORLD OF KIDS	949-5888
2055	BERETANIA FLORIST	942-9833
2055	EVES BEAUTY & BAR- BER SALON AT HALE KOA	944-3699
2055	FT DERUSSY	955-0060
2055	HALE KOA HOTEL	955-0555
2055	PRIME TIME SPORTS	949-8352
2161	Adamakis Ernie	924-3766
2161	Allen Roy & Val	923-3086

2002	*MAGNUM MOPEDS	942-3411
2002	*SOUTH SEA RENT A CAR	941-0570
2020	*ABC DISCOUNT STORES	941-3371
2025	*KALAKAUA TEXACO	955-2541
2025	*LEISURE BIKES INC	955-3705
2045	*AIRPORT MOTORCOACH	955-1446
2045	*ARIZONA MEMORIAL BUS SHUTTLE	947-5015
2045	*HOLIDAY INN	955-6363
2045	*MAKAI SUGAR CO THE	955-6363
2051	*POLYNESIAN RESORT SHOP	947-7173
2051	*WAIKIKI BIKE RENTLS	949-2477
2051	*WAIKIKI SPACE GAMES	946-0064
2053	CULVIN THEU A	946-5593
2053	*CULVINS CAMERA CNTR	946-4404
2053	*CULVINS CAMERA CNTR	949-3798
2053	HAGERTY L KEVIN	941-4392
2053	MELENDY PETER S	944-8963
2057	*KYU YA RESTAURANT	946-1121
2057	*KYU YA RESTAURANT	947-3911
2070	*MIKE MCCORMACK REALTORS	942-9044
2070	*NICKS FISHMARKET	955-6333
2070	*TINAS LTD	955-5655
2070	*WAIKIKI GATEWAY HTL	955-3741
2080	*ADKI MINI MART	949-5978
2082	*MATA LAURENCE PHOTO & GIFTS	946-5939
2098	*UNCLE JHNS FAMILY RESTAURANT	955-5935
2100	*CANLIS RESTAURANT	923-2324
2112	*POPUS MEXICAN RESTAURANT	923-7355

FT DERUSSY

FT DERUSSY	96815
*HOT LINE	923-8777
*WAIKIKI BEACH CHAPLAINCY	923-8777
107 *FT DERUSSY PACKAGED BEVERAGE STORE	955-1033
109 BENAVENTE JOHN C	955-5890

2005	*VILLAGE TOURS INC	947-2607
2005	*WALTAMS SHIRT SHACK	946-4432
2055	*ART SOURCE THE	947-7370
2055	*AVIS RENT A CAR	955-7503
2055	*FT DERUSSY BEACH SERVICE INC	949-3469
2055	*FT DERUSSY HALE KOA EXCHANGE	955-0060
2055	*FT DERUSSY HALE KOA EXCHANGE	955-0077
2055	*HALE KOA BEAUTY SALON & BARBER SHP	949-8475
2055	*HALE KOA GIFT SHOP	955-0667
2055	*HALE KOA HOTEL	955-0555
2055	*HALE KOA HOTEL TOUR & TRAVEL DESK	946-5204
2055	*RUSTYS FLORIST INC	955-0010
2161	BENEVIKTSUN O L	923-6705
2161	BERGQUIST WEISSER M	923-8584

2002	*TRADEWIND CHEVRON SERVICE	949-1319
2002	*TRADEWIND CHEVRON SERVICE	955-0670
2020	*SUN CLEANERS	955-4464
2025	*KALAKAUA TEXACO	955-2541
2045	*HAL E MAKAI DOWNTOWNER HOTEL	955-6363
+ 2045	*P WS SPOT SUPPER CLUB	922-5222
+ 2045	*P WS SPOT SUPPER CLUB	955-6363
2045	*SPANIOLO RESTAURANT	955-6363
2045	*SUGAR MILL LOUNGE	955-6363
2046	IKEDA FRANK Y	946-9836
2046	*NIKKO GEM & JEWELRY SUPPLY INC	949-2797
+ 2048	*SANDRAS FASHIONS	941-0098
2049	*ALA MOANA FLOWERS	941-2228
2049	*HAWAII BLOSSOMS LTD	949-2922
2052	*HOUSE OF EIGHT	947-3833
2053	COLVIN THEO A	946-5593
2053	*COLVINS CAMERA CNTR	946-4404
2053	*COLVINS CAMERA CNTR	949-3798
2053	SABIO ANDRES	941-7343
2054	*A J J ENTRPRS INC	941-4131
2054	*SHELL RENT A CAR OF HAWAII	949-2932
2054	*WAIKIKI SHELL SERV	941-4131
2057	*KYO YA	946-1121
2057	*KYO YA	947-3911
2070	*B & G SIGHTSEEING HAWAII INC	941-9698
2070	*FORD BOB GOLF PRO SHOP	955-2060
2070	*MID PACIFIC EXPRESS	947-1241
2070	*MID PACIFIC EXPRESS	947-5070
2070	*NICKS FISH MARKET	955-6333
2070	*TINAS LTD	955-5655
2070	*WAIKIKI GATEWAY HTL	955-3741
2080	*AOKIS MINI MART	949-5978
2082	*HATA LAURENCE PHOTO & GIFTS	946-5939
2098	*NOBUS SERVICE STN	946-0522
2098	*NOBUS SERVICE STN	949-3545
2100	*CANLIS RESTAURANT	923-2324

FT DERUSSY

FT DERUSSY

96815

+ *	*FT DERUSSY EXCH	955-0060
+ *	*FT DERUSSY EXCH	955-0077
	*HOT LINE	923-8777
+ *	*ISLAND BCH SVCS INC	955-0050
	*WAIKIKI BEACH CHAPLAINCY	923-8777
+ 107 *	*FT DERUSSY PACKAGED BEVERAGE STORE	955-1033

	HAWAIIAN SHOP	955-6544
2005	*WALTAHS SHIRT SHACK	946-4432
2055	*BIRDSHALL J F JR	947-7652
2055	*HALF KOA BEAUTY SLN BARBER SHOP	949-8475
2055	*HALE KOA GIFT SHOP	955-0667
2055	*HALE KOA HOTEL	947-5754
2055	*HALE KOA HOTEL	947-6462
2055	*HALE KOA HOTEL	947-6680
2055	*HALE KOA HOTEL	947-6880
2055	*HALF KOA HOTEL	947-7041
2055	*HALE KOA HOTEL	947-7471
2055	*HALE KOA HOTEL	955-0555
2055	*PUSTYS FLORIST	955-0010
2055	*YOUNG LAUNDRY & DRY CLEANING	955-4580
2161	*ALOHALANI SHORE INC	922-2721
2161	ANDERSON R	923-4183
2161	ANDERSON R	923-5388



*REGULATORY RECORDS  
DOCUMENTATION*

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## Property Information

Order Number:	22092600550p
Date Completed:	September 27, 2022
Project Number:	2209-00263-PH1
Project Property:	Kobayashi Group - Former Kyo-ya Restaurant 2057 Kalakaua Avenue Honolulu HI 96815
Coordinates:	
Latitude:	21.2832175
Longitude:	-157.83193181
UTM Northing:	2353940.99093 Meters
UTM Easting:	621171.687248 Meters
UTM Zone:	UTM Zone 04Q
Elevation:	3.28 ft
Slope Direction:	N/A

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The ERIS **Physical Setting Report - PSR** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

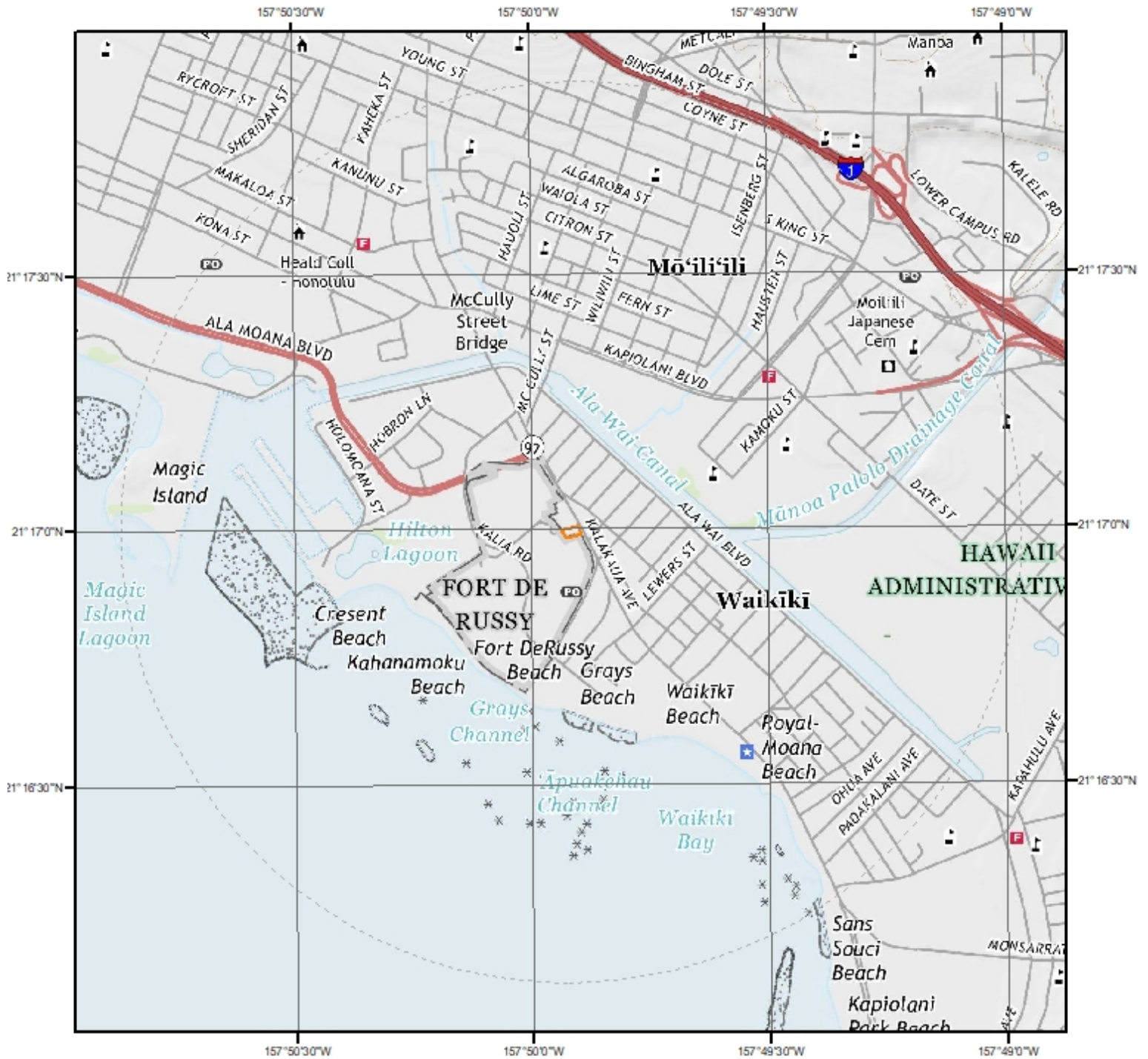
The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

### Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.



# Topographic Information



**Current USGS Topo (2017)**



Quadrangle(s): Honolulu, HI

Source: USGS 7.5 Minute Topographic Map

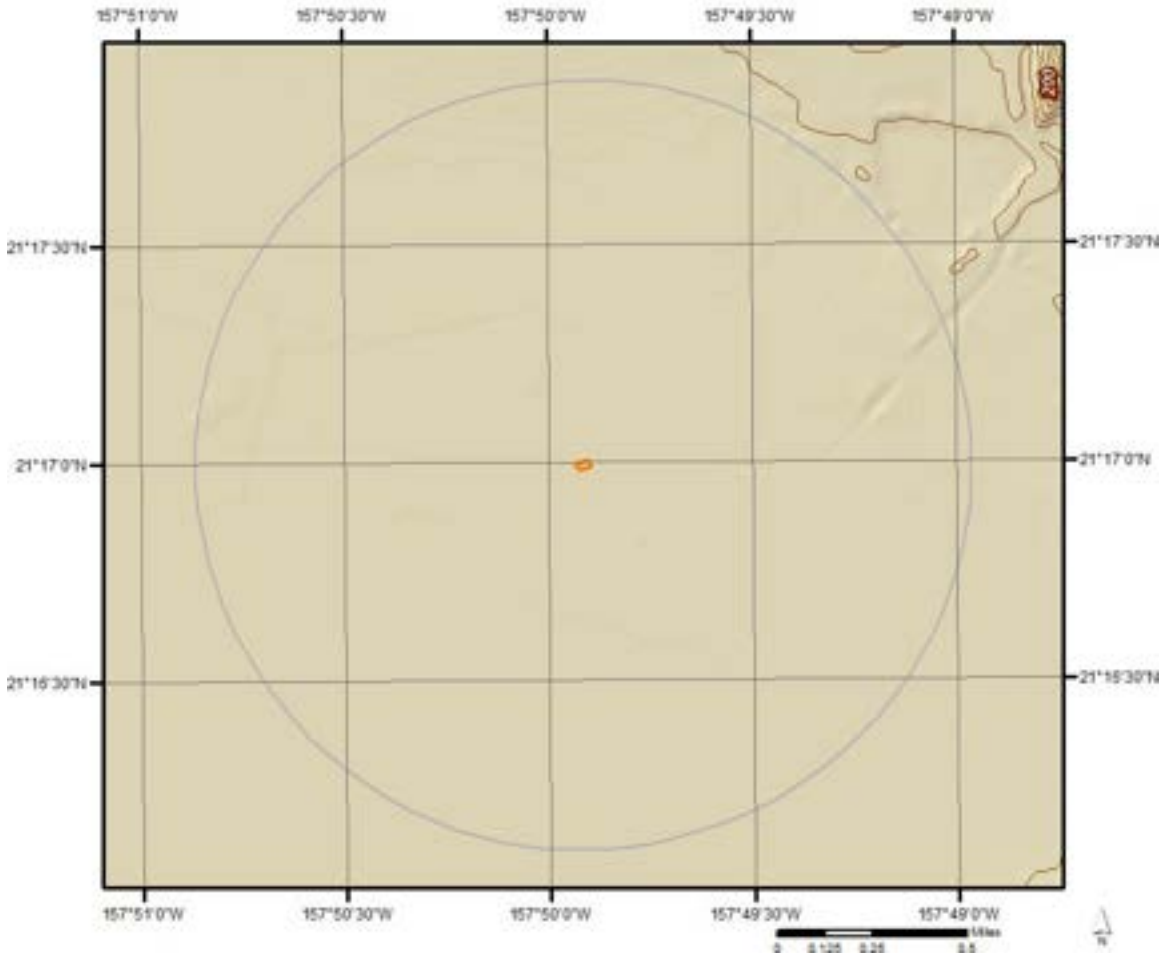


# Topographic Information

The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

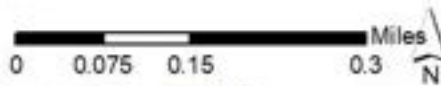
Elevation: 3.28 ft  
Slope Direction: N/A











# Hydrologic Information



## Wetland

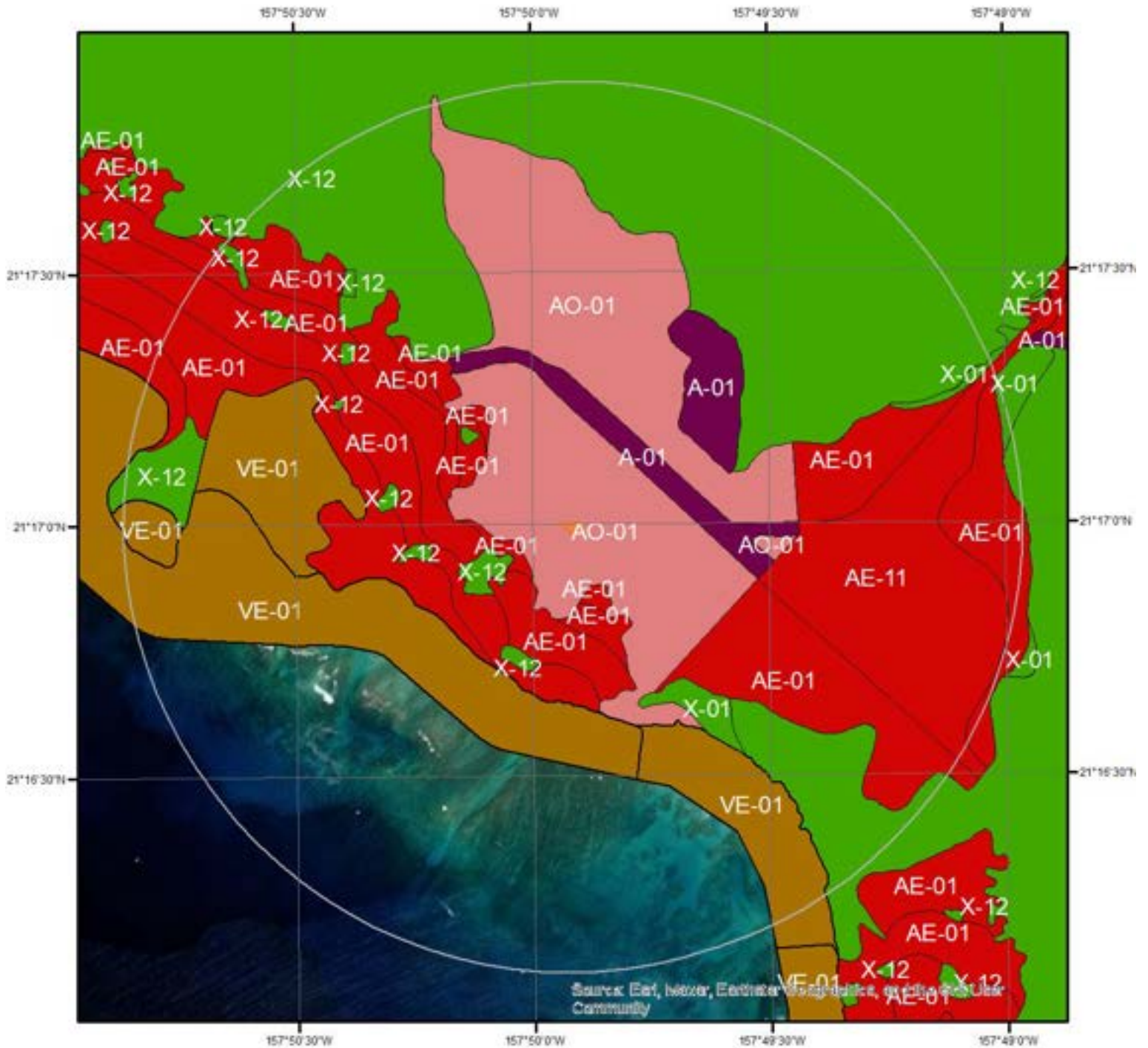


This map shows wetland existence using data from US Fish & Wildlife. Data coverage is shown to the right. Gray indicates no data available in the area.

- |   |   |
|---|---|
|  Estuarine and Marine Deepwater    |  Freshwater Pond |
|  Estuarine and Marine Wetland      |  Lake            |
|  Freshwater Emergent Wetland       |  Other           |
|  Freshwater Forested/Shrub Wetland |  Riverine        |



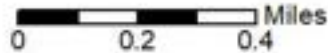
# Hydrologic Information



## Flood Hazard Zones

This map shows FEMA flood hazard zones. FIRM panels are shown to the right, and blank indicates no data is available.

- |   |  |   |
|---|--|---|
|  A   |  AO |  X                 |
|  A99 |  V  |  OPEN WATER        |
|  AE  |  VE |  NOT POPULATED     |
|  AH  |  D  |  AREA NOT INCLUDED |



Quadrangle(s): Honolulu, HI



## Hydrologic Information

The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below. For detailed Zone descriptions please click the link: <https://floodadvocate.com/fema-zone-definitions>

---

Available FIRM Panels in area: 15003C0366G(effective:2011-01-19) 15003C0368G(effective:2011-01-19)  
15003C0365G(effective:2011-01-19) 15003C0362G(effective:2011-01-19)

---

### Flood Zone A-01

Zone: A  
Zone subtype:

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### Flood Zone AE-01

Zone: AE  
Zone subtype:

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### Flood Zone AE-11

Zone: AE  
Zone subtype: FLOODWAY

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### Flood Zone AO-01

Zone: AO  
Zone subtype:

---

### Flood Zone VE-01

Zone: VE  
Zone subtype:

---

### Flood Zone X-01

Zone: X  
Zone subtype: 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

---

### Flood Zone X-12

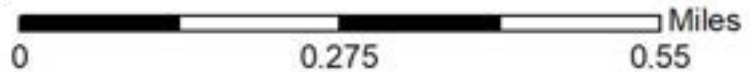
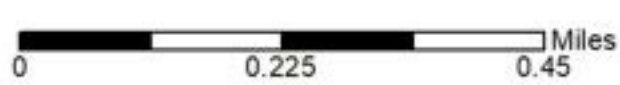
Zone: X  
Zone subtype: AREA OF MINIMAL FLOOD HAZARD

**Geologic Information**



**Geologic Units**

This map shows geologic units in the area. Please refer to the report for detailed descriptions.



## Geologic Information

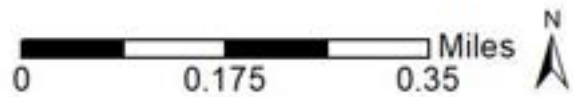
The previous page shows USGS geology information. Detailed information about each unit is provided below.

No records found for the project property or surrounding properties.

# Soil Information



## SSURGO Soils



This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.





## Soil Information

The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

---

### Map Unit BS (2.86%)

Map Unit Name: Beaches  
Bedrock Depth - Min:  
Watertable Depth - Annual Min: 0cm  
Drainage Class - Dominant: Excessively drained

Hydrologic Group - Dominant:

Major components are printed below

Beaches(100%)

horizon H1(0cm to 15cm)	Coarse sand
horizon H2(15cm to 152cm)	Coarse sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: BS - Beaches

Component: Beaches (100%)

Generated brief soil descriptions are created for major soil components. The Beaches is a miscellaneous area.

---

### Map Unit FL (73.72%)

Map Unit Name: Fill land, mixed  
Bedrock Depth - Min: 152cm  
Watertable Depth - Annual Min:  
Drainage Class - Dominant: Well drained  
Hydrologic Group - Dominant: B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Fill land, mixed(100%)

horizon H1(0cm to 15cm)	Gravelly sandy loam
horizon H2(15cm to 152cm)	Fine sandy loam
horizon H3(152cm to 178cm)	Bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: FL - Fill land, mixed

Component: Fill land, mixed (100%)

The Fill land, mixed, mixed component makes up 100 percent of the map unit. Slopes are 0 to 3 percent. This component is on fill flats. The parent material consists of Fill land. Depth to a root restrictive layer, bedrock, lithic, is 40 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 45 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 10 within 30 inches of the soil surface.

## Soil Information

### Map Unit JaC (20.2%)

Map Unit Name: Jaucas sand, 0 to 15 percent slopes  
Bedrock Depth - Min:  
Watertable Depth - Annual Min:  
Drainage Class - Dominant: Excessively drained  
Hydrologic Group - Dominant: A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Jaucas(100%)  
horizon H1(0cm to 33cm) Sand  
horizon H2(33cm to 152cm) Sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: JaC - Jaucas sand, 0 to 15 percent slopes, MLRA 163

Component: Jaucas (100%)

The Jaucas component makes up 100 percent of the map unit. Slopes are 0 to 15 percent. This component is on above high tide beaches, islands, coastal plains. The parent material consists of sand sized coral and sea shells sandy marine deposits derived from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7s. Irrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 95 percent.

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### Map Unit W (3.23%)

Map Unit Name: Water > 40 acres  
No more attributes available for this map unit

Component Description:

Minor map unit components are excluded from this report.

Map Unit: W - Water > 40 acres

Component: Water > 40 acres (100%)

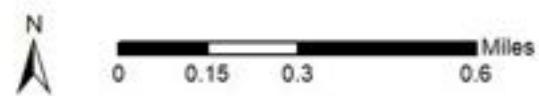
Generated brief soil descriptions are created for major soil components. The Water > 40 acres is a miscellaneous area.

# Wells and Additional Sources



Source: Esri, NOAA, Earthstar Geographics, and the GIS User Community

## Wells & Additional Sources



- |                                |                                    |
|--------------------------------|------------------------------------|
| ▲ Sites with Higher Elevation  | ▲ OGW Sites with Higher Elevation  |
| ■ Sites with Same Elevation    | ■ OGW Sites with Same Elevation    |
| ▼ Sites with Lower Elevation   | ▼ OGW Sites with Lower Elevation   |
| ○ Sites with Unknown Elevation | ● OGW Sites with Unknown Elevation |



# Wells and Additional Sources Summary

## Federal Sources

### Public Water Systems Violations and Enforcement Data

Map Key	PWS ID	Distance (ft)	Direction
20	HI0000330	2996.03	SE

### Safe Drinking Water Information System (SDWIS)

Map Key	PWS ID	Distance (ft)	Direction
22	HI0000330	3064.72	SE

### USGS National Water Information System

Map Key	Monitoring Loc Identifier	Distance (ft)	Direction
1	USGS-16247130	1305.70	ENE
3	USGS-211709157502001	1335.18	W
4	USGS-211712157494801	1483.39	E
6	USGS-211713157502201	1517.36	W
6	USGS-211713157502202	1517.36	W
8	USGS-211706157502401	1773.83	WSW
9	USGS-16247140	1893.46	N
13	USGS-211648157494801	2732.12	SE
17	USGS-211636157493701	2845.92	SE
19	USGS-211655157493801	2899.59	ESE
21	USGS-211729157500501	3018.44	NNW
23	USGS-16247160	3273.42	WNW
27	USGS-211654157493201	3436.74	ESE
28	USGS-211734157493601	3489.92	NE
30	USGS-211720157492701	3586.67	ENE
32	USGS-211721157492601	3704.88	ENE
33	USGS-211718157492501	3724.93	E
36	USGS-211730157492901	3804.03	ENE
38	USGS-211721157503001	3844.21	WNW
39	USGS-211720157492401	3861.30	ENE
41	USGS-211733157504101	3969.25	WNW
42	USGS-211722157503101	3978.97	WNW
43	USGS-211722157492301	4005.46	ENE
47	USGS-211734157504201	4104.00	WNW
50	USGS-211723157492201	4125.24	ENE
51	USGS-211647157492801	4135.90	SE
52	USGS-211753157500201	4184.58	N
53	USGS-211725157492201	4189.98	ENE
56	USGS-211638157493601	4214.31	SE
58	USGS-211746157493601	4373.13	NE
58	USGS-211746157493602	4373.13	NE
59	USGS-211735157492601	4407.35	NE
60	USGS-211711157490801	4461.19	ENE
61	USGS-211756157501001	4517.12	N
64	USGS-16247100	4603.39	ENE
65	USGS-211754157502301	4607.31	NNW
67	USGS-211758157500901	4707.16	N
69	USGS-211721157491401	4805.05	ENE
71	USGS-211712157491201	4883.69	E
73	USGS-211800157495501	4961.19	N
74	USGS-211800157495401	4978.46	NNE

## Wells and Additional Sources Summary

77	USGS-211801157495701	5031.89	N
79	USGS-16238000	5080.37	NNW
80	USGS-211718157491000	5123.33	E
80	USGS-211718157491002	5123.33	E
81	USGS-211718157491001	5139.48	E
82	USGS-211717157490301	5151.05	ENE
83	USGS-211803157500801	5201.79	N

### Wells from NWIS

Map Key	ID	Distance (ft)	Direction
No records found			

### State Sources

#### Oil and Gas Wells

Map Key	ID	Distance (ft)	Direction
No records found			

#### Well Index Database

Map Key	WID	Distance (ft)	Direction
2	3-1750-006	1318.70	W
5	3-1750-008	1510.79	W
5	3-1750-007	1510.79	W
7	3-1750-004	1753.10	WSW
10	3-1750-014	2063.71	W
11	3-1750-015	2635.93	W
11	3-1750-016	2635.93	W
12	3-1649-012	2709.74	SE
14	3-1750-018	2739.03	W
14	3-1750-017	2739.03	W
15	3-1750-019	2751.41	W
16	3-1750-021	2767.41	W
16	3-1750-020	2767.41	W
18	3-1649-009	2890.57	ESE
24	3-1750-012	3353.21	NW
25	3-1750-013	3379.06	NW
26	3-1649-008	3429.83	ESE
29	3-1749-003	3520.76	NE
31	3-1749-012	3606.57	ENE
34	3-1749-013	3725.45	ENE
35	3-1749-017	3743.03	ENE
37	3-1749-005	3830.88	ENE
40	3-1749-002	3880.52	ENE
44	3-1750-010	4022.80	WNW
45	3-1749-010	4026.05	ENE
46	3-1749-011	4056.46	ENE
48	3-1750-011	4113.88	WNW
49	3-1649-001	4125.23	SE
54	3-1649-007	4194.42	SE
55	3-1749-001	4212.44	ENE
57	3-1750-002	4219.39	N
59	3-1749-021	4407.35	NE
59	3-1749-020	4407.35	NE
62	3-1749-023	4522.09	E
63	3-1750-003	4549.65	N
66	3-1750-001	4635.61	NNW

## Wells and Additional Sources Summary

68	3-1750-005	4740.25	N
70	3-1749-014	4858.52	ENE
72	3-1749-008	4896.11	E
75	3-1849-007	4999.15	N
76	3-1849-006	5010.63	N
78	3-1849-008	5067.33	N
81	3-1749-007	5139.48	E
84	3-1850-002	5235.31	N

# Wells and Additional Sources Detail Report

## Public Water Systems Violations and Enforcement Data

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	SE	0.57	2,996.03	3.28	PWSV

Address Line 2: 120 KAIULANI AVENUE  
State Code: HI  
Zip Code: 96815  
City Name: HONOLULU  
Address Line 1: SHERATON PRINCESS KAIULANI  
PWS ID: HI0000330  
PWS Type Code: NTNCWS  
PWS Type Description: Non-Transient Non-Community Water System  
Primary Source Code: GW  
Primary Source Desc: Groundwater  
PWS Activity Code: A  
PWS Activity Description: Active  
PWS Deactivation Date:  
Phone Number: 808-931-8910

--Details--

Population Served Count: 2830  
City Served:  
County Served:  
State Served: HI  
Zip Code Served:

## Safe Drinking Water Information System (SDWIS)

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	SE	0.58	3,064.72	3.28	SDWIS

PWS ID: HI0000330  
PWS Type: Non-Transient non-community system  
No of Facilities: 3  
No of Violations: 8  
No of Site Visits: 8  
Cities Served: -  
Counties Served: Honolulu  
Population Served Count: 2,830  
Primacy Agency: Hawaii  
EPA Region: Region 9

## USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
1	ENE	0.25	1,305.70	0.24	FED USGS

# Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.28462778000000
Source Map Scale:	24000	Longitude:	-157.8280889000000
Monitoring Loc Name:	Ala Wai Canal at Ala Wai Elem. School, Oahu, HI		
Monitoring Loc Identifier:	USGS-16247130		
Monitoring Loc Type:	Stream: Canal		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:	11.7		
Drainage Area Unit:	sq mi		
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	5		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
3	W	0.25	1,335.18	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	122	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19550607	Latitude:	21.28268333000000
Source Map Scale:	24000	Longitude:	-157.8361444000000
Monitoring Loc Name:	3-1750-06 W30 DERUSY		
Monitoring Loc Identifier:	USGS-211709157502001		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			



# Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 1  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 5.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	E	0.28	1,483.39	0.00	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.28351667000000
Source Map Scale:	24000	Longitude:	-157.8272556000000
Monitoring Loc Name:	Ala Wai Canal at Honolulu, HI		
Monitoring Loc Identifier:	USGS-211712157494801		
Monitoring Loc Type:	Stream: Canal		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:	11.9		
Drainage Area Unit:	sq mi		
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	0		
Vertical Measure Unit:	feet		
Vertical Accuracy:	10		

# Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	W	0.29	1,517.36	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	120	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19551107	Latitude:	21.28379444000000
Source Map Scale:	24000	Longitude:	-157.83670000000000
Monitoring Loc Name:	3-1750-07 W30-1 DERU		
Monitoring Loc Identifier:	USGS-211713157502201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	3.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	W	0.29	1,517.36	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	90.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS

## Wells and Additional Sources Detail Report

W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19551107	Latitude:	21.28379444000000
Source Map Scale:	24000	Longitude:	-157.8367000000000
Monitoring Loc Name:	3-1750-08 W30-2 DERU		
Monitoring Loc Identifier:	USGS-211713157502202		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	3.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	WSW	0.34	1,773.83	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	62.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19500501	Latitude:	21.28185000000000
Source Map Scale:	24000	Longitude:	-157.8372556000000
Monitoring Loc Name:	3-1750-04 W30-3		
Monitoring Loc Identifier:	USGS-211706157502401		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		

## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 3.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 1  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
9	N	0.36	1,893.46	2.99	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.28851667000000
Source Map Scale:	24000	Longitude:	-157.8328110000000
Monitoring Loc Name:	Ala Wai Canal at McCully St. bridge, Oahu, HI		
Monitoring Loc Identifier:	USGS-16247140		
Monitoring Loc Type:	Stream: Canal		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:	12.9		
Drainage Area Unit:	sq mi		
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	5		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.52	2,732.12	3.28	FED USGS

# Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	105	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	105	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19671001	Latitude:	21.27685000000000
Source Map Scale:	24000	Longitude:	-157.8272556000000
Monitoring Loc Name:	3-1649.01 -01/W23-1		
Monitoring Loc Identifier:	USGS-211648157494801		
Monitoring Loc Type:	Subsurface: Groundwater drain		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	8.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	SE	0.54	2,845.92	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	105	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.27666667000000
Source Map Scale:	24000	Longitude:	-157.8269444000000
Monitoring Loc Name:	3-1649-12 Waikiki, Oahu, HI		
Monitoring Loc Identifier:	USGS-211636157493701		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

# Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: Unknown  
 Horizontal Accuracy Unit: Unknown  
 Horizontal Collection Mthd: Reported.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 3  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 3  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from Digital Elevation Model  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
19	ESE	0.55	2,899.59	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	810	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19140101	Latitude:	21.27879444000000
Source Map Scale:	24000	Longitude:	-157.8244778000000
Monitoring Loc Name:	3-1649-09 W23 WAIKIK		
Monitoring Loc Identifier:	USGS-211655157493801		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	4.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		

## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
21	NNW	0.57	3,018.44	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:			
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:			
Well Depth:		Aquifer Type:			
Well Depth Unit:		Country Code:	US		
Well Hole Depth:		Provider Name:	NWIS		
W Hole Depth Unit:		County:	HONOLULU		
Construction Date:		Latitude:	21.29127778000000		
Source Map Scale:	24000	Longitude:	-157.8347500000000		
Monitoring Loc Name:	Makiki Ditch nr Lunalilo School, Oahu, HI				
Monitoring Loc Identifier:	USGS-211729157500501				
Monitoring Loc Type:	Stream: Ditch				
Monitoring Loc Desc:					
HUC Eight Digit Code:	20060000				
Drainage Area:					
Drainage Area Unit:					
Contrib Drainage Area:					
Contrib Drainage Area Unit:					
Horizontal Accuracy:	.1				
Horizontal Accuracy Unit:	seconds				
Horizontal Collection Mthd:	Interpolated from Digital MAP.				
Horiz Coord Refer System:	NAD83				
Vertical Measure:	3				
Vertical Measure Unit:	feet				
Vertical Accuracy:	5				
Vertical Accuracy Unit:	feet				
Vertical Collection Mthd:	Interpolated from Digital Elevation Model				
Vert Coord Refer System:	LMSL				

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
23	WNW	0.62	3,273.42	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:			
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:			
Well Depth:		Aquifer Type:			
Well Depth Unit:		Country Code:	US		
Well Hole Depth:		Provider Name:	NWIS		

## Wells and Additional Sources Detail Report

W Hole Depth Unit:	County:	HONOLULU
Construction Date:	Latitude:	21.28823889000000
Source Map Scale: 24000	Longitude:	-157.8403110000000
Monitoring Loc Name:	Ala Wai Canal at Ala Moana Blvd. bridge, Oahu, HI	
Monitoring Loc Identifier:	USGS-16247160	
Monitoring Loc Type:	Stream: Canal	
Monitoring Loc Desc:		
HUC Eight Digit Code:	20060000	
Drainage Area:	16.0	
Drainage Area Unit:	sq mi	
Contrib Drainage Area:		
Contrib Drainage Area Unit:		
Horizontal Accuracy:	1	
Horizontal Accuracy Unit:	seconds	
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)	
Horiz Coord Refer System:	NAD83	
Vertical Measure:	5	
Vertical Measure Unit:	feet	
Vertical Accuracy:	1	
Vertical Accuracy Unit:	feet	
Vertical Collection Mthd:	Interpolated from topographic map.	
Vert Coord Refer System:	LMSL	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
27	ESE	0.65	3,436.74	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	666	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19000101	Latitude:	21.27851667000000
Source Map Scale:	24000	Longitude:	-157.8228110000000
Monitoring Loc Name:	3-1649-08 W19 WAIKIK		
Monitoring Loc Identifier:	USGS-211654157493201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		



## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 5.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
28	NE	0.66	3,489.92	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	730	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18820101	Latitude:	21.28962778000000
Source Map Scale:	24000	Longitude:	-157.8239222000000
Monitoring Loc Name:	3-1749-03 W40 PALOLO		
Monitoring Loc Identifier:	USGS-211734157493601		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	10.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
30	ENE	0.68	3,586.67	9.84	FED USGS

# Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	521	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18890101	Latitude:	21.28573889000000
Source Map Scale:	24000	Longitude:	-157.8214222000000
Monitoring Loc Name:	3-1749-12 W33 PALOLO		
Monitoring Loc Identifier:	USGS-211720157492701		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	12.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
32	ENE	0.70	3,704.88	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	500	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18890101	Latitude:	21.28601667000000
Source Map Scale:	24000	Longitude:	-157.8211444000000
Monitoring Loc Name:	3-1749-13 W34 PALOLO		
Monitoring Loc Identifier:	USGS-211721157492601		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

## Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 5  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 14.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 5  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
33	E	0.71	3,724.93	7.52	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	468	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19170101	Latitude:	21.28518333000000
Source Map Scale:	24000	Longitude:	-157.8208667000000
Monitoring Loc Name:	3-1749-17 W29 PALOLO		
Monitoring Loc Identifier:	USGS-211718157492501		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	11.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		

## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
36	ENE	0.72	3,804.03	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	587	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18830101	Latitude:	21.28851667000000
Source Map Scale:	24000	Longitude:	-157.82197780000000
Monitoring Loc Name:	3-1749-05 W35 PALOLO		
Monitoring Loc Identifier:	USGS-211730157492901		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	8.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
38	WNW	0.73	3,844.21	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	88	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS

## Wells and Additional Sources Detail Report

W Hole Depth Unit:	County:	HONOLULU
Construction Date:	Latitude:	21.28916667000000
Source Map Scale: 24000	Longitude:	-157.8416667000000
Monitoring Loc Name: 3-1750-10 Ala Moana, Oahu, HI		
Monitoring Loc Identifier: USGS-211721157503001		
Monitoring Loc Type: Well		
Monitoring Loc Desc:		
HUC Eight Digit Code: 20060000		
Drainage Area:		
Drainage Area Unit:		
Contrib Drainage Area:		
Contrib Drainage Area Unit:		
Horizontal Accuracy: Unknown		
Horizontal Accuracy Unit: Unknown		
Horizontal Collection Mthd: Reported.		
Horiz Coord Refer System: NAD83		
Vertical Measure: 3		
Vertical Measure Unit: feet		
Vertical Accuracy: 3		
Vertical Accuracy Unit: feet		
Vertical Collection Mthd: Interpolated from Digital Elevation Model		
Vert Coord Refer System: LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
39	ENE	0.73	3,861.30	19.56	FED USGS

Organiz Identifier: USGS-HI	Formation Type:
Organiz Name: USGS Hawaii Water Science Center	Aquifer Name: Hawaii volcanic-rock aquifers
Well Depth: 428	Aquifer Type:
Well Depth Unit: ft	Country Code: US
Well Hole Depth:	Provider Name: NWIS
W Hole Depth Unit:	County: HONOLULU
Construction Date: 18810101	Latitude: 21.28573889000000
Source Map Scale: 24000	Longitude: -157.8205889000000
Monitoring Loc Name: 3-1749-02 W28 PALOLO	
Monitoring Loc Identifier: USGS-211720157492401	
Monitoring Loc Type: Well	
Monitoring Loc Desc:	
HUC Eight Digit Code: 20060000	
Drainage Area:	
Drainage Area Unit:	
Contrib Drainage Area:	
Contrib Drainage Area Unit:	
Horizontal Accuracy: 5	

## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection: Interpolated from MAP.  
 Mthd:  
 Horiz Coord Refer: NAD83  
 System:  
 Vertical Measure: 13.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
41	WNW	0.75	3,969.25	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	88.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	88.0	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19671001	Latitude:	21.28935000000000
Source Map Scale:	24000	Longitude:	-157.8419778000000
Monitoring Loc Name:	3-1750.01A 10/W63-2A		
Monitoring Loc Identifier:	USGS-211733157504101		
Monitoring Loc Type:	Subsurface: Groundwater drain		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection:	Interpolated from MAP.		
Mthd:			
Horiz Coord Refer:	NAD83		
System:			
Vertical Measure:	4.30		
Vertical Measure Unit:	feet		
Vertical Accuracy:	.2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Level or other surveyed method.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
42	WNW	0.75	3,978.97	3.28	FED USGS

## Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	55	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.28944444000000
Source Map Scale:	24000	Longitude:	-157.8419444000000
Monitoring Loc Name:	3-1750-11 Ala Moana, Oahu, HI		
Monitoring Loc Identifier:	USGS-211722157503101		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	Unknown		
Horizontal Accuracy Unit:	Unknown		
Horizontal Collection Mthd:	Reported.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	3		
Vertical Measure Unit:	feet		
Vertical Accuracy:	3		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from Digital Elevation Model		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
43	ENE	0.76	4,005.46	16.38	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	463	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18890101	Latitude:	21.28629444000000
Source Map Scale:	24000	Longitude:	-157.8203110000000
Monitoring Loc Name:	3-1749-10 W31 PALOLO		
Monitoring Loc Identifier:	USGS-211722157492301		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

## Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 5  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 13.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 5  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
47	WNW	0.78	4,104.00	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:	55.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	55.0	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19671001	Latitude:	21.28962778000000
Source Map Scale:	24000	Longitude:	-157.8422556000000
Monitoring Loc Name:	3-1750.01B 11/W63-2B		
Monitoring Loc Identifier:	USGS-211734157504201		
Monitoring Loc Type:	Subsurface: Groundwater drain		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	4.60		
Vertical Measure Unit:	feet		
Vertical Accuracy:	.2		



## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Level or other surveyed method.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
50	ENE	0.78	4,125.24	14.12	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	435	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	475	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	18890101	Latitude:	21.28657222000000
Source Map Scale:	24000	Longitude:	-157.8200333000000
Monitoring Loc Name:	3-1749-11 W32 PALOLO		
Monitoring Loc Identifier:	USGS-211723157492201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	14.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
51	SE	0.78	4,135.90	3.28	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	856	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS

## Wells and Additional Sources Detail Report

W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18820101	Latitude:	21.27657222000000
Source Map Scale:	24000	Longitude:	-157.8217000000000
Monitoring Loc Name:	3-1649-01 W21 WAIKIK		
Monitoring Loc Identifier:	USGS-211647157492801		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	5.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
52	N	0.79	4,184.58	6.56	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	416	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18900101	Latitude:	21.29490556000000
Source Map Scale:	24000	Longitude:	-157.8311444000000
Monitoring Loc Name:	3-1750-02 W45 MCCULY		
Monitoring Loc Identifier:	USGS-211753157500201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		

## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 8.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
53	ENE	0.79	4,189.98	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	407	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18810101	Latitude:	21.28712778000000
Source Map Scale:	24000	Longitude:	-157.8200333000000
Monitoring Loc Name:	3-1749-01 W27 PALOLO		
Monitoring Loc Identifier:	USGS-211725157492201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	15.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
56	SE	0.80	4,214.31	3.28	FED USGS

## Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	941	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18920101	Latitude:	21.27407222000000
Source Map Scale:	24000	Longitude:	-157.8239222000000
Monitoring Loc Name:	3-1649-07 W22 WAIKIK		
Monitoring Loc Identifier:	USGS-211638157493601		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	5.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
58	NE	0.83	4,373.13	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	28.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19540101	Latitude:	21.29296110000000
Source Map Scale:	24000	Longitude:	-157.8239222000000
Monitoring Loc Name:	3-1749-20 W35-1A MOI		
Monitoring Loc Identifier:	USGS-211746157493601		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

## Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 1  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 15.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 5  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
58	NE	0.83	4,373.13	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	28.0	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	32.0	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19540910	Latitude:	21.29296110000000
Source Map Scale:	24000	Longitude:	-157.82392220000000
Monitoring Loc Name:	3-1749.01 STAR MARKET		
Monitoring Loc Identifier:	USGS-211746157493602		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	9.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		

## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
59	NE	0.83	4,407.35	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:			
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:			
Well Depth:	28	Aquifer Type:			
Well Depth Unit:	ft	Country Code:	US		
Well Hole Depth:		Provider Name:	NWIS		
W Hole Depth Unit:		County:	HONOLULU		
Construction Date:		Latitude:	21.29305556000000		
Source Map Scale:	24000	Longitude:	-157.82388890000000		
Monitoring Loc Name:	3-1749-21 Moiliili, Oahu, HI				
Monitoring Loc Identifier:	USGS-211735157492601				
Monitoring Loc Type:	Well				
Monitoring Loc Desc:					
HUC Eight Digit Code:	20060000				
Drainage Area:					
Drainage Area Unit:					
Contrib Drainage Area:					
Contrib Drainage Area Unit:					
Horizontal Accuracy:	Unknown				
Horizontal Accuracy Unit:	Unknown				
Horizontal Collection Mthd:	Reported.				
Horiz Coord Refer System:	NAD83				
Vertical Measure:	10				
Vertical Measure Unit:	feet				
Vertical Accuracy:	5				
Vertical Accuracy Unit:	feet				
Vertical Collection Mthd:	Interpolated from Digital Elevation Model				
Vert Coord Refer System:	LMSL				

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
60	ENE	0.84	4,461.19	10.03	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:			
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:			
Well Depth:		Aquifer Type:			
Well Depth Unit:		Country Code:	US		
Well Hole Depth:		Provider Name:	NWIS		

# Wells and Additional Sources Detail Report

W Hole Depth Unit:	County:	HONOLULU
Construction Date:	Latitude:	21.28627778000000
Source Map Scale: 24000	Longitude:	-157.8189167000000
Monitoring Loc Name: Manoa-Palolo Canal 770 ft abv Date St, Oahu, HI		
Monitoring Loc Identifier: USGS-211711157490801		
Monitoring Loc Type: Stream		
Monitoring Loc Desc:		
HUC Eight Digit Code: 20060000		
Drainage Area:		
Drainage Area Unit:		
Contrib Drainage Area:		
Contrib Drainage Area Unit:		
Horizontal Accuracy: .1		
Horizontal Accuracy Unit: seconds		
Horizontal Collection Mthd: Interpolated from Digital MAP.		
Horiz Coord Refer System: NAD83		
Vertical Measure: 10		
Vertical Measure Unit: feet		
Vertical Accuracy: 5		
Vertical Accuracy Unit: feet		
Vertical Collection Mthd: Interpolated from Digital Elevation Model		
Vert Coord Refer System: LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
61	N	0.86	4,517.12	9.84	FED USGS

Organiz Identifier: USGS-HI	Formation Type:
Organiz Name: USGS Hawaii Water Science Center	Aquifer Name: Hawaii volcanic-rock aquifers
Well Depth: 374	Aquifer Type:
Well Depth Unit: ft	Country Code: US
Well Hole Depth:	Provider Name: NWIS
W Hole Depth Unit:	County: HONOLULU
Construction Date: 18900101	Latitude: 21.29573889000000
Source Map Scale: 24000	Longitude: -157.8333667000000
Monitoring Loc Name: 3-1750-03 W46 MCCULY	
Monitoring Loc Identifier: USGS-211756157501001	
Monitoring Loc Type: Well	
Monitoring Loc Desc:	
HUC Eight Digit Code: 20060000	
Drainage Area:	
Drainage Area Unit:	
Contrib Drainage Area:	
Contrib Drainage Area Unit:	
Horizontal Accuracy: 5	

## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 10.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
64	ENE	0.87	4,603.39	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.28652778000000
Source Map Scale:	24000	Longitude:	-157.8185556000000
Monitoring Loc Name:	Manoa-Palolo Drainage Canal at Moiliili, Oahu, HI		
Monitoring Loc Identifier:	USGS-16247100		
Monitoring Loc Type:	Stream: Canal		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:	10.2		
Drainage Area Unit:	sq mi		
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	5		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
65	NNW	0.87	4,607.31	6.56	FED USGS



## Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	475	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18810101	Latitude:	21.29518333000000
Source Map Scale:	24000	Longitude:	-157.8369778000000
Monitoring Loc Name:	3-1750-01 W61 MCCULY		
Monitoring Loc Identifier:	USGS-211754157502301		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	14.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
67	N	0.89	4,707.16	13.12	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	154	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	19530801	Latitude:	21.29629444000000
Source Map Scale:	24000	Longitude:	-157.8330889000000
Monitoring Loc Name:	3-1750-05 W50 MCCULY		
Monitoring Loc Identifier:	USGS-211758157500901		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

## Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 5  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 15.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 1  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
69	ENE	0.91	4,805.05	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	417	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18910101	Latitude:	21.28601667000000
Source Map Scale:	24000	Longitude:	-157.8178110000000
Monitoring Loc Name:	3-1749-14 W26 PALOLO		
Monitoring Loc Identifier:	USGS-211721157491401		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	13.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		

## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
71	E	0.92	4,883.69	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	411	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	411	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	18880101	Latitude:	21.28351667000000
Source Map Scale:	24000	Longitude:	-157.8172556000000
Monitoring Loc Name:	3-1749-08 W24 PALOLO		
Monitoring Loc Identifier:	USGS-211712157491201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	11.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
73	N	0.94	4,961.19	16.40	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS

# Wells and Additional Sources Detail Report

W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18910701	Latitude:	21.29685000000000
Source Map Scale:	24000	Longitude:	-157.8292000000000
Monitoring Loc Name:	3-1849-07 W43 MAKIKI		
Monitoring Loc Identifier:	USGS-211800157495501		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	18.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
74	NNE	0.94	4,978.46	16.40	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	160	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18910101	Latitude:	21.29685000000000
Source Map Scale:	24000	Longitude:	-157.8289222000000
Monitoring Loc Name:	3-1849-06 W42 MAKIKI		
Monitoring Loc Identifier:	USGS-211800157495401		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		

## Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 17.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 2  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
77	N	0.95	5,031.89	19.69	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	397	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:	18940101	Latitude:	21.29712778000000
Source Map Scale:	24000	Longitude:	-157.8297556000000
Monitoring Loc Name:	3-1849-08 W44 MAKIKI		
Monitoring Loc Identifier:	USGS-211801157495701		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	20.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
79	NNW	0.96	5,080.37	13.12	FED USGS

# Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	HONOLULU
Construction Date:		Latitude:	21.29663889000000
Source Map Scale:	24000	Longitude:	-157.8367500000000
Monitoring Loc Name:	Makiki Stream at King St. bridge, Oahu, HI		
Monitoring Loc Identifier:	USGS-16238000		
Monitoring Loc Type:	Stream		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:	2.47		
Drainage Area Unit:	sq mi		
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	10		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
80	E	0.97	5,123.33	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	338	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	338	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	1885	Latitude:	21.28518333000000
Source Map Scale:	24000	Longitude:	-157.8167000000000
Monitoring Loc Name:	3-1749-07 W25 Kapahulu, Oahu, HI		
Monitoring Loc Identifier:	USGS-211718157491000		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			

# Wells and Additional Sources Detail Report

HUC Eight Digit Code: 20060000  
 Drainage Area:  
 Drainage Area Unit:  
 Contrib Drainage Area:  
 Contrib Drainage Area Unit:  
 Horizontal Accuracy: 1  
 Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 14.30  
 Vertical Measure Unit: feet  
 Vertical Accuracy: .1  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Level or other surveyed method.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
80	E	0.97	5,123.33	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	459	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	625	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19510801	Latitude:	21.28518333000000
Source Map Scale:	24000	Longitude:	-157.81670000000000
Monitoring Loc Name:	3-1749-07 W25 TB D		
Monitoring Loc Identifier:	USGS-211718157491002		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	14.30		
Vertical Measure Unit:	feet		
Vertical Accuracy:	.1		

## Wells and Additional Sources Detail Report

Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Level or other surveyed method.  
 Vert Coord Refer System: LMSL

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
81	E	0.97	5,139.48	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	Hawaii volcanic-rock aquifers
Well Depth:	393	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	625	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	HONOLULU
Construction Date:	19510801	Latitude:	21.28527778000000
Source Map Scale:	24000	Longitude:	-157.8166667000000
Monitoring Loc Name:	3-1749-07 Kapahulu W25 TB E, Oahu, HI		
Monitoring Loc Identifier:	USGS-211718157491001		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	20060000		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	14.35		
Vertical Measure Unit:	feet		
Vertical Accuracy:	.1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Level or other surveyed method.		
Vert Coord Refer System:	LMSL		

<b>Map Key</b>	<b>Direction</b>	<b>Distance (mi)</b>	<b>Distance (ft)</b>	<b>Elevation (ft)</b>	<b>DB</b>
82	ENE	0.98	5,151.05	9.84	FED USGS

Organiz Identifier:	USGS-HI	Formation Type:	
Organiz Name:	USGS Hawaii Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS



## Wells and Additional Sources Detail Report

W Hole Depth Unit:	County:	HONOLULU
Construction Date:	Latitude:	21.28805556000000
Source Map Scale: 24000	Longitude:	-157.8173889000000
Monitoring Loc Name: Manoa Str 50 ft blw Kapiolani bridge, Oahu, HI		
Monitoring Loc Identifier: USGS-211717157490301		
Monitoring Loc Type: Stream		
Monitoring Loc Desc:		
HUC Eight Digit Code: 20060000		
Drainage Area:		
Drainage Area Unit:		
Contrib Drainage Area:		
Contrib Drainage Area Unit:		
Horizontal Accuracy: 1		
Horizontal Accuracy Unit: seconds		
Horizontal Collection Mthd: Interpolated from Digital MAP.		
Horiz Coord Refer System: NAD83		
Vertical Measure: 10		
Vertical Measure Unit: feet		
Vertical Accuracy: 20		
Vertical Accuracy Unit: feet		
Vertical Collection Mthd: Interpolated from Digital Elevation Model		
Vert Coord Refer System: LMSL		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
83	N	0.99	5,201.79	22.97	FED USGS

Organiz Identifier: USGS-HI	Formation Type:
Organiz Name: USGS Hawaii Water Science Center	Aquifer Name: Hawaii volcanic-rock aquifers
Well Depth: 475	Aquifer Type:
Well Depth Unit: ft	Country Code: US
Well Hole Depth:	Provider Name: NWIS
W Hole Depth Unit:	County: HONOLULU
Construction Date: 18800101	Latitude: 21.29768333000000
Source Map Scale: 24000	Longitude: -157.8328110000000
Monitoring Loc Name: 3-1850-02 W51 MAKIKI	
Monitoring Loc Identifier: USGS-211803157500801	
Monitoring Loc Type: Well	
Monitoring Loc Desc:	
HUC Eight Digit Code: 20060000	
Drainage Area:	
Drainage Area Unit:	
Contrib Drainage Area:	
Contrib Drainage Area Unit:	
Horizontal Accuracy: 5	

# Wells and Additional Sources Detail Report

Horizontal Accuracy Unit: seconds  
 Horizontal Collection Mthd: Interpolated from MAP.  
 Horiz Coord Refer System: NAD83  
 Vertical Measure: 25.00  
 Vertical Measure Unit: feet  
 Vertical Accuracy: 5  
 Vertical Accuracy Unit: feet  
 Vertical Collection Mthd: Interpolated from topographic map.  
 Vert Coord Refer System: LMSL

## Well Index Database

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	W	0.25	1,318.70	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	30-	Init Head:	
WID:	3-1750-006	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1955	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	122	Pump GPM1:	
Solid Case(Ft):	93	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-008:034
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.836111
Geology Division:	Other	Lat NAD83 (DD):	21.282778
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	1/1/1955		
Well Use Desc:			

# Wells and Additional Sources Detail Report

Well Owner Name:  
 Well Use Reporter Name:  
 Owner User: Hilton Hawaiian Villages LLC  
 Land Owner: Hilton Hawaiian Villages LLC  
 Land Owner Name:  
 Driller: Samson/Smock  
 Pump Installer:  
 Surveyor:  
 Geology Name: Alluvium

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	W	0.29	1,510.79	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:		Init Head:	
WID:	3-1750-008	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1955	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	90	Pump GPM1:	0
Solid Case(Ft):	42	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-009:009
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.836667
Geology Division:	Other	Lat NAD83 (DD):	21.283889
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:			
Well Use Desc:			
Well Owner Name:			

# Wells and Additional Sources Detail Report

Well Use Reporter Name:  
 Owner User: Hilton Hawaiian Villages LLC  
 Land Owner: Hilton Hawaiian Villages LLC  
 Land Owner Name:  
 Driller: Samson/Smock  
 Pump Installer:  
 Surveyor:  
 Geology Name: Alluvium

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	W	0.29	1,510.79	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	30-1	Init Head:	
WID:	3-1750-007	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1955	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	120	Pump GPM1:	
Solid Case(Ft):	98	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-009:009
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.836667
Geology Division:	Other	Lat NAD83 (DD):	21.283889
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	1/1/1955		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			

# Wells and Additional Sources Detail Report

Owner User: Hilton Hawaiian Villages LLC  
 Land Owner: Hilton Hawaiian Villages LLC  
 Land Owner Name:  
 Driller: Samson/Smock  
 Pump Installer:  
 Surveyor:  
 Geology Name: Alluvium

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	WSW	0.33	1,753.10	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	30-3	Init Head:	
WID:	3-1750-004	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1950	Pump Depth:	
Casing Dia(Inch):	10	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	62	Pump GPM1:	
Solid Case(Ft):	61	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	230
Bottom Hole Elev:		Test Ddown:	1
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-008:034
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qbd	Long NAD83 (DD):	-157.837222
Geology Division:	Other	Lat NAD83 (DD):	21.281944
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:	230	Longitude:	
T:		Latitude:	
WCR:	1/1/1950		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		

# Wells and Additional Sources Detail Report

Land Owner: Hilton Hawaiian Villages LLC  
 Land Owner Name:  
 Driller: Samson/Smock  
 Pump Installer:  
 Surveyor:  
 Geology Name: Beach Deposits (Holocene)

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
10	W	0.39	2,063.71	3.28	WATER WELLS

Well No:		Init CL (MG/L):	18000
Old No:		Init Head:	
WID:	3-1750-014	Init Head2:	
Well Name:	Hilton Lagoon	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	UNU	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2003	Pump Depth:	
Casing Dia(Inch):	14	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	400	Pump GPM1:	0
Solid Case(Ft):	29	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-009:010
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.838333
Geology Division:	Other	Lat NAD83 (DD):	21.283056
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:			
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Peter Schall (Hilton Hawaiian Villages LLC)		
Land Owner:	Peter Schall (Hilton Hawaiian Villages LLC)		

# Wells and Additional Sources Detail Report

Land Owner Name:  
 Driller: Beylik / Energetic A JV  
 Pump Installer:  
 Surveyor:  
 Geology Name: Calcareous reef rock

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	W	0.50	2,635.93	3.28	WATER WELLS

Well No:		Init CL (MG/L):	19096
Old No:		Init Head:	
WID:	3-1750-015	Init Head2:	
Well Name:	HHV 1	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	IRRHOT	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2005	Pump Depth:	
Casing Dia(Inch):	16	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	205	Pump GPM1:	15000
Solid Case(Ft):	87	Pump MGD:	21.6
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-037:021
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.84
Geology Division:	Other	Lat NAD83 (DD):	21.282778
Geology Status:	Active	GPS:	TRUE
Head Feet:		UTM:	FALSE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	6/3/2005		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		
Land Owner:	State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:			

# Wells and Additional Sources Detail Report

Driller: Beylik / Energetic A JV  
 Pump Installer: Beylik / Energetic A JV  
 Surveyor:  
 Geology Name: Calcareous reef rock

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	W	0.50	2,635.93	3.28	WATER WELLS

Well No:	Init CL (MG/L):	19163
Old No:	Init Head:	
WID: 3-1750-016	Init Head2:	
Well Name: HHV 2	Init Head3:	
Old Name:	Initial Head3:	
Well Type: PER - Percussion	Latest HD:	
Well Use:	Max Chlor:	
Use: IRRHOT	Min Chlor:	
Year Drilled:	PIR:	
Yr Drilled: 2005	Pump Depth:	
Casing Dia(Inch): 16	Pump Elev:	
Ground El(Ft):	Pump GPM:	
Well Depth(Ft): 250	Pump GPM1: 0	
Solid Case(Ft): 83	Pump MGD:	
Perf Case(Ft):	Pump Yr:	
Aquifer Code: 30101	Test Date:	
Aquifer Type: Caprock	Test GPM:	
Bottom Hole Elev:	Test Ddown:	
Btm Perfor Cas Elev:	Test Chlor:	
Btm Solid Cas Elev:	Test Temp:	
Draft MGD:	Test Unit:	
Draft MGY:	Island: Oahu	
Draft Yr:	TMK: (1) 2-3-037:021	
Five Vol Pump Time:	Quad Map: 13	
Geology Code: Qcrs	Long NAD83 (DD): -157.84	
Geology Division: Other	Lat NAD83 (DD): 21.282778	
Geology Status: Active	GPS: TRUE	
Head Feet:	UTM: FALSE	
Spec Capac:	Longitude:	
T:	Latitude:	
WCR: 6/3/2005		
Well Use Desc:		
Well Owner Name:		
Well Use Reporter Name:		
Owner User: Hilton Hawaiian Villages LLC		
Land Owner: State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:		
Driller: Beylik / Energetic A JV		



# Wells and Additional Sources Detail Report

Pump Installer: Beylik / Energetic A JV  
 Surveyor:  
 Geology Name: Calcareous reef rock

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
12	SE	0.51	2,709.74	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	23-1	Init Head:	
WID:	3-1649-012	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1967	Pump Depth:	
Casing Dia(Inch):	12	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	105	Pump GPM1:	
Solid Case(Ft):	54	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	200
Bottom Hole Elev:		Test Ddown:	0.2
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-6-001:013
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.827222
Geology Division:	Other	Lat NAD83 (DD):	21.276944
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:	1000	Longitude:	
T:		Latitude:	
WCR:	1/1/1967		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Kyo-Ya Company, LLC		
Land Owner:	Kyo-ya Hotels & Resorts, LP		
Land Owner Name:			
Driller:	Layne International		
Pump Installer:			

# Wells and Additional Sources Detail Report

Surveyor:

Geology Name: Calcareous reef rock

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	W	0.52	2,739.03	3.28	WATER WELLS

Well No:		Init CL (MG/L):	18985
Old No:		Init Head:	
WID:	3-1750-018	Init Head2:	
Well Name:	HHV 4	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	IRRHOT	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2005	Pump Depth:	
Casing Dia(Inch):	16	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	255	Pump GPM1:	0
Solid Case(Ft):	82	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-037:021
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.840278
Geology Division:	Other	Lat NAD83 (DD):	21.2825
Geology Status:	Active	GPS:	TRUE
Head Feet:		UTM:	FALSE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	6/3/2005		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		
Land Owner:	State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:			
Driller:	Beylik / Energetic A JV		
Pump Installer:	Beylik / Energetic A JV		
Surveyor:			

# Wells and Additional Sources Detail Report

Geology Name: Calcareous reef rock

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	W	0.52	2,739.03	3.28	WATER WELLS

Well No:		Init CL (MG/L):	19279
Old No:		Init Head:	
WID:	3-1750-017	Init Head2:	
Well Name:	HHV 3	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	IRRHOT	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2005	Pump Depth:	
Casing Dia(Inch):	16	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	250	Pump GPM1:	0
Solid Case(Ft):	97	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-037:021
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.840278
Geology Division:	Other	Lat NAD83 (DD):	21.2825
Geology Status:	Active	GPS:	TRUE
Head Feet:		UTM:	FALSE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	6/3/2005		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		
Land Owner:	State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:			
Driller:	Beylik / Energetic A JV		
Pump Installer:	Beylik / Energetic A JV		
Surveyor:			
Geology Name:	Calcareous reef rock		

## Wells and Additional Sources Detail Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
15	W	0.52	2,751.41	3.28	WATER WELLS

Well No:		Init CL (MG/L):	19168
Old No:		Init Head:	
WID:	3-1750-019	Init Head2:	
Well Name:	HHV 5	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	IRRHOT	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2005	Pump Depth:	
Casing Dia(Inch):	16	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	260	Pump GPM1:	0
Solid Case(Ft):	83	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-037:021
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.840278
Geology Division:	Other	Lat NAD83 (DD):	21.282222
Geology Status:	Active	GPS:	TRUE
Head Feet:		UTM:	FALSE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	6/3/2005		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		
Land Owner:	State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:			
Driller:	Beylik / Energetic A JV		
Pump Installer:	Beylik / Energetic A JV		
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
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# Wells and Additional Sources Detail Report

16	W	0.52	2,767.41	3.28	WATER WELLS
Well No:			Init CL (MG/L):		19102
Old No:			Init Head:		
WID:		3-1750-021	Init Head2:		
Well Name:		HHV 7	Init Head3:		
Old Name:			Initial Head3:		
Well Type:		PER - Percussion	Latest HD:		
Well Use:			Max Chlor:		
Use:		IRRHOT	Min Chlor:		
Year Drilled:			PIR:		
Yr Drilled:		2005	Pump Depth:		
Casing Dia(Inch):		16	Pump Elev:		
Ground El(Ft):			Pump GPM:		
Well Depth(Ft):		250	Pump GPM1:		0
Solid Case(Ft):		82	Pump MGD:		
Perf Case(Ft):			Pump Yr:		
Aquifer Code:		30101	Test Date:		
Aquifer Type:		Caprock	Test GPM:		
Bottom Hole Elev:			Test Ddown:		
Btm Perfor Cas Elev:			Test Chlor:		
Btm Solid Cas Elev:			Test Temp:		
Draft MGD:			Test Unit:		
Draft MGY:			Island:		Oahu
Draft Yr:			TMK:		(1) 2-3-037:021
Five Vol Pump Time:			Quad Map:		13
Geology Code:		Qcrs	Long NAD83 (DD):		-157.840278
Geology Division:		Other	Lat NAD83 (DD):		21.281944
Geology Status:		Active	GPS:		TRUE
Head Feet:			UTM:		FALSE
Spec Capac:			Longitude:		
T:			Latitude:		
WCR:		6/3/2005			
Well Use Desc:					
Well Owner Name:					
Well Use Reporter Name:					
Owner User:		Hilton Hawaiian Villages LLC			
Land Owner:		State of Hawaii, Department of Transportation, Harbors Division, DOT			
Land Owner Name:					
Driller:		Beylik / Energetic A JV			
Pump Installer:		Beylik / Energetic A JV			
Surveyor:					
Geology Name:		Calcareous reef rock			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
16	W	0.52	2,767.41	3.28	WATER WELLS

# Wells and Additional Sources Detail Report

Well No:		Init CL (MG/L):	19484
Old No:		Init Head:	
WID:	3-1750-020	Init Head2:	
Well Name:	HHV 6	Init Head3:	
Old Name:		Initial Head3:	
Well Type:	PER - Percussion	Latest HD:	
Well Use:		Max Chlor:	
Use:	IRRHOT	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	2005	Pump Depth:	
Casing Dia(Inch):	16	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	205	Pump GPM1:	0
Solid Case(Ft):	87	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-037:021
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.840278
Geology Division:	Other	Lat NAD83 (DD):	21.281944
Geology Status:	Active	GPS:	TRUE
Head Feet:		UTM:	FALSE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	6/3/2005		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hilton Hawaiian Villages LLC		
Land Owner:	State of Hawaii, Department of Transportation, Harbors Division, DOT		
Land Owner Name:			
Driller:	Beylik / Energetic A JV		
Pump Installer:	Beylik / Energetic A JV		
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
18	ESE	0.55	2,890.57	3.28	WATER WELLS

## Wells and Additional Sources Detail Report

Well No:		Init CL (MG/L):	
Old No:	23-	Init Head:	
WID:	3-1649-009	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1914	Pump Depth:	
Casing Dia(Inch):	12	Pump Elev:	
Ground El(Ft):	4	Pump GPM:	
Well Depth(Ft):	810	Pump GPM1:	
Solid Case(Ft):	781	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-806	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-777	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.824444
Geology Division:	Other	Lat NAD83 (DD):	21.278889
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	1/1/1914		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Matson Nav. Co.		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
24	NW	0.64	3,353.21	3.28	WATER WELLS

Well No:	Init CL (MG/L):	18750
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## Wells and Additional Sources Detail Report

Old No:		Init Head:	
WID:	3-1750-012	Init Head2:	
Well Name:	Yacht Harbor 1	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	INDEL	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1972	Pump Depth:	
Casing Dia(Inch):		Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):		Pump GPM1:	1800
Solid Case(Ft):		Pump MGD:	2.592
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-036:039
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.839944
Geology Division:	Other	Lat NAD83 (DD):	21.289083
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:			
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Yacht Harbor Towers		
Land Owner:	Yacht Harbor Towers		
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
25	NW	0.64	3,379.06	3.28	WATER WELLS

Well No:	Init CL (MG/L):	18750
Old No:	Init Head:	



## Wells and Additional Sources Detail Report

WID:	3-1750-013	Init Head2:	
Well Name:	Yacht Harbor 2	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	INDEL	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1972	Pump Depth:	
Casing Dia(Inch):		Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):		Pump GPM1:	1800
Solid Case(Ft):		Pump MGD:	2.592
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Caprock	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-036:039
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.840111
Geology Division:	Other	Lat NAD83 (DD):	21.289
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:			
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Yacht Harbor Towers		
Land Owner:	Yacht Harbor Towers		
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
26	ESE	0.65	3,429.83	3.28	WATER WELLS

Well No:	Init CL (MG/L):
Old No: 19-	Init Head:
WID: 3-1649-008	Init Head2:

## Wells and Additional Sources Detail Report

Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1900	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):	5	Pump GPM:	
Well Depth(Ft):	666	Pump GPM1:	
Solid Case(Ft):	608	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-661	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-603	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.822778
Geology Division:	Other	Lat NAD83 (DD):	21.278611
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	1/2/1900		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Guardian Trust		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
29	NE	0.67	3,520.76	3.28	WATER WELLS

Well No:		Init CL (MG/L):
Old No:	40-	Init Head:
WID:	3-1749-003	Init Head2:
Well Name:	Kapahulu	Init Head3:

# Wells and Additional Sources Detail Report

Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1882	Pump Depth:	
Casing Dia(Inch):		Pump Elev:	
Ground El(Ft):	10	Pump GPM:	
Well Depth(Ft):	730	Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-720	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-7-008:002
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.823889
Geology Division:	Other	Lat NAD83 (DD):	21.289722
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1882		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Magoon Trust		
Land Owner:	State of Hawaii		
Land Owner Name:			
Driller:	Cooke-Peddler		
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
31	ENE	0.68	3,606.57	9.84	WATER WELLS

Well No:		Init CL (MG/L):	240
Old No:	33-	Init Head:	19.9
WID:	3-1749-012	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	

## Wells and Additional Sources Detail Report

Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1889	Pump Depth:	
Casing Dia(Inch):	6	Pump Elev:	
Ground El(Ft):	12	Pump GPM:	
Well Depth(Ft):	521	Pump GPM1:	
Solid Case(Ft):	418	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-509	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-406	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.821389
Geology Division:	Other	Lat NAD83 (DD):	21.285833
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1889		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Y. T. Char		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
34	ENE	0.71	3,725.45	9.84	WATER WELLS

Well No:		Init CL (MG/L):	216
Old No:	34-	Init Head:	23
WID:	3-1749-013	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	

## Wells and Additional Sources Detail Report

Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1889	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):	14	Pump GPM:	
Well Depth(Ft):	500	Pump GPM1:	
Solid Case(Ft):	430	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-486	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-416	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.821111
Geology Division:	Other	Lat NAD83 (DD):	21.286111
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1889		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	L. Y. Whee		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
35	ENE	0.71	3,743.03	13.18	WATER WELLS

Well No:		Init CL (MG/L):	83
Old No:	29-	Init Head:	18.5
WID:	3-1749-017	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	

## Wells and Additional Sources Detail Report

Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1917	Pump Depth:	
Casing Dia(Inch):	10	Pump Elev:	
Ground El(Ft):	11	Pump GPM:	
Well Depth(Ft):	468	Pump GPM1:	
Solid Case(Ft):	402	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-457	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-391	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.820833
Geology Division:	Other	Lat NAD83 (DD):	21.285278
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	1/1/1917		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Hawn. Hotels		
Land Owner:			
Land Owner Name:			
Driller:	L. McCandless		
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
37	ENE	0.73	3,830.88	9.84	WATER WELLS

Well No:	Init CL (MG/L):	37
Old No:	Init Head:	24.8
WID:	Init Head2:	
Well Name:	Init Head3:	
Old Name:	Initial Head3:	
Well Type:	Latest HD:	
Well Use:	Max Chlor:	
Use:	Min Chlor:	

## Wells and Additional Sources Detail Report

Year Drilled:		PIR:	
Yr Drilled:	1883	Pump Depth:	
Casing Dia(Inch):	6	Pump Elev:	
Ground El(Ft):	8	Pump GPM:	
Well Depth(Ft):	587	Pump GPM1:	
Solid Case(Ft):	564	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-579	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-556	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.821944
Geology Division:	Other	Lat NAD83 (DD):	21.288611
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1883		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	T. Y. Ung		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
40	ENE	0.73	3,880.52	19.60	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	28-	Init Head:	
WID:	3-1749-002	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	

## Wells and Additional Sources Detail Report

Yr Drilled:	1881	Pump Depth:	
Casing Dia(Inch):	6	Pump Elev:	
Ground El(Ft):	13	Pump GPM:	
Well Depth(Ft):	428	Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-415	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.820556
Geology Division:	Other	Lat NAD83 (DD):	21.285833
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1881		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Y. C. Shee		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
44	WNW	0.76	4,022.80	3.28	WATER WELLS

Well No:		Init CL (MG/L):	13954
Old No:	63-2A	Init Head:	2.8
WID:	3-1750-010	Init Head2:	
Well Name:	Ala Moana	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	INDOTH	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1967	Pump Depth:	



## Wells and Additional Sources Detail Report

Casing Dia(Inch):	18	Pump Elev:	
Ground El(Ft):	4.3	Pump GPM:	
Well Depth(Ft):	88	Pump GPM1:	
Solid Case(Ft):	42	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Caprock	Test GPM:	600
Bottom Hole Elev:	-83.7	Test Ddown:	0.8
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-37.7	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-038:001
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.842139
Geology Division:	Other	Lat NAD83 (DD):	21.289389
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:	750	Longitude:	
T:		Latitude:	
WCR:	1/1/1967		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	GGP Ala Moana L.L.C.		
Land Owner:	GGP Ala Moana L.L.C.		
Land Owner Name:			
Driller:	Layne International		
Pump Installer:			
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
45	ENE	0.76	4,026.05	13.99	WATER WELLS

Well No:		Init CL (MG/L):	47
Old No:	31-	Init Head:	23.2
WID:	3-1749-010	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1889	Pump Depth:	
Casing Dia(Inch):	12	Pump Elev:	

## Wells and Additional Sources Detail Report

Ground El(Ft):	13	Pump GPM:	
Well Depth(Ft):	463	Pump GPM1:	
Solid Case(Ft):	424	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-450	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-411	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.820278
Geology Division:	Other	Lat NAD83 (DD):	21.286389
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1889		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	F. Y. Tsumoto		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
46	ENE	0.77	4,056.46	12.52	WATER WELLS

Well No:	Init CL (MG/L):	47	
Old No:	32-	Init Head:	24
WID:	3-1749-011	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1889	Pump Depth:	
Casing Dia(Inch):	10	Pump Elev:	
Ground El(Ft):	14	Pump GPM:	

## Wells and Additional Sources Detail Report

Well Depth(Ft):	475	Pump GPM1:	
Solid Case(Ft):	420	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-461	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-406	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.820278
Geology Division:	Other	Lat NAD83 (DD):	21.286667
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1889		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	S. S. Dumae		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
48	WNW	0.78	4,113.88	3.28	WATER WELLS

Well No:		Init CL (MG/L):	13451
Old No:	63-2B	Init Head:	2.9
WID:	3-1750-011	Init Head2:	
Well Name:	Ala Moana	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNLOS	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1967	Pump Depth:	
Casing Dia(Inch):	18	Pump Elev:	
Ground El(Ft):	4.6	Pump GPM:	
Well Depth(Ft):	55	Pump GPM1:	

## Wells and Additional Sources Detail Report

Solid Case(Ft):	37	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Caprock	Test GPM:	550
Bottom Hole Elev:	-50.4	Test Ddown:	0.5
Btm Perfor Cas Elev:		Test Chlor:	17680
Btm Solid Cas Elev:	-32.4	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-3-038:001
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qcrs	Long NAD83 (DD):	-157.842222
Geology Division:	Other	Lat NAD83 (DD):	21.289722
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:	1100	Longitude:	
T:		Latitude:	
WCR:	1/1/1967		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	GGP Ala Moana L.L.C.		
Land Owner:	GGP Ala Moana L.L.C.		
Land Owner Name:			
Driller:	Layne International		
Pump Installer:			
Surveyor:			
Geology Name:	Calcareous reef rock		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
49	SE	0.78	4,125.23	3.28	WATER WELLS

Well No:	Init CL (MG/L):
Old No:	21-
WID:	3-1649-001
Well Name:	Waikiki
Old Name:	
Well Type:	
Well Use:	
Use:	ABNSLD
Year Drilled:	
Yr Drilled:	1882
Casing Dia(Inch):	8
Ground El(Ft):	5
Well Depth(Ft):	856
Solid Case(Ft):	856

Init Head:	7
Init Head2:	
Init Head3:	
Initial Head3:	
Latest HD:	
Max Chlor:	
Min Chlor:	
PIR:	
Pump Depth:	
Pump Elev:	
Pump GPM:	
Pump GPM1:	
Pump MGD:	

# Wells and Additional Sources Detail Report

Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-851	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-851	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.821667
Geology Division:	Other	Lat NAD83 (DD):	21.276667
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1882		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	G. Lucas		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
54	SE	0.79	4,194.42	3.28	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	22-	Init Head:	
WID:	3-1649-007	Init Head2:	
Well Name:	Waikiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1892	Pump Depth:	
Casing Dia(Inch):	10	Pump Elev:	
Ground EI(Ft):	5	Pump GPM:	
Well Depth(Ft):	941	Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	

## Wells and Additional Sources Detail Report

Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-936	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.823889
Geology Division:	Other	Lat NAD83 (DD):	21.274167
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1892		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	State of Hawaii		
Land Owner:	State of Hawaii		
Land Owner Name:			
Driller:	L. McCandless		
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
55	ENE	0.80	4,212.44	9.84	WATER WELLS

Well No:		Init CL (MG/L):	28
Old No:	27-	Init Head:	22.7
WID:	3-1749-001	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1881	Pump Depth:	
Casing Dia(Inch):	6	Pump Elev:	
Ground El(Ft):	15	Pump GPM:	
Well Depth(Ft):	407	Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	

## Wells and Additional Sources Detail Report

Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-392	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.82
Geology Division:	Other	Lat NAD83 (DD):	21.287222
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1881		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	C. K. Spencer		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
57	N	0.80	4,219.39	6.58	WATER WELLS

Well No:		Init CL (MG/L):	75
Old No:	45	Init Head:	29.6
WID:	3-1750-002	Init Head2:	
Well Name:	McCully	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1890	Pump Depth:	
Casing Dia(Inch):	6	Pump Elev:	
Ground El(Ft):	9	Pump GPM:	
Well Depth(Ft):	416	Pump GPM1:	0
Solid Case(Ft):	363	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Basal	Test GPM:	

## Wells and Additional Sources Detail Report

Bottom Hole Elev:	-407	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-354	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.831111
Geology Division:	Other	Lat NAD83 (DD):	21.295
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:			
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Y. Kam		
Land Owner:			
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
59	NE	0.83	4,407.35	9.84	WATER WELLS

Well No:		Init CL (MG/L):	
Old No:	35-1B	Init Head:	
WID:	3-1749-021	Init Head2:	
Well Name:	Moiliili	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1954	Pump Depth:	
Casing Dia(Inch):	12	Pump Elev:	
Ground El(Ft):		Pump GPM:	
Well Depth(Ft):	28	Pump GPM1:	
Solid Case(Ft):	11	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Caprock	Test GPM:	100
Bottom Hole Elev:		Test Ddown:	1



## Wells and Additional Sources Detail Report

Btm Perfor Cas Elev:	Test Chlor:
Btm Solid Cas Elev:	Test Temp:
Draft MGD:	Test Unit:
Draft MGY:	Island: Oahu
Draft Yr:	TMK: (1) 2-8-005:002
Five Vol Pump Time:	Quad Map: 13
Geology Code: Qcrs	Long NAD83 (DD): -157.823889
Geology Division: Other	Lat NAD83 (DD): 21.293056
Geology Status: Active	GPS: FALSE
Head Feet:	UTM: TRUE
Spec Capac: 100	Longitude:
T:	Latitude:
WCR: 1/1/1954	
Well Use Desc:	
Well Owner Name:	
Well Use Reporter Name:	
Owner User: Star Market	
Land Owner:	
Land Owner Name:	
Driller: Layne International	
Pump Installer:	
Surveyor:	
Geology Name: Calcareous reef rock	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
59	NE	0.83	4,407.35	9.84	WATER WELLS

Well No:	Init CL (MG/L):
Old No: 35-1A	Init Head:
WID: 3-1749-020	Init Head2:
Well Name: Moiliili	Init Head3:
Old Name:	Initial Head3:
Well Type:	Latest HD:
Well Use:	Max Chlor:
Use: ABNSLD	Min Chlor:
Year Drilled:	PIR: 1/1/1954
Yr Drilled: 1954	Pump Depth:
Casing Dia(Inch): 12	Pump Elev:
Ground El(Ft):	Pump GPM:
Well Depth(Ft): 28	Pump GPM1: 18
Solid Case(Ft): 10	Pump MGD: 0.025
Perf Case(Ft):	Pump Yr:
Aquifer Code: 30101	Test Date:
Aquifer Type: Caprock	Test GPM: 200
Bottom Hole Elev:	Test Ddown: 2.4
Btm Perfor Cas Elev:	Test Chlor:

## Wells and Additional Sources Detail Report

Btm Solid Cas Elev:	Test Temp:
Draft MGD:	Test Unit:
Draft MGY:	Island: Oahu
Draft Yr:	TMK: (1) 2-8-005:002
Five Vol Pump Time:	Quad Map: 13
Geology Code: Qcrs	Long NAD83 (DD): -157.823889
Geology Division: Other	Lat NAD83 (DD): 21.293056
Geology Status: Active	GPS: FALSE
Head Feet:	UTM: TRUE
Spec Capac: 83	Longitude:
T:	Latitude:
WCR: 1/1/1954	
Well Use Desc:	
Well Owner Name:	
Well Use Reporter Name:	
Owner User: Star Market	
Land Owner:	
Land Owner Name:	
Driller: Layne International	
Pump Installer:	
Surveyor:	
Geology Name: Calcareous reef rock	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
62	E	0.86	4,522.09	6.56	WATER WELLS

Well No:	Init CL (MG/L):
Old No:	Init Head:
WID: 3-1749-023	Init Head2:
Well Name: Ala Wai Pit 5	Init Head3:
Old Name:	Initial Head3:
Well Type:	Latest HD:
Well Use:	Max Chlor:
Use: ABNLOS	Min Chlor:
Year Drilled:	PIR:
Yr Drilled: 1964	Pump Depth:
Casing Dia(Inch): 18	Pump Elev:
Ground El(Ft):	Pump GPM:
Well Depth(Ft): 12	Pump GPM1: 700
Solid Case(Ft): 4	Pump MGD: 1.008
Perf Case(Ft):	Pump Yr:
Aquifer Code: 30101	Test Date:
Aquifer Type: Alluvial	Test GPM:
Bottom Hole Elev:	Test Ddown:
Btm Perfor Cas Elev:	Test Chlor:
Btm Solid Cas Elev:	Test Temp:

# Wells and Additional Sources Detail Report

Draft MGD:	Test Unit:
Draft MGY:	Island: Oahu
Draft Yr:	TMK: (1) 2-7-036:002
Five Vol Pump Time:	Quad Map: 13
Geology Code: Qa	Long NAD83 (DD): -157.818333
Geology Division: Other	Lat NAD83 (DD): 21.2825
Geology Status: Active	GPS: FALSE
Head Feet:	UTM: TRUE
Spec Capac:	Longitude:
T:	Latitude:
WCR: 1/1/1964	
Well Use Desc:	
Well Owner Name:	
Well Use Reporter Name:	
Owner User: C&C Honolulu Dept. of Parks and Recreation, DPR	
Land Owner: State of Hawaii	
Land Owner Name:	
Driller:	
Pump Installer:	
Surveyor:	
Geology Name: Alluvium	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
63	N	0.86	4,549.65	9.84	WATER WELLS

Well No:	Init CL (MG/L):
Old No: 46	Init Head: 28.2
WID: 3-1750-003	Init Head2:
Well Name: McCully	Init Head3:
Old Name:	Initial Head3:
Well Type:	Latest HD:
Well Use:	Max Chlor:
Use: ABNSLD	Min Chlor:
Year Drilled:	PIR:
Yr Drilled: 1890	Pump Depth:
Casing Dia(Inch): 8	Pump Elev:
Ground El(Ft): 10	Pump GPM:
Well Depth(Ft): 374	Pump GPM1: 0
Solid Case(Ft): 340	Pump MGD:
Perf Case(Ft):	Pump Yr:
Aquifer Code: 30102	Test Date:
Aquifer Type: Basal	Test GPM:
Bottom Hole Elev: -364	Test Ddown:
Btm Perfor Cas Elev:	Test Chlor:
Btm Solid Cas Elev: -330	Test Temp:
Draft MGD:	Test Unit:

## Wells and Additional Sources Detail Report

Draft MGY:	Island:	Oahu
Draft Yr:	TMK:	
Five Vol Pump Time:	Quad Map:	13
Geology Code: QTKl	Long NAD83 (DD):	-157.833333
Geology Division: Other	Lat NAD83 (DD):	21.295833
Geology Status: Active	GPS:	FALSE
Head Feet:	UTM:	TRUE
Spec Capac:	Longitude:	
T:	Latitude:	
WCR:		
Well Use Desc:		
Well Owner Name:		
Well Use Reporter Name:		
Owner User: Diamond Bakery		
Land Owner:		
Land Owner Name:		
Driller:		
Pump Installer:		
Surveyor:		
Geology Name: Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
66	NNW	0.88	4,635.61	6.56	WATER WELLS

Well No:	Init CL (MG/L):	42
Old No: 61-	Init Head:	29.9
WID: 3-1750-001	Init Head2:	
Well Name: McCully	Init Head3:	
Old Name:	Initial Head3:	
Well Type:	Latest HD:	
Well Use:	Max Chlor:	
Use: ABNSLD	Min Chlor:	
Year Drilled:	PIR:	
Yr Drilled: 1881	Pump Depth:	
Casing Dia(Inch): 8	Pump Elev:	
Ground El(Ft): 14	Pump GPM:	
Well Depth(Ft): 475	Pump GPM1:	
Solid Case(Ft):	Pump MGD:	
Perf Case(Ft):	Pump Yr:	
Aquifer Code: 30102	Test Date:	
Aquifer Type: Basal	Test GPM:	
Bottom Hole Elev: -461	Test Ddown:	
Btm Perfor Cas Elev:	Test Chlor:	
Btm Solid Cas Elev:	Test Temp:	
Draft MGD:	Test Unit:	
Draft MGY:	Island:	Oahu

# Wells and Additional Sources Detail Report

Draft Yr:	TMK:
Five Vol Pump Time:	Quad Map: 13
Geology Code: QTKI	Long NAD83 (DD): -157.836944
Geology Division: Other	Lat NAD83 (DD): 21.295278
Geology Status: Active	GPS: FALSE
Head Feet:	UTM: TRUE
Spec Capac:	Longitude:
T:	Latitude:
WCR: 01/01/1881	
Well Use Desc:	
Well Owner Name:	
Well Use Reporter Name:	
Owner User: City and County of Honolulu, C&CH	
Land Owner:	
Land Owner Name:	
Driller:	
Pump Installer:	
Surveyor:	
Geology Name: Lava flows, Ko'olau Basalt	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
68	N	0.90	4,740.25	13.87	WATER WELLS

Well No:	Init CL (MG/L):
Old No:	Init Head:
WID: 3-1750-005	Init Head2:
Well Name: McCully	Init Head3:
Old Name:	Initial Head3:
Well Type:	Latest HD:
Well Use:	Max Chlor:
Use: UNU	Min Chlor:
Year Drilled:	PIR:
Yr Drilled: 1953	Pump Depth:
Casing Dia(Inch): 8	Pump Elev:
Ground El(Ft):	Pump GPM:
Well Depth(Ft): 154	Pump GPM1: 0
Solid Case(Ft): 70	Pump MGD:
Perf Case(Ft):	Pump Yr:
Aquifer Code: 30102	Test Date:
Aquifer Type: Caprock	Test GPM: 50
Bottom Hole Elev:	Test Ddown: 8
Btm Perfor Cas Elev:	Test Chlor:
Btm Solid Cas Elev:	Test Temp:
Draft MGD:	Test Unit:
Draft MGY:	Island: Oahu
Draft Yr:	TMK: (1) 2-8-001:001

## Wells and Additional Sources Detail Report

Five Vol Pump Time:	Quad Map: 13
Geology Code: Qcrs	Long NAD83 (DD): -157.833056
Geology Division: Other	Lat NAD83 (DD): 21.296389
Geology Status: Active	GPS: FALSE
Head Feet:	UTM: TRUE
Spec Capac:	Longitude:
T:	Latitude:
WCR:	
Well Use Desc:	
Well Owner Name:	
Well Use Reporter Name:	
Owner User: Times Market	
Land Owner: Silverlode INC	
Land Owner Name:	
Driller:	
Pump Installer:	
Surveyor:	
Geology Name: Calcareous reef rock	

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
70	ENE	0.92	4,858.52	9.84	WATER WELLS

Well No:	Init CL (MG/L): 57
Old No: 26-	Init Head: 24.8
WID: 3-1749-014	Init Head2:
Well Name: Kaimuki High School	Init Head3:
Old Name:	Initial Head3:
Well Type:	Latest HD:
Well Use:	Max Chlor:
Use: OBS	Min Chlor:
Year Drilled:	PIR:
Yr Drilled: 1891	Pump Depth:
Casing Dia(Inch): 8	Pump Elev:
Ground El(Ft): 13	Pump GPM:
Well Depth(Ft): 417	Pump GPM1: 0
Solid Case(Ft): 282	Pump MGD:
Perf Case(Ft):	Pump Yr:
Aquifer Code: 30101	Test Date:
Aquifer Type: Basal	Test GPM:
Bottom Hole Elev: -404	Test Ddown:
Btm Perfor Cas Elev:	Test Chlor:
Btm Solid Cas Elev: -269	Test Temp:
Draft MGD:	Test Unit:
Draft MGY:	Island: Oahu
Draft Yr:	TMK: (1) 2-7-024:001
Five Vol Pump Time:	Quad Map: 13

## Wells and Additional Sources Detail Report

Geology Code:	QTKI	Long NAD83 (DD):	-157.817628
Geology Division:	Other	Lat NAD83 (DD):	21.285919
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1891		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Honolulu Board of Water Supply, BWS		
Land Owner:	City and County of Honolulu, C&CH		
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
72	E	0.93	4,896.11	9.84	WATER WELLS

Well No:	Init CL (MG/L):	51	
Old No:	24-	Init Head:	20.1
WID:	3-1749-008	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	UNU	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1888	Pump Depth:	
Casing Dia(Inch):	4	Pump Elev:	
Ground El(Ft):	10	Pump GPM:	
Well Depth(Ft):	410	Pump GPM1:	
Solid Case(Ft):	196	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-400	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-186	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-7-035:069
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.817222

# Wells and Additional Sources Detail Report

Geology Division:	Other	Lat NAD83 (DD):	21.283611
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1888		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Kim Chang		
Land Owner:	Cynthia C Akiyoshi Trust		
Land Owner Name:			
Driller:			
Pump Installer:			
Surveyor:			
Geology Name:	Lava flows, Ko'olau Basalt		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
75	N	0.95	4,999.15	19.69	WATER WELLS

Well No:	Init CL (MG/L):	55	
Old No:	43-	Init Head:	30
WID:	3-1849-007	Init Head2:	
Well Name:	Manoa Valley	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABN	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1891	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):	18	Pump GPM:	
Well Depth(Ft):		Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Perched	Test GPM:	
Bottom Hole Elev:		Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-8-009:076
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.829299
Geology Division:	Other	Lat NAD83 (DD):	21.296972



## Wells and Additional Sources Detail Report

Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	
WCR:	01/01/1891		
Well Use Desc:			
Well Owner Name:			
Well Use Reporter Name:			
Owner User:	Land Process Service Corp.		
Land Owner:	Kam, Wah Trust Est.		
Land Owner Name:			
Driller:	L. McCandless		
Pump Installer:			
Surveyor:			
Geology Name:	Alluvium		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
76	N	0.95	5,010.63	19.32	WATER WELLS

Well No:	Init CL (MG/L):	54	
Old No:	42-	Init Head:	30.6
WID:	3-1849-006	Init Head2:	
Well Name:	Manoa Valley	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABN	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1891	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):	17	Pump GPM:	
Well Depth(Ft):	160	Pump GPM1:	
Solid Case(Ft):		Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Perched	Test GPM:	
Bottom Hole Elev:	-143	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:		Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-8-009:080
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.829033
Geology Division:	Other	Lat NAD83 (DD):	21.29696
Geology Status:	Active	GPS:	FALSE

## Wells and Additional Sources Detail Report

Head Feet:	UTM:	TRUE
Spec Capac:	Longitude:	
T:	Latitude:	
WCR: 01/01/1891		
Well Use Desc:		
Well Owner Name:		
Well Use Reporter Name:		
Owner User: Carl P & Eleanor C Mudrick		
Land Owner: Carl P & Eleanor C Mudrick		
Land Owner Name:		
Driller: L. McCandless		
Pump Installer:		
Surveyor:		
Geology Name: Alluvium		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
78	N	0.96	5,067.33	19.69	WATER WELLS

Well No:	Init CL (MG/L):	56
Old No: 44-	Init Head:	30.8
WID: 3-1849-008	Init Head2:	
Well Name: Manoa Valley	Init Head3:	
Old Name:	Initial Head3:	
Well Type:	Latest HD:	
Well Use:	Max Chlor:	
Use: ABNSLD	Min Chlor:	
Year Drilled:	PIR:	
Yr Drilled: 1894	Pump Depth:	
Casing Dia(Inch): 8	Pump Elev:	
Ground El(Ft): 20	Pump GPM:	
Well Depth(Ft): 397	Pump GPM1:	
Solid Case(Ft): 337	Pump MGD:	
Perf Case(Ft):	Pump Yr:	
Aquifer Code: 30102	Test Date:	
Aquifer Type: Perched	Test GPM:	
Bottom Hole Elev: -377	Test Ddown:	
Btm Perfor Cas Elev:	Test Chlor:	
Btm Solid Cas Elev: -317	Test Temp:	
Draft MGD:	Test Unit:	
Draft MGY:	Island: Oahu	
Draft Yr:	TMK:	
Five Vol Pump Time:	Quad Map: 13	
Geology Code: Qa	Long NAD83 (DD): -157.829722	
Geology Division: Other	Lat NAD83 (DD): 21.297222	
Geology Status: Active	GPS: FALSE	
Head Feet:	UTM: TRUE	

# Wells and Additional Sources Detail Report

Spec Capac: Longitude:  
 T: Latitude:  
 WCR: 01/01/1894  
 Well Use Desc:  
 Well Owner Name:  
 Well Use Reporter Name:  
 Owner User: J. T. Shinn  
 Land Owner:  
 Land Owner Name:  
 Driller:  
 Pump Installer:  
 Surveyor:  
 Geology Name: Alluvium

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
81	E	0.97	5,139.48	9.84	WATER WELLS

Well No:		Init CL (MG/L):	56
Old No:	25-	Init Head:	25
WID:	3-1749-007	Init Head2:	
Well Name:	Kapahulu	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	UNU	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1885	Pump Depth:	
Casing Dia(Inch):	8	Pump Elev:	
Ground El(Ft):	18	Pump GPM:	
Well Depth(Ft):	625	Pump GPM1:	0
Solid Case(Ft):	309	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30101	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-607	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-291	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 2-7-024:001
Five Vol Pump Time:		Quad Map:	13
Geology Code:	QTKI	Long NAD83 (DD):	-157.816667
Geology Division:	Other	Lat NAD83 (DD):	21.285278
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	

# Wells and Additional Sources Detail Report

T: Latitude:  
 WCR: 01/01/1885  
 Well Use Desc:  
 Well Owner Name:  
 Well Use Reporter Name:  
 Owner User: City and County of Honolulu, C&CH  
 Land Owner: City and County of Honolulu, C&CH  
 Land Owner Name:  
 Driller:  
 Pump Installer:  
 Surveyor:  
 Geology Name: Lava flows, Ko'olau Basalt

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
84	N	0.99	5,235.31	25.38	WATER WELLS

Well No:		Init CL (MG/L):	51
Old No:	51-	Init Head:	29.8
WID:	3-1850-002	Init Head2:	
Well Name:	Makiki	Init Head3:	
Old Name:		Initial Head3:	
Well Type:		Latest HD:	
Well Use:		Max Chlor:	
Use:	ABNSLD	Min Chlor:	
Year Drilled:		PIR:	
Yr Drilled:	1880	Pump Depth:	
Casing Dia(Inch):	5	Pump Elev:	
Ground El(Ft):	25	Pump GPM:	
Well Depth(Ft):	475	Pump GPM1:	
Solid Case(Ft):	347	Pump MGD:	
Perf Case(Ft):		Pump Yr:	
Aquifer Code:	30102	Test Date:	
Aquifer Type:	Basal	Test GPM:	
Bottom Hole Elev:	-450	Test Ddown:	
Btm Perfor Cas Elev:		Test Chlor:	
Btm Solid Cas Elev:	-322	Test Temp:	
Draft MGD:		Test Unit:	
Draft MGY:		Island:	Oahu
Draft Yr:		TMK:	(1) 3-9-010:001
Five Vol Pump Time:		Quad Map:	13
Geology Code:	Qa	Long NAD83 (DD):	-157.832778
Geology Division:	Other	Lat NAD83 (DD):	21.297778
Geology Status:	Active	GPS:	FALSE
Head Feet:		UTM:	TRUE
Spec Capac:		Longitude:	
T:		Latitude:	

## Wells and Additional Sources Detail Report

WCR: 01/01/1880  
Well Use Desc:  
Well Owner Name:  
Well Use Reporter Name:  
Owner User: Kamehameha Schools, KS  
Land Owner: Kamehameha Schools, KS  
Land Owner Name:  
Driller: Pierce  
Pump Installer:  
Surveyor:  
Geology Name: Alluvium

## Radon Information

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for *HONOLULU* County: **3**

*Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L*

*Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L*

*Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L*

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### Federal Area Radon Information for *HONOLULU* County

No Measures/Homes:	257
Geometric Mean:	0.1
Arithmetic Mean:	0.1
Median:	0
Standard Deviation:	0.6
Maximum:	4.8
% >4 pCi/L:	0
% >20 pCi/L:	0
Notes on Data Table:	TABLE 1. Screening indoor radon data from the State/EPA Residential Radon Survey of Hawaii conducted during 1989-90. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

## **Federal Sources**

### **FEMA National Flood Hazard Layer**

**FEMA FLOOD**

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

### **Indoor Radon Data**

**INDOOR RADON**

Indoor radon measurements tracked by the Environmental Protection Agency(EPA) and the State Residential Radon Survey.

### **Public Water Systems Violations and Enforcement Data**

**PWSV**

List of drinking water violations and enforcement actions from the Safe Drinking Water Information System (SDWIS) made available by the Drinking Water Protection Division of the US EPA's Office of Groundwater and Drinking Water. Enforcement sensitive actions are not included in the data released by the EPA. Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

### **Radon Zone Level**

**RADON ZONE**

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

### **Safe Drinking Water Information System (SDWIS)**

**SDWIS**

The Safe Drinking Water Information System (SDWIS) contains information about public water systems as reported to US Environmental Protection Agency (EPA) by the states. Addresses may correspond with the location of the water system, or with a contact address.

### **Soil Survey Geographic database**

**SSURGO**

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

### **U.S. Fish & Wildlife Service Wetland Data**

**US WETLAND**

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

### **USGS Current Topo**

**US TOPO**

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

### **USGS Geology**

**US GEOLOGY**

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

### **USGS National Water Information System**

**FED USGS**

The U.S. Geological Survey (USGS)'s National Water Information System (NWIS) is the nation's principal repository of water resources data. This database includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data.

### **Wells from NWIS**

**FED USGS**

The U.S. Geological Survey's National Water Information System (NWIS) is the nation's principal repository of water resources data. The NWIS includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data. This NWIS dataset contains select Site Types from the overall NWIS Sites data, limited to the following Group Site Types only: Groundwater Group Site Types: Well, Collector or Ranney type well, Hyporheic-zone well,

# Appendix

Interconnected Wells, Multiple wells; Spring Group Site Type: Spring; and Other Group Site Types: Aggregate groundwater use, Cistern.

## **State Sources**

### **Oil and Gas Wells**

As of HI state regulatory agencies, FracTracker Alliance - state of Hawaii confirmed not to have any active (drilled but not plugged) oil and gas wells.

**OGW**

### **Well Index Database**

The Department of Land and Natural Resources Commission on Water Resource Management (CWRM) maintains the Well Index Database that tracks specific information pertaining to the construction and installation of production wells in Hawaii.

**WATER WELLS**



## Liability Notice

**Reliance on information in Report:** The Physical Setting Report (PSR) DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a review of environmental databases and physical characteristics for the site or adjacent properties.

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*RECORDS OF  
COMMUNICATION/INTERVIEW*

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**Overview**



**Legend**

- Roads
- Parcels

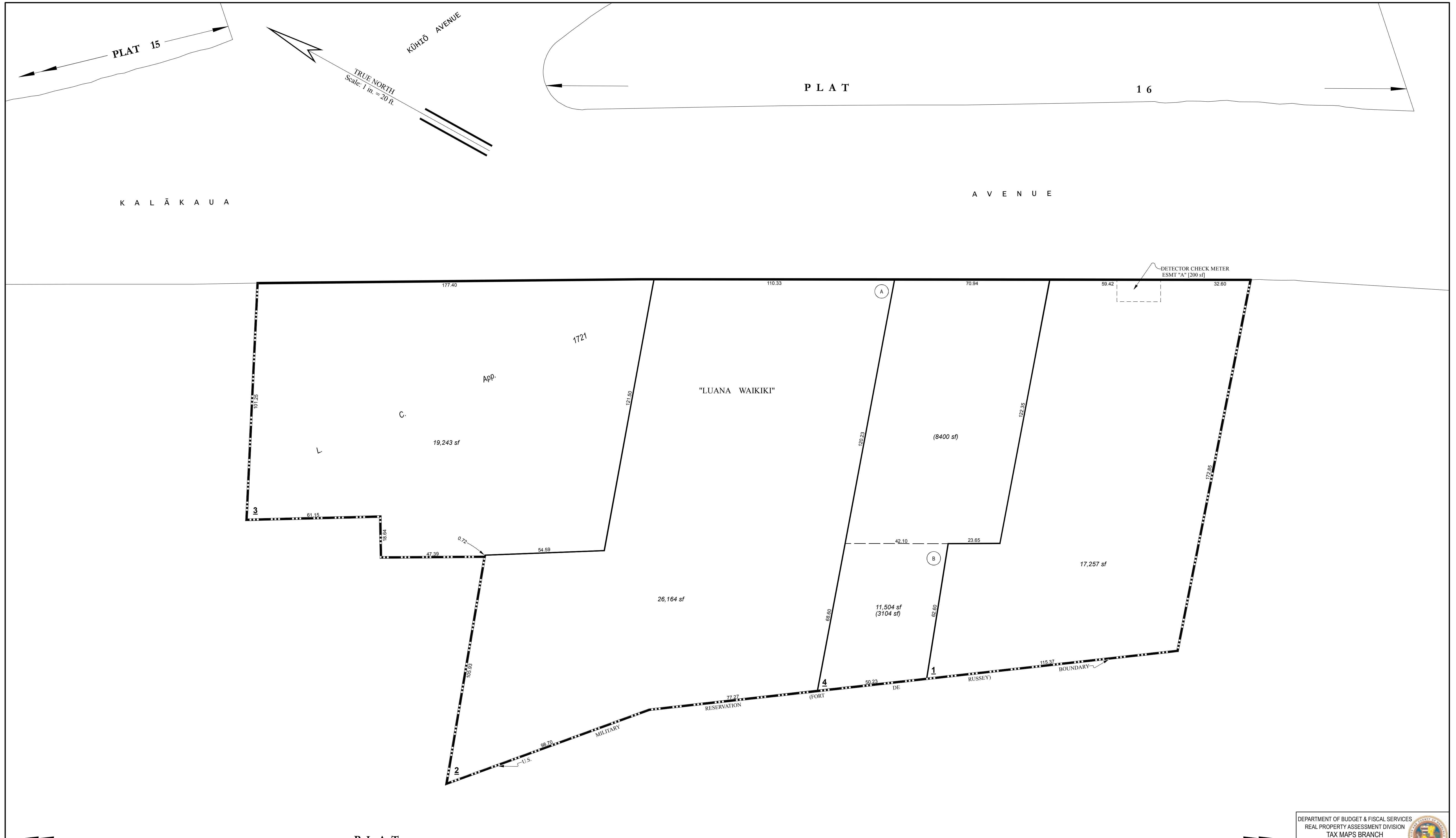
<b>Parcel ID</b>	260060010000	<b>Situs/Physical Address</b>	2057 KALAKAU AVE	<b>Assessed Land Value</b>	\$14,495,900	<b>Last 2 Sales</b>			
<b>Acreage</b>	0.3962			<b>Assessed Building Value</b>	\$0	<b>Date</b>	<b>Price</b>	<b>Reason</b>	<b>Qual</b>
<b>Class</b>	COMMERCIAL			<b>Total Property Assessed Value</b>	\$14,495,900	n/a	0	n/a	n/a
				<b>Total Property Exemptions</b>	\$0	n/a	0	n/a	n/a
				<b>Total Net Taxable Value</b>	\$14,495,900				

**Brief Tax Description** POR LCAW 8559B:29 17,257 SF DES SUB/ESMTS  
 (Note: Not to be used on legal documents)

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Date created: 9/26/2022  
 Last Data Uploaded: 9/26/2022 12:43:35 AM



Date: 05/07/2014 lgs

LC APP 762 Map 2, LC APP 857 Map 2 and LC APP 1721 Map 1; HONOLULU, OAHU, HAWAII.

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 FOR PROPERTY ASSESSMENT PURPOSES, PARCELS MAY NOT BE LEGALLY SUBDIVIDED LOTS - SUBJECT TO CHANGE

DEPARTMENT OF BUDGET & FISCAL SERVICES REAL PROPERTY ASSESSMENT DIVISION TAX MAPS BRANCH CITY & COUNTY OF HONOLULU <b>TAX MAP</b>		
FIRST TAXATION DIVISION		
ZONE	SECTION	PLAT
<b>2</b>	<b>6</b>	<b>006</b>
SCALE: 1 INCH = 20 FEET		

## NOTICE TO REQUESTER

TO: Alexis Aguilar, ENPRO Environmental / aaguilar@enproenvironmental.com HW Section  
(Requester's name)

FROM: Hawaii Dept. of Health, Solid and Hazardous Waste Branch, Amy Liana, (808) 586-4226, amy.liana@doh.hawaii.gov  
(Agency, and agency contact person's name, telephone number, & email address)

DATE THAT THE RECORD REQUEST WAS RECEIVED BY AGENCY: 10/14/2022

DATE OF THIS NOTICE: 10/18/2022

GOVERNMENT RECORDS YOU REQUESTED (attach copy of request or provide brief description below):

- 1.
- 2.
- 3.
- 4.

THIS NOTICE IS TO INFORM YOU THAT YOUR RECORD REQUEST: No HW records

Will be granted in its entirety.

Cannot be granted. Agency is unable to disclose the requested records for the following reason:

- Agency does not maintain the records. (HRS § 92F-3)  
Other agency that is believed to maintain records: \_\_\_\_\_
- Agency needs further clarification or description of the records requested. Please contact the agency and provide the following information: \_\_\_\_\_
- Request requires agency to create a summary or compilation from records, but requested information is not readily retrievable. (HRS § 92F-11(c))

Will be granted in part and denied in part, **OR**  Is denied in its entirety

Although the agency maintains the requested records, it is not disclosing all or part of them based on the exemptions provided in HRS § 92F-13 and/or § 92F-22 or other laws cited below.

(Describe the portions of records that the agency will not disclose.)

RECORDS OR  
INFORMATION WITHHELD

APPLICABLE  
STATUTES

AGENCY  
JUSTIFICATION

### REQUESTER'S RESPONSIBILITIES:

You are required to (1) pay any lawful fees and costs assessed; (2) make any necessary arrangements with the agency to inspect, copy or receive copies as instructed below; and (3) provide the agency any additional information requested. If you do not comply with the requirements set forth in this notice within 20 business days after the postmark date of this notice or the date the agency makes the records available, you will be presumed to have abandoned your request and the agency shall have no further duty to process your request. Once the agency begins to process your request, you may be liable for any fees and costs incurred. If you wish to cancel or modify your request, you must advise the agency upon receipt of this notice.

**METHOD & TIMING OF DISCLOSURE:**

Records available for public access in their entireties must be disclosed within a reasonable time, not to exceed 10 business days from the date the request was received, or after receipt of any prepayment required. Records not available in their entireties must be disclosed within 5 business days after this notice or after receipt of any prepayment required. HAR § 2-71-13(c). If incremental disclosure is authorized by HAR § 2-71-15, the first increment must be disclosed within 5 business days of this notice or after receipt of any prepayment required.

**Method of Disclosure:**

- Inspection at the following location: \_\_\_\_\_
- As requested, a copy of the record(s) will be provided in the following manner:
  - Available for pick-up at the following location: \_\_\_\_\_
  - Will be mailed to you.
  - Will be transmitted to you by other means requested: \_\_\_\_\_

**Timing of Disclosure:** All records, or the first increment if applicable, will be made available or provided to you:

- On \_\_\_\_\_, 20\_\_\_\_.
- After prepayment of 50% of fees and 100% of costs, as estimated below.

**For incremental disclosures, each subsequent increment will be disclosed within 20 business days after:**

- The prior increment (if one prepayment of fees is required and received), or
- Receipt of each incremental prepayment, if prepayment for each increment is required.

**Records will be disclosed in increments because the records are voluminous and the following extenuating circumstances exist:**

- Agency must consult with another person to determine whether the record is exempt from disclosure under HRS chapter 92F.
- Request requires extensive agency efforts to search, review, or segregate the records or otherwise prepare the records for inspection or copying.
- Agency requires additional time to respond to the request in order to avoid an unreasonable interference with its other statutory duties and functions.
- A natural disaster or other situation beyond agency's control prevents agency from responding to the request within 10 business days.

**ESTIMATED FEES & COSTS AND PAYMENT:**

**FEES:** For personal record requests under Part III of chapter 92F, HRS, the agency may charge you for its costs only, and fee waivers do not apply.

For public record requests under Part II of chapter 92F, HRS, the agency is authorized to charge you fees to search for, review, and segregate your request (even if a record is subsequently found to not exist or will not be disclosed in its entirety). The agency must waive the first \$30 in fees assessed for general requesters, OR in the alternative, the first \$60 in fees when the agency finds that the request is made in the public interest. Only one waiver is provided for each request. See HAR §§ 2-71-19, -31 and -32.

**COSTS:** For either personal or public record requests, the agency may charge you for the costs of copying and delivering records in response to your request, and other lawful fees and costs.

**PREPAYMENT:** The agency may require prepayment of 50% of the total estimated fees and 100% of the total estimated costs prior to processing your request. If a prepayment is required, the agency may wait to start any search for or review of the records until the prepayment is received by the agency. Additionally, if you have outstanding fees or costs

from previous requests, including abandoned requests, the agency may require prepayment of 100% of the unpaid balance from prior requests before it begins any search or review for the records you are now seeking.

The following is an itemization of what you must pay, based on the estimated fees and costs that the agency will charge you and the applicable waiver amount that will be deducted:

**For public record requests only:**

<b>Fees:</b> Search	Estimate of time to be spent: <u>15</u> <sup>mins</sup> <del>hours</del> (\$2.50 for each 15-minute period)	\$ 2.50 x 13
Review & segregation	Estimate of time to be spent: _____ hours (\$5.00 for each 15-minute period)	\$
Fees waived	<input checked="" type="checkbox"/> general (\$30), <b>OR</b> <input type="checkbox"/> public interest (\$60) (Only one waiver per request)	<\$ <u>30.00</u> x 13
Other	_____	\$
	(Pursuant to HAR §§ 2-71-19 & 2-71-31)	
<b>Total Estimated Fees:</b>		<b>\$ 0.00</b>

**For public or personal record requests:**

<b>Costs:</b> Copying	Estimate of # of pages to be copied: _____ (@ \$ _____ per page, pursuant to HRS § 92-21)	\$
Delivery	Postage	\$
Other	_____	\$
<b>Total Estimated Costs:</b>		<b>\$</b>

**TOTAL ESTIMATED FEES AND COSTS from above:** \$ 0.00

The estimated fees and costs above are for the first incremental disclosure only. Additional fees and costs, and no further fee waivers, will apply to future incremental disclosures.

PREPAYMENT IS REQUIRED (50% of fees + 100% of costs, as estimated above) \$

UNPAID BALANCE FROM PRIOR REQUESTS (100% must be paid before work begins) \$

**TOTAL AMOUNT DUE AT THIS TIME** \$ 0.00

Payment may be made by:  cash  
 personal check payable to \_\_\_\_\_  
 other \_\_\_\_\_

For questions about this notice or the records being sought, please contact the agency person named at the beginning of this form. Please note that the Office of Information Practices (OIP) does not maintain the records of other agencies, and a requester must seek records directly from the agency it believes maintains the records. If the agency denies or fails to respond to your written request for records or if you have other questions regarding compliance with the UIPA, then you may contact OIP at (808) 586-1400, [oip@hawaii.gov](mailto:oip@hawaii.gov), or 250 South Hotel Street, Suite 107, Honolulu, Hawaii 96813.

OCT 14 2022

(13)

### REQUEST TO ACCESS A GOVERNMENT RECORD

DATE: October 14, 2022  
 TO: DOH/EMD/Solid & Hazardous Waste Branch (Fax: 808-586-7509)  
 FROM: Alexis Aguilar ENPRO Environmental  
Name or Alias 151 Hekili Street, Suite 210 (808) 748-2108 phone  
Contact Information Kailua, Hawaii 96734 (808) 262-4449 fax

WST: \_\_\_\_\_  
 HW: NO FILES  
 TH: \_\_\_\_\_  
 SW: \_\_\_\_\_

Although you are not required to provide any personal information, you should provide enough information to allow the agency to contact you about this request. The processing of this request may be stopped if the agency is unable to contact you. Therefore, please provide any information that will allow the agency to contact you (name or alias, telephone or fax number, mailing address, e-mail address, etc.).

#### I WOULD LIKE THE FOLLOWING GOVERNMENT RECORD

Describe the government record as specifically as possible so that it can be located. Try to provide a record name, subject matter, date, location, purpose, or names of persons to whom the record refers, or other information that could help the agency identify the record. A complete and accurate description of the government record you request will prevent delays in locating the record. Attach a second page if needed.

*please expedite - THANKS*

Aloha,

I am currently working on a Phase I Environmental Site Assessment for the following property located on Oahu: Former Kyo-ya Restaurant at 2057 Kalakaua Avenue, Honolulu, Hawaii. I would like to review regulatory records for the following properties:

- 2051-2057 Kalakaua Avenue, Case No.: 20061225-1454
- 1988 Kalakaua Avenue, Case No.: 20190516-1022
- Kalakaua Avenue & Keoniana Street, Case No.: 20010425-1305
- Chevron USA, 2002 Kalakaua Avenue, IHEER ID: 2594, Facility ID: 9-101266
- AIM Waikiki, 2025 Kalakaua Avenue, Facility ID: 9-100328
- Waikiki Gateway Park Explosion, 2044 Kalakaua Avenue, Facility Registry ID: 110013776002
- Maile Sky Court, 2058 Kuhio Avenue
- King Kalakaua Plaza, 2080 Kalakaua Avenue, Facility ID: 9-103235
- Kalakaua Avenue Oil and Waste Released from Tank, 2090 Kalakaua Avenue
- CM&D, 2112 Kalakaua Avenue, Facility ID: 9-103734
- Ritz Carlton Waikiki Residence & Resort, 2139 Kuhio Avenue
- Royal Gardens Hotel Diesel, 440 Olohana Street

My report is due October 24., 2022. In light of my timeline, I would greatly appreciate any assistance you can provide in expediting access to the files. Mahalo for you time and assistance,

Alexis Aguilar



# NOTICE TO REQUESTER

DATE: 10/26/2012

TO: Alexis Agallo

FROM: Dept. of Health/Hazard Evaluation & Emergency Response Officer(201-535-4249)  
Department Name, Name & Telephone Number of Contact Person at Agency

ACCESS TO THE GOVERNMENT RECORD YOU REQUESTED (copy of request attached or brief description below)

---

---

- will be granted in its entirety
- cannot be granted because
- agency does not maintain the requested record.
  - agency needs a further description or clarification of the requested record. Please contact the agency within \_\_\_\_\_ day of your request will be considered abandoned.
  - the request would require the agency to create a summary or compilation from records that is not readily retrievable.
- is denied in its entirety or will be granted only to certain parts of this government record. Denial of access to this or portions of this government record is based upon the following subsections of section 52F-13, Hawaii Revised Statutes, or other laws as cited below. The portions of the record that the agency will not disclose are described in general terms:

STATUTE

RECORD OR PORTIONS WITHHELD

## METHOD AND DATE OF DISCLOSURE:

- inspection at the following location: \_\_\_\_\_ On date/time: \_\_\_\_\_
- Copy provided to you:
- available for pick-up at the agency on (date/time): \_\_\_\_\_
  - to be mailed
  - transmitted by other means as requested
- Incremental Disclosure: The record will be disclosed in increments. (The agency must attach a description of extenuating circumstances that support its intention to disclose incrementally. See §2-71-15 H.A.R.) The first increment will be available on \_\_\_\_\_

See Back for Information on Fees

Should you have questions about the agency's response, you may contact the person named above. If you are not satisfied with the agency's response, you may call the Office of Information Practices at 808-535-1402.

## REQUEST TO ACCESS A GOVERNMENT RECORD

DATE: October 14, 2022  
TO: Hazard Evaluation & Emergency Response Office (Fax: 808-7837)  
FROM: Alexis Aguilu ENPRO Environmental  
Site & Env: 131 Heleli Street, Suite 210 (808) 748-2108 phone  
Honolulu, Hawaii 96714 (808) 262-4449 fax

Although you are not required to provide any personal information, you should provide enough information to allow the Agency to contact you about this request. The privacy of this request may be released if the Agency is unable to contact you. Therefore, please provide any information that will allow the Agency to contact you (name, e-mail, telephone or the mailing, mailing address, actual address, etc.).

### PLEASE LIST THE FOLLOWING GOVERNMENT RECORD

Describe the government record or records as specifically as possible so that it can be located. To it provide a record name, subject matter, date created, location or control of records or other identifying information that would help the Agency locate the record. A complete and accurate description of the government record you request will greatly assist in locating the record. Attach a record page if needed.

Alexis,

I am currently working on an Environmental Site Assessment for the following property located on Oahu: Tonaw Kyo-ya Restaurant at 2057 Kalia Avenue, Honolulu, Hawaii. I would like to review regulatory records for the following properties:

- 2001-2007 Kalia Avenue, Case No.: 20061225-2454
- 1888 Kalia Avenue, Case No.: 20090516-1822
- Kalia Avenue & Kamehame Street, Case No.: 20030425-1305
- Chevron USA, 2007 Kalia Avenue, DDER ID: 2104, **Facility ID: 9-101266**
- ADM Waiuku, 2025 Kalia Avenue, **Facility ID: 9-100528**
- Waiuku Gateway Park Explosion, 2046 Kalia Avenue, **Facility Registry ID: 118923779002**
- Mole Sky Court, 2078 Kalia Avenue
- King Kalia Plaza, 2080 Kalia Avenue, **Facility ID: 9-103238**
- Kalia Avenue Oil and Waste Released from Tank, 2080 Kalia Avenue
- **CM&D, 2112 Kalia Avenue, Facility ID: 9-105754**
- Kilo Carbon Waiuku Residence & Resort, 2139 Kalia Avenue
- Royal Gardens Hotel Diesel, 440 Ohiwaka Street

My report is due October 24, 2022. In light of my timeline, I would greatly appreciate any assistance you can provide in expediting access to the files. Mahalo for your time and assistance. **\*\* No record found on the Site Facility/TMK or address request \*\***

**R.L - 10/26/2022**

Alexis Aguilu

*Note: Please check with Solid and Hazardous Waste Branch (808) 783-7837 for the Facility ID Nos. highlighted above (808) 783-1226.*

**ORIGIINALE** (Please check one or more of the options below)

- To inspect the government record.
- A copy of the government record. (Please check one of the options below). See the back of the page for information about fees that you may be required to pay for agency services to produce your record request. Note: Copying and transmission charges may also apply to certain records.
- Pick up at agency (date and time) \_\_\_\_\_
- Yes
- Yes but you will only if available
- Other if available (please specify) \_\_\_\_\_
- If the agency maintains the records in a form other than paper, please advise in which format you would prefer to have the records:
- Electronic  Audio  Other (please specify) \_\_\_\_\_
- Check this box if you are attaching a request for waiver of fees in the public interest (see waiver information on back)

**SEE BACK FOR IMPORTANT INFORMATION**

OFFICIAL USE ONLY

\_\_\_\_\_  
Agency Name

\_\_\_\_\_  
Office Manager

Oct 27, 2022

Date: (18) (24) (30) (60)

## Alexis Aguilar

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**From:** Hiromoto, Carly <carly.hiromoto@hawaiianelectric.com> on behalf of TransformerInfo <TransformerInfo@hawaiianelectric.com>  
**Sent:** Friday, October 28, 2022 12:38 PM  
**To:** Alexis Aguilar  
**Cc:** TransformerInfo  
**Subject:** RE: Follow-up: Pad Mounted Transformer Vault 20072: 2057 Kalakaua Avenue, Honolulu Hawaii

Hi Alexis,

Thanks again for your confirmation and for providing the photos. After looking into this further, it is possible that V20072 is not company-owned equipment, and you may need to follow-up with the property owner for information about this vault.

Thank you,  
~Carly

---

**From:** Alexis Aguilar <aAguilar@enproenvironmental.com>  
**Sent:** Tuesday, October 25, 2022 2:53 PM  
**To:** TransformerInfo <TransformerInfo@hawaiianelectric.com>  
**Subject:** RE: Follow-up: Pad Mounted Transformer Vault: 2057 Kalakaua Avenue, Honolulu Hawaii

Yes, this is correct. Please see the attached photos.

Thank you!

Alexis Aguilar  
Project Manager



151 Hekili Street Suite 210 Kailua HI 96734  
Direct Line: 808-748-2108  
Ph: 808-262-0909 Fx: 808-262-4449  
[www.enproenvironmental.com](http://www.enproenvironmental.com)

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**From:** Hiromoto, Carly <[carly.hiromoto@hawaiianelectric.com](mailto:carly.hiromoto@hawaiianelectric.com)> **On Behalf Of** TransformerInfo  
**Sent:** Tuesday, October 25, 2022 7:03 AM  
**To:** Alexis Aguilar <[aAguilar@enproenvironmental.com](mailto:aAguilar@enproenvironmental.com)>  
**Cc:** TransformerInfo <[TransformerInfo@hawaiianelectric.com](mailto:TransformerInfo@hawaiianelectric.com)>  
**Subject:** Follow-up: Pad Mounted Transformer Vault: 2057 Kalakaua Avenue, Honolulu Hawaii  
**Importance:** High

Aloha Alexis,

Just wanted to follow-up. Please confirm the subject property and if the vault number in the attached letter is correct (V20072). Please send any photos you may have as well.

Thank you,  
~Carly

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**From:** Hiromoto, Carly <[carly.hiromoto@hawaiianelectric.com](mailto:carly.hiromoto@hawaiianelectric.com)> **On Behalf Of** TransformerInfo  
**Sent:** Tuesday, October 18, 2022 9:16 AM  
**To:** 'Alexis Aguilar' <[aAguilar@enproenvironmental.com](mailto:aAguilar@enproenvironmental.com)>  
**Cc:** TransformerInfo <[TransformerInfo@hawaiianelectric.com](mailto:TransformerInfo@hawaiianelectric.com)>  
**Subject:** Follow-up: Pad Mounted Transformer Vault: 2057 Kalakaua Avenue, Honolulu Hawaii  
**Importance:** High

Aloha Alexis,

Can you please confirm the vault number (20072) that you are requesting information for? Also, is the subject address the location of the Kyo-ya Building? If you have any photos of the equipment, please send that as well.

Thank you,  
~Carly

---

**From:** Alexis Aguilar <[aAguilar@enproenvironmental.com](mailto:aAguilar@enproenvironmental.com)>  
**Sent:** Friday, October 14, 2022 9:59 AM  
**To:** Hiromoto, Carly <[carly.hiromoto@hawaiianelectric.com](mailto:carly.hiromoto@hawaiianelectric.com)>  
**Cc:** TransformerInfo <[TransformerInfo@hawaiianelectric.com](mailto:TransformerInfo@hawaiianelectric.com)>  
**Subject:** Pad Mounted Transformer Vault: 2057 Kalakaua Avenue, Honolulu Hawaii

**[This email is coming from an EXTERNAL source. Please use caution when opening attachments or links in suspicious email.]**

Aloha Carly,

Attached to this email is an information request form for a transformer vault located on the southeastern boarder of 2057 Kalakaua Avenue. Should you have any questions or concerns, please don't hesitate to ask.

Mahalo,

**Alexis Aguilar**  
Project Manager



151 Hekili Street Suite 210 Kailua HI 96734  
Direct Line: 808-748-2108  
Ph: 808-262-0909 Fx: 808-262-4449  
[www.enproenvironmental.com](http://www.enproenvironmental.com)

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### Phase I Environmental Site Assessment User Questionnaire

The person who will use the Phase I ESA should provide the following information. Please fill in this form to the best of your ability, explaining any Yes answers to 1b), 2, 3, 4, 5, and/or 6 on a separate sheet of paper and attaching supporting documentation. Without these answers, our report would have to note that the Phase I ESA is incomplete, and your Landowner Liability Protections could be at risk. **Provide the completed questionnaire before we conduct the site visit.**

Completed by: Name: John Nelson  
Company: Best Bridal Hawaii, Inc.  
Title: Property operations Manager  
Phone Number: 808-722-5539  
Time Familiar with Site: 2015-Present  
Relationship to Site: Property Operations Manager

PROJECT NO.: 2209-00263-PH1  
PROJECT NAME/ADDRESS: 2057 Kalakaua Ave

1. **Environmental Cleanup Liens.** ASTM requires the User to check for environmental liens that may be filed or recorded against the subject property. Such liens might be found in the "exceptions to coverage" section of the property's title insurance commitment or policy. Please attach all documentation pertaining to environmental cleanup liens.

- a) Have you checked for these environmental cleanup liens?  Yes  No  
b) Are you aware of any such liens against the subject property?  Yes  No

2. **Activity and Use Limitations (AULs).** These include engineering controls (e.g. caps) and land use restrictions or institutional controls (e.g. deed restrictions, covenants) that may be in place at the subject property or filed under federal, tribal, state, or local law. The title commitment or policy might list AULs. Please attach all documentation pertaining to environmental cleanup liens.

Are you aware of any possible AULs involving the subject site?  Yes  No

3. **Specialized Knowledge.** This involves personal knowledge or experience related to the subject property or nearby properties. For example, any chemicals, oil, degreasers, gasoline, or other hazardous substances commonly used at the subject property or adjacent properties. Include information on above-ground and/or underground storage tanks, cess pools, etc.

Do you have any specialized knowledge that might indicate the past or present use of such substances on the subject or nearby properties?  Yes  No

4. **Fair Market Value.** A purchase price significantly below fair market value may indicate an environmental problem. Please note that this question does not require an appraisal of the property. If the price is significantly below market value, the User should consider whether it might be because contamination may be present at the subject property.

Is the purchase price significantly below fair market value?  Yes  No

5. **Common Knowledge.** Please use a separate sheet if necessary.

- a) Describe past uses of the property: Restaurant.
- b) Describe any specific chemicals that are present or were once present at the property: N/A
- c) Describe any other information such as spills, cleanups, or previous environmental investigations that may help us identify possible contamination: N/A

6. **Obvious Indicators.** This includes any spills, stains, releases, cleanups, etc. on or near the subject property.

Do you know of any obvious indicators of possible contamination on or near the site?  Yes  No

7. **Purpose of Phase I.** Please indicate your purpose for conducting a Phase I Environmental Site Assessment as the subject property.

- Sale/purchase     Return of lease     Redevelopment     Other \_\_\_\_\_

8. **Plans.** This includes general maps, as-built drawings, etc. Please attach all available plans for the subject property.

Can you supply a floor plan diagram and list of tenants for the structures at the property?  Yes  No

9. **Attachments.** Please indicate all documentation provided along with this questionnaire. - Previously Provided

- |   |                                |                                    |   |
|---|--------------------------------|------------------------------------|---|
| a) Ownership records                                  | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input checked="" type="radio"/> Not Applicable |
| b) Environmental liens                                | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| c) AULs   | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| d) Explanation of specialized knowledge               | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| e) Explanation of reduced fair market value           | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| f) Additional information regarding common knowledge  | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| g) Explanation of obvious indicators of contamination | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| h) Previous environmental reports                     | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| i) Floor plan   | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| j) Site map   | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| k) As-built drawings                                  | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |
| l) Other  | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable            |

**Respondent Affirmation.** Respondent represents that to the best of their knowledge the above statements and facts are true and correct and no material facts have been suppressed or misstated.

Signature [Signature] Date 10/10/22

Answers to this questionnaire have been orally communicated to a representative of ENPRO Environmental, and was completed by:

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_





### Phase I Environmental Site Assessment Site Questionnaire

Persons with significant knowledge of the subject property – such as past and present owners and occupants – should provide the following information. Please fill in this form to the best of your ability and attach supporting documentation, if available. Without these answers, our report would have to note that the Phase I ESA is incomplete, and applicable Landowner Liability Protections could be at risk. Return the completed questionnaire as soon as possible.

Completed by: Name: JoAnn Nelson  
 Company: Best Bridal Hawaii, Inc.  
 Title: Property Operations Manager  
 Phone Number: (808) 722-5539  
 Time Familiar with Site: 2015 - Present  
 Relationship to Site: Property Operations Manager

PROJECT NO.: 2209-00263-PH1  
 PROJECT NAME/ADDRESS: 2057 Kalakaua Ave

#### GENERAL SITE USAGE

- What is the current use of the property? Wedding Planning.
- Are hazardous materials or petroleum products currently present at the property?  Yes  No  Unknown  
 If yes, what type and where are they located? lawn equipment containing oil/gas  
Back storage room.
- What is the past use of the property? Restaurant.
- Were hazardous materials or petroleum products previously present at the property?  Yes  No  Unknown  
 If yes, what type and where were they located? \_\_\_\_\_
- What are the current uses of the adjacent properties? Hotel / Park
- What were the past uses of the adjacent properties? " "
- What are the current uses of the surrounding area? " "
- What were the past uses of the surrounding area? " "

**EXTERIOR AREAS**

9. Are there pits, ponds, or lagoons on or near the property?  Yes  No  Unknown
10. Are there any rivers or creeks that run through the property?  Yes  No  Unknown
11. Are there or have there ever been any above-ground storage tanks?  Yes  No  Unknown

If yes, please complete the table below (status = active, out-of-use, removed, etc.):

Contents	Capacity	Location	Status	Known Leak?	Closure Report?
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

12. Are there any underground storage tanks on the property?  Yes  No  Unknown

If yes, please complete the table below (status = active, out-of-use, removed, etc.):

Contents	Capacity	Location	Status	Known Leak?	Closure Report?
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

13. Are there any pipes of unidentified use on the property exterior?  Yes  No  Unknown

If yes, where? \_\_\_\_\_

14. Are there any 55-gallon drums on the property exterior?  Yes  No  Unknown

If yes, please describe number, contents, and location: \_\_\_\_\_

15. Are there any unidentified substance containers on the property exterior?  Yes  No  Unknown

If yes, please describe their size and location: \_\_\_\_\_

16. Is there any electrical or hydraulic equipment on the property exterior?  Yes  No  Unknown

If so, does the equipment contain PCBs?

Please describe the number, type, and location of the equipment: elevator that does not operate.

17. Are there any areas of stained soil or pavement on the property?  Yes  No  Unknown

If so, where? \_\_\_\_\_

18. Is there any evidence of stressed vegetation on the property?  Yes  No  Unknown  
 If so, where? \_\_\_\_\_
19. Is there any solid waste on the property?  Yes  No  Unknown  
 If so, where? \_\_\_\_\_
20. Are there any wells on the property?  Yes  No  Unknown  
 If so, please describe the number, type, location, and purpose: \_\_\_\_\_

21. Are there any septic systems on the property?  Yes  No  Unknown

**INTERIOR AREAS**

22. Are there interior heating/cooling systems?  Yes  No  Unknown
23. Is there evidence of stains or corrosion on floors/walls/ceilings?  Yes  No  Unknown  
 If so, in which rooms? 2nd Floor / 1st Floor Ceiling stains from Rain.
24. Are there any sump pumps on the property?  Yes  No  Unknown
25. Are there any pipes of unidentified use on the property interior?  Yes  No  Unknown  
 If so, where? \_\_\_\_\_
26. Are there any 55-gallon drums on the property interior?  Yes  No  Unknown  
 If yes, please describe number, contents, and location: \_\_\_\_\_

27. Are there any unidentified substance containers on the property interior?  Yes  No  Unknown  
 If yes, please describe their size and location: \_\_\_\_\_

28. Is there any electrical or hydraulic equipment on the property interior?  Yes  No  Unknown  
 If so, does the equipment contain PCBs?  Yes  No  Unknown  
 Please describe the number, type, and location of the equipment: Elevator that does not operate.

**PROPERTY DOCUMENTATION**

29. Do you know of any past or present environmental documents or inspections?  Yes  No  Unknown
30. Do you know of any hazardous waste permits?  Yes  No  Unknown

31. Do you know of any wastewater permits?  Yes  No  Unknown
32. Do you know of any underground injection permits?  Yes  No  Unknown
33. Do you know of any stormwater pollution prevention plans?  Yes  No  Unknown

34. Please indicate all supporting documentation provided along with this questionnaire. *-Previously Provided.*
- |  |                                |                                    |                                      |
|--|--------------------------------|------------------------------------|--------------------------------------|
| a) Environmental document(s)/inspection(s) | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| b) Hazardous waste permit(s)               | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| c) Wastewater permit(s)                    | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| d) Underground injection permit(s)         | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| e) Stormwater pollution prevention plan(s) | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| f) Underground storage tank documentation  | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| g) Above-ground storage tank documentation | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| h) Floor plan                              | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| i) Site map                                | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| j) As-built drawings                       | <input type="radio"/> Attached | <input type="radio"/> Not Provided | <input type="radio"/> Not Applicable |
| k) Other _____                             |                                |                                    |                                      |

35. Is there anything else we should know?

**Respondent Affirmation.** Respondent represents that to the best of their knowledge the above statements and facts are true and correct and no material facts have been suppressed or misstated.

Signature  Date *10/20/22*

Answers to this questionnaire have been orally communicated to a representative of ENPRO Environmental, and was completed by:

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

*QUALIFICATIONS OF ENVIRONMENTAL  
PROFESSIONALS*

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Randy Herold  
*President*

**CAREER HISTORY** More than thirty years of documented success in the establishment and leadership of professional environmental companies, managing technical projects and improving management and information systems. Strong interpersonal and technical skills. Broad experience in building science, indoor air quality, environmental assessments, hazardous waste remediation, and technological applications.

**EDUCATION** M.S., Environmental Management, University of Hawaii 1976  
B.S., Marine Biology, Chaminade University, 1972  
Project Management, University of Hawaii, 1992  
Strategic Planning, University of Hawaii, 1990

**PROFESSIONAL AFFILIATIONS** National Board Director – American Indoor Air Quality Council  
National Board Director – Indoor Air Quality Association  
Hawaii Chapter Director – Indoor Air Quality Association  
National Operating Board – American Council for Accredited Certification  
National Marketing Committee Indoor Air Quality Association 2006-2007  
National Finance Committee Indoor Air Quality Association 2007-now  
National Chapter Relations Committee Indoor Air Quality Association 2007-now  
Finance Committee, US Green Building Council, Honolulu Chapter, 2008  
Charter Member, Texas Indoor Air Quality Association  
President, Honolulu Executives Association, 2010  
President, National Association of Industrial and Office Properties  
National Environmental Affairs Committee – National Association of Office and Industrial Properties  
Founding Director – Hawaii Association of Environmental Professionals  
ASTM E-50 Committee on Environmental Assessment  
ASTM Mold Task Force  
Board Member – Certified Commercial Investment Member  
Board Member – Le Jardin Academy

**CERTIFICATIONS** Board Certified Indoor Environmental Consultant (CIEC)  
Board Certified Indoor Air Quality Manager (CIAQM)  
Registered Environmental Assessor  
Certified Hazardous Materials Manager, Master Level  
Certified Hazardous Waste Specialist  
Registered Environmental Professional  
Certified Asbestos Designer/Planner/Inspector  
Certified Residential Measurement Provider, Radon  
IICRC Water Restoration Technician



# Alexis Aguilar

## *Environmental Consultant*

**CAREER HISTORY** Experienced in conducting fungal inspection surveys for moisture intrusion, visible suspect mold and indoor air quality investigations.

Experienced in conducting post remediation verification (PRV) for mold and moisture intrusion remediation and hygienic indoor surfaces.

Experienced in conducting hazardous materials surveys and environmental site assessments for asbestos containing building materials, and lead containing paint.

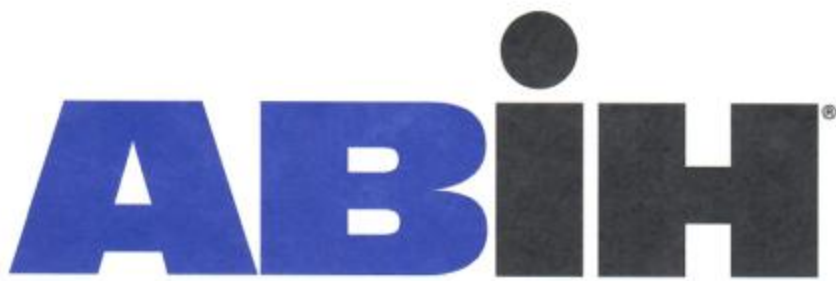
Experienced in collecting multi-incremental soil samples.

Experienced in environmental research and report preparation.

Experienced in biological fieldwork and laboratory sample preparation.

**EDUCATION** B.S. Marine Biology,  
University of Hawai'i at Mānoa 2021

**CERTIFICATIONS** AHERA Asbestos Inspector, Certification No. HIASB-5119  
Lead Based Paint Risk Assessor, Certification No. PB-1277



**american board of industrial hygiene®**

organized to improve the practice of industrial hygiene  
proclaims that

*Stacey L. Croghan*

having met all requirements of  
education, experience and examination, and  
ongoing maintenance,  
is hereby certified in the

**COMPREHENSIVE PRACTICE  
of  
INDUSTRIAL HYGIENE**

and has the right to use the designations

**CERTIFIED INDUSTRIAL HYGIENIST**

**CIH**

Certificate Number	9758 CP
Awarded:	May 7, 2010
Expiration Date:	December 1, 2020



*Nicole Greenan*  
Chair, ABIH

*William H. Oliver*  
Chief Executive Officer, ABIH



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## SENIOR EOSH PROFESSIONAL

Senior Environmental and Occupational Safety and Health professional with 20+ years of progressive experience and training. Self-motivated, highly skilled, analytical scientist with exceptional programmatic and technical expertise. Adept at problem recognition and solving through program development, implementation, and management. Leader recognized for dedication and the ability to consistently perform at high levels in a fast-paced atmosphere. Possess strong oral communication skills paired with excellent writing and presentation skills.

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## PROFESSIONAL EXPERIENCE

### Management

- ☞ Supported Federal government agency as a subject matter expert by providing guidance for and development of program management plans, budget analysis, national-level policy and regulations addressing various OSH programs including respiratory protection and personal protective equipment programs.
  - ☞ Member of 3-person auditing team conducting risk surveys (focused on safety, industrial hygiene and fire and life safety) at Federal government medical facilities to identify potential program risks that could result in significant untoward events if not properly mitigated. Surveys included a 3 to 4-day comprehensive walk-through of the entire facility, interviews with division managers and review of program documents, records, citations and violations. Resulting information was analyzed and programmatic risks were identified.
  - ☞ Member of team that implemented OHSAS 18001:2007 conformant safety and health management system for a Federal government regulatory agency. System was implemented agency-wide which includes the agency's headquarters and approximately 35 satellite locations across the United States effecting over 8,500 employees. Project included developing a business case, conducting gap analyses and hazard risk assessments at each facility, developing and presenting training, and providing on-site technical support during the implementation process.
  - ☞ Drafted a safety management system implementation strategy for a Federal government agency to be implemented at over 150 locations. The system mirrors ANSI/AIHA Z10. Project included conducting a gap analysis and defining current agency activities that meet system requirements. Follow-up activities included a pilot program involving site visits to three locations to develop and vet tools to assist with the implementation of the management system. Lead team of five SMEs in conducting customized one-on-one support for all 150 locations during the implementation period.
  - ☞ Project manager for pilot study aimed at reducing the risks associated with slip, trip, and fall hazards at Federal government medical facilities. Project entailed leading weekly workgroup meetings, planning and organizing site visits at pilot facilities, developing observation and rating criteria, reviewing site visit reports, developing corrective and preventive action plans, identifying appropriate leading and lagging measures, and drafting a *Best Management Practices* document and inspection checklist to be utilized by facilities throughout the agency.
  - ☞ Assistant project manager for noise boundary survey conducted at power plant servicing the United States Capitol facilities and grounds. Project entailed regular interactions with the client, organizing and planning noise surveys (including personal dosimetry), training and supervising junior staff conducting the surveys, and review and approval of final report submitted to client.
  - ☞ Lead efforts to develop an environmental audit program for a Federal emergency response organization. Task included reviewing all existing program documentation, reviewing current Federal and State regulatory requirements and development of audit standard operating procedures and checklists to be used by agency personnel at approximately 25 locations.
  - ☞ Key member of team assembled to restore a failing safety and environmental division of a military medical installation. The team conducted a gap analysis and developed and implemented a plan to bring the division into compliance with Federal, State and local regulations. The task was completed in 12 months and the division passed three subsequent Medical Command inspections under team's direction.
  - ☞ Developed and implemented numerous safety programs including written policies, standards and training for Hazard Communication, Respiratory Protection, Confined Space Entry and Personal Protective Equipment for military organizations and Executive and Legislative Branch agencies.
  - ☞ Managed activities associated with the remediation of petroleum contaminated soil and groundwater sites under the Virginia Petroleum Storage Tank Fund Program and District of Columbia Voluntary Cleanup Program. Activities included planning and organizing remediation activities, coordinating and supervising junior field personnel, interacting with both clients and State officials, authoring quarterly reports, and filing required documentation which included NPDES permits.
  - ☞ Managed 30 full-time employees and independent contractors conducting indoor air quality surveys. Duties included hiring and training new personnel, coordinating personnel schedules with short-notice requests, supervising ongoing activities, and providing final review and approval for over 200 project reports each month.
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## PROFESSIONAL EXPERIENCE (continued)

### Technical (continued)

- ☞ Conducted numerous industrial hygiene exposure assessments of Federal government employees involved in diverse activities including pharmaceutical compounding, chemotherapeutic drug administration, boiler and chiller plant operations, ground maintenance, water and waste water treatment, boat operations, diving operations and environmental research.
- ☞ Conducted noise boundary survey of the coal operations at a Federal government power plant. In addition to management responsibilities, personally collected sound level readings of all areas of a six-story boiler plant, coal conveyer system, rail delivery system and heavy equipment associated with the operation.
- ☞ Conducted hazard risk assessments at multiple Federal agency regional offices and laboratories. Task involved performing a walk-through of the facilities and conducting interviews with personnel regarding their work activities. Resulting information was analyzed and a workplace hazard inventory was developed for each facility.
- ☞ Conducted dozens of compliance inspections and audits looking at safety, health, and environmental criteria at military installations and Executive and Legislative Branch agencies. Developed and implemented corrective and preventive action plans to address all non-compliances.
- ☞ Developed site-specific health and safety plans for field work ranging from indoor air quality surveys to petroleum storage tank removals and installations.
- ☞ Authored the *Control Banding* and *IH Sampling Strategies and Methodologies* sections for a Federal government agency's Laboratory Safety Guidebook.
- ☞ Lead military installation Safety Awareness Program which included activities such as authoring seasonal, holiday, and event-specific memorandums; organizing seasonal safety campaigns; and executing two Safety and Health Fair Expositions.
- ☞ Conducted indoor air quality surveys involving visual assessments and sampling for biological, particulate, and comfort parameters.
- ☞ Compiled annual Tier II chemical inventory reports for military medical installation and Federal government agency.
- ☞ Developed and implemented internal permitting process for the proper disposal of liquid hazardous waste by evaluating all equipment and procedures which utilized liquid chemicals/reagents. Permits included proper handling, storage, and personal protective equipment requirements.
- ☞ In addition to management responsibilities, conducted sampling, gauging, and operations and maintenance activities for sites associated with petroleum contaminated soil and groundwater.
- ☞ Conducted Transaction Screen, Phase I, and Phase II Environmental Site Assessments to meet due diligence requirements for real estate transactions. Projects were conducted in accordance with current ASTM Standards and required an on-site walk through, property records review, regulatory review, and data analysis.
- ☞ Researched the environmental fate and effects of multiple compounds including the chemical behavior of halogenated organic compounds in estuarine systems and coastal soils; role of nitrogen in the microbial degradation of organic carbon in wastewater treatment systems; and effects of salinity on the solubility of halogenated organic compounds. Designed and performed all experimental procedures including soil and water sampling techniques, extraction techniques, and sample analysis based on published procedures and chemical principles.
- ☞ Developed standard operating procedures and performed testing to determine hydrogen diffusivity rates of filters designed for radioactive waste containers. Conducted daily quality control procedures to ensure data integrity. Hydrogen diffusivity testing and data collection procedures successfully passed two United States Department of Energy quality assurance audits during my tenure.
- ☞ Conducted independent research project titled "Characterization of Extracellular Lipase from the fungus *Syzygites megalocarpus*". Maintained cultures, performed extractions of desired compounds, and prepared samples for analysis. Compiled analytical data and reported results on a weekly basis.

### Instructional

- ☞ Co-developed and instructed an *Industrial Hygiene Exposure Assessment* training course for industrial hygienists and safety professionals in a medical center environment.
- ☞ Developed computer based *Safety and Health Management System General Awareness* training course for an OHSAS 18001:2007 conformant management system.
- ☞ Developed and conducted various instructional presentations to inform and educate colleagues on topics ranging from injury and illness reporting to fundamentals of indoor air quality to the use of Microsoft Communicator.
- ☞ Instructed the chemistry section of *Essentials of Hazardous Materials Management*, a Certified Hazardous Materials Manager review course conducted for applicants within the company.

## Stacey L. Croghan, CIH

279 Laura Avenue  
Boaz, AL 35957

808-780-2200  
scroghan@labyrintholutionsllc.com

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### PROFESSIONAL EXPERIENCE (continued)

#### Instructional (continued)

- ☞ Developed and executed training for field technicians conducting indoor air quality surveys. Training consisted of development of sampling strategies, proper equipment calibration and use, sample labeling, information gathering, and report writing.
- ☞ As laboratory manager, trained approximately 20 undergraduate students in general laboratory techniques and safety.
- ☞ As teaching assistant, lectured, supervised experiments, and graded laboratory reports for over 300 freshman chemistry students.

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### EMPLOYMENT HISTORY

<b>Principal/Occupational Safety and Health Consultant</b> Labyrinth Solutions, LLC, Boaz, AL	2017 to present
<b>Occupational Safety and Health Consultant</b> Booz Allen Hamilton, Washington D.C. Metro Area	2010 to 2017
<b>Environmental, Safety and Industrial Hygiene Project Manager</b> Total Environmental Concepts, Washington D.C. Metro Area	2007 to 2010
<b>Principal/Environmental Consultant</b> Croghan Environmental, LLC, Ewa Beach, HI	2003 to 2007
<b>Technical Services Manager</b> ENPRO Environmental, Kailua, HI	2001 to 2003
<b>Senior Research Technician/Laboratory Manager</b> Millar Wilson Laboratory for Chemical Research, Jacksonville University, Jacksonville, FL	1998 to 2001
<b>Undergraduate Research and Teaching Assistant</b> Department of Chemistry and Department of Botany and Microbiology, Auburn University, Auburn, AL	1994 to 1996

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### EDUCATION AND PROFESSIONAL DEVELOPMENT

#### Formal Education

<b>Master of Science in Public Health - Occupational and Environmental Hygiene</b> Johns Hopkins University, Baltimore, Maryland	2013
<b>Graduate Certificate - Environmental and Occupational Health</b> Johns Hopkins University, Baltimore, Maryland	2009
<b>Graduate Coursework (20 Credit Hours) - Business Administration</b> Jacksonville University, Jacksonville, Florida	2000
<b>Bachelor of Science - Biochemistry</b> Auburn University, Auburn, Alabama	1996

#### Professional Development

<b>Introduction to Incident Command System (IS-100.b)</b> FEMA Emergency Management Institute	
<b>ICS for Single Resources and Initial Action Incidents (IS-200.b)</b> FEMA Emergency Management Institute	
<b>National Incident Management System (NIMS), An Introduction (IS-700.a)</b> FEMA Emergency Management Institute	
<b>National Response Framework, An Introduction (IS-800.b)</b> FEMA Emergency Management Institute	
<b>Application of Industrial Hygiene in an Emergency Response</b> American Industrial Hygiene Association	
<b>Environmental Laws and Regulations for Industrial Hygienists</b> American Industrial Hygiene Association	
<b>Designing Effective EHS Organizations Using Management Systems</b> American Industrial Hygiene Association	
<b>Building a Successful Consulting Practice</b> American Industrial Hygiene Association	
<b>Developing a Business Case: Selecting the Best Solutions, Getting the Needed Resources</b> American Industrial Hygiene Association	

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279 Laura Avenue  
Boaz, AL 35957

808-780-2200  
scroghan@labyrintholutionsllc.com

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### EDUCATION AND PROFESSIONAL DEVELOPMENT

#### **Professional Development (continued)**

#### **Applying Health Hazard and Control Banding Strategies**

American Industrial Hygiene Association

#### **REACH: A Risk Management Strategy**

American Industrial Hygiene Association

#### **OHSAS 18001 Internal Auditor**

North Carolina State University

#### **Exposure Assessment Strategies and Statistics**

American Industrial Hygiene Association

#### **Comprehensive Review of Industrial Hygiene**

Rocky Mountain Center for Occupational and Environmental Health

#### **Applied Ergonomics**

United States Army Public Health Center

#### **National Environmental Policy Act Writing, Department of Defense Specific**

ShIPLEY Group

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### PROFESSIONAL CERTIFICATIONS

#### **Certified Industrial Hygienist (#9758)**

2010

American Board of Industrial Hygiene

#### **Environmental Analytical Technician (#2522)**

1999

National Registry of Certified Chemists

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### PROFESSIONAL AFFILIATIONS

American Industrial Hygiene Association

Academy of Industrial Hygiene

American Board of Industrial Hygiene

National Registry of Certified Chemists

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### RESEARCH, PUBLICATIONS AND PRESENTATIONS

Croghan, S.L., "An Analytical Review of Safety and Health Management Systems and User Perception of Their Effectiveness," Independent Professional Project, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, Maryland, May 2013, 85 pp.

Sonnenberg, L.B. and Croghan, S.L., "Nitrogen and Organic Carbon Transformations in an Aerated Stabilization Basin," Proceedings, 2001 Technical Association for the Pulp and Paper Industry (TAPPI) International Environmental Conference, Charlotte, North Carolina, April 2001, 12 pp.

Sonnenberg, L.B. and Croghan, S.L., "Relating Source and Physicochemical Characteristics of Dissolved Organic Carbon in Natural and Anthropogenic Systems," presented at the National American Chemical Society Conference, August 1999, New Orleans, Louisiana.

Sonnenberg, L.B. and Croghan, S.L., "The Role of Nitrogen in the Physicochemical Characteristics of Dissolved Organic Matter," presented at the National American Chemical Society Conference, August 1999, New Orleans, Louisiana.

Maze, S.L., "Characterization of Lipase from the Fungus *Syzygites megalocarpus* with Respect to pH, Temperature and an Anionic Surfactant," Independent Research Project, Auburn University, Department of Botany and Microbiology, Auburn, Alabama, June 1996, 8 pp.

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### VOLUNTEER LEADERSHIP ROLES

Senior Advisor - USS Jefferson City Family Readiness Group

2013 to 2016

Vice President - Metro Washington Auburn Alumni Club

2009 to 2010

Team Captain - TEC Triathlon Team

2008 to 2010

Chair - Cameron Station Community Association Financial Advisory Committee

2007 to 2009

President - USS Charlotte Family Readiness Group

2004 to 2005

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October 25, 2022

Ms. Alana Kobayashi Pakkala  
Kobayashi Group, LLC  
1288 Ala Moana Blvd, Suite 201  
Honolulu, Hawaii 96814

RE: Limited Asbestos and Lead-Based Paint Sampling and Analysis  
2057 Kalakaua Avenue  
Honolulu, Hawaii  
ENPRO Project Number: 2209-00264-HAZ

Dear Ms. Pakkala,

This letter is regarding the limited asbestos and lead-based paint sampling and analysis conducted at the above-referenced property on October 12, 2022. The purpose of this project was to collect and analyze samples of certain suspect asbestos-containing materials (ACM) and collect paint chip samples for total lead analysis. Sampling focused on materials which may be disturbed during redevelopment.

**Asbestos**

Specific materials and sampling locations are presented in Table 1.

**Table 1**  
Asbestos Sampling Materials and Locations

SAMPLE ID	LOCATION	MATERIAL
A1	Roof	Black Roll Roof Shingle
A2	Roof	Black Waterproof Tar
A3	Roof	Black Vibration Cloth
A4	Roof	Fiberglass Insulation
A5	Roof	Gray Duct Caulking
A6	Roof	Gray Roof Patch
A7	Roof	Pipe Caulking
A8	Roof	Duct Sealant

**Table 1 (continued)**  
**Asbestos Sampling Materials and Locations**

SAMPLE ID	LOCATION	MATERIAL
A9	Roof	Yellow Fibrous Insulation
A10	Roof	White Vibration Cloth
A11	Roof	Gray/White Tank End Cap
A12	Roof	Black Vent Caulking
A13	Roof	Clay Roof Tile
A14	Ground Level	Black Stone Tile Grout
A15	Ground Level	Black Window Caulking
A16	Ground Level	Gray Drop Ceiling Tile
A17	Ground Level	2" x 4" Cream Ceramic Floor Tile
A18	Ground Level	Drywall
A19	Ground Level	Gray Speckled Vinyl Floor Tile
A20	Ground Level	Tan Cove Base
A21	Ground Level	Blue Carpet - Mastic
A22	Ground Level	2' X 4' White Drop Ceiling Tile
A23	Ground Level	Brown Threshold
A24	Ground Level	Light Gray Textured Wallpaper
A25	Ground Level	Drywall Ceiling
A26	Ground Level	White Cove Base
A27	Ground Level	Door Weather Strip
A28	Ground Level	Black Threshold
A29	Ground Level	Under Sink Coating
A30	Ground Level	Dark Gray Ceramic Floor Tile
A31	Ground Level	White Ceramic Wall Tile
A32	Ground Level	Brown Ceramic Floor Tile
A33	Ground Level	Silver Freezer Caulk
A34	Ground Level	Cream Vinyl Floor Tile
A35	Ground Level	Light Brown Laminate Floor
A36	Ground Level	Light Brown Textured Wallpaper
A37	Ground Level	White Pipe Insulation
A38	Ground Level	Cream Wallpaper
A39	Ground Level	Mirror Caulking
A40	Ground Level	Glass Block Grout
A41	Ground Level	Green Marble Mastic
A42	Ground Level	Dark Gray Textured Wallpaper
A44	Ground Level	Black Marble Floor Tile
A45	Ground Level	Light Gray Ceramic Wall Tile
A46	2 <sup>nd</sup> Floor	Dark Gray Textured Wallpaper
A47	2 <sup>nd</sup> Floor	Glass Block Grout
A48	2 <sup>nd</sup> Floor	Brown Carpet - Mastic
A49	2 <sup>nd</sup> Floor	Green Carpet - Mastic
A50	2 <sup>nd</sup> Floor	Green and White Textured Wallpaper
A51	2 <sup>nd</sup> Floor	Black Door Threshold



**Table 1 (continued)**  
**Asbestos Sampling Materials and Locations**

SAMPLE ID	LOCATION	MATERIAL
A52	2 <sup>nd</sup> Floor	Cream Textured Wallpaper
A53	2 <sup>nd</sup> Floor	Black Window Caulking
A54	2 <sup>nd</sup> Floor	Brown Ceramic Floor Tile
A55	2 <sup>nd</sup> Floor	White and Gray Ceramic Floor Tile
A56	2 <sup>nd</sup> Floor	Drywall
A57	2 <sup>nd</sup> Floor	White Speckled Drop Ceiling Tile
A58	2 <sup>nd</sup> Floor	White Pipe Insulation
A59	2 <sup>nd</sup> Floor	Brown Duct Vibration Mastic
A60	2 <sup>nd</sup> Floor	Brown Wall Mastic
A61	2 <sup>nd</sup> Floor	Silver Freezer Caulking
A62	2 <sup>nd</sup> Floor	Gray Speckled Vinyl Floor Tile
A63	Ground Level	Dark Gray Textured Wallpaper
A64	2 <sup>nd</sup> Floor	White Cove Base
A65	2 <sup>nd</sup> Floor	Dark Gray Carpet – Mastic
A66	2 <sup>nd</sup> Floor	Gray Cove Base
A67	2 <sup>nd</sup> Floor	Dark Gray Ceramic Floor Tile
A68	2 <sup>nd</sup> Floor	White Ceramic Floor Tile
A69	2 <sup>nd</sup> Floor	Drywall Ceiling
A70	2 <sup>nd</sup> Floor	Green Textured Wallpaper
A72	2 <sup>nd</sup> Floor	Tan Textured Wallpaper
A73	2 <sup>nd</sup> Floor	CMU
A74	2 <sup>nd</sup> Floor	Bamboo Ceiling Wallpaper
A75	2 <sup>nd</sup> Floor	White Wallpaper
A76	2 <sup>nd</sup> Floor	Black Stone Floor Grout
A77	2 <sup>nd</sup> Floor	Black Marble Cove Base
A78	2 <sup>nd</sup> Floor	Black Roof Shingle
A79	2 <sup>nd</sup> Floor	Gray Ceiling Wall Tile
A80	Parking Structure	Vibration Cloth

This investigation was limited to the areas listed in Table 1 as requested by the client and excludes other areas.

Three samples of each suspect material were collected by a DOH-certified asbestos inspector (HIASB certification #5173) and submitted to an independent laboratory for asbestos analysis.

The project samples were analyzed by polarized light microscopy using EPA Method 600/M4-82-020 and/or Method 600/R-93/116 by Hawaii Analytical Laboratory, a National Voluntary Laboratory Accreditation Program accredited laboratory.

Based on the analytical results, none of the samples contained asbestos.



It has been a pleasure to be of service to you. Please contact me at 808-748-2108 if you have any questions regarding this project.

Sincerely,

 Alexis Aguilar



Alexis Aguilar  
Project Manager  
Asbestos Inspector HIASB-5173

Enclosures:      Photographs  
                         Floor Plan  
                         Analytical Report



**Photo 1**

2057 Kalakaua Avenue – Facing Southwest

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 04, 2022





**Photo 2**

Asbestos Bulk Sample – A1a – Roll Roof Shingle, Black



**Photo 3**

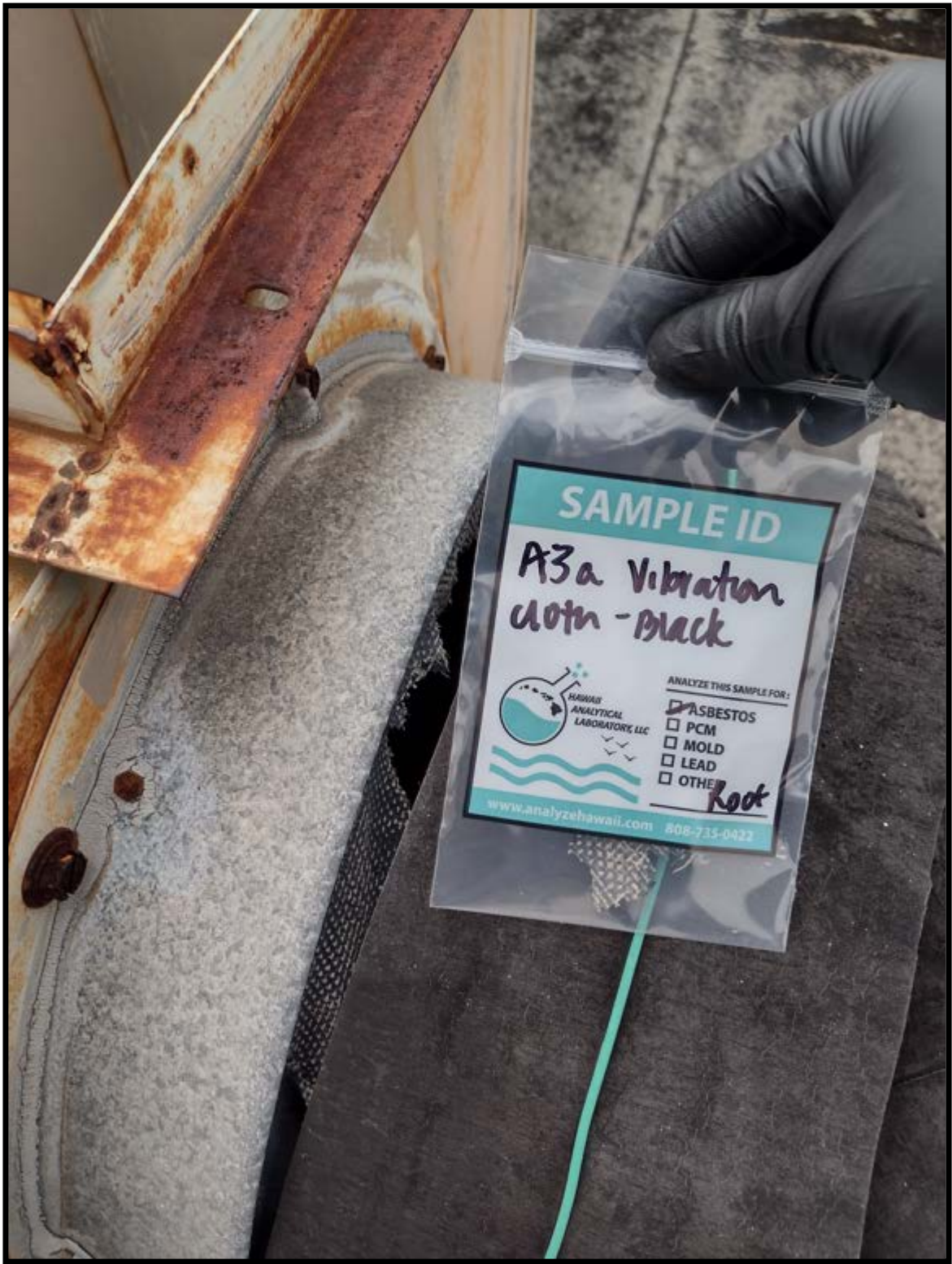
Asbestos Bulk Sample – A2a – Waterproof Tar, Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 4**

Asbestos Bulk Sample – A3a – Vibration Cloth, Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 5**

Asbestos Bulk Sample – A4a – Fiberglass Insulation

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 6**

Asbestos Bulk Sample – A5a – Duct Caulk, Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 7**

Asbestos Bulk Sample – A6a – Roof Patch, Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 8**

Asbestos Bulk Sample – A7a – Pipe Caulk

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 9**

Asbestos Bulk Sample – A8a – Duct Sealant

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 10**

Asbestos Bulk Sample – A9a – Yellow Fibrous Insulation

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





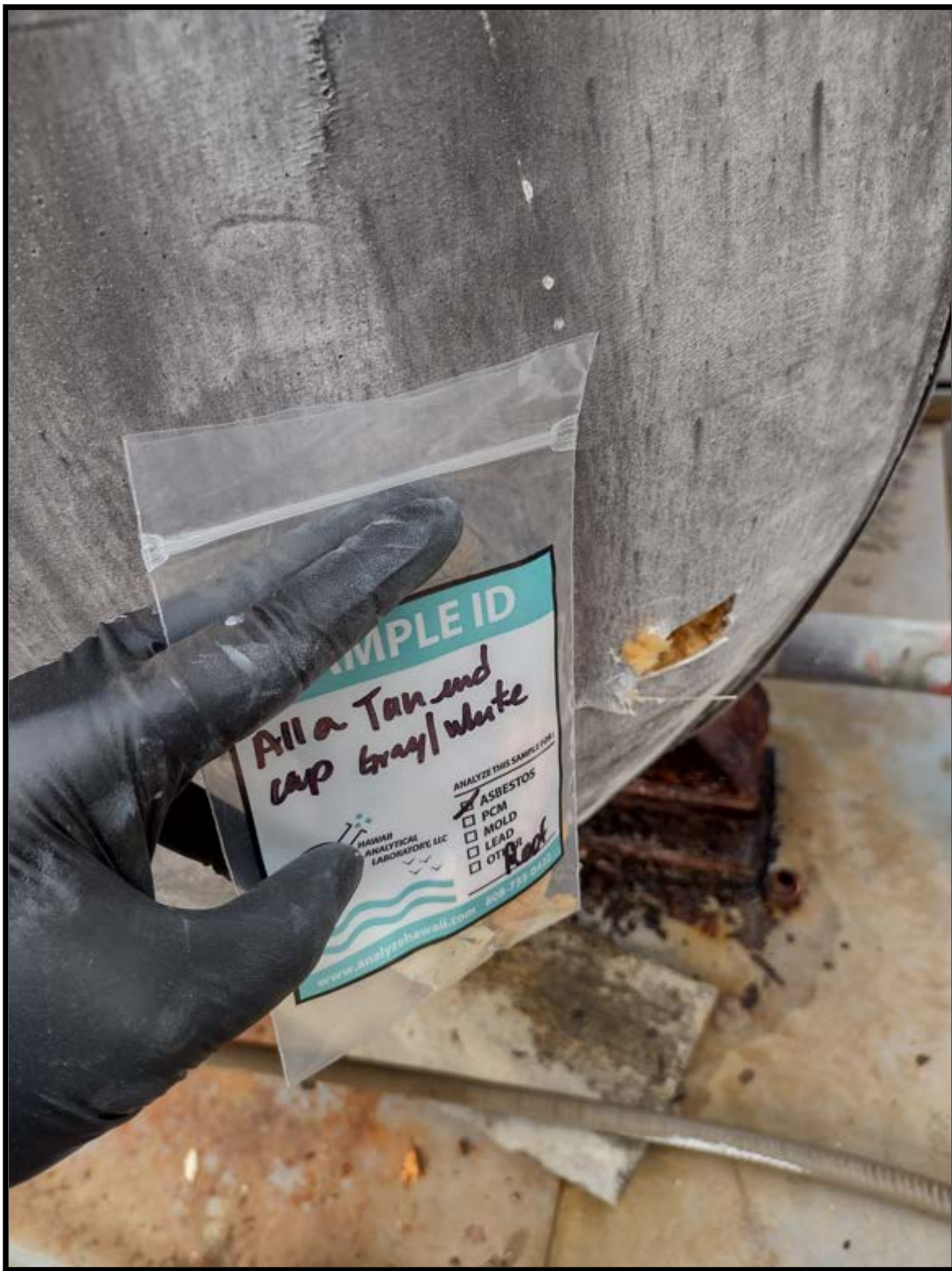
**Photo 11**

Asbestos Bulk Sample – A10a –Vibration Cloth, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 12**

Asbestos Bulk Sample – A11a – Tan End Cap, Gray/White



**Photo 13**

Asbestos Bulk Sample – A12a – Vent Caulking, Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 14**

Asbestos Bulk Sample – A13a - Clay Roof Tile





**Photo 15**

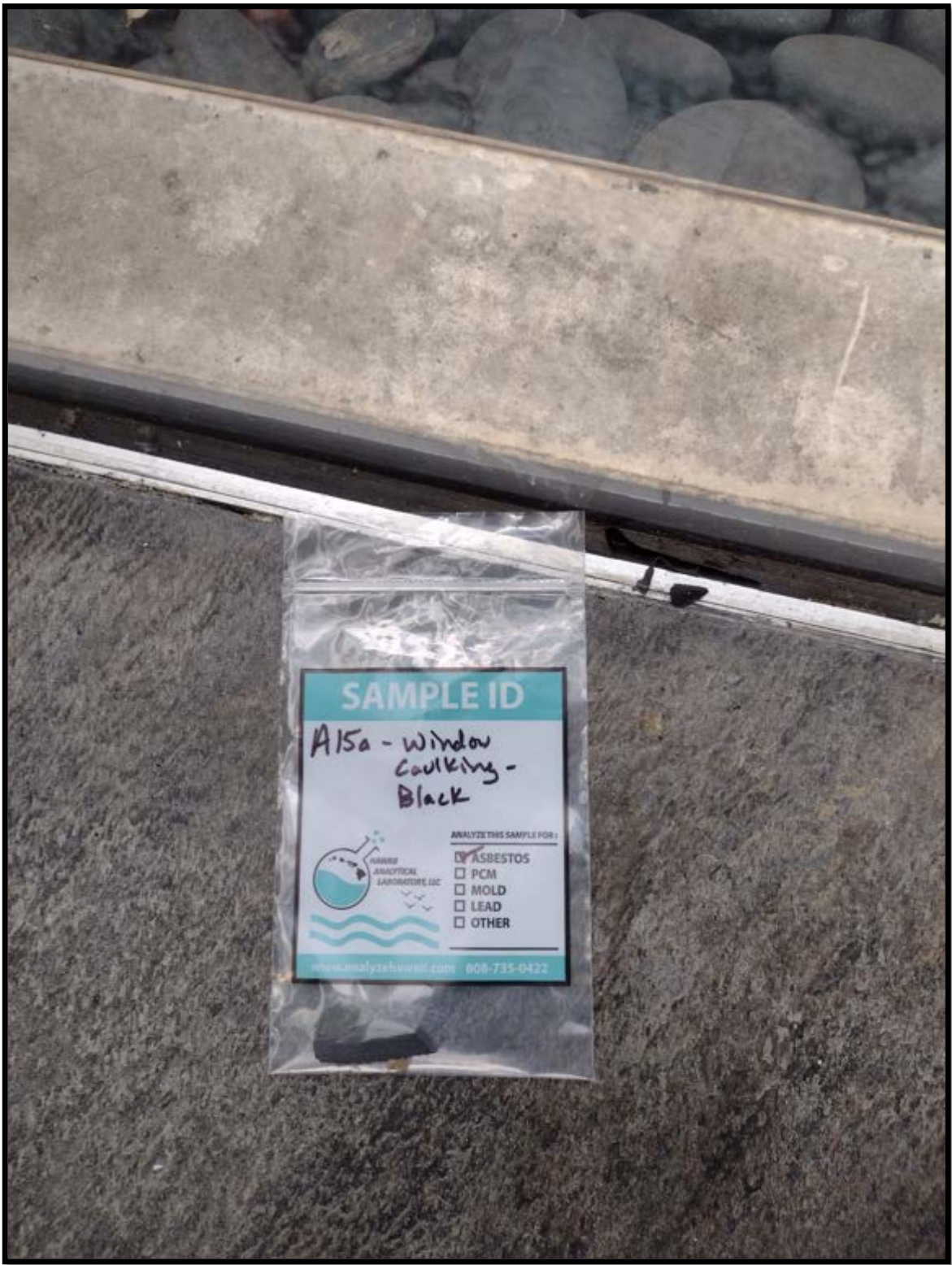
Asbestos Bulk Sample – A14a – Black Stone Tile Grout

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 16**

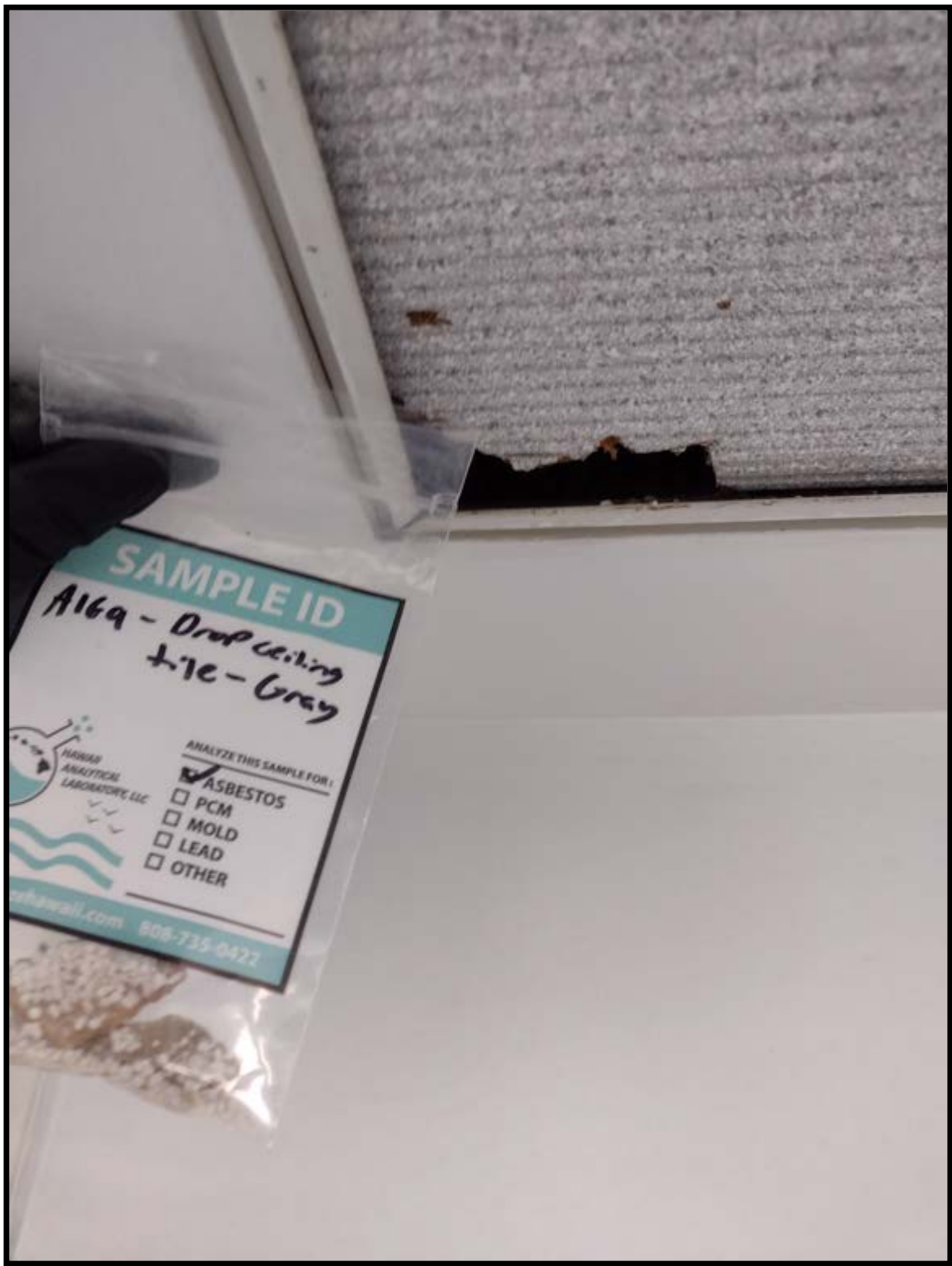
Asbestos Bulk Sample – A15a – Window Caulking , Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 17**

Asbestos Bulk Sample – A16a – Drop Ceiling Tile,

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 18**

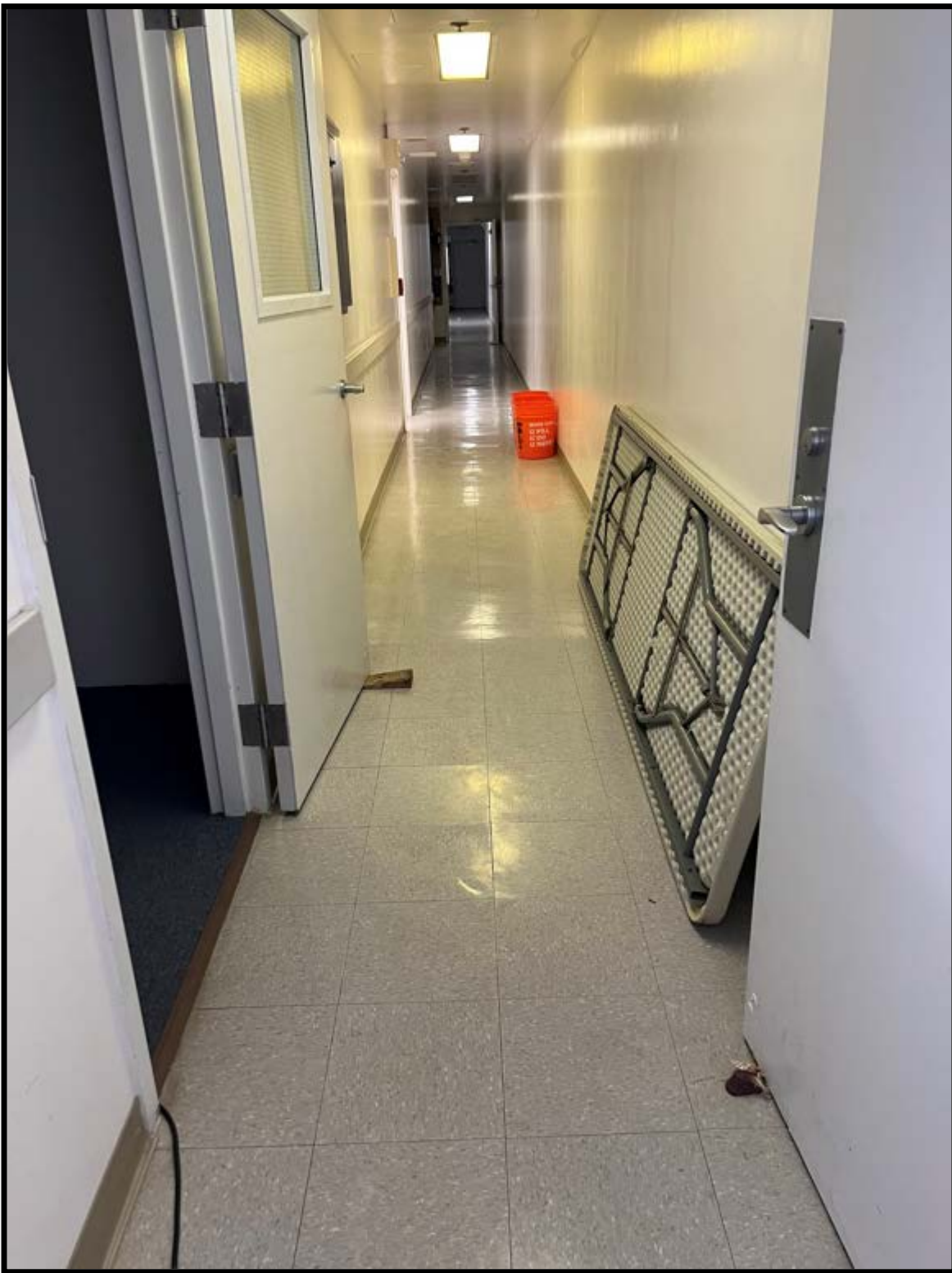
Asbestos Bulk Sample – A17a – 2x4 Ceramic Floor Tile, Cream



Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 19**

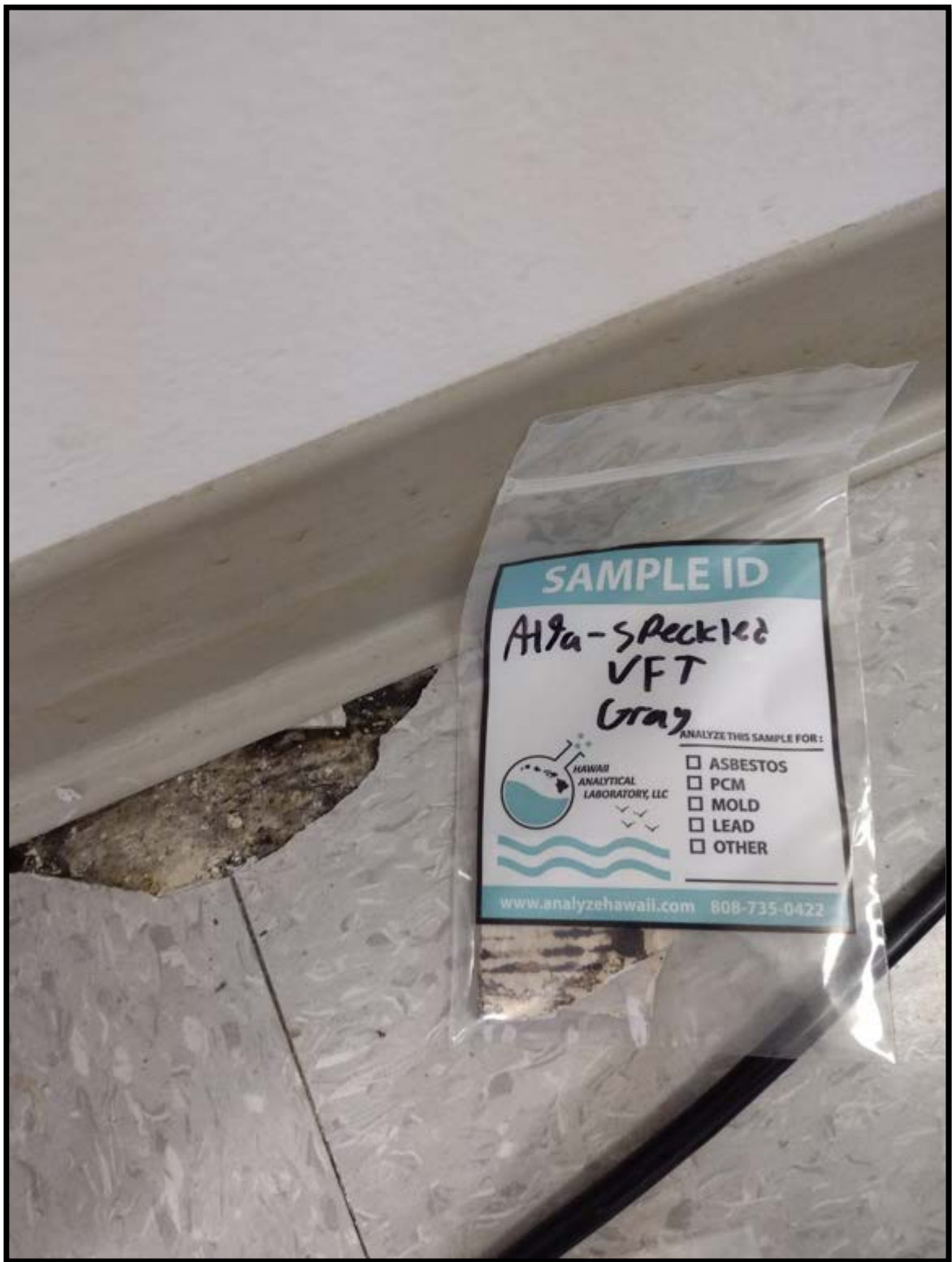
Asbestos Bulk Sample – A18a - Drywall

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 20**

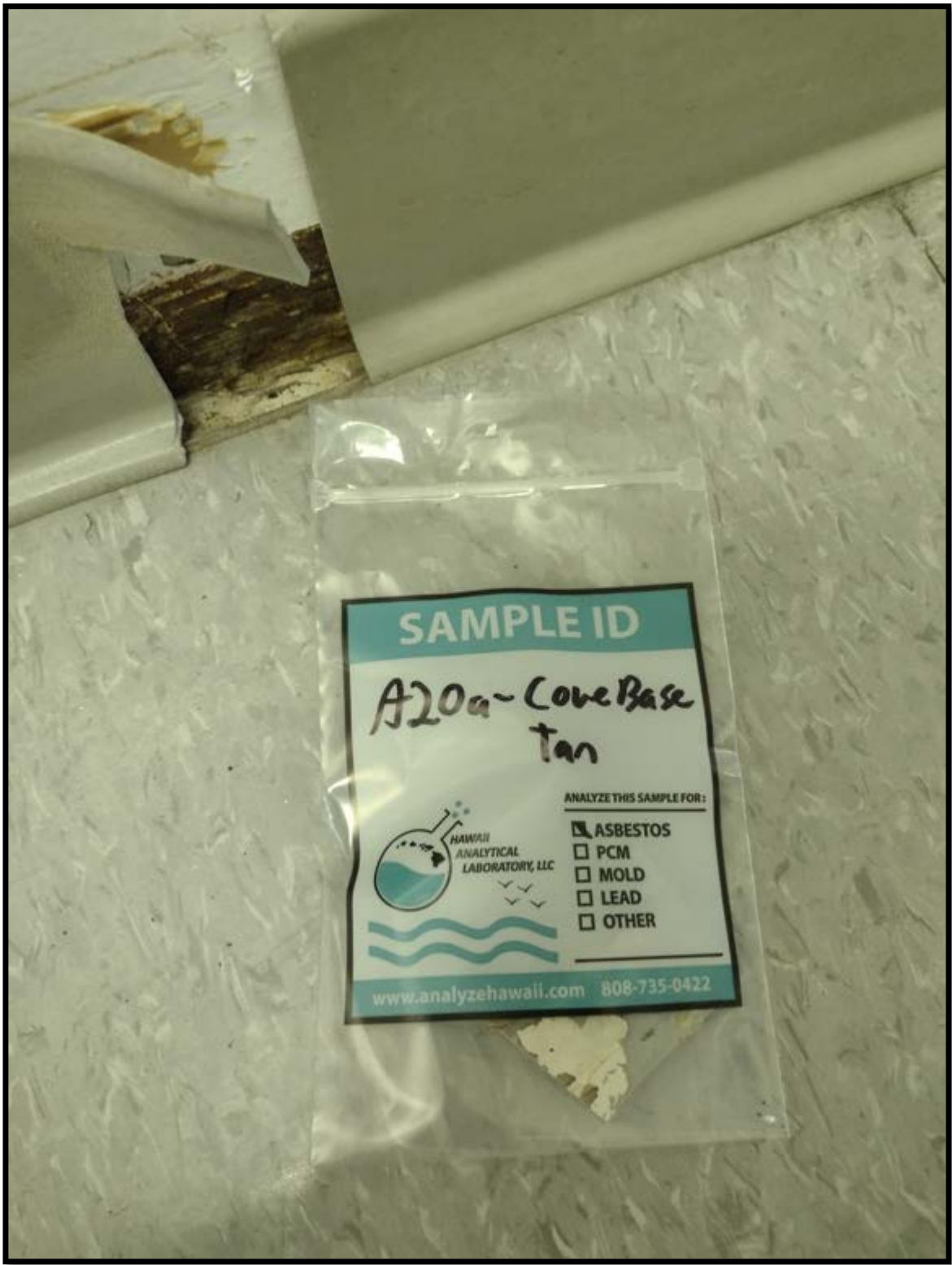
Asbestos Bulk Sample – A19a – Speckled Vinyl Floor Tile

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 21**

Asbestos Bulk Sample – A20a – Cove Base, Tan

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

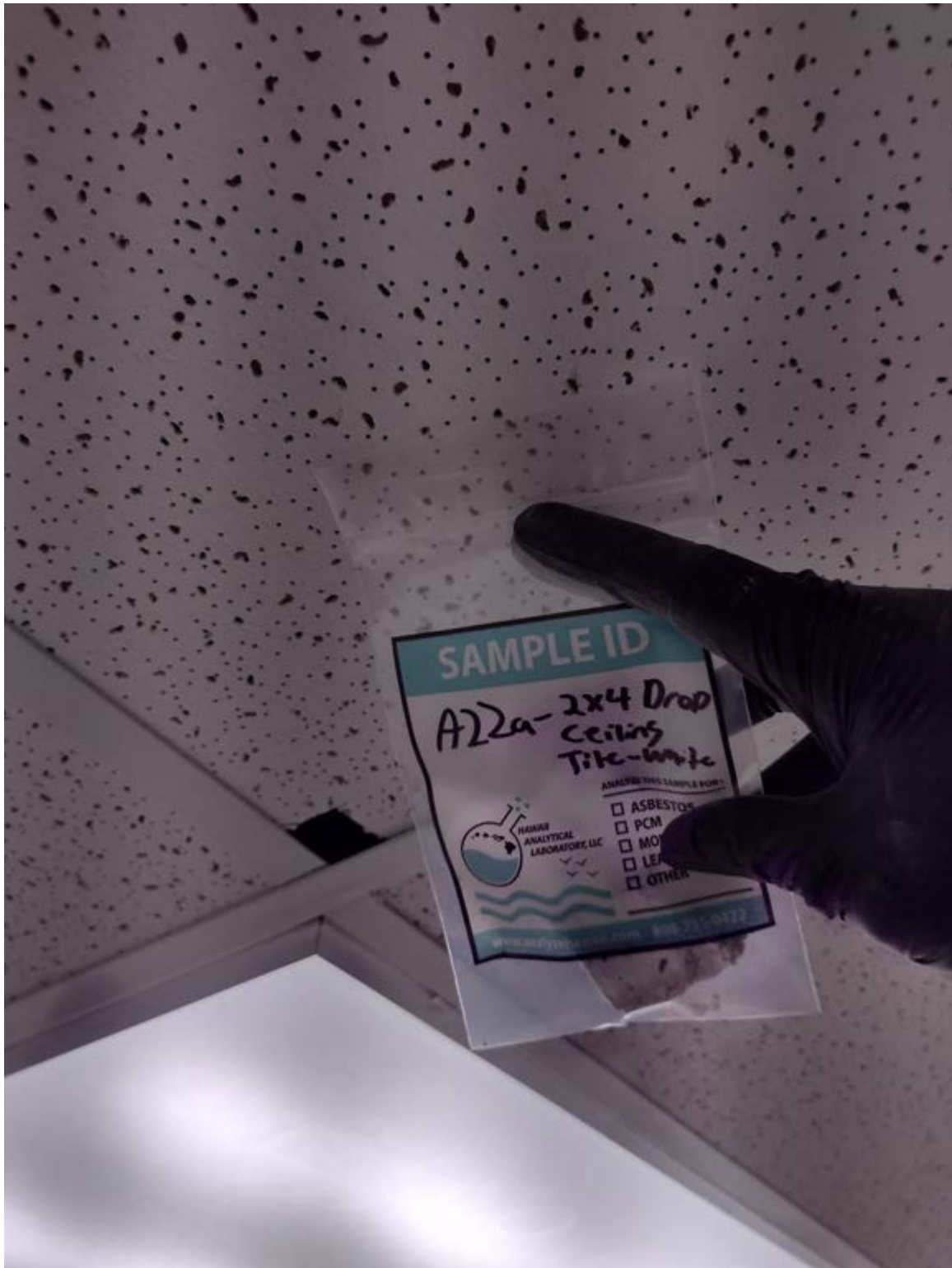
Date of Photo: October 12, 2022



**Photo 22**

Asbestos Bulk Sample – A21a – Carpet Mastic, Blue





**Photo 23**

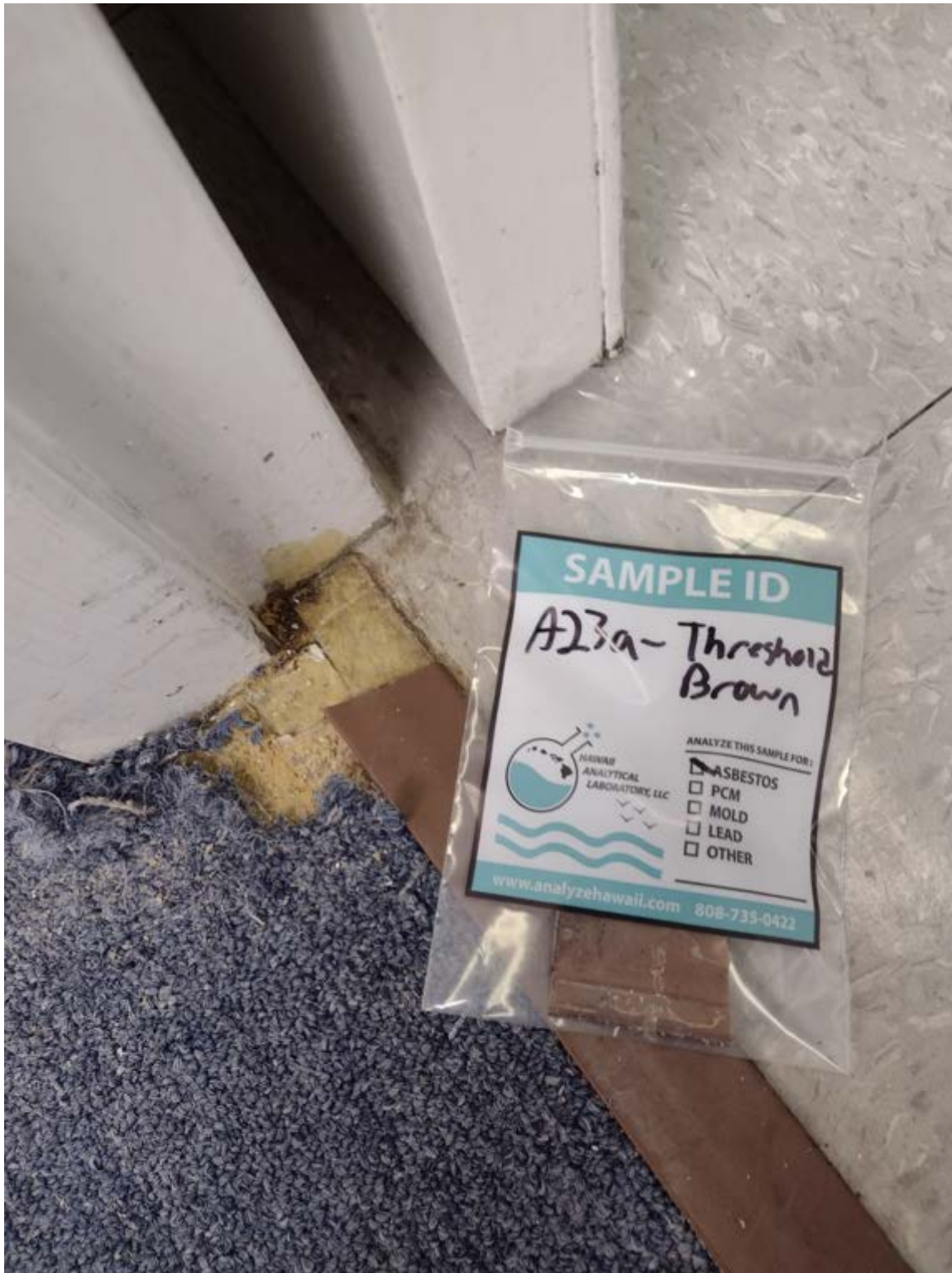
Asbestos Bulk Sample – A22a – 2x4 Drop Ceiling Tile, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

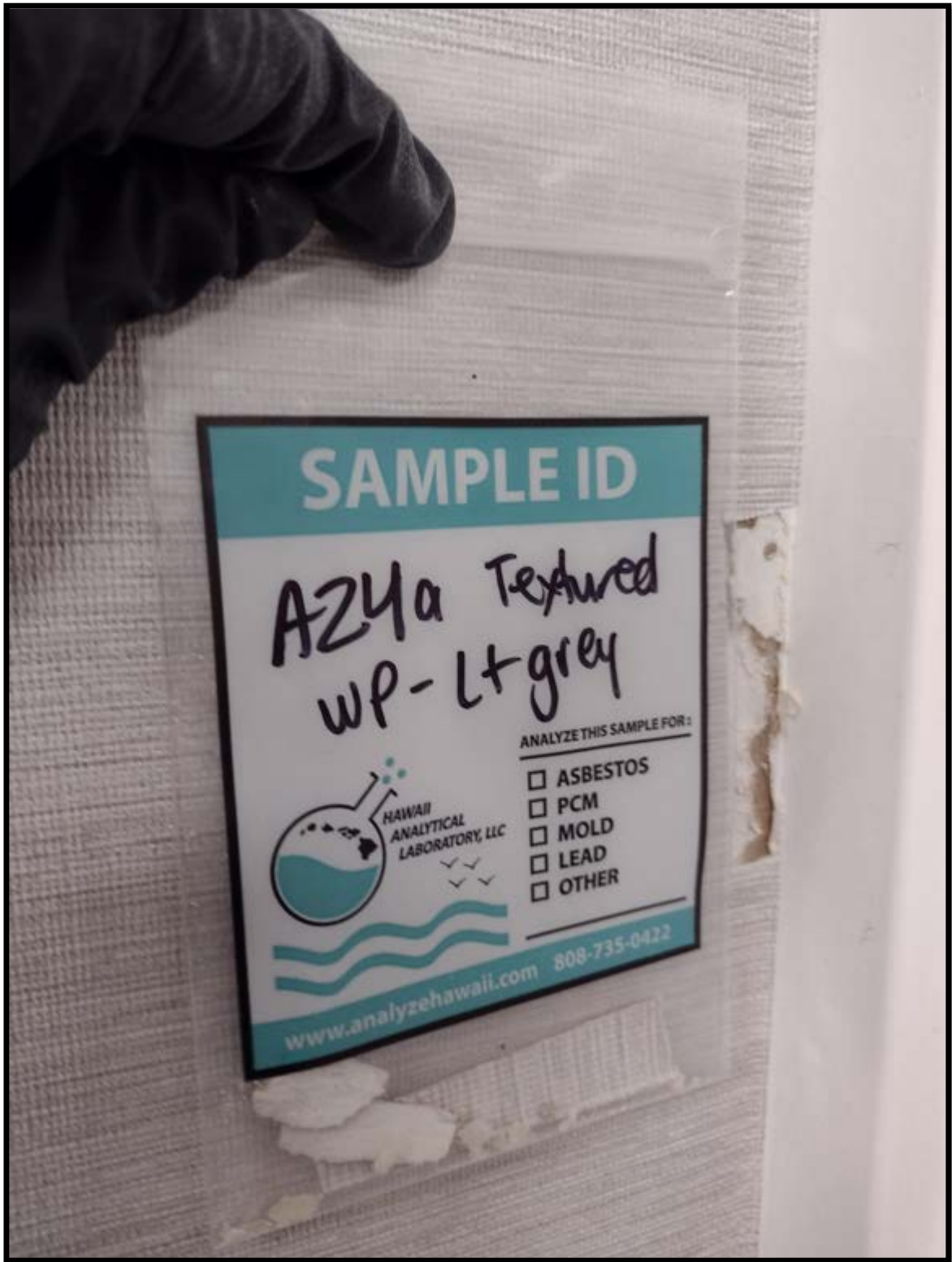
Date of Photo: October 12, 2022





**Photo 24**

Asbestos Bulk Sample – A23a – Threshold, Brown



**Photo 25**

Asbestos Bulk Sample – A24a – Textured Wall Paper, Light Gray



**Photo 26**

Asbestos Bulk Sample – A25a – Drywall Ceiling



**Photo 27**

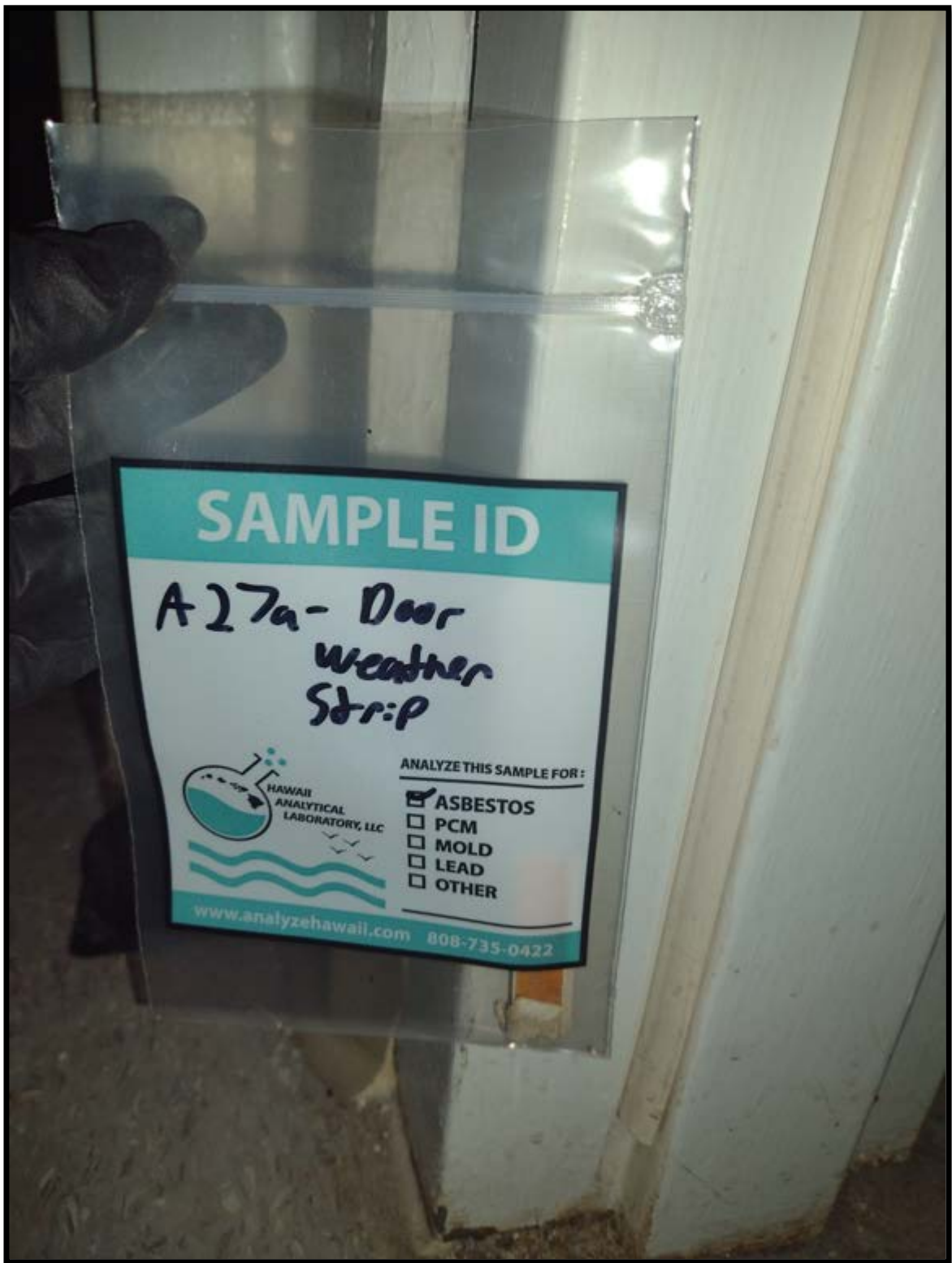
Asbestos Bulk Sample – A26b – Cove Base, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





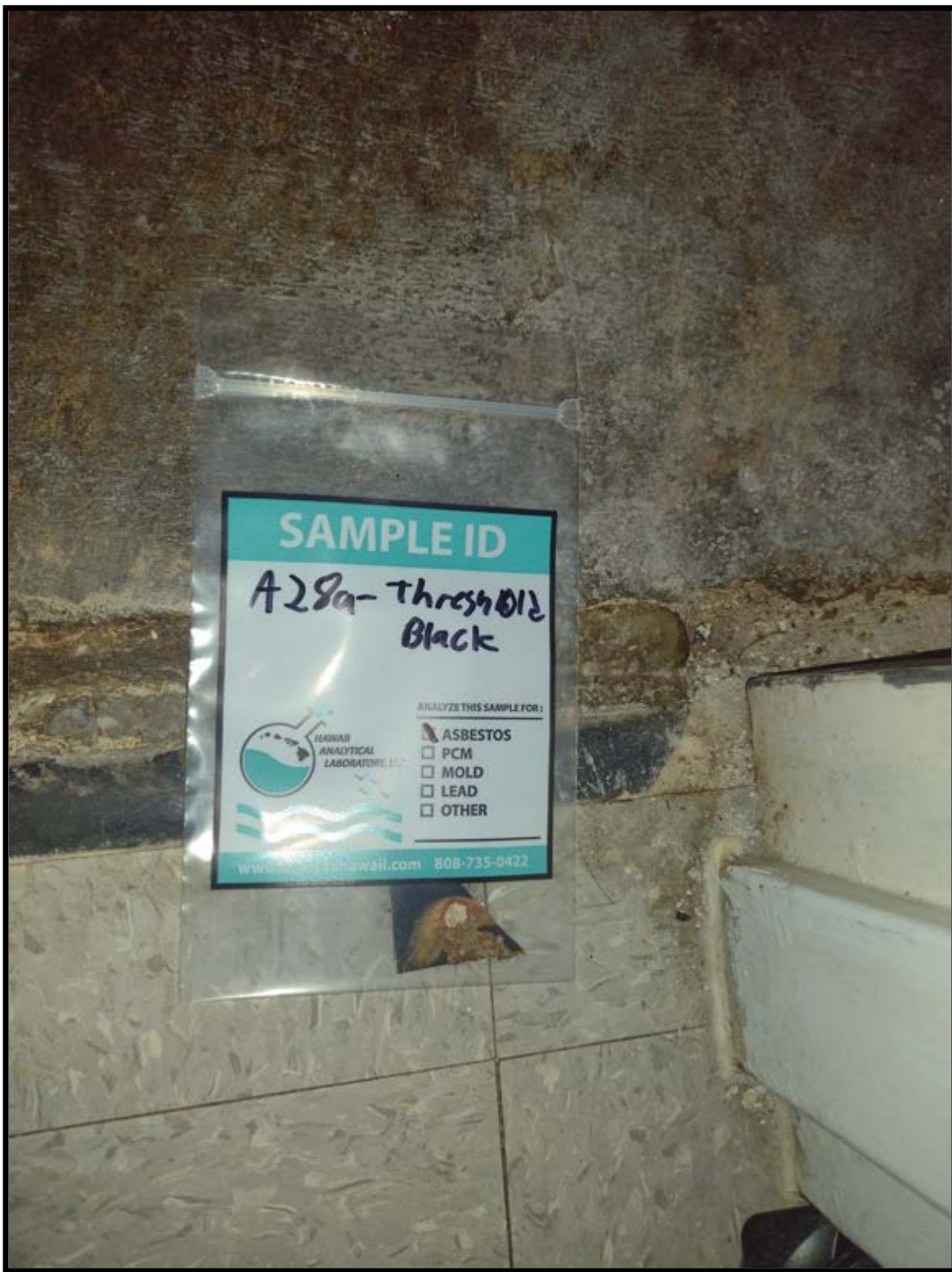
**Photo 28**

Asbestos Bulk Sample – A27a – Door Weather Strip

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 29**

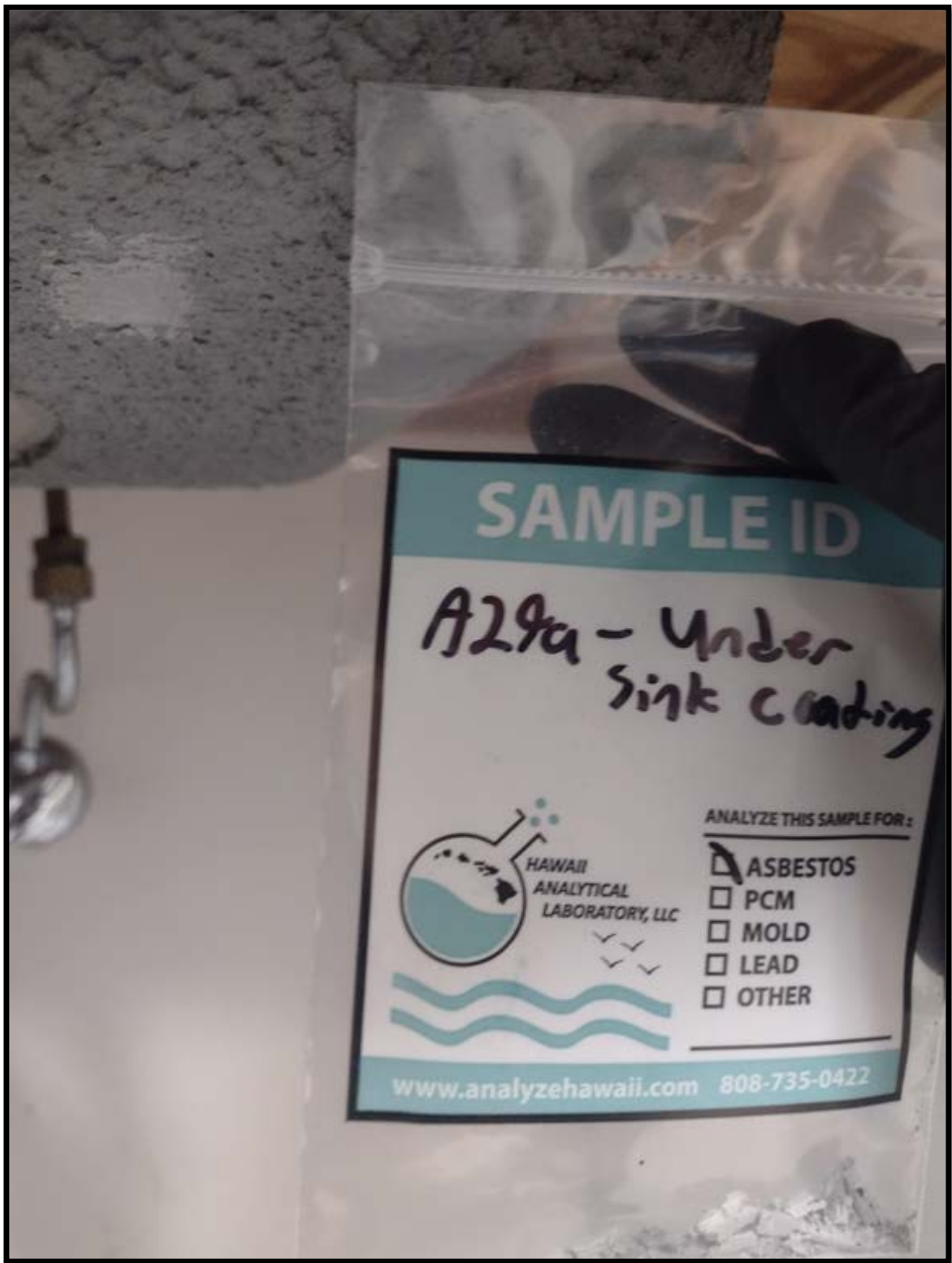
Asbestos Bulk Sample – A28a – Threshold, Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 30**

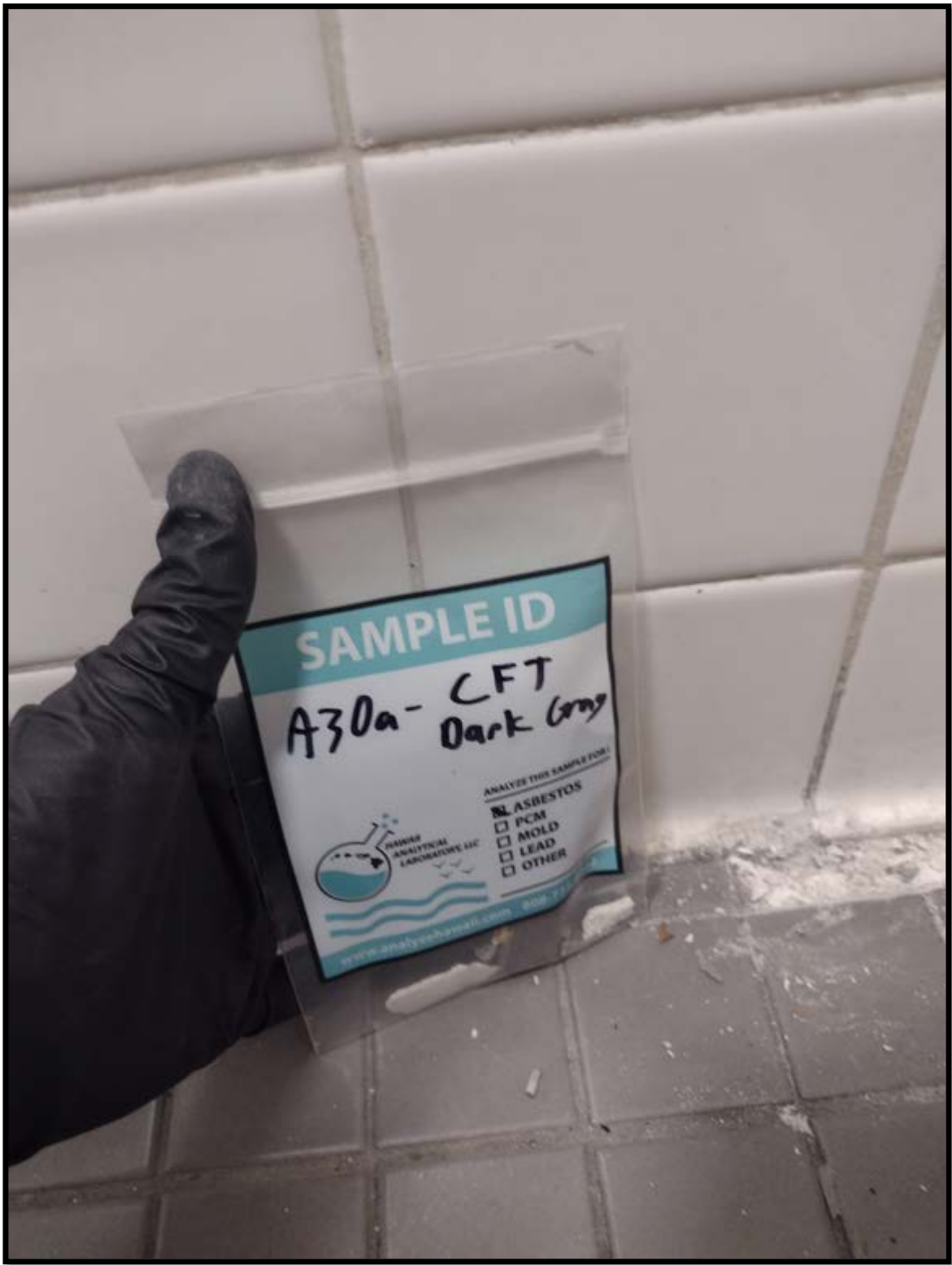
Asbestos Bulk Sample – A29a – Sink Coating

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

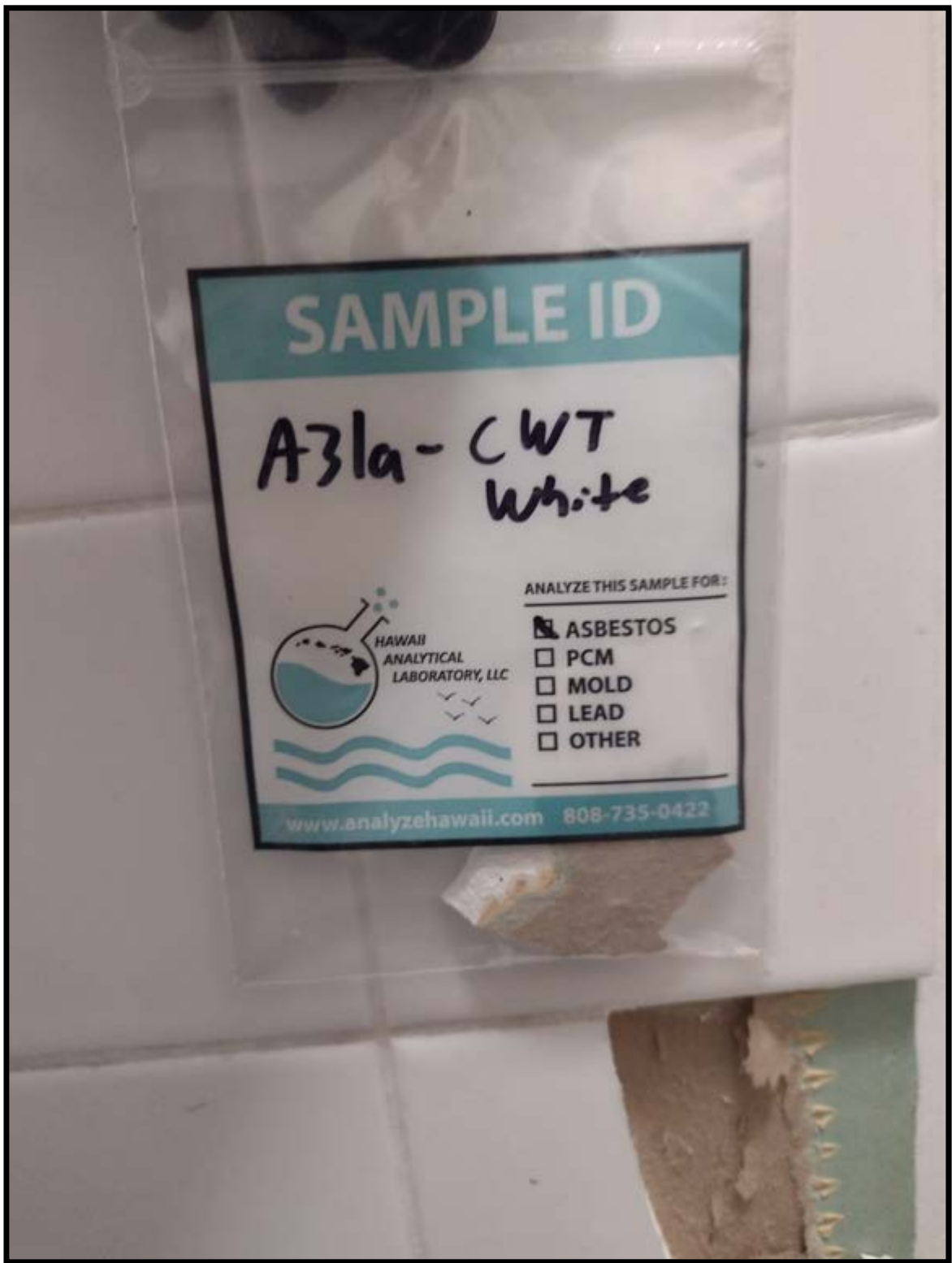
Date of Photo: October 12, 2022





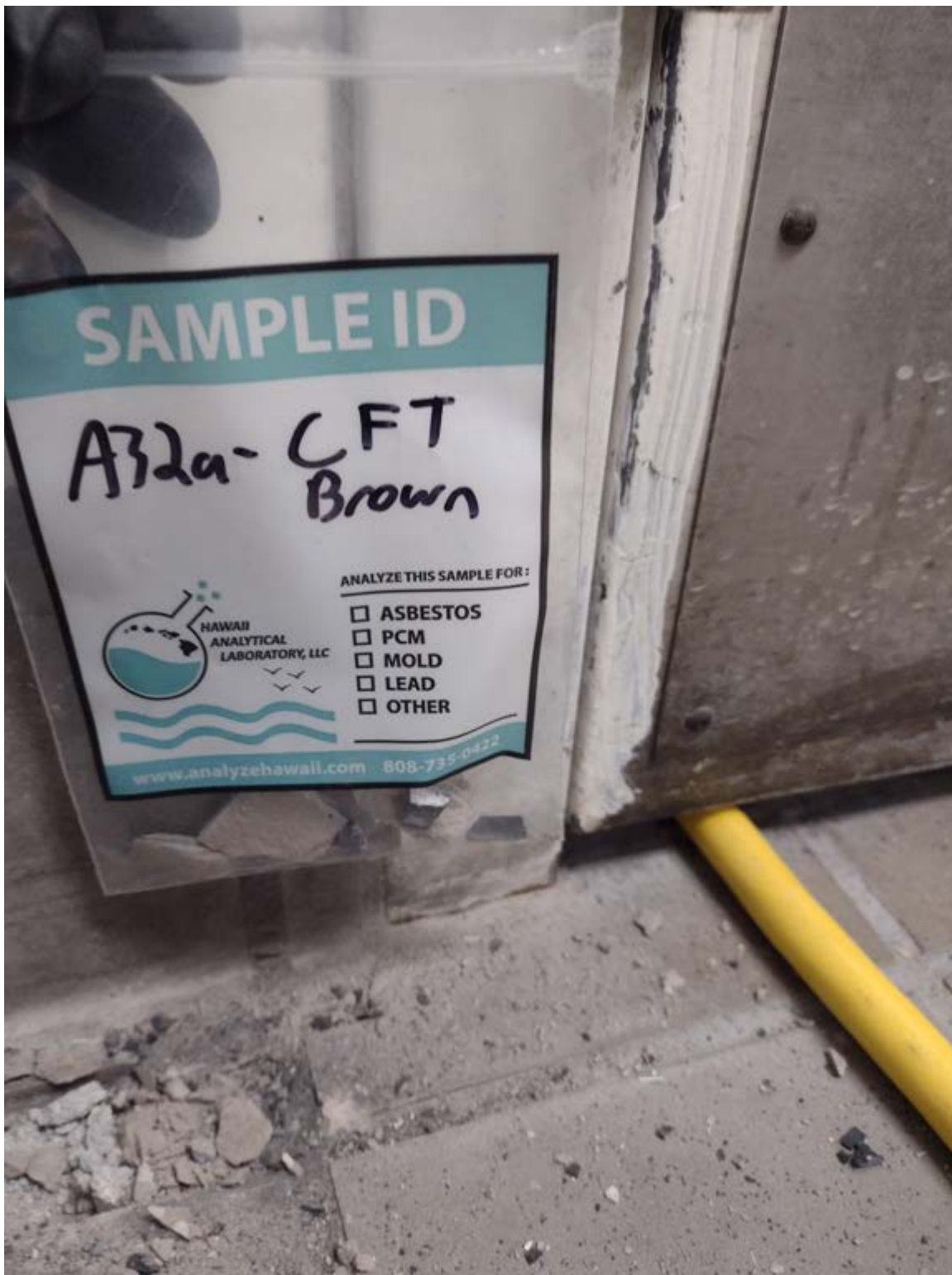
**Photo 31**

Asbestos Bulk Sample – A30a – Ceramic Floor Tile, Dark Gray



**Photo 32**

Asbestos Bulk Sample – A31a – Ceramic Wall Tile, White



**Photo 33**

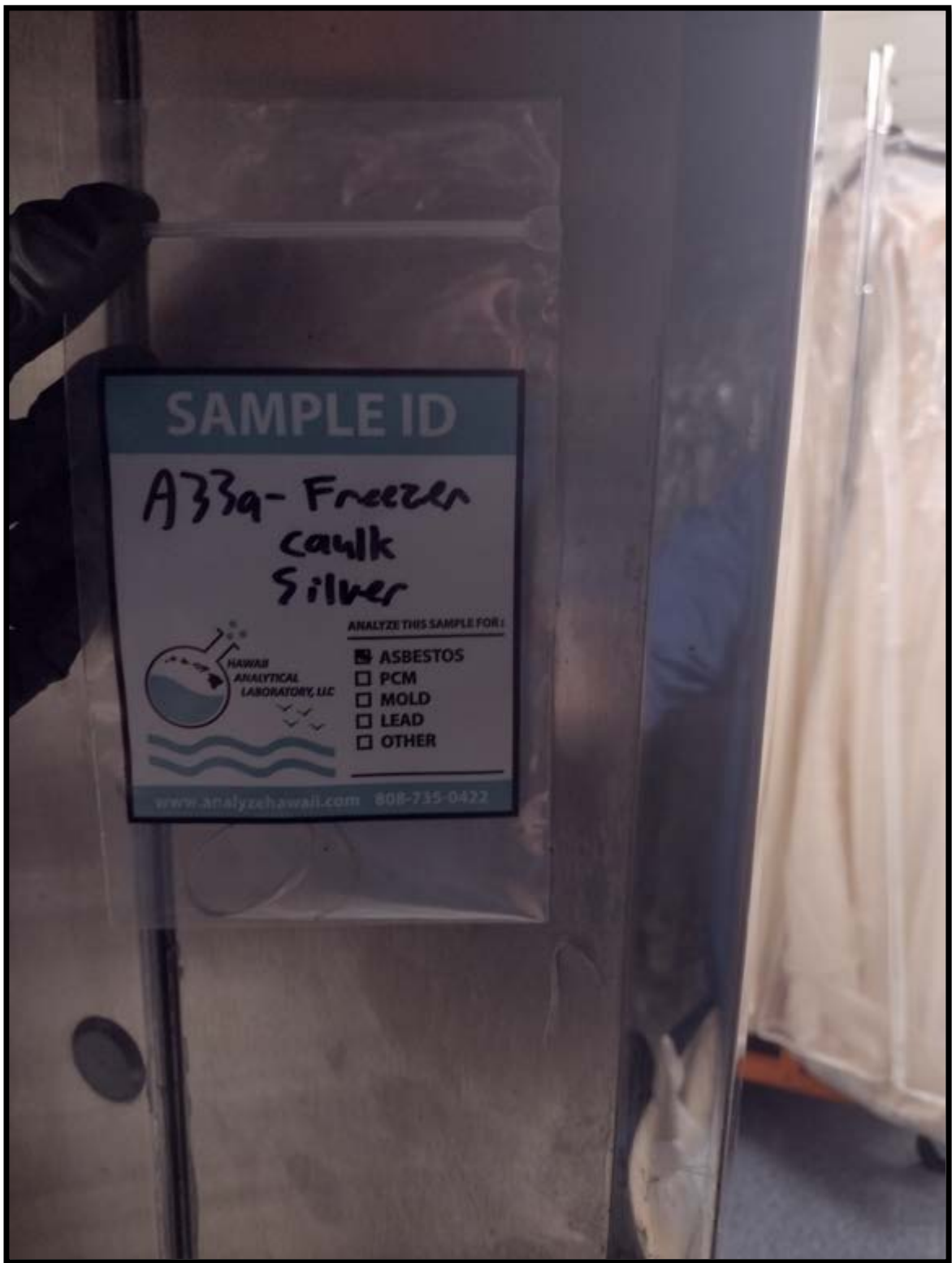
Asbestos Bulk Sample – A32a – Ceramic Floor Tile, Brown

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 34**

Asbestos Bulk Sample – A33a – Freezer Caulk, Silver

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 35**

Asbestos Bulk Sample – A34a – Vinyl Floor Tile, Cream

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 36**

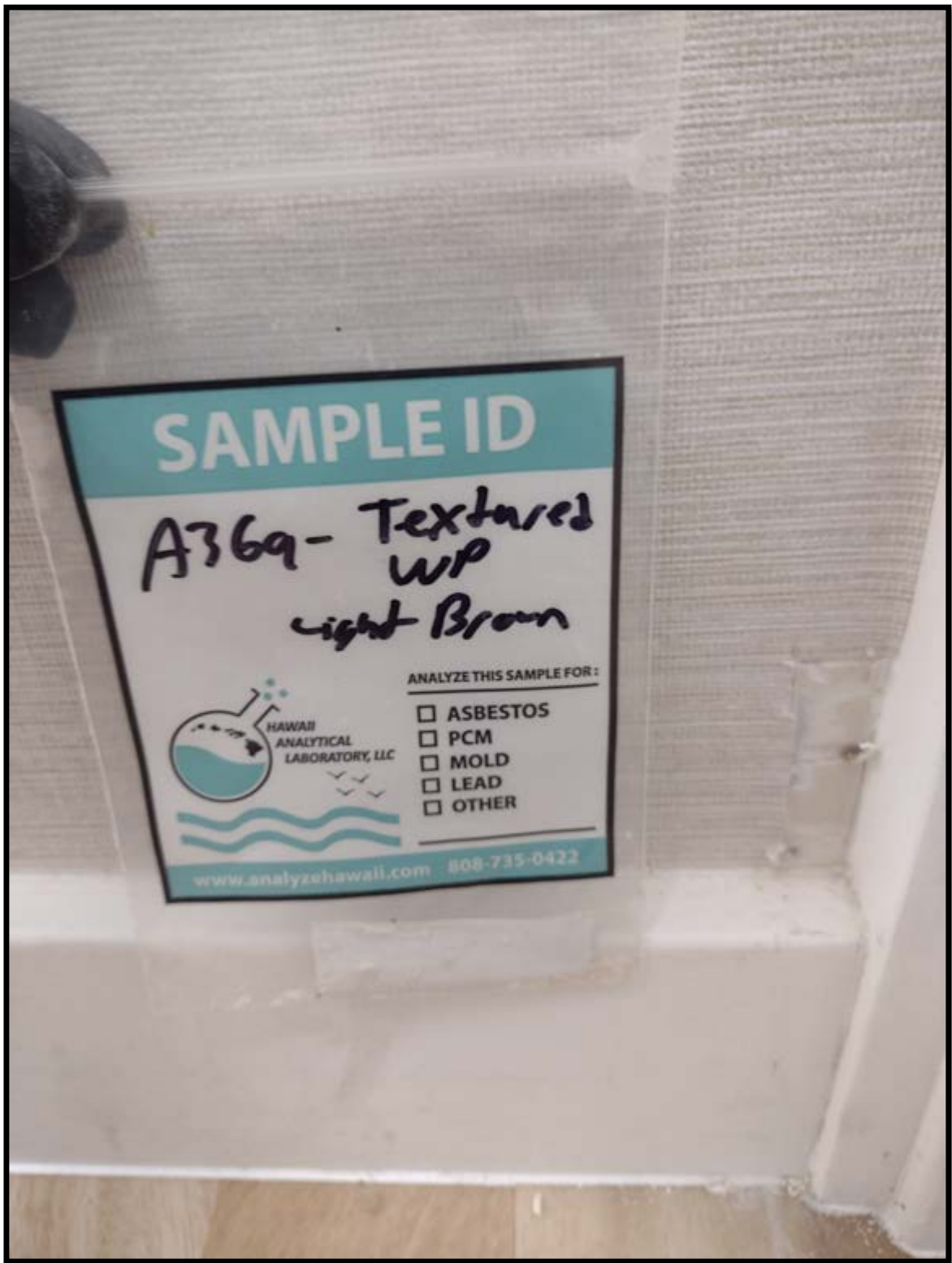
Asbestos Bulk Sample – A35a – Laminate Floor Tile, Light Brown

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 37**

Asbestos Bulk Sample – A36a – Textured Wallpaper, Light Brown



**Photo 38**

Asbestos Bulk Sample – A37a – Pipe Insulation, White

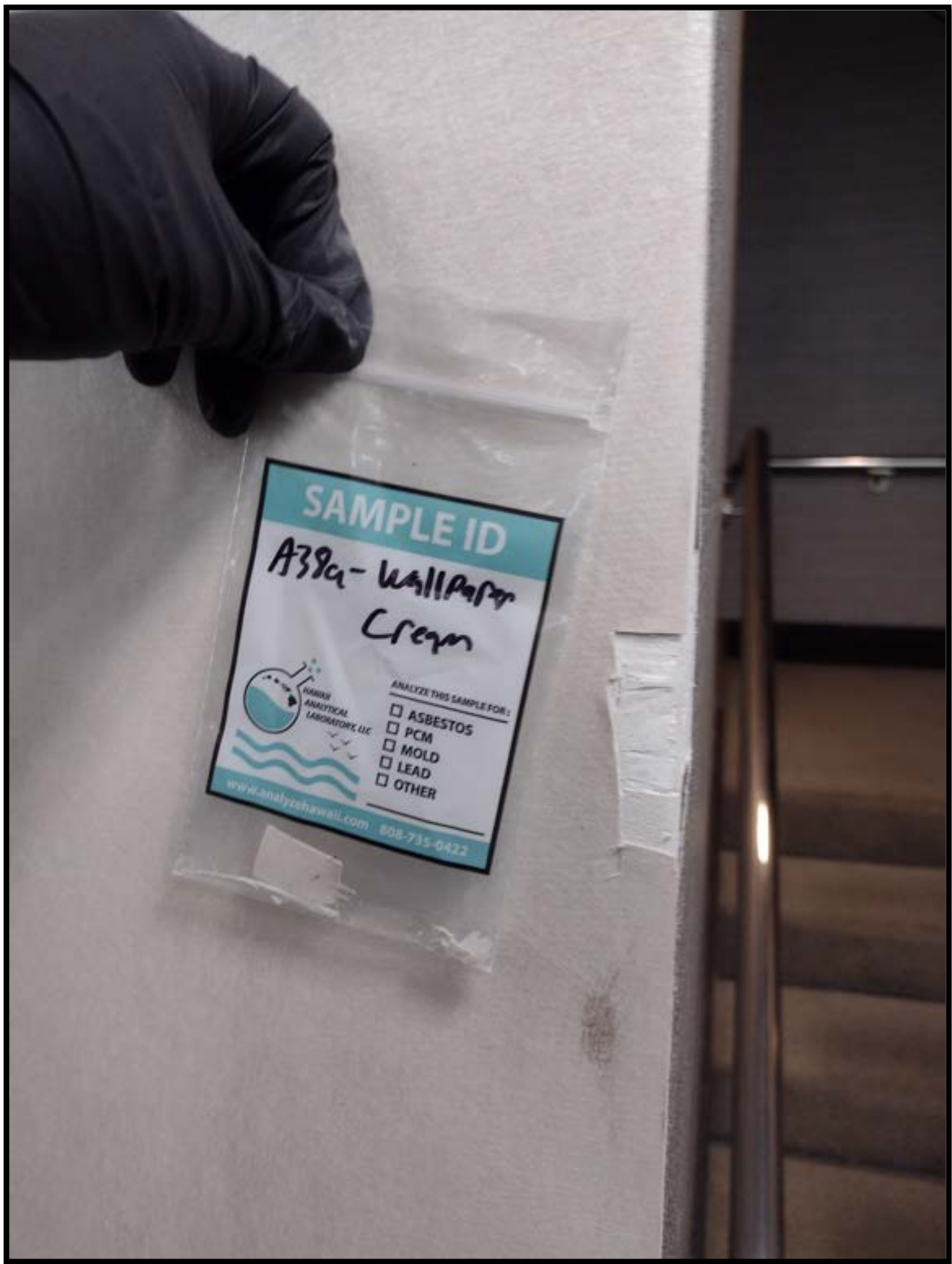
Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022

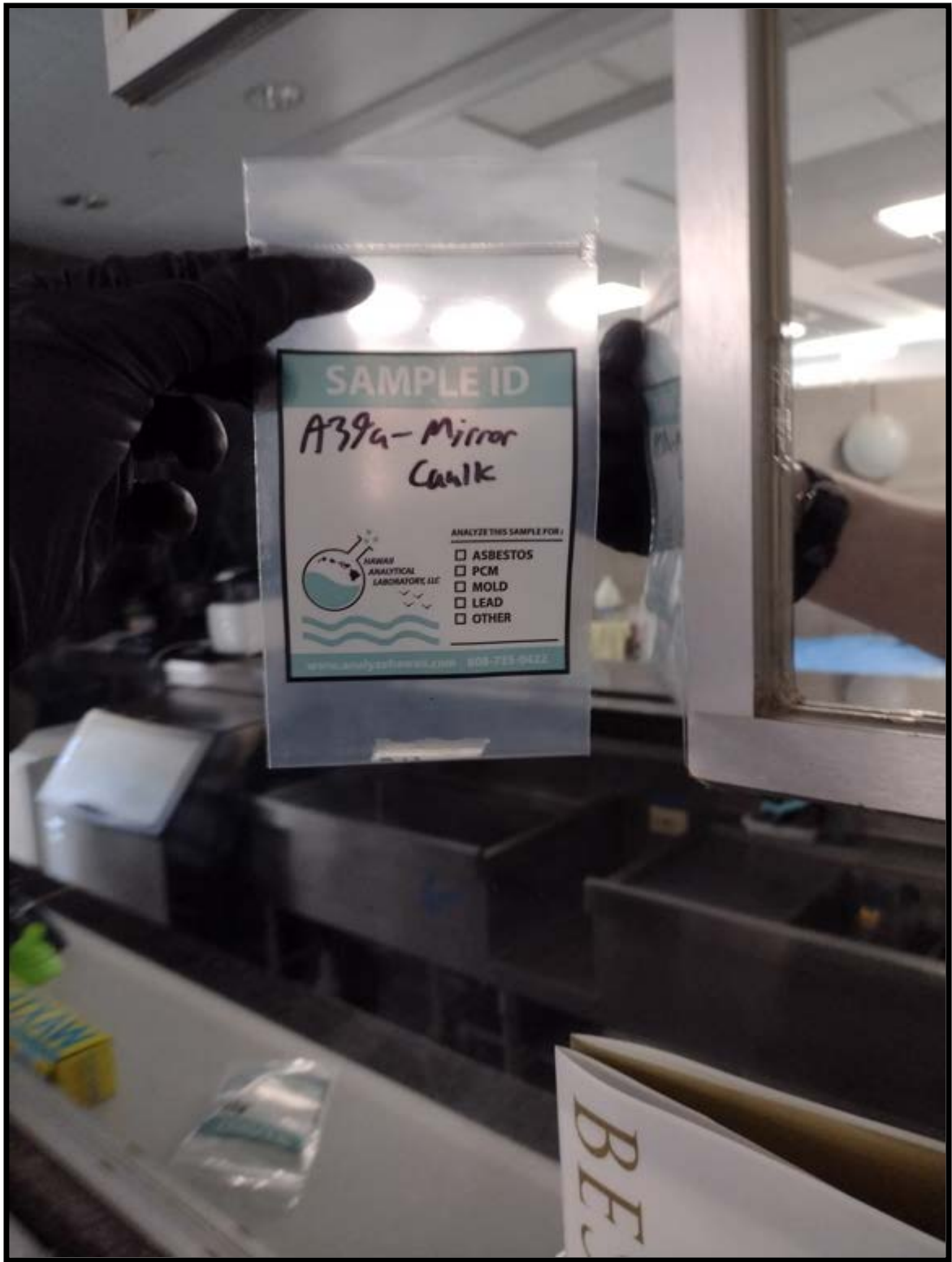






**Photo 39**

Asbestos Bulk Sample – A38a – Wallpaper, Cream



**Photo 40**

Asbestos Bulk Sample – A39a – Mirror Caulk

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 41**

Asbestos Bulk Sample – A40a – Glass Block Grout



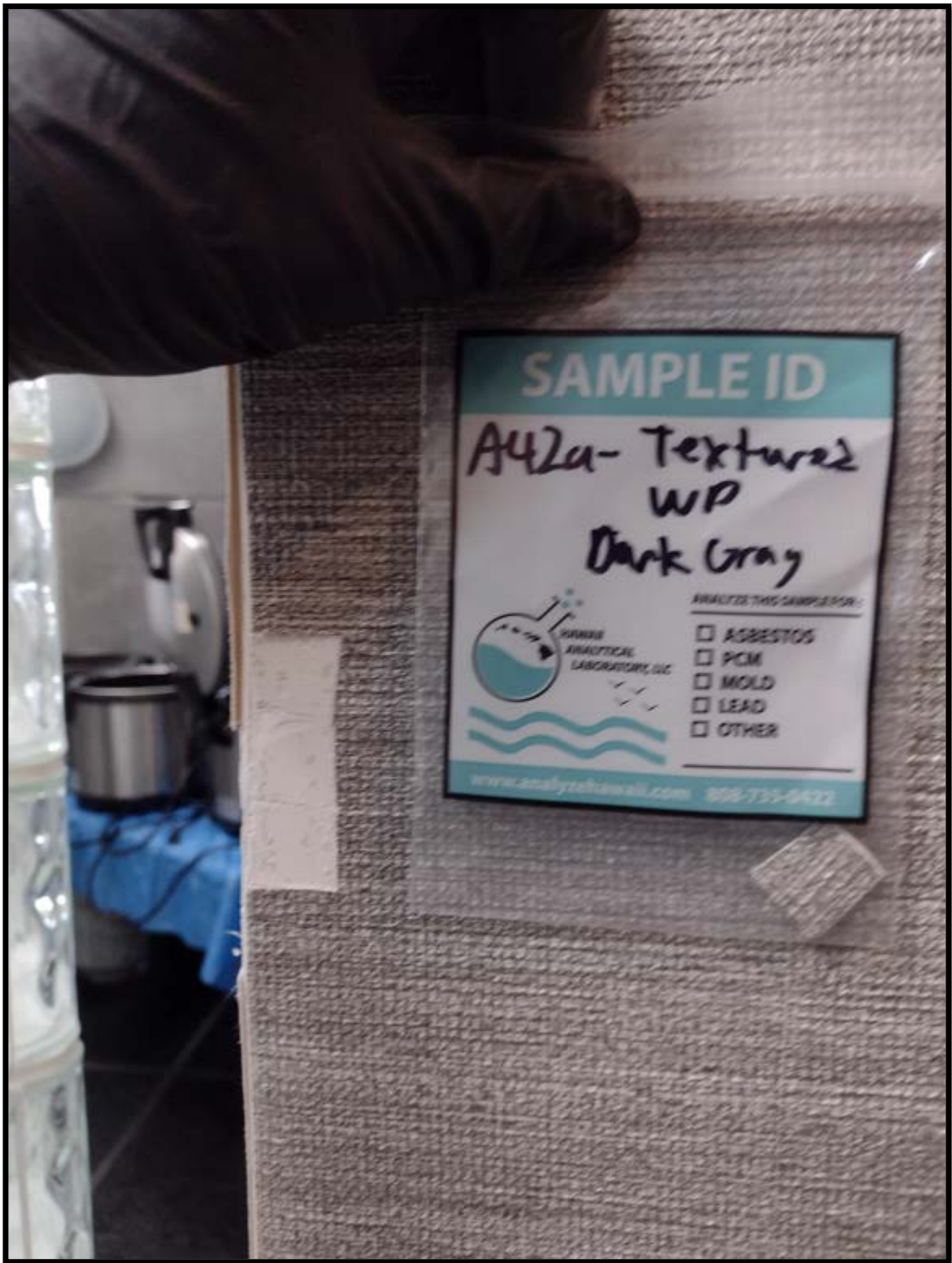
**Photo 42**

Asbestos Bulk Sample – A41a – Green Marble Mastic

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 43**

Asbestos Bulk Sample – A42a – Textured Wallpaper, Dark Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 44**

Asbestos Bulk Sample – A44a – Marble Floor Tile, Black



**Photo 45**

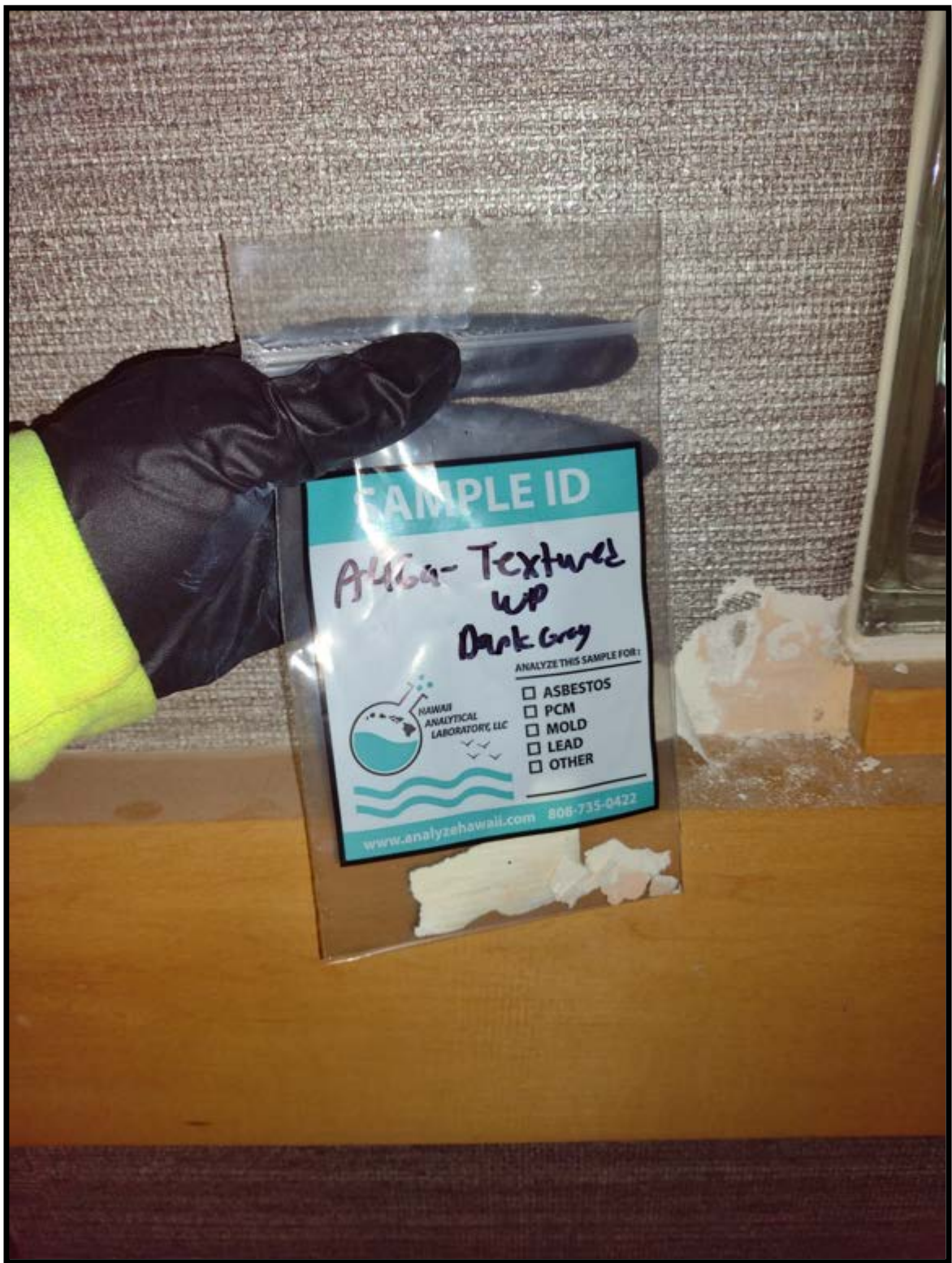
Asbestos Bulk Sample – A45a – Ceramic Wall Tile, Light Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022

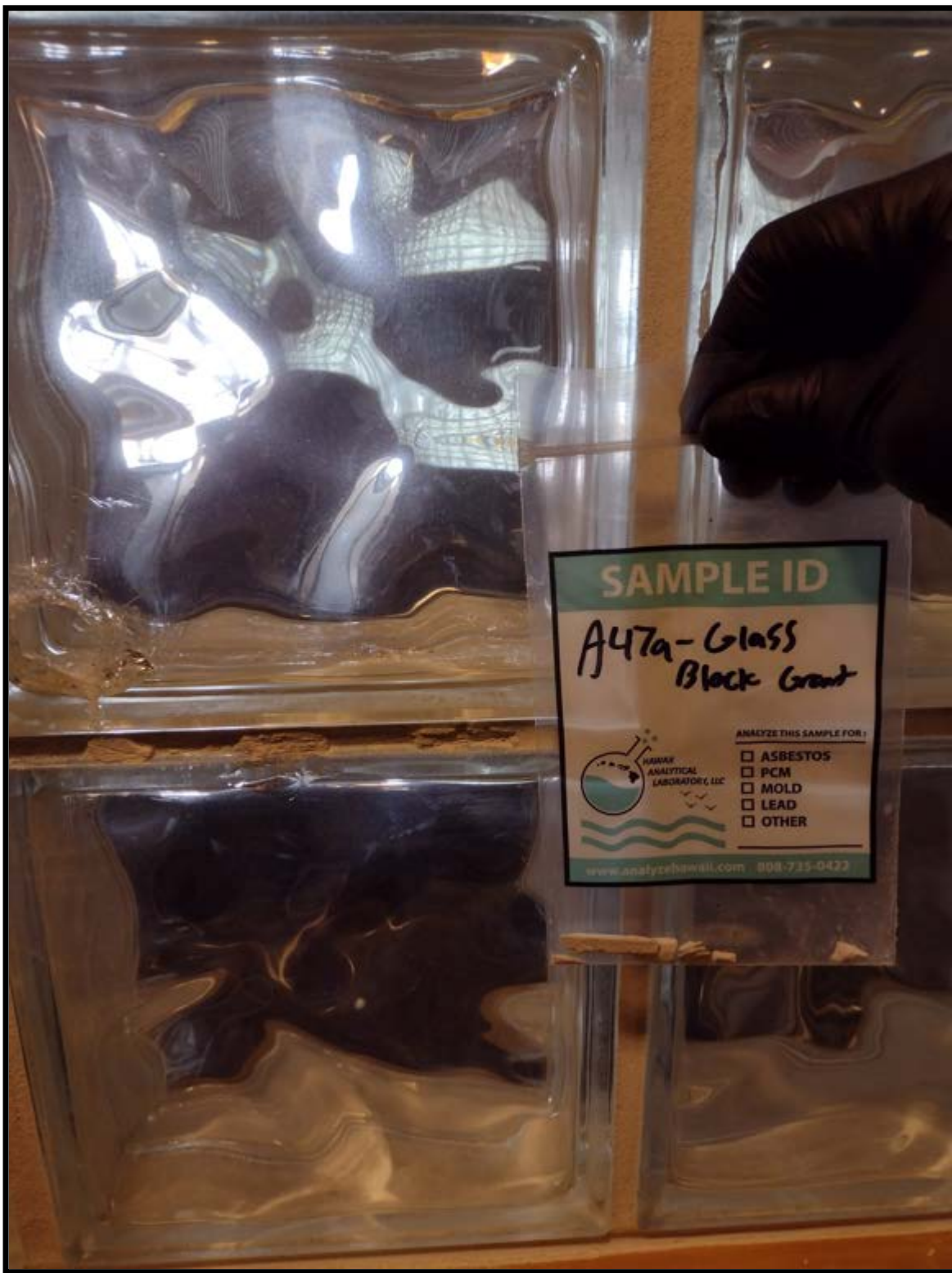




**Photo 46**

Asbestos Bulk Sample – A46a – Textured Wallpaper, Dark Gray





**Photo 47**

Asbestos Bulk Sample – A47a – Glass Block Grout

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 48**

Asbestos Bulk Sample – A48a – Diamond Carpet Mastic, Brown



**Photo 49**

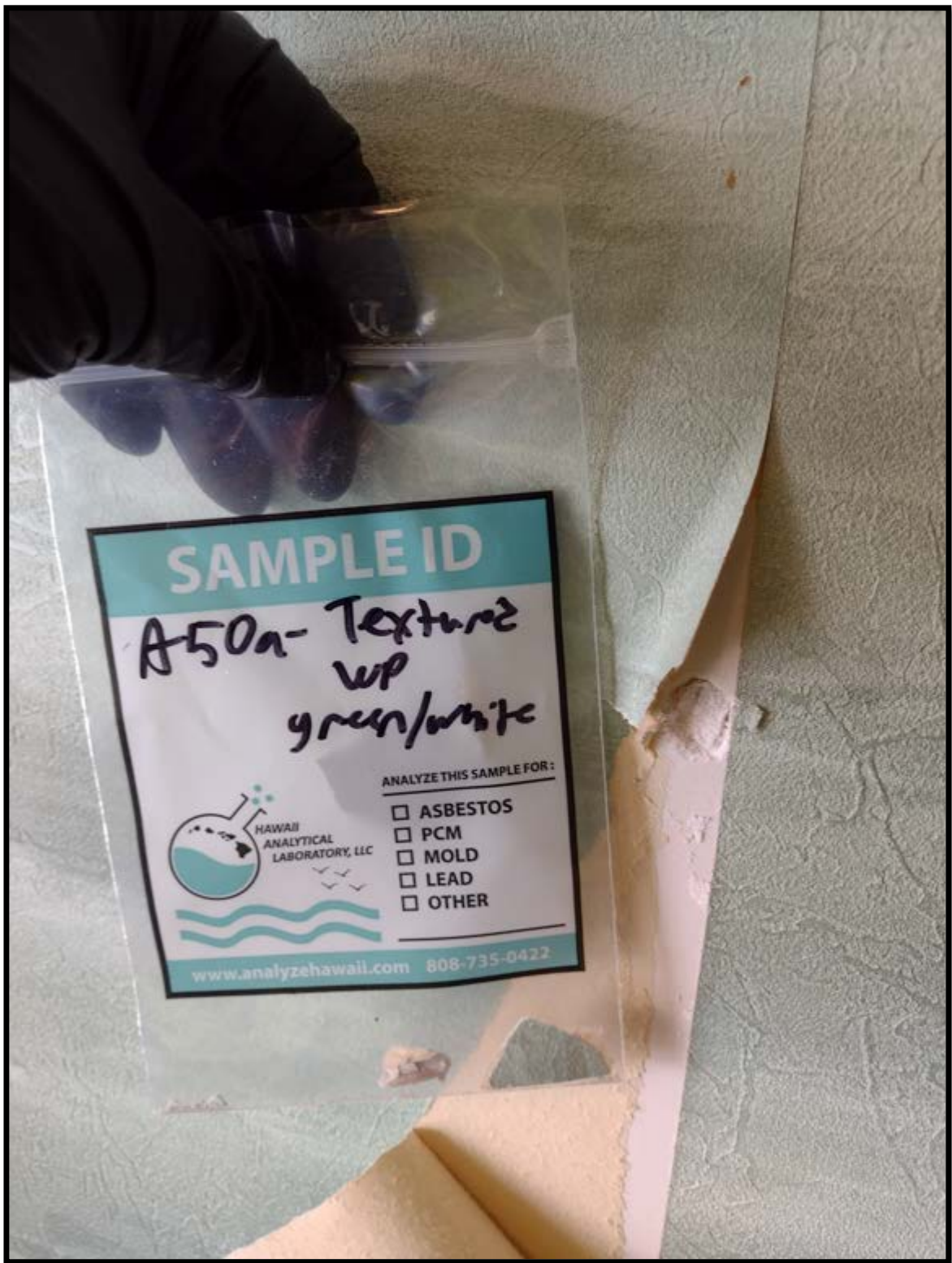
Asbestos Bulk Sample – A49a – Carpet Mastic Green

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 50**

Asbestos Bulk Sample – A50a – Textured Wallpaper, Green/White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 51**

Asbestos Bulk Sample – A51a – Door Threshold, Black



Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 52**

Asbestos Bulk Sample – A52a – Textured Wallpaper, Cream



**Photo 53**

Asbestos Bulk Sample – A53a – Window Caulk, Black



Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 54**

Asbestos Bulk Sample – A54a – Ceramic Floor Tile, Brown

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022







**Photo 55**

Asbestos Bulk Sample – A55a – Ceramic Wall Tile, White/Gray

Project Number: 2209-00264-HAZ

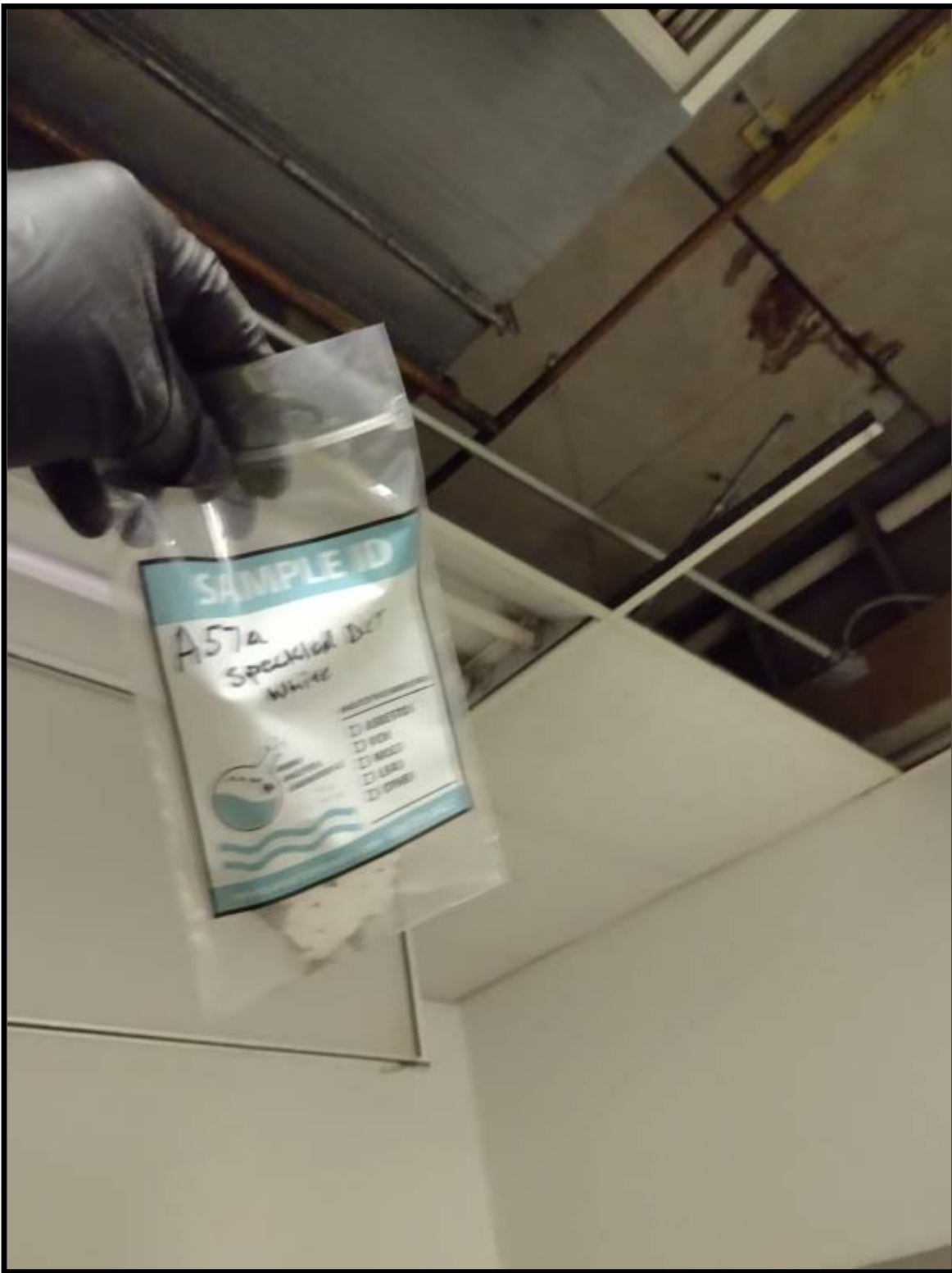
2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 56**

Asbestos Bulk Sample – A56a - Drywall



**Photo 57**

Asbestos Bulk Sample – A57a – Speckled Drop Ceiling Tile, White



Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 58**

Asbestos Bulk Sample – A58a – Pipe Insulation, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 59**

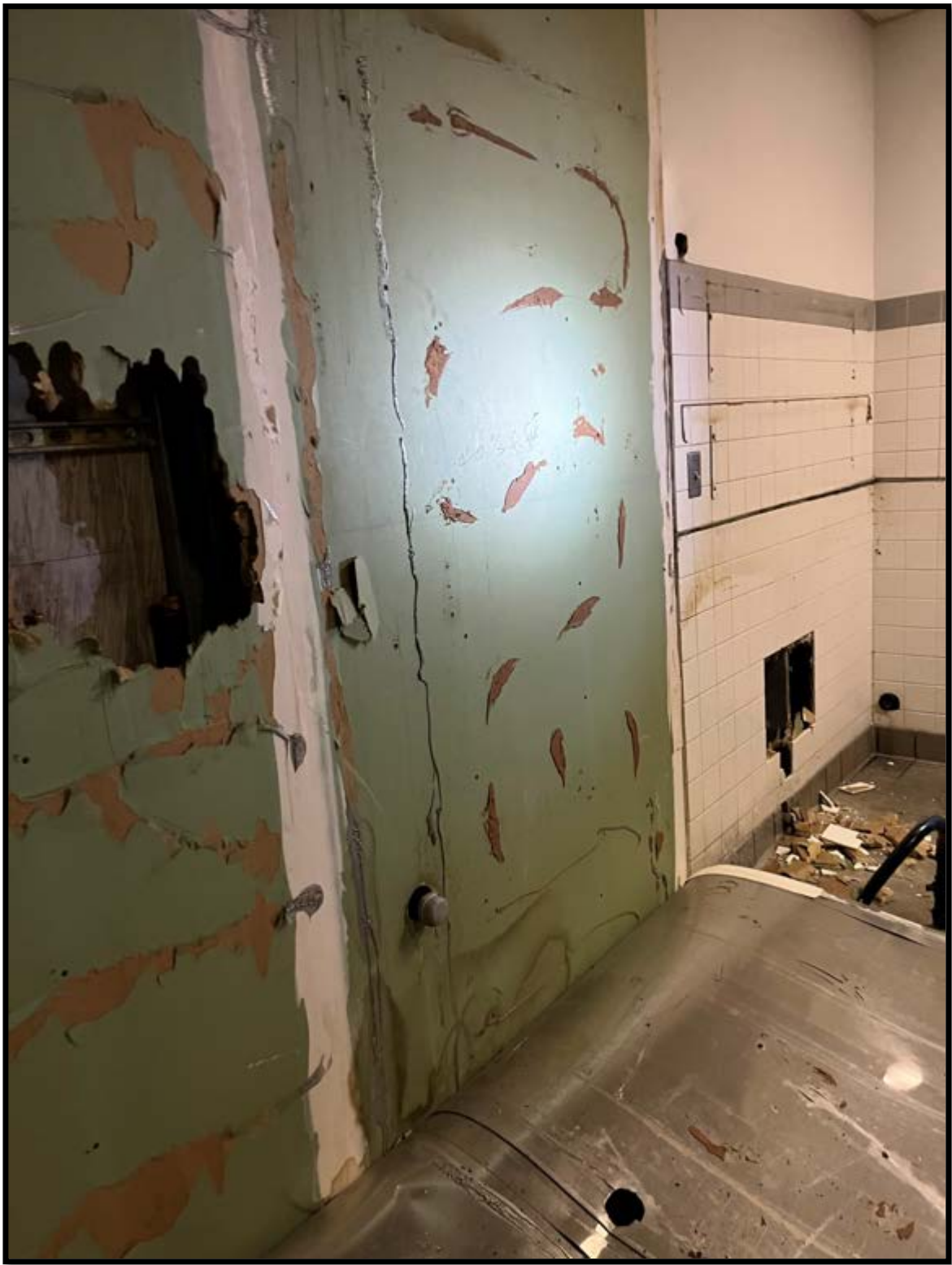
Asbestos Bulk Sample – A59a – Vibration Duct Mastic, Brown



Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 60**

Asbestos Bulk Sample – A60a – Wall Mastic, Brown



Project Number: 2209-00264-HAZ

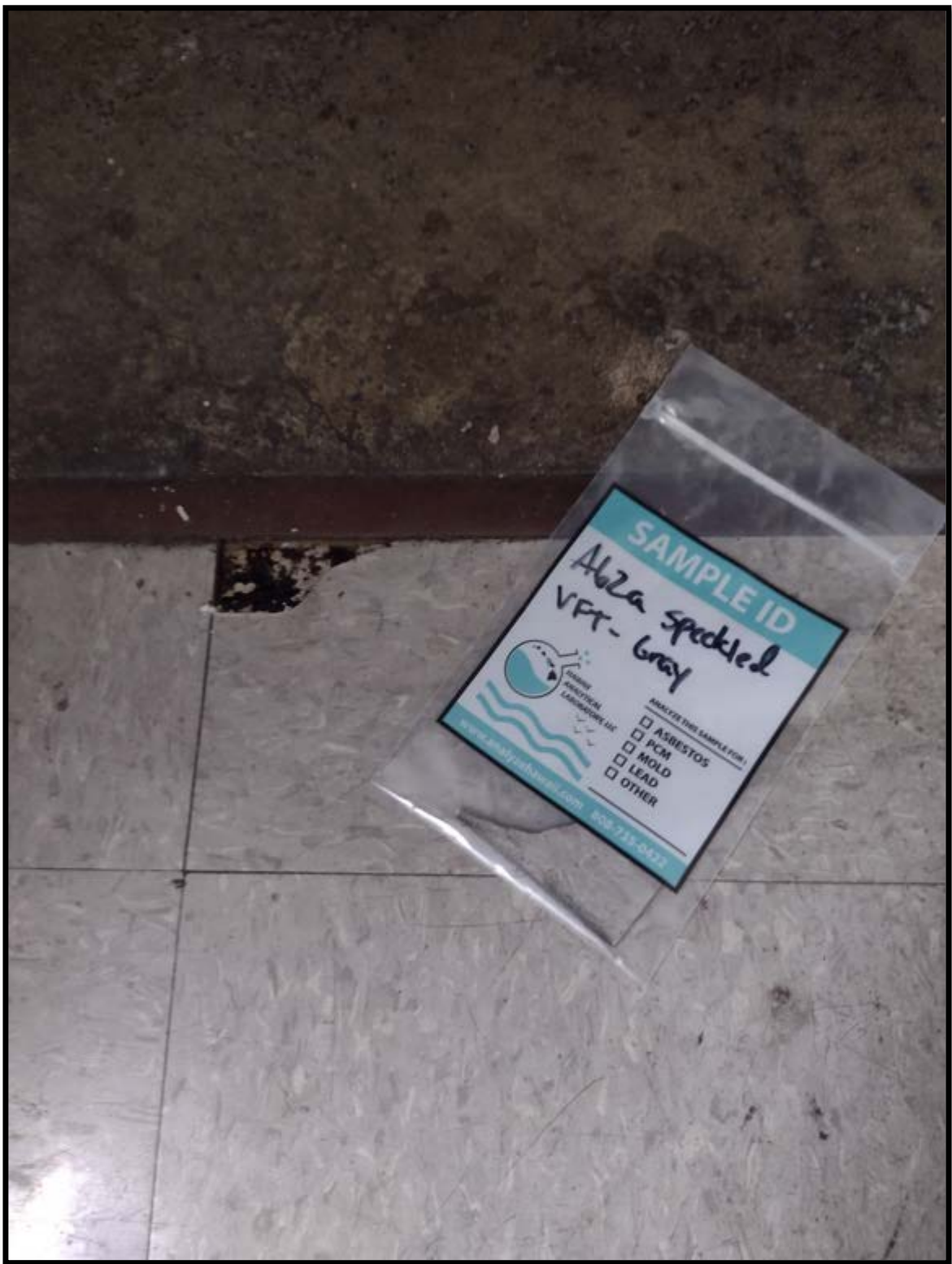
2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 61**

Asbestos Bulk Sample – A61c – Silver Freezer Caulk



**Photo 62**

Asbestos Bulk Sample – A62a – Speckled Vinyl Floor Tile, Gray

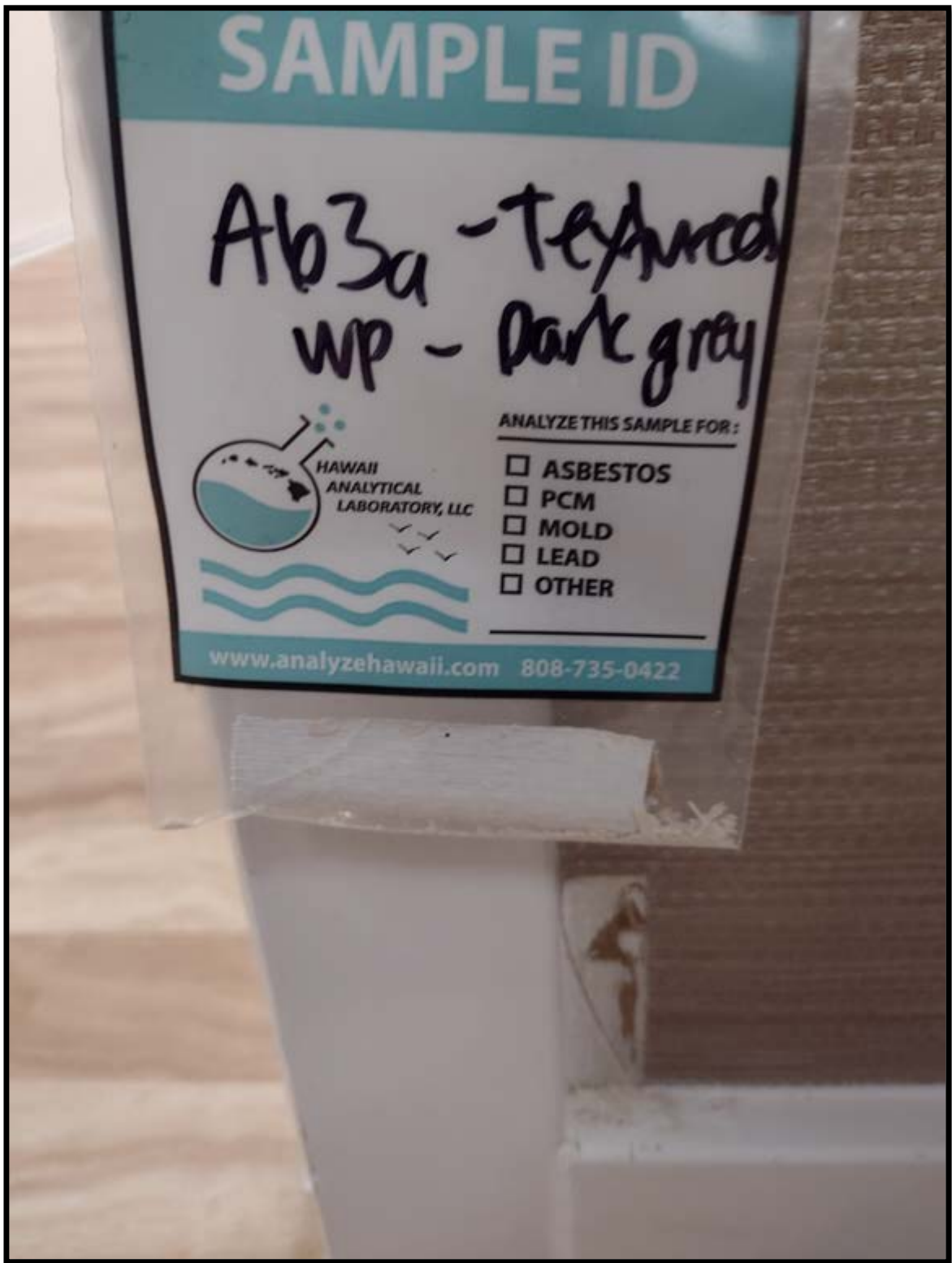
Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022







**Photo 63**

Asbestos Bulk Sample – A63a - Textured Wallpaper, Dark Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 64**

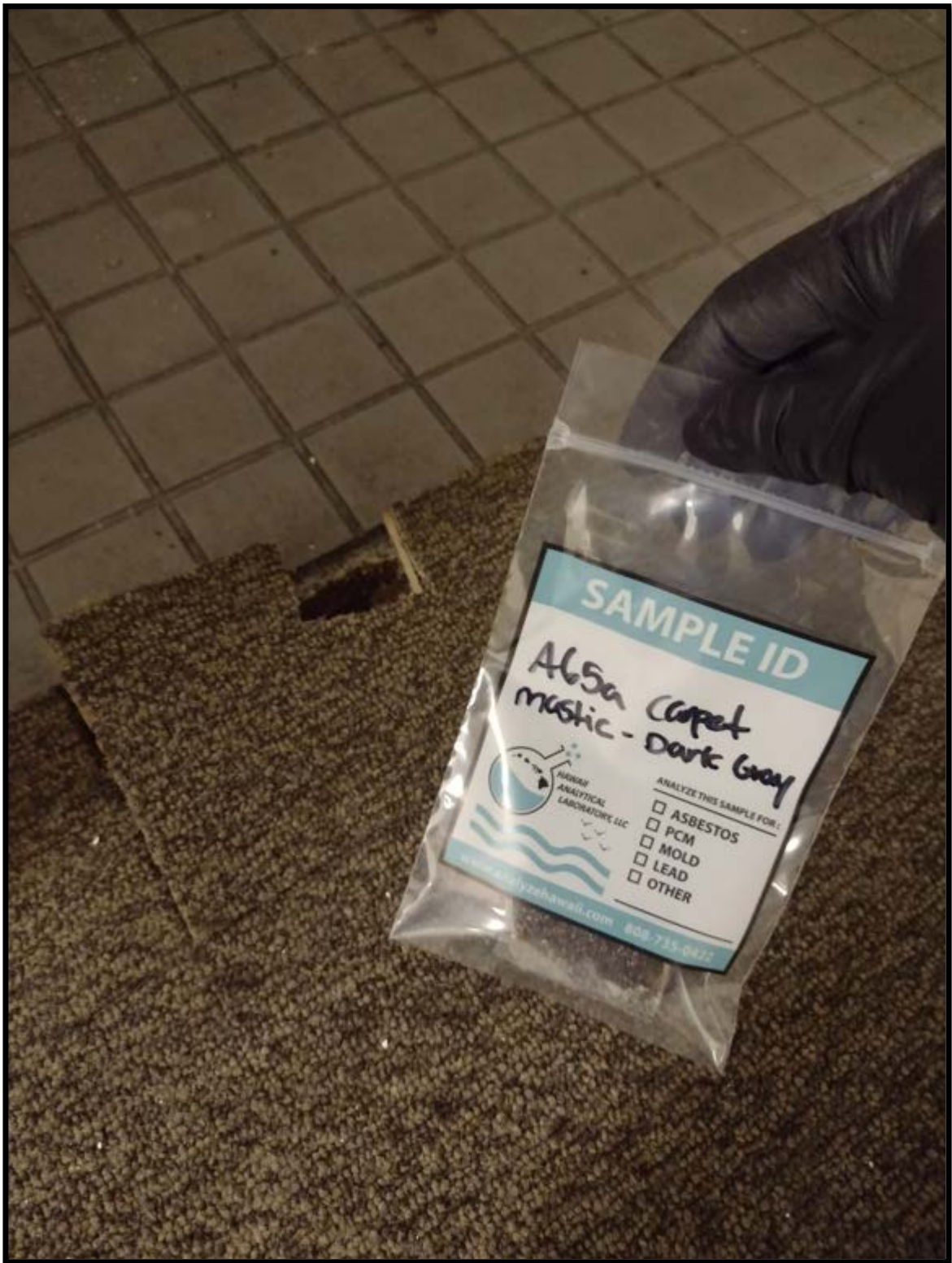
Asbestos Bulk Sample – A64a – Cove Base, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 65**

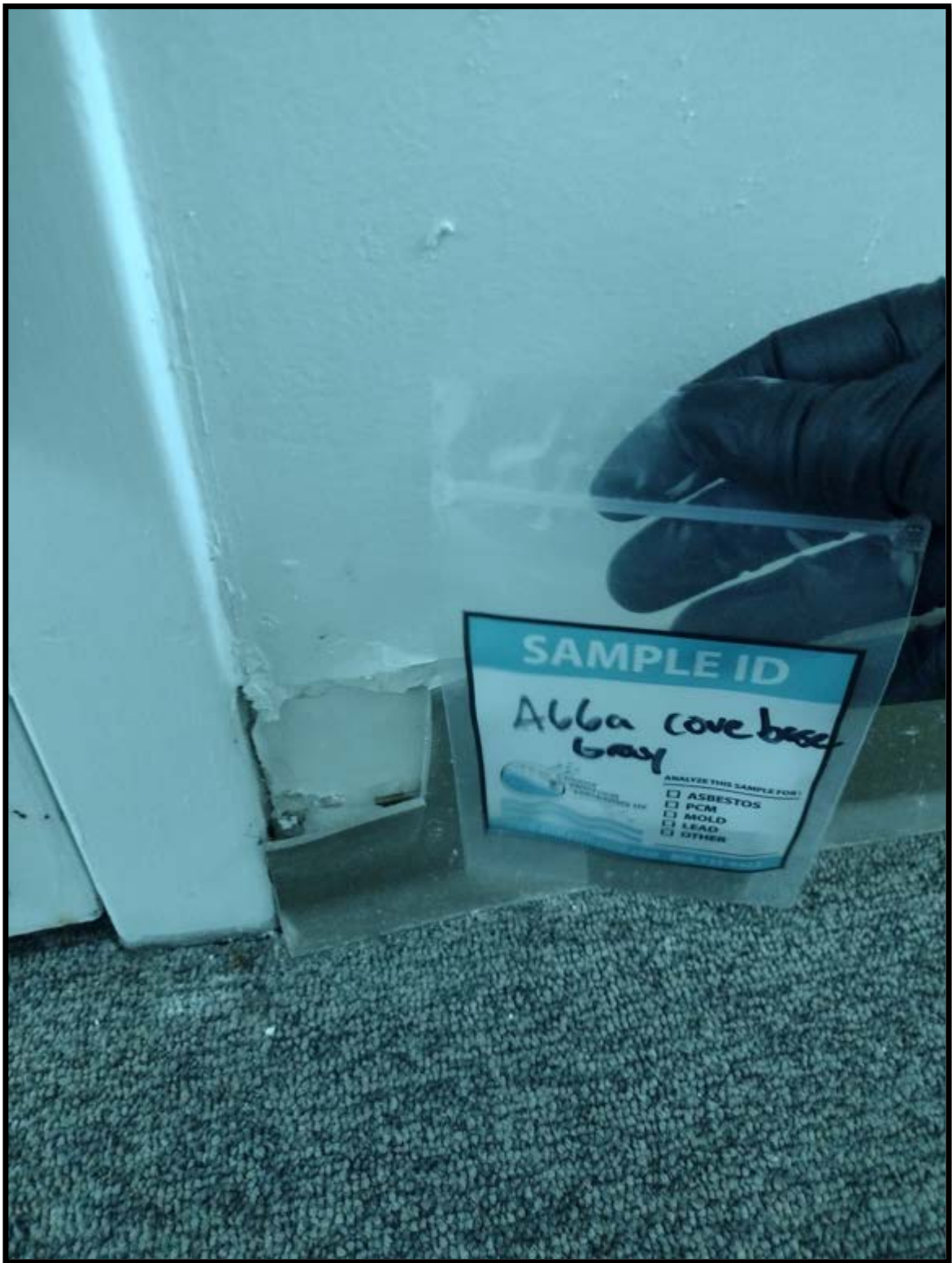
Asbestos Bulk Sample – A65a – Carpet Mastic, Dark Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 66**

Asbestos Bulk Sample – A66a – Cove Base, Gray

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 67**

Asbestos Bulk Sample – A67a – 1x1 Ceramic Floor Tile, Dark Gray



**Photo 68**

Asbestos Bulk Sample – A68b – White / Gray Ceramic Wall Tile



**Photo 69**

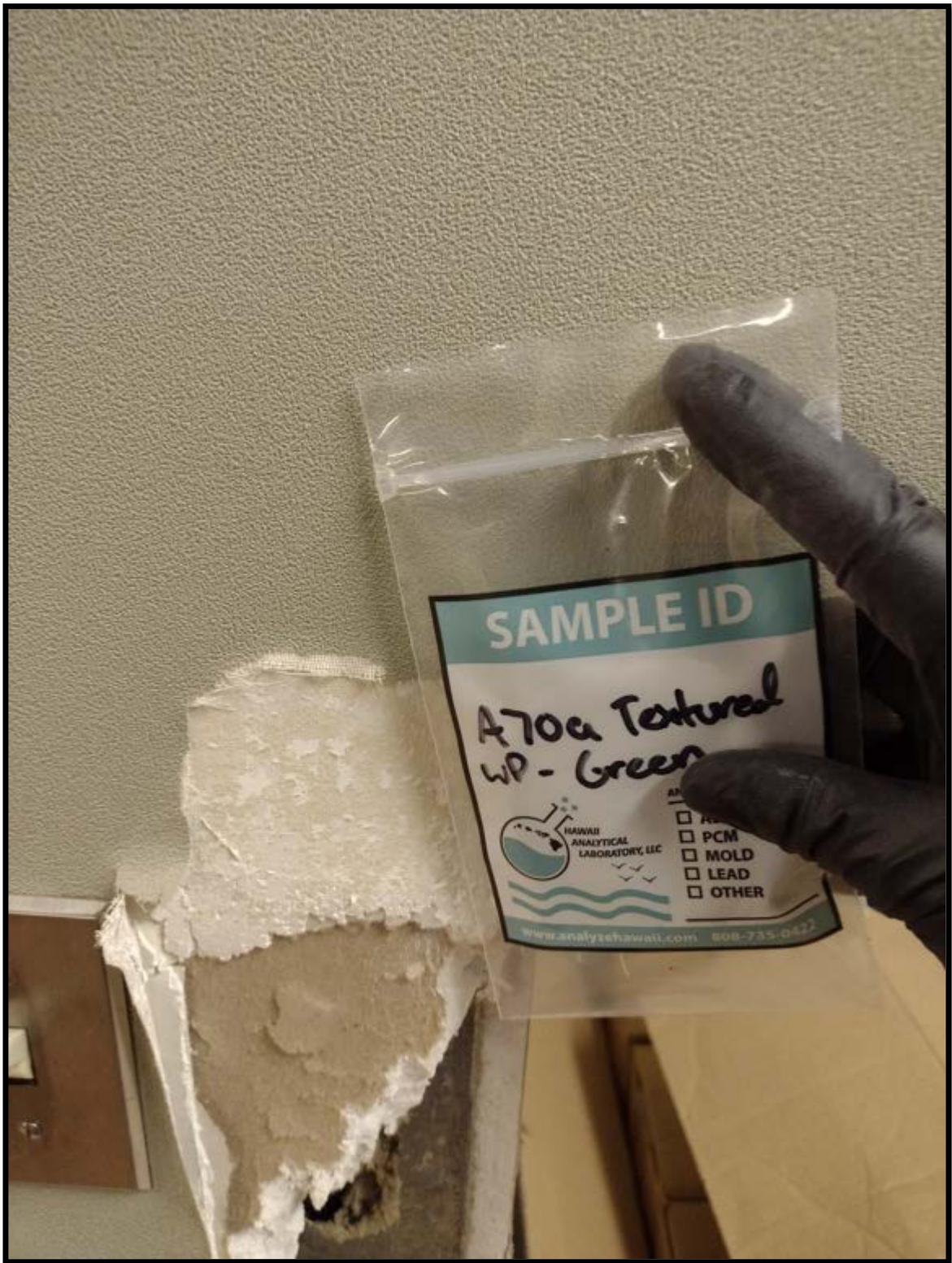
Asbestos Bulk Sample – A69a – Drywall Ceiling

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022





**Photo 70**

Asbestos Bulk Sample – A70a – Textured Wallpaper, Green





**Photo 71**

Asbestos Bulk Sample – A72a – Textured Wallpaper, Tan

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 72**

Asbestos Bulk Sample – A73a - CMU

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

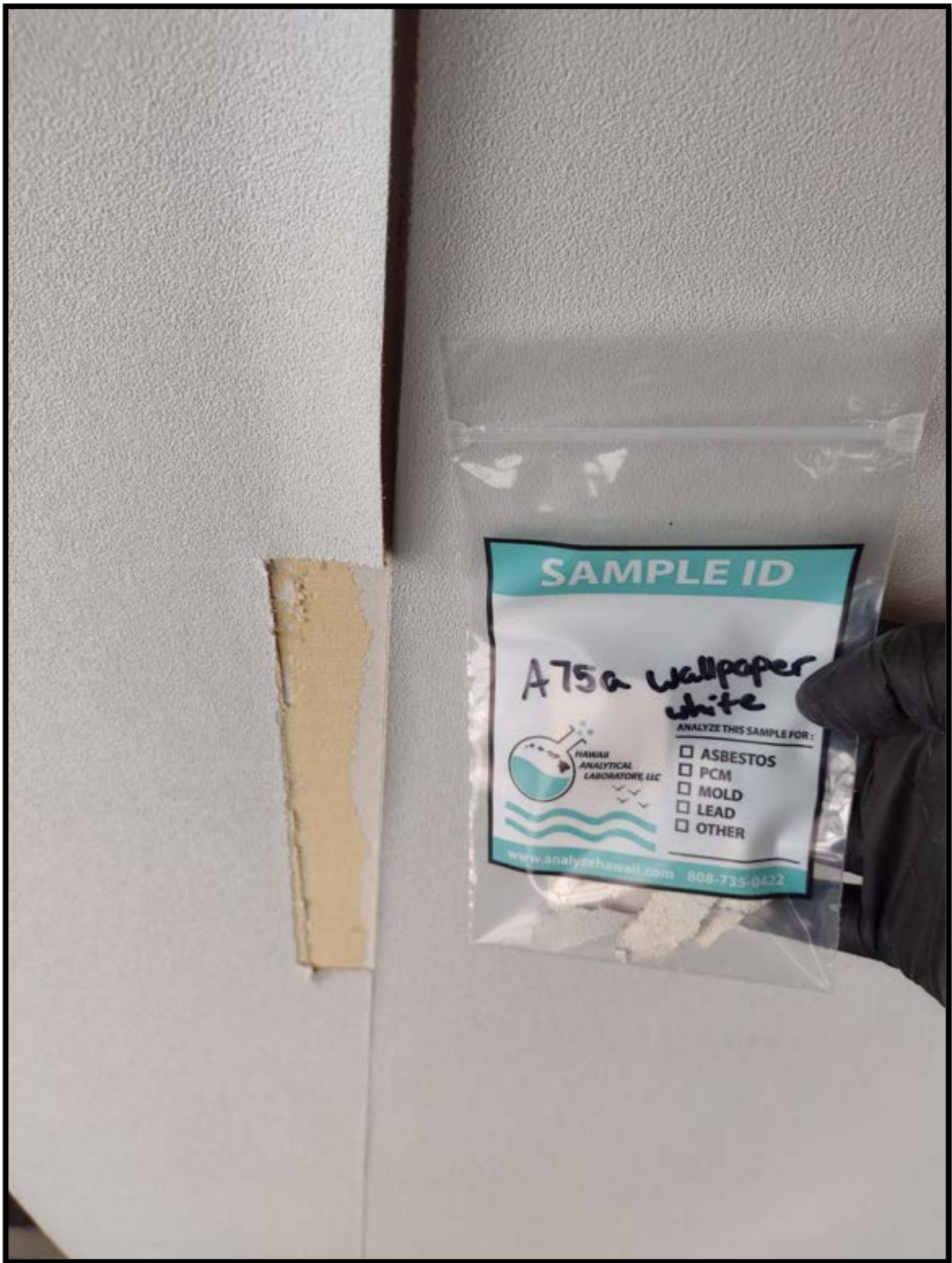
Date of Photo: October 12, 2022





**Photo 73**

Asbestos Bulk Sample – A74a – Bamboo Ceiling Wallpaper



**Photo 74**

Asbestos Bulk Sample – A75a – Wallpaper, White

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 75**

Asbestos Bulk Sample – A76a – Black Stone Floor Grout

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 76**

Asbestos Bulk Sample – A77a – Marble Cove Base, Black

Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022



**Photo 77**

Asbestos Bulk Sample – A78a – Roof Shingle, Black



**Photo 78**

Asbestos Bulk Sample – A79a – Ceramic Wall Tile, Gray

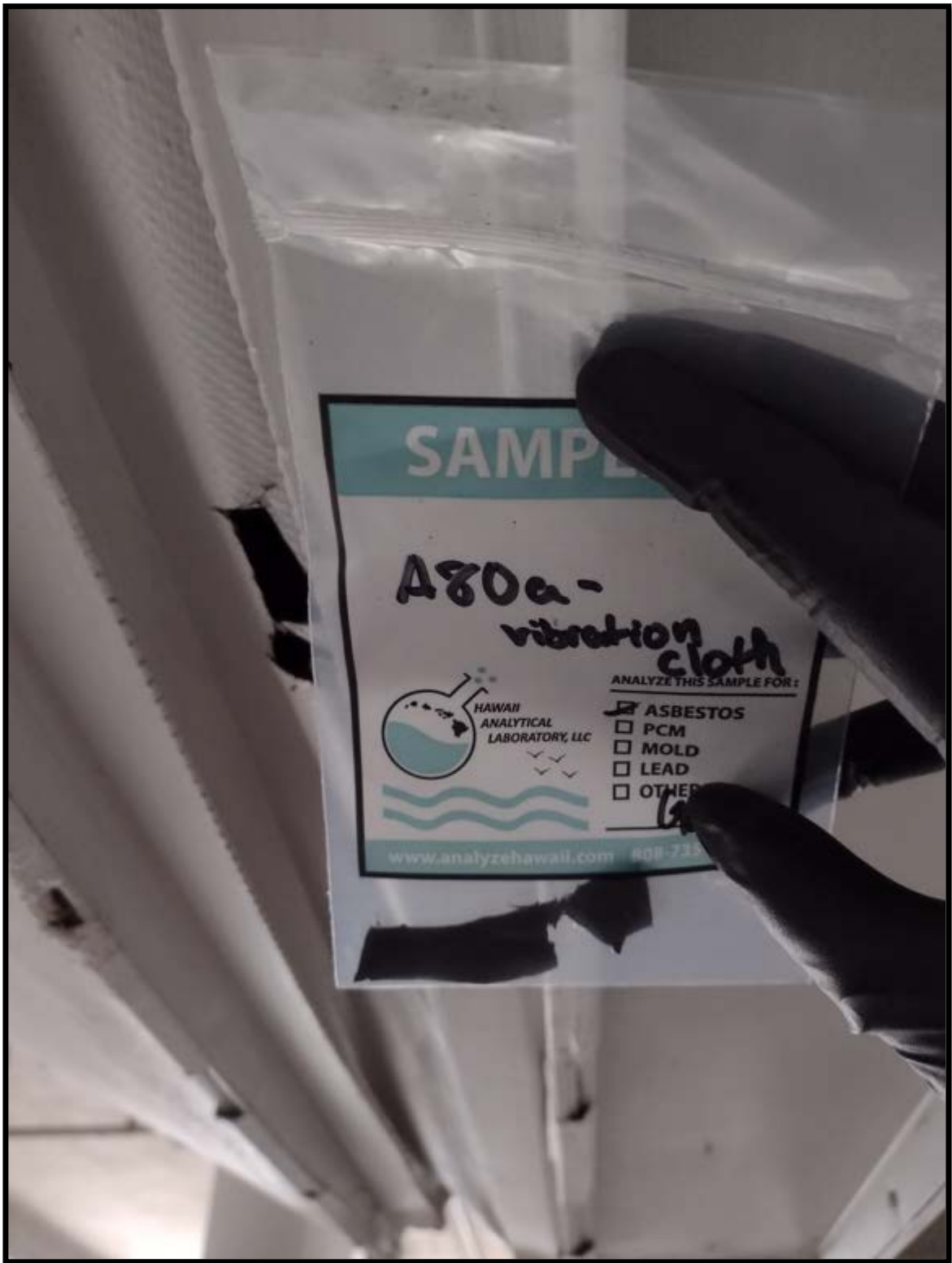
Project Number: 2209-00264-HAZ

2057 Kalakaua Avenue

Date of Photo: October 12, 2022

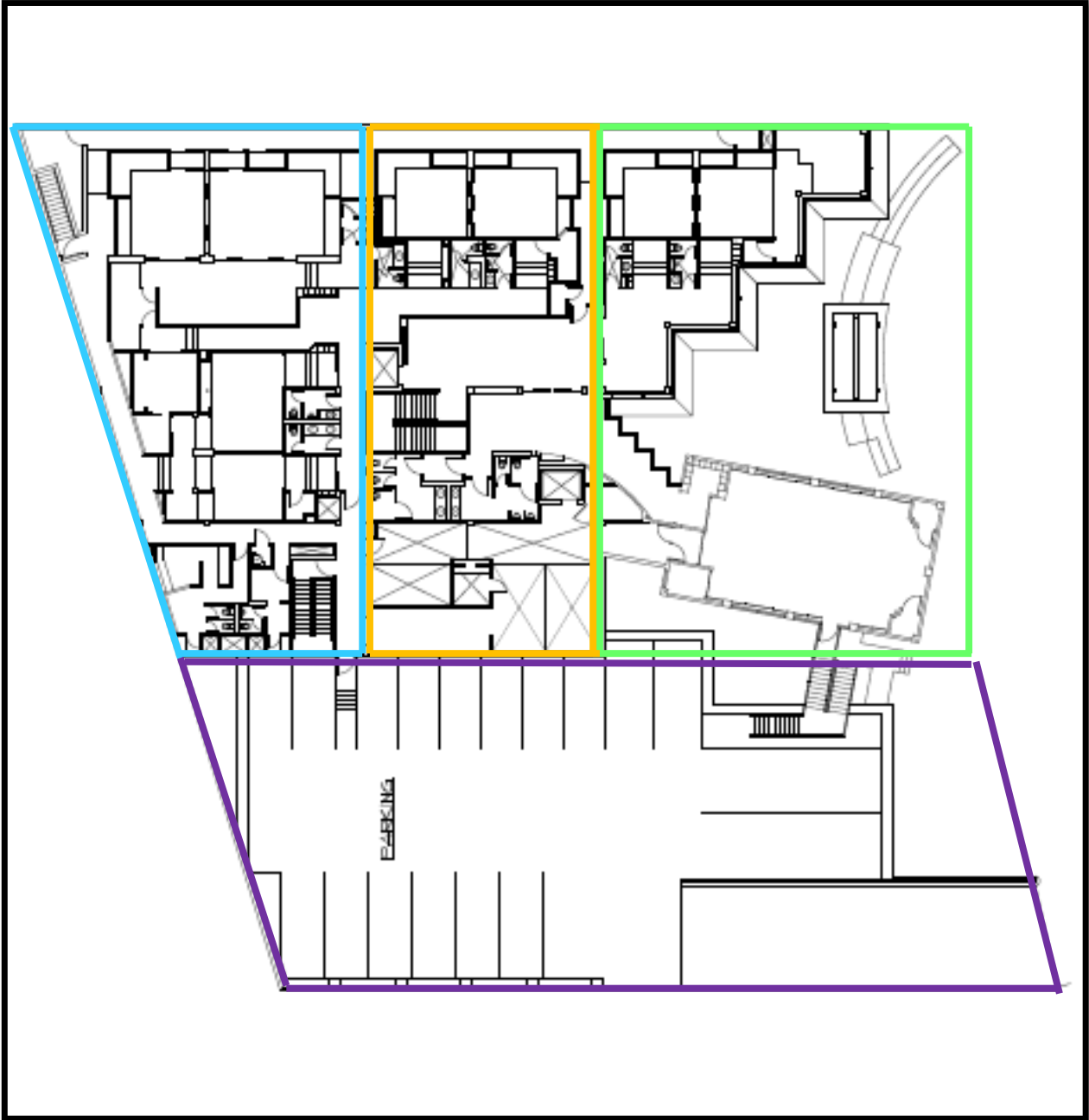






**Photo 79**

Asbestos Bulk Sample – A80a – Vibration Cloth




- Sector One
- Sector Two
- Sector Three
- Parking Garage

**Figure 1**

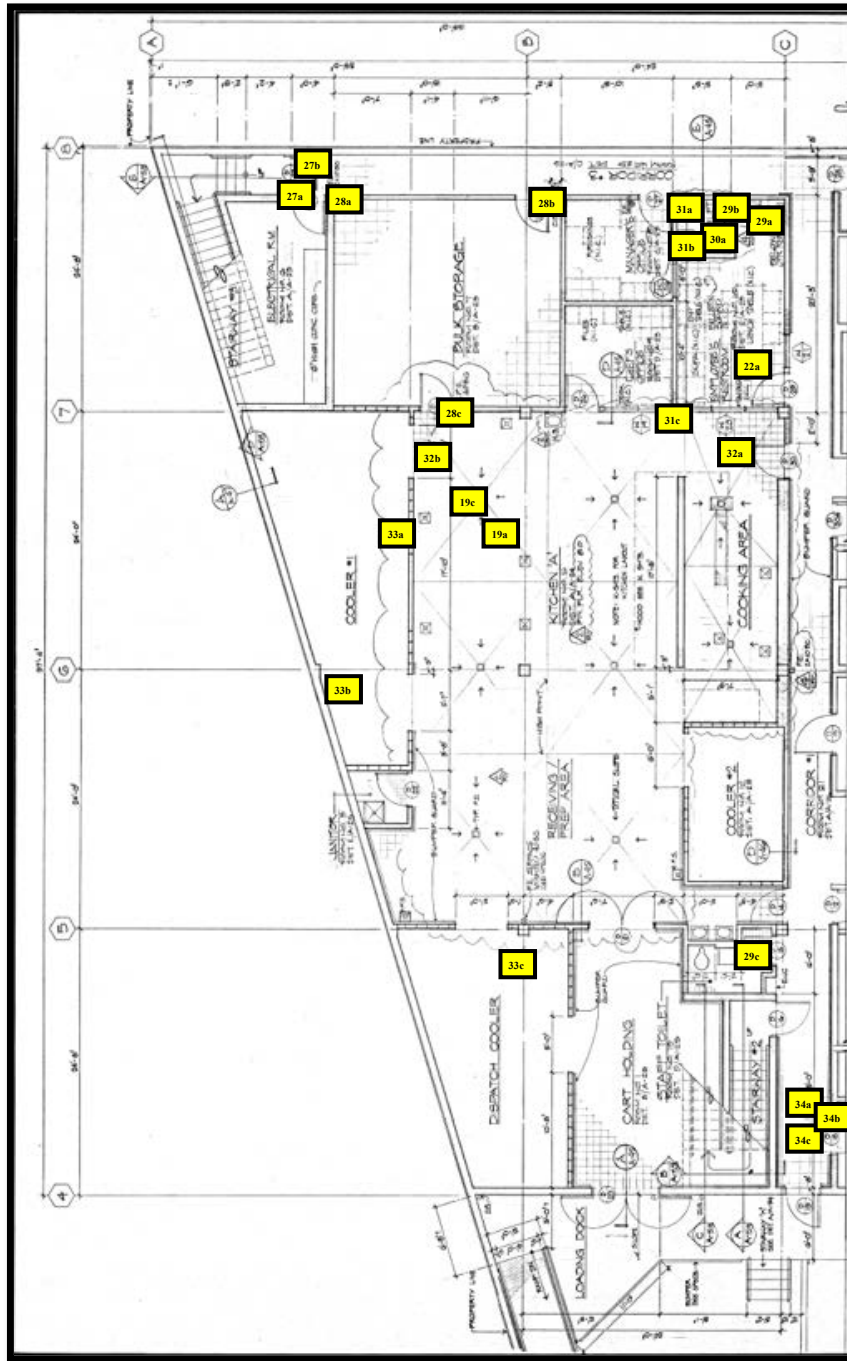
2057 Kalakaua Avenue – Building Overview






 Negative Asbestos Sample

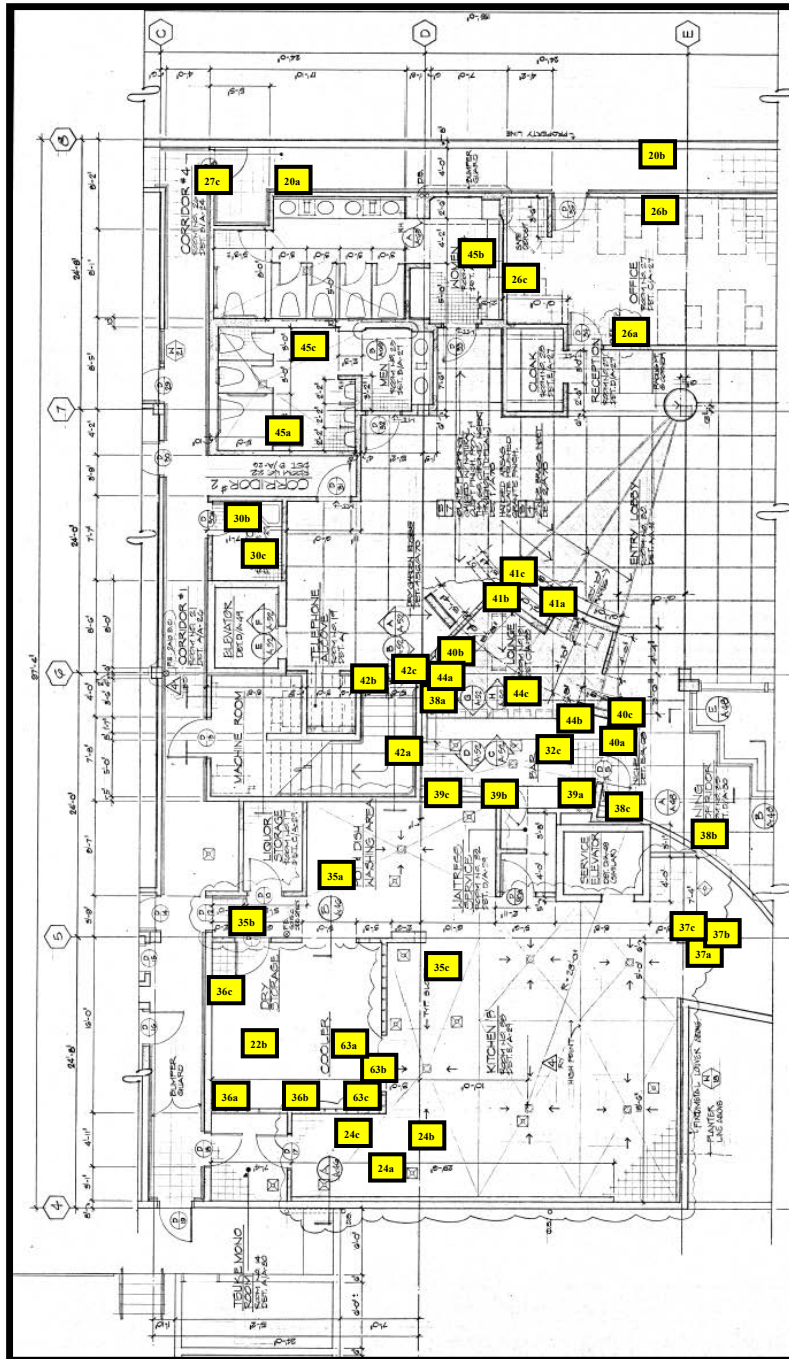
**Figure 2**  
Roof Plan




 Negative Asbestos Sample

**Figure 3**

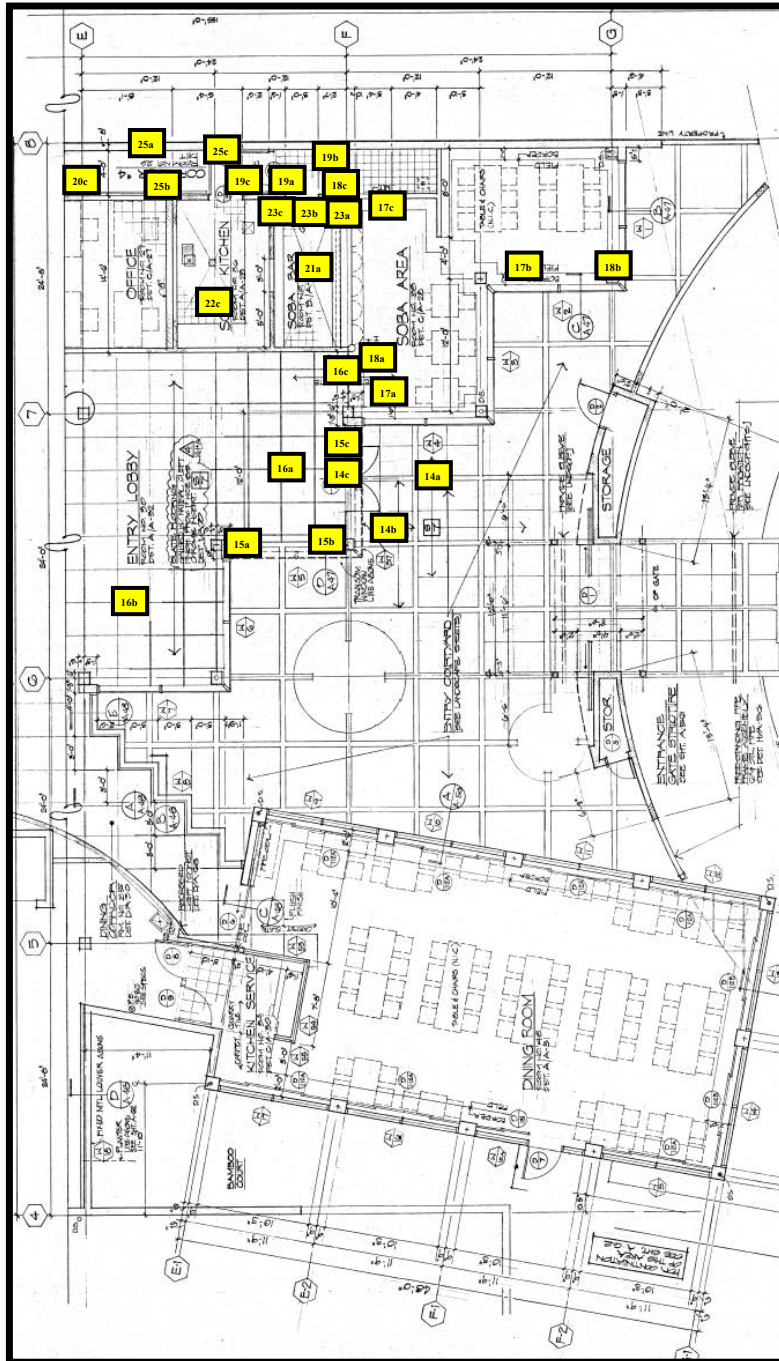
Ground Floor – Sector One




 Negative Asbestos Sample

**Figure 4**

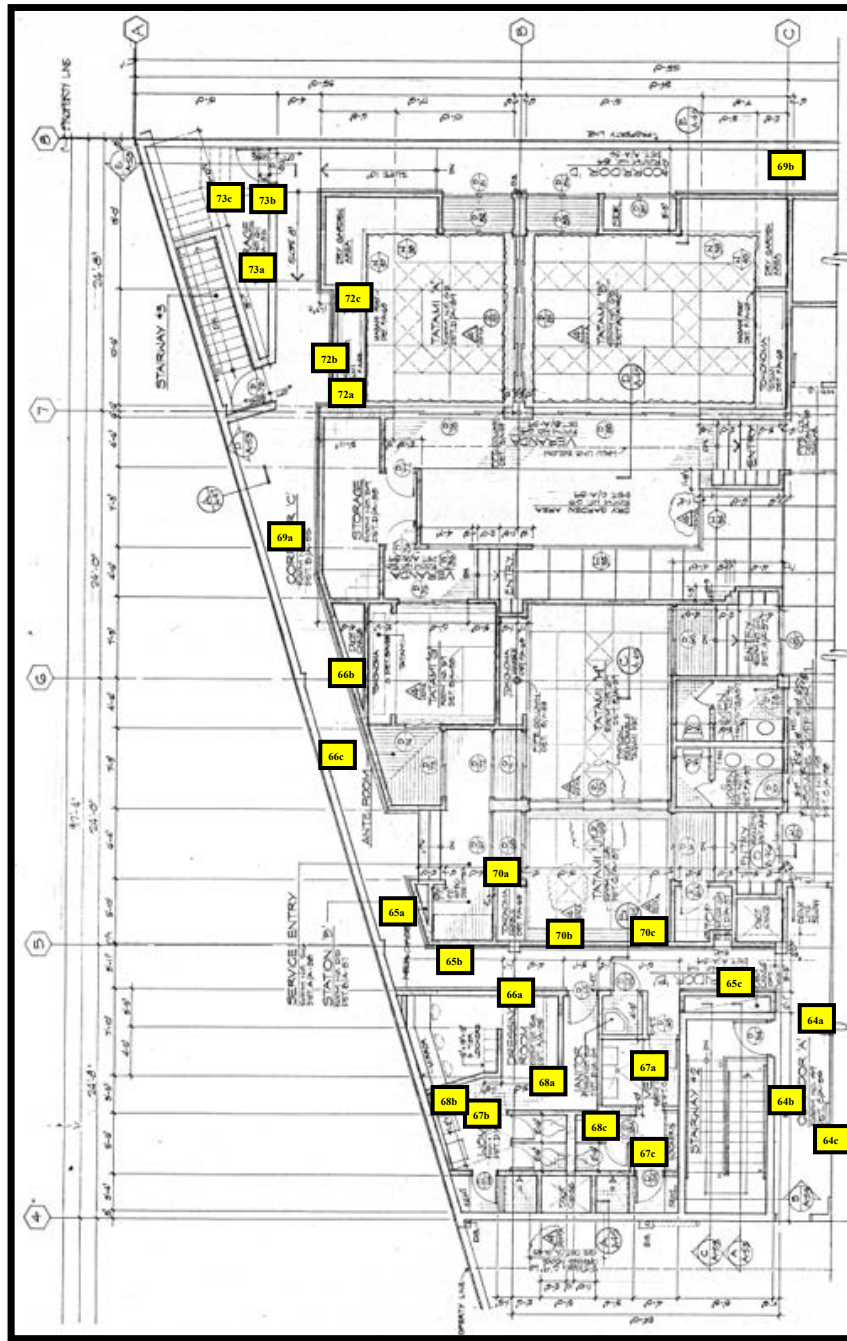
Ground Floor – Sector Two




 Negative Asbestos Sample

**Figure 5**

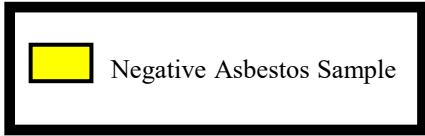
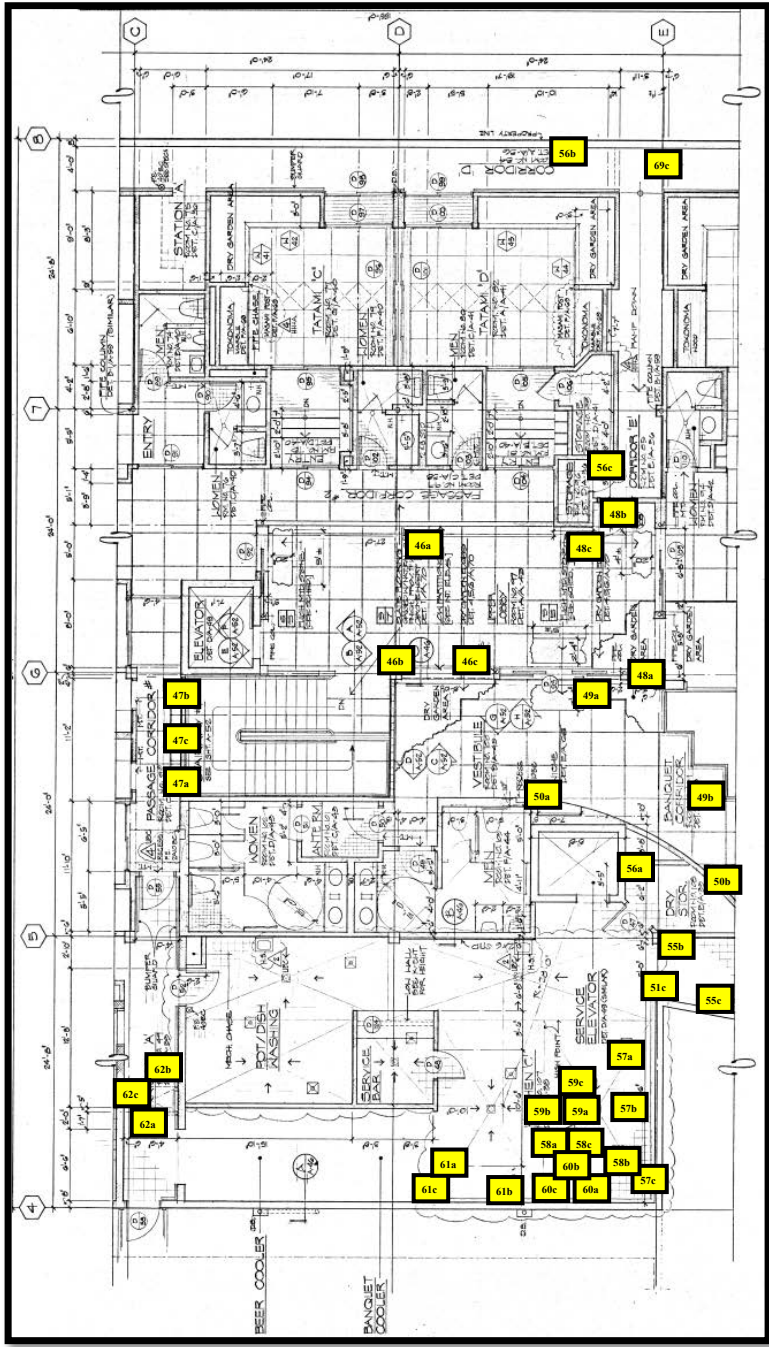
Ground Floor – Sector Three



 Negative Asbestos Sample

**Figure 6**

2<sup>nd</sup> Floor – Sector One

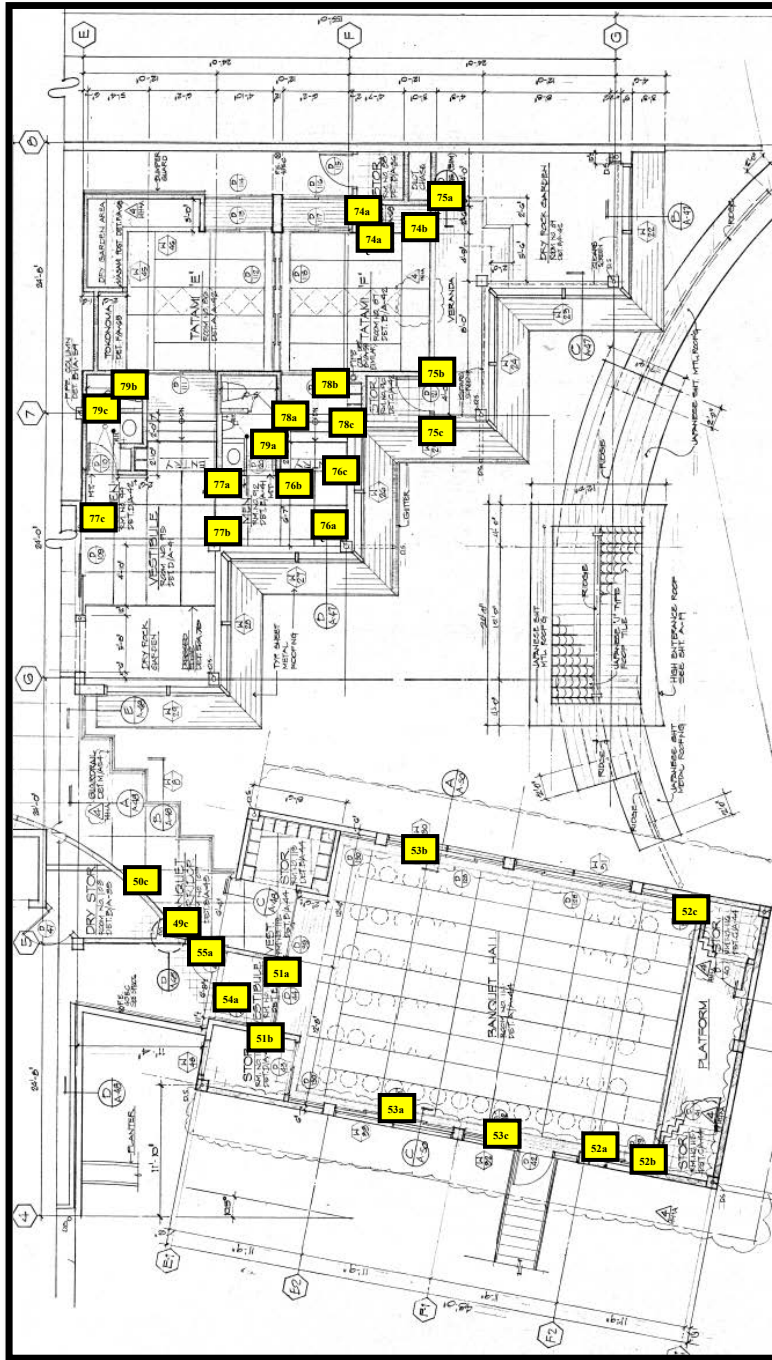



**Figure 7**

**2<sup>nd</sup> Floor – Sector Two**



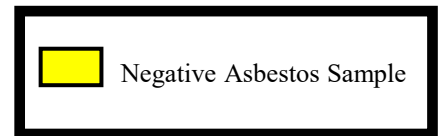
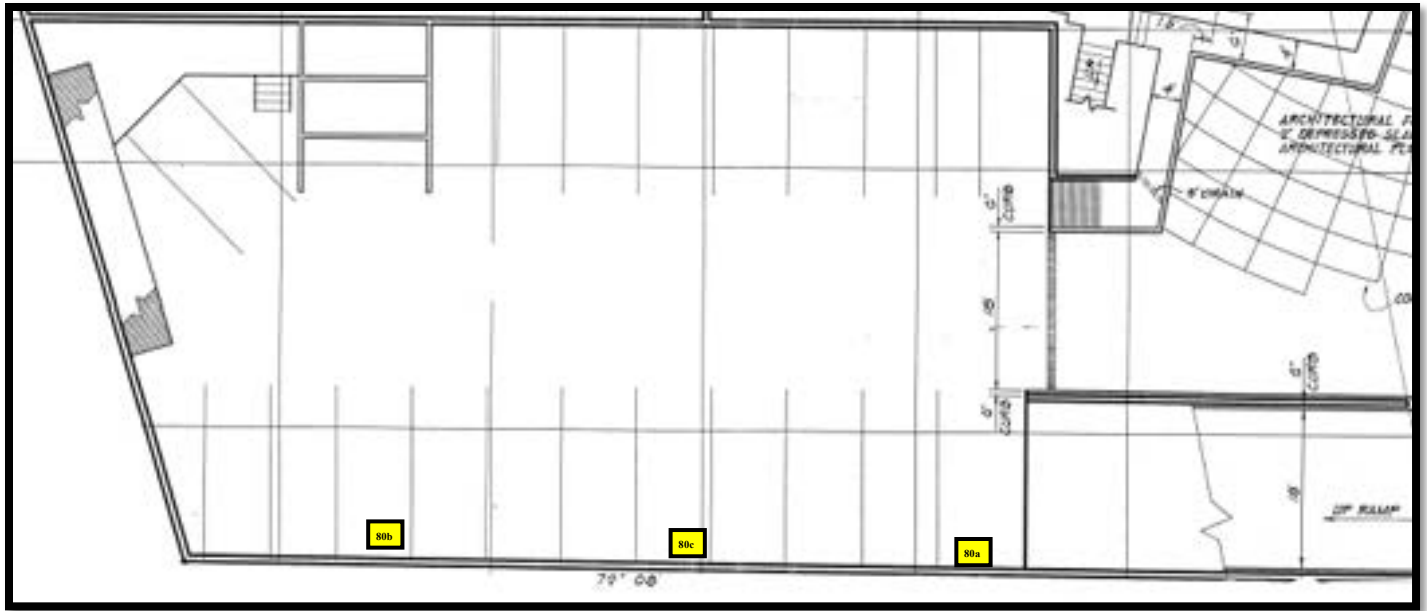




 Negative Asbestos Sample

**Figure 8**

**2<sup>nd</sup> Floor – Sector Three**



**Figure 9**

**Parking Garage**



# Hawaii Analytical Laboratory ANALYTICAL REPORT

Wednesday, October 19, 2022

ENPRO Environmental  
151 Hekili Street, Suite. 210  
Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709  
**Date Submitted:** 10/12/2022  
**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281050	A1a Roll Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar						
	Comments						
202281050	A1a Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (1)						
	Comments						
202281050	A1a Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (2)						
	Comments						
202281050	A1a Roll Roof Shingle - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar (1)						
	Comments						
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar (2)						
	Comments						

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Phone Number: (808)262-0909  
 Facsimile: (808) 262-4449  
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Lab Job No: 202209709

Date Submitted: 10/12/2022

Your Project: 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (1)						
	Comments						
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (2)						
	Comments						
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281051	A1b Roll Roof Shingle - Black		NONE DETECTED		None detected	Foam	10/17/2022
	<u>Layer</u> Brown foam						
	Comments						
202281052	A1c Roll Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar (1)						
	Comments						
202281052	A1c Roll Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar (2)						
	Comments						
202281052	A1c Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (1)						
	Comments						
202281052	A1c Roll Roof Shingle - Black		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle (2)						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709

**Date Submitted:** 10/12/2022

**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281052	A1c Roll Roof Shingle - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281053	A2a Waterproofing Tar - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281054	A2b Waterproofing Tar - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281055	A2c Waterproofing Tar - Black		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar						
	Comments						
202281056	A3a Vibration Cloth - Black		NONE DETECTED		Synthetic fiber (undulose)	40 Binder	10/17/2022
	<u>Layer</u> Black vibration cloth						
	Comments						
202281057	A3b Vibration Cloth - Black		NONE DETECTED		Synthetic fiber (undulose)	40 Binder	10/17/2022
	<u>Layer</u> Black vibration cloth						
	Comments						
202281058	A3c Vibration Cloth - Black		NONE DETECTED		Synthetic fiber (undulose)	40 Binder	10/17/2022
	<u>Layer</u> Black vibration cloth						
	Comments						
202281059	A4a Fiberglass Insulation - Yellow		NONE DETECTED		None detected	Tar	10/17/2022
	<u>Layer</u> Black tar material (limited)						
	Comments						

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 151 Hekili Street, Suite. 210  
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**Email:** -

**Lab Job No:** 202209709

**Date Submitted:** 10/12/2022

**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281059	<b>A4a Fiberglass Insulation - Yellow</b>	NONE DETECTED			Fibrous glass (amorphous) + cellulose (undulose)	30 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281059	<b>A4a Fiberglass Insulation - Yellow</b>	NONE DETECTED			None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						
202281059	<b>A4a Fiberglass Insulation - Yellow</b>	NONE DETECTED			Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow/white insulation						
	Comments						
202281060	<b>A4b Fiberglass Insulation - Yellow</b>	NONE DETECTED			Fibrous glass (amorphous) + cellulose (undulose)	30 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281060	<b>A4b Fiberglass Insulation - Yellow</b>	NONE DETECTED			Cellulose (undulose)	15 Binder + other	10/17/2022
	<u>Layer</u> White coating						
	Comments						
202281060	<b>A4b Fiberglass Insulation - Yellow</b>	NONE DETECTED			None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						
202281060	<b>A4b Fiberglass Insulation - Yellow</b>	NONE DETECTED			Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281061	<b>A4c Fiberglass Insulation - Yellow</b>	NONE DETECTED			None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709

**Date Submitted:** 10/12/2022

**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281061	A4c Fiberglass Insulation - Yellow		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow/white insulation						
	Comments						
202281062	A5a Duct Caulking - Gray		NONE DETECTED		None detected	Binder + other	10/17/2022
	<u>Layer</u> Gray caulking						
	Comments						
202281063	A5b Duct Caulking - Gray		NONE DETECTED		None detected	Binder + other	10/17/2022
	<u>Layer</u> Gray caulking						
	Comments						
202281064	A5c Duct Caulking - Gray		NONE DETECTED		None detected	Binder + other	10/17/2022
	<u>Layer</u> Gray caulking						
	Comments						
202281065	A6a Roof Patch - Gray		NONE DETECTED		Fibrous glass (amorphous)	10 Tar	10/17/2022
	<u>Layer</u> Black felt / tar						
	Comments						
202281065	A6a Roof Patch - Gray		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle						
	Comments						
202281065	A6a Roof Patch - Gray		NONE DETECTED		Cellulose (undulose)	15 Tar	10/17/2022
	<u>Layer</u> Gray/black patch						
	Comments						
202281066	A6b Roof Patch - Gray		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709

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**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281066	A6b Roof Patch - Gray		NONE DETECTED		Cellulose (undulose)	15 Tar	10/17/2022
	<u>Layer</u> Gray/black patch						
	Comments						
202281067	A6c Roof Patch - Gray		NONE DETECTED		Synthetic fiber (undulose)	10 Tar + aggregate	10/17/2022
	<u>Layer</u> Black shingle						
	Comments						
202281067	A6c Roof Patch - Gray		NONE DETECTED		Cellulose (undulose)	15 Tar	10/17/2022
	<u>Layer</u> Gray/black patch						
	Comments						
202281068	A7a Pipe Caulking		NONE DETECTED		Fibrous glass (amorphous)	10 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281068	A7a Pipe Caulking		NONE DETECTED		None detected	Binder + other	10/17/2022
	<u>Layer</u> White/gray caulking						
	Comments						
202281069	A7b Pipe Caulking		NONE DETECTED		Fibrous glass (amorphous)	10 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281069	A7b Pipe Caulking		NONE DETECTED		Cellulose (undulose)	2 Binder + other	10/17/2022
	<u>Layer</u> White rubbery material						
	Comments						
202281069	A7b Pipe Caulking		NONE DETECTED		None detected	Binder + other	10/17/2022
	<u>Layer</u> White/gray caulking						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709  
**Date Submitted:** 10/12/2022  
**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202281069	A7b Pipe Caulking		NONE DETECTED		Fibrous glass (amorphous)	95	Other	10/17/2022
	<u>Layer</u> <u>Yellow insulation</u>							
	Comments							
202281070	A7c Pipe Caulking		NONE DETECTED		Fibrous glass (amorphous)	10	Aluminum + other	10/17/2022
	<u>Layer</u> <u>Silver wrap</u>							
	Comments							
202281070	A7c Pipe Caulking		NONE DETECTED		Cellulose (undulose)	2	Binder + other	10/17/2022
	<u>Layer</u> <u>White rubbery material</u>							
	Comments							
202281070	A7c Pipe Caulking		NONE DETECTED		None detected		Binder + other	10/17/2022
	<u>Layer</u> <u>White/gray caulking</u>							
	Comments							
202281070	A7c Pipe Caulking		NONE DETECTED		Fibrous glass (amorphous)	95	Other	10/17/2022
	<u>Layer</u> <u>Yellow insulation</u>							
	Comments							
202281071	A8a Duct Sealant		NONE DETECTED		Cellulose (undulose)	2	Binder + other	10/17/2022
	<u>Layer</u> <u>White sealant</u>							
	Comments							
202281072	A8b Duct Sealant		NONE DETECTED		Cellulose (undulose)	2	Binder + other	10/17/2022
	<u>Layer</u> <u>White sealant</u>							
	Comments							
202281073	A8c Duct Sealant		NONE DETECTED		Cellulose (undulose)	2	Binder + other	10/17/2022
	<u>Layer</u> <u>White sealant</u>							
	Comments							

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709  
**Date Submitted:** 10/12/2022  
**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281074	A9a Yellow Fibrous Insulation		NONE DETECTED		None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						
202281074	A9a Yellow Fibrous Insulation		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281075	A9b Yellow Fibrous Insulation		NONE DETECTED		None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						
202281075	A9b Yellow Fibrous Insulation		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281076	A9c Yellow Fibrous Insulation		NONE DETECTED		None detected	Plastic	10/17/2022
	<u>Layer</u> White plastic						
	Comments						
202281076	A9c Yellow Fibrous Insulation		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281077	A10a Vibration Cloth - White		NONE DETECTED		Fibrous glass (amorphous)	40 Binder	10/17/2022
	<u>Layer</u> White vibration						
	Comments						
202281078	A10b Vibration Cloth - White		NONE DETECTED		Fibrous glass (amorphous)	40 Binder	10/17/2022
	<u>Layer</u> White vibration						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281079	A10c Vibration Cloth - White		NONE DETECTED		Fibrous glass (amorphous)	40 Binder	10/17/2022
	<u>Layer</u> White vibration						
	Comments						
202281080	A11a Tank End Cap - Gray/White		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	30 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281080	A11a Tank End Cap - Gray/White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Binder + other	10/17/2022
	<u>Layer</u> White coating						
	Comments						
202281080	A11a Tank End Cap - Gray/White		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281081	A11b Tank End Cap - Gray/White		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	30 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						
202281081	A11b Tank End Cap - Gray/White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Binder + other	10/17/2022
	<u>Layer</u> White coating						
	Comments						
202281081	A11b Tank End Cap - Gray/White		NONE DETECTED		Fibrous glass (amorphous)	95 Other	10/17/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281082	A11c Tank End Cap - Gray/White		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	30 Aluminum + other	10/17/2022
	<u>Layer</u> Silver wrap						
	Comments						

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202281082	A11c Tank End Cap - Gray/White	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	15 Binder + other	10/17/2022
<u>Layer</u>	<u>White coating</u>						
<u>Comments</u>							
202281082	A11c Tank End Cap - Gray/White	NONE DETECTED			Fibrous glass (amorphous)	95 Other	10/17/2022
<u>Layer</u>	<u>Yellow insulation</u>						
<u>Comments</u>							
202281083	A12a Vent Caulking Black	NONE DETECTED			None detected	Binder	10/17/2022
<u>Layer</u>	<u>Black caulking</u>						
<u>Comments</u>							
202281084	A12b Vent Caulking Black	NONE DETECTED			None detected	Binder	10/17/2022
<u>Layer</u>	<u>Black caulking</u>						
<u>Comments</u>							
202281085	A12c Vent Caulking Black	NONE DETECTED			None detected	Binder	10/17/2022
<u>Layer</u>	<u>Black caulking</u>						
<u>Comments</u>							
202281086	A13a Clay Roof Tile	NONE DETECTED			Cellulose (undulose)	40 Tar	10/17/2022
<u>Layer</u>	<u>Black tar paper</u>						
<u>Comments</u>							
202281086	A13a Clay Roof Tile	NONE DETECTED			None detected	Ceramic	10/17/2022
<u>Layer</u>	<u>Gray clay tile</u>						
<u>Comments</u>							
202281086	A13a Clay Roof Tile	NONE DETECTED			None detected	Cementitious + other	10/17/2022
<u>Layer</u>	<u>Gray grout</u>						
<u>Comments</u>							

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## Bulk Asbestos Determination

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202281087	A13b Clay Roof Tile		NONE DETECTED		Cellulose (undulose)	40 Tar	10/17/2022
	<u>Layer</u> Black tar paper						
	Comments						
202281087	A13b Clay Roof Tile		NONE DETECTED		None detected	Ceramic	10/17/2022
	<u>Layer</u> Gray clay tile						
	Comments						
202281087	A13b Clay Roof Tile		NONE DETECTED		None detected	Cementitious + other	10/17/2022
	<u>Layer</u> Gray grout						
	Comments						
202281088	A13c Clay Roof Tile		NONE DETECTED		Cellulose (undulose)	40 Tar	10/17/2022
	<u>Layer</u> Black tar paper						
	Comments						
202281088	A13c Clay Roof Tile		NONE DETECTED		None detected	Ceramic	10/17/2022
	<u>Layer</u> Gray clay tile						
	Comments						
202281088	A13c Clay Roof Tile		NONE DETECTED		None detected	Cementitious + other	10/17/2022
	<u>Layer</u> Gray grout						
	Comments						
202281089	A14a Black Stone Tile Grout		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Black grout						
	Comments						
202281089	A14a Black Stone Tile Grout		NONE DETECTED		None detected	Stone	10/18/2022
	<u>Layer</u> Gray stone tile						
	Comments						

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## Bulk Asbestos Determination

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202281090	A14b Black Stone Tile Grout		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						
202281090	A14b Black Stone Tile Grout		NONE DETECTED		None detected	Stone	10/18/2022
	<u>Layer</u> <u>Gray stone tile</u>						
	Comments						
202281091	A14c Black Stone Tile Grout		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						
202281091	A14c Black Stone Tile Grout		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Black rubbery material</u>						
	Comments						
202281091	A14c Black Stone Tile Grout		NONE DETECTED		None detected	Stone	10/18/2022
	<u>Layer</u> <u>Gray stone tile</u>						
	Comments						
202281092	A15a Window Caulking - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Black caulking</u>						
	Comments						
202281092	A15a Window Caulking - Black		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> <u>Yellow foam</u>						
	Comments						
202281093	A15b Window Caulking - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Black caulking</u>						
	Comments						

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 Kailua HI 96734

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## Bulk Asbestos Determination

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202281093	A15b Window Caulking - Black		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> Yellow foam						
	Comments						
202281094	A15c Window Caulking - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Black caulking						
	Comments						
202281094	A15c Window Caulking - Black		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> Yellow foam						
	Comments						
202281095	A16a Drop Ceiling Tile - Gray		NONE DETECTED		Fibrous glass (amorphous)	85 Glass bead + other	10/18/2022
	<u>Layer</u> Gray/yellow drop ceiling tile						
	Comments						
202281095	A16a Drop Ceiling Tile - Gray		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> White foam						
	Comments						
202281096	A16b Drop Ceiling Tile - Gray		NONE DETECTED		Fibrous glass (amorphous)	85 Glass bead + other	10/18/2022
	<u>Layer</u> Gray/yellow drop ceiling tile						
	Comments						
202281096	A16b Drop Ceiling Tile - Gray		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> White foam						
	Comments						
202281097	A16c Drop Ceiling Tile - Gray		NONE DETECTED		Fibrous glass (amorphous)	85 Glass bead + other	10/18/2022
	<u>Layer</u> Gray/yellow drop ceiling tile						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281097	A16c Drop Ceiling Tile - Gray		NONE DETECTED		None detected	Foam	10/18/2022
	<u>Layer</u> White foam						
	Comments						
202281098	A17a 2x4 CFT - Cream		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281099	A17b 2x4 CFT - Cream		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Off-white grout						
	Comments						
202281099	A17b 2x4 CFT - Cream		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281100	A17c 2x4 CFT - Cream		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Off-white grout						
	Comments						
202281100	A17c 2x4 CFT - Cream		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281101	A18a Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> White drywall						
	Comments						
202281101	A18a Drywall		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (1)						
	Comments						

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Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281101	A18a Drywall		NONE DETECTED		Cellulose (undulose)	20 Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (2) / paper						
	Comments						
202281101	A18a Drywall		NONE DETECTED		None detected	Binder + paint	10/18/2022
	<u>Layer</u> White rubbery material / paint						
	Comments						
202281102	A18b Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> White drywall						
	Comments						
202281102	A18b Drywall		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (1) / paint (1)						
	Comments						
202281102	A18b Drywall		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (2) / paint (2)						
	Comments						
202281103	A18c Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> Tan drywall						
	Comments						
202281103	A18c Drywall		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (1) / paint						
	Comments						
202281103	A18c Drywall		NONE DETECTED		Cellulose (undulose)	20 Calcite + binder	10/18/2022
	<u>Layer</u> White joint compound (2) / paper						
	Comments						

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202281104	A19a Speckled VFT - Gray		NONE DETECTED		Cellulose (undulose)	10 Tar	10/18/2022
	<u>Layer</u> Black mastic						
	Comments						
202281104	A19a Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Gray vinyl floor tile						
	Comments						
202281104	A19a Speckled VFT - Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellowish mastic						
	Comments						
202281105	A19b Speckled VFT - Gray		NONE DETECTED		Cellulose (undulose)	10 Tar	10/18/2022
	<u>Layer</u> Black mastic						
	Comments						
202281105	A19b Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Gray vinyl floor tile						
	Comments						
202281105	A19b Speckled VFT - Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellowish mastic						
	Comments						
202281106	A19c Speckled VFT - Gray		NONE DETECTED		Cellulose (undulose)	10 Tar	10/18/2022
	<u>Layer</u> Black mastic						
	Comments						
202281106	A19c Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Gray vinyl floor tile						
	Comments						

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Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281106	A19c Speckled VFT - Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellowish mastic						
	Comments						
202281107	A20a Cove Base - Tan		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Brown mastic						
	Comments						
202281107	A20a Cove Base - Tan		NONE DETECTED		None detected	Cementitious + paint	10/18/2022
	<u>Layer</u> Gray cementitious material / white paint						
	Comments						
202281107	A20a Cove Base - Tan		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Tan covebase						
	Comments						
202281107	A20a Cove Base - Tan		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Tan mastic						
	Comments						
202281108	A20b Cove Base - Tan		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Tan covebase						
	Comments						
202281108	A20b Cove Base - Tan		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Tan mastic						
	Comments						
202281109	A20c Cove Base - Tan		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Tan covebase						
	Comments						

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202281109	A20c Cove Base - Tan		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Tan mastic						
	Comments						
202281110	A21a Carpet Mastic - Blue		NONE DETECTED		Synthetic fiber (undulose)	90 Binder	10/18/2022
	<u>Layer</u> Blue carpet						
	Comments						
202281110	A21a Carpet Mastic - Blue		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281111	A21b Carpet Mastic - Blue		NONE DETECTED		Synthetic fiber (undulose)	90 Binder	10/18/2022
	<u>Layer</u> Blue carpet						
	Comments						
202281111	A21b Carpet Mastic - Blue		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281112	A21c Carpet Mastic - Blue		NONE DETECTED		Synthetic fiber (undulose)	90 Binder	10/18/2022
	<u>Layer</u> Blue carpet						
	Comments						
202281112	A21c Carpet Mastic - Blue		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281113	A22a 2x4 Drop Ceiling Tile - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	85 Perlite + other	10/18/2022
	<u>Layer</u> White drop ceiling tile						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709  
**Date Submitted:** 10/12/2022  
**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281114	<b>A22b 2x4 Drop Ceiling Tile - White</b>	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	85 Perlite + other	10/18/2022
	<u>Layer</u> <u>White drop ceiling tile</u>						
	Comments						
202281115	<b>A22c 2x4 Drop Ceiling Tile - White</b>	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	85 Perlite + other	10/18/2022
	<u>Layer</u> <u>White drop ceiling tile</u>						
	Comments						
202281116	<b>A23a Threshold Brown</b>	NONE DETECTED			None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>Brown threshold</u>						
	Comments						
202281116	<b>A23a Threshold Brown</b>	NONE DETECTED			None detected	Binder	10/18/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202281117	<b>A23b Threshold Brown</b>	NONE DETECTED			None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>Brown threshold</u>						
	Comments						
202281117	<b>A23b Threshold Brown</b>	NONE DETECTED			None detected	Binder	10/18/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202281118	<b>A23c Threshold Brown</b>	NONE DETECTED			None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>Brown threshold</u>						
	Comments						
202281118	<b>A23c Threshold Brown</b>	NONE DETECTED			None detected	Binder	10/18/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

Phone Number: (808)262-0909  
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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281119	<b>A24a Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Light gray wallpaper / clear mastic</u> Comments	NONE DETECTED			Synthetic fiber (undulose)	20 Vinyl + binder	10/18/2022
202281119	<b>A24a Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Off-white joint compound / paint</u> Comments	NONE DETECTED			None detected	Calcite + binder + paint	10/18/2022
202281119	<b>A24a Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>White drywall</u> Comments	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
202281120	<b>A24b Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Light gray wallpaper / clear mastic</u> Comments	NONE DETECTED			Synthetic fiber (undulose)	20 Vinyl + binder	10/18/2022
202281120	<b>A24b Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Off-white joint compound / paint</u> Comments	NONE DETECTED			None detected	Calcite + binder + paint	10/18/2022
202281120	<b>A24b Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>White caulk</u> Comments	NONE DETECTED			None detected	Binder	10/18/2022
202281121	<b>A24c Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Light gray wallpaper / clear mastic</u> Comments	NONE DETECTED			Synthetic fiber (undulose)	20 Vinyl + binder	10/18/2022
202281121	<b>A24c Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>Off-white joint compound / paint</u> Comments	NONE DETECTED			None detected	Calcite + binder + paint	10/18/2022

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## Bulk Asbestos Determination

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202281121	<b>A24c Textured Wallpaper - Light Gray</b> <u>Layer</u> <u>White caulk</u> Comments	NONE DETECTED			None detected	Binder	10/18/2022
202281122	<b>A25a Drywall Ceiling</b> <u>Layer</u> <u>White drywall</u> Comments	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
202281122	<b>A25a Drywall Ceiling</b> <u>Layer</u> <u>White joint compound (1) / paint</u> Comments	NONE DETECTED			None detected	Calcite + binder + paint	10/18/2022
202281122	<b>A25a Drywall Ceiling</b> <u>Layer</u> <u>White joint compound (2) / paper</u> Comments	NONE DETECTED			Cellulose (undulose)	20 Calcite + binder	10/18/2022
202281123	<b>A25b Drywall Ceiling</b> <u>Layer</u> <u>White drywall</u> Comments	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
202281123	<b>A25b Drywall Ceiling</b> <u>Layer</u> <u>White joint compound (1) / paint</u> Comments	NONE DETECTED			None detected	Calcite + binder + paint	10/18/2022
202281123	<b>A25b Drywall Ceiling</b> <u>Layer</u> <u>White joint compound (2) / paper</u> Comments	NONE DETECTED			Cellulose (undulose)	20 Calcite + binder	10/18/2022
202281124	<b>A25c Drywall Ceiling</b> <u>Layer</u> <u>White drywall</u> Comments	NONE DETECTED			Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022

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202281124	<b>A25c Drywall Ceiling</b>		NONE DETECTED		None detected	Calcite + binder + paint	10/18/2022
	<u>Layer</u> <u>White joint compound (1) / paint</u>						
	Comments						
202281124	<b>A25c Drywall Ceiling</b>		NONE DETECTED		Cellulose (undulose)	20 Calcite + binder	10/18/2022
	<u>Layer</u> <u>White joint compound (2) / paper</u>						
	Comments						
202281125	<b>A26a Cove Base - White</b>		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Brown mastic</u>						
	Comments						
202281125	<b>A26a Cove Base - White</b>		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>White covebase</u>						
	Comments						
202281126	<b>A26b Cove Base - White</b>		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Brown mastic</u>						
	Comments						
202281126	<b>A26b Cove Base - White</b>		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>White covebase</u>						
	Comments						
202281127	<b>A26c Cove Base - White</b>		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> <u>Brown mastic</u>						
	Comments						
202281127	<b>A26c Cove Base - White</b>		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> <u>White covebase</u>						
	Comments						

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 151 Hekili Street, Suite. 210  
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202281127	A26c Cove Base - White		NONE DETECTED		None detected	Calcite + binder + paint	10/18/2022
	<u>Layer</u> White joint compound / paint						
	Comments						
202281128	A27a Door Weather Strap		NONE DETECTED		Cellulose (undulose)	5 Binder + other	10/18/2022
	<u>Layer</u> Tan mastic / white paper						
	Comments						
202281128	A27a Door Weather Strap		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> White strip						
	Comments						
202281129	A27b Door Weather Strap		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> White strip						
	Comments						
202281129	A27b Door Weather Strap		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281130	A27c Door Weather Strap		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> White strip						
	Comments						
202281130	A27c Door Weather Strap		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281131	A28a Threshold - Black		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						

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 151 Hekili Street, Suite. 210  
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## Bulk Asbestos Determination

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202281131	A28a Threshold - Black		NONE DETECTED		None detected	Cementitious	10/18/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281131	A28a Threshold - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281132	A28b Threshold - Black		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						
202281132	A28b Threshold - Black		NONE DETECTED		None detected	Cementitious	10/18/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281132	A28b Threshold - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281133	A28c Threshold - Black		NONE DETECTED		None detected	Vinyl	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						
202281133	A28c Threshold - Black		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281134	A29a Under Sink - Coating		NONE DETECTED		Cellulose (undulose)	20 Binder + other	10/18/2022
	<u>Layer</u> Gray sink undercoating						
	Comments						

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 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281135	A29b Under Sink - Coating		NONE DETECTED		Cellulose (undulose)	20 Binder + other	10/18/2022
	<u>Layer</u> Gray sink undercoating						
	Comments						
202281136	A29c Under Sink - Coating		NONE DETECTED		Cellulose (undulose)	20 Binder + other	10/18/2022
	<u>Layer</u> Gray sink undercoating						
	Comments						
202281137	A30a CFT - Dark Gray		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Gray grout						
	Comments						
202281137	A30a CFT - Dark Gray		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281137	A30a CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281138	A30b CFT - Dark Gray		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Gray grout						
	Comments						
202281138	A30b CFT - Dark Gray		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281138	A30b CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						

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202281139	A30c CFT - Dark Gray		NONE DETECTED		None detected	Glass + other	10/18/2022
	<u>Layer</u> Gray grout						
	Comments						
202281139	A30c CFT - Dark Gray		NONE DETECTED		None detected	Calcite + other	10/18/2022
	<u>Layer</u> White mortar						
	Comments						
202281139	A30c CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281140	A31a CWT - White		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281140	A31a CWT - White		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281141	A31b CWT - White		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281141	A31b CWT - White		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281142	A31c CWT - White		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						

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Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281142	A31c CWT - White		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281143	A32a CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black grout						
	Comments						
202281143	A32a CFT - Brown		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281144	A32b CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black grout						
	Comments						
202281144	A32b CFT - Brown		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281145	A32c CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black grout						
	Comments						
202281145	A32c CFT - Brown		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281146	A33a Freezer Caulk - Silver		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Silver caulk						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281147	A33b Freezer Caulk - Silver		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Silver caulk						
	Comments						
202281148	A33c Freezer Caulk - Silver		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Silver caulk						
	Comments						
202281149	A34a VFT - Cream		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
	<u>Layer</u> Cream floor tile						
	Comments						
202281149	A34a VFT - Cream		NONE DETECTED		None detected	Tar + calcite + binder	10/18/2022
	<u>Layer</u> Yellow/black mastics						
	Comments						
202281150	A34b VFT - Cream		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
	<u>Layer</u> Cream floor tile						
	Comments						
202281150	A34b VFT - Cream		NONE DETECTED		None detected	Tar + calcite + binder	10/18/2022
	<u>Layer</u> Yellow/black mastics						
	Comments						
202281151	A34c VFT - Cream		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
	<u>Layer</u> Cream floor tile						
	Comments						
202281151	A34c VFT - Cream		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281152	<b>A35a Laminate Floor - Light Brown</b> <u>Layer</u> <u>Light brown laminate flooring</u> Comments		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
202281153	<b>A35b Laminate Floor - Light Brown</b> <u>Layer</u> <u>Light brown laminate flooring</u> Comments		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
202281154	<b>A35c Laminate Floor - Light Brown</b> <u>Layer</u> <u>Light brown laminate flooring</u> Comments		NONE DETECTED		None detected	Calcite + vinyl	10/18/2022
202281155	<b>A36a Textured Wallpaper - Lt. Brown</b> <u>Layer</u> <u>Light brown textured wallpaper</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
202281155	<b>A36a Textured Wallpaper - Lt. Brown</b> <u>Layer</u> <u>Off-white adhesive</u> Comments		NONE DETECTED		None detected	Other	10/18/2022
202281156	<b>A36b Textured Wallpaper - Lt. Brown</b> <u>Layer</u> <u>Light brown textured wallpaper</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
202281156	<b>A36b Textured Wallpaper - Lt. Brown</b> <u>Layer</u> <u>Off-white adhesive</u> Comments		NONE DETECTED		None detected	Other	10/18/2022
202281157	<b>A36c Textured Wallpaper - Lt. Brown</b> <u>Layer</u> <u>Light brown textured wallpaper</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022

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 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281157	A36c Textured Wallpaper - Lt. Brown		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281158	A37a Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> Silver foil / paper wrap						
	Comments						
202281158	A37a Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281159	A37b Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> Silver foil / paper wrap						
	Comments						
202281159	A37b Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281160	A37c Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> Silver foil / paper wrap						
	Comments						
202281160	A37c Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281161	A38a Wallpaper - Green		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281161	A38a Wallpaper - Green		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281162	A38b Wallpaper - Green		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						
202281162	A38b Wallpaper - Green		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281163	A38c Wallpaper - Green		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						
202281163	A38c Wallpaper - Green		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281164	A39a Mirror Caulk		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Clear caulk						
	Comments						
202281165	A39b Mirror Caulk		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Clear caulk						
	Comments						
202281166	A39c Mirror Caulk		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Clear caulk						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281167	<b>A40a Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281168	<b>A40b Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281169	<b>A40c Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281170	<b>A41a Green Marble Mastic</b>		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> <u>Black caulk</u>						
	Comments						
202281170	<b>A41a Green Marble Mastic</b>		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> <u>Gray grout</u>						
	Comments						
202281170	<b>A41a Green Marble Mastic</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>Green marble tile</u>						
	Comments						
202281170	<b>A41a Green Marble Mastic</b>		NONE DETECTED		None detected	Gypsum	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281171	<b>A41b Green Marble Mastic</b>		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> <u>Black caulk</u>						
	Comments						

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## Bulk Asbestos Determination

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202281171	A41b Green Marble Mastic		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray grout						
	Comments						
202281171	A41b Green Marble Mastic		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Green marble tile						
	Comments						
202281171	A41b Green Marble Mastic		NONE DETECTED		None detected	Gypsum	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281172	A41c Green Marble Mastic		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> Black caulk						
	Comments						
202281172	A41c Green Marble Mastic		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray grout						
	Comments						
202281172	A41c Green Marble Mastic		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Green marble tile						
	Comments						
202281172	A41c Green Marble Mastic		NONE DETECTED		None detected	Gypsum	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281173	A42a Textured Wallpaper - Dark Gray		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Dark gray textured wallpaper						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281174	<b>A42b Textured Wallpaper - Dark Gray</b>		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Dark gray textured wallpaper						
	Comments						
202281175	<b>A42c Textured Wallpaper - Dark Gray</b>		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Dark gray textured wallpaper						
	Comments						
202281176	<b>A44a Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black marble tile						
	Comments						
202281176	<b>A44a Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281176	<b>A44a Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Foam + other	10/18/2022
	<u>Layer</u> Off-white foam pad						
	Comments						
202281177	<b>A44b Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black marble tile						
	Comments						
202281177	<b>A44b Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281177	<b>A44b Marble Floor Tile - Black</b>		NONE DETECTED		None detected	Foam + other	10/18/2022
	<u>Layer</u> Off-white foam pad						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

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**Facsimile:** (808) 262-4449  
**Email:** -

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202281178	A44c Marble Floor Tile - Black		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> Black marble tile						
	Comments						
202281178	A44c Marble Floor Tile - Black		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> Gray mortar						
	Comments						
202281178	A44c Marble Floor Tile - Black		NONE DETECTED		None detected	Foam + other	10/18/2022
	<u>Layer</u> Off-white foam pad						
	Comments						
202281179	A45a CWT - Light Gray		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281179	A45a CWT - Light Gray		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281180	A45b CWT - Light Gray		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281180	A45b CWT - Light Gray		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281181	A45c CWT - Light Gray		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						

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 Kailua HI 96734

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**Email:** -

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## Bulk Asbestos Determination

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202281181	<b>A45c CWT - Light Gray</b>		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281182	<b>A46a Textured Wallpaper - Dark Gray</b>		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> <u>Dark gray textured wallpaper</u>						
	Comments						
202281183	<b>A46b Textured Wallpaper - Dark Gray</b>		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> <u>Dark gray textured wallpaper</u>						
	Comments						
202281184	<b>A46c Textured Wallpaper - Dark Gray</b>		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> <u>Dark gray textured wallpaper</u>						
	Comments						
202281185	<b>A47a Glass Block Grout</b>		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> <u>White caulk</u>						
	Comments						
202281185	<b>A47a Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281186	<b>A47b Glass Block Grout</b>		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> <u>White caulk</u>						
	Comments						
202281186	<b>A47b Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						

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 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281187	<b>A47c Glass Block Grout</b>		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> <u>White caulk</u>						
	Comments						
202281187	<b>A47c Glass Block Grout</b>		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>White grout</u>						
	Comments						
202281188	<b>A48a Diamond Carpet Mastic - Brown</b>		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022
	<u>Layer</u> <u>Brown carpet</u>						
	Comments						
202281188	<b>A48a Diamond Carpet Mastic - Brown</b>		NONE DETECTED		Synthetic fibers (undulose)	95 Other	10/18/2022
	<u>Layer</u> <u>Pink/gray carpet pad</u>						
	Comments						
202281188	<b>A48a Diamond Carpet Mastic - Brown</b>		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202281189	<b>A48b Diamond Carpet Mastic - Brown</b>		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022
	<u>Layer</u> <u>Brown carpet</u>						
	Comments						
202281189	<b>A48b Diamond Carpet Mastic - Brown</b>		NONE DETECTED		Synthetic fibers (undulose)	95 Other	10/18/2022
	<u>Layer</u> <u>Pink/gray carpet pad</u>						
	Comments						
202281189	<b>A48b Diamond Carpet Mastic - Brown</b>		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281190	<b>A48c Diamond Carpet Mastic - Brown</b> <u>Layer</u> <u>Brown carpet</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022
202281190	<b>A48c Diamond Carpet Mastic - Brown</b> <u>Layer</u> <u>Pink/gray carpet pad</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	95 Other	10/18/2022
202281190	<b>A48c Diamond Carpet Mastic - Brown</b> <u>Layer</u> <u>Yellow mastic</u> Comments		NONE DETECTED		None detected	Binder + other	10/18/2022
202281191	<b>A49a Carpet Mastic - Green</b> <u>Layer</u> <u>Gray carpet pad</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	25 Foam	10/18/2022
202281191	<b>A49a Carpet Mastic - Green</b> <u>Layer</u> <u>Green carpet</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022
202281191	<b>A49a Carpet Mastic - Green</b> <u>Layer</u> <u>Yellow mastic</u> Comments		NONE DETECTED		None detected	Binder + other	10/18/2022
202281192	<b>A49b Carpet Mastic - Green</b> <u>Layer</u> <u>Gray carpet pad</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	25 Foam	10/18/2022
202281192	<b>A49b Carpet Mastic - Green</b> <u>Layer</u> <u>Green carpet</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022

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202281192	A49b Carpet Mastic - Green		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281193	A49c Carpet Mastic - Green		NONE DETECTED		Synthetic fibers (undulose)	25 Foam	10/18/2022
	<u>Layer</u> Gray carpet pad						
	Comments						
202281193	A49c Carpet Mastic - Green		NONE DETECTED		Synthetic fibers (undulose)	85 Other	10/18/2022
	<u>Layer</u> Green carpet						
	Comments						
202281193	A49c Carpet Mastic - Green		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281194	A50a Textured WP - GR/WH		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Green textured wallpaper						
	Comments						
202281195	A50b Textured WP - GR/WH		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Green textured wallpaper						
	Comments						
202281196	A50c Textured WP - GR/WH		NONE DETECTED		Cellulose (undulose)	65 Other	10/18/2022
	<u>Layer</u> Green textured wallpaper						
	Comments						
202281197	A51a Door Threshold - Black		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						

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202281198	A51b Door Threshold - Black		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						
202281199	A51c Door Threshold - Black		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Black threshold						
	Comments						
202281200	A52a Textured WP - Cream		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						
202281200	A52a Textured WP - Cream		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281201	A52b Textured WP - Cream		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						
202281201	A52b Textured WP - Cream		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						
202281202	A52c Textured WP - Cream		NONE DETECTED		Synthetic fibers (undulose)	20 Other	10/18/2022
	<u>Layer</u> Cream textured wallpaper						
	Comments						
202281202	A52c Textured WP - Cream		NONE DETECTED		None detected	Other	10/18/2022
	<u>Layer</u> Off-white adhesive						
	Comments						

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202281203	A53a Window Caulk - Black		NONE DETECTED		None detected	Calcite + binder + other	10/18/2022
	<u>Layer</u> <u>Black caulk</u>						
	Comments						
202281204	A53b Window Caulk - Black		NONE DETECTED		None detected	Calcite + binder + other	10/18/2022
	<u>Layer</u> <u>Black caulk</u>						
	Comments						
202281205	A53c Window Caulk - Black		NONE DETECTED		None detected	Calcite + binder + other	10/18/2022
	<u>Layer</u> <u>Black caulk</u>						
	Comments						
202281206	A54a CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						
202281206	A54a CFT - Brown		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> <u>Gray mortar</u>						
	Comments						
202281207	A54b CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						
202281207	A54b CFT - Brown		NONE DETECTED		None detected	Calcite + quartz	10/18/2022
	<u>Layer</u> <u>Gray mortar</u>						
	Comments						
202281208	A54c CFT - Brown		NONE DETECTED		None detected	Quartz + other	10/18/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

**Phone Number:** (808)262-0909  
**Facsimile:** (808) 262-4449  
**Email:** -

**Lab Job No:** 202209709

**Date Submitted:** 10/12/2022

**Your Project:** 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281209	A55a CWT - White/Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281209	A55a CWT - White/Gray		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281210	A55b CWT - White/Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281210	A55b CWT - White/Gray		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281211	A55c CWT - White/Gray		NONE DETECTED		None detected	Binder + other	10/18/2022
	<u>Layer</u> Tan adhesive						
	Comments						
202281211	A55c CWT - White/Gray		NONE DETECTED		None detected	Calcite	10/18/2022
	<u>Layer</u> White grout						
	Comments						
202281212	A56a Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> White drywall						
	Comments						
202281212	A56a Drywall		NONE DETECTED		None detected	Calcite + quartz + paint	10/18/2022
	<u>Layer</u> White joint compound / white paint						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281213	A56b Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> <u>White drywall</u>						
	<u>Comments</u>						
202281213	A56b Drywall		NONE DETECTED		None detected	Calcite + quartz + paint	10/18/2022
	<u>Layer</u> <u>White joint compound (1) / white paint</u>						
	<u>Comments</u>						
202281213	A56b Drywall		NONE DETECTED		None detected	Calcite + quartz + paint	10/18/2022
	<u>Layer</u> <u>White joint compound (2) / paper</u>						
	<u>Comments</u>						
202281214	A56c Drywall		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	15 Gypsum	10/18/2022
	<u>Layer</u> <u>White drywall</u>						
	<u>Comments</u>						
202281214	A56c Drywall		NONE DETECTED		None detected	Calcite + quartz + paint	10/18/2022
	<u>Layer</u> <u>White joint compound (1) / white paint</u>						
	<u>Comments</u>						
202281214	A56c Drywall		NONE DETECTED		None detected	Calcite + quartz + paint	10/18/2022
	<u>Layer</u> <u>White joint compound (2) / paper</u>						
	<u>Comments</u>						
202281215	A57a Speckled DCT - White		NONE DETECTED		Fibrous glass (amorphous)	70 Calcite + quartz + perlite + other	10/18/2022
	<u>Layer</u> <u>White/gray ceiling tile</u>						
	<u>Comments</u>						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

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**Email:** -

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281216	A57b Speckled DCT - White		NONE DETECTED		Fibrous glass (amorphous)	70 Calcite + quartz + perlite + other	10/18/2022
	<u>Layer</u> <u>White/gray ceiling tile</u>						
	<u>Comments</u>						
202281217	A57c Speckled DCT - White		NONE DETECTED		Fibrous glass (amorphous)	70 Calcite + quartz + perlite + other	10/18/2022
	<u>Layer</u> <u>White/gray ceiling tile</u>						
	<u>Comments</u>						
202281218	A58a Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> <u>Silver foil / paper wrap</u>						
	<u>Comments</u>						
202281218	A58a Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> <u>Yellow insulation</u>						
	<u>Comments</u>						
202281219	A58b Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> <u>Silver foil / paper wrap</u>						
	<u>Comments</u>						
202281219	A58b Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> <u>Yellow insulation</u>						
	<u>Comments</u>						
202281220	A58c Pipe Insulation - White		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	50 Foil	10/18/2022
	<u>Layer</u> <u>Silver foil / paper wrap</u>						
	<u>Comments</u>						

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## Bulk Asbestos Determination

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202281220	A58c Pipe Insulation - White		NONE DETECTED		Fibrous glass (amorphous)	> 99 None detected	10/18/2022
	<u>Layer</u> Yellow insulation						
	Comments						
202281221	A59a Vibration Duct Mastic - Brown		NONE DETECTED		Fibrous glass (amorphous)	5 Binder + other	10/18/2022
	<u>Layer</u> Brown mastic						
	Comments						
202281221	A59a Vibration Duct Mastic - Brown		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White mastic						
	Comments						
202281222	A59b Vibration Duct Mastic - Brown		NONE DETECTED		Fibrous glass (amorphous)	5 Binder + other	10/18/2022
	<u>Layer</u> Brown mastic						
	Comments						
202281222	A59b Vibration Duct Mastic - Brown		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White mastic						
	Comments						
202281223	A59c Vibration Duct Mastic - Brown		NONE DETECTED		Fibrous glass (amorphous)	5 Binder + other	10/18/2022
	<u>Layer</u> Brown mastic						
	Comments						
202281223	A59c Vibration Duct Mastic - Brown		NONE DETECTED		None detected	Calcite + binder	10/18/2022
	<u>Layer</u> White mastic						
	Comments						
202281224	A60a Wall Mastic - Brown		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> Brown mastic / paper						
	Comments						

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 151 Hekili Street, Suite. 210  
 Kailua HI 96734

Phone Number: (808)262-0909  
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## Bulk Asbestos Determination

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202281225	A60b Wall Mastic - Brown		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> Brown mastic / paper						
	Comments						
202281226	A60c Wall Mastic - Brown		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> Brown mastic / paper						
	Comments						
202281227	A61a Freezer Caulk - Silver		NONE DETECTED		None detected	Other	10/19/2022
	<u>Layer</u> Off-white caulk						
	Comments						
202281228	A61b Freezer Caulk - Silver		NONE DETECTED		None detected	Other	10/19/2022
	<u>Layer</u> Off-white caulk						
	Comments						
202281229	A61c Freezer Caulk - Silver		NONE DETECTED		None detected	Other	10/19/2022
	<u>Layer</u> Off-white caulk						
	Comments						
202281230	A62a Speckled VFT - Gray		NONE DETECTED		None detected	Binder + tar	10/19/2022
	<u>Layer</u> Black/yellow mastics						
	Comments						
202281230	A62a Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Off-white vinyl floor tile						
	Comments						
202281231	A62b Speckled VFT - Gray		NONE DETECTED		None detected	Binder + tar	10/19/2022
	<u>Layer</u> Black/yellow mastics						
	Comments						

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202281231	A62b Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Off-white vinyl floor tile						
	Comments						
202281232	A62c Speckled VFT - Gray		NONE DETECTED		None detected	Binder + tar	10/19/2022
	<u>Layer</u> Black/yellow mastics						
	Comments						
202281232	A62c Speckled VFT - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Off-white vinyl floor tile						
	Comments						
202281233	A63a Textured Wallpaper - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
	<u>Layer</u> Gray wallpaper						
	Comments						
202281233	A63a Textured Wallpaper - Dark Gray		NONE DETECTED		None detected	Paint + binder	10/19/2022
	<u>Layer</u> Yellow mastic / white paint						
	Comments						
202281234	A63b Textured Wallpaper - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
	<u>Layer</u> Gray wallpaper						
	Comments						
202281234	A63b Textured Wallpaper - Dark Gray		NONE DETECTED		None detected	Calcite	10/19/2022
	<u>Layer</u> White joint compound (1, limited)						
	Comments						
202281234	A63b Textured Wallpaper - Dark Gray		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound (2, limited) / paper						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281234	<b>A63b Textured Wallpaper - Dark Gray</b> <u>Layer</u> <u>Yellow mastic / white paint</u> Comments		NONE DETECTED		None detected	Paint + binder	10/19/2022
202281235	<b>A63c Textured Wallpaper - Dark Gray</b> <u>Layer</u> <u>Gray wallpaper</u> Comments		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
202281235	<b>A63c Textured Wallpaper - Dark Gray</b> <u>Layer</u> <u>White joint compound (2, limited) / paper</u> Comments		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
202281235	<b>A63c Textured Wallpaper - Dark Gray</b> <u>Layer</u> <u>Ylw mastic / white joint comp. (1, lim.) / paint</u> Comments		NONE DETECTED		None detected	Paint + binder + calcite	10/19/2022
202281236	<b>A64a Cove Base - Gray</b> <u>Layer</u> <u>Brown/yellow mastics</u> Comments		NONE DETECTED		None detected	Binder	10/19/2022
202281236	<b>A64a Cove Base - Gray</b> <u>Layer</u> <u>Off-white cove base</u> Comments		NONE DETECTED		None detected	Vinyl	10/19/2022
202281237	<b>A64b Cove Base - Gray</b> <u>Layer</u> <u>Brown/yellow mastics</u> Comments		NONE DETECTED		None detected	Binder	10/19/2022
202281237	<b>A64b Cove Base - Gray</b> <u>Layer</u> <u>Off-white cove base</u> Comments		NONE DETECTED		None detected	Vinyl	10/19/2022

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281238	A64c Cove Base - Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> <u>Brown/yellow mastics</u>						
	Comments						
202281238	A64c Cove Base - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> <u>Off-white cove base</u>						
	Comments						
202281239	A65a Carpet Mastic - Dark Gray		NONE DETECTED		Fibrous glass (amorphous)	5 Tar + calcite	10/19/2022
	<u>Layer</u> <u>Black tar felt-like material</u>						
	Comments						
202281239	A65a Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	95 Calcite	10/19/2022
	<u>Layer</u> <u>Brown carpet</u>						
	Comments						
202281239	A65a Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
	<u>Layer</u> <u>Yellow foam / gray fabric-like material</u>						
	Comments						
202281239	A65a Carpet Mastic - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202281240	A65b Carpet Mastic - Dark Gray		NONE DETECTED		Fibrous glass (amorphous)	5 Tar + calcite	10/19/2022
	<u>Layer</u> <u>Black tar felt-like material</u>						
	Comments						
202281240	A65b Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	95 Calcite	10/19/2022
	<u>Layer</u> <u>Brown carpet</u>						
	Comments						

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## Bulk Asbestos Determination

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202281240	A65b Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
	<u>Layer</u> Yellow foam / gray fabric-like material						
	Comments						
202281240	A65b Carpet Mastic - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281241	A65c Carpet Mastic - Dark Gray		NONE DETECTED		Fibrous glass (amorphous)	5 Tar + calcite	10/19/2022
	<u>Layer</u> Black tar felt-like material						
	Comments						
202281241	A65c Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	95 Calcite	10/19/2022
	<u>Layer</u> Brown carpet						
	Comments						
202281241	A65c Carpet Mastic - Dark Gray		NONE DETECTED		Synthetic fibers (undulose)	10 Other	10/19/2022
	<u>Layer</u> Yellow foam / gray fabric-like material						
	Comments						
202281241	A65c Carpet Mastic - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281242	A66a Cove Base - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Brown cove base						
	Comments						
202281242	A66a Cove Base - Gray		NONE DETECTED		None detected	Calcite + gypsum + paint	10/19/2022
	<u>Layer</u> White joint compound / white paint						
	Comments						

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202281242	A66a Cove Base - Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281243	A66b Cove Base - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Brown cove base						
	Comments						
202281243	A66b Cove Base - Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Brown mastic						
	Comments						
202281243	A66b Cove Base - Gray		NONE DETECTED		None detected	Calcite + gypsum + paint	10/19/2022
	<u>Layer</u> White joint compound / white paint						
	Comments						
202281243	A66b Cove Base - Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281244	A66c Cove Base - Gray		NONE DETECTED		None detected	Vinyl	10/19/2022
	<u>Layer</u> Brown cove base						
	Comments						
202281244	A66c Cove Base - Gray		NONE DETECTED		None detected	Calcite + gypsum + paint	10/19/2022
	<u>Layer</u> White joint compound (1) / white paint						
	Comments						
202281244	A66c Cove Base - Gray		NONE DETECTED		None detected	Calcite	10/19/2022
	<u>Layer</u> White joint compound (2)						
	Comments						

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## Bulk Asbestos Determination

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202281244	A66c Cove Base - Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281245	A67a 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281245	A67a 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281245	A67a 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Off-white mastic						
	Comments						
202281246	A67b 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281246	A67b 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281246	A67b 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Off-white mastic						
	Comments						
202281247	A67c 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						

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 Kailua HI 96734

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281247	A67c 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281247	A67c 1x1 CFT - Dark Gray		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Off-white mastic						
	Comments						
202281248	A68a 2x2 CWT - White		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281248	A68a 2x2 CWT - White		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound / paper						
	Comments						
202281248	A68a 2x2 CWT - White		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						
202281249	A68b 2x2 CWT - White		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281249	A68b 2x2 CWT - White		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound / paper						
	Comments						
202281249	A68b 2x2 CWT - White		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> Yellow mastic						
	Comments						

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ENPRO Environmental  
 151 Hekili Street, Suite. 210  
 Kailua HI 96734

Phone Number: (808)262-0909  
 Facsimile: (808) 262-4449  
 Email: -

Lab Job No: 202209709  
 Date Submitted: 10/12/2022  
 Your Project: 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281250	A68c 2x2 CWT - White		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> <u>Black grout</u>						
	Comments						
202281250	A68c 2x2 CWT - White		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> <u>White joint compound / paper</u>						
	Comments						
202281250	A68c 2x2 CWT - White		NONE DETECTED		None detected	Binder	10/19/2022
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202281251	A69a Drywall Ceiling		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> <u>White drywall</u>						
	Comments						
202281251	A69a Drywall Ceiling		NONE DETECTED		None detected	Calcite + paint	10/19/2022
	<u>Layer</u> <u>White joint compound (1) / white paint</u>						
	Comments						
202281251	A69a Drywall Ceiling		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> <u>White joint compound (2) / paper</u>						
	Comments						
202281252	A69b Drywall Ceiling		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> <u>White drywall</u>						
	Comments						
202281252	A69b Drywall Ceiling		NONE DETECTED		None detected	Calcite + paint	10/19/2022
	<u>Layer</u> <u>White joint compound (1) / white paint</u>						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281252	A69b Drywall Ceiling		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound (2) / paper						
	Comments						
202281253	A69c Drywall Ceiling		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281253	A69c Drywall Ceiling		NONE DETECTED		None detected	Calcite + paint	10/19/2022
	<u>Layer</u> White joint compound (1) / white paint						
	Comments						
202281253	A69c Drywall Ceiling		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound (2) / paper						
	Comments						
202281254	A70a Textured WP - Green		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic / white paint						
	Comments						
202281255	A70b Textured WP - Green		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic / white paint						
	Comments						
202281256	A70c Textured WP - Green		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic / white paint						
	Comments						
202281256	A70c Textured WP - Green		NONE DETECTED		None detected	Calcite	10/19/2022
	<u>Layer</u> White joint compound						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281257	A72a Textured WP - Tan		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Tan wallpaper / yellow mastic / white paint						
	Comments						
202281257	A72a Textured WP - Tan		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281258	A72b Textured WP - Tan		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Tan wallpaper / yellow mastic / white paint						
	Comments						
202281258	A72b Textured WP - Tan		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281259	A72c Textured WP - Tan		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Tan wallpaper / yellow mastic / white paint						
	Comments						
202281259	A72c Textured WP - Tan		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281260	A73a CMU		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281261	A73b CMU		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281262	A73c CMU		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281263	A74a Bamboo Ceiling WP		NONE DETECTED		Cellulose (undulose)	97 Other	10/19/2022
	<u>Layer</u> Brown bamboo wallpaper						
	Comments						
202281263	A74a Bamboo Ceiling WP		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281264	A74b Bamboo Ceiling WP		NONE DETECTED		Cellulose (undulose)	97 Other	10/19/2022
	<u>Layer</u> Brown bamboo wallpaper						
	Comments						
202281264	A74b Bamboo Ceiling WP		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281265	A74c Bamboo Ceiling WP		NONE DETECTED		Cellulose (undulose)	97 Other	10/19/2022
	<u>Layer</u> Brown bamboo wallpaper						
	Comments						
202281265	A74c Bamboo Ceiling WP		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	10/19/2022
	<u>Layer</u> White drywall						
	Comments						
202281266	A75a Wallpaper - White		NONE DETECTED		Synthetic fibers (undulose)	10 Other + binder	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic (1)						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281266	A75a Wallpaper - White	NONE DETECTED			Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Off-white wallpaper / yellow mastic (2) / paint						
	Comments						
202281267	A75b Wallpaper - White	NONE DETECTED			Synthetic fibers (undulose)	10 Other + binder	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic (1)						
	Comments						
202281267	A75b Wallpaper - White	NONE DETECTED			Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Off-white wallpaper / yellow mastic (2) / paint						
	Comments						
202281268	A75c Wallpaper - White	NONE DETECTED			Synthetic fibers (undulose)	10 Other + binder	10/19/2022
	<u>Layer</u> Gray wallpaper / yellow mastic (1)						
	Comments						
202281268	A75c Wallpaper - White	NONE DETECTED			Synthetic fibers (undulose)	10 Other + binder + paint	10/19/2022
	<u>Layer</u> Off-white wallpaper / yellow mastic (2) / paint						
	Comments						
202281269	A76a Black Stone Floor Grout	NONE DETECTED			None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281270	A76b Black Stone Floor Grout	NONE DETECTED			None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281271	A76c Black Stone Floor Grout	NONE DETECTED			None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281272	A77a Marble Cove Base - Black		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Black grout						
	Comments						
202281272	A77a Marble Cove Base - Black		NONE DETECTED		None detected	Quartz	10/19/2022
	<u>Layer</u> Black marble						
	Comments						
202281272	A77a Marble Cove Base - Black		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material						
	Comments						
202281272	A77a Marble Cove Base - Black		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound / paper						
	Comments						
202281273	A77b Marble Cove Base - Black		NONE DETECTED		None detected	Quartz	10/19/2022
	<u>Layer</u> Black marble						
	Comments						
202281273	A77b Marble Cove Base - Black		NONE DETECTED		Cellulose (undulose)	15 Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material / paper						
	Comments						
202281274	A77c Marble Cove Base - Black		NONE DETECTED		None detected	Quartz	10/19/2022
	<u>Layer</u> Black marble						
	Comments						
202281274	A77c Marble Cove Base - Black		NONE DETECTED		Cellulose (undulose)	15 Calcite + quartz	10/19/2022
	<u>Layer</u> Gray cementitious material / paper						
	Comments						

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 Your Project: 2209-00264-HAZ, 2057 Kalakaua Avenue, 10/12/22

## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281275	A78a Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	20 Tar + quartz	10/19/2022
	<u>Layer</u> Black roofing						
	Comments						
202281276	A78b Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	20 Tar + quartz	10/19/2022
	<u>Layer</u> Black roofing						
	Comments						
202281277	A78c Roof Shingle - Black		NONE DETECTED		Fibrous glass (amorphous)	20 Tar + quartz	10/19/2022
	<u>Layer</u> Black roofing						
	Comments						
202281278	A79a CWT - Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> White grout						
	Comments						
202281278	A79a CWT - Gray		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> Yellow mastic / paper						
	Comments						
202281279	A79b CWT - Gray		NONE DETECTED		Cellulose (undulose)	30 Calcite	10/19/2022
	<u>Layer</u> White joint compound (limited)						
	Comments						
202281279	A79b CWT - Gray		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> Yellow mastic / paper						
	Comments						
202281280	A79c CWT - Gray		NONE DETECTED		None detected	Calcite + quartz	10/19/2022
	<u>Layer</u> White grout						
	Comments						

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## Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202281280	A79c CWT - Gray		NONE DETECTED		Cellulose (undulose)	15 Binder	10/19/2022
	<u>Layer</u> <u>Yellow mastic / paper</u>						
	Comments						
202281281	A80a Vibration Cloth		NONE DETECTED		Synthetic fibers (undulose)	20 Other + paint	10/19/2022
	<u>Layer</u> <u>Black vibration cloth / white paint</u>						
	Comments						
202281282	A80b Vibration Cloth		NONE DETECTED		Synthetic fibers (undulose)	20 Other + paint	10/19/2022
	<u>Layer</u> <u>Black vibration cloth / white paint</u>						
	Comments						
202281283	A80c Vibration Cloth		NONE DETECTED		Synthetic fibers (undulose)	20 Other + paint	10/19/2022
	<u>Layer</u> <u>Black vibration cloth / white paint</u>						
	Comments						

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General Comments

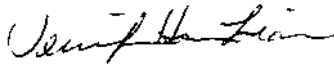
The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

> This testing result is greater than the numerical value listed.

< This testing result is less than the numerical value listed.

None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy.

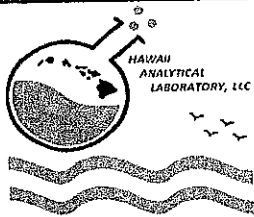


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**Jennifer Hsu Liao**  
**Laboratory Manager**

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3615 Harding Avenue, Suite 308  
 Honolulu, HI 96816  
 PH: 808-735-0422  
 FAX: 808-735-0047

New Client?

Report To\* : ENPRO Environmental  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
 Phone / Cell No.\* : 262-0909  
 Report results to : info@enproenvironmental.com  
 via email or fax : aAgullar@enproenvironmental.com  
 or verbal: \_\_\_\_\_

Invoice To\* : Kanani Cale  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
 Phone / Cell No.\* : 262-0909  
 Purchase Order No. : \_\_\_\_\_  
 Email Invoice To : info@enproenvironmental.com

**Need Results By\*:**

- 5 Working Days *aa*
- 4 Working Days *TAT for AM*
- 72 hour
- 48 hour
- 24 Hour *aa*
- Rush - 6 hours
- Immediate - 4 hrs or less

Site/Project Name: 2057 Kalakaua Avenue Client Project No.: 2209-00264-HAZ Sampled By: *Alexis A. Morgan, L. Liam S. Howard R.*

Comments / Special Instructions: \_\_\_\_\_

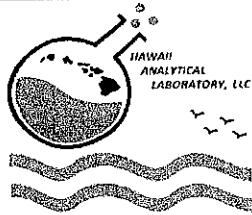
PLM POSITIVE STOP Instructions:  
 Positive stop per SAMPLE  
 Positive stop per LAYER

LAB USE ONLY  
 Lab Report No.: 202209709

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A1a Roll Roof Shingle - Black	10/12/2022	Bulk	X	Asbestos		202281050
A1b						202281051
A1c						202281052
A2a Waterproofing Tar - Black						202281053
A2b						202281054
A2c						202281055
A3a Vibration cloth - Black						202281056
A3b						202281057
A3c						202281058
A4a Fiberglass insulation - yellow						202281059
A4b						202281060
A4c						202281061

Relinquished By (Print and Sign) <i>Alexis Agullar</i>	Date/Time <i>10/12/22 2:30</i>	Received By (Print and Sign) <i>Breanna Perez</i>	Date/Time <i>0-12-22 P02:35 RQVD</i>
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Sample description can be paint chips, concrete, specific sample collection location, etc...  
 If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.  
 All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.  
 \*Required fields, failure to complete these fields may result in a delay in your samples being processed.



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 via email or fax : aAguilar@enproenvironmental.com  
 or verbal: \_\_\_\_\_

Invoice To\* : Kanani Cale  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
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 Purchase Order No. : \_\_\_\_\_  
 Email Invoice To : info@enproenvironmental.com

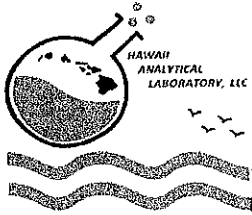
Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By: \_\_\_\_\_

Comments / Special Instructions: \_\_\_\_\_ PLM POSITIVE STOP Instructions:  
 Positive stop per SAMPLE  
 Positive stop per LAYER  
**LAB USE ONLY**  
 Lab Report No.: **202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
Asa <i>Duct Caulking - Gray</i>	10/12/2022	Bulk	X	Asbestos		202281062
Asb						202281063
Asc						202281064
A6a <i>Roof patch - Gray</i>						202281065
A6b						202281066
A6c						202281067
A7a <i>Pipe caulking</i>						202281068
A7b						202281069
A7c						202281070
A8a <i>Duct Sealant</i>						202281071
A8b						202281072
A8c						202281073

Relinquished By (Print and Sign) <b>Alexis Aguilar</b> <i>[Signature]</i>	Date/Time	Received By (Print and Sign) <b>Breanna Perez</b> <i>[Signature]</i>	Date/Time <b>10-12-22 20:50 RCVD</b>
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 Rev 20140701



3615 Harding Avenue, Suite 308  
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 PH: 808-735-0422  
 FAX: 808-735-0047

New Client?

Report To\* : ENPRO Environmental  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
 Phone / Cell No.\* : 262-0909  
 Report results to : info@enproenvironmental.com  
 via email or fax : aAguilar@enproenvironmental.com  
 or verbal: :

Invoice To\* : Kanani Cale  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
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**Need Results By\*:**

- 5 Working Days
- 4 Working Days
- 72 hour
- 48 hour
- 24 Hour
- Rush - 6 hours
- Immediate - 4 hrs or less

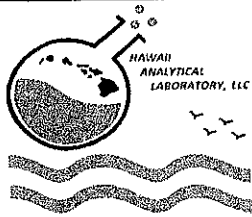
Site/Project Name: 2057 Kalakaua Avenue Client Project No.: 2209-00264-HAZ Sampled By:

Comments / Special Instructions: PLM POSITIVE STOP Instructions:  
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A9a Yellow Fibrous Insulation	10/12/2022	Bulk	X	Asbestos		202281074
A9b	↓	↓	↓	↓	↓	202281075
A9c						202281076
A10a Vibration cloth - white						202281077
A10b						202281078
A10c						202281079
A11a Tank end cap Gray/white						202281080
A11b						202281081
A11c						202281082
A12a Vent caulking black						202281083
A12b						202281084
A12c	202281085					

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Alexis Aguilar <i>alexis.aguilar</i>		Breanna Perez <i>Breanna Perez</i>	10-12-22 02:50 RCVD

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Site/Project Name: 2057 Kalakaua Avenue      Client Project No.: 2209-00264-HAZ      Sampled By:

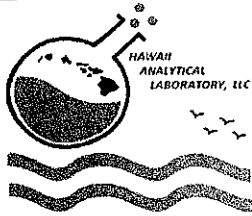
Comments / Special Instructions:      PLM POSITIVE STOP Instructions:  
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A13a Clay Roof Tile	10/12/2022	Bulk	X	Asbestos		202281086
A13b						202281087
A13c						202281088
A14a Black Stone Tile Grout						202281089
A14b						202281090
A14c						202281091
A15a Window Caulking - Black						202281092
A15b						202281093
A15c						202281094
A16a Drop Ceiling Tile - Gray						202281095
A16b						202281096
A16c						202281097

Relinquished By (Print and Sign): Alexis Aguilar *alexis aguilar*      Date/Time:      Received By (Print and Sign): Breanna Perez *Breanna Perez*      Date/Time: 10-12-22 02:50 RCVD

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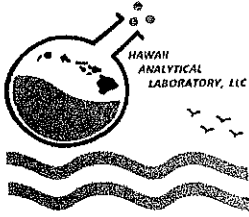
Site/Project Name: 2057 Kalakaua Avenue Client Project No.: 2209-00264-HAZ Sampled By:

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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A17a 2x4 CFT - Cream	10/12/2022	Bulk	X	Asbestos		202281098
A17b	↓	↓	↓	↓	↓	202281099
A17c	↓	↓	↓	↓	↓	202281100
A18a Dry wall	↓	↓	↓	↓	↓	202281101
A18b	↓	↓	↓	↓	↓	202281102
A18c	↓	↓	↓	↓	↓	202281103
A19a Speckled VFT - Gray	↓	↓	↓	↓	↓	202281104
A19b	↓	↓	↓	↓	↓	202281105
A19c	↓	↓	↓	↓	↓	202281106
A20a Love Base - Tan	↓	↓	↓	↓	↓	202281107
A20b	↓	↓	↓	↓	↓	202281108
A20c	↓	↓	↓	↓	↓	202281109

Relinquished By (Print and Sign) Alexis Agullar/ <i>alexis agullar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 20:50 RCVD
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Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By:

Comments / Special Instructions:

PLM POSITIVE STOP Instructions:

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**LAB USE ONLY**

Lab Report No.:

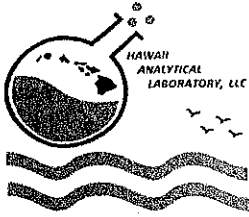
**202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A21a Carpet Mastic - Blue	10/12/2022	Bulk	X	Asbestos		202281110
A21b ↓						202281111
A21c ↓						202281112
A22a 2x4 Drop Ceiling Tile - white						202281113
A22b ↓						202281114
A22c ↓						202281115
A23a Three hold Prower						202281116
A23b ↓						202281117
A23c ↓						202281118
A24a Textured Wallpaper - light gray						202281119
A24b ↓						202281120
A24c ↓						202281121

Relinquished By (Print and Sign) Alexis Aguilar/ <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 02:50 RCVD
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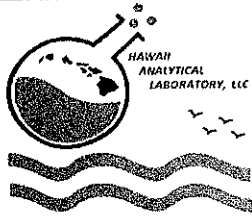
Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By:

Comments / Special Instructions: PLM POSITIVE STOP Instructions:  
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 Positive stop per LAYER  
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A25a Drywall ceiling	10/12/2022	Bulk	X	Asbestos		202281122
A25b						202281123
A25c						202281124
A26a Cove Base - white						202281125
A26b						202281126
A26c						202281127
A27a Door Weather Strip						202281128
A27b						202281129
A27c						202281130
A28a Threshold - Black						202281131
A28b						202281132
A28c						202281133

Relinquished By (Print and Sign) Alexis Aguilar/ <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 02:50 RCVD
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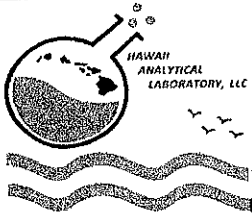
Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A29a Under Sink - Loating	10/12/2022	Bulk	X	Asbestos		202281134
A29b ↓						202281135
A29c ↓						202281136
A30a CFT - Dark Gray						202281137
A30b ↓						202281138
A30c ↓						202281139
A31a GWT - White						202281140
A31b ↓						202281141
A31c ↓						202281142
A32a CFT - Brown						202281143
A32b ↓						202281144
A32c ↓						202281145

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Alexis Aguilar <i>alexis aguilar</i>		Breanna Perez <i>Breanna Perez</i>	10-12-22 02:50 RCVD

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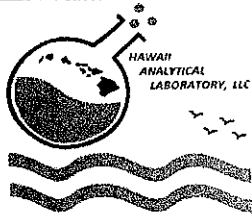
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A33a Freezer Caulk - Silver	10/12/2022	Bulk	X	Asbestos		202281146
A33b ↓	↓	↓	↓	↓		202281147
A33c ↓	↓	↓	↓	↓		202281148
A34a VFT Cream						202281149
A34b ↓	↓	↓	↓	↓		202281150
A34c ↓	↓	↓	↓	↓		202281151
A35a Laminate Floor - light brown						202281152
A35b ↓	↓	↓	↓	↓		202281153
A35c ↓	↓	↓	↓	↓		202281154
A36a Textured wallpaper - Lt Brown						202281155
A36b ↓	↓	↓	↓	↓		202281156
A36c ↓	↓	↓	↓	↓		202281157

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Alexis Aguilar/ <i>alexis aguilar</i>		<i>Reanna Perry</i>	10-12-22 P02:50 RCVD

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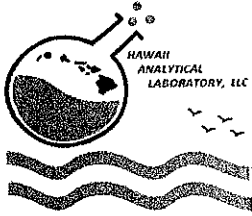
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A37a Pipe Insulation - White	10/12/2022	Bulk	X	Asbestos		202281158
A37b						202281159
A37c						202281160
A38a Wall paper - Green						202281161
A38b						202281162
A38c						202281163
A39a Microcement						202281164
A39b						202281165
A39c						202281166
A40a Glass Block Grout						202281167
A40b						202281168
A40c						202281169

Relinquished By (Print and Sign) Alexis Aguilar <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 P.02:50 RCVD
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Client Project No.:  
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Sampled By: \_\_\_\_\_

Comments / Special Instructions:

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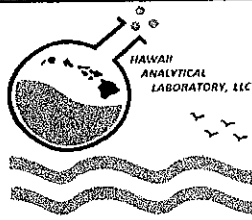
**202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A41a Green Marble Mosaic	10/12/2022	Bulk	X	Asbestos		202281170
A41b	↓	↓	↓	↓	↓	202281171
A41c	↓	↓	↓	↓	↓	202281172
A42a Textured Wallpaper - Dark Gray						202281173
A42b	↓	↓	↓	↓	↓	202281174
A42c	↓	↓	↓	↓	↓	202281175
<del>A43a Stair Carpet Mosaic - Gray</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>202281176</del>
<del>A43b</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>202281177</del>
<del>A43c</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>↓</del>	<del>202281178</del>
A44a Marble Floor Tile - Black						202281176
A44b	↓	↓	↓	↓	↓	202281177
A44c	↓	↓	↓	↓	↓	202281178

*all  
not  
included*

Relinquished By (Print and Sign) Alexis Aguilar/ <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 20:50 RCVD
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Sample description can be paint chips, concrete, specific sample collection location, etc...  
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3615 Harding Avenue, Suite 308  
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 PH: 808-735-0422  
 FAX: 808-735-0047

New Client?

Report To\* : ENPRO Environmental  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
 Phone / Cell No.\* : 262-0909  
 Report results to : info@enproenvironmental.com  
 via email or fax : aAguilar@enproenvironmental.com  
 or verbal: :

Invoice To\* : Kanani Cale  
 Company : ENPRO Environmental  
 Address\* : 151 Hekili Street, Suite 210  
 Kailua, HI 96734  
 Phone / Cell No.\* : 262-0909  
 Purchase Order No. :  
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**Need Results By\*:**

- 5 Working Days
- 4 Working Days
- 72 hour
- 48 hour
- 24 Hour
- Rush - 6 hours
- Immediate - 4 hrs or less

Site/Project Name:  
**2057 Kalakaua Avenue**

Client Project No.:  
**2209-00264-HAZ**

Sampled By:

Comments / Special Instructions:

PLM POSITIVE STOP Instructions:

- Positive stop per SAMPLE
- Positive stop per LAYER

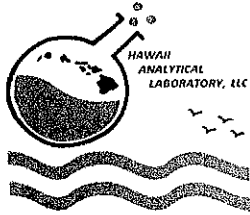
**LAB USE ONLY**

Lab Report No.:  
**202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A45a CWT- light Gray	10/12/2022	Bulk	X	Asbestos		202281179
A45b						202281180
A45c						202281181
A46a Textured Wallpaper Dark Gray						202281182
A46b						202281183
A46c						202281184
A47a Glass Block front						202281185
A47b						202281186
A47c						202281187
A48a Diamond Carpet Mastic - Brown						202281188
A48b						202281189
A48c						202281190

Relinquished By (Print and Sign) Alexis Aguilar/ <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 P02:50 RCVD
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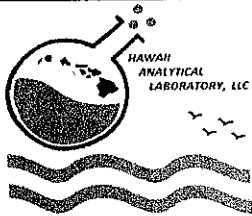
Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By: \_\_\_\_\_

Comments / Special Instructions: \_\_\_\_\_ PLM POSITIVE STOP Instructions:  
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 Positive stop per LAYER  
**LAB USE ONLY**  
 Lab Report No.: **202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A 49a - Carpet mastic - Green	10/12/2022	Bulk	X	Asbestos		202281191
A49b						202281192
A49c						202281193
A50a - Textured WP - GR/WH						202281194
A50b						202281195
A50c						202281196
A51a - Door Threshold - Black						202281197
A51b						202281198
A51c						202281199
A52a Textured WP - Cream						202281200
A52b						202281201
A52c						202281202

Relinquished By (Print and Sign) <b>Alexis Aguilar</b> <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) <b>Breanna Perez</b> <i>Breanna Perez</i>	Date/Time 10-12-22 P02:51 RCVD
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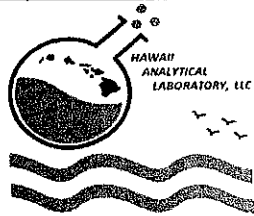
Site/Project Name: 2057 Kalakaua Avenue      Client Project No.: 2209-00264-HAZ      Sampled By:

Comments / Special Instructions:      PLM POSITIVE STOP Instructions:  
 Positive stop per SAMPLE  
 Positive stop per LAYER  
**LAB USE ONLY**  
 Lab Report No.: 202209709

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A53a window caulk - black	10/12/2022	Bulk	X	Asbestos		202281203
A53b ↓						202281204
A53c ↓						202281205
A54a CPT - Brown						202281206
A54b ↓						202281207
A54c ↓						202281208
A55a CWT - White/Gray						202281209
A55b ↓						202281210
A55c ↓						202281211
A66a - Drywall						202281212
A66b ↓						202281213
A66c ↓						202281214

Relinquished By (Print and Sign) Alexis Agullar/ <i>alexis agullar</i>	Date/Time	Received By (Print and Sign) <i>Deanna Perry</i>	Date/Time 10-12-22 P02:51 RCVD
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Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By: \_\_\_\_\_

Comments / Special Instructions: \_\_\_\_\_

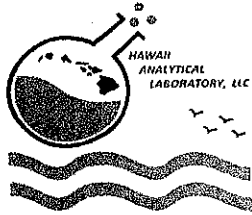
PLM POSITIVE STOP Instructions:  
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 Positive stop per LAYER

**LAB USE ONLY**  
 Lab Report No.: **202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A57a speckled OCT - white	10/12/2022	Bulk	X	Asbestos		202281215
A57b						202281216
A57c						202281217
A58a Pipe insulation - white						202281218
A58b						202281219
A58c						202281220
A59a vibration duct mastic - Brown						202281221
A59b						202281222
A59c						202281223
A60a wall mastic - Brown						202281224
A60b						202281225
A60c						202281226

Relinquished By (Print and Sign) <b>Alexis Aguilar</b> <i>alexisaguilar</i>	Date/Time	Received By (Print and Sign) <b>Breanna Perez</b> <i>Breanna Perez</i>	Date/Time <b>10-12-22 02:51 RCVD</b>
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Site/Project Name: **2057 Kalakaua Avenue** Client Project No.: **2209-00264-HAZ** Sampled By:

Comments / Special Instructions: PLM POSITIVE STOP Instructions:  
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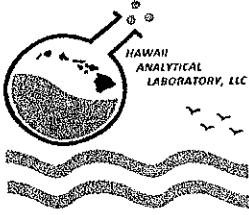
Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A01 a Freezer Caulk - Silver	10/12/2022	Bulk	X	Asbestos		202281227
A01 b						202281228
A01 c						202281229
A02 a Spunked VFT - Gray						202281230
A02 b						202281231
A02 c						202281232
A03a Textured Wallpaper Dark Gray						202281233
A03b						202281234
A03c						202281235
A04 a base base - Gray						202281236
A04 b						202281237
A04 c						202281238

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Alexis Aguilar <i>alexis aguilar</i>		Breanna Perez <i>Breanna Perez</i>	10-12-22 20:51 RCVD

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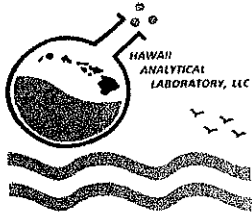
Site/Project Name: **2057 Kalakaua Avenue**      Client Project No.: **2209-00264-HAZ**      Sampled By:

Comments / Special Instructions:      PLM POSITIVE STOP Instructions:  
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 Positive stop per LAYER  
**LAB USE ONLY**  
 Lab Report No.: **202209709**

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A65a carpet mastic - Dark gray	10/12/2022	Bulk	X	Asbestos		202281239
A65b ↓						202281240
A65c ↓						202281241
A66a Cove base - Gray						202281242
A66b ↓						202281243
A66c ↓						202281244
A67a 1x1 CFT - Dark Gray						202281245
A67b ↓						202281246
A67c ↓						202281247
A68a 2x2 CWT - White						202281248
A68b ↓						202281249
A68c ↓						202281250

Relinquished By (Print and Sign) <b>Alexis Aguilar/ <i>alexis aguilar</i></b>	Date/Time	Received By (Print and Sign) <b>Breanna Perez</b>	Date/Time <b>10-12-22 02:51 RCVD</b>
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Comments / Special Instructions:

PLM POSITIVE STOP Instructions:  
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**LAB USE ONLY**  
 Lab Report No.:  
**202209709**

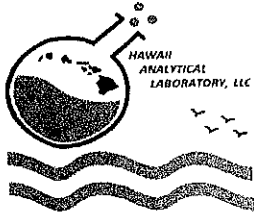
Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A69a Dry wall ceiling	10/12/2022	Bulk	X	Asbestos		202281251
A69b						202281252
A69c						202281253
A70a Textured WP - green						202281254
A70b						202281255
A70c						202281256
<del>A71a Bamboo mat floor</del>						
<del>A71b</del>						
<del>A71c</del>						
A72a Textured WP - Tan						202281257
A72b						202281258
A72c						202281259

*Not included*

Relinquished By (Print and Sign) <b>Alexis Aguilar</b> <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) <b>Breanna Perez</b> <i>Breanna Perez</i>	Date/Time 10-12-22 P02:51 RCVD
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Site/Project Name: 2057 Kalakaua Avenue      Client Project No.: 2209-00264-HAZ      Sampled By: \_\_\_\_\_

Comments / Special Instructions: \*\* Per Alexis, analyze the grout only - aa 10/19/2022

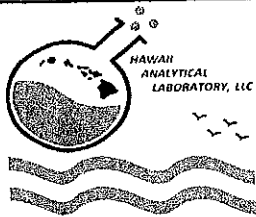
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 Positive stop per LAYER

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 Lab Report No.: 202209709

Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A73a CMU	10/12/2022	Bulk	X	Asbestos		202281260
A73b ↓						202281261
A73c ↓						202281262
A74a Bamboo ceiling WP						202281263
A74b ↓						202281264
A74c ↓						202281265
A75a wallpaper - white						202281266
A75b ↓						202281267
A75c ↓						202281268
** A76a Black stone floor grout						202281269
A76b ↓						202281270
A76c ↓						202281271

Relinquished By (Print and Sign) Alexis Aguilar/ <i>alexis aguilar</i>	Date/Time	Received By (Print and Sign) Breanna Perez <i>Breanna Perez</i>	Date/Time 10-12-22 P02:51 RCVD
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Sample Identification* (Maximum of 30 Characters)	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab ID
A77a marble cove base-black	10/12/2022	Bulk	X	Asbestos		202281272
A77b ↓						202281273
A77c ↓						202281274
A78a Roof shingle - Black						202281275
A78b ↓						202281276
A78c ↓						202281277
A79a CWT - Gray						202281278
A79b ↓						202281279
A79c ↓						202281280
A80a vibration cloth						202281281
A80b ↓						202281282
A80c ↓						202281283

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Alexis Aguilar <i>[Signature]</i>		Breanna Perez <i>[Signature]</i>	10-12-22 P02:51 RCVD

Sample description can be paint chips, concrete, specific sample collection location, etc...  
 If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.  
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# Appendix E:

## Traffic Impact Report Kalia Cultural Entertainment Venue



# Traffic Impact Report

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## *Kalia Cultural Entertainment Venue*



Prepared for:  
2055 Kalakaua LLC

Prepared by:  
Wilson Okamoto Corporation

June 2023

***TRAFFIC IMPACT REPORT***  
***FOR***  
***KALIA CULTURAL ENTERTAINMENT VENUE***

*Prepared for:*

2055 Kalakaua LLC  
1288 Ala Moana Boulevard, Suite 201  
Honolulu, HI 96814

*Prepared by:*

Wilson Okamoto Corporation  
1907 S. Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
WOC Ref #10773-02

June 2023



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## **I. INTRODUCTION**

### **A. Purpose of Study**

The purpose of this study is to identify and assess the traffic impacts resulting from the development of the Kalia Cultural Entertainment Venue in Waikiki on the island of Oahu. The proposed project entails the replacement of an existing 2-story building with an open-air entertainment venue.

### **B. Scope of Study**

This report presents the findings and conclusions of the traffic study, the scope of which includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic operations in the vicinity.
3. Analysis of future roadway and traffic operations without the proposed project.
4. Analysis and development of trip generation characteristics for the proposed project.
5. Superimposing site-generated traffic over future traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

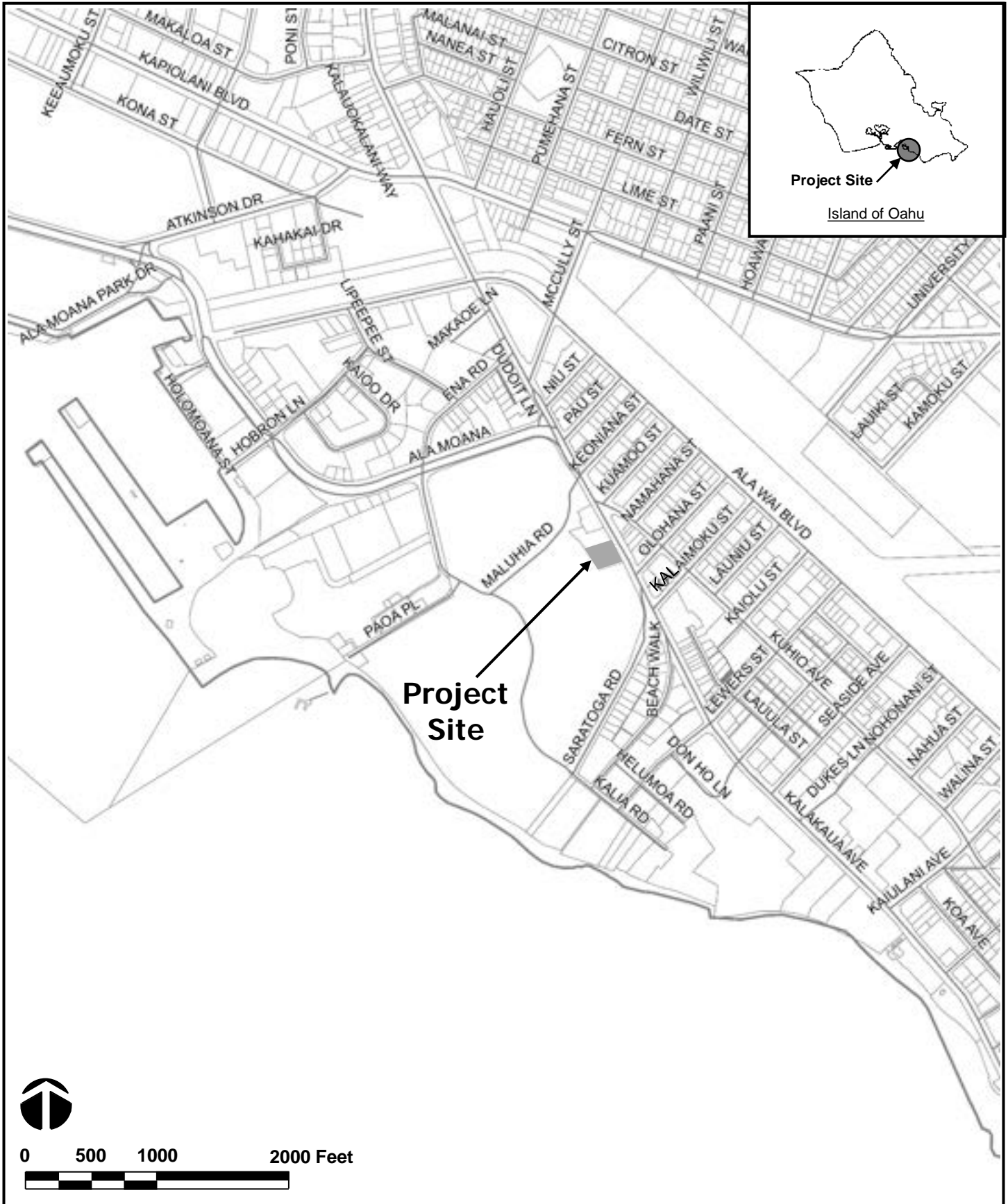
## **II. PROJECT DESCRIPTION**

### **A. Location**

The project site is located adjacent to Kalakaua Avenue near the western edge of Waikiki on the island of Oahu (see Figure 1). The project site is bounded by the Luana Waikiki Hotel and Suites to the west, Kalakaua Avenue to the north, and the Fort DeRussy Park facilities to the south and east and is further identified as Tax Map Keys (TMKs): (1) 2-6-006:001 and 004. Access to the proposed project is expected to be provided via new driveways off Kalakaua Avenue.

### **B. Project Characteristics**

The project site houses the former Kyo-ya restaurant and its associated parking structure, which is currently being utilized as a parking area for Hui Carshare.



**KALIA CULTURAL ENTERTAINMENT VENUE**

**LOCATION MAP AND VICINITY MAP**

**FIGURE**

**1**

The proposed project entails the replacement of the existing structures with an open-air cultural entertainment venue that accommodates up to 715 guests including the following:

- A large lawn for guest seating and max capacity of 685 people
- A two-story multi-purpose building that will include an enclosed seating area that can accommodate a maximum of 30 people as well as other amenities and support spaces for the venue
- A pick-up/drop-off area and loading zone off Kalakaua Avenue

Access to the proposed project is expected to be provided via new one-way driveways off Kalakaua Avenue to serve the project's porte cochere. Due to the project's location within Waikiki and anticipated event programming, the majority of guests are expected to utilize alternative modes of transportation to access the site with no parking expected to be provided on-site. The project is anticipated to be completed by the Year 2024. Figure 2 shows the proposed project site plan.

### **III. EXISTING TRAFFIC CONDITIONS**

#### **A. Area Roadway System**

The project site is located adjacent to Kalakaua Avenue, a one-way (eastbound) roadway that with Ala Wai Boulevard forms a couplet system providing east-west access through Waikiki. Northeast of the project site, Kalakaua Avenue intersects Olohana Street, a predominantly two-lane, one-way (southbound) roadway between Kalakaua Avenue and Ala Wai Boulevard. At this signalized T-intersection, the Kalakaua Avenue approach of the intersection has four through lanes while the southbound approach on Olohana Street has two left-turn lanes.

East of the intersection with Olohana Street, Kalakaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalakaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way (northbound) roadway generally oriented in the north-south direction between Kalakaua Avenue and Ala Wai Boulevard while Saratoga Road is generally a two-lane, two-way roadway oriented in the north-south direction between Kalia Road and Kalakaua Avenue. At the intersection with Kalakaua Avenue, the Saratoga Road approach has one northbound through lane and two channelized right-turn lanes. It should be noted that there are posted signs at the intersection indicating



**KALIA CULTURAL ENTERTAINMENT VENUE**

**PROJECT SITE PLAN**

FIGURE

2

that right-turn movements from the northbound approach are prohibited on red. Kalaimoku Street has two northbound departure lanes.

**B. Traffic Volumes and Conditions**

**1. General**

**a. Field Investigation**

Field investigations were conducted on March 10-11, 2023 and consisted of manual turning movement count surveys during the weekday and Saturday afternoon peak hours between 4:00 PM and 7:00 PM at the following intersections:

- Kalakaua Avenue Midblock
- Kalakaua Avenue and Olohana Street
- Kalakaua Avenue, Kalaimoku Street, and Saratoga Road
- Kalakaua Avenue and Beach Walk

Appendix A includes the existing traffic count data.

**b. Capacity Analysis Methodology**

The highway capacity analysis performed in this study is based upon procedures presented in the “Highway Capacity Manual”, Transportation Research Board, 2000, and the “Synchro” software, developed by Trafficware. It should be noted that the HCM 2016 methodology is available with the Synchro software; however, analysis conducted using that methodology is unable to accommodate all the lane use configurations in the study area. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak hours of traffic.

LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS “A” through “F”; LOS “A” representing ideal or free-flow traffic operating conditions and LOS “F” unacceptable or potentially congested traffic operating conditions.

“Volume-to-Capacity” (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of



one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road's carrying capacity. The LOS definitions are included in Appendix B.

**2. Existing Peak Hour Traffic**

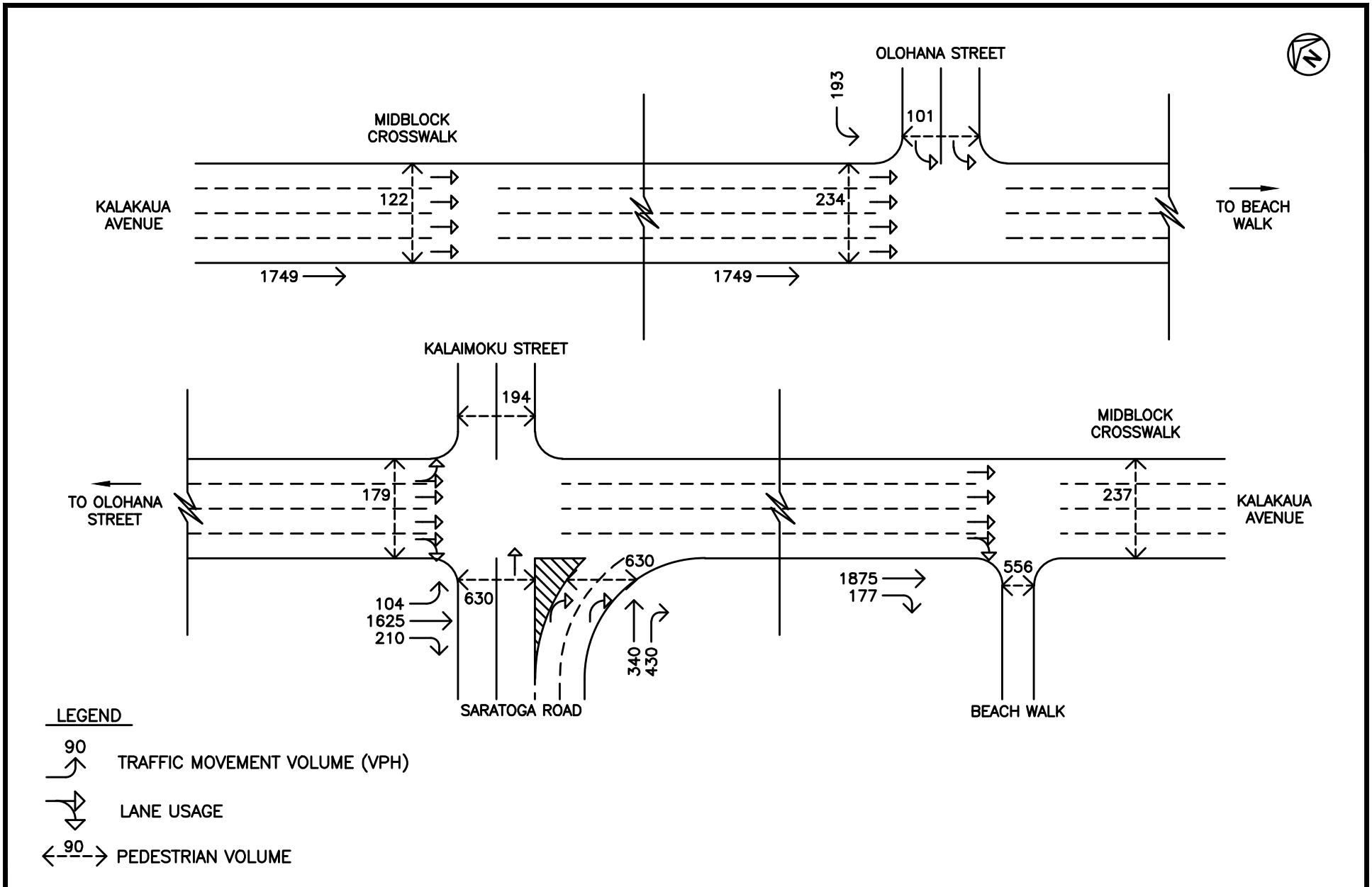
**a. General**

Figures 3 and 4 show the existing lane uses and peak hour traffic volumes. The peak hours of traffic during the weekday and Saturday PM periods generally occur between 4:00 PM and 5:00 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. The LOS calculations are included in Appendix C.

**b. Kalakaua Avenue and Olohana Street**

At the intersection with Olohana Street, Kalakaua Avenue carries 1,749 vehicles and 1,662 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. The Kalakaua Avenue approach operates at LOS "B" during the weekday PM peak period and LOS "A" during the Saturday PM peak period. Field observations indicate traffic queues from the downstream intersections periodically extended through this intersection during both peak periods. These queues were primarily observed within the outside (right lanes) with maximum queue lengths of 7-8 vehicles observed during both peak periods. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle.

The Olohana Street approach carries 193 vehicles and 190 vehicles southbound during the weekday and Saturday PM peak periods, respectively. The Olohana Street approach operates at LOS "D" during both peak periods. Traffic queues occasionally formed on the Olohana Street approach of the intersection. Average queue lengths of 4-6 vehicles were observed during both peak periods. These

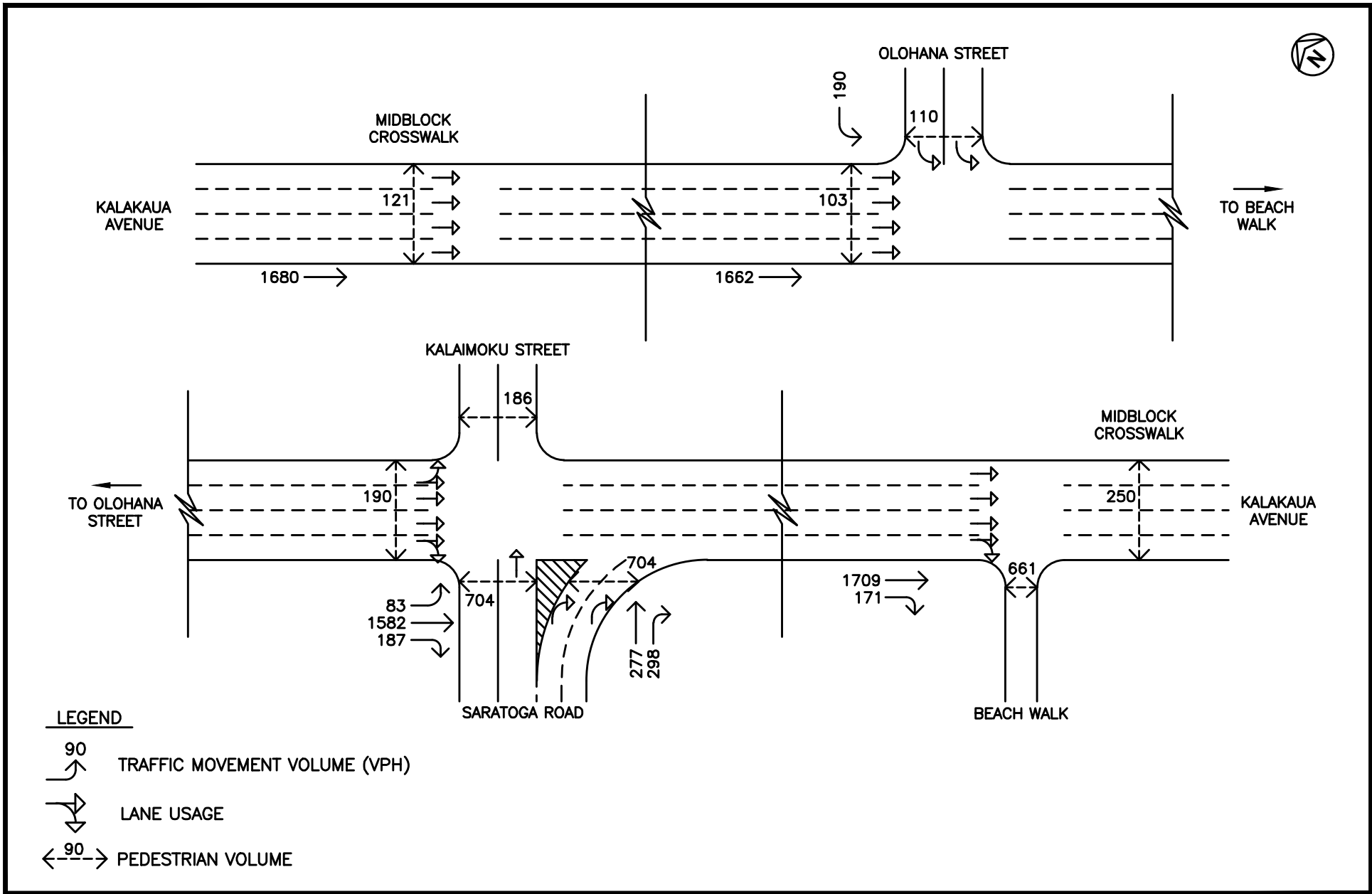


KALIA CULTURAL ENTERTAINMENT VENUE

EXISTING WEEKDAY PM PEAK HOUR OF TRAFFIC

FIGURE

3



**KALIA CULTURAL ENTERTAINMENT VENUE**

**EXISTING SATURDAY PM PEAK HOUR OF TRAFFIC**

**FIGURE**  
4

queues were observed to clear the intersection after each traffic signal cycle change.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection and across Olohana Street on the north side of the intersection. During the weekday PM peak period, 234 pedestrians were observed crossing Kalakaua Avenue, while 101 pedestrians were observed crossing Olohana Street. During the Saturday PM peak period, 103 pedestrians were observed crossing Kalakaua Avenue, while 110 pedestrians were observed crossing Olohana Street during the same peak period.

In addition, there is a midblock crosswalk provided across Kalakaua Avenue approximately 350 feet west of the intersection with Olohana Street in front of the Luana Waikiki Hotel and Suites. During the weekday PM peak period, 122 pedestrians were observed crossing Kalakaua Avenue while 121 pedestrians were observed crossing at the same location during the Saturday PM peak period.

**c. Kalakaua Avenue, Kalaimoku Street, and Saratoga Road**

At the intersection with Kalaimoku Street and Saratoga Road, Kalakaua Avenue carries 1,939 vehicles and 1,852 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. The Kalakaua Avenue approach operates at LOS “A” during both peak periods. As previously discussed, eastbound queues at this intersection periodically extended through the upstream intersection with Olohana Street. Field observations indicate that more extensive queues formed along the curbside lanes due to the high volume of conflicting pedestrians at the crosswalks on Kalaimoku Street and Saratoga Road. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle.

The Saratoga Road approach of the intersection carries 770 vehicles and 575 vehicles northbound during the weekday and

Saturday PM peak periods, respectively. This approach operates at LOS “F” and LOS “E” during the weekday and Saturday PM peak periods, respectively. Traffic queues periodically formed on the Saratoga Road approach of the intersection with average queue lengths of 7-9 vehicles observed during the weekday and Saturday PM peak periods. Although most of these queues cleared the intersection after each traffic signal cycle change, vehicles occasionally had to wait for more than one traffic signal cycle. The high volume of conflicting traffic, fixed traffic signal timing at the intersection, and the restriction of right-turn movements on red contribute to the low levels of service and queueing at this approach.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection, as well as across Kalaimoku Street on the north side of the intersection and across Saratoga Road on the south side of the intersection. During the weekday PM peak period, 179 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 194 pedestrians and 630 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively. During the Saturday PM peak period, 190 pedestrians were observed crossing Kalakaua Avenue on the west of the intersection, while 186 pedestrians and 704 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively.

**d. Kalakaua Avenue and Beach Walk**

At the intersection with Beach Walk, Kalakaua Avenue carries 2,052 vehicles and 1,880 vehicles eastbound during the weekday and Saturday PM peak periods, respectively. It should be noted that this approach does not have a level of service since there are no conflicting traffic movements at this intersection. Field observations indicate that traffic queues along Kalakaua Avenue from the downstream intersection with Lewers Street occasionally extended through this

intersection influencing traffic operations at the upstream intersections with Kalaimoku Street/Saratoga Road and Olohana Street. In addition, field observations also indicate queuing along the outer right lane may be attributed to vehicles yielding to the high volume of conflicting pedestrians at the crosswalk on Beach Walk.

A crosswalk is provided across Beach Walk on the south side of the intersection. During the weekday PM peak period, 556 pedestrians were observed crossing Beach Walk on the south side of the intersection, while 661 pedestrians were observed crossing Beach Walk on the south side of the intersection. In addition, a signalized midblock crosswalk is also provided across Kalakaua Avenue just east of the intersection with Beach Walk. During the weekday PM peak period, 237 pedestrians were observed crossing Kalakaua Avenue at this midblock crossing, with 250 pedestrians observed crossing at the same crossing location during the Saturday PM peak period.

#### **IV. PROJECTED TRAFFIC CONDITIONS**

##### **A. Site-Generated Traffic**

##### **1. Trip Generation Methodology**

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in “Trip Generation, 11<sup>th</sup> Edition,” 2021 and the available programming information for the project. The Kalia Cultural Entertainment Venue is expected to be able to accommodate up to 715 guests split between the 2 seating areas along with 50 employees. Operating hours are planned to be between 4:30 PM and 8:30 PM, with doors to open at 4:30 PM, dinner and music to begin at 5:30 PM, and the entertainment show to start at 6:30 PM with all programming expected to conclude at about 8:00 PM. All employees are assumed to arrive at least an hour before the doors open and as such, trips associated with employees are expected to occur outside of the weekday and Saturday PM peak hours. Guest arrivals at the Kalia Cultural Entertainment Venue are expected to be distributed over time with

the majority of them expected to occur between 4:30 PM when the doors open and 5:30 PM when dinner service begins. All guests are expected to depart within an hour of the end of the entertainment show with employee departures expected to occur shortly thereafter. For the purpose of this report, the assessment focuses on the guest arrival period since traffic demands along the adjacent roadways are higher during this period.

Based on information provided by the project’s developer, the majority of guests (90% of guests) are expected to travel to/from areas within Waikiki given the project’s location, anticipated type of programming (luau), and target marketing audience. As such, only 10% of the guests are expected to travel to/from areas external to Waikiki. In addition, due to the project’s location and proximity to nearby hotel accommodations, the availability of improved pedestrian facilities, and convenient access to nearby transit stops, all site-generated trips to/from the Waikiki area are expected to walk to/from the project site. Table 1 summarizes the project site trip generation characteristics applied to the PM peak hours of traffic by mode.

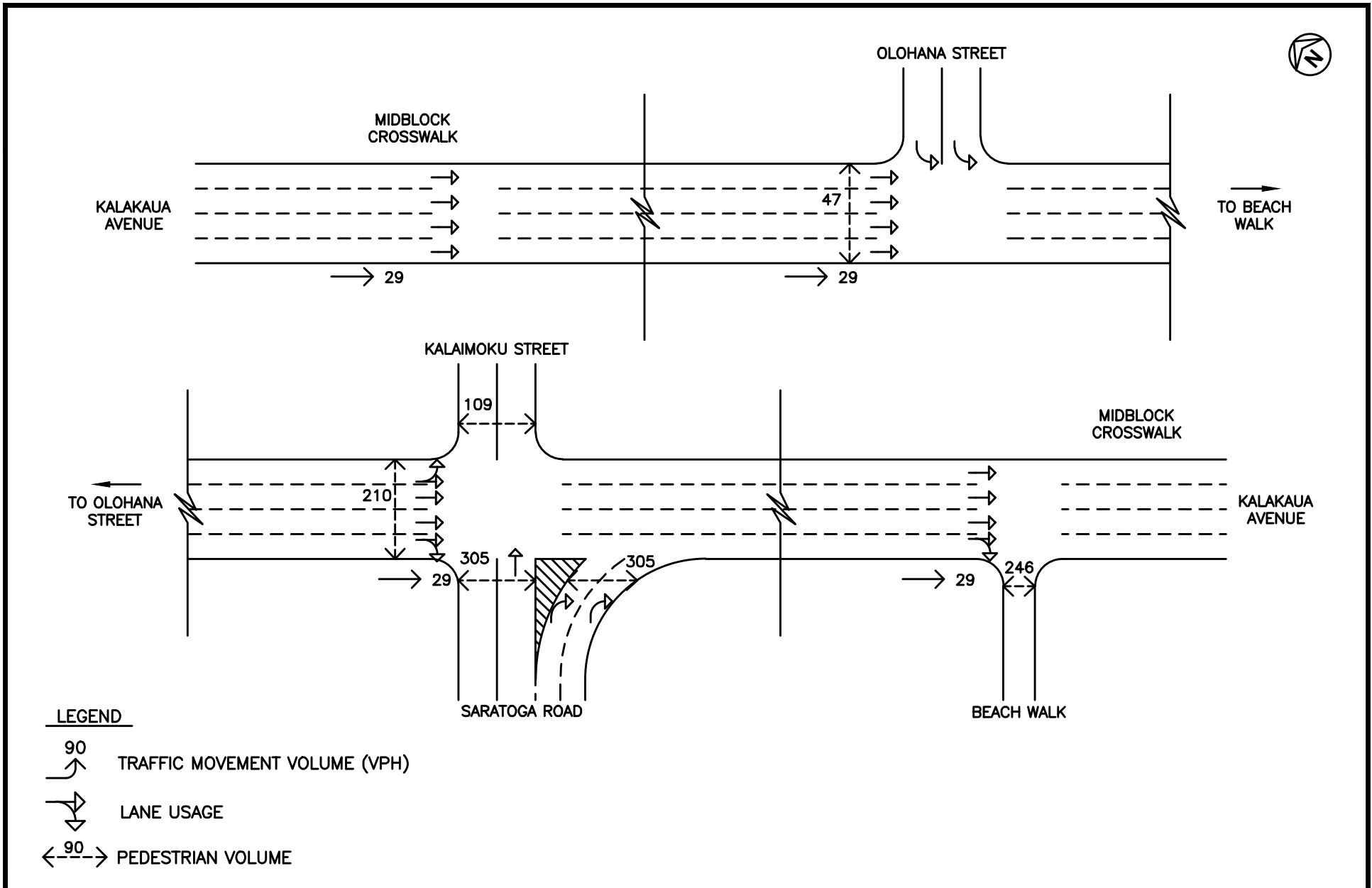
**Table 1: Peak Hour Trip Generation**

<b>KALIA CULTURAL ENTERTAINMENT VENUE</b>		
<b>VEHICULAR TRIPS</b>		
		<b>PROJECTED TRIP ENDS</b>
WEEKDAY & SATURDAY PM PEAK	ENTER	29
	EXIT	-
	<b>TOTAL</b>	<b>29</b>
<b>PEDESTRIAN TRIPS</b>		
		<b>PROJECTED TRIP ENDS</b>
WEEKDAY & SATURDAY PM PEAK	ENTER	592
	EXIT	-
	<b>TOTAL</b>	<b>592</b>

**2. Trip Distribution**

**a. General**

Figure 5 shows the distribution of site-generated trips by mode at the study intersections during the weekday and Saturday PM peak



KALIA CULTURAL ENTERTAINMENT VENUE

DISTRIBUTION OF SITE-GENERATED VEHICLE AND PEDESTRIANS WITH PROJECT

FIGURE 5



hours of traffic. As previously discussed, trips associated with the proposed Kalia Cultural Entertainment Venue are expected to be divided between vehicular and pedestrian trips. The distribution of trips by mode are detailed in the following sections.

**b. Vehicular Trip Distribution**

Parking will not be provided on-site and as such, vehicular trips in the vicinity of the project site associated with guests of the Kalia Cultural Entertainment Venue are assumed to be comprised of pick-up and drop-off within the project's porte cochere. It should be noted that any guests requiring parking are assumed to be facilitated within the public parking facilities within Waikiki with guests then walking to/from these facilities. As such, they would be included as part of the pedestrian trips associated with the proposed project. Primary access to the project site will be provided via one-way driveways off Kalakaua Avenue and all site-generated vehicular trips accessing the project site are assumed to utilize Kalakaua Avenue to travel to the project site from areas to west and depart to areas to the east since that roadway is a one-way (eastbound) roadway.

**c. Pedestrian Trip Distribution**

The theme of the entertainment associated with the proposed project is expected to be a luau. Currently, there are a few similar options within Waikiki like the show that is hosted at the Hilton Hawaiian Village, but most of the other options are located a significant distance from Waikiki. As such, the proposed project is expected to provide an attractive, convenient option for visitors in Waikiki. Given that there is already an established show at the Hilton Hawaiian Village that serves its guests and the nearby surrounding properties, all of the pedestrian trips associated with the Kalia Cultural Entertainment Venue were assumed to be traveling to/from areas within Waikiki north and east of the project site. As such, pedestrian trips were distributed between Kuhio Avenue, Kalakaua Avenue,

Beach Walk, and Saratoga Road based on the relative distribution existing pedestrian traffic along those major pedestrian routes with 25% of pedestrian trips anticipated to come from the north along Kuhio Avenue, 55% from the east along Kalakaua Avenue, and 5% and 15% expected to travel from the southeast via Saratoga Road and Beach Walk, respectively.

**B. Through Traffic Forecasting Methodology**

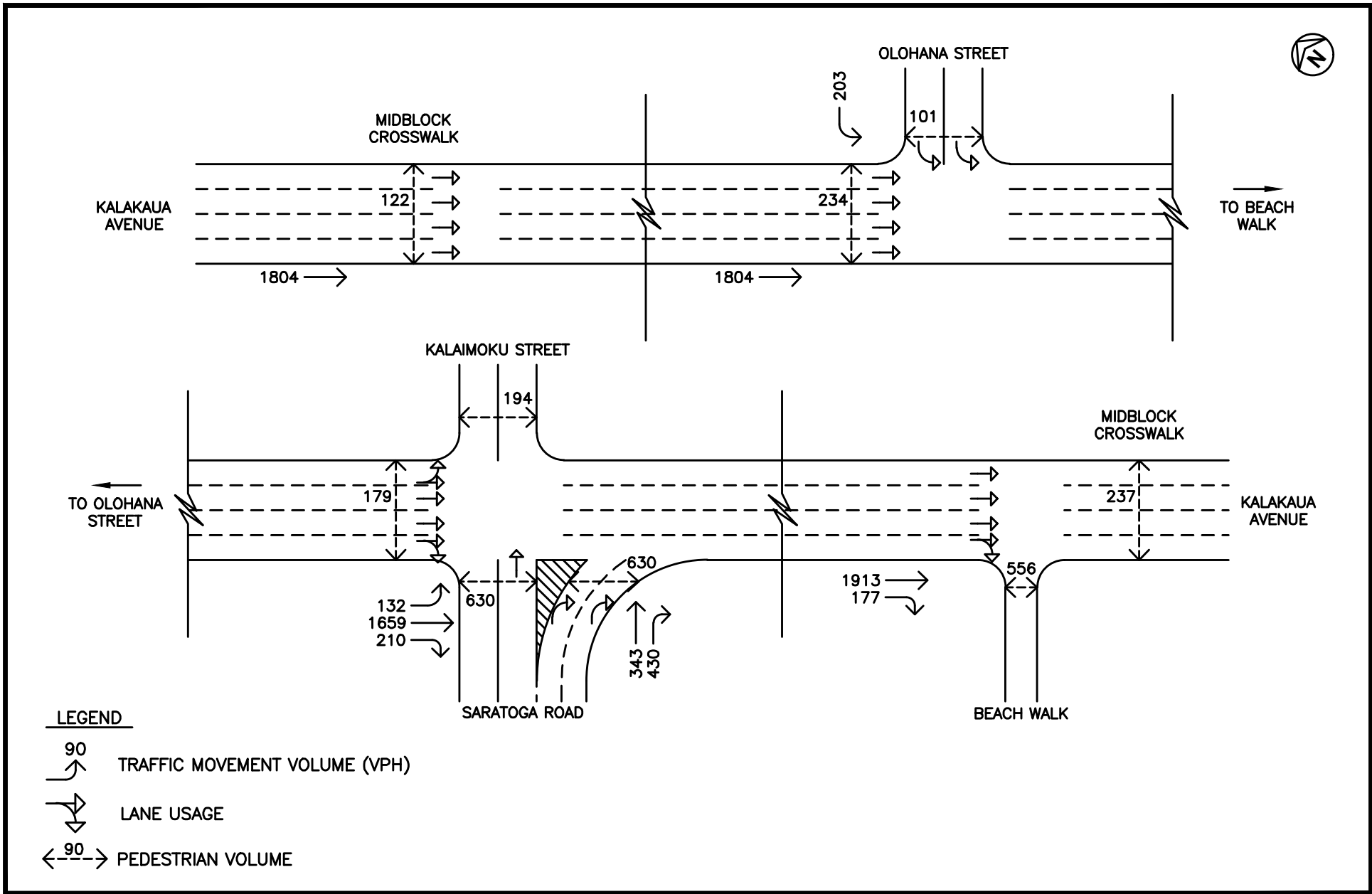
There are no State of Hawaii or City and County of Honolulu traffic count stations in the immediate vicinity of the project site with sufficient available historical data to obtain a historical trend for the growth of traffic in the vicinity. However, for the purpose of this report, an average annual growth rate of 2.0% per year was conservatively assumed along Kalakaua Avenue to account for ambient growth in traffic. As such, using 2023 as the Base Year, a growth rate of 1.02 was applied to the existing through traffic demands along Kalakaua Avenue to achieve the projected Year 2024 traffic demands.

**C. Other Considerations**

There is another planned development located in the vicinity of the Kalia Cultural Entertainment Venue. The project entails redevelopment of the existing King Kalakaua Plaza and conversion of the existing building into a Marriott Vacation resort with 110 timeshare units. Access to the proposed project is expected to be provided via driveways off Kalaimoku Street. Based on the “Traffic Impact Report for the King Kalakaua Plaza” (dated April 2020) previously prepared for the project, completion was initially expected in Year 2023 but is now anticipated to be completed by Year 2024. As such, trips associated with this project was incorporated into without project conditions.

**D. Total Traffic Volumes Without Project**

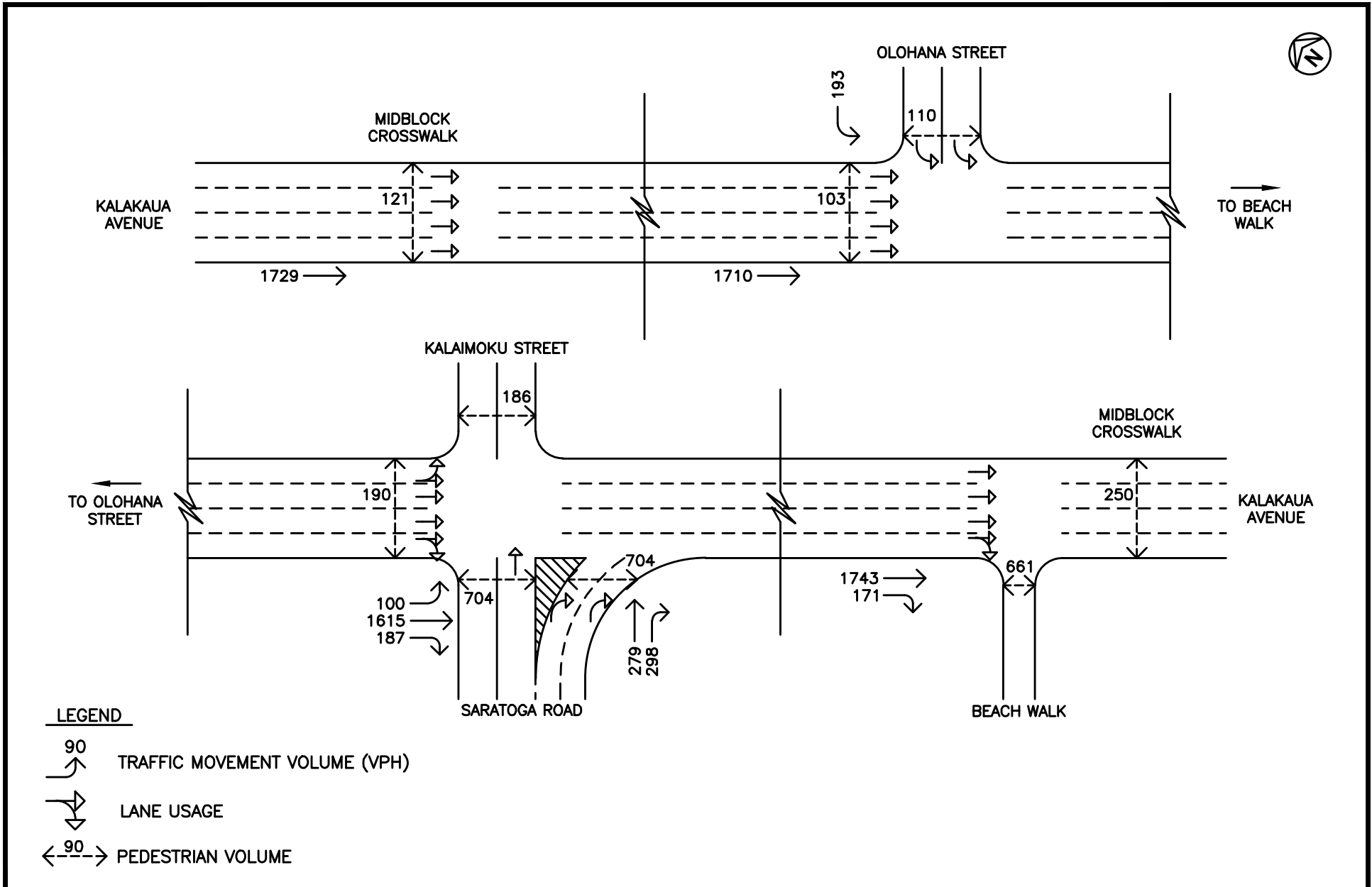
The projected Year 2024 weekday and Saturday PM peak period traffic volumes and operating conditions without the proposed Kalia Cultural Entertainment Venue are shown in Figures 6 and 7 and summarized in Table 2. The analysis incorporates other developments in the vicinity of the project including the redevelopment of the King Kalakaua Plaza and ambient growth in traffic. The



**KALIA CULTURAL ENTERTAINMENT VENUE**

**YEAR 2024 WEEKDAY PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT**

**FIGURE**  
**6**



**KALIA CULTURAL ENTERTAINMENT VENUE**

**YEAR 2024 SATURDAY PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT**

**FIGURE 7**



existing levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

**Table 2: Existing and Projected Year 2024 (Without Project) LOS Traffic Operating Conditions**

Intersection	Approach	Weekday PM		Saturday PM	
		Exist	Year 2024 w/o Proj	Exist	Year 2024 w/o Proj
Kalakaua Ave/ Olohana St	Eastbound	B	B	A	A
	Southbound	D	D	D	D
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	A	A	A	A
	Northbound	F	F	E	E

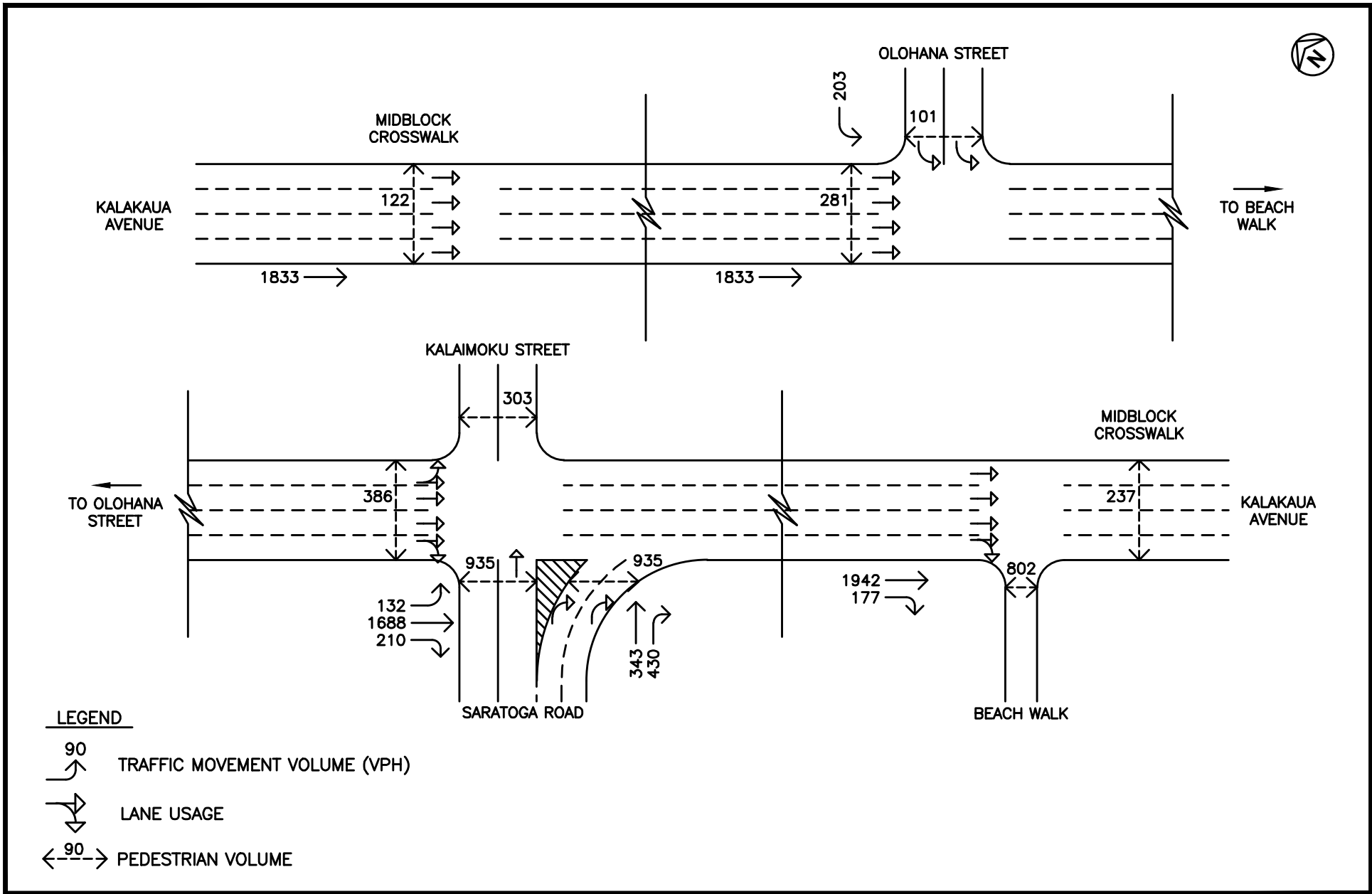
Under Year 2024 without project conditions, traffic operations in the vicinity of Kalia Cultural Entertainment Venue are expected to remain similar to existing conditions. Along Kalakaua Avenue, the approaches at the intersection with Olohana Street are expected to continue operating at LOS “D” or better during both peak periods. At Kalaimoku Street and Saratoga Road, the eastbound approach on Kalakaua Avenue is expected to continue operating at LOS “A” during both peak periods, while the northbound approach is expected to continue operating at LOS “F” and LOS “E” during the weekday and Saturday PM peak periods. The high volume of conflicting vehicular and pedestrian traffic are expected to continue influencing traffic operations at this intersection.

**E. Total Traffic Volumes With Project**

Figures 8 and 9 shows the Year 2024 cumulative weekday and Saturday PM peak hour traffic conditions resulting from the projected external traffic and the proposed Kalia Cultural Entertainment Venue. The cumulative volumes consist of site-generated traffic superimposed over the Year 2024 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

**V. TRAFFIC IMPACT ANALYSIS**

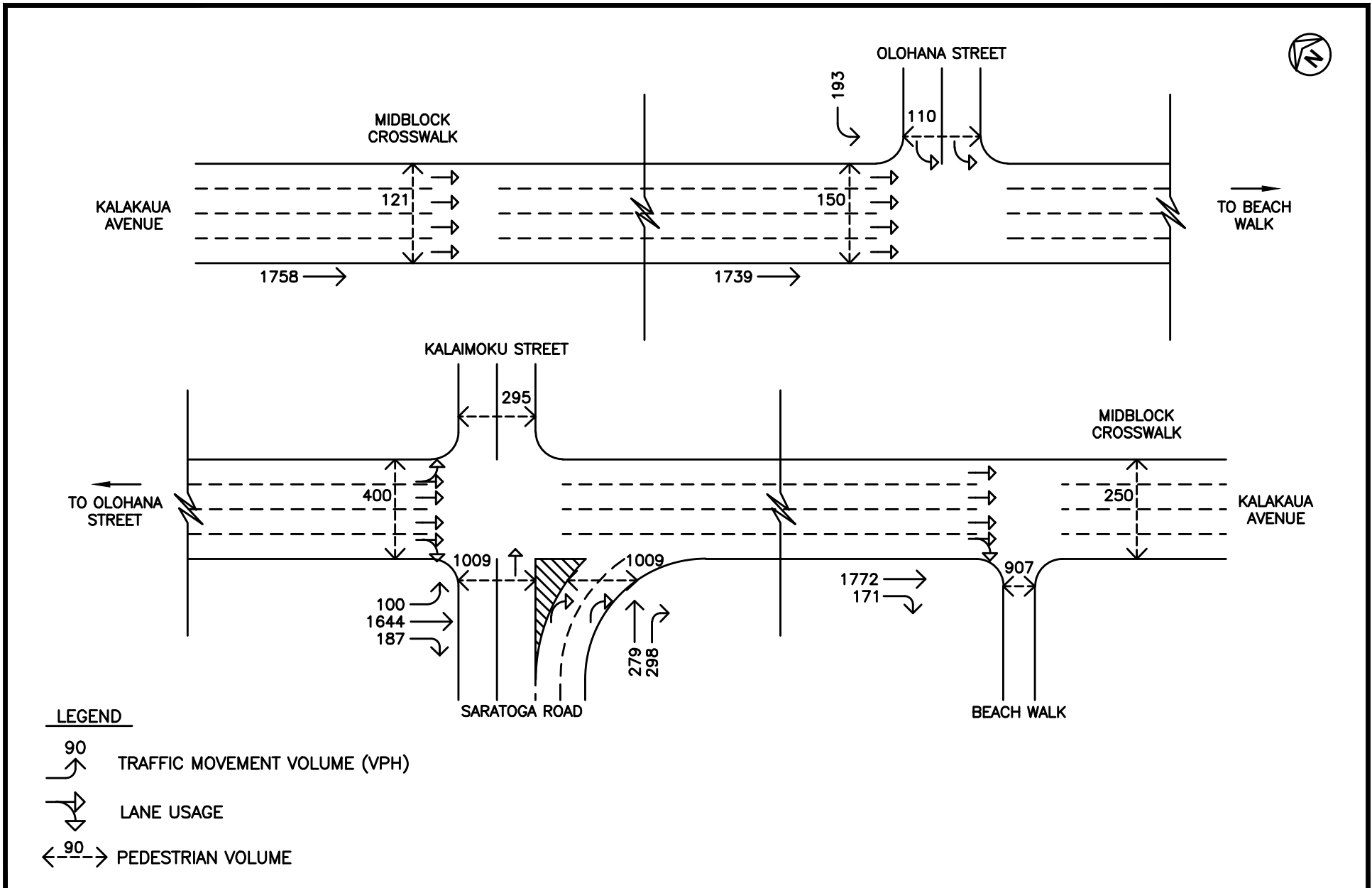
The Year 2024 cumulative weekday and Saturday PM peak hour traffic conditions with the proposed Kalia Cultural Entertainment Venue are summarized in Table 3. The



**KALIA CULTURAL ENTERTAINMENT VENUE**

**YEAR 2024 WEEKDAY PM PEAK HOUR OF TRAFFIC WITH PROJECT**

**FIGURE 8**



**KALIA CULTURAL ENTERTAINMENT VENUE**

**YEAR 2024 SATURDAY PM PEAK HOUR OF TRAFFIC WITH PROJECT**

**FIGURE**  
9

existing and projected Year 2024 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

**Table 3: Existing and Projected Year 2024 (Without and With Project)  
LOS Traffic Operating Conditions**

Intersection	Approach	Weekday PM Peak			Saturday PM Peak		
		Exist	Year 2024		Exist	Year 2024	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Ave/ Olohana St	Eastbound	B	B	B	A	A	A
	Southbound	D	D	D	D	D	D
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	A	A	A	A	A	A
	Northbound	F	F	F	E	E	E

With the proposed Kalia Cultural Entertainment Venue, traffic operations in the project vicinity are generally expected to remain similar to without project conditions. At Olohana Street, traffic operations at the intersection with Kalakaua Avenue are anticipated to continue operating at LOS “D” or better during both peak periods. At the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road, the eastbound approach is expected to continue operating at LOS “A” or better during both peak periods, whereas the northbound approach on Saratoga Road is expected to continue operating at LOS “F” and LOS “E” during the weekday and Saturday PM peak periods. Existing queues formed along Kalakaua Avenue are expected to continue influencing traffic operations in the vicinity of the project. As previously discussed, these queues are influenced by the high volume of conflicting pedestrians with queues extending through the intersection with Olohana Street. Given the high volume of pedestrian and vehicular traffic in the vicinity of the project, the preparation of a traffic management plan that includes circulation, loading, and traffic demand management strategies is recommended to further minimize the potential impact of the proposed project.

**IV. MULTIMODAL FACILITIES**

**A. Pedestrian Facilities**

**1. Methodology**

The quality of service assessment performed for pedestrian facilities in this study is based upon the procedures presented in the “Highway Capacity

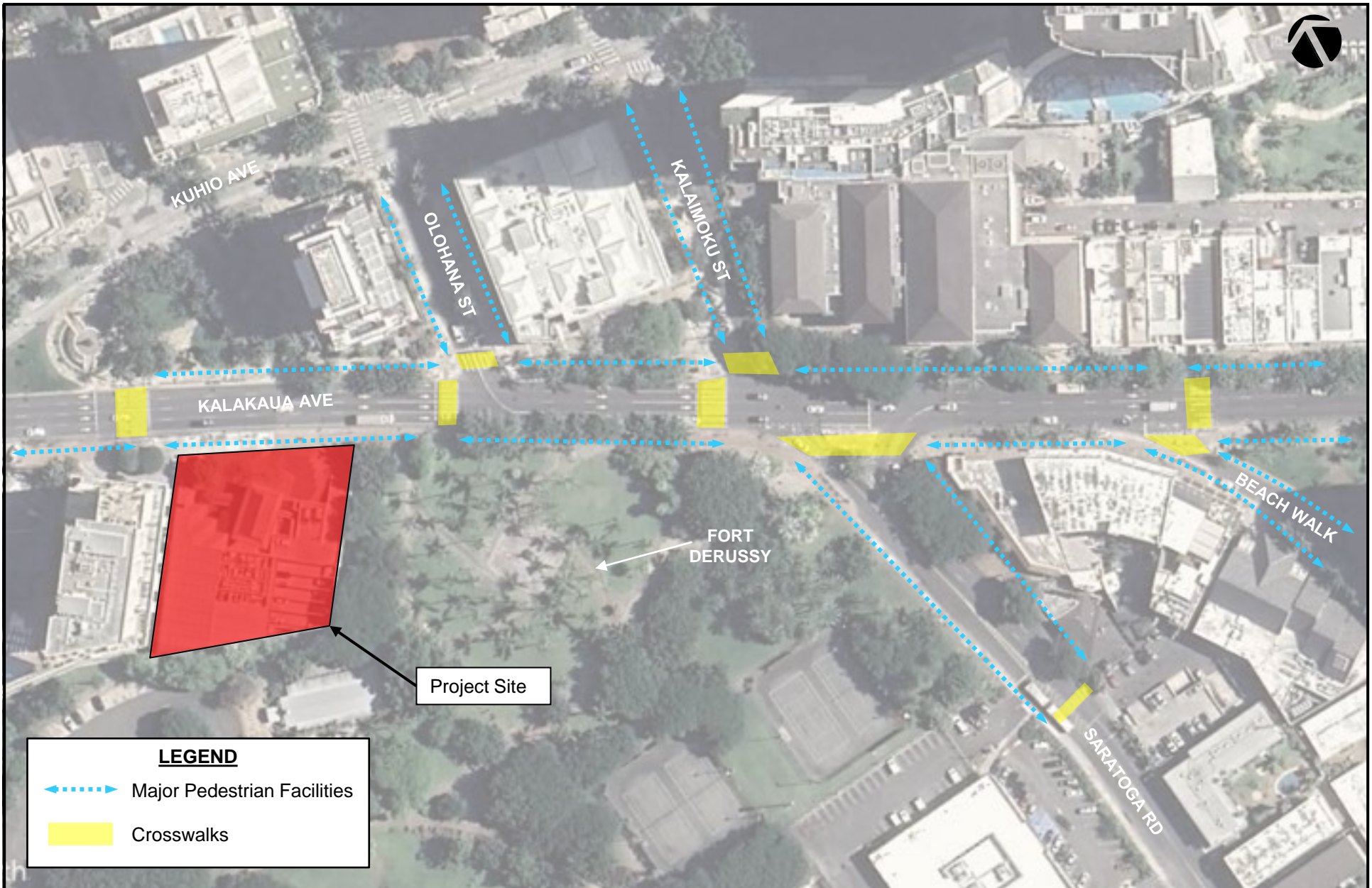


Manual”, Transportation Research Board, 2016. Similar to vehicular levels of service, the pedestrian quality of service is based on the concept of Level of Service (LOS) which incorporates factors such as speed and other basic descriptors relating to the characteristics of the intersection including walk time and cycle length at signalized intersections and crosswalk length and conflicting vehicular traffic for unsignalized intersections. The LOS ranges from LOS “A” through “F” with LOS “A” representing the best operating conditions and LOS “F” the worst operating conditions. LOS definitions for pedestrian mode are included in Appendix B.



## **2. Existing Conditions and Pedestrian LOS**

The proposed project is located in the Waikiki district where there is limited parking, a high density of attractive destinations, and high volumes of pedestrian traffic. Along Kalakaua Avenue, sidewalks are provided along both sides of the roadway with pedestrian crossings facilitated by curb ramps, marked crosswalks, and protected pedestrian signal phases at the intersections with Olohana Street and Kalaimoku Street and Saratoga Road. In addition, there are also signalized midblock crossings west of Olohana Street and east of Beach Walk. North of the project site, similar pedestrian facilities are also provided along Olohana Street, Kalaimoku Street, and Kuhio Avenue. In addition, the project site is located adjacent to Fort DeRussy Park which includes a network of pedestrian walkways that provide connections to destinations south of the project site. Pedestrian circulation in the vicinity of the project is shown in Figure 10.

Table 4 below summarizes the existing pedestrian levels of service (PLOS) for the crossings at the study intersections utilizing the “Synchro” software developed by Trafficware. It should be noted that a PLOS is not provided for the marked crossing at the intersection with Beach Walk due to the lane configuration at this location. In general, the study intersections operate at PLOS “C” or better. This indicates there’s sufficient space for normal walking speeds, though pedestrians may need to occasionally adjust



**LEGEND**

-  Major Pedestrian Facilities
-  Crosswalks

Project Site

FORT DERUSSY

**KALIA CULTURAL ENTERTAINMENT VENUE**

**PEDESTRIAN FACILITIES**

FIGURE

10



his/her path to avoid conflicts. PLOS calculations are included in Appendix F.

**Table 4: Existing Pedestrian Levels of Service**

Intersection	Approach	Existing	
		Weekday PM	Saturday PM
Kalakaua Ave/ Olohana St	Eastbound	C	C
	Southbound	B	B
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	C	C
	Northbound	B	B
	Southbound	B	B

In addition to the pedestrian LOS for the crossings at the adjacent intersections, a secondary assessment was performed for the intersection of Kalakaua with Kalaimoku Street and Saratoga Road to verify the pedestrian LOS for the corners of the intersection based on pedestrian spacing. Due to the high volume of anticipated pedestrian traffic at that intersection, consideration was given to whether adequate queuing space for pedestrians waiting to cross was provided. Under existing conditions, the corner circulation areas at the intersection are rated at LOS “C” or better.

**3. With Project Conditions**

The proposed project is expected to enhance/maintain the existing pedestrian facilities in the vicinity of the project. It should be noted that a pedestrian connection is being considered to the adjacent Luana Waikiki Hotel and Suites to provide additional off-street connections to the project site.

Under with project conditions, pedestrian levels of service (PLOS) for the crossings at the study intersections are generally expected to remain similar to existing conditions during both peak periods. LOS calculations are summarized in Table 5 below and included in Appendix G.

**Table 5: Projected Pedestrian Levels of Service**

Intersection	Approach/	With Project	
		Weekday PM	Weekend PM
Kalakaua Ave/ Olohana St	Eastbound	C	C
	Southbound	B	B
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	C	C
	Northbound	B	B
	Southbound	B	B

However, the pedestrian level of service based on pedestrian spacing are expected to deteriorate for the southwest corner of the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road. That corner is expected to deteriorate from an LOS “C” to an LOS “E” as the average pedestrian spacing available is reduced with the addition of site-generated pedestrian trips at this corner location. Given the anticipated increase in the number of pedestrians waiting to cross at the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road, the implementation of turning restrictions on red for the Kalakaua Avenue approach of the intersection should be considered. The turning restriction on red from this approach would minimize potential conflict with right-turning vehicles to Saratoga Road and left-turning vehicles to Kalaimoku Street and facilitate pedestrian traffic flow during the designated pedestrian crossing phase. It should be noted that there is already a right-turn on red restriction from the Saratoga Road approach of the intersection. An assessment of traffic operations with the implementation of a no right-turn on red on the eastbound approach indicates that the levels of service are expected to remain similar to existing conditions (see Table 6 below). LOS calculations are included in Appendix E.

**Table 6: Projected Year 2024 (With Project and With Project with Turning Restrictions) LOS Traffic Operating Conditions**

Intersection	Approach	Weekday PM		Saturday PM	
		w/ Proj	w/ Proj*	w/ Proj	w/ Proj*
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	A	A	A	A
	Northbound	F	F	E	E

*\*With no right-turn on red from Kalakaua Avenue to Saratoga Road and no left-turn on red from Kalakaua Avenue to Kalaimoku Street*

In addition to the implementation of turning restrictions on red on the Kalakaua Avenue approach at the intersection with Kalaimoku Street and Saratoga Road, the preparation of a Traffic Management Plan is also recommended to identify management strategies to further minimize the potential impact of the proposed project to the surrounding roadways. These strategies could include provision of information to guests in advance of the events to inform them of the multiple access routes to the project site in order to distribute pedestrian traffic demands along the adjacent facilities, the use of staggered arrival times for guests based on ticket type, or the use of special duty officers (SDOs) to help facilitate pedestrian crossings at the intersection of Kalakaua Avenue and Kalaimoku Street and Saratoga Road.

**B. Bicycle Facilities**

**1. Methodology**

Bicycle Level of Traffic Stress (LTS) is a metric developed by the Mineta Transportation Institute used to classify a roadway segment or intersection. The LTS ranking system is based on the amount of traffic stress imposed on cyclists based on variables such as street width, the presence of bike lanes and parking lanes, prevailing vehicle speed, and average daily traffic volumes. The Level of Traffic Stress ranges from 1 to 4 and can be assessed for a given segment or intersection via six tables provided by the Mineta Transportation Institute. The general descriptions of the LTS levels are as follows:

- LTS 1: Characterized by strong separation from all except low speed, low volume traffic. Simple crossings. Suitable for children.
- LTS 2: Except in low speed/low volume traffic situations, cyclists have their own place to ride that keeps them from having to interact with traffic except at formal crossings. There is a physical separation from higher speed and multilane traffic. Crossings are easy for an adult to navigate. This refers to a level of traffic stress that most adults can tolerate, particularly those sometimes classified as interested but concerned.
- LTS 3: Involves interaction with moderate speed or multilane traffic, or close proximity to higher speed traffic. Refers to a level of traffic stress acceptable to those classified as enthused and confident.
- LTS 4: Involves interaction with higher speed traffic or close proximity to high-speed traffic. Refers to a level of stress acceptable only to those classified as strong and fearless.

It should be noted that current LTS methodology assumes no traffic stress is imposed on cyclists at signalized intersections. Guidance provided by the Mineta Transportation Institute includes categorizing signalized intersections as a LTS 2.

## **2. Existing Conditions and Bicycle Level of Traffic Stress**

In the vicinity of the project, there are designated bike lanes provided along Kalakaua Avenue and Ala Wai Boulevard serving east-west travel within Waikiki (see Figure 11). The bike lane along Kalakaua Avenue serves eastbound bicyclists and extends between Ala Moana Boulevard and Dukes Lane, where it transitions to a shared roadway lane until Kaiulani Avenue, then reverts back to a designated bike lane until its terminus at Kapahulu Avenue. Conversely, the dedicated bike lane along Ala Wai Boulevard serves westbound bicyclists and extends between Keoniana Street and Kapahulu Avenue. Dedicated bicycle facilities serving north-south travel are currently limited. In addition to on-street bicycle facilities, the project is located in close proximity to BIKI bike share stations (see Figure 12). The nearest bike share station is located north of the project site along Kalakaua Avenue within Waikiki Gateway Park. There is also another station east of the project site at the southwest corner of the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road.



**LEGEND**

— LTS 3

Project Site



**KALIA CULTURAL ENTERTAINMENT VENUE**

**BICYCLE LEVEL OF TRAFFIC STRESS**

FIGURE  
11



**LEGEND**

- Existing Bike Lane
- - - Proposed Bike Lane
- - - Proposed Shared Roadway
- - - Proposed Protected Bike Lane
- Bike Share Station

[Red Shaded Area] Project Site



**KALIA CULTURAL ENTERTAINMENT VENUE**

**BICYCLE FACILITIES**

FIGURE  
12



The roadways in the vicinity of the project site were assessed based on the Bicycle Level of Traffic Stress (LTS). Although dedicated bike lanes are provided along Kalakaua Avenue and Ala Wai Boulevard, these roadways are rated LTS 3 due to the multilane configuration of these roadways. Kalaimoku Street and Olohana Street are also rated at LTS 3 since bicyclists along these roadways must share the travel way with vehicular traffic and as such, would be more suitable for more experienced bicyclists.

### **3. Projected Conditions**

The City and County of Honolulu has plans to enhance the existing bicycle facilities in the vicinity of the project. These improvements are included in the “Oahu Bike Plan” (Updated 2019), published by the City and County of Honolulu Department of Transportation Services and include the following:

- Protected bike lanes on Kalakaua Avenue from Kapiolani Boulevard to Kapahulu Avenue.
- Bike lanes on Ala Moana Boulevard from Fort Street Mall to Kalakaua Avenue
- Bike lanes Pau Street from Kalakaua Avenue to Ala Wai Boulevard.
- Bike lanes on Saratoga Road from Kalia Road to Kalakaua Avenue.
- Protected bike lanes on Kalaimoku Street from Kalakaua Avenue to Ala Wai Boulevard.

These improvements are depicted in Figure 12. The incorporation of these bicycle facilities are expected to increase access to dedicated bicycle facilities and reduce the level of traffic stress for bicyclists along the roadways in the project area. However, the timeline for these improvements are not known at this time.

## **C. Transit Facilities**

### **1. Methodology**

Transit Capacity and Quality of Service is a metric used to measure transit availability, comfort, and convenience from both the passenger and transit service provider’s points of view. The framework for this metric is outlined in the Transit Cooperative Research Program (TCRP) Report 165: Transit Capacity and Quality of Service Manual (TCQSM), 3rd Edition

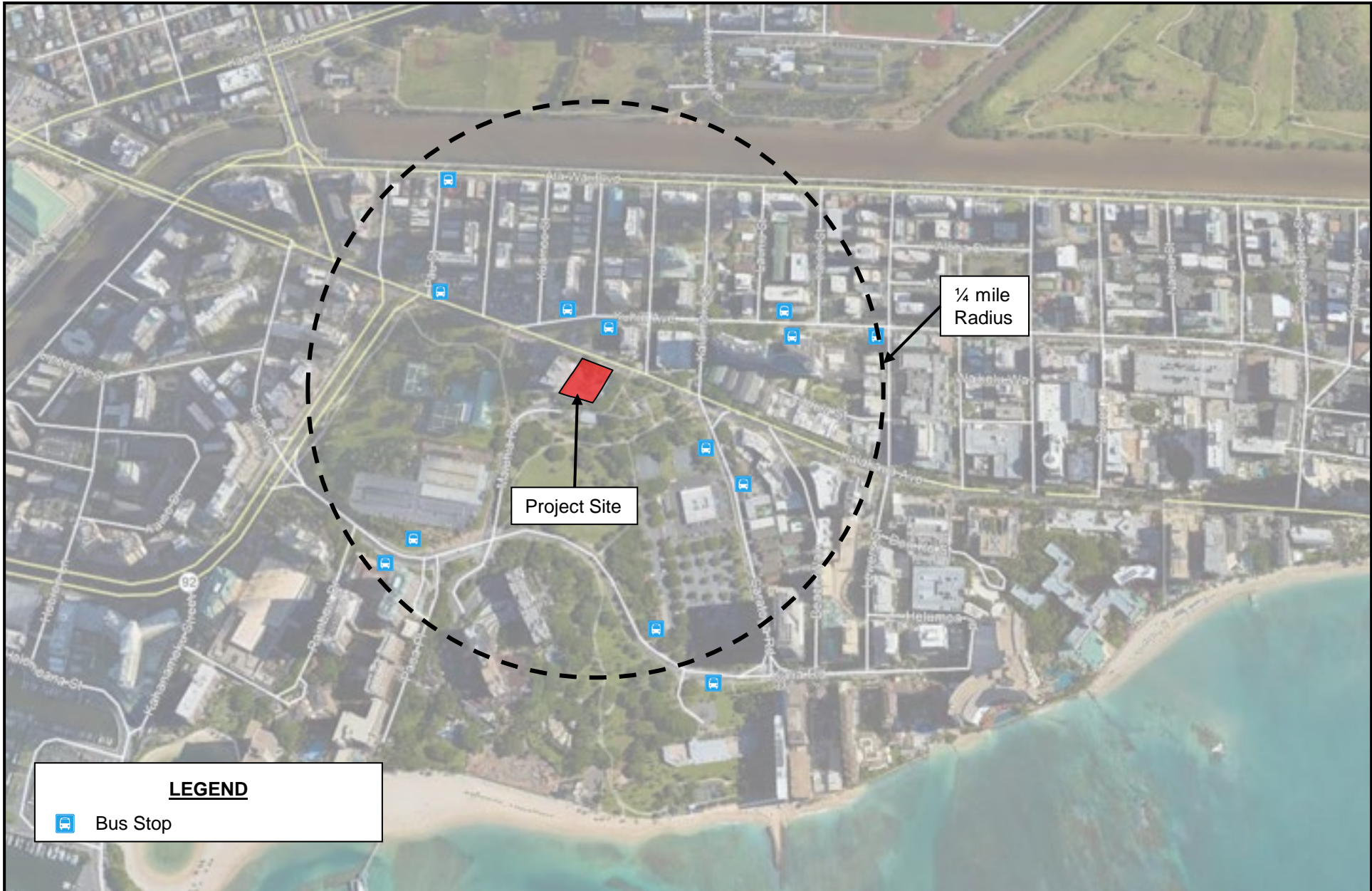
published in 2013 which provides research-based guidance on public transit capacity and quality of service. The quality of service concepts and methods contained in the TCQSM address real-world transit operations, comprehensive planning, and design needs. The research for and development of the TCQSM has also directly supported the development of the Multimodal Level of Service (LOS) analysis methodologies introduced in the Highway Capacity Manual (HCM) 2010 and subsequently refined in HCM 6. Multimodal LOS analyzes a roadway corridor comprised of street segments which are defined as a length of street between intersections where traffic may have to stop due to traffic control. Transit LOS can be directly compared to other transportation modes with LOS “A” representing the best quality of service and the letter “F” used to represent the worst quality of service. The assessment evaluates the quality of transit operations incorporating factors that bear all aspect of a transit trip including the pedestrian environment along the street, service frequency and reliability, and the availability of transit amenities at those stop locations.

## **2. Existing Conditions and Transit LOS**

There are existing transit resources located within the vicinity of Kalia Cultural Entertainment Venue. It should be noted that these facilities are generally located north and east of the project site along Kuhio Avenue and Saratoga Road. The majority of these facilities are provided by “The Bus” which is operated by Oahu Transit Service (OTS) for the City and County of Honolulu Department of Transportation Services. Within a quarter mile-radius of the project site, there are several bus stop locations serving a total of 12 unique routes. These routes are summarized in Table 7 below and are depicted in Figure 13.

**Table 7: Transit Routes in the Vicinity of the Project**

<b>Route Number</b>	<b>Description</b>
2	Local route that services Downtown, Ala Moana and Waikiki
2L	Local route that services Downtown, Ala Moana and Waikiki



**KALIA CULTURAL ENTERTAINMENT VENUE**

**TRANSIT FACILITIES**

FIGURE

13

**Table 7: Transit Routes in the Vicinity of the Project (Cont'd)**

<b>Route Number</b>	<b>Description</b>
4	Local route that services Downtown, Ala Moana and Waikiki
8	Regional route between Aiea and Waikiki
13	Local route that services Downtown, Ala Moana and Waikiki
20	Regional route between Aiea and Waikiki
23	Regional route between Ala Moana and Sea Life Park
42	Regional route between Ewa Beach and Waikiki
E	Express route between Ewa Beach and Waikiki
W1	Regional route between Ewa Beach and Waikiki
W2	Regional route between Waipahu and Waikiki
W3	Local route that services Ala Moana and Waikiki

Based on the Transit Capacity and Quality of Service Manual (TCQSM), a quarter mile represents the maximum distance that people will walk to a transit stop which is equivalent to approximately 5 minutes of walking time. To verify the existing quality of service for the transit facilities in the project vicinity, an assessment of these facilities was conducted based on the methodology outlined by the TCQSM. Transit service on Kuhio Avenue is rated at LOS “B” while transit service along Saratoga Road and Kalia Road are rated at a LOS “A” since these roadways are served by a number of local, regional, and express routes with headways of 30 minutes or less. Transit LOS calculations are included in Appendix H. It should be noted that the City and County of Honolulu has plans to include bus-priority lanes along Kuhio Avenue from Olohana Street to Kapahulu Avenue. At this time, the planned bus-priority lanes are expected to be installed in late 2023. The existing transit routes serving this roadway are expected to be maintained with the implementation of this improvement.

In addition to transit, there are also a number of transportation options by private companies that provide access to/from and within the Waikiki area and are accessible from the project site. There are a number of trolley routes

that run along Kalakaua Avenue, with the nearest trolley stop located along Olohana Street northeast of the project site.

## **VI. RECOMMENDATIONS**

Based on the analysis of the traffic data, the following are recommendations of this study to be incorporated in the project design.

1. Provide sufficient sight distance for motorists to safely enter and exit all project driveways to ensure pedestrians, bicyclists, and motorists are aware of the presence of each other at these conflict points.
2. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto adjacent roadways.
4. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
5. Coordinate with the City and County of Honolulu Department of Transportation Services the feasibility of prohibiting right-turn on red movements from Kalakaua Avenue to Saratoga Road and left-turn on red movements to Kalaimoku Street to facilitate pedestrian crossings at this location and minimize potential conflict with turning vehicles.
6. Prepare additional assessments to determine if the proposed frontage design provides adequate queueing areas and sidewalk widths to accommodate the anticipated volume of pedestrian traffic along Kalakaua Avenue. These assessments should be prepared during the design phase when the layout of the project porte cochere and frontage are determined. All pedestrian facilities should be made accessible in conformance with the American with Disabilities Act (ADA). Coordinate such designs with the appropriate design review agencies.
7. Provide adequate passing areas along the porte cochere to accommodate all anticipated vehicle types (i.e. buses, vans, etc.) to ensure through traffic flow and minimize potential queueing onto the adjacent roadway.
8. Prepare an update to the Traffic Impact Analysis Report (TIAR) should there be significant changes to the anticipated event programming used as the basis of this report. In addition, it should be noted that valet operations are not expected to be implemented with the project at this time. However, the TIAR should be updated should valet operations be undertaken in the future.

9. Prepare a Transportation Management Plan (TMP) that includes traffic circulation, parking, loading, and traffic demand management strategies to minimize the project's potential impact to the surrounding roadways given the project's location within an area with high pedestrian and vehicular traffic. Some of these strategies could include:
  - Preparation of informational brochures or packets provided to guests in advance of the event that include information with regards to the multiple access routes available to/from the project site
  - Use of staggered arrival times based on ticket type to distribute pedestrian demand and reduce peaking
  - Use of SDOs at the intersection of Kalakaua Avenue and Kalaimoku Street/Saratoga Road to facilitate traffic flow and assist with pedestrian crossings
  - Use of on-site personnel to monitor operations within the project's project cohere, enforce vehicle size restrictions within the porte cohere, if appropriate, and ensure queues do not extend onto the adjacent roadway
10. Coordinate with the City and County of Honolulu Department of Transportation Services regarding their plans for additional bike facilities along the roadways in the project vicinity.
11. Prepare a Construction Management Plan (CMP) to minimize the impact of construction traffic and activities on the surrounding roadway network.
12. Prepare a supplemental traffic study 6 months to 1 year after project completion and occupancy to verify projected conditions.

## **VII. CONCLUSION**

The proposed project entails the replacement of the existing 2-story building that formerly housed the Kyo-ya restaurant and its associated parking structure with an open-air entertainment venue with a large lawn for guest seating and a two story multi-purpose building that will include an enclosed seating area. Access to the project site are planned to be provided via new one-way driveways off Kalakaua Avenue to serve the project's porte cohere. No parking is expected to be provided on-site, with the majority of guests expected to utilize alternative modes of transportation to access the site. The proposed project is expected to be completed by Year 2024. With the implementation of the Kalia Cultural Entertainment Venue, traffic operations via vehicular mode are generally expected to remain similar to existing and without project conditions since a majority of the trips associated with the project are expected to be made via alternative modes. The pedestrian levels of service at the study intersections are also generally expected to remain similar to existing and without

project conditions due to the fixed traffic signal timing at the intersections along Kalakaua Avenue. However, the levels of service based on pedestrian space at the corner areas of the intersections may deteriorate with the anticipated pedestrian volumes under with project conditions. As such, it is recommended that the project coordinate with the City and County of Honolulu to explore the feasibility of implementing turning restrictions at the intersection of Kalakaua Avenue with Kalaimoku Street and Saratoga Road to facilitate pedestrian crossings and minimize potential conflicts with turning vehicles. In addition, the preparation of a Transportation Management Plan that addresses circulation, loading, and traffic demand management strategies is recommended to further minimize the potential impact of the proposed project to the surrounding roadways.

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**APPENDIX A**  
**EXISTING TRAFFIC COUNT DATA**

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# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: MAL  
Counters: TU-0653  
Weather: Clear

File Name : KALMID PM  
Site Code : 00000001  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Start Time	Driveway Northbound			Kalakaua Avenue Eastbound			Int. Total
	Right	Peds	App. Total	Thru	Peds	App. Total	
04:00 PM	0	74	74	426	42	468	542
04:15 PM	0	84	84	382	22	404	488
04:30 PM	1	97	98	420	31	451	549
04:45 PM	3	96	99	403	27	430	529
<b>Total</b>	<b>4</b>	<b>351</b>	<b>355</b>	<b>1631</b>	<b>122</b>	<b>1753</b>	<b>2108</b>
05:00 PM	2	57	59	383	25	408	467
05:15 PM	4	99	103	392	42	434	537
05:30 PM	1	109	110	369	27	396	506
05:45 PM	0	74	74	420	33	453	527
<b>Total</b>	<b>7</b>	<b>339</b>	<b>346</b>	<b>1564</b>	<b>127</b>	<b>1691</b>	<b>2037</b>
06:00 PM	3	88	91	394	27	421	512
06:15 PM	1	106	107	383	36	419	526
06:30 PM	1	102	103	331	30	361	464
06:45 PM	2	104	106	307	30	337	443
<b>Total</b>	<b>7</b>	<b>400</b>	<b>407</b>	<b>1415</b>	<b>123</b>	<b>1538</b>	<b>1945</b>
<b>Grand Total</b>	<b>18</b>	<b>1090</b>	<b>1108</b>	<b>4610</b>	<b>372</b>	<b>4982</b>	<b>6090</b>
Apprch %	1.6	98.4		92.5	7.5		
Total %	0.3	17.9	18.2	75.7	6.1	81.8	

Start Time	Driveway Northbound		Kalakaua Avenue Eastbound		Int. Total
	Right	App. Total	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 04:00 PM					
04:00 PM	0	0	426	426	426
04:15 PM	0	0	382	382	382
04:30 PM	1	1	420	420	421
04:45 PM	3	3	403	403	406
<b>Total Volume</b>	<b>4</b>	<b>4</b>	<b>1631</b>	<b>1631</b>	<b>1635</b>
<b>% App. Total</b>	<b>100</b>		<b>100</b>		
<b>PHF</b>	<b>.333</b>	<b>.333</b>	<b>.957</b>	<b>.957</b>	<b>.960</b>

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400

Honolulu HI, 96826

Counted By: MAL  
 Counters: TU-0653  
 Weather: Clear

File Name : KALMID PM - BIKES  
 Site Code : 00000001  
 Start Date : 3/10/2023  
 Page No : 1

Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	7	7	7
04:15 PM	8	8	8
04:30 PM	14	14	14
04:45 PM	13	13	13
Total	42	42	42
05:00 PM	8	8	8
05:15 PM	4	4	4
05:30 PM	8	8	8
05:45 PM	12	12	12
Total	32	32	32
06:00 PM	6	6	6
06:15 PM	10	10	10
06:30 PM	2	2	2
06:45 PM	3	3	3
Total	21	21	21
Grand Total	95	95	95
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:15 PM			
04:15 PM	8	8	8
04:30 PM	14	14	14
04:45 PM	13	13	13
05:00 PM	8	8	8
Total Volume	43	43	43
% App. Total	100		
PHF	.768	.768	.768

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: MD  
Counters: TU-0651  
Weather: Clear

File Name : KALMID PM SAT  
Site Code : 00000001  
Start Date : 3/11/2023  
Page No : 1

Groups Printed- Unshifted

Start Time	Driveway Northbound		Kalakaua Avenue Eastbound			Int. Total
	Right	App. Total	Thru	Peds	App. Total	
04:00 PM	3	3	406	36	442	445
04:15 PM	4	4	439	29	468	472
04:30 PM	7	7	434	39	473	480
04:45 PM	2	2	401	17	418	420
<b>Total</b>	<b>16</b>	<b>16</b>	<b>1680</b>	<b>121</b>	<b>1801</b>	<b>1817</b>
05:00 PM	1	1	384	42	426	427
05:15 PM	0	0	395	36	431	431
05:30 PM	6	6	420	23	443	449
05:45 PM	3	3	389	43	432	435
<b>Total</b>	<b>10</b>	<b>10</b>	<b>1588</b>	<b>144</b>	<b>1732</b>	<b>1742</b>
06:00 PM	3	3	405	42	447	450
06:15 PM	3	3	396	54	450	453
06:30 PM	0	0	433	24	457	457
06:45 PM	2	2	389	36	425	427
<b>Total</b>	<b>8</b>	<b>8</b>	<b>1623</b>	<b>156</b>	<b>1779</b>	<b>1787</b>
<b>Grand Total</b>	<b>34</b>	<b>34</b>	<b>4891</b>	<b>421</b>	<b>5312</b>	<b>5346</b>
Apprch %	100		92.1	7.9		
Total %	0.6	0.6	91.5	7.9	99.4	

Start Time	Driveway Northbound		Kalakaua Avenue Eastbound			Int. Total
	Right	App. Total	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1						
Peak Hour for Entire Intersection Begins at 04:00 PM						
04:00 PM	3	3	406		406	409
04:15 PM	4	4	439		439	443
04:30 PM	7	7	434		434	441
04:45 PM	2	2	401		401	403
<b>Total Volume</b>	<b>16</b>	<b>16</b>	<b>1680</b>		<b>1680</b>	<b>1696</b>
% App. Total	100		100			
PHF	.571	.571	.957		.957	.957

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: MD  
Counters: TU-0651  
Weather: Clear

File Name : KALMID PM SAT - BIKES  
Site Code : 00000001  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	10	10	10
04:15 PM	11	11	11
04:30 PM	16	16	16
04:45 PM	16	16	16
Total	53	53	53
05:00 PM	10	10	10
05:15 PM	9	9	9
05:30 PM	6	6	6
05:45 PM	7	7	7
Total	32	32	32
06:00 PM	13	13	13
06:15 PM	8	8	8
06:30 PM	10	10	10
06:45 PM	7	7	7
Total	38	38	38
Grand Total	123	123	123
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	10	10	10
04:15 PM	11	11	11
04:30 PM	16	16	16
04:45 PM	16	16	16
Total Volume	53	53	53
% App. Total	100		
PHF	.828	.828	.828

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: RM  
Counters: TU-0650  
Weather: Clear

File Name : KALOLO PM  
Site Code : 00000002  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Start Time	Olohana Street Southbound			Kalakaua Avenue Eastbound			Int. Total
	Left	Peds	App. Total	Thru	Peds	App. Total	
04:00 PM	43	34	77	483	37	520	597
04:15 PM	56	11	67	454	20	474	541
04:30 PM	52	33	85	399	16	415	500
04:45 PM	42	23	65	413	161	574	639
<b>Total</b>	<b>193</b>	<b>101</b>	<b>294</b>	<b>1749</b>	<b>234</b>	<b>1983</b>	<b>2277</b>
05:00 PM	43	10	53	406	45	451	504
05:15 PM	44	26	70	408	51	459	529
05:30 PM	47	12	59	424	14	438	497
05:45 PM	48	19	67	402	36	438	505
<b>Total</b>	<b>182</b>	<b>67</b>	<b>249</b>	<b>1640</b>	<b>146</b>	<b>1786</b>	<b>2035</b>
06:00 PM	41	29	70	471	23	494	564
06:15 PM	54	24	78	452	42	494	572
06:30 PM	42	28	70	362	31	393	463
06:45 PM	49	18	67	352	14	366	433
<b>Total</b>	<b>186</b>	<b>99</b>	<b>285</b>	<b>1637</b>	<b>110</b>	<b>1747</b>	<b>2032</b>
<b>Grand Total</b>	<b>561</b>	<b>267</b>	<b>828</b>	<b>5026</b>	<b>490</b>	<b>5516</b>	<b>6344</b>
Apprch %	67.8	32.2		91.1	8.9		
Total %	8.8	4.2	13.1	79.2	7.7	86.9	

Start Time	Olohana Street Southbound		Kalakaua Avenue Eastbound		Int. Total
	Left	App. Total	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 04:00 PM					
04:00 PM	43	43	483	483	526
04:15 PM	56	56	454	454	510
04:30 PM	52	52	399	399	451
04:45 PM	42	42	413	413	455
<b>Total Volume</b>	<b>193</b>	<b>193</b>	<b>1749</b>	<b>1749</b>	<b>1942</b>
<b>% App. Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>PHF</b>	<b>.862</b>	<b>.862</b>	<b>.905</b>	<b>.905</b>	<b>.923</b>

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: RM  
Counters: TU-0650  
Weather: Clear

File Name : KALOLO PM - BIKES  
Site Code : 00000002  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	13	13	13
04:15 PM	11	11	11
04:30 PM	11	11	11
04:45 PM	16	16	16
Total	51	51	51
05:00 PM	6	6	6
05:15 PM	9	9	9
05:30 PM	12	12	12
05:45 PM	8	8	8
Total	35	35	35
06:00 PM	9	9	9
06:15 PM	10	10	10
06:30 PM	4	4	4
06:45 PM	4	4	4
Total	27	27	27
Grand Total	113	113	113
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	13	13	13
04:15 PM	11	11	11
04:30 PM	11	11	11
04:45 PM	16	16	16
Total Volume	51	51	51
% App. Total	100		
PHF	.797	.797	.797

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: MAL  
Counters: TU-0650  
Weather: Clear

File Name : KALOLO PM SAT  
Site Code : 00000002  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Start Time	Olohana Street Southbound			Kalakaua Avenue Eastbound			Int. Total
	Left	Peds	App. Total	Thru	Peds	App. Total	
04:00 PM	48	25	73	402	33	435	508
04:15 PM	60	21	81	425	26	451	532
04:30 PM	40	41	81	431	19	450	531
04:45 PM	42	23	65	404	25	429	494
<b>Total</b>	<b>190</b>	<b>110</b>	<b>300</b>	<b>1662</b>	<b>103</b>	<b>1765</b>	<b>2065</b>
05:00 PM	44	30	74	396	26	422	496
05:15 PM	51	22	73	375	38	413	486
05:30 PM	53	27	80	438	16	454	534
05:45 PM	32	33	65	391	38	429	494
<b>Total</b>	<b>180</b>	<b>112</b>	<b>292</b>	<b>1600</b>	<b>118</b>	<b>1718</b>	<b>2010</b>
06:00 PM	45	42	87	405	54	459	546
06:15 PM	51	37	88	397	48	445	533
06:30 PM	53	39	92	420	39	459	551
06:45 PM	37	50	87	369	27	396	483
<b>Total</b>	<b>186</b>	<b>168</b>	<b>354</b>	<b>1591</b>	<b>168</b>	<b>1759</b>	<b>2113</b>
<b>Grand Total</b>	<b>556</b>	<b>390</b>	<b>946</b>	<b>4853</b>	<b>389</b>	<b>5242</b>	<b>6188</b>
Apprch %	58.8	41.2		92.6	7.4		
Total %	9	6.3	15.3	78.4	6.3	84.7	

Start Time	Olohana Street Southbound		Kalakaua Avenue Eastbound		Int. Total
	Left	App. Total	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 04:00 PM					
04:00 PM	48	48	402	402	450
04:15 PM	60	60	425	425	485
04:30 PM	40	40	431	431	471
04:45 PM	42	42	404	404	446
Total Volume	190	190	1662	1662	1852
% App. Total	100		100		
PHF	.792	.792	.964	.964	.955

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: MAL  
Counters: TU-0650  
Weather: Clear

File Name : KALOLO PM SAT - BIKES  
Site Code : 00000002  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	9	9	9
04:15 PM	13	13	13
04:30 PM	14	14	14
04:45 PM	14	14	14
Total	50	50	50
05:00 PM	5	5	5
05:15 PM	7	7	7
05:30 PM	6	6	6
05:45 PM	4	4	4
Total	22	22	22
06:00 PM	10	10	10
06:15 PM	6	6	6
06:30 PM	6	6	6
06:45 PM	5	5	5
Total	27	27	27
Grand Total	99	99	99
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	9	9	9
04:15 PM	13	13	13
04:30 PM	14	14	14
04:45 PM	14	14	14
Total Volume	50	50	50
% App. Total	100		
PHF	.893	.893	.893



# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: DB, NY  
Counters: TU-0652, TU-2049  
Weather: Clear

File Name : KALKALSAR PM  
Site Code : 00000003  
Start Date : 3/10/2023  
Page No : 1

Groups Printed- Unshifted

Start Time	Kalaimoku Street Southbound		Saratoga Road Northbound				Kalakaua Avenue Eastbound					Int. Total
	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	32	32	77	105	131	313	29	402	50	46	527	872
04:15 PM	34	34	86	75	156	317	27	420	58	36	541	892
04:30 PM	63	63	89	86	163	338	25	371	37	59	492	893
04:45 PM	65	65	88	96	180	364	23	332	65	38	458	887
<b>Total</b>	<b>194</b>	<b>194</b>	<b>340</b>	<b>362</b>	<b>630</b>	<b>1332</b>	<b>104</b>	<b>1525</b>	<b>210</b>	<b>179</b>	<b>2018</b>	<b>3544</b>
05:00 PM	43	43	87	77	134	298	17	368	28	18	431	772
05:15 PM	66	66	78	68	180	326	19	373	37	48	477	869
05:30 PM	58	58	50	67	161	278	17	371	42	43	473	809
05:45 PM	73	73	45	63	182	290	17	384	43	50	494	857
<b>Total</b>	<b>240</b>	<b>240</b>	<b>260</b>	<b>275</b>	<b>657</b>	<b>1192</b>	<b>70</b>	<b>1496</b>	<b>150</b>	<b>159</b>	<b>1875</b>	<b>3307</b>
06:00 PM	68	68	41	43	141	225	13	341	31	14	399	692
06:15 PM	62	62	44	43	203	290	5	381	32	18	436	788
06:30 PM	76	76	41	52	198	291	16	327	26	18	387	754
06:45 PM	60	60	41	36	194	271	20	312	44	31	407	738
<b>Total</b>	<b>266</b>	<b>266</b>	<b>167</b>	<b>174</b>	<b>736</b>	<b>1077</b>	<b>54</b>	<b>1361</b>	<b>133</b>	<b>81</b>	<b>1629</b>	<b>2972</b>
<b>Grand Total</b>	<b>700</b>	<b>700</b>	<b>767</b>	<b>811</b>	<b>2023</b>	<b>3601</b>	<b>228</b>	<b>4382</b>	<b>493</b>	<b>419</b>	<b>5522</b>	<b>9823</b>
Apprch %	100		21.3	22.5	56.2		4.1	79.4	8.9	7.6		
Total %	7.1	7.1	7.8	8.3	20.6	36.7	2.3	44.6	5	4.3	56.2	

Start Time	Southbound	Saratoga Road Northbound			Kalakaua Avenue Eastbound				Int. Total	
	App. Total	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	77	105	182	29	402	50	481	663	
04:15 PM	0	86	75	161	27	420	58	505	666	
04:30 PM	0	89	86	175	25	371	37	433	608	
04:45 PM	0	88	96	184	23	332	65	420	604	
<b>Total Volume</b>	<b>0</b>	<b>340</b>	<b>362</b>	<b>702</b>	<b>104</b>	<b>1525</b>	<b>210</b>	<b>1839</b>	<b>2541</b>	
<b>% App. Total</b>		<b>48.4</b>	<b>51.6</b>		<b>5.7</b>	<b>82.9</b>	<b>11.4</b>			
<b>PHF</b>	<b>.000</b>	<b>.955</b>	<b>.862</b>	<b>.954</b>	<b>.897</b>	<b>.908</b>	<b>.808</b>	<b>.910</b>	<b>.954</b>	

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: DB  
Counters: TU-0652  
Weather: Clear

File Name : KALKALSAR PM - BIKES  
Site Code : 00000003  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	15	15	15
04:15 PM	10	10	10
04:30 PM	11	11	11
04:45 PM	17	17	17
Total	53	53	53
05:00 PM	8	8	8
05:15 PM	8	8	8
05:30 PM	12	12	12
05:45 PM	9	9	9
Total	37	37	37
06:00 PM	8	8	8
06:15 PM	12	12	12
06:30 PM	4	4	4
06:45 PM	5	5	5
Total	29	29	29
Grand Total	119	119	119
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	15	15	15
04:15 PM	10	10	10
04:30 PM	11	11	11
04:45 PM	17	17	17
Total Volume	53	53	53
% App. Total	100		
PHF	.779	.779	.779

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: JL, EH  
Counters: TU-0652, TU-2049  
Weather: Clear

File Name : KALKALSAR PM SAT  
Site Code : 00000003  
Start Date : 3/11/2023  
Page No : 1

Groups Printed- Unshifted

Start Time	Kalaimoku Street Southbound		Saratoga Road Northbound				Kalakaua Avenue Eastbound					Int. Total
	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	36	36	79	67	175	321	20	386	46	46	498	855
04:15 PM	46	46	80	64	186	330	26	409	55	38	528	904
04:30 PM	58	58	61	70	179	310	18	398	46	51	513	881
04:45 PM	46	46	57	89	164	310	19	372	40	55	486	842
<b>Total</b>	<b>186</b>	<b>186</b>	<b>277</b>	<b>290</b>	<b>704</b>	<b>1271</b>	<b>83</b>	<b>1565</b>	<b>187</b>	<b>190</b>	<b>2025</b>	<b>3482</b>
05:00 PM	52	52	68	68	179	315	14	346	33	43	436	803
05:15 PM	51	51	73	80	206	359	18	344	39	71	472	882
05:30 PM	60	60	53	46	203	302	21	398	51	62	532	894
05:45 PM	50	50	40	77	221	338	25	364	23	42	454	842
<b>Total</b>	<b>213</b>	<b>213</b>	<b>234</b>	<b>271</b>	<b>809</b>	<b>1314</b>	<b>78</b>	<b>1452</b>	<b>146</b>	<b>218</b>	<b>1894</b>	<b>3421</b>
06:00 PM	72	72	39	58	247	344	18	373	38	57	486	902
06:15 PM	82	82	41	54	219	314	20	367	26	63	476	872
06:30 PM	78	78	38	62	196	296	18	390	47	73	528	902
06:45 PM	88	88	45	55	172	272	17	366	31	98	512	872
<b>Total</b>	<b>320</b>	<b>320</b>	<b>163</b>	<b>229</b>	<b>834</b>	<b>1226</b>	<b>73</b>	<b>1496</b>	<b>142</b>	<b>291</b>	<b>2002</b>	<b>3548</b>
<b>Grand Total</b>	<b>719</b>	<b>719</b>	<b>674</b>	<b>790</b>	<b>2347</b>	<b>3811</b>	<b>234</b>	<b>4513</b>	<b>475</b>	<b>699</b>	<b>5921</b>	<b>10451</b>
Apprch %	100		17.7	20.7	61.6		4	76.2	8	11.8		
Total %	6.9	6.9	6.4	7.6	22.5	36.5	2.2	43.2	4.5	6.7	56.7	

Start Time	Southbound	Saratoga Road Northbound			Kalakaua Avenue Eastbound				Int. Total	
	App. Total	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	79	67	146	20	386	46	452	598	
04:15 PM	0	80	64	144	26	409	55	490	634	
04:30 PM	0	61	70	131	18	398	46	462	593	
04:45 PM	0	57	89	146	19	372	40	431	577	
Total Volume	0	277	290	567	83	1565	187	1835	2402	
% App. Total		48.9	51.1		4.5	85.3	10.2			
PHF	.000	.866	.815	.971	.798	.957	.850	.936	.947	

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: JL  
Counters: TU-0652  
Weather: Clear

File Name : KALKALSAR PM SAT - Bikes  
Site Code : 00000003  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	11	11	11
04:15 PM	13	13	13
04:30 PM	13	13	13
04:45 PM	10	10	10
Total	47	47	47
05:00 PM	9	9	9
05:15 PM	9	9	9
05:30 PM	10	10	10
05:45 PM	6	6	6
Total	34	34	34
06:00 PM	11	11	11
06:15 PM	13	13	13
06:30 PM	9	9	9
06:45 PM	14	14	14
Total	47	47	47
Grand Total	128	128	128
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	11	11	11
04:15 PM	13	13	13
04:30 PM	13	13	13
04:45 PM	10	10	10
Total Volume	47	47	47
% App. Total	100		
PHF	.904	.904	.904

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: CD  
Counters: TU-0654  
Weather: Clear

File Name : KALBEA PM  
Site Code : 00000004  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Start Time	Beach Walk Northbound		Kalakaua Avenue Eastbound				Int. Total
	Peds	App. Total	Thru	Right	Peds	App. Total	
04:00 PM	121	121	556	33	59	648	769
04:15 PM	131	131	522	52	58	632	763
04:30 PM	164	164	472	45	52	569	733
04:45 PM	140	140	477	61	68	606	746
<b>Total</b>	<b>556</b>	<b>556</b>	<b>2027</b>	<b>191</b>	<b>237</b>	<b>2455</b>	<b>3011</b>
05:00 PM	145	145	417	61	78	556	701
05:15 PM	159	159	429	44	94	567	726
05:30 PM	198	198	455	48	63	566	764
05:45 PM	216	216	430	44	76	550	766
<b>Total</b>	<b>718</b>	<b>718</b>	<b>1731</b>	<b>197</b>	<b>311</b>	<b>2239</b>	<b>2957</b>
06:00 PM	171	171	426	39	101	566	737
06:15 PM	197	197	425	32	79	536	733
06:30 PM	287	287	362	43	104	509	796
06:45 PM	309	309	371	32	103	506	815
<b>Total</b>	<b>964</b>	<b>964</b>	<b>1584</b>	<b>146</b>	<b>387</b>	<b>2117</b>	<b>3081</b>
<b>Grand Total</b>	<b>2238</b>	<b>2238</b>	<b>5342</b>	<b>534</b>	<b>935</b>	<b>6811</b>	<b>9049</b>
Apprch %	100		78.4	7.8	13.7		
Total %	24.7	24.7	59	5.9	10.3	75.3	

Start Time	Northbound		Kalakaua Avenue Eastbound			Int. Total
		App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1						
Peak Hour for Entire Intersection Begins at 04:00 PM						
04:00 PM		0	556	33	589	589
04:15 PM		0	522	52	574	574
04:30 PM		0	472	45	517	517
04:45 PM		0	477	61	538	538
Total Volume		0	2027	191	2218	2218
% App. Total			91.4	8.6		
PHF		.000	.911	.783	.941	.941

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: CD  
Counters: TU-0654  
Weather: Clear

File Name : KALBEA PM - BIKES  
Site Code : 00000004  
Start Date : 3/10/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	10	10	10
04:15 PM	9	9	9
04:30 PM	7	7	7
04:45 PM	14	14	14
Total	40	40	40
05:00 PM	9	9	9
05:15 PM	8	8	8
05:30 PM	11	11	11
05:45 PM	11	11	11
Total	39	39	39
06:00 PM	6	6	6
06:15 PM	4	4	4
06:30 PM	5	5	5
06:45 PM	4	4	4
Total	19	19	19
Grand Total	98	98	98
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:45 PM			
04:45 PM	14	14	14
05:00 PM	9	9	9
05:15 PM	8	8	8
05:30 PM	11	11	11
Total Volume	42	42	42
% App. Total	100		
PHF	.750	.750	.750

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: CD  
Counters: TU-0654  
Weather: Clear

File Name : KALBEA PM SAT  
Site Code : 00000004  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Start Time	Beach Walk Northbound		Kalakaua Avenue Eastbound				Int. Total
	Peds	App. Total	Thru	Right	Peds	App. Total	
04:00 PM	177	177	407	34	74	515	692
04:15 PM	144	144	457	41	67	565	709
04:30 PM	180	180	437	58	47	542	722
04:45 PM	160	160	436	38	62	536	696
<b>Total</b>	<b>661</b>	<b>661</b>	<b>1737</b>	<b>171</b>	<b>250</b>	<b>2158</b>	<b>2819</b>
05:00 PM	170	170	403	38	126	567	737
05:15 PM	167	167	441	36	91	568	735
05:30 PM	178	178	395	51	76	522	700
05:45 PM	267	267	417	40	83	540	807
<b>Total</b>	<b>782</b>	<b>782</b>	<b>1656</b>	<b>165</b>	<b>376</b>	<b>2197</b>	<b>2979</b>
06:00 PM	224	224	408	35	88	531	755
06:15 PM	238	238	454	64	128	646	884
06:30 PM	199	199	434	25	82	541	740
06:45 PM	213	213	373	43	93	509	722
<b>Total</b>	<b>874</b>	<b>874</b>	<b>1669</b>	<b>167</b>	<b>391</b>	<b>2227</b>	<b>3101</b>
<b>Grand Total</b>	<b>2317</b>	<b>2317</b>	<b>5062</b>	<b>503</b>	<b>1017</b>	<b>6582</b>	<b>8899</b>
Apprch %	100		76.9	7.6	15.5		
Total %	26	26	56.9	5.7	11.4	74	

Start Time	Northbound		Kalakaua Avenue Eastbound			Int. Total
		App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1						
Peak Hour for Entire Intersection Begins at 04:00 PM						
04:00 PM		0	407	34	441	441
04:15 PM		0	457	41	498	498
04:30 PM		0	437	58	495	495
04:45 PM		0	436	38	474	474
Total Volume		0	1737	171	1908	1908
% App. Total			91	9		
PHF		.000	.950	.737	.958	.958

# Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400  
Honolulu HI, 96826

Counted By: CD  
Counters: TU-0654  
Weather: Clear

File Name : KALBEA PM SAT - Bikes  
Site Code : 00000004  
Start Date : 3/11/2023  
Page No : 1

### Groups Printed- Unshifted

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
04:00 PM	10	10	10
04:15 PM	14	14	14
04:30 PM	14	14	14
04:45 PM	10	10	10
Total	48	48	48
05:00 PM	10	10	10
05:15 PM	8	8	8
05:30 PM	10	10	10
05:45 PM	6	6	6
Total	34	34	34
06:00 PM	1	1	1
06:15 PM	7	7	7
06:30 PM	6	6	6
06:45 PM	6	6	6
Total	20	20	20
Grand Total	102	102	102
Apprch %	100		
Total %	100	100	

Kalakaua Avenue - Bikes Eastbound			
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 04:00 PM			
04:00 PM	10	10	10
04:15 PM	14	14	14
04:30 PM	14	14	14
04:45 PM	10	10	10
Total Volume	48	48	48
% App. Total	100		
PHF	.857	.857	.857



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**APPENDIX B**

**LEVEL OF SERVICE DEFINITIONS**

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## LEVEL OF SERVICE DEFINITIONS

### LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

**Level of Service (LOS)** for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

**Table 1: Level-of-Service Criteria for Signalized Intersections**

Level of Service	Control Delay per Vehicle (sec/veh)
A	$\leq 10.0$
B	$> 10.0$ and $\leq 20.0$
C	$> 20.0$ and $\leq 35.0$
D	$> 35.0$ and $\leq 55.0$
E	$> 55.0$ and $\leq 80.0$
F	$> 80.0$

Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group.

**Level of Service A** describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

**Level of Service B** describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**Level of Service C** describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

**Level of Service D** describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**Level of Service E** describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

**Level of Service F** describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

## **LEVEL OF SERVICE DEFINITIONS**

### **LEVEL-OF-SERVICE CRITERIA FOR PEDESTRIANS**

#### **Signalized Intersections**

Pedestrian LOS at a signalized intersection is based on a unitless score that combines performance measures such as speed and basic descriptors relating to characteristics of the intersection. The association between score value and LOS is based on traveler perception research with the letter “A” used to represent the best quality of service, and the letter “F” used to represent the worst quality of service. The following are general qualitative descriptors:

At LOS A, pedestrians freely move in the desired path without needing to adjust their movements in response to pedestrians. Walking speeds are freely selected and conflicts between pedestrians are unlikely.

At LOS B there is sufficient area for pedestrians to select walking speeds freely to bypass other pedestrians and avoid crossing conflicts. At this level, pedestrians must occasionally adjust his/her path to avoid conflicts.

At LOS C there is sufficient space for normal walking speeds, and for bypassing other pedestrians. Crossing movements may cause minor conflicts and pedestrian must frequently adjust his/her path to avoid conflicts.

At LOS D the pedestrian’s speed and ability to pass slower pedestrians are restricted. There is a high probability of conflict requiring frequent changes in speed and position.

At LOS E the pedestrian’s speed is restricted, resulting in a limited ability and capacity to pass slower pedestrians.

At LOS F the pedestrian’s speed is severely restricted, resulting in frequent contact with other users.

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**APPENDIX C**

**CAPACITY ANALYSIS CALCULATIONS**  
**EXISTING PEAK PERIOD TRAFFIC ANALYSIS**

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# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↑↑	
Traffic Volume (vph)	0	1749	0	0	193	0
Future Volume (vph)	0	1749	0	0	193	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1901	0	0	210	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1901	0	0	210	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.30			c0.06	
v/s Ratio Perm						
v/c Ratio		0.41			0.34	
Uniform Delay, d1		5.8			39.2	
Progression Factor		2.33			1.00	
Incremental Delay, d2		0.3			1.5	
Delay (s)		13.8			40.7	
Level of Service		B			D	
Approach Delay (s)		13.8	0.0		40.7	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023



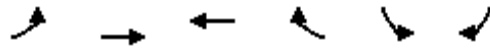
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		←↑↑↑						↑	↑↑				
Traffic Volume (vph)	104	1625	210	0	0	0	0	340	430	0	0	0	
Future Volume (vph)	104	1625	210	0	0	0	0	340	430	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0						5.0	5.0				
Lane Util. Factor		0.86						1.00	0.88				
Frbp, ped/bikes		0.94						1.00	1.00				
Flpb, ped/bikes		0.99						1.00	1.00				
Frt		0.98						1.00	0.85				
Flt Protected		1.00						1.00	1.00				
Satd. Flow (prot)		5840						1863	2787				
Flt Permitted		1.00						1.00	1.00				
Satd. Flow (perm)		5840						1863	2787				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	114	1786	231	0	0	0	0	374	473	0	0	0	
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	2111	0	0	0	0	0	374	473	0	0	0	
Confl. Peds. (#/hr)	194		630	630		194	179					179	
Turn Type	Perm	NA						NA	Prot				
Protected Phases		2						8	8				
Permitted Phases	2												
Actuated Green, G (s)		80.0						20.0	20.0				
Effective Green, g (s)		80.0						20.0	20.0				
Actuated g/C Ratio		0.73						0.18	0.18				
Clearance Time (s)		5.0						5.0	5.0				
Lane Grp Cap (vph)		4247						338	506				
v/s Ratio Prot								c0.20	0.17				
v/s Ratio Perm		0.36											
v/c Ratio		0.50						1.11	0.93				
Uniform Delay, d1		6.4						45.0	44.4				
Progression Factor		0.57						1.00	1.00				
Incremental Delay, d2		0.4						80.8	26.7				
Delay (s)		4.1						125.8	71.1				
Level of Service		A						F	E				
Approach Delay (s)		4.1			0.0			95.2			0.0		
Approach LOS		A			A			F			A		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			30.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.62										
Actuated Cycle Length (s)			110.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			59.6%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↑↑	
Traffic Volume (vph)	0	1662	0	0	190	0
Future Volume (vph)	0	1662	0	0	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1807	0	0	207	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1807	0	0	207	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.28			c0.06	
v/s Ratio Perm						
v/c Ratio		0.39			0.33	
Uniform Delay, d1		5.7			39.2	
Progression Factor		2.35			1.00	
Incremental Delay, d2		0.2			1.4	
Delay (s)		13.6			40.6	
Level of Service		B			D	
Approach Delay (s)		13.6	0.0		40.6	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑						↑	↑↑			
Traffic Volume (vph)	83	1582	187	0	0	0	0	277	298	0	0	0
Future Volume (vph)	83	1582	187	0	0	0	0	277	298	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frbp, ped/bikes		0.94						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5847						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5847						1863	2787			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	91	1738	205	0	0	0	0	304	327	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2017	0	0	0	0	0	304	327	0	0	0
Confl. Peds. (#/hr)	186		704	704		186	397					397
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						8				
Permitted Phases	2								8			
Actuated Green, G (s)		80.0						20.0	20.0			
Effective Green, g (s)		80.0						20.0	20.0			
Actuated g/C Ratio		0.73						0.18	0.18			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		4252						338	506			
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.34							0.12			
v/c Ratio		0.47						0.90	0.65			
Uniform Delay, d1		6.2						44.0	41.7			
Progression Factor		0.57						1.00	1.00			
Incremental Delay, d2		0.4						29.0	6.3			
Delay (s)		3.9						73.0	48.0			
Level of Service		A						E	D			
Approach Delay (s)		3.9			0.0			60.0			0.0	
Approach LOS		A			A			E			A	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

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**APPENDIX D**

**CAPACITY ANALYSIS CALCULATIONS**  
**PROJECTED YEAR 2024 PEAK PERIOD TRAFFIC ANALYSIS**  
**WITHOUT PROJECT**

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# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↑↑	
Traffic Volume (vph)	0	1804	0	0	203	0
Future Volume (vph)	0	1804	0	0	203	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1961	0	0	221	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1961	0	0	221	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.31			c0.06	
v/s Ratio Perm						
v/c Ratio		0.42			0.35	
Uniform Delay, d1		5.9			39.4	
Progression Factor		2.34			1.00	
Incremental Delay, d2		0.3			1.6	
Delay (s)		14.0			40.9	
Level of Service		B			D	
Approach Delay (s)		14.0	0.0		40.9	
Approach LOS		B	A		D	
















### Intersection Summary

HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	132	1659	210	0	0	0	0	343	430	0	0	0	
Future Volume (vph)	132	1659	210	0	0	0	0	343	430	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0						5.0	5.0				
Lane Util. Factor		0.86						1.00	0.88				
Frbp, ped/bikes		0.94						1.00	1.00				
Flpb, ped/bikes		0.99						1.00	1.00				
Frt		0.98						1.00	0.85				
Flt Protected		1.00						1.00	1.00				
Satd. Flow (prot)		5840						1863	2787				
Flt Permitted		1.00						1.00	1.00				
Satd. Flow (perm)		5840						1863	2787				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	145	1823	231	0	0	0	0	377	473	0	0	0	
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	2179	0	0	0	0	0	377	473	0	0	0	
Confl. Peds. (#/hr)	194		630	630		194	179					179	
Turn Type	Perm	NA						NA	Perm				
Protected Phases		2						8					
Permitted Phases	2								8				
Actuated Green, G (s)		80.0						20.0	20.0				
Effective Green, g (s)		80.0						20.0	20.0				
Actuated g/C Ratio		0.73						0.18	0.18				
Clearance Time (s)		5.0						5.0	5.0				
Lane Grp Cap (vph)		4247						338	506				
v/s Ratio Prot								c0.20					
v/s Ratio Perm		0.37							0.17				
v/c Ratio		0.51						1.12	0.93				
Uniform Delay, d1		6.5						45.0	44.4				
Progression Factor		0.57						1.00	1.00				
Incremental Delay, d2		0.4						83.8	26.7				
Delay (s)		4.1						128.8	71.1				
Level of Service		A						F	E				
Approach Delay (s)		4.1			0.0			96.7			0.0		
Approach LOS		A			A			F			A		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			29.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.63										
Actuated Cycle Length (s)			110.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			59.7%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↵↵	
Traffic Volume (vph)	0	1710	0	0	200	0
Future Volume (vph)	0	1710	0	0	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1859	0	0	217	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1859	0	0	217	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.29			c0.06	
v/s Ratio Perm						
v/c Ratio		0.40			0.35	
Uniform Delay, d1		5.8			39.3	
Progression Factor		2.35			1.00	
Incremental Delay, d2		0.2			1.5	
Delay (s)		13.8			40.8	
Level of Service		B			D	
Approach Delay (s)		13.8	0.0		40.8	
Approach LOS		B	A		D	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			16.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.39			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.0
Intersection Capacity Utilization			38.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑						↑	↑↑			
Traffic Volume (vph)	110	1615	187	0	0	0	0	279	298	0	0	0
Future Volume (vph)	110	1615	187	0	0	0	0	279	298	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frbp, ped/bikes		0.94						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5839						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5839						1863	2787			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	121	1775	205	0	0	0	0	307	327	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2083	0	0	0	0	0	307	327	0	0	0
Confl. Peds. (#/hr)	186		704	704		186	190					190
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						8				
Permitted Phases	2								8			
Actuated Green, G (s)		80.0						20.0	20.0			
Effective Green, g (s)		80.0						20.0	20.0			
Actuated g/C Ratio		0.73						0.18	0.18			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		4246						338	506			
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.36							0.12			
v/c Ratio		0.49						0.91	0.65			
Uniform Delay, d1		6.4						44.1	41.7			
Progression Factor		0.57						1.00	1.00			
Incremental Delay, d2		0.4						30.4	6.3			
Delay (s)		4.0						74.5	48.0			
Level of Service		A						E	D			
Approach Delay (s)		4.0			0.0			60.8			0.0	
Approach LOS		A			A			E			A	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

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**APPENDIX E**

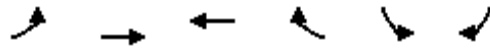
**CAPACITY ANALYSIS CALCULATIONS**  
**PROJECTED YEAR 2024 PEAK PERIOD TRAFFIC ANALYSIS**  
**WITH PROJECT**

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# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↵↵	
Traffic Volume (vph)	0	1833	0	0	203	0
Future Volume (vph)	0	1833	0	0	203	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1992	0	0	221	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1992	0	0	221	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.31			c0.06	
v/s Ratio Perm						
v/c Ratio		0.43			0.35	
Uniform Delay, d1		5.9			39.4	
Progression Factor		2.34			1.00	
Incremental Delay, d2		0.3			1.6	
Delay (s)		14.1			40.9	
Level of Service		B			D	
Approach Delay (s)		14.1	0.0		40.9	
Approach LOS		B	A		D	
















Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	132	1688	210	0	0	0	0	343	430	0	0	0	
Future Volume (vph)	132	1688	210	0	0	0	0	343	430	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0						5.0	5.0				
Lane Util. Factor		0.86						1.00	0.88				
Frbp, ped/bikes		0.93						1.00	1.00				
Flpb, ped/bikes		0.98						1.00	1.00				
Frt		0.98						1.00	0.85				
Flt Protected		1.00						1.00	1.00				
Satd. Flow (prot)		5761						1863	2787				
Flt Permitted		1.00						1.00	1.00				
Satd. Flow (perm)		5761						1863	2787				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	145	1855	231	0	0	0	0	377	473	0	0	0	
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	2213	0	0	0	0	0	377	473	0	0	0	
Confl. Peds. (#/hr)	301		938	938		307	386					386	
Turn Type	Perm	NA						NA	Perm				
Protected Phases		2						8					
Permitted Phases	2								8				
Actuated Green, G (s)		80.0						20.0	20.0				
Effective Green, g (s)		80.0						20.0	20.0				
Actuated g/C Ratio		0.73						0.18	0.18				
Clearance Time (s)		5.0						5.0	5.0				
Lane Grp Cap (vph)		4189						338	506				
v/s Ratio Prot								c0.20					
v/s Ratio Perm		0.38							0.17				
v/c Ratio		0.53						1.12	0.93				
Uniform Delay, d1		6.6						45.0	44.4				
Progression Factor		0.59						1.00	1.00				
Incremental Delay, d2		0.4						83.8	26.7				
Delay (s)		4.4						128.8	71.1				
Level of Service		A						F	E				
Approach Delay (s)		4.4			0.0			96.7			0.0		
Approach LOS		A			A			F			A		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			29.8									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.65										
Actuated Cycle Length (s)			110.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			59.7%									ICU Level of Service	B
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 3: Kalakaua Ave & Olohana St

05/25/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↵↵	
Traffic Volume (vph)	0	1739	0	0	200	0
Future Volume (vph)	0	1739	0	0	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1890	0	0	217	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1890	0	0	217	0
Turn Type		NA			Prot	
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		80.0			20.0	
Effective Green, g (s)		80.0			20.0	
Actuated g/C Ratio		0.73			0.18	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		4660			624	
v/s Ratio Prot		c0.29			c0.06	
v/s Ratio Perm						
v/c Ratio		0.41			0.35	
Uniform Delay, d1		5.8			39.3	
Progression Factor		2.35			1.00	
Incremental Delay, d2		0.2			1.5	
Delay (s)		13.9			40.8	
Level of Service		B			D	
Approach Delay (s)		13.9	0.0		40.8	
Approach LOS		B	A		D	

### Intersection Summary

HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑						↑	↑↑			
Traffic Volume (vph)	110	1644	187	0	0	0	0	279	298	0	0	0
Future Volume (vph)	110	1644	187	0	0	0	0	279	298	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frbp, ped/bikes		0.93						1.00	1.00			
Flpb, ped/bikes		0.98						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5749						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5749						1863	2787			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	121	1807	205	0	0	0	0	307	327	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2117	0	0	0	0	0	307	327	0	0	0
Confl. Peds. (#/hr)	293		1012	1012		293	397					397
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						8				
Permitted Phases	2								8			
Actuated Green, G (s)		80.0						20.0	20.0			
Effective Green, g (s)		80.0						20.0	20.0			
Actuated g/C Ratio		0.73						0.18	0.18			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		4181						338	506			
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.37							0.12			
v/c Ratio		0.51						0.91	0.65			
Uniform Delay, d1		6.5						44.1	41.7			
Progression Factor		0.59						1.00	1.00			
Incremental Delay, d2		0.4						30.4	6.3			
Delay (s)		4.2						74.5	48.0			
Level of Service		A						E	D			
Approach Delay (s)		4.2			0.0			60.8			0.0	
Approach LOS		A			A			E			A	

### Intersection Summary
















HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	132	1688	210	0	0	0	0	343	430	0	0	0	
Future Volume (vph)	132	1688	210	0	0	0	0	343	430	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0						5.0	5.0				
Lane Util. Factor		0.86						1.00	0.88				
Frbp, ped/bikes		0.94						1.00	1.00				
Flpb, ped/bikes		0.99						1.00	1.00				
Frt		0.98						1.00	0.85				
Flt Protected		1.00						1.00	1.00				
Satd. Flow (prot)		5855						1863	2787				
Flt Permitted		1.00						1.00	1.00				
Satd. Flow (perm)		5855						1863	2787				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	145	1855	231	0	0	0	0	377	473	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	2231	0	0	0	0	0	377	473	0	0	0	
Confl. Peds. (#/hr)	301		938	938		307	386					386	
Turn Type	Perm	NA						NA	Perm				
Protected Phases		2						8					
Permitted Phases	2								8				
Actuated Green, G (s)		80.0						20.0	20.0				
Effective Green, g (s)		80.0						20.0	20.0				
Actuated g/C Ratio		0.73						0.18	0.18				
Clearance Time (s)		5.0						5.0	5.0				
Lane Grp Cap (vph)		4258						338	506				
v/s Ratio Prot								c0.20					
v/s Ratio Perm		0.38							0.17				
v/c Ratio		0.52						1.12	0.93				
Uniform Delay, d1		6.6						45.0	44.4				
Progression Factor		0.57						1.00	1.00				
Incremental Delay, d2		0.4						83.8	26.7				
Delay (s)		4.2						128.8	71.1				
Level of Service		A						F	E				
Approach Delay (s)		4.2			0.0			96.7			0.0		
Approach LOS		A			A			F			A		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			29.7									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			110.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			78.9%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Signalized Intersection Capacity Analysis

## 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/25/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←↑↑↑						↑	↑↑			
Traffic Volume (vph)	110	1644	187	0	0	0	0	279	298	0	0	0
Future Volume (vph)	110	1644	187	0	0	0	0	279	298	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frbp, ped/bikes		0.93						1.00	1.00			
Flpb, ped/bikes		0.98						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5749						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5749						1863	2787			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	121	1807	205	0	0	0	0	307	327	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2133	0	0	0	0	0	307	327	0	0	0
Confl. Peds. (#/hr)	293		1012	1012		293	397					397
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						8				
Permitted Phases	2								8			
Actuated Green, G (s)		80.0						20.0	20.0			
Effective Green, g (s)		80.0						20.0	20.0			
Actuated g/C Ratio		0.73						0.18	0.18			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		4181						338	506			
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.37							0.12			
v/c Ratio		0.51						0.91	0.65			
Uniform Delay, d1		6.5						44.1	41.7			
Progression Factor		0.59						1.00	1.00			
Incremental Delay, d2		0.4						30.4	6.3			
Delay (s)		4.3						74.5	48.0			
Level of Service		A						E	D			
Approach Delay (s)		4.3			0.0			60.8			0.0	
Approach LOS		A			A			E			A	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

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**APPENDIX F**

**PEDESTRIAN LEVEL OF SERVICE CALCULATIONS**  
**EXISTING CONDITIONS**

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Approach	EB	WB	SB
Crosswalk Length (ft)	48.0	47.9	24.6
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2
Number of Right-Turn Islands	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	4	2	0
Effective Walk Time (s)	11.0	11.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	44.5	44.5	55.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.57	2.61	1.83
Pedestrian Crosswalk LOS	C	C	B

HCM 6th Signals-Pedestrians  
 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/30/2023

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.3	49.1	32.1	38.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	0	8	2	0
Effective Walk Time (s)	0.0	11.0	56.0	0.0
Right Corner Size A (ft)	13.5	9.0	13.5	9.0
Right Corner Size B (ft)	13.5	9.0	13.5	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	182.25	81.00	182.25	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	55.0	44.5	13.3	55.0
Pedestrian Compliance Code	Poor	Poor	Fair	Poor
Pedestrian Crosswalk Score	2.62	2.64	2.15	1.95
Pedestrian Crosswalk LOS	C	C	B	B



HCM 6th Signals-Pedestrians  
3: Kalakaua Ave & Olohana St

05/30/2023

Approach	EB	WB	SB
Crosswalk Length (ft)	48.0	47.9	24.6
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2
Number of Right-Turn Islands	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	4	2	0
Effective Walk Time (s)	11.0	11.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	44.5	44.5	55.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.55	2.59	1.83
Pedestrian Crosswalk LOS	C	C	B

HCM 6th Signals-Pedestrians  
 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/30/2023

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.3	49.1	32.1	56.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2	1
Number of Right-Turn Islands	0	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	0	8	2	0
Effective Walk Time (s)	0.0	11.0	56.0	0.0
Right Corner Size A (ft)	13.5	9.0	13.5	9.0
Right Corner Size B (ft)	13.5	9.0	13.5	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	182.25	81.00	182.25	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	55.0	44.5	13.3	55.0
Pedestrian Compliance Code	Poor	Poor	Fair	Poor
Pedestrian Crosswalk Score	2.60	2.60	2.05	1.79
Pedestrian Crosswalk LOS	C	C	B	B

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**APPENDIX G**

**PEDESTRIAN LEVEL OF SERVICE CALCULATIONS  
PROJECTED CONDITIONS**

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Approach	EB	WB	SB
Crosswalk Length (ft)	48.0	47.9	24.6
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2
Number of Right-Turn Islands	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	4	2	0
Effective Walk Time (s)	11.0	11.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	44.5	44.5	55.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.59	2.64	1.83
Pedestrian Crosswalk LOS	C	C	B

HCM 6th Signals-Pedestrians  
 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/30/2023

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.2	49.1	32.2	56.9
Crosswalk Width (ft)	24.0	12.0	24.0	12.0
Total Number of Lanes Crossed	4	4	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	0	8	2	0
Effective Walk Time (s)	0.0	11.0	56.0	0.0
Right Corner Size A (ft)	14.0	9.0	23.0	14.0
Right Corner Size B (ft)	14.0	9.0	36.5	14.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	196.00	81.00	839.50	196.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	55.0	44.5	13.3	55.0
Pedestrian Compliance Code	Poor	Poor	Fair	Poor
Pedestrian Crosswalk Score	2.64	2.66	2.16	1.96
Pedestrian Crosswalk LOS	C	C	B	B

Approach	EB	WB	SB
Crosswalk Length (ft)	48.0	47.9	24.6
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	2
Number of Right-Turn Islands	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	4	2	0
Effective Walk Time (s)	11.0	11.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	44.5	44.5	55.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.60	2.65	1.84
Pedestrian Crosswalk LOS	C	C	B

HCM 6th Signals-Pedestrians  
 5: Saratoga Rd/Kalaimoku St & Kalakaua Ave

05/30/2023

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.2	49.1	32.2	56.9
Crosswalk Width (ft)	24.0	12.0	24.0	12.0
Total Number of Lanes Crossed	4	4	2	1
Number of Right-Turn Islands	0	0	0	0
Type of Control	Pretimed	Pretimed	Pretimed	Pretimed
Corresponding Signal Phase	0	8	2	0
Effective Walk Time (s)	0.0	11.0	56.0	0.0
Right Corner Size A (ft)	13.5	9.0	13.5	9.0
Right Corner Size B (ft)	13.5	9.0	13.5	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	182.25	81.00	182.25	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	55.0	44.5	13.3	55.0
Pedestrian Compliance Code	Poor	Poor	Fair	Poor
Pedestrian Crosswalk Score	2.67	2.66	2.08	1.86
Pedestrian Crosswalk LOS	C	C	B	B

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**APPENDIX H**  
**TRANSIT LEVEL OF SERVICE CALCULATIONS**

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Multimodal Transit LOS Calculation								
		Kuhio Ave WB	Kuhio Ave EB	Pau NB	Saratoga SB	Saratoga NB	Kalia WB	Kalia EB
Inputs		1	2	3	4	5	6	7
<b>TRANSIT OPERATIONS INFORMATION</b>								
	Number of local buses on street segment per hour (bus/h)	24	23	4	16	16	16	17
	Number of express buses stopping in segment per hour (bus/h)	2	12	0	2	12	2	11
$t_{ex}$	Average excess wait time (min)	3.5	3.8	3.0	3.0	4.2	2.4	4.2
$L_f$	Average passenger load factor (p/seat)	0.6	0.6	0.8	0.4	0.4	0.4	0.5
$S$	Average transit travel speed (mi/h)	7.8	7.4	8.7	8.6	9.5	9.6	10.4
$l_{pt}$	Average passenger trip length (mi)	15.5	16.0	3.2	9.9	10.3	9.9	10.3
	Is the segment in the CBD of a metro area of 5 million or more?	No	No	No	No	No	No	No
<b>TRANSIT AMENITY DATA</b>								
$p_{sh}$	Percent stops in segment with a shelter	0%	0%	0%	100%	0%	100%	0%
$p_{be}$	Percent stops in segment with a bench	100%	100%	100%	100%	100%	100%	100%
<b>PEDESTRIAN ENVIRONMENT DATA</b>								
$W_A$	Sidewalk width (ft) (Enter 0 if no sidewalk)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
$W_{buf}$	Buffer width from sidewalk to street (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Does a continuous barrier exist between the street and sidewalk?	No	No	No	No	No	No	No
	Is the street divided?	No	No	No	No	No	No	No
	Are parking spaces striped?	No	No	No	No	No	No	No
$p_{pk}$	Proportion of on-street parking occupied	0%	0%	0%	0%	0%	0%	0%
$W_{bl}$	Bicycle lane width (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$W_{os}$	Shoulder/parking lane width (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$W_{ol}$	Outside travel lane (closest to sidewalk) width (ft)	10.0	10.0	12.0	18.0	10.0	12.0	12.0
$v_m$	Outside lane demand flow rate at midsegment (veh/h)	600	600	300	300	700	350	200
$S_R$	Average vehicle running speed, including intersection delay (mi/h)	25.0	25.0	25.0	25.0	25.0	25.0	25.0
<b>Calculations</b>								
$f$	Transit frequency (bus/h)	26	35	4	18	28	18	28
$f_h$	Headway factor	3.79	3.84	2.80	3.69	3.80	3.69	3.80
$f_{pl}$	Passenger load weighting factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$T_{at}$	Perceived amenity time rate (min/mi)	0.0	0.0	0.1	0.2	0.0	0.2	0.0
$T_{ex}$	Excess wait time rate due to late arrivals (min/mi)	0.2	0.2	0.9	0.3	0.4	0.2	0.4
$T_{ptt}$	Perceived travel time rate (min/mi)	8.1	8.6	8.7	7.4	7.1	6.6	6.6
$T_{btt}$	Base travel time rate (min/mi)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
$f_{tt}$	Perceived travel time factor	0.76	0.75	0.74	0.79	0.80	0.82	0.82
$S_{w-r}$	Transit wait-ride score	2.88	2.86	2.07	2.90	3.03	3.04	3.13
$f_s$	Motorized vehicle speed adjustment factor	0.25	0.25	0.25	0.25	0.25	0.25	0.25
$f_v$	Motorized vehicle volume adjustment factor	1.37	1.37	0.68	0.68	1.59	0.80	0.46
$W_{aA}$	Adjusted available sidewalk width (ft)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
$f_{sw}$	Sidewalk width coefficient	3.60	3.60	3.60	3.60	3.60	3.60	3.60
$f_b$	Buffer area coefficient	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$W_t$	Total width of outside lane, bike lane, and parking lane/shoulder (ft)	10.0	10.0	12.0	18.0	10.0	12.0	12.0
$W_v$	Effective total width as a function of traffic volume (ft)	10.0	10.0	12.0	18.0	10.0	12.0	12.0
$W_1$	Effective width of combined bike lane and shoulder (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$f_w$	Cross-section adjustment factor	-4.49	-4.49	-4.55	-4.72	-4.49	-4.55	-4.55
$l_p$	Pedestrian environment score	3.17	3.17	2.43	2.26	3.40	2.54	2.20
	Pedestrian LOS	C	C	B	B	C	B	B
$l_t$	Transit LOS score	2.16	2.18	3.25	1.99	1.96	1.83	1.64
<b>Output</b>								
	<b>Transit LOS</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>



# Appendix F:

## Preliminary Engineering Report Civil Infrastructure



**DRAFT**

**PRELIMINARY ENGINEERING REPORT  
CIVIL INFRASTRUCTURE**

**Kālia Cultural Entertainment Venue**

Honolulu, Oahu, Hawai'i  
TMK: 2-6-006:001 and 004

**Prepared For:**

**2055 Kalakaua, LLC**  
1188 Bishop St, Suite 2212  
Honolulu, Hawaii 96813

**Prepared By:**

**Wilson Okamoto Corporation**  
Engineers and Planners  
1907 South Beretania Street, Suite 400  
Honolulu, Hawai'i 96826

**May 2023**

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- Figure 4-3 Existing Sanitary Sewer System
- Figure 4-4 Existing Water Supply System

## **APPENDICES**

### Appendix A – Sewer System Information

- Sewer Connection Application submitted May 12, 2023
- Approved Sewer Connection Application dated June 2, 2023

### Appendix B – Water System Information

- Water Availability Response Letter received May 2, 2023
- Updated Water Availability Request Letter submitted May 19, 2023
- Updated Water Availability Response Letter received June 8, 2023
- BWS Premise ID Report provided May 24, 2023

### Appendix C – Other Utility Systems Information

- HECO Correspondence
- HiTel Correspondence
- Spectrum Correspondence
- HiGas Correspondence and Existing Gas Map May 24, 2023

### Appendix D – Preliminary Drainage Study for Kalia Cultural Entertainment Venue

### Appendix E – Due Diligence Report for Park Kalia Waikiki dated November 2015

## **EXECUTIVE SUMMARY**

The client, 2055 Kalakaua, LLC intends to develop the 0.66-acre property located in Waikiki on the island of Oahu. The project site was formerly occupied by the Kyo-ya Restaurant and its associated parking structure. The project includes the development of a cultural entertainment venue that includes a large lawn for guest seating, a stage, a two-story multi-purpose building, and a porte cochere. The project site is identified by Tax Map (1) 2-6-006: 001 and 004.

To assess the condition of the existing site and to identify measures that might be taken to mitigate potential impacts from the operation of this project, a preliminary engineering report was conducted by Wilson Okamoto Corporation. The purpose of the report is to provide detailed evaluation of the site infrastructure and utility systems for the project, review the existing infrastructure improvements, determine the project requirements related to roadway and parking facilities, site grading, storm drainage, sanitary sewage, and potable water availability, determine required improvements, and identify possible opportunities and constraints for the redevelopment. These findings are summarized and articulated in the contents of this Preliminary Engineering Report (PER).

Following the closing of Kyo-ya Restaurant, the project site became the subject of a due diligence report regarding the previously planned development of a 170-unit high-rise condo-hotel (see Appendix E). Findings from the previous study are mostly valid, due to the lack of improvements completed within the site from the time of the previous study until now. Therefore, the previous report's findings are used to support any new findings regarding the currently proposed development.



## **1 PROJECT DESCRIPTION**

### **1.1 Existing Condition**

The proposed project site is comprised of two existing parcels adjacent to each other, located by TMKs 2-6-006: 001 and 004, respectively at 2057 and 2051 Kalakaua Avenue in Honolulu. The property identified by TMK 2-6-006: 001 will be referred to as Parcel 1 and property identified by TMK 2-6-006: 004 will be referred to as Parcel 4. The areas of Parcel 1 and 4 are approximately 0.40-acres and 0.26-acres, respectively. The total area of the two parcels is approximately 0.66-acres (See Figure 1-1 and 1-2). The overall site is bounded by the Luana Waikiki Hotel and Suites to the north, Kalakaua Avenue to the east, the Fort DeRussy Army Chapel and Brothers in Valor Memorial to the south, and Maluhia Road to the west.

The surrounding area can be characterized as an urban resort area. Waikīkī is designated as a special district by the City and County of Honolulu and is organized by various precincts. As the Proposed Project is situated in the Resort Mixed Use Precinct, several hotels and commercial uses are situated due east along Kalakaua Avenue.

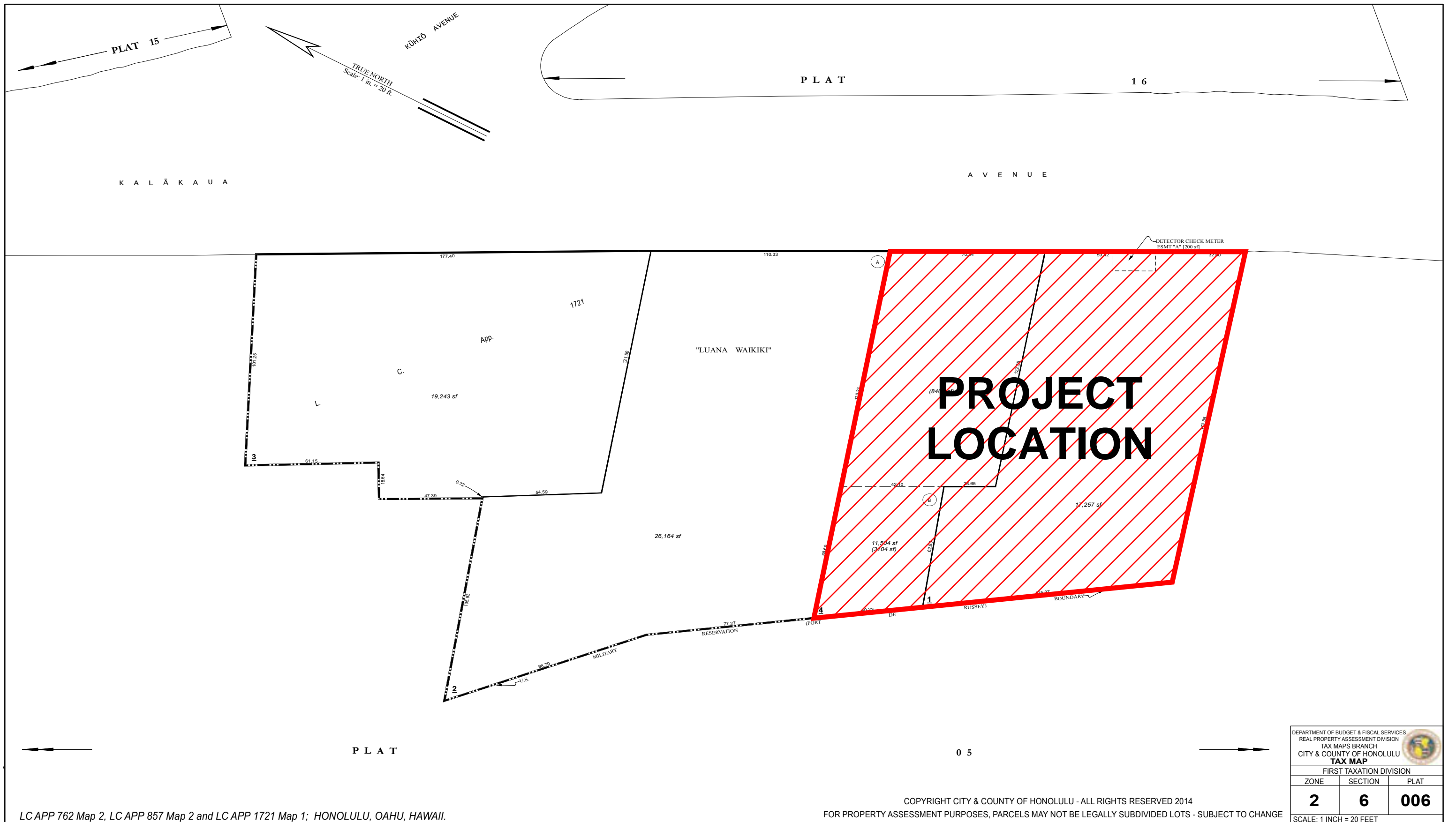
The project site has been vacant since 2007 but was formerly occupied by the Kyo-ya Restaurant and its associated parking structure.

### **1.2 Proposed Condition**

The client, 2055 Kalakaua, LLC, is proposing to develop a cultural entertainment venue in Waikiki. The proposed development includes an open lawn, a stage, a porte cochere, and a multi-purpose building that includes restrooms, office space, and food preparation areas. The venue is anticipated to accommodate approximately 740 seats for guests and all food consumed would be delivered via trucks thus it is expected that no cooking and food preparation occurs at the venue.



**FIGURE 1-1**  
PROJECT LOCATION AND VICINITY MAP



**FIGURE 1-2**  
**TAX MAP KEY**

## **2 ROADWAY, PARKING, AND ACCESS**

### **2.1 Existing Conditions**

The project site is located on the Makai side of Kalakaua Avenue between the Kalakaua Avenue/Kuhio Avenue split and Olohana Street. Kalakaua Avenue fronting the project is a one-way four-lane road.

Existing access to the site is through an approximately 40' wide driveway apron along Kalakaua Avenue at the southeast corner of Parcel 1.

### **2.2 Proposed Improvements**

Vehicular and Pedestrian Access is proposed along Kalakaua Avenue. A right-in, right-out driveway leading to a porte cochere will provide vehicle access to the pedestrian drop off. A loading zone will be provided near the north side of the site for use by delivery trucks. No alternative entrances nor parking spaces are anticipated to be added for the site.

As the redevelopment progresses and site plans are developed, consultation with the appropriate jurisdiction having authority will be required to determine vehicular driveway locations, provide adequate site distance, pedestrian sidewalk requirement, bicycle facilities, and emergency vehicle access lanes.

Any proposed new driveways and walkways for the project will be designed to meet applicable State and City Requirements. Geometrics and pavement structures for proposed driveways will need to be designed based on the appropriate design vehicles. Proposed pavement structures will follow the Soils Engineer's recommendation and walkway layouts will be laid out and installed in compliance with Americans with Disabilities Act (ADA) Accessibility Guidelines to the maximum extent practicable.

### **3 SITE GRADING, SOIL, AND FLOOD HAZARD**

#### **3.1 Existing Condition**

The site is mainly occupied by the closed Kyo-ya restaurant building and two-level parking garage. During site investigation, it was observed that on the Maluhia Road, Fort DeRussy Park, and Luana Waikiki Hotel faces of the property, the wall of the existing building straddles the property line and on the Kalakaua Ave. frontage, there is a high point at the entrance to the two-level parking garage and the site generally slopes towards the existing sidewalk. It was observed that a portion of the existing sidewalk along this frontage is depressed due to uplifting of the sidewalk by the root system of an existing tree adjacent to the curb line along Kalakaua Ave. A series of trench drains were installed in the depressed areas to mitigate the ponding in the low areas. The trench drain outlet location was undetermined. A portion of the existing gutter adjacent to the bike lane is also uplifting due to the root system causing ponding in the gutter. No mitigation measures were observed for the ponding within the gutter.

Soil series and mapping units for the island of Oahu are found in maps on the United States Department of Agriculture online web soil survey and soil physical properties are found in the “Soil Survey of islands of Kauai, Oahu, Mau, Molokai, and Lanai, State of Hawaii” dated January 1, 1972, prepared by the U.S. Department of Agriculture, Soil Conservation Service (currently Natural Resources Conservation Services). The underlying soil within the project site consists of Fill land (See figure 3-1). The soil has characteristics described below:

Fill Land, (FL): A fill soil material dredged from the reef or general material from other sources usually consists of mixture of cinders, stone fragments, and ash soil material.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel No: 15003C0366G dated January 19, 2011 shows that the project is located in Zone AO (Depth 2') (See Figure 3-2). Zone AO (Depth 2') is the Special Flood Hazard Area defined as “Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined”.

#### **3.2 Proposed Improvements**

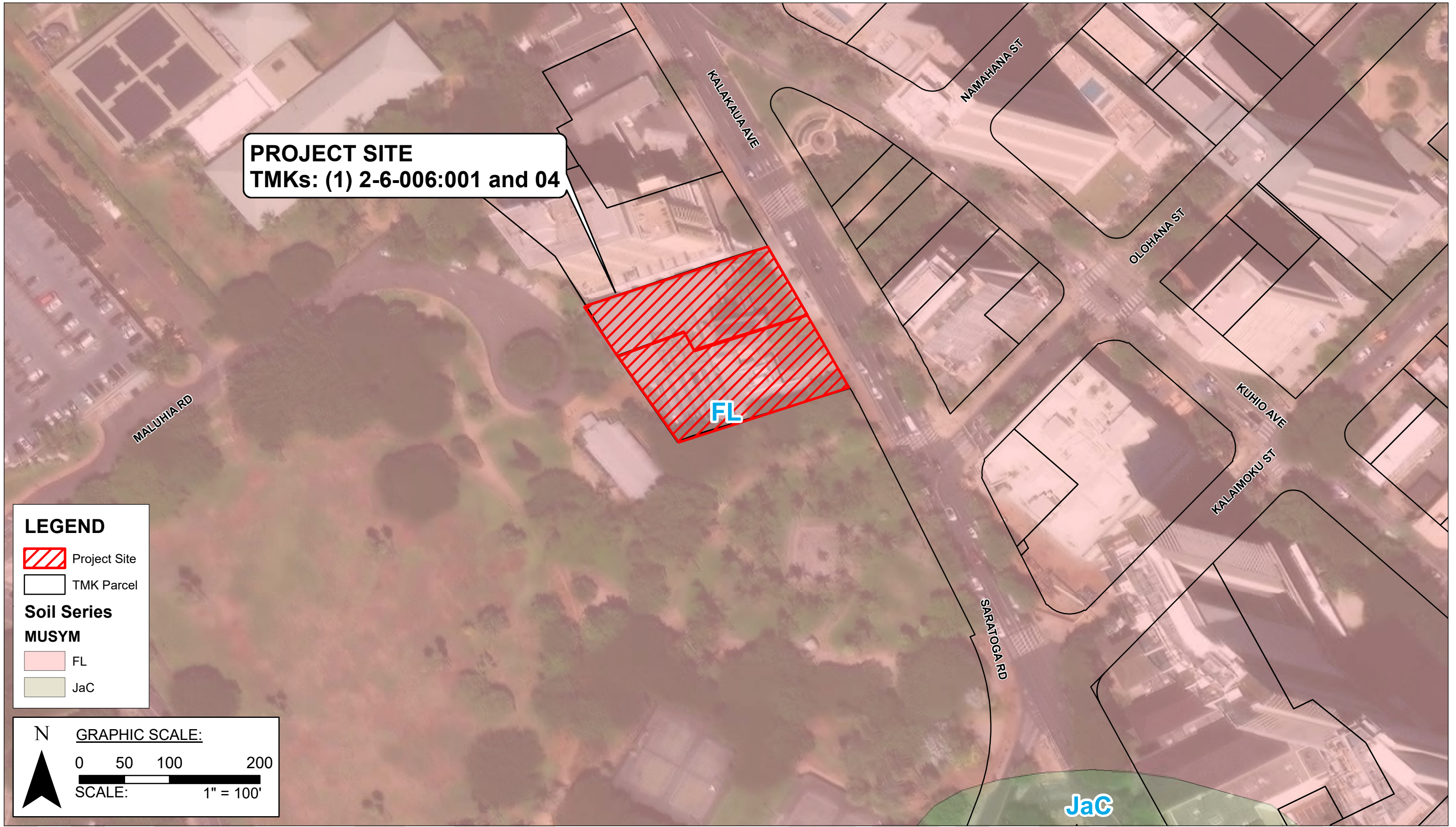
Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation (FFE) for any proposed building should be established at a minimum of 2-feet above the highest existing adjacent grades on site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

In May 2023, Wilson Okamoto Corporation discussed with the City regarding the required base flood elevation (BFE) for the proposed development. Per record drawings dated 1989 of the previous restaurant site, BFE was established at 7.60 feet msl. The original BFE was derived by adding the AO depth value of 2-feet to the pre-existing site's highest adjacent grade of 5.60 feet msl. The City preliminarily took no exception to using the same basis in establishing the BFE for the proposed development.

The project site shall be graded to provide positive drainage for storm water runoff to flow towards onsite drain inlets throughout the site. Storm water runoff in excess of the existing conditions will need to be detained, harvested/reused, or disposed by percolation onsite. Accessible walkway layouts, dimensions, and slopes shall comply with ADA Accessibility Guidelines.

Site grading will follow the Geotechnical Engineer's recommendations conforming to Chapter 14, Article 15 of the Revised Ordinances of Honolulu (ROH) "Grading, Grubbing and Stockpiling" as amended. All grading and construction activities will comply with the Rules Relating to Water Quality, Department of Planning and Permitting (DPP), CCH, amended September 17, 2018, to control soil erosion and ensure that the discharge of pollutants from the construction site will be reduced to the maximum extent as practicable (MEP).

Temporary erosion control measures shall be installed prior to any demolition and/or construction activities. Recommended Structural Best Management Practices (BMPs) include silt fence, filter sock, stabilized construction ingress/egress, concrete washout area, and sediment control filters at drain inlets and catch basins. The City should be consulted during the design process to help determine the extent of storm water quality management measures required.



**FIGURE 3-1**  
**SOILS CLASSIFICATION MAP**



**PROJECT SITE**  
**TMKs: (1) 2-6-006:001 and 04**

**LEGEND**

Project Site

TMK Parcel

**Flood Zone**

AO

AE

**GRAPHIC SCALE:**

0 50 100 200

SCALE: 1" = 100'

PANEL 0366G

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**CITY AND COUNTY OF HONOLULU, HAWAII**


**PANEL 366 OF 395**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0366	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
15003C0366G

**MAP REVISED**  
JANUARY 19, 2011

Federal Emergency Management Agency



**FIGURE 3-2**  
**FLOOD INSURANCE RATE MAP**



## **4 UTILITY ANALYSIS**

### **4.1 Storm Drainage**

#### **4.1.1 Background**

Review of site storm drainage systems is based on City and County of Honolulu GIS Map Data and available record drawings.

#### **4.1.2 Existing Condition**

Along Kalakaua Avenue there is an existing catch basin located approximately in line with the boundary between Parcels 1 and 4. The catch basin is connected to the City underground drainage system that discharges into the Ala Wai Canal at the mauka end of Kalaimoku Street (See Figure 4-1).

More information on the existing conditions is contained in the *Preliminary Drainage Study for Kalia Cultural Entertainment Venue* (See Appendix D).

#### **4.1.3 Proposed Drainage System Improvements**

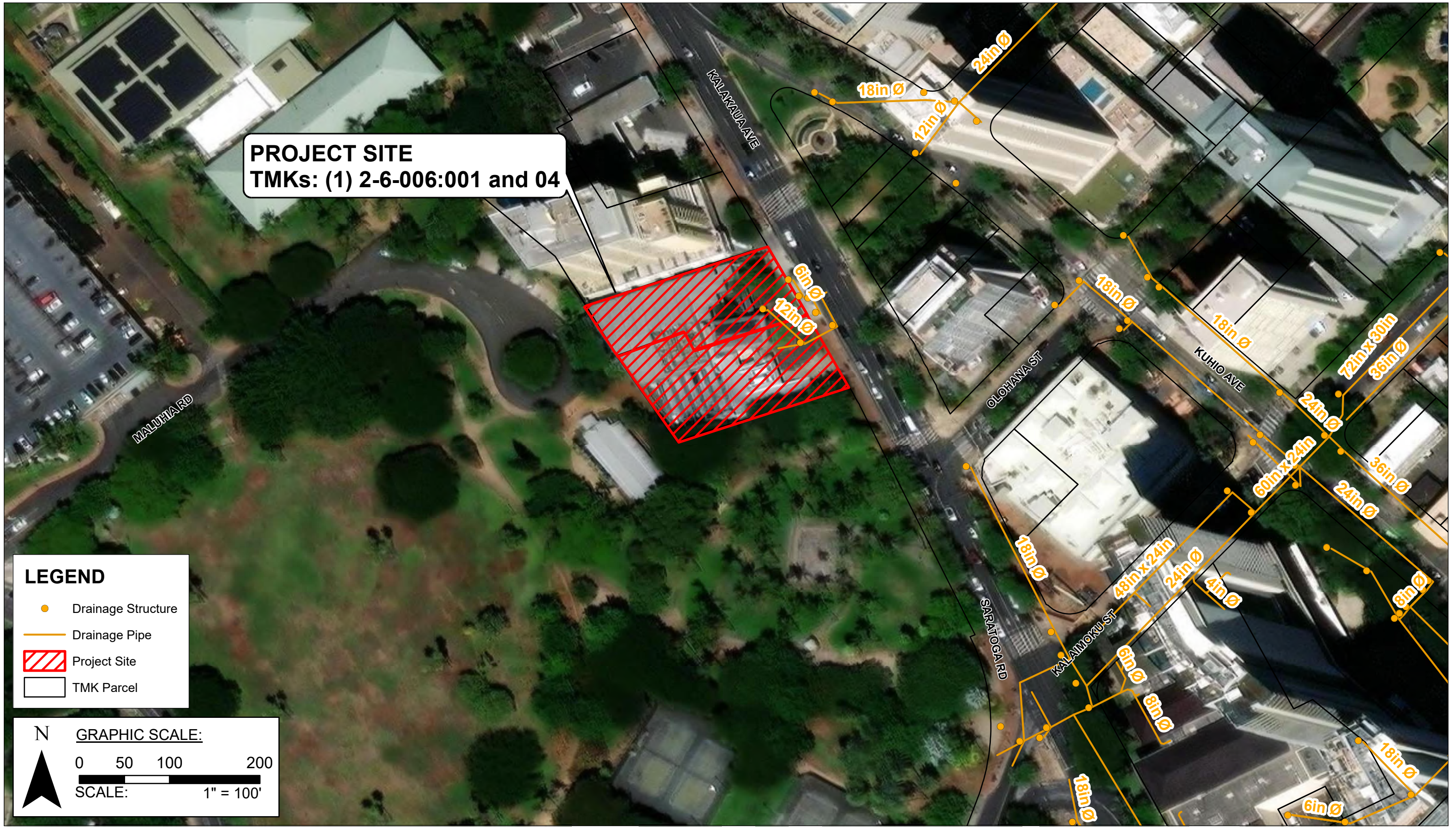
The existing site is comprised of both impervious and pervious surfaces. The installation of the large open lawn area will significantly increase the amount of pervious area onsite, which may serve to decrease storm water peak flow runoff quantities. Additional drainage improvements may include the installation of drain inlets, manholes, and treatment devices as required by the proposed layout of the site.

The final sizes and drainage structure locations will be determined during the design phase of the project and maintain the existing discharge points to the city drainage system. As required by the Storm Drainage Standards, DPP, CCH, dated August 2017, storm water quality measures shall be installed to treat the water quality volume.

More information on the proposed conditions is contained in the *Preliminary Drainage Study for Kalia Cultural Entertainment Venue* (See Appendix D).

#### **4.1.4 Sea Level Rise**

The Pacific Islands Ocean Observing System (PacIOOS) Hawai'i Sea Level Rise Viewer provides 3.2' height sea level rise impacts by the year 2100 due to passive flooding, annual high wave flooding, and coastal erosion (See Figure 4-2). According to the viewer, passive flooding does not occur in the vicinity nor within the project site. Therefore, the project will not be impacted by the 3.2-foot sea level rise.



**PROJECT SITE**  
 TMKs: (1) 2-6-006:001 and 04

**LEGEND**

- Drainage Structure
- Drainage Pipe
- Project Site
- TMK Parcel

**N** **GRAPHIC SCALE:**

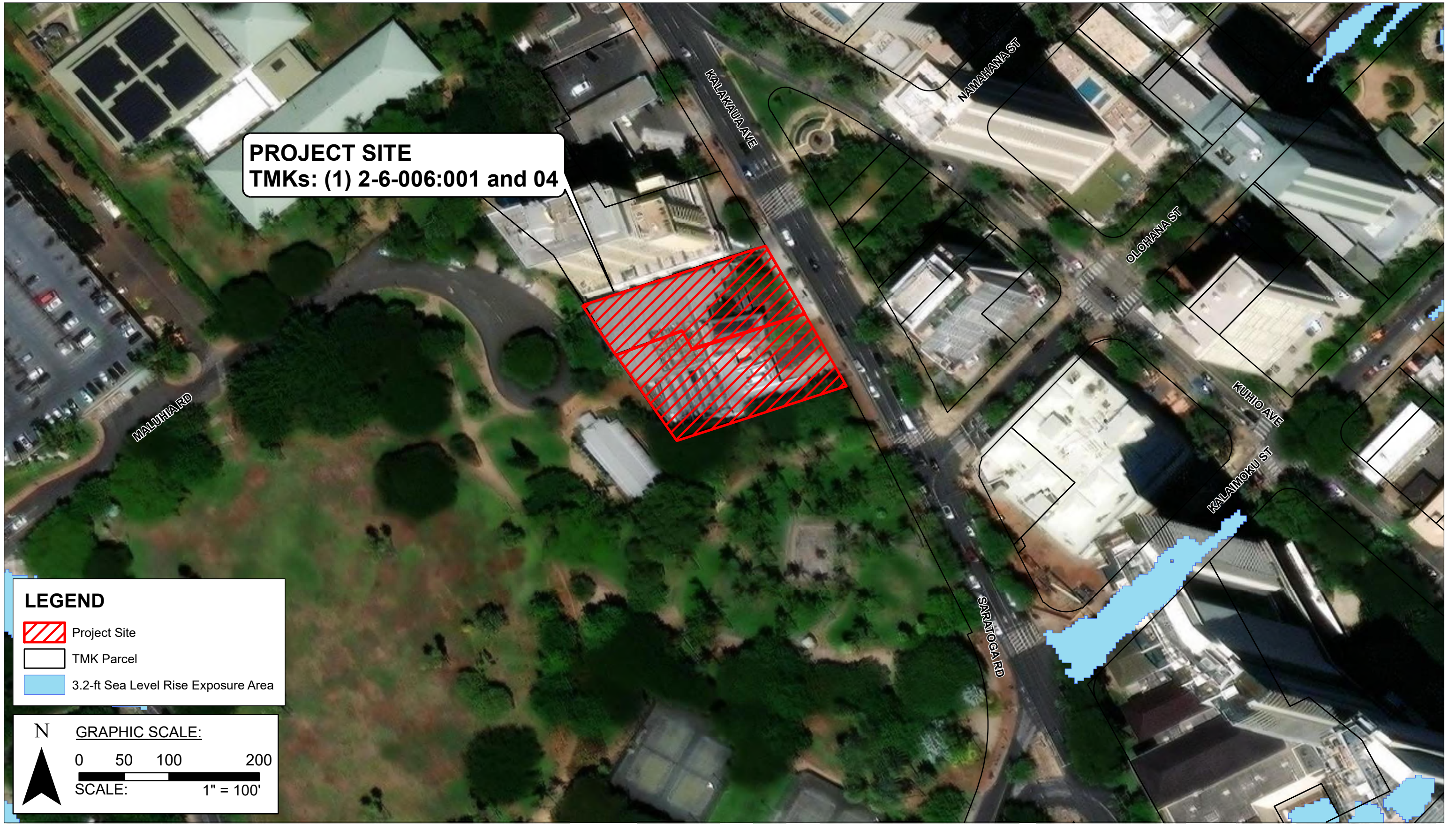
0 50 100 200

**SCALE:** 1" = 100'



**FIGURE 4-1**

**EXISTING STORM DRAINAGE SYSTEM**



**FIGURE 4-2**  
SEA LEVEL RISE

## **4.2 Sanitary Sewer System**

### **4.2.1 Existing Conditions**

Information obtained via record drawings and GIS map data provided by the City and County of Honolulu, indicates each parcel has a 6-inch sewer lateral that connects to an existing 8-inch gravity sewerline that runs within the sidewalk fronting the project site along Kalakaua Avenue. The existing sewer main connects to the Fort DeRussy pump station located along Kalakaua Avenue, north of the project site (See Figure 4-3 Existing Sanitary Sewer System).

### **4.2.2 Proposed Improvements**

A sewer connection application was submitted to the City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch in May 2023. The City approved the sewer connection application on June 2, 2023 (See Appendix A).

A sewer connection application in support of the previously planned development was submitted in June 2015. As of November 2015, the application was being reviewed by the Department of Environmental Services. In summary, coordination between the City and the EPA and DOH spanning from 2010-2014 regarding required improvements to the Fort DeRussy wastewater pump station which serves the project site has not been resolved.

Sewage flows from the proposed development is anticipated to be collected by one or more of the existing laterals adjacent to the parcels. Locations of the lateral connections and their ability to be utilized in the proposed project should be verified during the design process.

Trenching and backfilling of the proposed sewer lines will follow CCH standards and the Soils Engineer's recommendations.

Upon City approval of construction plans and payment of any applicable sewer facilities charges, the proposed system can be connected to the City sewer system.

### **4.2.3 Design Criteria and Facility Charges**

Average daily sanitary sewer rates are based on the City and County of Honolulu, Design Standards of the Department of Wastewater Management. The quantity of wastewater was determined as follows:

Flow Criteria:

- Resort Use Area of 0.66 acre and 400 capita per acre = 264 capita
- Average per capita flow = 80 gallons per day

Based on the above criteria the estimated average daily flow for the project is calculated as:

$$264 \text{ capita} \times 80 \text{ gallons per day} = 21,120 \text{ gallons per day.}$$



**PROJECT SITE**  
 TMKs: (1) 2-6-006:001 and 04

**LEGEND**

- Sewer Manhole
- Sewer Mains
- Sewer Laterals
- Project Site
- TMK Parcel

**N** **GRAPHIC SCALE:**

0 50 100 200

**SCALE:** 1" = 100'



**FIGURE 4-3**

**EXISTING SANITARY SEWER SYSTEM**

### **4.3 Water Supply System**

#### **4.3.1 Existing Conditions**

Water for domestic use and fire protection is provided to the project site and surrounding vicinity through the CCH Board of Water Supply (BWS) municipal water system (See Figure 4-4). Wilson Okamoto Corporation requested information from BWS on May 23, 2023, to better understand the existing water system near the project site. Per resources provided by BWS on May 24, 2023, the offsite BWS water system in the vicinity of the project site consists of 8-inch cast iron cylinder pipe running along Kalakaua Avenue. The project site is served by the existing 8-inch main via a 5/8" meter (M/N#0720844465) with a 1-inch lateral. BWS records also indicate an additional 2-inch meter (M/N#8383346215) with a 2.5-inch lateral (See Figure 4-4; Appendix B). The closest existing fire hydrant to the project site frontage is located on the mauka side of Kalakaua Ave near the intersection of Kalakaua Avenue and Kalaimoku Street.

Correspondence in June 2015, between Wilson Okamoto Corporation and BWS, indicated the existing system could not provide adequate fire protection for the previously planned development. However, the lesser demand of the currently proposed development may result in a more favorable determination regarding water availability by BWS.

A request letter for water availability for the draft environmental assessment of the currently proposed development was submitted to the Board of Water Supply (BWS) on April 10, 2023. BWS sent a response letter on May 2, 2023, indicating the existing water system is currently adequate to accommodate the proposed development. However, the existing Honolulu water system capacity has been reduced due to the shutdown of the Halawa Shaft pumping station.

An updated request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on May 19, 2023. BWS sent a response letter on June 8, 2023 containing similar conclusions to those included in the May 2 response letter (See Appendix B).

During the design process, construction drawings should be submitted to BWS for review approval and on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. BWS will require the implementation of water conservation measures for the proposed residential redevelopment. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

#### **4.3.2 Connection to Board of Water Supply Systems**

Water connection(s) to the existing Board of Water Supply system will be determined during the design the design process and when construction plans for the proposed project are submitted for review and approval. If the existing laterals are not utilized,

connection will likely occur to the existing 8-inch main along the makai side of Kalakaua Avenue.

The locations of the existing water laterals and meters and their ability to be utilized in the proposed project should be verified during the design process.

#### **4.3.3 Design Standards**

Average daily water demand is based on BWS Water System standards, Domestic Consumption Guidelines. The zoning designation of the proposed site was determined to be Commercial Only with an associated demand of 3000 gals/acre. The average daily water demand is as follows:

##### Average Daily Water Demand:

- Commercial Use – 0.66 acres
- Average Daily Demand for Commercial Use – 3000 gals per acre per day.

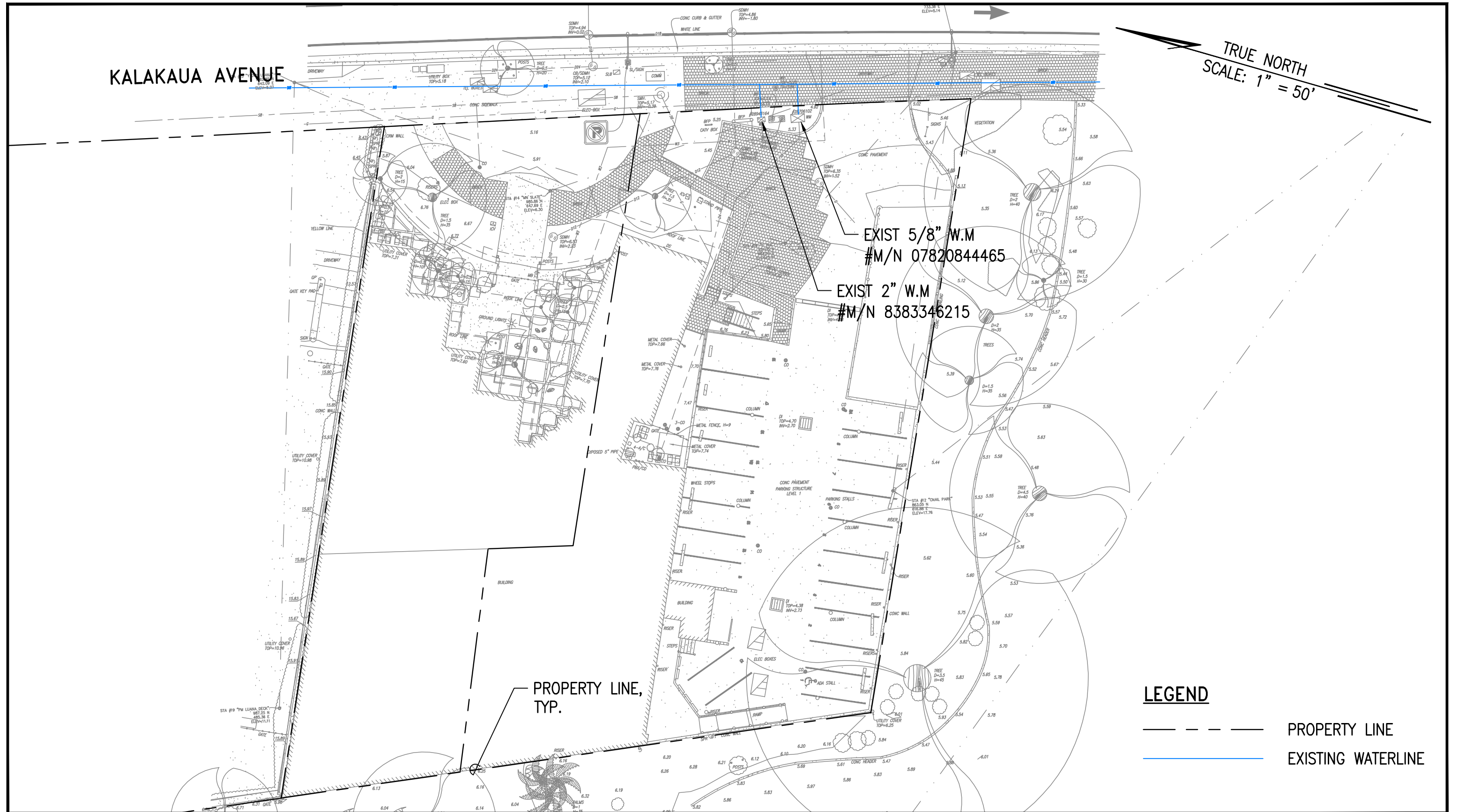
Based on the above criteria the estimated average daily water demand for the project is calculated as:

$$0.66 \text{ acres} \times 3000 \text{ gals per acre per day} = 1980 \text{ gallons per day}$$



KALAKAUA AVENUE

TRUE NORTH  
SCALE: 1" = 50'



EXIST 5/8" W.M.  
#M/N 07820844465

EXIST 2" W.M.  
#M/N 8383346215

PROPERTY LINE,  
TYP.

**LEGEND**

- PROPERTY LINE
- EXISTING WATERLINE



**FIGURE 4-4**  
**EXISTING WATER SUPPLY SYSTEM**

## **4.4 Other Utility Systems**

### **4.4.1 Electrical Power Facilities**

Wilson Okamoto Corporation requested information from Hawaiian Electric Company (HECO) on May 23, 2023, to understand existing electrical system near the project site (See Appendix C). Connection(s) and electrical service capacity should be verified with HECO during the design process.

### **4.4.2 Telephone System**

Wilson Okamoto Corporation requested information from Hawaiian Telcom (HiTel) on May 23, 2023, to understand the existing telecommunications system near the project site (See Appendix C). Connection(s) and telecommunications service capacity should be verified with HiTel during the design process.

### **4.4.3 Cable Television System**

Wilson Okamoto Corporation requested information from Spectrum (formerly Oceanic and Charter Communications) on May 23, 2023, to understand existing CATV system near the project site (See Appendix C). Connection(s) and CATV service capacity should be verified with Spectrum during the design process.

### **4.4.4 Gas System**

Wilson Okamoto Corporation requested information from Hawaii Gas (HiGas) on May 23, 2023, to understand the existing natural gas system near the project site. Record drawings received on May 24, 2023 from HiGas indicate there are two 2-inch gas lines servicing the project site, fed by a main along Kalakaua Avenue (See Appendix C). Connection(s) and gas service capacity should be verified with HiGas during the design process.

## 5 REFERENCES

1. "Flood Insurance Rate Map, City and County of Honolulu, Hawaii, Community Panel Number 15003 C0226 F," Federal Emergency Management Agency, Federal Insurance Administration, September 30, 2004.
2. "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," United States Department of Agriculture, Soil Conservation Service, August 1972.
3. "Storm Drainage Standards", Department of Planning and Permitting, City and County of Honolulu, August 2017.
4. "Rules Relating to Water Quality of the Administrative Rules, Title 20," Department of Planning and Permitting, City and County of Honolulu, September 17, 2018.
5. "Water System Standard", Board of Water Supply, City and County of Honolulu, State of Hawaii, 2022.
6. "Wastewater System Design Standards, Volume 1 Wastewater Collection Systems," Department of Environmental Services, City and County of Honolulu, July 2017
7. "16 Inch low pressure water main Waikiki section – Job 26 W", Honolulu Sewer and Water Commission Honolulu, T.H. January 9, 1928.
8. "McCully –Waikiki: 30-inch and 12-inch Water Mains – Job 92 -12" R.M. Towill Corporation, Board of Water Supply, City and County of Honolulu, August 1995.
9. "2057 Kalakua Avenue Premise ID Reports", Board of Water Supply, City and County of Honolulu, May 24 2023.
10. "Topographic Survey Affecting Land Court Application 857 Lot B Land Court Application Por, R.P 8416, L. C. AW. 8559-B Ap. 29 to WM C. Lunalilio" by Walter P. Thompson, Inc Surveying and Mapping" dated December 12, 2022.

# **Appendix A**

## ***Sewer System Information***

- Sewer Connection Application submitted May 2023
- Approved Sewer Connection Application dated June 2, 2023

## SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

All required documents and fees must accompany this application form. Please visit [www.honolulu.gov/dpp](http://www.honolulu.gov/dpp) for applicable procedures and fees under the menu heading Application & Forms, Site Engineering and Subdivision Permits. Electronic submittal of permit applications and other permit-related documents constitutes agreement by the applicant or authorized representative to transact business electronically with this department, in accordance with HRS Chapter 489E.

I. PERMIT	VARIANCE	APPROVAL
-----------	----------	----------

**Check one or more as appropriate:**

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Grading<br><input type="checkbox"/> Grubbing<br><input type="checkbox"/> Stockpiling<br><input type="checkbox"/> Trenching | <input type="checkbox"/> Sewer Connection<br><input type="checkbox"/> Flood Hazard Variance<br><input type="checkbox"/> Flood Determination<br><input type="checkbox"/> Floodway Permit<br><input type="checkbox"/> Flood Map Revision | <input type="checkbox"/> Subdivision, Easement Consolidation<br><input type="checkbox"/> Park Dedication<br><input type="checkbox"/> Lot Determination<br><input type="checkbox"/> Ag. Site Development |
|---|--|---|

**Complete Sections I, II, III and all other sections as possible**

II. LOT AND LAND USE INFORMATION
----------------------------------

TAX MAP KEY(S) \_\_\_\_\_ Lot Area: \_\_\_\_\_ sq.ft/ac.

Zoning District: \_\_\_\_\_ Development Plan Designation: \_\_\_\_\_ State Land Use District: \_\_\_\_\_

Street Address/Location of Property: \_\_\_\_\_

Present Use of Property/Building: \_\_\_\_\_

Project Name (if any): \_\_\_\_\_

Request/Proposal (describe the nature of the request, proposed activity or project): \_\_\_\_\_

III. APPLICANT INFORMATION
----------------------------

Owner/Developer	Engineer/Architect	Contractor (or Agent for Subdivision apps only)
Name (& title) _____	_____	_____
Mailing Address _____	_____	_____
City _____ State _____ Zip _____	City _____ State _____ Zip _____	City _____ State _____ Zip _____
Phone Number(s) _____	_____	_____
Email Address _____	_____	_____

APPLICANT _____	_____	 Signature of applicant
Print NAME of applicant	Print TITLE of applicant	

IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY
---

Estimated Dates: Start: \_\_\_\_\_ Completion: \_\_\_\_\_ Borrow Material: \_\_\_\_\_

Area of work (sf or acres): \_\_\_\_\_ Borrow Site: \_\_\_\_\_

Disturbed area (sf or acres): \_\_\_\_\_ Disposal Material: \_\_\_\_\_

Estimated Quantity (cy): Cut: \_\_\_\_\_ Fill: \_\_\_\_\_ Disposal Site: \_\_\_\_\_

V. AUTHORIZED AGENT
---------------------

**This statement of authorization is used in reference to the information provided for in sections I, II and III above.**

I/We, \_\_\_\_\_, hereby authorize \_\_\_\_\_  
Print NAME and TITLE of person giving authority Print NAME of person receiving authority (Authorized Agent)

to act in my/our behalf in obtaining/closing the Grading/Grubbing/Stockpiling/Trenching permit for the project.

\_\_\_\_\_  
 Signature of Owner/Developer giving authority Date

FOR DIVISION USE ONLY:
------------------------

Grading Permit No.: _____	Application No.: _____
Trenching Permit No.: _____	Date of Application: _____
	Received By: _____

# SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

## VI. FOR TRENCHING INFORMATION ONLY

Tax Map Key(s): \_\_\_\_\_

Work to be performed for: \_\_\_\_\_ Work to be done:  Service Connection  Repair  Borings

Estimated Dates: Start: \_\_\_\_\_ Completion: \_\_\_\_\_ Other: \_\_\_\_\_

Estimated Value of work: \$ \_\_\_\_\_ Dimensions: \_\_\_\_\_ ft/in \_\_\_\_\_ ft/in \_\_\_\_\_ ft/in  
length width depth

in the city right - of - way

AGENCY CLEARANCES	SIGNATURE	DATE	ADDRESS	PHONE NO.
DPP, Wastewater Branch			650 So. King St., FMB, 1st Flr.	768-8210
DTS, Traffic Signal			650 So. King St., FMB, 2nd Flr.	768-8388
DDC, Street Lightning			650 So. King St., FMB, 11th Flr.	768-8431
BWS, Customer Care			630 So. Beretania St., 1st Flr.	748-5460
Hawaiian Electric Co., Inc., Engineering Division			820 Ward Avenue, 4th Flr.	543-5654
Hawaiian Telcom, Excavation			1177 Bishop St., Lobby	546-7746
Gasco., Inc., Maps & Records			515 Kamakee St., 1st Flr.	594-5575
Spectrum, Engineering & Construction			200 Akamainui St. haw.engineering.research@charter.com	625-8443
DFM, Division of Road Maintenance (if trenching 200 linear feet or more)			99-999 Iwaena Street, #214	786-3600

DPP: Dept. of Planning and Permitting DTS: Dept. of Transportation Services DDC: Dept. of Design and Construction BWS: Board of Water Supply DFM: Dept. of Facility Maintenance

**Note to agencies providing clearances:** Signatures on this form may be reproduced (scanned and emailed) and submitted electronically for permitting purposes in accordance with HRS Chapter 489E. Original wet signatures may be retained by the applicant(s).

**Note to the applicants receiving clearances:** The utilities listed above may not represent all underground utilities located within City rights-of-ways, nor do their utility clearances relieve the permittee from complying with all other applicable codes, rules, regulations, and/or permit procedures including, but not limited to, additional clearances and requirements for other utilities (i.e. irrigation, data transmission, etc.) located within City rights-of-ways. Pursuant to ROH 2021, Section 14-2.6, the permittee shall indemnify and save harmless the city for any injuries or damages to any person or property received or sustained by any person as a consequence of any act or acts of the permittee on work done under the trenching permit.

## VII. FOR SEWER CONNECTION INFORMATION ONLY

*To receive a response via e-mail, provide email address below and check box here:*

Residential: No. of Proposed Units \_\_\_\_\_ (Provide breakdown below)

\_\_\_\_\_ Studios \_\_\_\_\_ 1 Bedroom \_\_\_\_\_ 2 Bedrooms \_\_\_\_\_ 3 Bedrooms \_\_\_\_\_ 4 Bedrooms \_\_\_\_\_ Other

Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

CATEGORY(IES)	QUANTITY(IES)	NEW WATER METER SIZE(S)
_____	_____	_____
_____	_____	_____
_____	_____	_____

Date of Connection: \_\_\_\_\_ (approximate) Connection Work Desired:  Use Existing Lateral  Other

Dimensions: \_\_\_\_\_ ft. \_\_\_\_\_ in. \_\_\_\_\_ ft.  
length size depth

Existing Structures/Dwellings on Property: (Provide breakdown below)

TYPE (i.e. Single Family)	QUANTITY(IES)	REMAIN	DEMOLISH
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Remarks: (Provide any additional information on the lines provided) *To receive a response via e-mail, provide email address below and check box here:*

\_\_\_\_\_

\_\_\_\_\_

### FOR DIVISION USE ONLY:

Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_

# SEWER TABLE

This table is used for required category and quantity for non-residential connections. (See sect. V1 "Sewer Connection Information Only" of the Site Development Master Application form).

TAX MAP KEY(S) 1-2-6-006:004 and 001

CATEGORY	UNITS QUANTITY	CATEGORY	UNITS QUANTITY
Animal Clinic	Employees	Meat Processing	gpd*
Aquarium	Employees	Medical Clinic	Employees
Auto Repair	Employees	Military	gpd*
Bakery	Employees	Milk Processing	gpd*
Banks	Employees	Mortuaries	Employees
Bowling Alley	Employees	Motel	Rooms
Car Dealership	Employees	Museum	Employees
Car Wash	Employees	Newspaper Agencies	Employees
Caterers	Employees	Noodle Factory	Employees
Church	Employees	Nursery	Employees
Commercial (Misc.)	Sq. Ft. of Floor Space	Nursing, Convalescent Home	Employees and Beds
Commercial Kennel	Employees	Office Building	Employees
Convent	Sisters	Park w/ comfort station only	Employees
Day Care, Pre-School	Children	Parking Structure	Employees
Delicatessen	Employees	Personal Services	Employees
Dental Clinic	Employees	Photo Finishers	Employees
Dentist's Office	Employees	Photo Processing	Employees
District Park	Employees	Pineapple Processing	gpd*
Doctor's Office	Employees	Police Station	Employees
Dormitory	Rooms	Potato Chip Manufacturing	gpd*
Drinking Establishment	Employees	Poultry Processing	gpd*
Dry Cleaning	gpd *	Prison	Prisoners
Elementary School	Students	Private Clubs	Employees
Eye Glass Manufacturing	Employees	Residential Care Home	Employees and Beds
Fast Foods	Employees	Resort Condo	Rooms
Fire Station	Employees	Restaurant	Seats per day
Florist	Employees	Retail	Sq. Ft. of Retail Floor Space
General Industry (Misc.)	Sq. Ft. of Floor Space	Rooming House	Rooms
Golf Course w/Clubhouse	Employees	Schools (other)	Students
Government Offices	Employees	Service Station	Employees
Grocery Store	Employees	Shopping Center	Sq. Ft. of Retail Floor Space
Half-way House	Employees and Beds	Soy Bean Factory	gpd*
Health Spa	Employees	Sports Arena	gpd*
High Schools	Students	Stadium	gpd*
Hospital	Beds	Sugar Processing	gpd*
Hostel	Rooms	Supermarket	Employees
Hotel	Rooms	Theater	Seats per day
Hotel Development	Acres	Tofu Factory	gpd*
Intermediate Schools	Students	Warehouse	Employees
Jewelry Manufacturing	Employees	YMCA (Lodging)	Rooms
Laundromats	Machines	Zoo	Employees
Library	Employees		

\*gpd = gallons per day

FOR DIVISION USE ONLY:

Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_

## Brooks Martinez

---

**From:** Brooks Martinez  
**Sent:** Tuesday, May 30, 2023 4:41 PM  
**To:** Meng, Jing  
**Cc:** Brennan Nacario  
**Subject:** RE: New Project Sewer Connection Application - Kalia Luau Waikiki

Hi Jing,

We estimate a sewage flow of **21,120 gpd**.

- The project site is in the Resort area (400 Capita/acre)
- $A=28761 \text{ sf} \sim 0.66 \text{ acre}$
- $400 \text{ capita/day} * 0.66 \text{ acre}$ 
  - o 264 Capita per day
- Avg. per capita flow.=80 gpd
- $264 \text{ capita per day} \times 80 \text{ gpd per capita}$ 
  - o **Est. flow = 21,120 gpd**

Thank you,

**Brooks Anthony Martinez**  
Civil Engineer



1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
T (808) 946-2277 F (808) 946-2253  
W <http://www.wilsonokamoto.com>

This message contains information that might be confidential and privileged. Unless you are the addressee or are authorized by the sender, you may not use, copy or disclose the information contained in this message. If you have received this message in error, please delete it and advise the sender.

---

**From:** Meng, Jing <jing.meng@honolulu.gov>  
**Sent:** Tuesday, May 30, 2023 4:21 PM  
**To:** Brooks Martinez <BMartinez@wilsonokamoto.com>  
**Cc:** Brennan Nacario <BNacario@wilsonokamoto.com>  
**Subject:** RE: New Project Sewer Connection Application - Kalia Luau Waikiki

Hi Brooks,

For 28,761 sf commercial (misc): Please provide breakdown list such as restaurant (seats/day or floor area), retail (floor area or employee count), office (floor area or employee count), etc. or provide estimated sewage flow in gallons per day.

Thanks,  
Jing



**From:** Meng, Jing <[jing.meng@honolulu.gov](mailto:jing.meng@honolulu.gov)>  
**Sent:** Friday, May 12, 2023 12:05 PM  
**To:** Brennan Nacario <[BNacario@wilsonokamoto.com](mailto:BNacario@wilsonokamoto.com)>  
**Subject:** RE: New Project Sewer Connection Application - Kalia Luau Waikiki

Hi Brennan,

We received your sewer connection application.

Thanks,  
Jing

---

**From:** Brennan Nacario <[BNacario@wilsonokamoto.com](mailto:BNacario@wilsonokamoto.com)>  
**Sent:** Friday, May 12, 2023 11:45 AM  
**To:** Meng, Jing <[jing.meng@honolulu.gov](mailto:jing.meng@honolulu.gov)>  
**Cc:** Coloma, Jon E <[jon.coloma@honolulu.gov](mailto:jon.coloma@honolulu.gov)>  
**Subject:** New Project Sewer Connection Application - Kalia Luau Waikiki

CAUTION: Email received from an **EXTERNAL** sender. Please confirm the content is safe prior to opening attachments or links.

Hi Jing,  
We respectfully request review/approval of the attached sewer connection for the subject project. There have been previous SCAs reviewed/approved in years past for this same parcel but those residential tower projects never went through with construction. What is being proposed now is an open lawn entertainment area for cultural shows. If it helps, I can send the previously approved SCAs although those would have been for a completely different use.

Please feel free to let me know if you have any questions.

Thanks,  
**Brennan Nacario, PE**  
Project Manager



1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
T (808) 946-2277 C (808) 271-3342  
W <http://www.wilsonokamoto.com>

This message contains information that might be confidential and privileged. Unless you are the addressee or are authorized by the sender, you may not use, copy or disclose the information contained in this message. If you have received this message in error, please delete it and advise the sender.



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.: **2023/SCA-0612** STATUS: **Approved with Conditions**

DATE RECEIVED: **05/12/2023** IWDP APP. NO.:

PROJECT NAME: **2023/SCA-0612 Kalia Cultural Entertainment Venue**

LOCATION:

Zone	Section	Plat	Parcel
2	6	006	001

**2057 KALAKAUA AVE Honolulu / Waikiki 96815** **17,257 Sq. Ft.**

Zone	Section	Plat	Parcel
2	6	006	004

**2051 KALAKAUA AVE Honolulu / Waikiki 96815** **11,504 Sq. Ft.**

SPECIFIC LOCATION: **2051 & 2057 KALAKAUA AVENUE**

APPLICANT: **Brennan Nacarlo**  
 1907 S. Beretania Street, Suite 400  
 Honolulu, HI 96826

DEVELOPMENT TYPE: **Theater** SEWER CONNECTION WORK DESIRED: **Existing**

OTHER USES: **715 people**

NON-RESIDENTIAL AREA: s.f. APPROXIMATE DATE OF CONNECTION:

<u>PROPOSED UNITS</u>	<u>EXISTING UNITS</u>	<u>UNITS TO BE DEMOLISHED</u>
No. of New Units: <b>0</b>	No. of Existing Units: <b>0</b>	No. of Units to be Demolished: <b>0</b>
Studios:	Studios:	Studios:
1-Bedroom:	1-Bedroom:	1-Bedroom:
2-Bedroom:	2-Bedroom:	2-Bedroom:
3-Bedroom:	3-Bedroom:	3-Bedroom:
4-Bedroom:	4-Bedroom:	4-Bedroom:
5-Bedroom:	5-Bedroom:	5-Bedroom:
6-Bedroom:	6-Bedroom:	6-Bedroom:

REMARKS **Industrial Wastewater Discharge Permit (IWDP) may be required. Submit IWDP application. Wastewater System Facility Charges (WSFC) may apply pending water meter installation or size increase.**

Approved with **06/02/2023**  
 Conditions

*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.*

EXPIRATION DATE: **06/01/2025**

*\* 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.*

REVIEWED BY: **Jing Meng**

Site Development Division, Wastewater Branch

# **Appendix B**

## ***Water System Information***

- Water Availability Response Letter received May 2, 2023
- Updated Water Availability Request Letter submitted May 19, 2023
- Updated Water Availability Response Letter received June 8, 2023
- BWS Premise ID Report provided May 24, 2023

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
[www.boardofwatersupply.com](http://www.boardofwatersupply.com)



May 2, 2023

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
MAX J. SWORD  
NA'ALEHU ANTHONY  
JONATHAN KANESHIRO

EDWIN H. SNIFFEN, Ex-Officio  
WARREN K. MAMIZUKA, Acting Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ERWIN M. KAWATA  
Deputy Manager



Mr. Keola Cheng  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Your Letter Dated April 10, 2023 Requesting Comments on the Draft Environmental Assessment for the Proposed Kalia Cultural Entertainment Venue Project at 2055 Kalakaua Avenue, Tax Map Key: 2-6-006: 001, 004

Thank you for your letter regarding the proposed Kalia Cultural Entertainment Venue project.

The existing water system is currently adequate to accommodate the proposed development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Halawa Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come first-served basis. 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.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remain safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at <http://www.boardofwatersupply.com> and <http://www.protectohawater.org> for the latest updates and water conservation tips.

Mr. Keola Cheng  
May 2, 2023  
Page 2

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Water conservation measures are required for the proposed residential redevelopment. These measures may include utilization of nonpotable water for irrigation, using rain catchments, combination of drought tolerant plants and xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Barry Usagawa of our Water Resources Division at (808) 748-5900.

Very truly yours,

  
ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

*RY*



10773-03  
May 19, 2023

City and County of Honolulu  
Board of Water Supply  
Customer Care Operating Unit  
630 South Beretania Street  
Honolulu, HI 96813

Attention: Mr. Ernest Lau – Manager and Chief Engineer BWS

Subject: Kalia Cultural Entertainment Venue – BWS Water System Adequacy

Dear Mr. Lau:

We are requesting Board of Water Supply assistance to determine adequacy of the existing source, storage, and water distribution systems in Kalakaua Avenue for the development of Kalia Cultural Entertainment Venue located at TMK: 2-1-006:001, 004. See enclosed Project Location and Vicinity Map, and Tax Map Key.

The development will include the following programming:

- Seating Count: 740 Seats Total
  - Ground Floor – 698 Seats
  - VIP 1 – 18 Seats
  - VIP 1.5 – 6 Seats
  - VIP 2 – 8 Seats
  - VIP 3 – 10 Seats

In addition to your review of the existing water system, we are requesting Board of Water Supply flow information, pressure information, record drawings, and facility maps related to the property. Any existing facility information that can be provided will be used in the project planning and design process to minimize potential conflicts during construction.

Feel free to call or email me at [bnacario@wilsonokamoto.com](mailto:bnacario@wilsonokamoto.com) should you have any questions or require additional information.

10773-03  
Letter to Ernest Lau  
Page 2  
May 19, 2023

Sincerely,

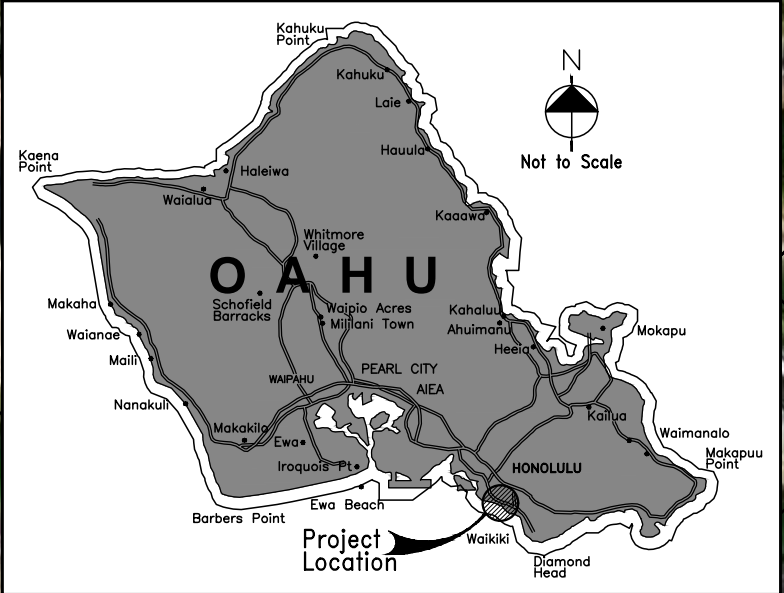
A handwritten signature in black ink that reads "Brennan Nacario". The signature is written in a cursive style with a large, stylized initial 'B'.

Brennan A. Nacario, P.E  
Project Manager



Enclosures: Project Vicinity and Location Map  
Tax Map Key



**PROJECT SITE**  
**TMKs: (1) 2-6-006:001 and 04**



**LEGEND**

-  Project Site
-  TMK Parcel

**GRAPHIC SCALE:**

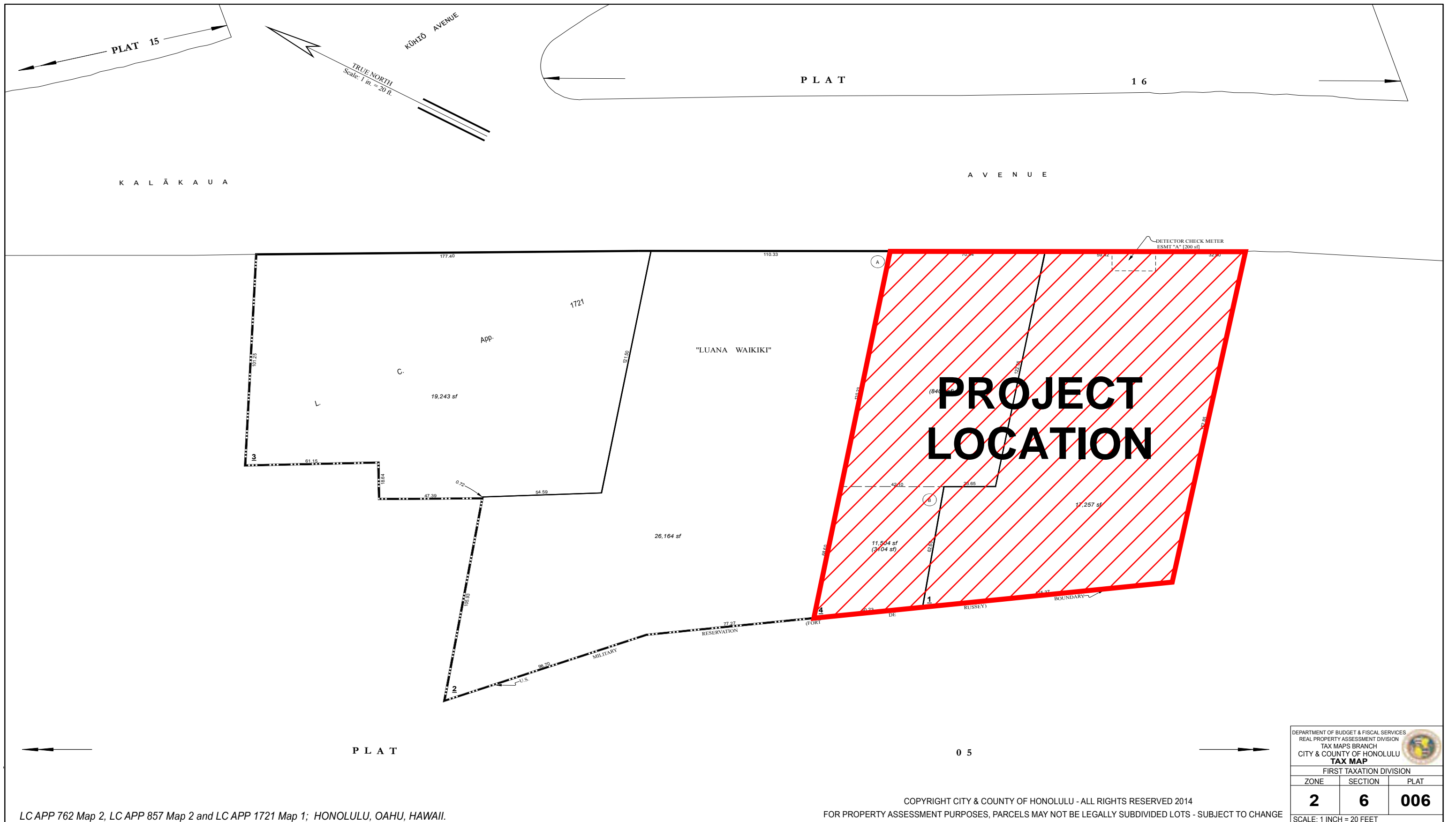
0 50 100 200

**SCALE:** 1" = 100'



**FIGURE 1-1**  
**PROJECT LOCATION AND VICINITY MAP**





LC APP 762 Map 2, LC APP 857 Map 2 and LC APP 1721 Map 1; HONOLULU, OAHU, HAWAII.

COPYRIGHT CITY & COUNTY OF HONOLULU - ALL RIGHTS RESERVED 2014  
 FOR PROPERTY ASSESSMENT PURPOSES, PARCELS MAY NOT BE LEGALLY SUBDIVIDED LOTS - SUBJECT TO CHANGE

DEPARTMENT OF BUDGET & FISCAL SERVICES REAL PROPERTY ASSESSMENT DIVISION TAX MAPS BRANCH CITY & COUNTY OF HONOLULU <b>TAX MAP</b>		
FIRST TAXATION DIVISION		
ZONE	SECTION	PLAT
<b>2</b>	<b>6</b>	<b>006</b>
SCALE: 1 INCH = 20 FEET		



**FIGURE 1-2**  
TAX MAP KEY

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
www.boardofwatersupply.com



June 8, 2023

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
MAX J. SWORD  
NA'ALEHU ANTHONY  
JONATHAN KANESHIRO

EDWIN H. SNIFFEN, Ex-Officio  
WARREN K. MAMIZUKA, Acting Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ERWIN M. KAWATA  
Deputy Manager

Mr. Brennan A. Nacario, P.E.  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Nacario:

**Subject: Your Letter Dated May 19, 2023 Requesting Comments on the Availability of Water and Flow and Pressure Data for the Proposed Kalia Cultural Entertainment Venue Project at 2055 Kalakaua Avenue Tax Map Key: 2-6-006: 001, 004**

Thank you for your letter regarding the proposed Kalia Cultural Entertainment Venue project.

The existing water system is currently adequate to accommodate the proposed development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Halawa Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come, first-served basis. 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.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remains safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at <http://www.boardofwatersupply.com> and <http://www.protectoahuwater.org> for the latest updates and water conservation tips.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Mr. Brennan Nacario  
June 8, 2023  
Page 2

Water conservation measures are required for the proposed residential redevelopment. These measures may include utilization of non-potable water for irrigation, using rain catchments, combination of drought tolerant plants and xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The construction drawings should be submitted for our approval, and the construction schedule should be coordinated to minimize impact to the water system.

The BWS has suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for Fire Hydrant No. M01057:

Static Pressure.....	76 psi
Residual Pressure.....	28 psi
Flow.....	4,000 gpm

The data is based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

The map showing the location of the fire hydrant is attached.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Barry Usagawa of our Water Resources Division, at (808) 748-5900.

Very truly yours,



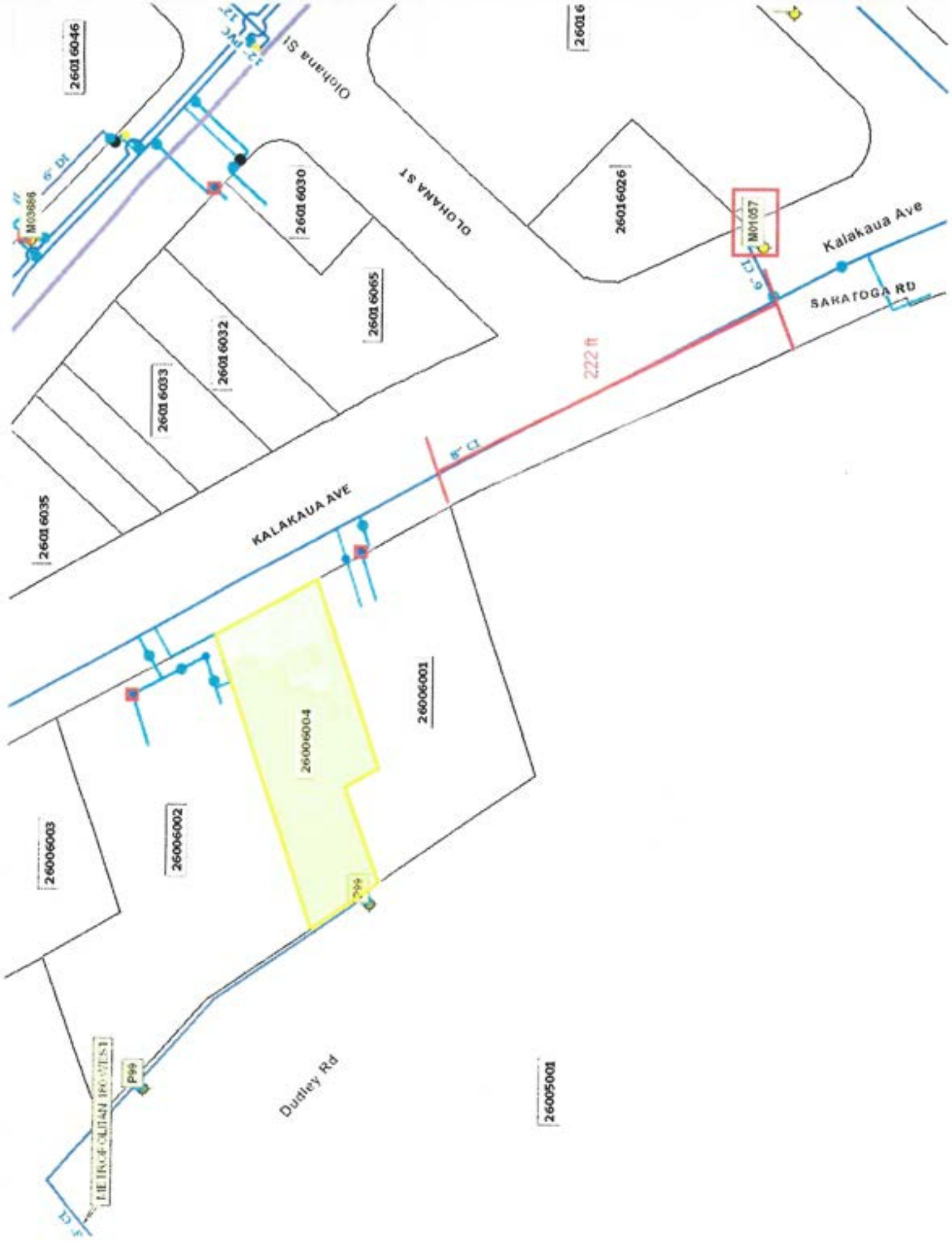
ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer



Attachment

cc: R. Chun

WR-23-67



ADDRESS	2057 KALAKAUA AVE
LOCATION	SLFC K BLDG 2M 1ST K D/A KAI S BX
CUSTOMER_NAME	KYO YA RESTAURANT
MXUID1	000028706102
ECRID1	002002102170
MTR_BADGE_NUM	01205498
MR_CYCLE	MO13
MR_ROUTE	1
MTR_READ_SEQUENCE	26090
SP_ID	0720844180
ASSET_CODE	SERVPT37817
MTR_ID	0720844465
MTR_CONFIG_ID	0720844920
MTR_EFFECTIVE_DATE	2020-03-06 15:51:08.0000000
MTR_MANUFACTURER	SENSUS
MTR_TYPE	WTR-SM
MTR_SIZE	02
MTR_LOCATION	DIRT
MTR_BOX_TYPE	
ABOLISH_DATE	
AD RMS	451400-071
DCMTR	Y
DCMTR_EQUIPMENT_ID	3309899631
DCMTR_INSTALL_DATE	1990-07-05 00:00:00.0000000
DCMTR_BADGE_NUM	88189603
DCMTR_SIZE	1B
REG_ID_1	0720844509
REG_ID_2	
ECRID2	
REG_ID_3	
ECRID3	
MXU_FK_1	5047316669
MXU_FK_2	
MXUID2	
MXU_FK_3	
MXUID3	
INLET_SIZE	
INLET_TYPE	
LATERAL_LENGTH	
LATERAL_SIZE	
LATERAL_TYPE	CU
MAIN_LOCATION	
MAIN_SIZE	

MAIN_TYPE	
OUTLET_SIZE	
OUTLET_TYPE	
PSI_HOSE_BIBB_BEFORE	
PSI_HOSE_BIBB_AFTER	
PSI_AT_MTR	
VALVE_BOX_TYPE	
VALVE_LOCATION	
VALVE_SIZE	
VALVE_TYPE	
MXLOCATION	SP0720844180
SERVICE_TYPE	O-AFS
INSTALL_DATE	1990-07-05
INSTALL_YR	1990
SERVICEPOINT_STATUS	R
SERVICEPOINT_SOURCE_STATUS	C
DISCONNECT_LOCATION	
REVMTR_ASSET_CODE	REVMTR38917
PREMISE_ID	0720844139
CAS_PREMID	1060808
PREMISE_TYPE	UNKNOWN
PREMISE_NAME	
SUBDIVISION	
WTR_DWELLING_UNITS	1
ELEVATION_AGREEMENT	
TMK9	126006001
TMK	26006001
POI	147798
BASEYARD	KAL4
MRC	KAL4
WATER_SYSTEM	METROPOLITAN 180 WEST
WATER_USE_ZONE	2021111400070
SEWER_CLASS	
SIC	
CREATEDATE	2016-03-25 12:36:30.0000000
LAST_MOD_DATE	2021-05-25 07:16:21.0000000

ADDRESS	2057 KALAKAUA AVE
LOCATION	SRFC E BLDG 2M E BX D/A
CUSTOMER_NAME	2055 KALAKAUA LLC
MXUID1	000028943164
ECRID1	000006070265
MTR_BADGE_NUM	06070265
MR_CYCLE	MO13
MR_ROUTE	1
MTR_READ_SEQUENCE	25530
SP_ID	8383346979
ASSET_CODE	SERVPT126750
MTR_ID	8383346215
MTR_CONFIG_ID	8383346024
MTR_EFFECTIVE_DATE	2008-01-30 00:00:00.0000000
MTR_MANUFACTURER	SENSUS
MTR_TYPE	WTR-SM
MTR_SIZE	07
MTR_LOCATION	DIRT
MTR_BOX_TYPE	III
ABOLISH_DATE	
AD RMS	451400-060
DCMTR	N
DCMTR_EQUIPMENT_ID	
DCMTR_INSTALL_DATE	
DCMTR_BADGE_NUM	
DCMTR_SIZE	
REG_ID_1	8383346101
REG_ID_2	
ECRID2	
REG_ID_3	
ECRID3	
MXU_FK_1	0530021760
MXU_FK_2	
MXUID2	
MXU_FK_3	
MXUID3	
INLET_SIZE	
INLET_TYPE	
LATERAL_LENGTH	
LATERAL_SIZE	D
LATERAL_TYPE	CU
MAIN_LOCATION	
MAIN_SIZE	

MAIN_TYPE	
OUTLET_SIZE	2
OUTLET_TYPE	CU
PSI_HOSE_BIBB_BEFORE	
PSI_HOSE_BIBB_AFTER	
PSI_AT_MTR	0050
VALVE_BOX_TYPE	
VALVE_LOCATION	IN
VALVE_SIZE	2
VALVE_TYPE	
MXLOCATION	SP8383346979
SERVICE_TYPE	O-W-NRES
INSTALL_DATE	1990-07-05
INSTALL_YR	1990
SERVICEPOINT_STATUS	R
SERVICEPOINT_SOURCE_STATUS	C
DISCONNECT_LOCATION	
REVMTR_ASSET_CODE	REVMTR133632
PREMISE_ID	8383346910
CAS_PREMID	1060806
PREMISE_TYPE	COM
PREMISE_NAME	
SUBDIVISION	
WTR_DWELLING_UNITS	1
ELEVATION_AGREEMENT	
TMK9	126006001
TMK	26006001
POI	147798
BASEYARD	KAL4
MRC	KAL4
WATER_SYSTEM	METROPOLITAN 180 WEST
WATER_USE_ZONE	2021111400070
SEWER_CLASS	30
SIC	
CREATEDATE	2016-03-25 12:36:30.0000000
LAST_MOD_DATE	2021-05-24 09:07:29.0000000



# **Appendix C**

## ***Other Utility Systems Information***

- HECO Correspondence
- HiTel Correspondence
- Spectrum Correspondence
- HiGas Correspondence and Existing Gas Map dated May 24, 2023

---

**From:** Jonah Matsuura  
**Sent:** Tuesday, May 23, 2023 3:52 PM  
**To:** bryan.yonaha@hawaiianelectric.com  
**Cc:** Brooks Martinez  
**Subject:** Kalākaua Properties As-Builts Request (HECO)  
**Attachments:** HECO Letter-KP.pdf

Hello Bryan,

We are requesting any available record information in our research of 2055 Kalākaua LLC Properties to be located near Kalākaua Ave at TMKs (1) 2-6-006:001 and (1) 2-6-006:004

Please see attached for the required documents for this request. If you have any questions or concerns, please feel free to contact us. We hope to hear from you soon.

Thank you,

**Jonah Matsuura**  
**Civil Intern**

T (808) 946-2277

## Brooks Martinez

---

**From:** Nancy Dela Cruz <Nancy.DelaCruz@hawaiiantel.com>  
**Sent:** Tuesday, June 13, 2023 3:18 PM  
**To:** Jonah Matsuura  
**Cc:** Brooks Martinez; HT-Plan Reviews  
**Subject:** RE: Kalākaua Properties As-Builts Request

Aloha, Jonah,

Please see below for the HT facilities for the area you requested on Kalakaua Avenue

Hawaiian Telcom has underground facilities in the area.

The red and orange “dashes” show where HT has underground support structures/facilities.

The red rectangles are either manholes, pullboxes, handholes or meters boxes.

The orange boxes are telephone cabinets, junction boxes or other HT equipment.

Please be aware that these locations are only approximate and that field locating should be done prior to any excavation work. Also, underground service drop connections to individual lots may not be identified on the maps, so again, please use caution. This is meant to show you where Hawaiian Telcom has facilities and in no way represent approval of any plans.

Thanks,  
Nancy Dela Cruz  
Hawaiian Telcom Excavation Desk  
1177 Bishop Street  
Honolulu, HI 96813  
808-546-7746



**From:** Jonah Matsuura <[jmatsuura@wilsonokamoto.com](mailto:jmatsuura@wilsonokamoto.com)>  
**Sent:** Tuesday, May 23, 2023 3:54 PM  
**To:** HT-Plan Reviews <[HT-PlanReviews@hawaiiantel.com](mailto:HT-PlanReviews@hawaiiantel.com)>  
**Cc:** Brooks Martinez <[BMartinez@wilsonokamoto.com](mailto:BMartinez@wilsonokamoto.com)>  
**Subject:** Kalākaua Properties As-Builts Request

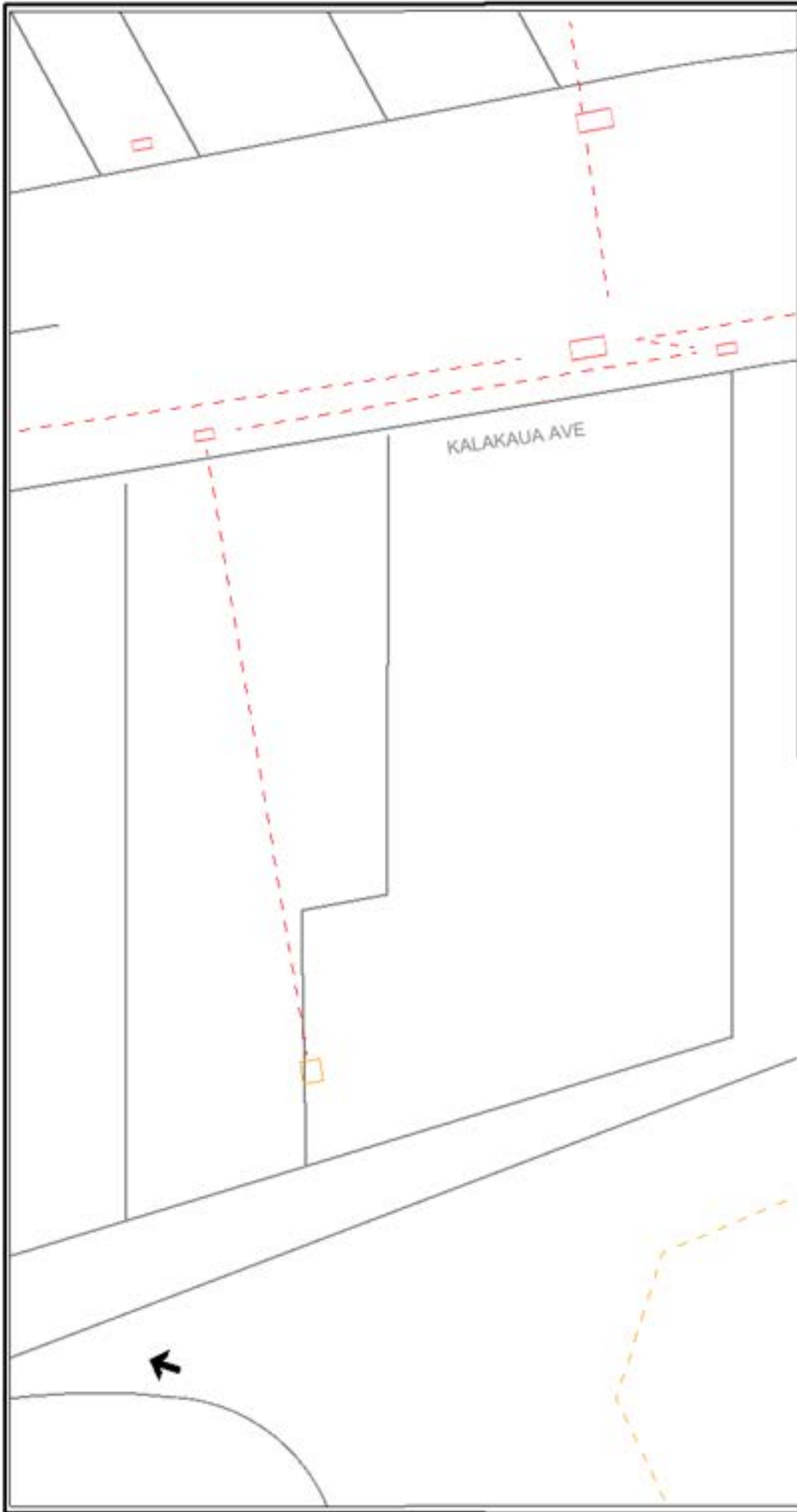
To Whom It May Concern,

Wilson Okamoto Corporation is requesting As-Built information in our research of the area near Kalākaua Ave between Saratoga Rd. and Ala Moana Blvd. Please see attached for the TMK maps of the area(s) we are looking at.

Thank you,

**Jonah Matsuura**  
Civil Intern

T (808) 946-2277



**PROPRIETARY INFORMATION FOR USE BY AUTHORIZED HAWAIIAN TELCOM EMPLOYEES ONLY**

<b>SPECIAL CIRCUITS</b> ASGMT REC'S DATE _____ DESIGN REVIEW REQ'D <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, ATTACH COMPLETED _____ SPECIAL SERVICES CHANGE NOTICE <input type="checkbox"/>	<b>TRANSMISSION CRITERIA</b> BRIDGE TAP(S) FOOTAGE _____ END SECTION FOOTAGE _____ LOOP ELR _____ (max) LOOP EML _____ (max) OFFICE LOOP LIMIT _____ (max)	<b>WORK SAFELY HIGH VOLTAGE</b> POWER CO _____ PHASE _____ KV _____ CONNECTED _____ GROUNDED _____ COMMENTS _____	<b>ISSUE</b> <input type="checkbox"/> ORIGINAL <input type="checkbox"/> REV NO. _____ DATE: _____
CODES: _____ JOB PRE-FIELDED BY: _____ ENG: (date) _____ DRAWN BY: (date) _____ APP'D _____	DATE PRE-FIELDED: _____ TEL _____ DATE _____ SHT _____ OF _____	PCAT: (date) _____ C.O. _____ TITLE: _____ (date) _____ W.C.: (date) _____ WO NO.: (date) _____ CTRL.: (date) _____	PIPELINE NO. _____ C.O. _____ TITLE: _____ (date) _____ W.C.: (date) _____ WO NO.: (date) _____ CTRL.: (date) _____
<b>Hawaiian Telecom</b>			

---

**From:** Jonah Matsuura  
**Sent:** Tuesday, May 23, 2023 3:58 PM  
**To:** haw.engineering.research@charter.com  
**Cc:** Brooks Martinez  
**Subject:** Kalākaua Properties As-Builts Request (SPECTRUM)  
**Attachments:** TMK MAPS.pdf

To Whom It May Concern,

We are requesting As-Built information in our research of the area near Kalākaua Ave between Saratoga Rd. and Ala Moana Blvd. Please see attached for the TMK maps of the area(s) we are looking at.

If you have any questions or concerns, please feel free to contact us. If the files are too large to email, please let me know and we will have someone pick them up.

Thank you,

**Jonah Matsuura**  
**Civil Intern**

T (808) 946-2277

---

**From:** Primo Ramos <pramos@hawaiigas.com>  
**Sent:** Wednesday, May 24, 2023 7:32 AM  
**To:** Jonah Matsuura  
**Cc:** Brooks Martinez  
**Subject:** FW: Kalākaua Properties As-Builts Request (GAS)  
**Attachments:** [KP] GasLineInfo.pdf; TMK MAPS.pdf; One Call Template with Legend - Copy - Copy (2).docx

Attached is a copy of the gas map(s) indicating the location of Hawaii Gas' facilities within the requested excavation area as well as adjacent to this area.

Hawaii Gas is providing this advanced copy of its gas map for the area requested to be marked on your One Call ticket. Please use this map as a reference to double check the location of gas facilities within the excavation area to avoid any damages.

Safety is very important to Hawaii Gas so we are providing this gas map as an additional measure to avoid damages and keep your personnel and the public safe.

Thanks,

---

**From:** Jonah Matsuura <jmatsuura@wilsonokamoto.com>  
**Sent:** Tuesday, May 23, 2023 3:33 PM  
**To:** Primo Ramos <pramos@hawaiigas.com>  
**Cc:** Brooks Martinez <BMartinez@wilsonokamoto.com>  
**Subject:** [EXTERNAL EMAIL] Kalākaua Properties As-Builts Request (GAS)

**CAUTION:** This email was received from outside of Hawaii Gas. Do not click links or open attachments unless you recognize the sender and know the content is safe.

---

Hello Primo,

We are requesting any available As-Built information in our research of 2055 Kalākaua LLC Properties to be located near Kalākaua Ave at TMKs (1) 2-6-006:004 and (1) 2-6-006:001

Please see the attachment of the TMK Maps for further details. Also see attached the Release Form for Gas Line Information, attached.

If you have any questions or concerns, please feel free to contact us. If the files are too large to email, please let me know and we will have someone pick them up.

Thank you,

**Jonah Matsuura**  
**Civil Intern**

T (808) 946-2277



All information provided by The Gas Company, including but not limited to maps, prints, stakeouts, toning, and site indications are approximations only of the location of its facilities and pipelines. The Gas Company makes no representation or warranty, either expressed or implied, of their accuracy; and the party receiving such information shall have the sole responsibility for field verification for determining the exact location of said facilities and pipelines. The presence of or assistance provided by any Gas Company employee shall not relieve said party of its responsibility for verification. The Gas Company shall not be liable for any claims or damages arising from the use of the information provided.

# **Appendix D**

## ***Preliminary Drainage Study***



**PRELIMINARY  
DRAINAGE STUDY**

**FOR THE**

**KĀLIA CULTURAL ENTERTAINMENT VENUE**

**Honolulu, Oahu, Hawaii**  
**Tax Key Map: 2-6-006:001, and 004**

**Prepared For:**

**2055 Kalakaua, LLC**  
1188 Bishop St. Suite 2212  
Honolulu, Hawaii 96813

**Prepared By:**

**Wilson Okamoto Corporation**  
Engineers and Planners  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
WOC Job No. 10773-03

May 2023

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## **I. INTRODUCTION**

### **A. General**

The client, 2055 Kalakaua, LLC intends to develop the 0.66-acre property located in Waikiki on the island of Oahu. The project site was formerly occupied by the Kyo-ya Restaurant and its associated parking structure. The project includes the development of a cultural entertainment venue that includes a large lawn for guest seating, a stage, a two-story multi-purpose building, and a porte cochere. The project site is identified by Tax Map Key (1) 2-6-006: 001 and 004.

The purpose of this report is to assess the impact of the proposed construction development on the existing drainage conditions of the area, and to recommend any drainage improvements.

### **B. Site Location and Project Description**

The proposed project site is comprised of two existing parcels adjacent to each other, TMKs 2-6-006: 001 and 004, located at 2055/2057A Kalakaua Avenue in Honolulu. The property identified by TMK 2-6-006: 001 will be referred a Parcel 1 and property identified by TMK 2-6-006: 004 will be referred to as Parcel 4. The areas of Parcel 1 and 4 are approximately 0.40-acres and 0.26-acres, respectively. The total area of the two parcels is approximately 0.66-acres (See Figure A). The overall parcel is bounded by the Luana Waikiki Hotel and Suites to the north, Kalakaua Avenue to the east, the Fort DeRussy Army Chapel and Brothers in Valor Memorial to the south, and Maluhia Road to the west.

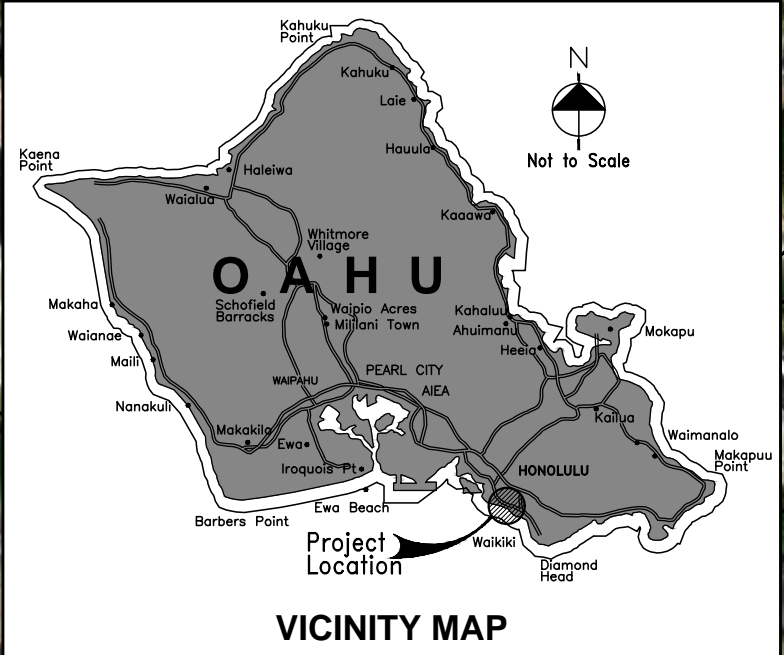
The client, 2055 Kalakaua, LLC, is proposing to develop a cultural entertainment venue in Waikiki. The proposed development includes an open lawn, a stage, a porte cochere, and a multi-purpose building that includes restrooms, office space, and food preparation areas. The venue is anticipated to accommodate an approximate of 740 seats for guests.

The site will be cleared to remove pavement and other site structures which conflict with the proposed improvements. Utilities that do not conflict with the proposed improvements are to remain unless otherwise noted.

The proposed improvements are conceptual and subject to change based on further development of plans and availability of additional information.



**PROJECT SITE**  
**TMKs: (1) 2-6-006:001 and 04**



**LEGEND**

- Project Site
- TMK Parcel

**N** **GRAPHIC SCALE:**

0 50 100 200

**SCALE:** 1" = 100'



**FIGURE A**  
**PROJECT LOCATION AND VICINITY MAP**

## **II. EXISTING DRAINAGE CONDITIONS**

### **A. Existing Topography**

The project site's topography is primarily characterized by impervious surfaces resulting from the open parking spaces and the restaurant building's roof area. The site gently slopes from west to east, with elevations varying between approximately 12ft to 4ft above mean sea level (MSL). Currently, storm runoff within the site area flows across the surface and eventually reaches a catch basin located along Kalakaua Avenue. This catch basin is connected to the City's underground drainage system, which ultimately discharges the runoff into the Ala Wai Canal near the mauka end of Kalaimoku Street.

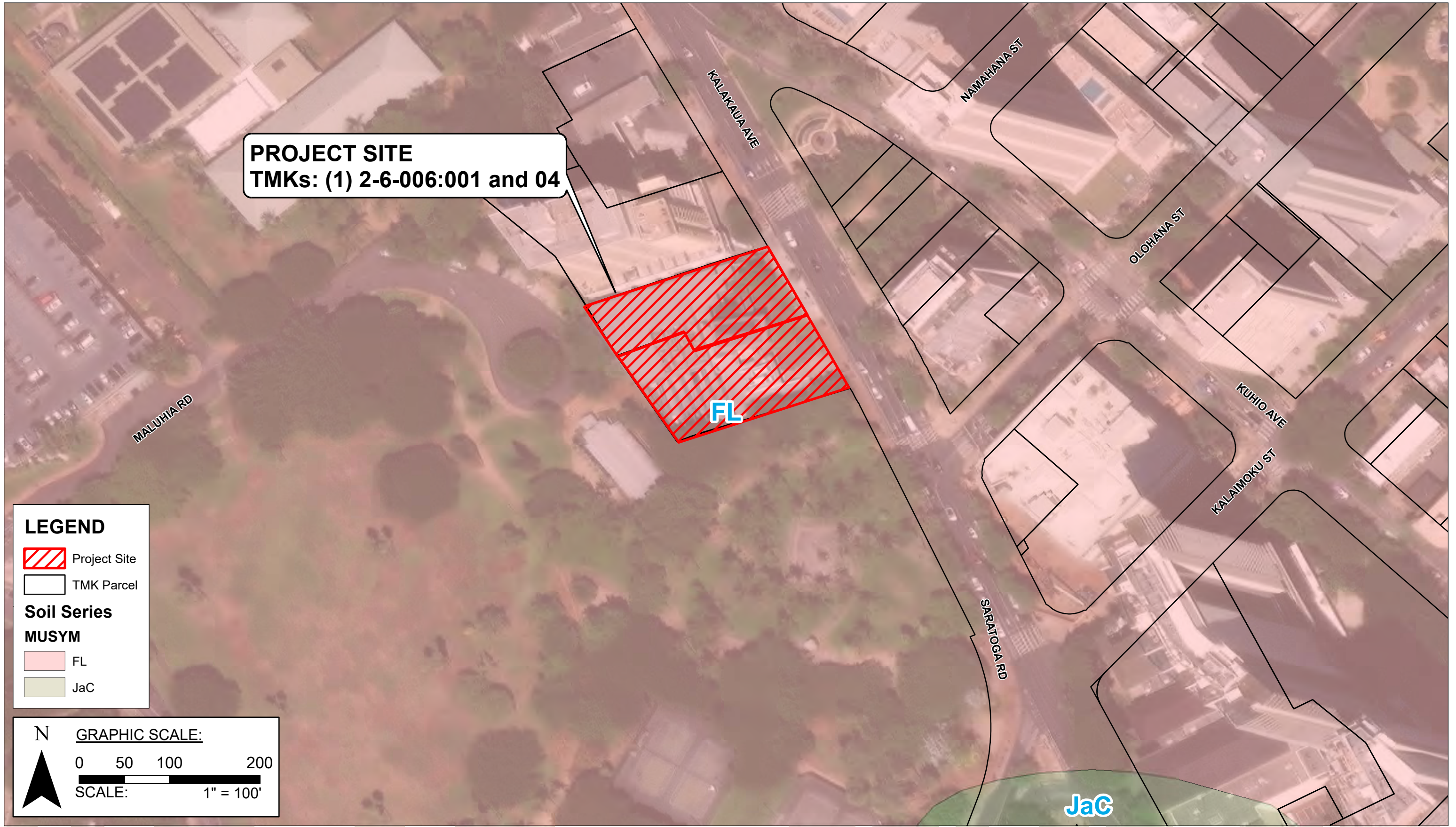
### **B. Soils**

Soil series and mapping units for the island of Oahu are found in maps on the United States Department of Agriculture online web soil survey and soil physical properties are found in the "Soil Survey of islands of Kauai, Oahu, Mau, Molokai, and Lanai, State of Hawaii" dated January 1, 1972, prepared by the U.S. Department of Agriculture, Soil Conservation Service (currently Natural Resources Conservation Services). The underlying soil within the project site consists of Fill land (See Figure B). The soil has characteristics described below:

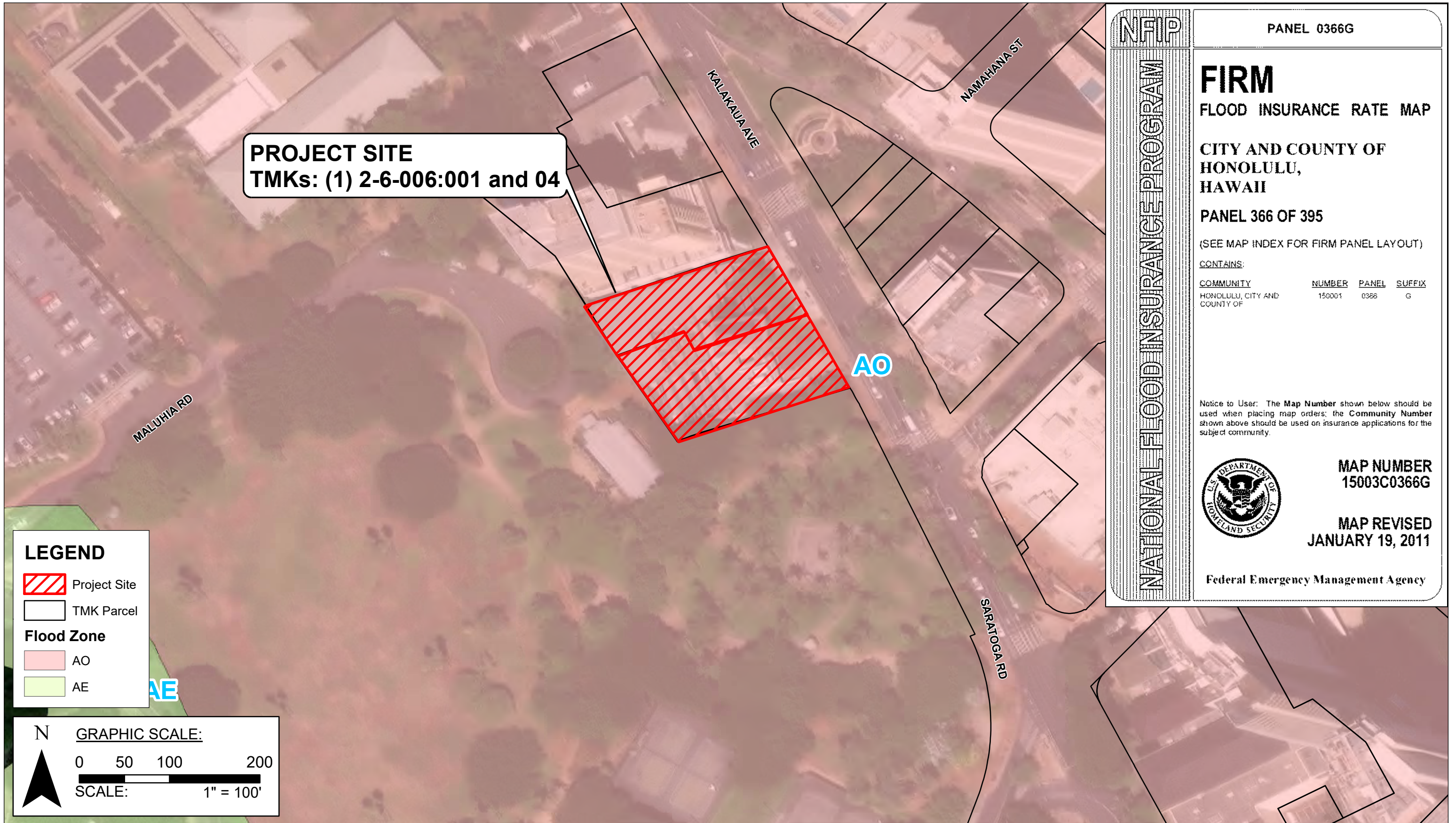
Fill Land, (FL): A fill soil material dredged from the reef or general material from other sources usually consists of mixture of cinders, stone fragments, and ash soil material.

### **C. Flood Hazard**

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel No: 15003C0366G dated January 19, 2011 shows that the project is located in Zone AO (Depth 2') (See Figure C). Zone AO (Depth 2') is the Special Flood Hazard Area defined as "Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined".



**FIGURE B**  
**SOILS CLASSIFICATION MAP**



**PROJECT SITE**  
**TMKs: (1) 2-6-006:001 and 04**

**LEGEND**

Project Site

TMK Parcel

**Flood Zone**

AO

AE

N

**GRAPHIC SCALE:**

0 50 100 200

**SCALE:** 1" = 100'

PANEL 0366G

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**CITY AND COUNTY OF HONOLULU, HAWAII**

**PANEL 366 OF 395**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0366	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
**15003C0366G**

**MAP REVISED**  
**JANUARY 19, 2011**

Federal Emergency Management Agency

**NATIONAL FLOOD INSURANCE PROGRAM**



**FIGURE C**  
**FLOOD INSURANCE RATE MAP**



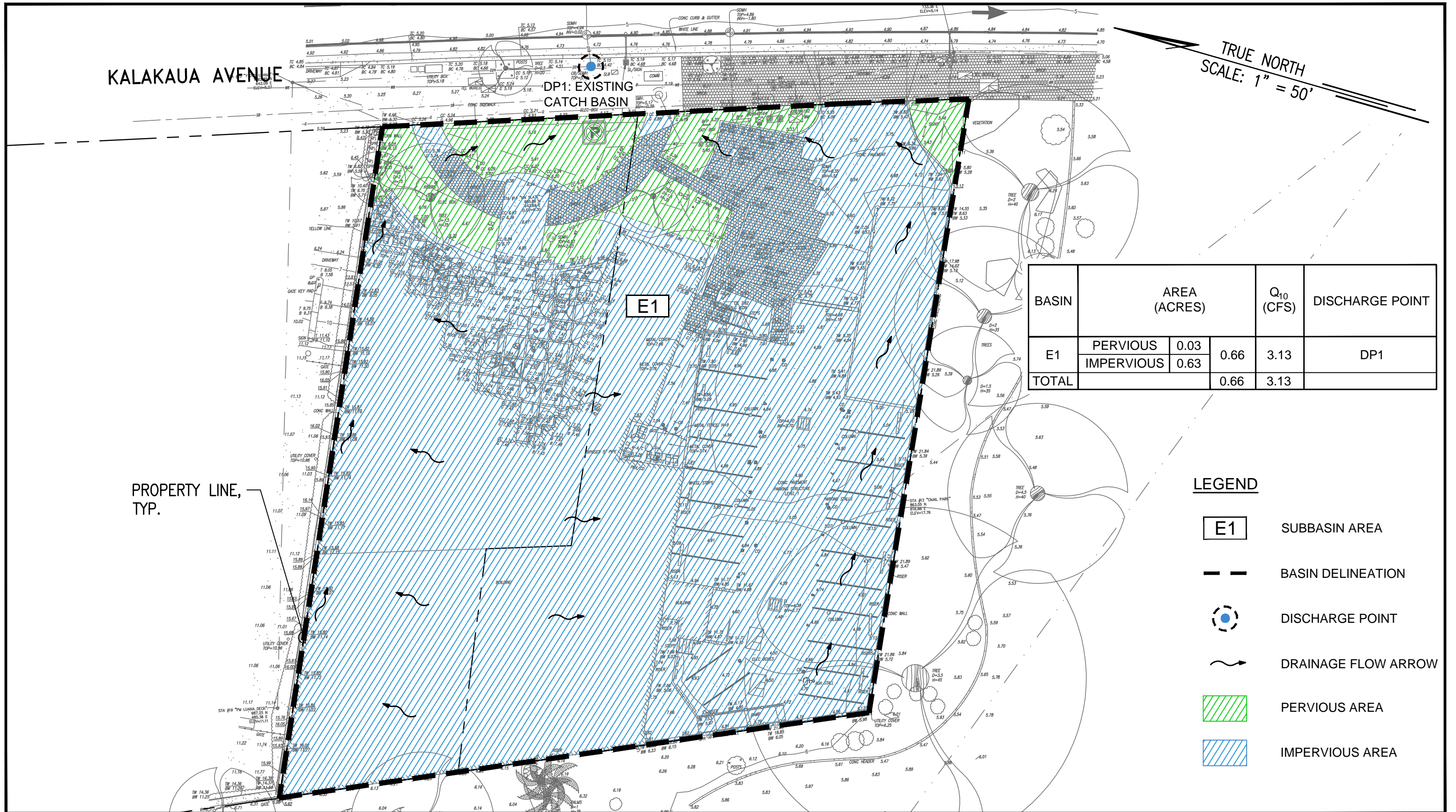
**D. Existing Condition**

Storm water runoff generated from the project site currently enters the City and County of Honolulu (City) drainage system at discharge point DP1. Once in the City drainage system, the storm water water eventually discharges into the Ala Wai Canal (See Figure E1).

The existing drainage area is composed of a single basin.

Runoff generated in subbasin E1, by a combination of roof, hardscape, and landscape area, sheetflows to a City catch basin and is conveyed through the City's underground piping system.

The total drainage area for the project site was determined to be 0.66 acres with an existing storm runoff flow rate of 3.13 cfs on 10yr-1hr rainfall event.



**FIGURE E1**  
**EXISTING DRAINAGE CONDITION MAP**

### **III. PROPOSED DRAINAGE CONDITIONS**

The proposed site layout contained within this report is not finalized and is assumed for the purposes of this preliminary study only.

Storm water runoff generated from the project site will enter the City and County of Honolulu (City) drainage system at discharge point DP1. Once in the City drainage system, the storm water will eventually discharge into the Ala Wai Canal (See Figure P1).

The proposed drainage area is composed of a single basin.

Runoff generated in subbasin P1, by a combination of roof, hardscape, and landscape area, sheetflows to City catch basin and is conveyed through the City's underground piping system.

The finalized proposed drainage patterns will mimic existing patterns as closely as possible to minimize impacts to the surrounding adjacent properties. Detailed improvements will be determined during the design phase of the project, with a focus on preserving the current discharge points that connect to the city's drainage system.

KALAKAUA AVENUE

DP1: EXISTING  
CATCH BASIN

TRUE NORTH  
SCALE: 1" = 50'

BASIN	AREA (ACRES)		Q <sub>10</sub> (CFS)	DISCHARGE POINT
P1	PERVIOUS	0.24	0.66	2.29
	IMPERVIOUS	0.42		
TOTAL			0.66	2.29

PROPERTY LINE,  
TYP.

P1

LEGEND





- P1 SUBBASIN AREA
- BASIN DELINEATION
-  DISCHARGE POINT
-  DRAINAGE FLOW ARROW
-  PERVIOUS AREA
-  IMPERVIOUS AREA



FIGURE P1  
PROPOSED DRAINAGE CONDITION MAP

#### **IV. HYDROLOGY ANALYSIS**

##### **A. Design Criteria**

The total drainage area (0.66 acres) is less than 100 acres. As such, the hydrologic analysis is based on a 10-year storm runoff with 1-hour rainfall intensity. The rational method was used to determine peak discharge for the existing and proposed conditions. The estimated rainfall for the project location is 2.14 inches for a 10-year storm.

##### **B. Peak Flow Calculations**

###### **1. Rational Method**

Peak flows are determined by the Rational Method expressed as:

$$Q = C * I' * A$$

where:

Q = Flowrate in cubic feet per second (cfs)

C = Runoff coefficient

I' = Rainfall intensity in inches per hour for a duration equal to the time of concentration.

A = Drainage area, in acres

###### **a) Runoff Coefficient (C)**

Runoff coefficients of 0.30 and 0.85 are selected for pervious and impervious surfaces, respectively. Selection is based on relation of site conditions to surface type descriptions provided in Plate 7 (See Appendix B).

**b) Rainfall Intensity (I')**

The design rainfall intensity and time of concentration were determined using the “Storm Drainage Standards” dated August 2017, by the Department of Permitting and Planning, City and County of Honolulu. A value of 2.14 inches/hour for the 10-year, 1-hour rainfall event were used in the hydrologic calculations. (See Appendix B).

**c) Drainage Area (A)**

Drainage basin boundaries are established through analysis of the site’s topographical characteristics. The existing site condition shows a singular drainage basin encompassing an area of 0.66 acres. Figure D provides a comprehensive depiction of the drainage area within this existing condition. As the project progresses into the design phase, determination of drainage areas for the proposed condition will be undertaken.

**d) Results**

Peak flows in cubic feet per second as calculated by the Rational Method for both the existing and proposed conditions are shown in Tables 1a, 1b, 2a, and 2b in Appendix A. Total discharge from rainfall on or within project site under existing drainage conditions on a 10yr-1hr rainfall event is 3.13 cfs. Total discharge from rainfall on or within project site under proposed drainage conditions is 2.29 cfs.

**V. DISCUSSION**

The storm water runoff from the site under the existing drainage conditions for the project is 3.13 cfs. Under proposed drainage conditions, the runoff rate was calculated to be 2.29 cfs. Between the existing and proposed conditions, there is a decrease in total peak discharge quantity of 0.84 cfs. The decrease can be primarily attributed to the decrease in impervious surface within the project site.

## VI. REFERENCES

1. “Storm Drainage Standards”, Department of Planning and Permitting, City and County of Honolulu, August 2017.
2. McCuen, Richard H. *Hydrologic Analysis and Design Third Edition*. Upper Saddle River: Pearson Prentice Hall, 2005.
3. “Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii”, United States Department of Agriculture Soil Conservation Service in cooperation with University of Hawaii Agricultural Experiment Station, August 1972.
4. “Flood Insurance Rate Map, City and County of Honolulu, Hawaii, Community-Panel Number 15003 C0226 F,” Federal Emergency Management Agency, Federal Insurance Administration, September 30, 2004.
5. “Topographic Survey Affecting Land Court Application 857 Lot B Land Court Application Por, R.P 8416, L. C. AW. 8559-B Ap. 29 to WM C. Lunalilio” by Walter P. Thompson, Inc Surveying and Mapping” dated December 12, 2022.

APPENDIX A

Table 1a	Weighted Runoff Coefficient – Existing Condition
Table 1b	Hydrologic Calculations – Existing Condition
Table 2a	Weighted Runoff Coefficient – Proposed Conditions
Table 2b	Hydrologic Calculations – Proposed Conditions



**Existing Conditions:**

**Table 1a: Weighted C Values - Existing Conditions**

Basin	Total Area (sf)	C <sub>pervious</sub>	A <sub>pervious</sub> (sf)	C <sub>impervious</sub>	A <sub>impervious</sub> (sf)	C <sub>weighted</sub>
E1	28780.60	0.30	1520.05	0.85	27260.55	0.82

(1) Runoff coefficient (C) provided from "Hydrologic Analysis and Design"<sup>4</sup> textbook and Gwinnet County Stormwater Management Manual

(2) Weighted C =  $\frac{\sum (C_x A_x)}{A}$

**Table 1b: Hydrologic Calculations - Existing Condition**

Basin	(1) C	(2) I <sub>10</sub> inches	Subbasin Area, A acres	(3) L feet	Slope ft/ft	(4) Tc min	(5) Correction Factor	(6) I' <sub>10</sub> inches	(7) Q <sub>10</sub> cfs	Discharge Point
E1	0.82	2.14	0.66	218.00	0.03	<6.00	2.70	5.778	3.13	DP1

- (1) Weighted runoff coefficient (C) from Table P1
- (2) Rainfall intensity (I) obtained from Plate 1
- (3) Estimated Sheet flow Travel Length, (L)
- (4) Time of concentration (Tc) obtained from Plate 3
- (5) Correction Factor obtained from Plate 4
- (6) Design rainfall intensity (I') = Correction Factor x I
- (7) Peak Flow Rate (Q) = C x I' x A

\* All plates and tables referenced above are located in the "Rules Relating to Storm Drainage Standards" by the City and County of Honolulu, August 2017

**Proposed Conditions:**

**Table 2a: Weighted C Values - Proposed Conditions**

Basin	Total Area (sf)	C <sub>pervious</sub>	A <sub>pervious</sub> (sf)	C <sub>impervious</sub>	A <sub>impervious</sub> (sf)	C <sub>weighted</sub>
E1	28780.60	0.30	10588.76	0.85	18191.84	0.65

(1) Runoff coefficient (C) provided from "Hydrologic Analysis and Design"<sup>4</sup> textbook and Gwinnet County Stormwater Management Manual

(2) Weighted C = 
$$\frac{\sum (C_x A_x)}{A}$$

**Table 2b: Hydrologic Calculations - Proposed Condition**

Basin	(1) C	(2) I <sub>10</sub> inches	Subbasin Area, A acres	(3) L feet	Slope ft/ft	(4) Tc min	(5) Correction Factor	(6) I' <sub>10</sub> inches	(7) Q <sub>10</sub> cfs	Discharge Point
E1	0.65	2.14	0.66	218.00	0.03	7.50	2.50	5.35	2.29	DP1

(1) Weighted runoff coefficient (C) from Table P1

(2) Rainfall intensity (I) obtained from Plate 1

(3) Estimated Sheet flow Travel Length, (L)

(4) Time of concentration (Tc) obtained from Plate 5

(5) Correction Factor obtained from Plate 6

(6) Design rainfall intensity (I') = Correction Factor x I

(7) Peak Flow Rate (Q) = C x I' x A

\* All plates and tables referenced above are located in the "Rules Relating to Storm Drainage Standards" by the City and County of Honolulu, August 2017

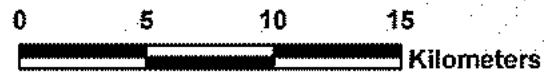
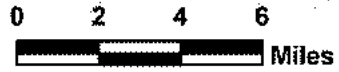
APPENDIX B

EXCERPTS FROM REFERENCE 1 - C&C STORM DRAINAGE STANDARDS

Plate 1	10-year, 1-hour Rainfall Intensity
Plate 3	Overland Flow Chart – Existing Condition
Plate 4	Correction Factor – Existing Condition
Plate 5	Overland Flow Chart – Proposed Condition
Plate 6	Correction Factor – Proposed Condition

EXCERPTS FROM REFERENCE 2

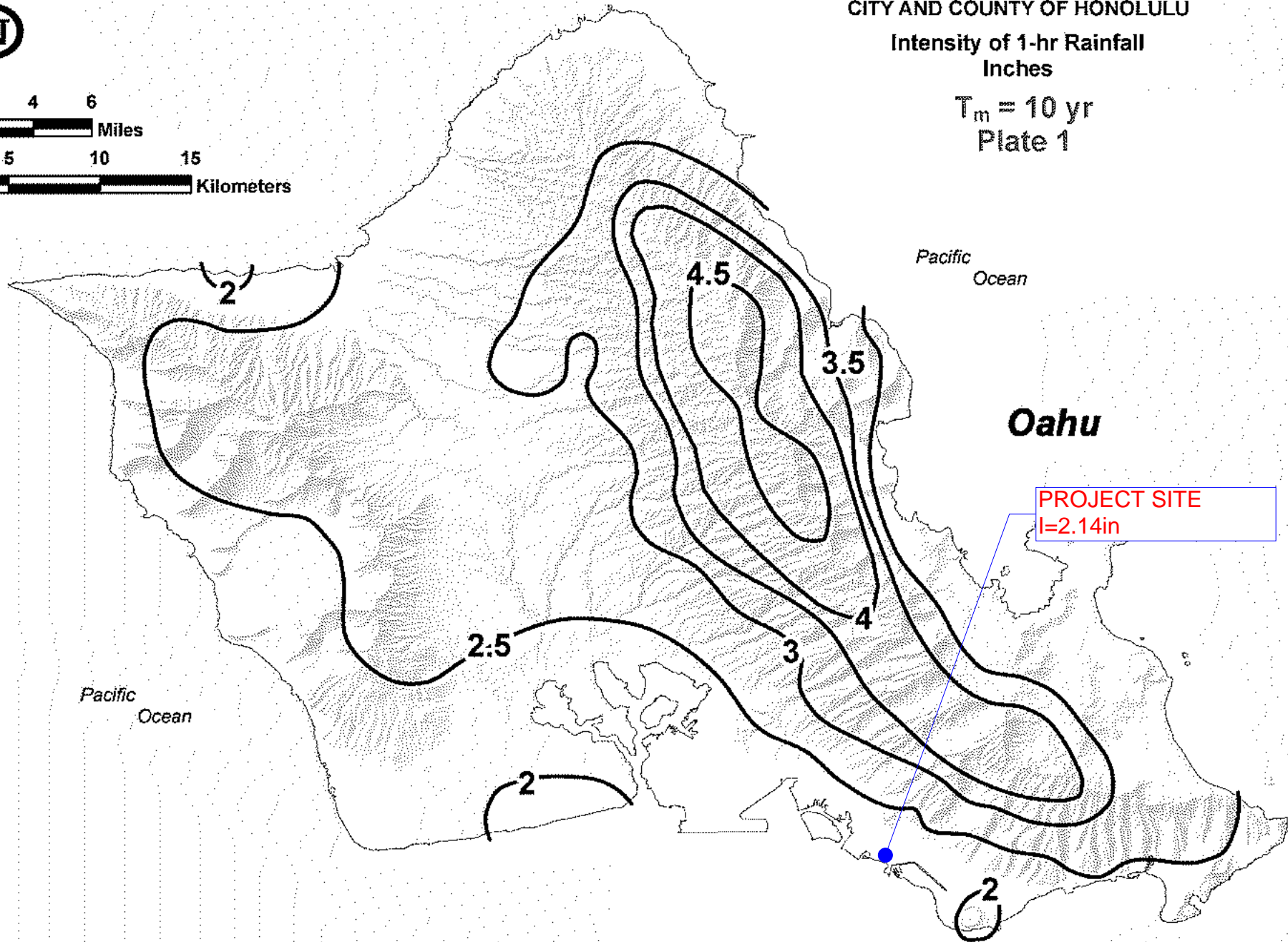
Plate 7	Runoff Coefficient for Surface Types
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CITY AND COUNTY OF HONOLULU

Intensity of 1-hr Rainfall  
Inches

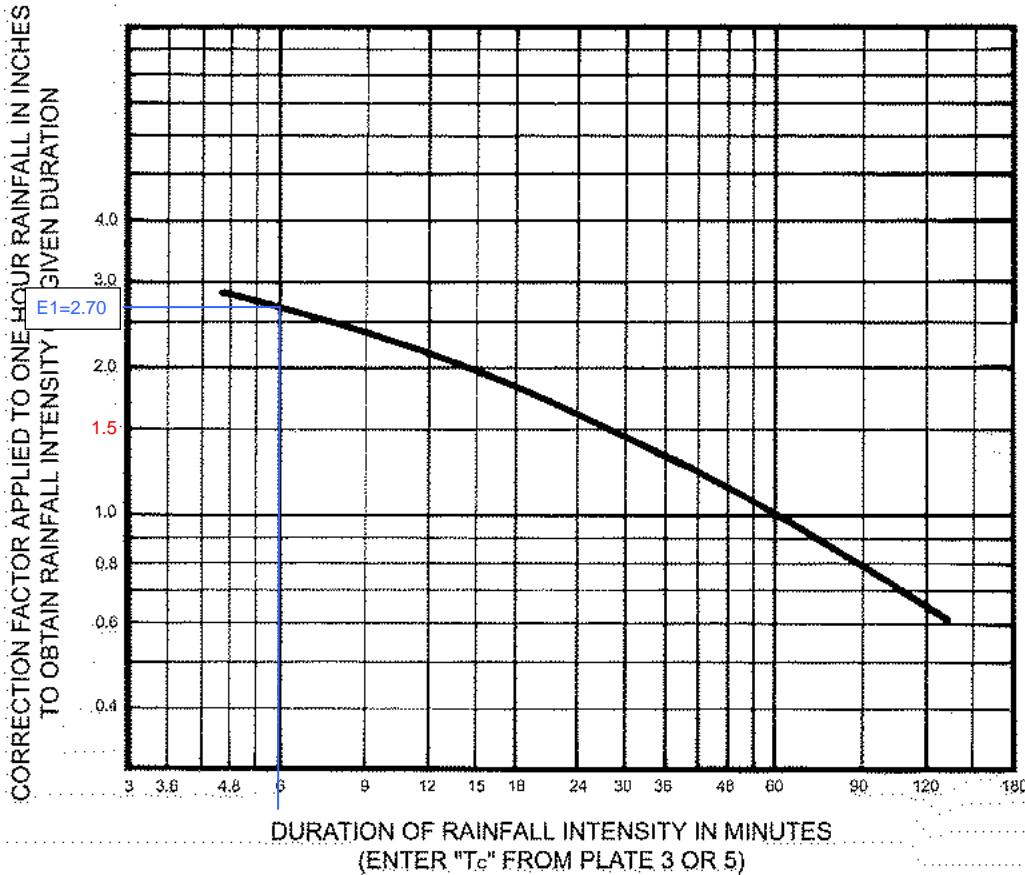
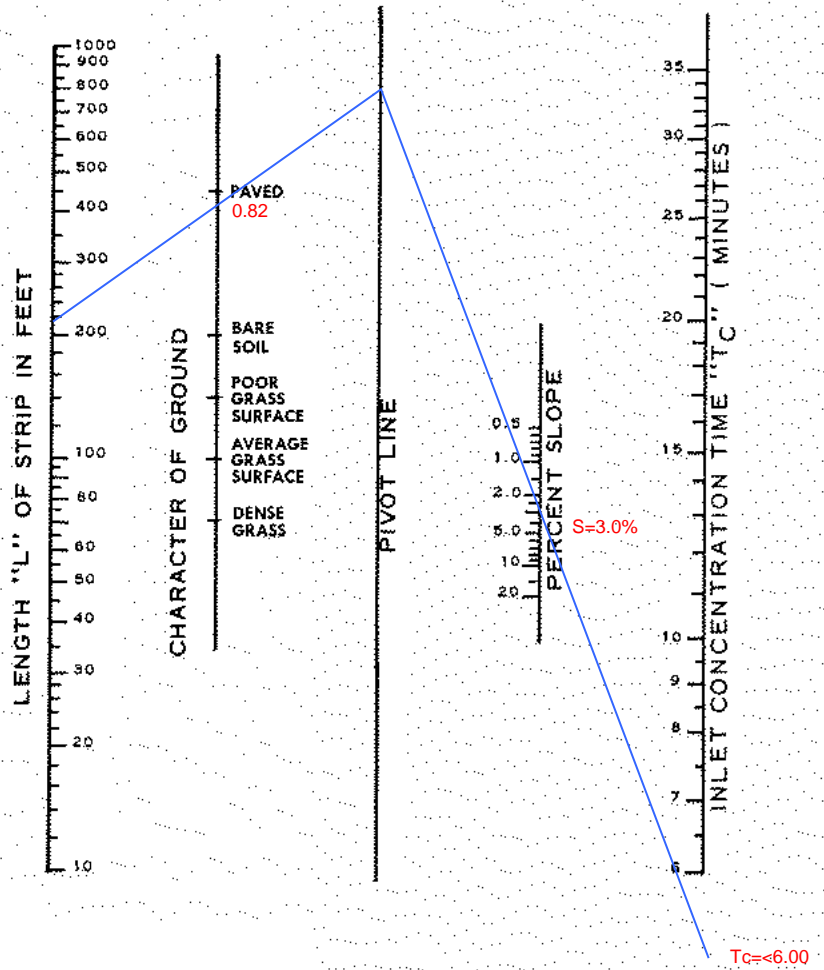
$T_m = 10$  yr  
Plate 1



# Existing Condition

## Plate 3

# Overland Flow Chart



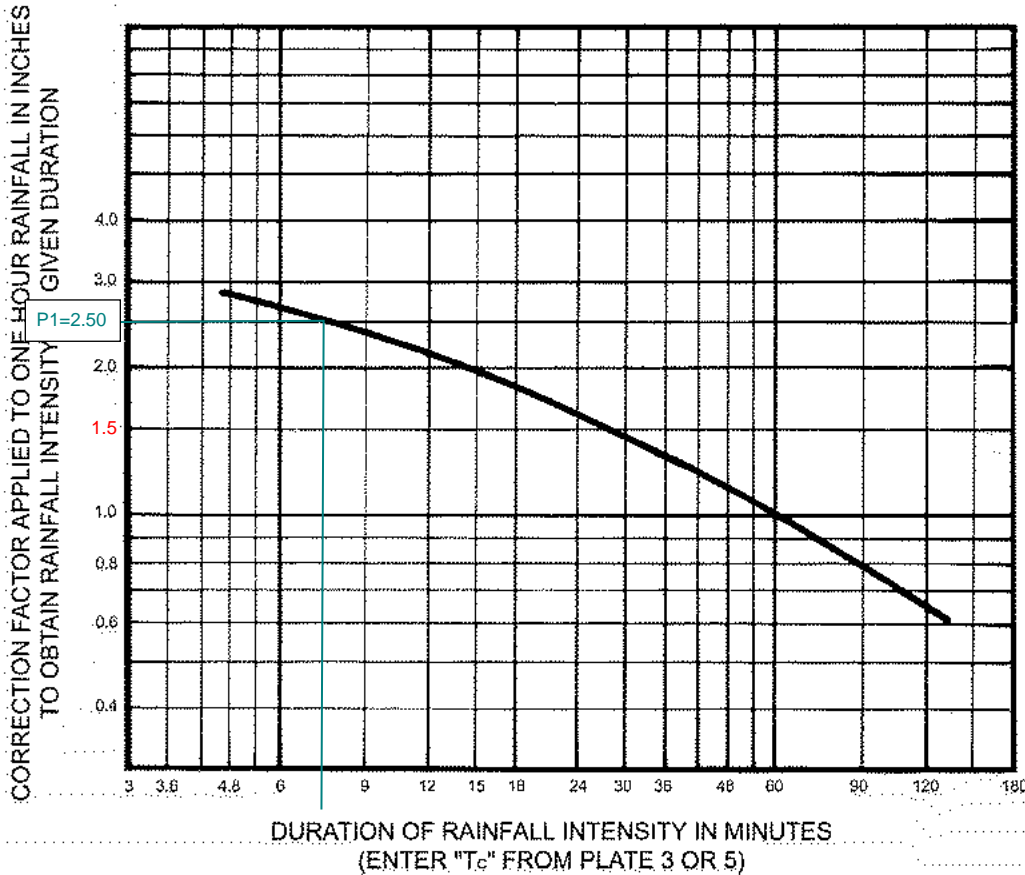
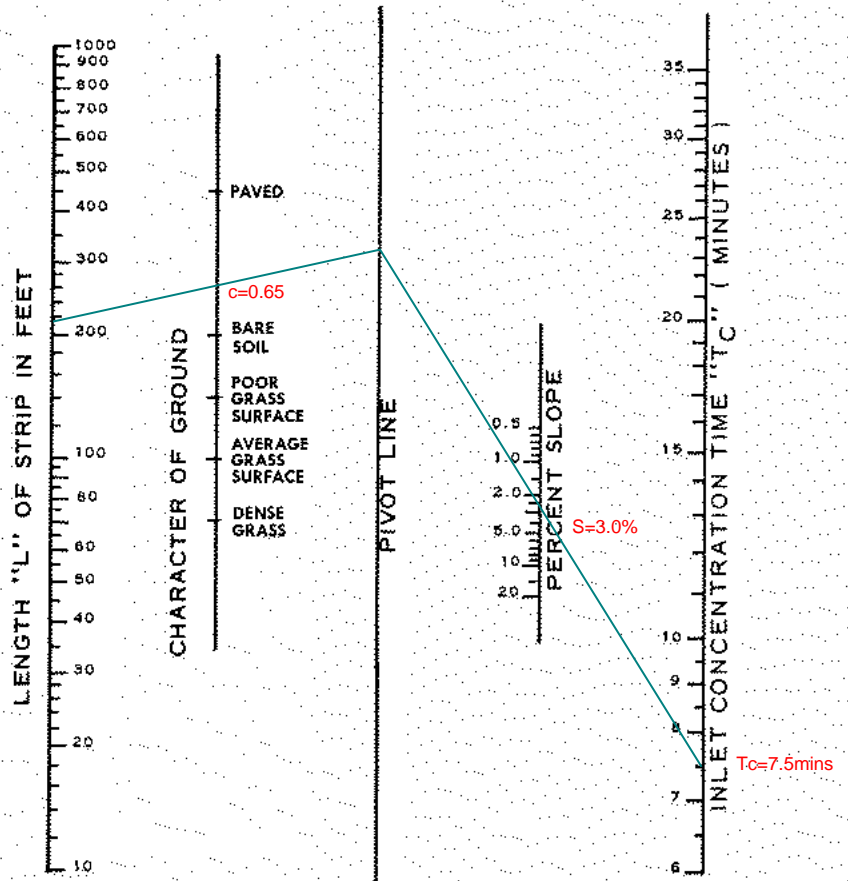
## Plate 4

**CORRECTION FACTOR**  
FOR CONVERTING 1 HR. RAINFALL  
TO RAINFALL INTENSITY  
OF VARIOUS DURATIONS

TO BE USED FOR AREA  
LESS THAN 100 ACRES  
(See Plate 6 on page 20 for  
area more than 100 acres)

# Proposed Condition

## Plate 5 Overland Flow Chart



## Plate 6

**CORRECTION FACTOR**  
FOR CONVERTING 1 HR. RAINFALL  
TO RAINFALL INTENSITY  
OF VARIOUS DURATIONS

TO BE USED FOR AREA  
LESS THAN 100 ACRES  
(See Plate 6 on page 20 for  
area more than 100 acres)

# **Appendix E**

***Due Diligence Report  
for Park Kalia Waikiki dated November 2015***

## Due Diligence Report

---

### *Park Kalia - Waikiki*



Prepared for:  
Rider Levett Bucknall

Prepared by:  
Wilson Okamoto Corporation

November 2015



**DUE DILIGENCE REPORT  
Park Kalia - Waikiki**

**Honolulu, Oahu, Hawaii  
TMK 2-6-006: 001 & 004**

**Prepared For:**

**Rider Levett Bucknall**

1001 Bishop Street #1340  
Honolulu, Hawaii 96813

**Prepared By:**

**Wilson Okamoto Corporation**

Engineers and Planners  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
WOC Job No. 10116-01

**November 2015**

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## APPENDIX

### Appendix A – Sewer System Information

Sewer Connection Application, submitted June 2015

Sewer Connection Application, submitted April 2014

Email 1 – Correspondence with C&C Wastewater Branch and Department of Environmental Services

Email 2 – Inquiry with C&C Wastewater Branch

Email 3 – Inquiry with C&C Wastewater Branch with Response, November 2015

C&C of Honolulu GIS Map of Sewer System in Project Vicinity

### Appendix B – Water System Information

Request For Flow and Pressure Data Letter to Mr. Robert Chun, BWS

Response Letter To Request For Flow and Pressure Data Letter, provided by BWS

Existing Water Meter and Lateral Information, provided by BWS

Water Facility Map In Project Vicinity

### Appendix C – Site Grading, Runoff, and Storm Drainage System Information

Site Reconnaissance Photos

Appendix D –Traffic Information

Email Correspondence with Mel Hirayama, DPP, TRB

## **1. EXECUTIVE SUMMARY**

Project Description: Based on the latest design concept, the proposed project consists of a 26 floor, 170 unit, condo-hotel on a 0.66-acre joint developed/consolidated property that is currently occupied by the closed Kyo-ya restaurant and two-level parking garage. The site is bounded by Luana Waikiki hotel to the north, Kalakaua Avenue to the east, Fort DeRussy park to the south, and Maluhia Road/Fort Derussy chapel to the west (See Figure 1 – Location Map and Figure 2 – TMK Map).

Sanitary Sewer System: A sewer connection application for the property was submitted to the C&C of Honolulu, Department of Planning and Permitting, Wastewater Branch in April 2014. The City has not decided on its position regarding the application as they are waiting for a response from the Environmental Protection Agency (EPA) and State of Hawaii Department of Health (DOH) on the adequacy of previous Fort DeRussy waste water pump station upgrades to support new sewer connections. To notify the City that the project program values have been updated and to incorporate the updated values into the sewer connection application, a new application was submitted on June 26, 2015. As of November 2015, the updated application is still in review with the City Environmental Services Department.

Water System: The request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on June 16, 2015. A BWS response letter to the request letter was received on June 29, 2015. The BWS response letter stated that the existing water system cannot provide adequate fire protection to the proposed development. The system is inadequate as the distance from the development to the nearest existing fire hydrant, approximately 295 linear feet, exceeds the standard 125 linear feet required for a high-rise hotel development. BWS will require the developer to install a fire hydrant on Kalakaua Ave within 125 linear feet of the development. During the design process, construction drawings should be submitted to BWS for review and approval. Also, BWS will require the implementation of water conservation measures. Based on the existing water meter and lateral information provided by BWS there is an 8-inch DI main and 8-inch DC meter that currently serves TMK 2-6-006:004 and a 2-inch copper lateral and 2-inch domestic meter serves TMK 2-6-006:001. BWS system facilities map indicated there is an existing 8-inch water main located along the makai side of Kalakaua Avenue fronting the project site that the laterals are connected to.

Site Grading, Runoff, and Storm Drainage System: On the Kalakaua Ave frontage, the site generally slopes towards the property boundary and on the Maluhia Road/Fort DeRussy park, and Luana Waikiki hotel faces the building straddles the property line.

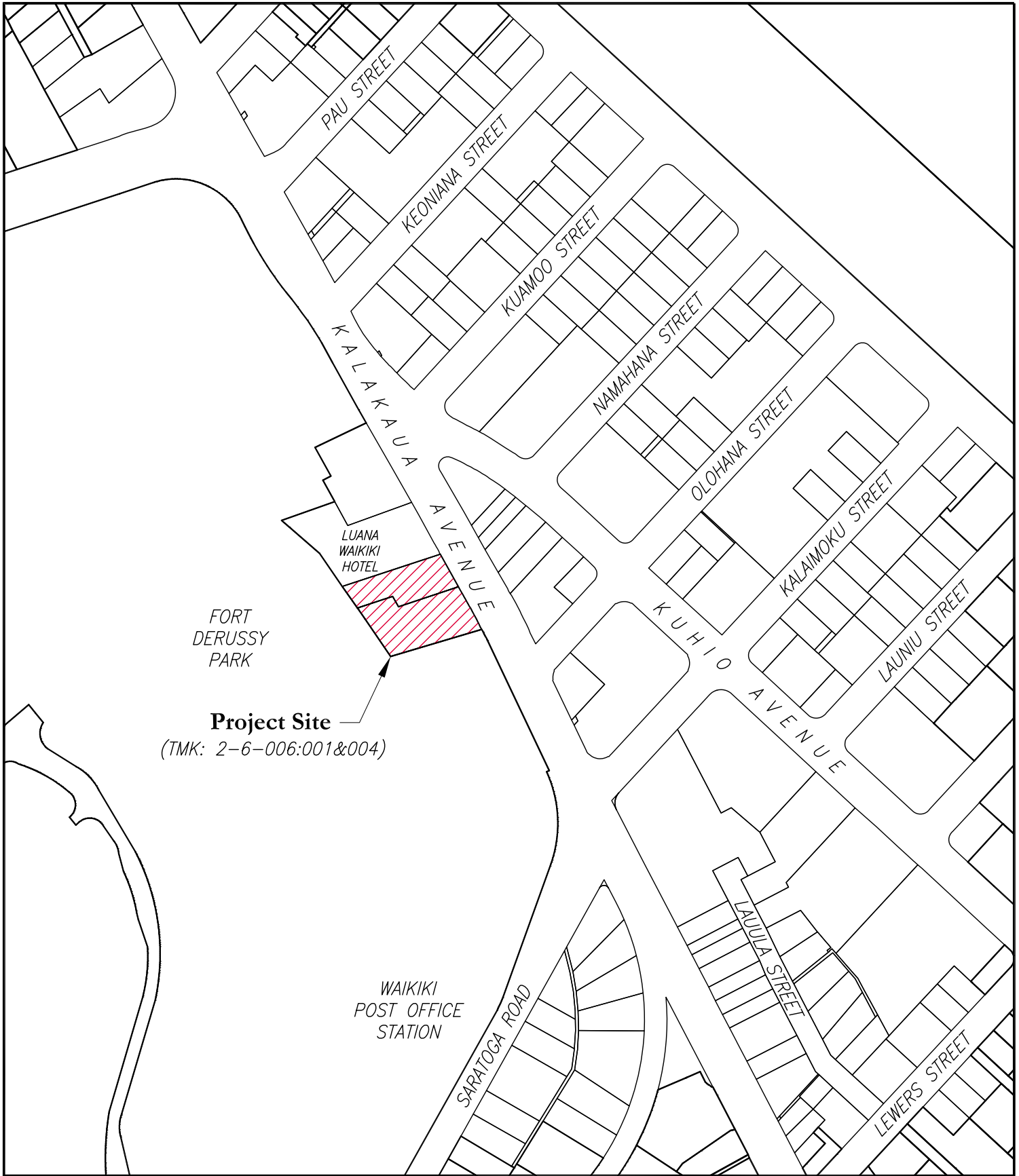
The project site is located in Flood Hazard Zone AO (Depth 2'). Zone AO represents "flood depths of 1 to 3 feet (usually sheet flow on sloping terrain)". Due to the AO (Depth 2') Flood Hazard Area Designation, the lowest ground floor finished floor elevation for any proposed building should be established a minimum 2-feet above the highest existing grades on-site.

Based on site reconnaissance, a portion of the existing sidewalk along Kalakaua Ave fronting the project appeared to be depressed with trench drains installed at the low spots to mitigate ponding. If improvements include mitigation of the depressed sidewalk areas, it may be a factor in determining the finished elevations of the proposed project site.

Roadway System and Traffic: Vehicular and pedestrian access is proposed along Kalakaua Ave. The proposed improvements consist of a one-way onsite driveway leading to the site porte cochere. A multi-story parking garage with access by two autolifts will be provided.

An inquiry was sent to the C&C of Honolulu, Department of Planning and Permitting, Traffic Review Branch to preliminarily determine any comments they may have or improvements that will be required in the City maintained Kalakaua Ave ROW due to the proposed project. The response indicated the following items to be considered as the project moves forward:

- In addition to the TIAR, the Waikiki Special District zoning ordinance has conditions that require construction and traffic management plans (TMP) to be prepared for the project and submitted to the City for review.
- Pedestrian access to the rear of the property, likely controlled by gate and card, may be required.
- Bicycle parking, primarily for employees, located on the property, may be required.
- Sight distance and driveway design standards should be adhered to. If gates are installed at driveway entrances, they should be recessed from the main roadway.

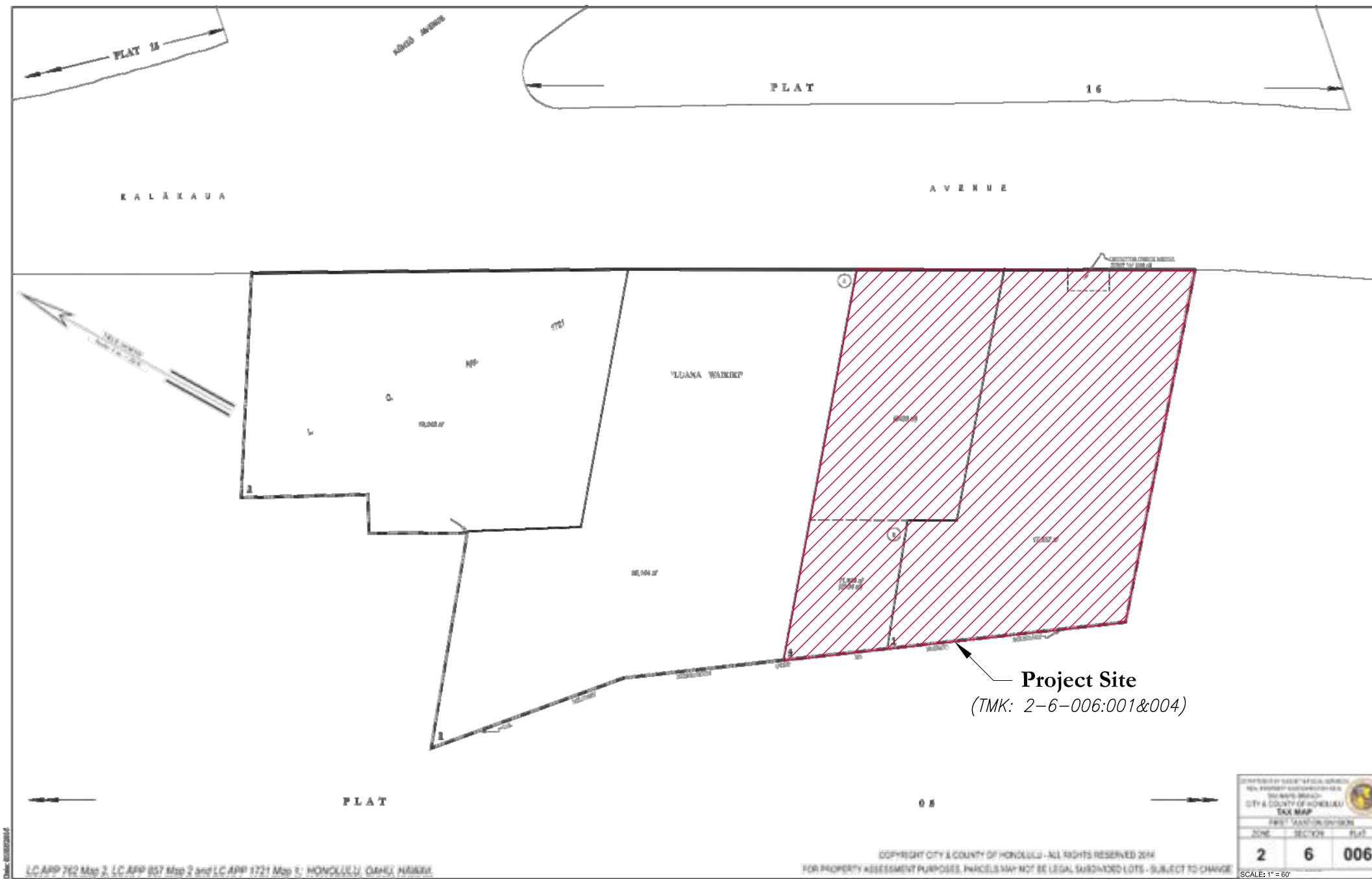


**PARK KALIA - WAIKIKI DUE DILIGENCE  
HONOLULU, OAHU, HAWAII**

**LOCATION MAP**

Figure

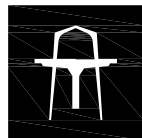
**1**



PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

TMK MAP KEY 2-6-006: 001, 004

Figure  
 2



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## **2. PROJECT DESCRIPTION**

### **2.1 Existing Conditions**

The proposed project site is comprised of two existing parcels adjacent to each other, TMKs 2-6-006: 001 & 004, located at 2055/2057A Kalakaua Avenue in Honolulu. The property identified by TMK 2-6-006: 001 will be referred to as Parcel 1 and the property identified by TMK 2-6-006: 004 will be referred to as Parcel 4. The areas of Parcel 1 and 4 are approximately 0.40-acres and 0.26-acres, respectively. The total area of the two parcels is approximately 0.66-acres. The project site is bounded by Luana Waikiki hotel to the north, Kalakaua Avenue to the east, Fort DeRussy Park to the south, and Maluhia Road/Fort Derussy chapel to the west. The portion of Kalakaua Avenue fronting the project is owned by various owners and maintained by the City and County of Honolulu and the other frontages are owned by Luana Waikiki and the United States Federal government.

The property is currently occupied by the closed 630 seat Kyo-ya restaurant building and two-level parking garage.

### **2.2 Proposed Project**

Based on the latest design concept, the proposed development will consist of the 26 floor Park Kalia - Waikiki condo-hotel that includes 170 units, a pool, a fitness center/spa, a bar area, a restaurant, and a wedding chapel. A multi-level parking garage will also be provided for the development. Various landscaping and water features will be installed around the site. The development plan spans Parcels 1 and 4 and will require a joint development agreement or parcel consolidation to be completed in the future.

### **3. SANITARY SEWER SYSTEM**

#### **3.1 Existing Conditions**

Information obtained from the City and County of Honolulu GIS map system indicates each parcel has a sewer lateral that connects to an existing 8-inch gravity sewerline that runs within the sidewalk fronting the project site along Kalakaua Avenue. The existing sewer main connects to the Fort DeRussy pump station located along Kalakaua Avenue, north of the project site (See Appendix A for C&C of Honolulu GIS Map of Sewer System in Project Vicinity).

#### **3.2 Connection to the City and County Sewer System**

A sewer connection application was submitted to the City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch in April 2014 (See Appendix A – Sewer Connection Application, submitted April 2014). The City has not provided any preliminary opinion regarding the connection application. Correspondence between the City and Wilson Okamoto Corporation has clarified the reason for delay in response (See Appendix A - Email Correspondence 1). In summary, a 2010 consent decree between the City and the EPA required the City to either upgrade the Fort DeRussy wastewater pump station or construct an alternative project that would result in the decommissioning of the station. The City responded to the EPA in August 2014 stating that the requirement to upgrade the wastewater pump station was already completed in 2009. The EPA and DOH have not responded to the City's August 2014 response, therefore, the City is not able to approve new sewer connection applications served by the Fort DeRussy waste water pump station until a response is received.

Since the original connection application was submitted, the project program values and concept has been revised. Inquiry emails were sent to the City on June 24, 2015 for direction on how to update the original values. A response has not been received to date (See Appendix A - Email Correspondence 2). In anticipation of the City requiring the submittal of a new application, a new sewer connection application that included the latest design concept program values was submitted to the City on June 26, 2015 (See Appendix A – Sewer Connection Application, submitted June 2015). WOC inquired with the City in November 2015 to follow up with the status of the sewer connection application review. The City responded the application is still in review at DPP, Environmental Services Department (See Appendix A – Email Correspondence 3).

It is anticipated that the proposed project will utilize one or more of the existing sewer laterals. Locations of the existing laterals and its ability to be utilized in the proposed project should be verified during the design process.

### 3.3 Design Criteria and Facility Charges

Average daily sanitary sewer rates are based on the City and County of Honolulu, Design Standards of the Department of Wastewater Management. The quantity of wastewater was determined as follows:

Flow Criteria:

- Based on 170 units and 2.8 capita per unit = 476 capita
- Plus, Commercial Use Area of 0.47 acre and 300 capita per acre = 141 capita
- Average per capita flow = 80 gallons per day

Based on the above criteria the estimated average daily flow for the project is calculated as:

$$617 \text{ capita} \times 80 \text{ gallons per day} = 49,360 \text{ gallons per day}$$

### 3.4 Facility Charges

The C&C collects a one-time wastewater facility charge from all new developments and redevelopments connecting to its wastewater system. The charges are collected with the intent of funding for future upgrades to the system. Typically, the C&C will credit a development for existing uses on the property and adjust the number of ESDUs that need to be purchased, accordingly. Any adjustments will be determined when the C&C provides an estimated wastewater facility charge on the awaited response to the sewer connection application. The actual sewer facility charge, however, will be finalized during the building permit process.

The current non-residential wastewater facility charge is \$6,424 per ESDU. This rate is reviewed annually and generally increases after the end of the fiscal year on June 30. The presently proposed rate beginning July 1, 2016 is \$6,616 per ESDU.

Non-residential ESDUs are calculated based on equivalent water meter size, which factors in plumbing fixture units. A chart showing equivalent water meter size to number of ESDUs is shown below:

<u>Meter size</u>	<u>Equivalent Single Family Dwelling Unit (ESDUs)</u>
5/8-inch	1.0
¾-inch	1.0
1-inches	2.4
1-1/2-inch	5.8

2-inches	13
3-inches	33
4-inches	57
6-inches	87

Based on the Board of Water Supply, Water System Standard, Peak Daily Water Demand calculations and General Meter and Lateral Information sizing chart, and assumed/estimated plumbing fixture unit count, a 3-inch meter is anticipated to be sized for the domestic flow of this project. Using the table above, a 3-inch meter equates to 33 ESDUs. The estimated sewer facilities charges payable to the City based the rate is calculated as:

$$33 \text{ ESDUs} \times \$6,424 = \$211,992$$

The actual sewer facility charges will be finalized during the building permit process.

## **4. WATER SYSTEM**

### **4.1 Background**

Water supply for the project will be provided through the municipal water system of the City and County of Honolulu's Board of Water Supply (BWS).

### **4.2 Existing Conditions**

The BWS water system in the vicinity of the project site consists of a system of distribution mains and fire hydrants. BWS facility map indicates an existing 8-inch waterline that runs within the makai side of Kalakaua Ave roadway. Based on BWS facility maps, the closest existing fire hydrant to the project site is located on the mauka side of Kalakaua Ave near the intersection of Kalakaua Ave and Kalaimoku Street (See Appendix B - Water System Facility Map).

A request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on June 16, 2015 (See Appendix B – Request For Flow and Pressure Data Letter). A response letter to the request for water availability for the project and pressure information for fire hydrants was received on June 29, 2015. The letter stated that the existing water system cannot provide adequate fire protection to the proposed development. The system is inadequate as the distance from the development to the nearest existing fire hydrant (approximately 295 linear feet) exceeds the standard 125 linear feet required for a high-rise hotel development. BWS will require the developer to install a fire hydrant on Kalakaua Ave within 125 linear feet of the development. During the design process, construction drawings should be submitted to BWS for review approval and on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. BWS will require the implementation of water conservation measures. The letter also provided following data for the existing fire hydrants in the vicinity of the site:

#### M-01057

Static Pressure: 76 psi  
Residual Pressure: 26 psi  
Flow: 4000 gallons per minute

#### M-01048

Static Pressure: 76 psi  
Residual Pressure: 36 psi  
Flow: 4000 gallons per minute

See Appendix B - Response Letter To Request For Flow and Pressure Data Letter, BWS)

BWS records show an existing 2-inch copper lateral and 2-inch water meter servicing Parcel 1 and an 8-inch ductile iron main and 8-inch DC meter servicing Parcel 4. (See Appendix B – Existing Water Meter and Lateral Information).

### **4.3 Connection to Board of Water Supply System**

Water connection(s) to the existing Board of Water Supply system will be determined during the design process and when construction plans for the proposed project are submitted for review and approval. If the existing laterals are not utilized, connection will likely occur to the existing 8-inch main along the makai side of the Kalakaua Ave roadway.

The locations of the existing water laterals and meters and its ability to be utilized in the proposed project should be verified during the design process.

### **4.4 Design Standards**

Average daily water demand is based on BWS Water System standards, Domestic Consumption Guidelines. The zoning designations of the proposed site was determined to be Resort with an associated demand of 350 gals/unit and Commercial/Residential Use with an associated demand of 120 gals/1,000 sf. The average daily water demand is as follows:

#### Average Daily Water Demand:

- Number Of Units – 170
- Commercial/Residential Mix Use – 20,353 sf
- Average Daily Demand For Resort – 350 gallons per unit per day
- Average Daily Demand For Commercial/Residential Use – 120 gals per 1,000 sf per day

Based on the above criteria the estimated average daily water demand for the project is calculated as:

$$170 \text{ units} \times 350 \text{ gallons per unit per day} = 59,500 \text{ gallons per day}$$

$$20,353 \text{ sf} \times 120 \text{ gallons per 1,000 sf per day} = 2,443 \text{ gallons per day}$$

$$\text{Total average daily water demand} = 61,943 \text{ gallons per day}$$

### **4.5 Facility Charges**

The BWS assesses a one-time water system facility charge from all new developments and redevelopments connecting to and increasing demand on its system. The charges are collected with the intent of funding for future upgrades to

the water system. The amount charged is determined based on the anticipated fixture unit (FU) count of the proposed project. To determine the fixture unit count, the project appliances and appurtenances count was assumed based on the November 10, 2015 development plan and this count was converted to fixture units. Floors that are not included in the calculation below were assumed to have no appliances and appurtenances. See Figures 3-1 to 3-7 for assumed appliance and appurtenance count per floor.

The breakdown of assumed appliances, appurtenances, fixtures per floor is:

- Pool Level – Number of Sinks – 16  
Number of Water Closets – 4  
Number of Bathtubs – 4
- Restaurant Level – Number of Sinks – 14  
Number of Water Closets – 8  
Number of Dishwashers – 4
- Lower Tower Level (8 Floors) Per Floor – Number of Sinks – 18  
Number of Water Closets – 10  
Number of Bathtubs – 16
- Upper Tower Level (9 Floors) Per Floor – Number of Sinks – 17  
Number of Water Closets – 8  
Number of Bathtubs – 15
- Penthouse Level – Number of Sinks – 13  
Number of Water Closets – 4  
Number of Bathtubs – 8
- Chapel + Penthouse Level (No Wedding or Wedding) – Number of Sinks – 10  
Number of Water Closets – 4  
Number of Bathtub – 4

To convert the appliances and appurtenances count to water supply fixture units (FU), Uniform Plumbing Code, Table A-2, Estimate Curves for Demand Load was used:

- Sink (Lavatories) = 1.0 FU
- Water Closet = 2.5 FU
- Bathtub = 4.0 FU
- Dishwasher = 1.5 FU

Based on the above, the total fixture units (FU) per level:

- Pool Level = 42 FU
- Restaurant Level = 40 FU
- Lower Tower Level Total (8 Floors) = 856 FU
- Upper Tower Level Total (8 Floor) = 873 FU

- Penthouse Level = 55 FU
- Chapel + Penthouse Level (No Wedding or Wedding) = 36 FU
- Total FU = 1902 FU

Based on BWS water system facilities charges, the rates of non-residential fixture units, as of July 1, 2015, are:

<u>Non-Residential</u>	<u>Water System Facility Charge</u>
First 50 Fixture Units	\$620.85 per Fixture Unit
Additional Fixture Units	\$220.29 per Fixture Unit

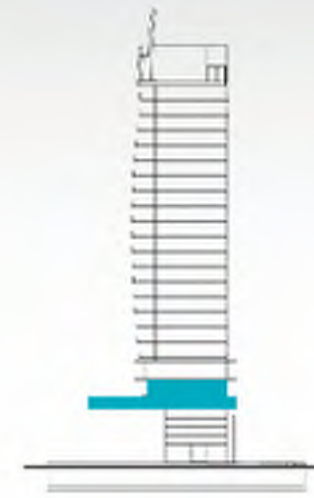
$$(50 \text{ FU} \times \$620.85) + (1852 \text{ FU} \times \$220.29) = \$439,019.58$$

Total Estimated Water System Facilities Charges = \$439,019.58

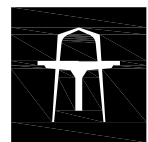
The actual water system facilities charges will be finalized during the building permit process based on the actual fixture unit count from the proposed project.



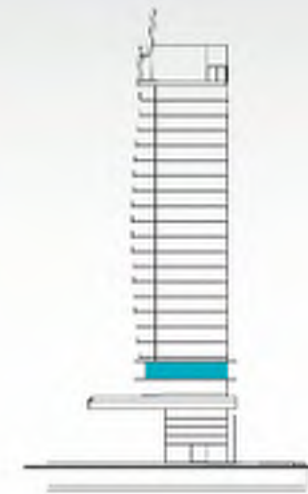
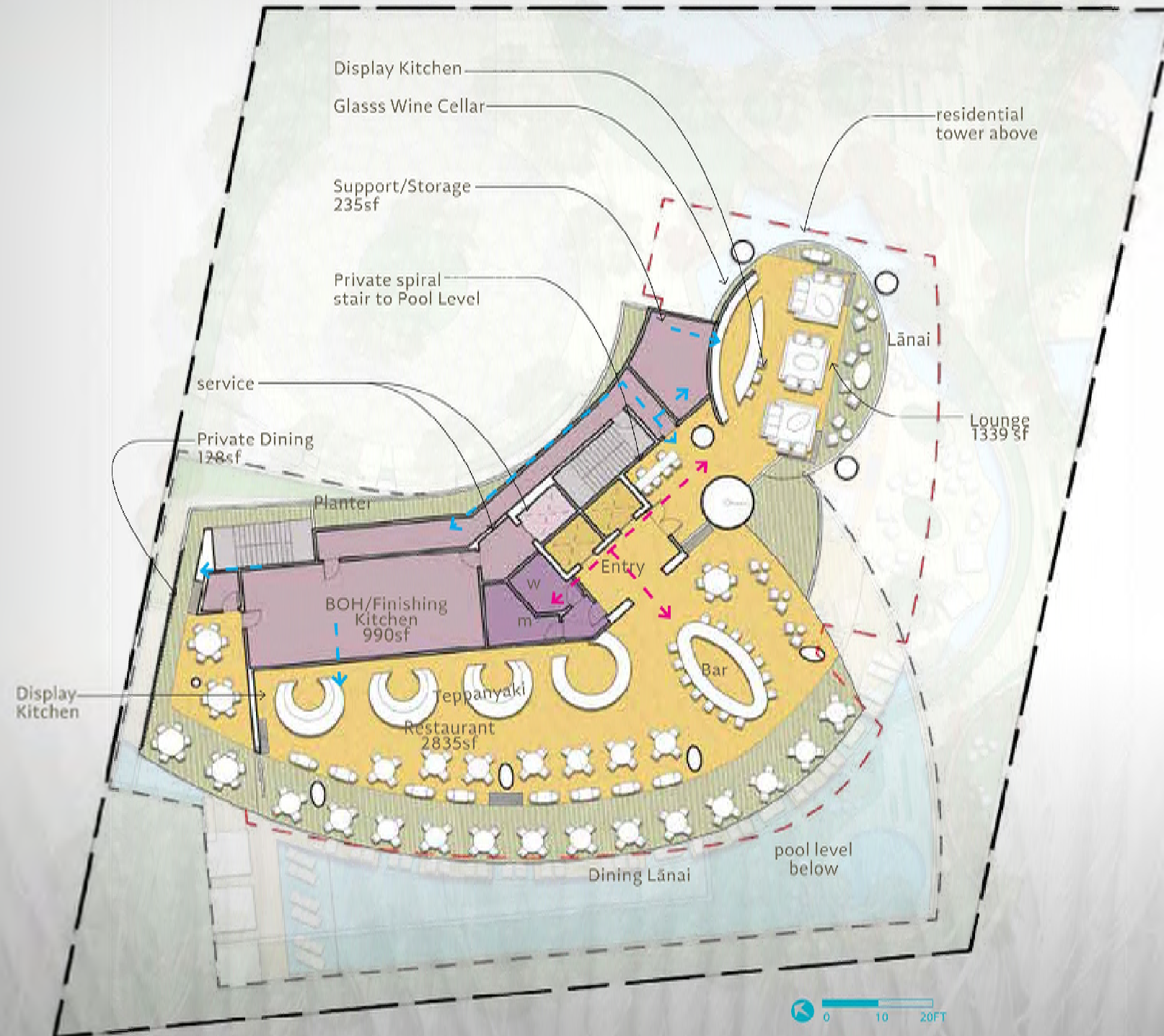
# Pool Level Plan



TOTAL ASSUMED FIXTURE COUNT PER FLOOR:  
 16 - SINK  
 4 - WATER CLOSET  
 4 - BATHTUB



# Restaurant Level Plan



TOTAL ASSUMED FIXTURE COUNT FOR RESTAURANT LEVEL:  
 14 - SINK  
 8 - WATER CLOSET  
 4 - DISHWASHER

PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

DEVELOPMENT PLAN - RESTAURANT LEVEL PLAN



**WILSON OKAMOTO**  
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Figure  
**3-2**

# Lower Tower Level Plan - 4-11 (10 Units)

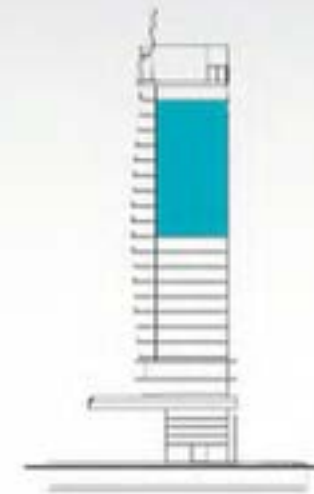
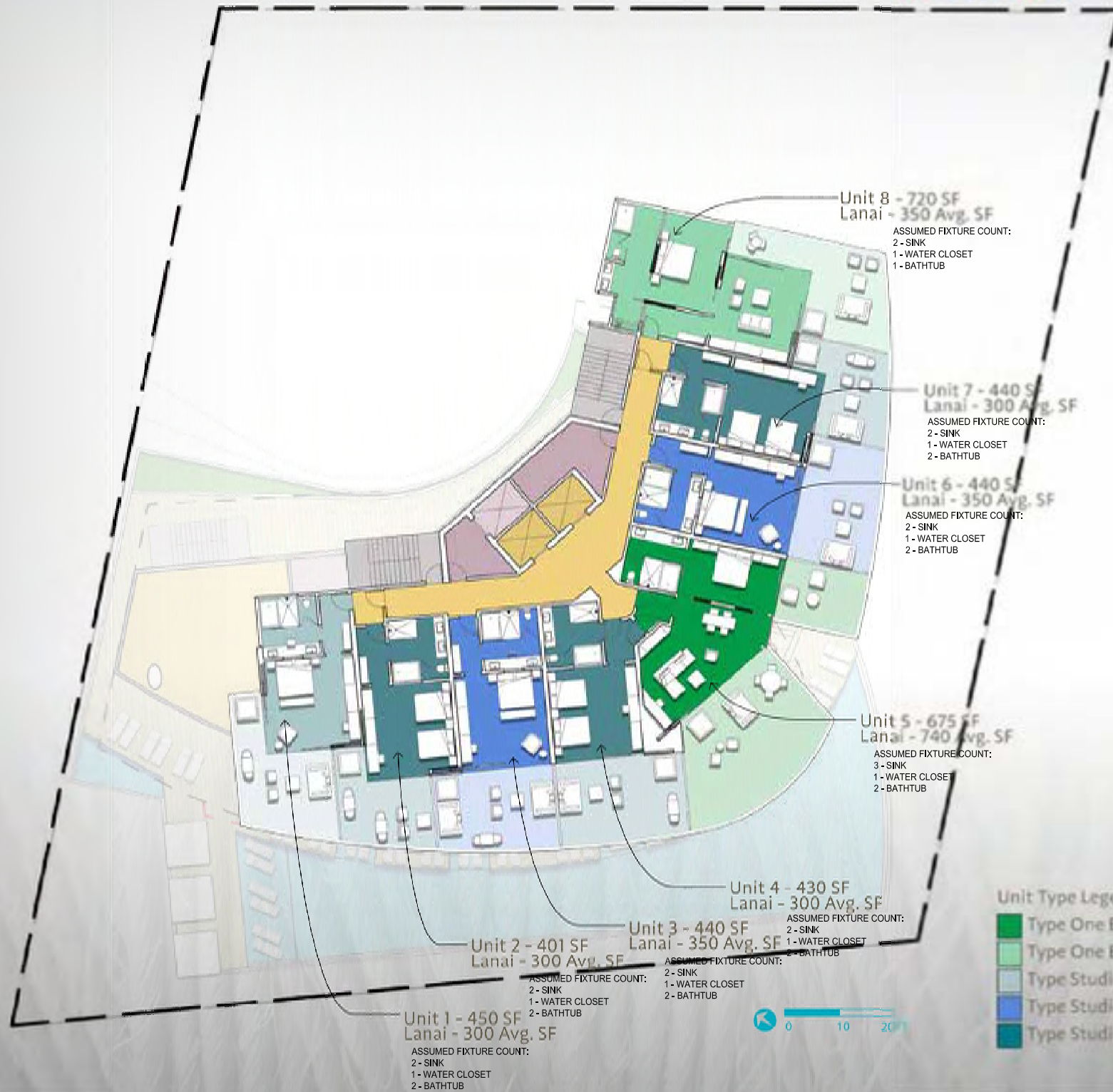


PARK KALIA - WAIKIKI DUE DILIGENCE  
HONOLULU, OAHU, HAWAII

DEVELOPMENT PLAN - LOWER TOWER LEVEL PLAN

Figure  
3-3

# Upper Tower Level Plan - 12 -20 (8 Units)



TOTAL ASSUMED FIXTURE COUNT PER FLOOR:  
 17 - SINK  
 8 - WATER CLOSET  
 15 - BATHTUB

PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

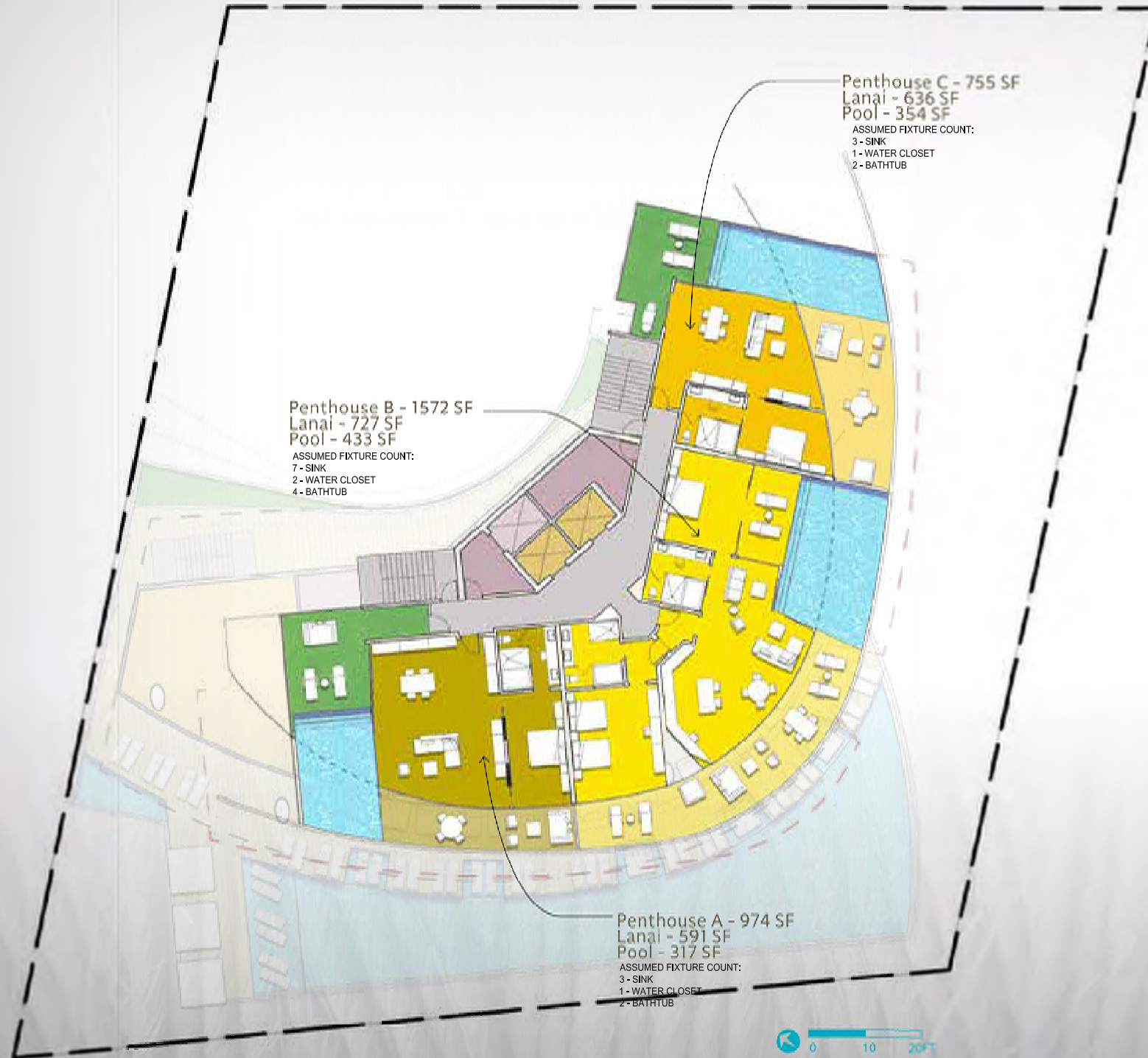
DEVELOPMENT PLAN - UPPER TOWER LEVEL PLAN



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Figure 3-4

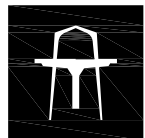
# Penthouse Level Plan - (3 Units)



TOTAL ASSUMED FIXTURE COUNT PER FLOOR:  
 13 - SINK  
 4 - WATER CLOSET  
 8 - BATHTUB

PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

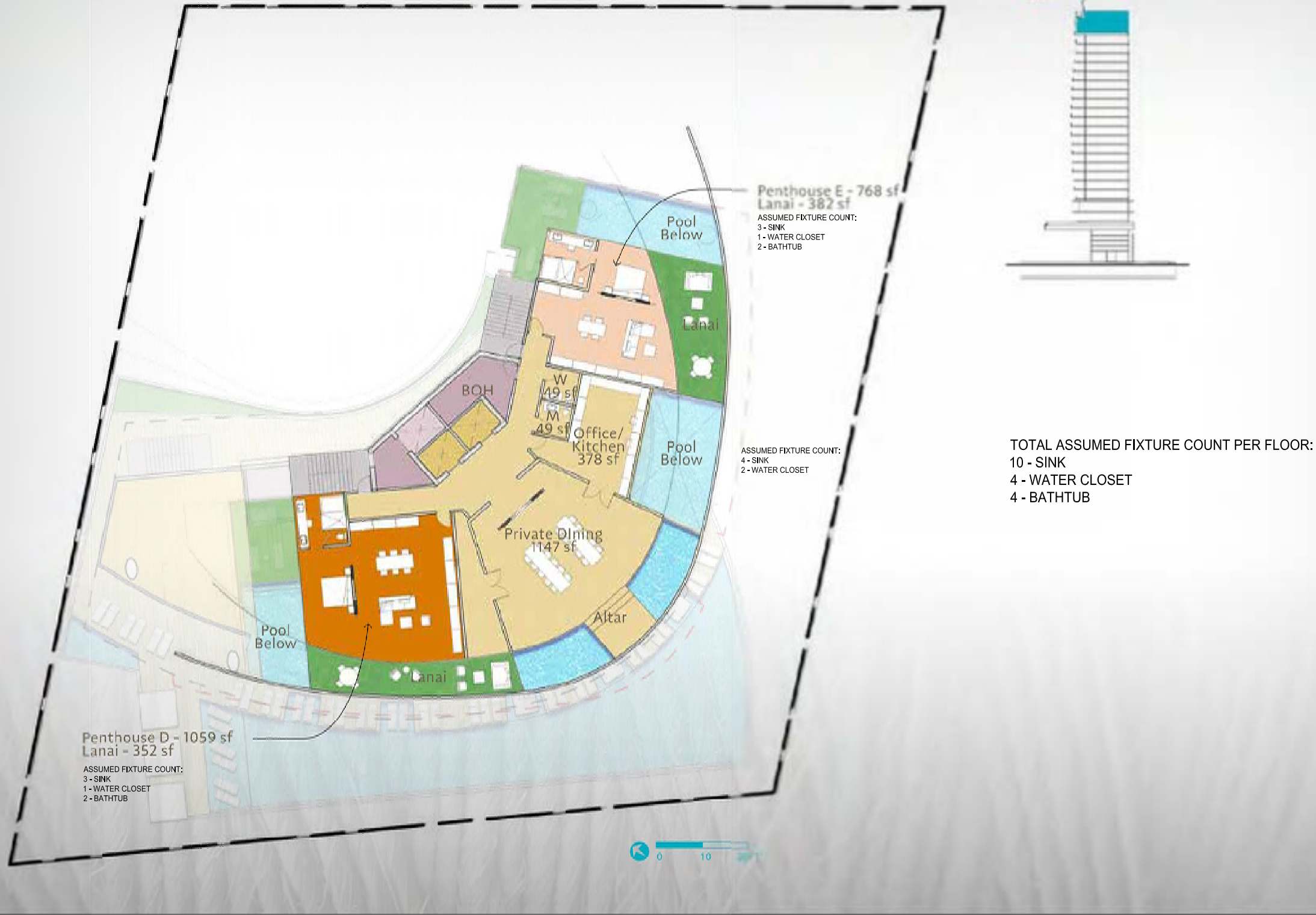
DEVELOPMENT PLAN - PENTHOUSE LEVEL PLAN



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Figure 3-5

# Chapel + Penthouse Hybrid Level Plan (no wedding)



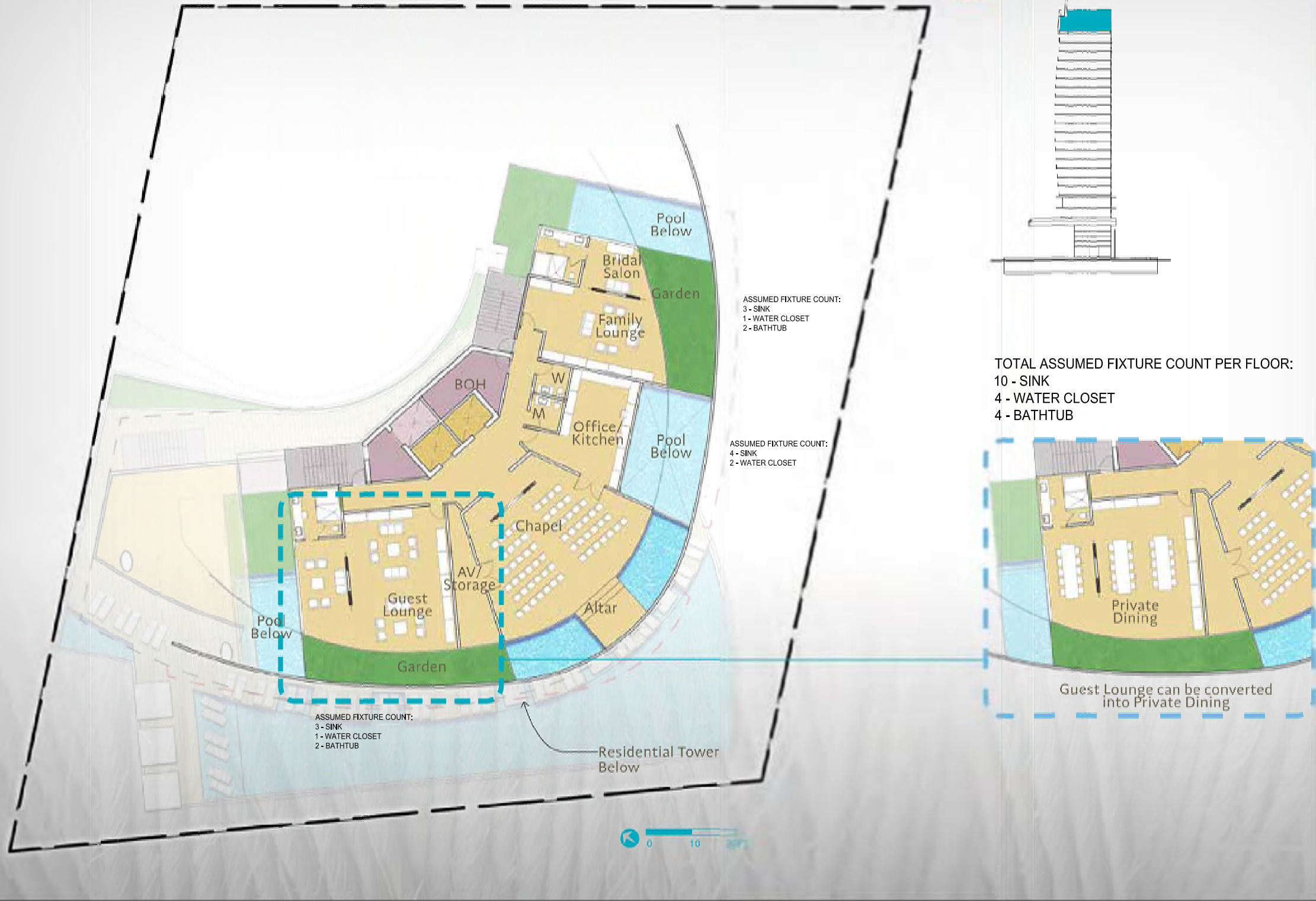
PARK KALIA - WAIKIKI DUE DILIGENCE  
HONOLULU, OAHU, HAWAII

DEVELOPMENT PLAN - CHAPEL + PENTHOUSE HYBRID LEVEL PLAN (NO WEDDING)

Figure  
3-6



# Chapel + Penthouse Hybrid Level Plan (wedding)



PARK KALIA - WAIKIKI DUE DILIGENCE  
HONOLULU, OAHU, HAWAII

DEVELOPMENT PLAN - CHAPEL + PENTHOUSE HYBRID LEVEL PLAN (WEDDING)

Figure  
**3-7**

## **5. SITE GRADING, RUNOFF, AND STORM DRAINAGE SYSTEM**

### **5.1 Background**

Review of the site grading, flooding, and storm drainage system is based on site reconnaissance and City and County of Honolulu GIS Map Data.

### **5.2 Existing Conditions**

The site is mainly occupied by the closed Kyo-ya restaurant building and two-level parking garage. During site reconnaissance, it was observed that on the Maluhia Road, Fort DeRussy Park, and Luana Waikiki Hotel faces of the property, the wall of the existing building straddles the property line and on the Kalakaua Ave. frontage, there is a high point at the entrance to the two-level parking garage and the site generally slopes towards the existing sidewalk. It was observed that a portion of the existing sidewalk along this frontage is depressed due to uplifting of the sidewalk by the root system of an existing tree adjacent to the curb line along Kalakaua Ave. A series of trench drains were installed in the depressed areas to mitigate the ponding in the low areas. The trench drain outlet location was undetermined. A portion of the existing gutter adjacent to the bike lane is also uplifting due to the root system causing ponding in the gutter. No mitigation measures were observed for the ponding within the gutter (See Appendix C - Site Reconnaissance Photos).

Along Kalakaua Avenue there is an existing catch basin located approximately in line with the boundary between Parcels 1 and 4. The catch basin is connected to the City underground drainage system that discharges into the Ala Wai Canal at the mauka end of Kalaimoku Street (See Figure 5 – Existing Drainage System Map).

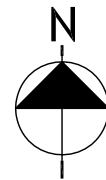
Based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), Community Panel 15003C0366G dated January 19, 2011, the project site is located in the Zone AO (Depth 2') (See Figure 4 – FIRM Map). Zone AO (Depth 2') is the Special Flood Hazard Area defined as "Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined".

### **5.3 Proposed Improvements**

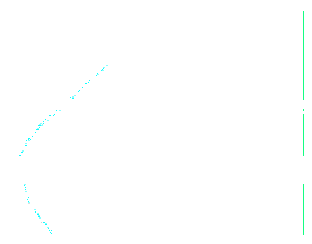
Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation for any proposed building should be established at a minimum of 2-feet above the highest existing grades on-site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

Grading of the proposed project site should convey storm runoff offsite. Besides adhering to the flood zone requirements another factor that could dictate proposed elevations of the site is if the sidewalk fronting the site is improved to raise the

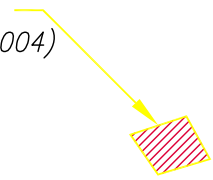




SCALE: 1"=500'



**Project Site**  
(TMK: 2-6-006:001&004)

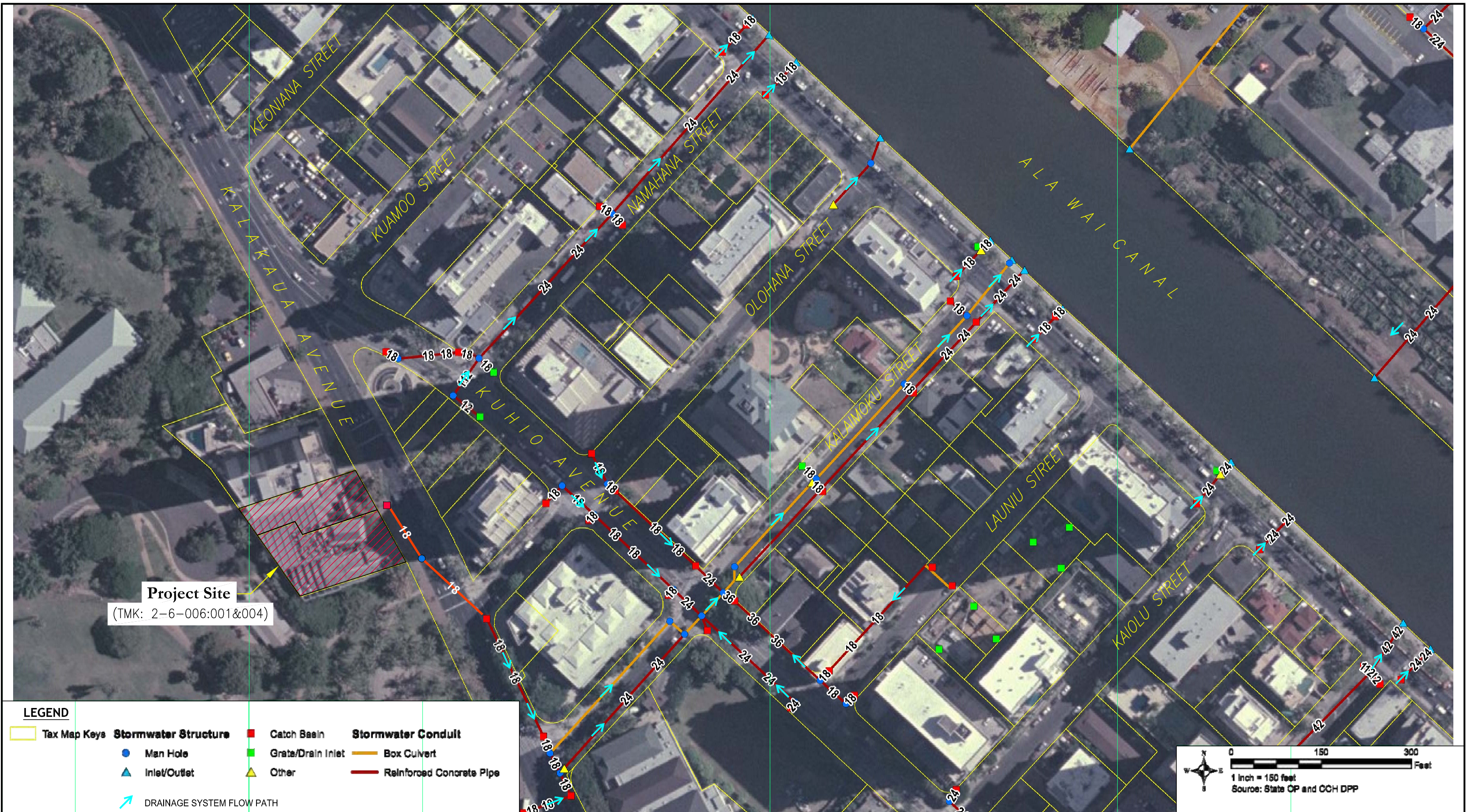


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**PARK KALIA - WAIKIKI DUE DILIGENCE**  
HONOLULU, OAHU, HAWAII

**FLOOD INSURANCE RATE MAP**

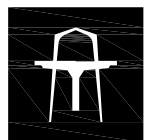
**Figure**  
**4**



PARK KALIA - WAIKIKI DUE DILIGENCE  
HONOLULU, OAHU, HAWAII

EXISTING DRAINAGE SYSTEM MAP

Figure  
5



depressed area to eliminate the existing ponding condition. If the sidewalk is improved, incidental work such as raising the covers of the various utility boxes within the sidewalk to finish grade should be completed. Other modifications to improve the area would be reconstruction of the existing gutter and landscaping measures to contain the existing tree root system to prevent uplifting of the surrounding area. The City should be consulted during the design process to help determine the extent of improvements along the sidewalk.

Due to the project site being less than one acre in size and not classified in the required criteria classification, storm water quality management practices may not be required for the project. The City should be consulted and confirmed on this at the time of final design for the project.

## **6. ROADWAY SYSTEM AND VEHICULAR ACCESS**

### **6.1 Existing Conditions**

The project site is located on the makai side of Kalakaua Avenue between the Kalakaua Avenue/Kuhio Avenue split and Olohana Street. Kalakaua Avenue fronting the project is a one-way, four-lane road.

Existing access to the site is through an approximately 40' wide driveway apron along Kalakaua Avenue at the southeast corner of Parcel 1.

### **6.2 Proposed Improvements**

Vehicular and Pedestrian Access is proposed along Kalakaua Avenue. It is anticipated the driveway apron will be relocated to near the northern corner of the property and will maintain a right in and out movement pattern.

The onsite driveway entering and exiting the porte cochere is one-way in and out with the direction movements separated by landscaped median island. A multi-story parking garage will be provided with access through 2 auto lifts.

A Traffic Impact Analysis Report (TIAR) has been prepared for the project to analyze the existing traffic conditions and future traffic conditions of the area due to the proposed project.

Email correspondence with the City and County of Honolulu, Department of Planning and Permitting, Traffic Review Branch, has indicated that the following items should be considered as the project design moves forward (See Appendix D – Email Correspondence):

- In addition to the TIAR, the Waikiki Special District zoning ordinance has conditions that require construction and traffic management plans (TMP) to be prepared for the project and submitted to the City for review.
- Pedestrian access to the rear of the property, likely controlled by gate and card, may be required.
- Bicycle parking, primarily for employees, located on the property, may be required.
- Sight distance and driveway design standards should be adhered to. If gates are installed at driveway entrances, they should be recessed from the main roadway.

# **Appendix A**

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## ***Sewer System Information***

**Sewer Connection Application, submitted June 2015**

**Sewer Connection Application, submitted April 2014**

**Email 1 – Correspondence with C&C Wastewater Branch  
and Department of Environmental Services**

**Email 2 – Inquiry with C&C Wastewater Branch**

**Email 3 – Inquiry with C&C Wastewater Branch with  
Response, November 2015**

**C&C of Honolulu GIS Map of Sewer System in Project  
Vicinity**

## SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing" and are available at your request. All specified materials described in the "Instructions for Filing" and required fees must accompany this form. You are encouraged to consult with Site Development Division (SDD) staff in completing the application to avoid processing delays.

For other applications, procedures, instructions, and a fillable version of this form, please visit [www.honoluluapp.org](http://www.honoluluapp.org)

### I. APPROVAL PERMIT VARIANCE AGREEMENT/LICENSE

Check one or more as appropriate:

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Subdivision         | <input type="checkbox"/> Grading                     | <input type="checkbox"/> Flood Hazard District Variance                   | <input type="checkbox"/> Driveway Crossing Existing Retaining Wall Agreement |
| <input type="checkbox"/> Easement(s)         | <input type="checkbox"/> Grubbing                    | <input type="checkbox"/> Slope Easement Variance                          | <input type="checkbox"/> Sewer Easement Agreement                            |
| <input type="checkbox"/> Lot Consolidation   | <input type="checkbox"/> Stockpiling                 | <input type="checkbox"/> Non-Standard Driveway Variance                   | <input type="checkbox"/> Drainage Connection License                         |
| <input type="checkbox"/> Park Dedication     | <input type="checkbox"/> Trenching                   | <input type="checkbox"/> Non-Standard Sidewalk Finish Variance            |  |
| <input type="checkbox"/> Site Development    | <input type="checkbox"/> Dewatering                  | <input type="checkbox"/> Surface Encroachment Variance                    |  |
| <input type="checkbox"/> Flood Determination | <input checked="" type="checkbox"/> Sewer Connection | <input type="checkbox"/> Surface Encroachment Variance for Planting Strip |  |

**NOTE: Sections II & III must be filled in completely for all applications. Please type or print legibly.**

### II. LOT AND LAND USE INFORMATION

TAX MAP KEY(S): 2-6-006:01 & 04 Lot Area: 28,761.00 sq.ft./ac.

Zoning District: Reort Mixed Use Development Plan Designation: \_\_\_\_\_ State Land Use District: \_\_\_\_\_

Street Address/Location of Property: 2045 Kalakaua Street M400

Present Use of Property/Building: Commercial

Project Name (if any): One Waikiki (Old Kyo-Ya Restaurant)

Request/Proposal (describe the nature of the request, proposed activity or project):

**Proposed condo-hotel**

### III. APPLICANT INFORMATION

	Recorded Fee Owner/Applicant	Engineer/Architect/Surveyor	Contractor/Authorized Agent/Contact
Name (& title)	<u>Leahi, LLC</u>	<u>Matthew K. Fujioka, P.E.</u>	
Mailing Address	<u>2045 Kalakaua Avenue #M250</u>	<u>1907 S. Beretania St, Suite 400</u>	
	<u>Honolulu, HI 96815</u>	<u>Honolulu HI 96826</u>	
Phone Number(s)	<u>(808) 983-3300</u>	<u>(808) 946 2277</u>	

APPLICANT <u>Matthew Fujioka, P.E.</u>	<u>Wilson Okamoto Corp.</u>	
Print NAME of applicant	Print COMPANY NAME and TITLE of applicant	Signature of applicant

### IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY

Estimated Dates: Start: \_\_\_\_\_ Completion: \_\_\_\_\_ Borrow Material: \_\_\_\_\_

Area of work (sf): \_\_\_\_\_ Borrow Site: \_\_\_\_\_

Dimensions of work: Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height\*: \_\_\_\_\_ Disposal Material: \_\_\_\_\_

Estimated Quantity (cy): Cut: \_\_\_\_\_ Fill: \_\_\_\_\_ Disposal Site: \_\_\_\_\_

\*Stockpile Only

### AUTHORIZATION CLEARANCE

This statement of authorization is used in reference to the information provided for in sections I, II and III above.

I/We, \_\_\_\_\_, hereby authorize \_\_\_\_\_ to act in my/our behalf in obtaining/closing the Grading/Grubbing/Stockpiling permit for the project.

Signature of Owner/Developer giving authority

#### FOR DIVISION USE ONLY:

Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_

# SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

## V. FOR TRENCHING INFORMATION ONLY

Work to be performed for: \_\_\_\_\_

Work to be done:  Service Connection  Repair

Estimated Dates: Start: \_\_\_\_\_

Completion: \_\_\_\_\_

Other: \_\_\_\_\_

Estimated Value of work: \$ \_\_\_\_\_

Dimensions:

length

ft/in

width

ft/in

depth

ft/in

AGENCY CLEARANCES	SIGNATURE	DATE	ADDRESS	PHONE NO.
DPP, Wastewater Branch			650 So. King St., FMB, 1st Flr.	768-8210
DTS, Traffic Signal			650 So. King St., FMB, 2nd Flr.	768-8388
DDC, Street Lightning			650 So. King St., FMB, 9th Flr.	768-8431
BWS, Customer Care			630 So. Beretania St., 1st Flr.	748-5460
Hawaiian Electric, Construction Installation			820 Ward Avenue, 4th Flr.	543-5654
Hawaiian Telcom, Excavation			1177 Bishop St., Security Entrance Adams Lane	546-7746
Gasco., Inc., Maps & Records			515 Kamakee St., 1st Flr.	594-5575
Oceanic Cablevision, Engineering & Constr.			200 Akamainui St.	625-8443
<input type="checkbox"/> CHECK IF REQUIRED DFM, Division of Road Maintenance			99-999 Iwaena Street, #214	768-3600

DPP: Dept. of Planning and Permitting DTS: Dept. of Transportation Services DDC: Dept. of Design and Construction BWS: Board of Water Supply DFM: Dept. of Facility Maintenance

**NOTE:** The utilities listed above may not represent all underground utilities located within City rights-of-ways, nor do these utility clearances relieve the permittee from complying with all other applicable codes, rules, regulations, and/or permit procedures including, but not limited to, additional clearances and requirements for other utilities (i.e. Irrigation, data transmission, etc.) located within City rights-of-ways. Pursuant to ROH 1990, Section 14-17.6, the permittee shall indemnify and save harmless the city for any injuries or damages to any person or property received or sustained by any person as a consequence of any act or acts of the permittee on work done under the trenching permit.

**FOR DIVISION USE ONLY:**

Date of Application: \_\_\_\_\_

Received By: \_\_\_\_\_

Application No.: \_\_\_\_\_

## VI. FOR SEWER CONNECTION INFORMATION ONLY

*To receive a response via e-mail, provide email address below and check box here:*

Residential: No. of Proposed Units \_\_\_\_\_ (Provide breakdown below)

Studios \_\_\_\_\_

1 Bedroom \_\_\_\_\_

2 Bedrooms \_\_\_\_\_

3 Bedrooms \_\_\_\_\_

4 Bedrooms \_\_\_\_\_

Other \_\_\_\_\_

Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

CATEGORY(IES)

QUANTITY(IES)

NEW WATER METER SIZE(S)

**Condo-Hotel**

**180 Units**

**2" Meter**

**Commercial (Misc.)**

**17,000 sq. ft.**

Date of Connection: \_\_\_\_\_  
(approximate)

**July 2018**

Connection Work Desired:  Use Existing Lateral  Other

Dimensions: \_\_\_\_\_

ft.

in.

ft.

length

size

depth

Existing Structures/Dwellings on Property: (Provide breakdown below)

TYPE (i.e. Single Family)

QUANTITY(IES)

REMAIN

DEMOLISH

**Restaurant (seats)**

**630**

**0**

**630**

Remarks: (Provide any additional information on the lines provided). *If response box is checked above, provide email address here:* mfujioka@wilsonokamoto.com

**Commercial area to include restaurant, bar, wedding chapel, and lounge. Property amenities include pool, fitness, concierge, and lobby area. The information in this application supercedes a previous application made for this property in April 2014 and is still under review.**

**FOR DIVISION USE ONLY:**

Date of Application: \_\_\_\_\_

Received By: \_\_\_\_\_

Application No.: \_\_\_\_\_

**SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM**

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing" and are available at your request. All specified materials described in the "Instructions for Filing" and required fees must accompany this form. You are encouraged to consult with Site Development Division (SDD) staff in completing the application to avoid processing delays.

For other applications, procedures, instructions, and a fillable version of this form, please visit [www.honolulu.gov](http://www.honolulu.gov)

**I. APPROVAL PERMIT VARIANCE AGREEMENT/LICENSE**

Check one or more as appropriate:

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Subdivision         | <input type="checkbox"/> Grading                     | <input type="checkbox"/> Flood Hazard District Variance                   | <input type="checkbox"/> Driveway Crossing Existing Retaining Wall Agreement |
| <input type="checkbox"/> Easement(s)         | <input type="checkbox"/> Grubbing                    | <input type="checkbox"/> Slope Easement Variance                          | <input type="checkbox"/> Sewer Easement Agreement                            |
| <input type="checkbox"/> Lot Consolidation   | <input type="checkbox"/> Stockpiling                 | <input type="checkbox"/> Non-Standard Driveway Variance                   | <input type="checkbox"/> Drainage Connection License                         |
| <input type="checkbox"/> Park Dedication     | <input type="checkbox"/> Trenching                   | <input type="checkbox"/> Non-Standard Sidewalk Finish Variance            |  |
| <input type="checkbox"/> Site Development    | <input type="checkbox"/> Dewatering                  | <input type="checkbox"/> Surface Encroachment Variance                    |  |
| <input type="checkbox"/> Flood Determination | <input checked="" type="checkbox"/> Sewer Connection | <input type="checkbox"/> Surface Encroachment Variance for Planting Strip |  |

NOTE: Sections II & III must be filled in completely for all applications. Please type or print legibly.

**II. LOT AND LAND USE INFORMATION**

TAX MAP KEY(S) 2-6-006:01 & 04 Lot Area: 28,761.00 sq. ft./ac.

Zoning District: Resort Mixed Use Development Plan Designation: \_\_\_\_\_ State Land Use District: \_\_\_\_\_

Street Address/Location of Property: 2045 Kalakaua Street M400

Present Use of Property/Building: Commercial

Project Name (if any): Kyo-ya Restaurant

Request/Proposal (describe the nature of the request, proposed activity or project):

Proposed hotel

**III. APPLICANT INFORMATION**

	Recorded Fee Owner/Applicant	Engineer/Architect/Surveyor	Contractor/Authorized Agent/Contact
Name (& title)	<u>Leahi, LLC</u>	<u>Matthew K. Fujjoka, P.E.</u>	
Mailing Address	<u>2045 Kalakaua Avenue #M250</u>	<u>1907 S. Beretania St, Suite 400</u>	
	<u>Honolulu, HI 96815</u>	<u>Honolulu HI 96826</u>	
	City State Zip	City State Zip	City State Zip
Phone Number(s)	<u>(808) 983-3300</u>	<u>(808) 946 2277</u>	

APPLICANT Leahi, LLC  
Print NAME of applicant Print COMPANY NAME and TITLE of applicant Signature of applicant

**IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY**

Estimated Dates: Start: \_\_\_\_\_ Completion: \_\_\_\_\_ Borrow Material: \_\_\_\_\_  
 Area of work (sf): \_\_\_\_\_ Borrow Site: \_\_\_\_\_  
 Dimensions of work: Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height\*: \_\_\_\_\_ Disposal Material: \_\_\_\_\_  
 Estimated Quantity (cy): Cut: \_\_\_\_\_ Fill: \_\_\_\_\_ Disposal Site: \_\_\_\_\_  
\*Stockpile Only

**AUTHORIZATION CLEARANCE**  
 This statement of authorization is used in reference to the information provided for in sections I, II and III above.  
 I/We, \_\_\_\_\_, hereby authorize \_\_\_\_\_ to act in my/our behalf in obtaining/closing  
Print NAME and TITLE of person giving authority Print NAME of person receiving authority  
 the Grading/Grubbing/Stockpiling permit for the project.  
 \_\_\_\_\_  
Signature of Owner/Developer giving authority

**FOR DIVISION USE ONLY:**  
 Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_



# SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

## V. FOR TRENCHING INFORMATION ONLY

Work to be performed for: \_\_\_\_\_ Work to be done:  Service Connection  Repair

Estimated Dates: Start: \_\_\_\_\_ Completion: \_\_\_\_\_ Other: \_\_\_\_\_

Estimated Value of work: \$ \_\_\_\_\_ Dimensions: length ft/in width ft/in depth ft/in

AGENCY CLEARANCES	SIGNATURE	DATE	ADDRESS	PHONE NO.
DPP, Wastewater Branch			650 So. King St., FMB, 1st Fir.	768-8210
DTS, Traffic Signal			650 So. King St., FMB, 2nd Fir.	768-8388
DDC, Street Lighting			650 So. King St., FMB, 9th Fir.	768-8431
BWS, Customer Care			630 So. Beretania St., 1st Fir.	748-5460
Hawaiian Electric, Construction Installation			820 Ward Avenue, 4th Fir.	543-5554
Hawaiian Telecom, Excavation			1177 Bishop St., Security Entrance Adams Lane	546-7746
Gasco., Inc., Maps & Records			515 Kamakee St., 1st Fir.	594-5575
Oceanic Cablevision, Engineering & Constr.			200 Akamainui St.	625-8443
<input type="checkbox"/> CHECK IF REQUIRED DFM, Division of Road Maintenance			99-999 Iwaena Street, #214	768-3600

DPP: Dept. of Planning and Permitting DTS: Dept. of Transportation Services DDC: Dept. of Design and Construction BWS: Board of Water Supply DFM: Dept. of Facility Maintenance

**NOTE:** The utilities listed above may not represent all underground utilities located within City rights-of-ways, nor do these utility clearances relieve the permittee from complying with all other applicable codes, rules, regulations, and/or permit procedures including, but not limited to, additional clearances and requirements for other utilities (i.e. irrigation, data transmission, etc.) located within City rights-of-ways. Pursuant to ROH 1990, Section 14-17.6, the permittee shall indemnify and save harmless the city for any injuries or damages to any person or property received or sustained by any person as a consequence of any act or acts of the permittee on work done under the trenching permit.

### FOR DIVISION USE ONLY:

Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_

## VI. FOR SEWER CONNECTION INFORMATION ONLY

*To receive a response via e-mail, provide email address below and check box here:*

Residential: No. of Proposed Units \_\_\_\_\_ (Provide breakdown below)

Studios \_\_\_\_\_ 1 Bedroom \_\_\_\_\_ 2 Bedrooms \_\_\_\_\_ 3 Bedrooms \_\_\_\_\_ 4 Bedrooms \_\_\_\_\_ Other \_\_\_\_\_

Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

CATEGORY(IES)	QUANTITY(IES)	NEW WATER METER SIZE(S)
Hotel	100 Rooms	1.5" Meter

**Commercial (misc.)** **15,000 sq. ft.**

Date of Connection: July 2015 (approximate) Connection Work Desired:  Use Existing Lateral  Other

Dimensions: \_\_\_\_\_ ft. \_\_\_\_\_ in. \_\_\_\_\_ ft.

length size depth

Existing Structures/Dwellings on Property: (Provide breakdown below)

TYPE (i.e. Single Family)	QUANTITY(IES)	REMAIN	DEMOLISH
Restaurant (seats)	630	0	630

Remarks: (Provide any additional information on the lines provided). *If response box is checked above, provide email address here:*

### FOR DIVISION USE ONLY:

Date of Application: \_\_\_\_\_ Received By: \_\_\_\_\_ Application No.: \_\_\_\_\_

**Lane Saito**

---

**From:** Matt Fujioka  
**Sent:** Wednesday, June 24, 2015 2:50 PM  
**To:** 'Olaes, Marisol'  
**Cc:** Lane Saito  
**Subject:** RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Marisol,

I wanted to follow up on the status of this sewer connection application again and had a couple of related questions:

1. Any update on the status of EPA/DOH approvals for the Fort Derussy SPS?
2. This might be a question for DPP, but since we originally submitted the SCA in April 2014, the proposed development has changed. Is it possible to update the existing application with the new information or should we submit a new SCA?

Thanks for your help!

Matt

**Matthew Fujioka, P.E.**  
Project Manager/Senior Engineer



**WILSON OKAMOTO**  
CORPORATION  
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
T (808) 946-2277 F (808) 946-2253  
W <http://www.wilsonokamoto.com>

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---

**From:** Olaes, Marisol [mailto:molaes@honolulu.gov]  
**Sent:** Wednesday, January 14, 2015 12:53 PM  
**To:** Matt Fujioka  
**Subject:** RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Matt,

I really don't know if a permit application like yours will be likely to get approved once EPA/DOH responds to us. There might be a chance but we cannot really make any promises right now.

Marisol

---

**From:** Matt Fujioka [mailto:mfujioka@wilsonokamoto.com]  
**Sent:** Wednesday, January 14, 2015 11:09 AM  
**To:** Olaes, Marisol  
**Subject:** RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Marisol,

Thanks for the quick response. It seemed to be an indefinite timeline to get a response from EPA/DOH, but if they do accept the City's position, would a permit application like ours be likely to get approved?

Thanks for your help,  
Matt

**Matthew Fujioka, P.E.**  
Project Manager/Senior Engineer



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---

**From:** Olaes, Marisol [<mailto:molaes@honolulu.gov>]  
**Sent:** Tuesday, January 13, 2015 10:14 AM  
**To:** Matt Fujioka  
**Subject:** FW: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Matt,  
Please see email from Lisa Kimura below.

*Marisol*

Marisol Olaes  
City & County of Honolulu  
Department of Environmental Services  
1000 Uluohia St., Suite 308  
Kapolei, HI 96707  
T 808-768-3467

---

**From:** Kimura, Lisa T  
**Sent:** Tuesday, January 13, 2015 9:33 AM  
**To:** Olaes, Marisol  
**Subject:** RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Marisol,

We sent a memo to DPP on this SCA review and the memo provided DPP with the following information. Basically, we are not able to make a determination on this appeal at this time. The 2010 Consent Decree requires the City to either upgrade the capacity of the Fort DeRussy Wastewater Pump Station (WWPS) to the extent recommended by the Wet Weather I/I Assessment Update; or construct an alternative project that would result in the decommissioning of the Fort DeRussy WWPS. The City sent a letter in August 2014 to the United States Environmental Protection Agency (EPA), Region IX and the State Department of Health (DOH) that the City has already satisfied the requirement to upgrade the

Fort DeRussy WWPS. The City's position is based on WWPS upgrades that were completed in 2009 and the analysis of flows completed for the Wet Weather I/I Assessment Update. After EPA and DOH have not yet responded with any comments that they may have about the City's position. Therefore, our department is not able to provide decisions on appeals for Sewer Connection Applications for projects connecting to the Fort DeRussy WWPS.

You can forward this e-mail to Matt Fujioka at Wilson Okamoto for his awareness.

Lisa

---

**From:** Olaes, Marisol  
**Sent:** Tuesday, January 13, 2015 9:24 AM  
**To:** Kimura, Lisa T  
**Subject:** FW: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Lisa,  
Any info on this one?

Thanks,  
Marisol

---

**From:** Matt Fujioka [<mailto:mfujioka@wilsonokamoto.com>]  
**Sent:** Tuesday, January 13, 2015 9:13 AM  
**To:** Olaes, Marisol  
**Subject:** Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Marisol,

Sorry for being a bother on your first day back, but I needed some help in finding out the status of the attached sewer connection application. The attachment isn't signed, but the signed application was submitted to DPP in April 2014. In follow up discussions I had with DPP, they said that it was being reviewed by operations/ENV and they did not know the status. Would it be possible to find out what the hold up is and when a response can be expected? Please let me know if you have any questions, thanks.

Matt

**Matthew Fujioka, P.E.**  
Project Manager/Senior Engineer



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## Email 2

### Lane Saito

---

**From:** Matt Fujioka  
**Sent:** Wednesday, June 24, 2015 2:37 PM  
**To:** tching@honolulu.gov  
**Cc:** Lane Saito  
**Subject:** Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Tessa,

We submitted a SCA for this parcel in April 2014 and our understanding, based on information from ENV, is that it is held up due to EPA/DOH approval issues concerning the Fort Derussy SPS. Since the time of application, our client has made changes to their development plan. Is it possible for us to update the information in our existing application or should we submit a new SCA?

Thanks for your help,  
Matt

**Matthew Fujioka, P.E.**  
Project Manager/Senior Engineer



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## Email 3

### Lane Saito

---

**From:** Matt Fujioka  
**Sent:** Tuesday, November 17, 2015 4:00 PM  
**To:** Lane Saito  
**Subject:** FW: Status of SCA

Sorry, here it is

#### Matthew Fujioka, P.E.

Associate Director



1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
T (808) 946-2277 F (808) 946-2253  
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---

**From:** Yoneshige, Mindy [<mailto:myoneshige@honolulu.gov>]  
**Sent:** Monday, November 09, 2015 10:00 AM  
**To:** Matt Fujioka  
**Subject:** RE: Status of SCA

Hi Matt,

Just double checked and both SCAs are still with ENV.

Thanks,

Mindy Yoneshige, P.E.  
City & County of Honolulu  
Department of Planning & Permitting  
Wastewater Branch  
650 S. King St. 1st Floor  
Honolulu, HI 96813  
(808) 768-8197

---

**From:** Matt Fujioka [<mailto:mfujioka@wilsonokamoto.com>]  
**Sent:** Monday, November 09, 2015 9:55 AM  
**To:** Yoneshige, Mindy  
**Cc:** Lane Saito  
**Subject:** Status of SCA

Hi Mindy,

Just wanted to check back on the status of the following SCAs that are in review:

1. (TMK: 2-3-021: 037, 038, and 039) - 641 Keeaumoku Street Condominium Development
  - a. Last update in September was that it was with ENV for review and would take another 2-3 months or so for review.
2. (TMK: 2-6-006: 001 and 004) – One Waikiki (Old Kyoya Restaurant)
  - a. Last update was that this parcel is served by the Ft Derussy pump station, which is still awaiting EPA approval for the improvements.

Please let me know if you have any additional updates for these two SCAs, thanks.

Matt

**Matthew Fujioka, P.E.**

Associate Director



**WILSON OKAMOTO**  
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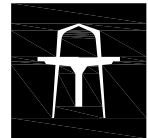
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PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

C&C OF HONOLULU GIS MAP OF SEWER SYSTEM IN PROJECT VICINITY



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 CORPORATION  
 ENGINEERS | PLANNERS | CONSULTANTS



# **Appendix B**

---

## ***Water System Information***

**Request For Flow and Pressure Data Letter to Mr.  
Robert Chun, BWS**

**Response Letter To Request For Flow and Pressure  
Data Letter, provided by BWS**

**Existing Water Meter and Lateral Information, provided  
by BWS**

**Water Facility Map in Project Vicinity**



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

10045-01  
June 16, 2015

City and County of Honolulu  
Board of Water Supply  
Customer Care Division  
630 South Beretania Street  
Honolulu, HI 96813

Attention: Mr. Robert Chun

Subject: 1 Waikiki Hotel  
Honolulu, Oahu, Hawaii  
TMK's: 2-6-006: 001 & 004

Dear Mr. Chun:

Wilson Okamoto Corporation is the civil engineering consultant performing a due diligence study for the proposed 1 Waikiki hotel in Waikiki. The total project site is approximately 28,761 square feet and is located at 2055/2057A Kalakaua Avenue. The project site is identified by Tax Map Key's: 2-6-006: 001 & 004 (See attached TMK Map).

At this time we would like to request your assistance in determining the adequacy of the existing BWS storage and water distribution system in the vicinity of the project site to support the proposed project. The existing project site is currently occupied by the now closed Kyo-ya Restaurant. The project proposes to demolish the existing structures on the property and build a 154 unit hotel that includes a restaurant, bar, pool & fitness area, concierge & café, and basement parking area.

The hotel floor level descriptions and area are as follows:

<u>Levels</u>	<u>Floor Area</u>
Level 26 (Wedding Chapel & Bar or Penthouse Unit)	3,800 sf or 3,524 sf
Levels 4-25 (Hotel Units)	106,964 sf (Total All Levels)
Level 3 (Lobby & Restaurant)	4,862 sf
Level 2 (Pool & Fitness)	3,850 sf
Level 1 (Concierge & Café)	3,850 sf
Total	123,326 sf or 123,050 sf

In addition to your review of the existing water system, we would like to obtain pressure and flow information for 2 existing fire hydrants located in the vicinity of the project site. The hydrant numbers are M01057 and M01048. (See attached BWS System Map).



10045-01  
Letter to Mr. Robert Chun  
Page 2  
June 16, 2015

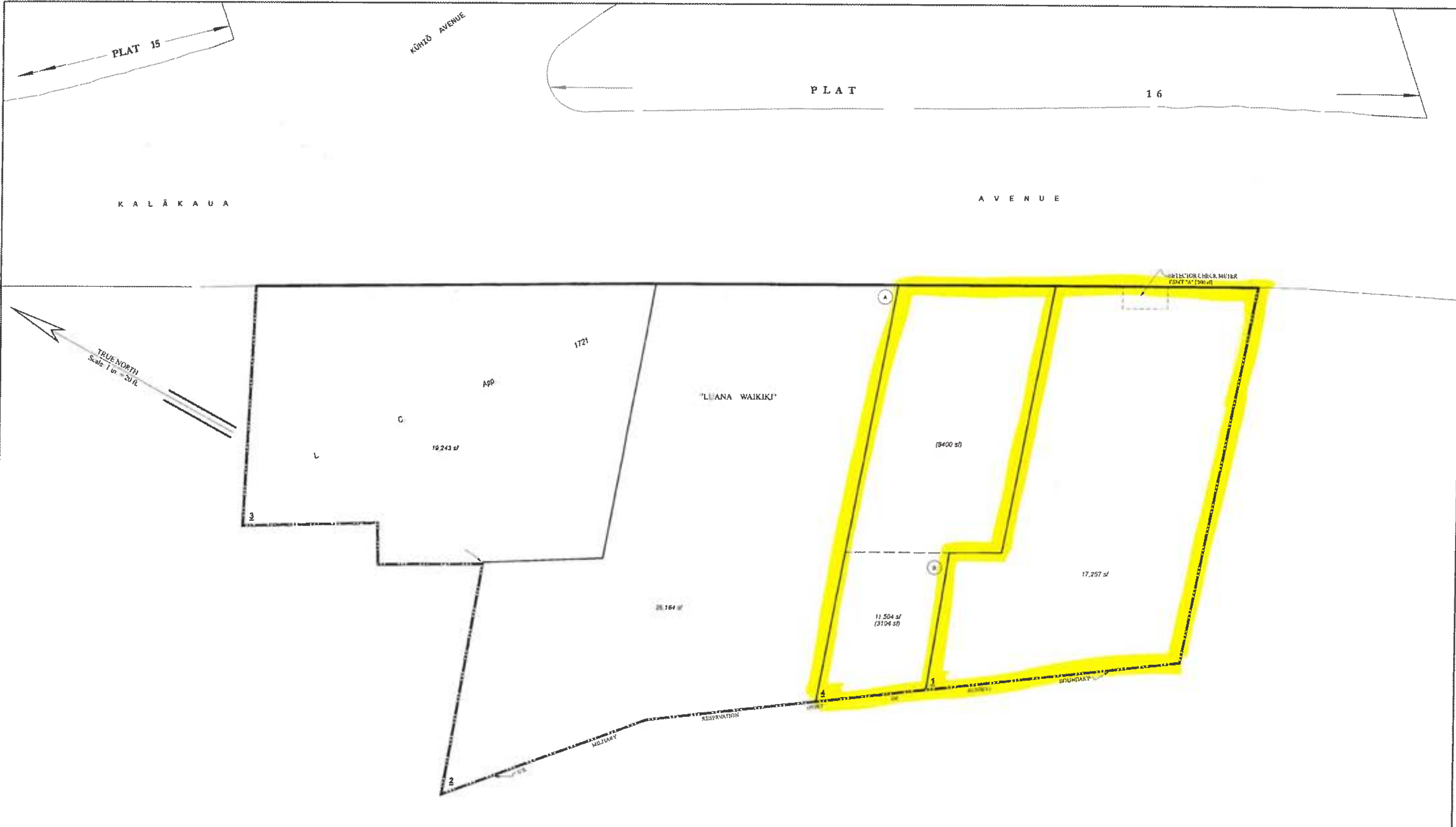
Please call 946-2277 should you have any questions or require additional information.

Sincerely:

A handwritten signature in black ink that reads "Lane Saito".

Lane Saito, P.E.  
Project Engineer

Enclosures:    TMK map  
                  BWS System Map



Date: 05/07/2014

LC APP 762 Map 2, LC APP 857 Map 2 and LC APP 1721 Map 1; HONOLULU, OAHU, HAWAII

COPYRIGHT CITY & COUNTY OF HONOLULU - ALL RIGHTS RESERVED 2014  
 FOR PROPERTY ASSESSMENT PURPOSES, PARCELS MAY NOT BE LEGAL SUBDIVIDED LOTS - SUBJECT TO CHANGE

DEPARTMENT OF BUDGET & FISCAL SERVICES REAL PROPERTY ASSESSMENT DIVISION TAX MAPS BRANCH CITY & COUNTY OF HONOLULU TAX MAP		
FIRST TAXATION DIVISION		
ZONE	SECTION	PLAT
2	6	006
SCALE 1 INCH = 20 FEET		

LS

# BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



June 23, 2015

KIRK CALDWELL, Mayor

DUANE R. MIYASHIRO, Chair  
ADAM C. WONG, Vice Chair  
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DAVID C. HULIHEE  
KAPUA SPROAT

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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 *ELK*

RECEIVED  
JUN 29 2015  
WATER SUPPLY BOARD

Mr. Lane Saito  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Saito:

Subject: Your Letter Dated June 16, 2015 Requesting the Availability of Water and Fire Flow Data to the Proposed 1 Waikiki Hotel on Kalakaua Avenue - Tax Map Key: 2-6-006: 001, 004

Thank you for your letter regarding the proposed 154-unit high-rise hotel and commercial development.

The existing water system cannot provide adequate fire protection to the proposed development in Kalakaua Avenue. Our Water System Standards require a fire hydrant to be located within 125 linear feet of high-rise hotel development and provide a flow of 4000 gallons per minute in the Waikiki area. The nearest fire hydrant is located approximately 295 linear feet away from the parcel. Therefore, the developer will be required to install a fire hydrant on Kalakaua Avenue within 125 linear feet of the parcels. The construction drawings should be submitted for our approval. However, please be advised that this information is based upon current data, and 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 for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

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.

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, xerscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

Mr. Lane Saito  
June 23, 2015  
Page 2

The Board of Water Supply has suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for the following fire hydrants:

<u>Fire Hydrant Number</u>	<u>Location</u>	<u>Static Pressure (psi)</u>	<u>Residual Pressure (psi)</u>	<u>Flow (gpm)</u>
M-01057	Kalakaua Avenue	76	26	4000
M-01048	Kuhio Avenue	76	36	4000

The data are based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

The maps showing the location of the fire hydrants are attached.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

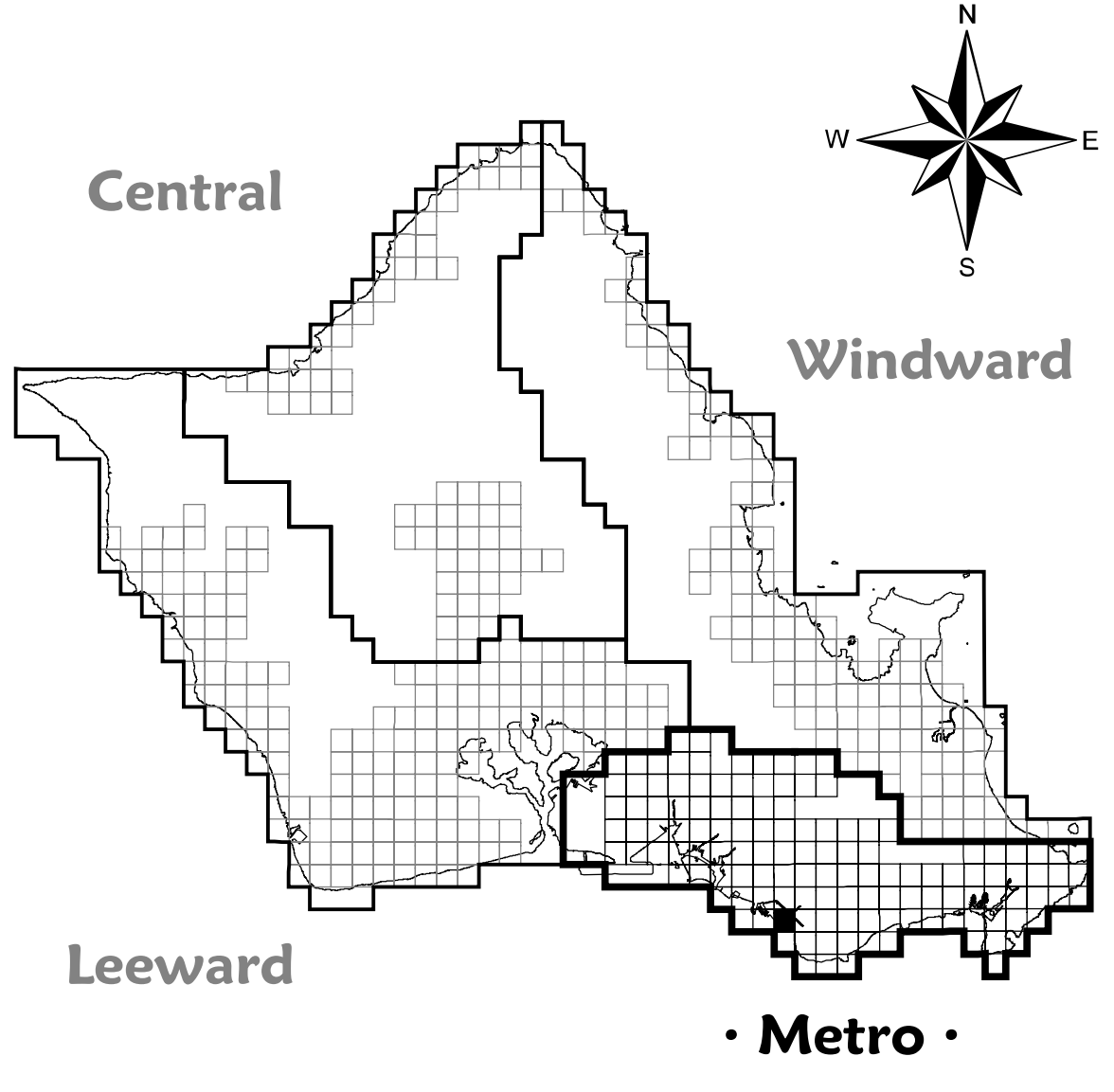
Very truly yours,



ERNEST Y.W. LAU, P.E.  
Manager and Chief Engineer

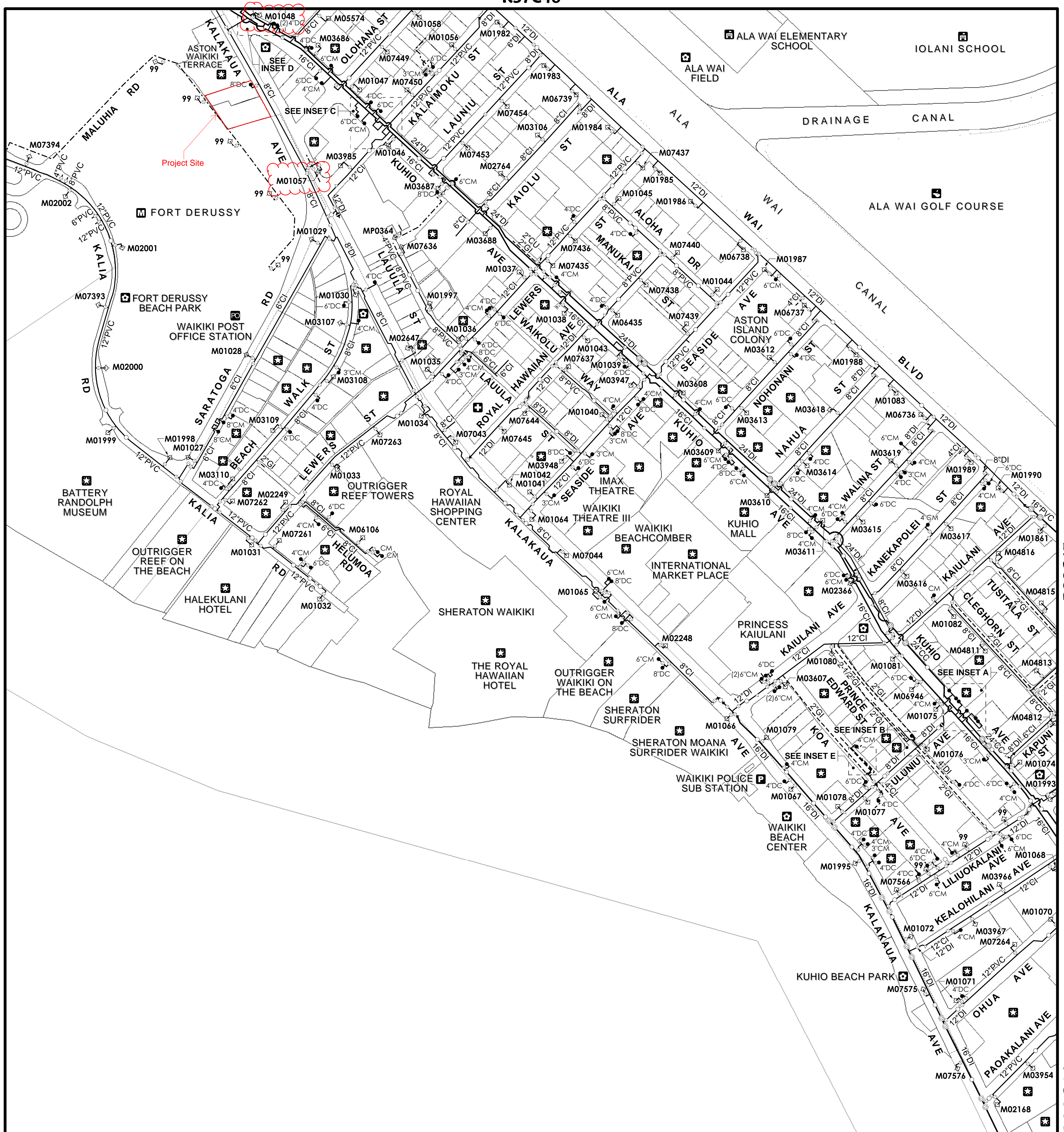
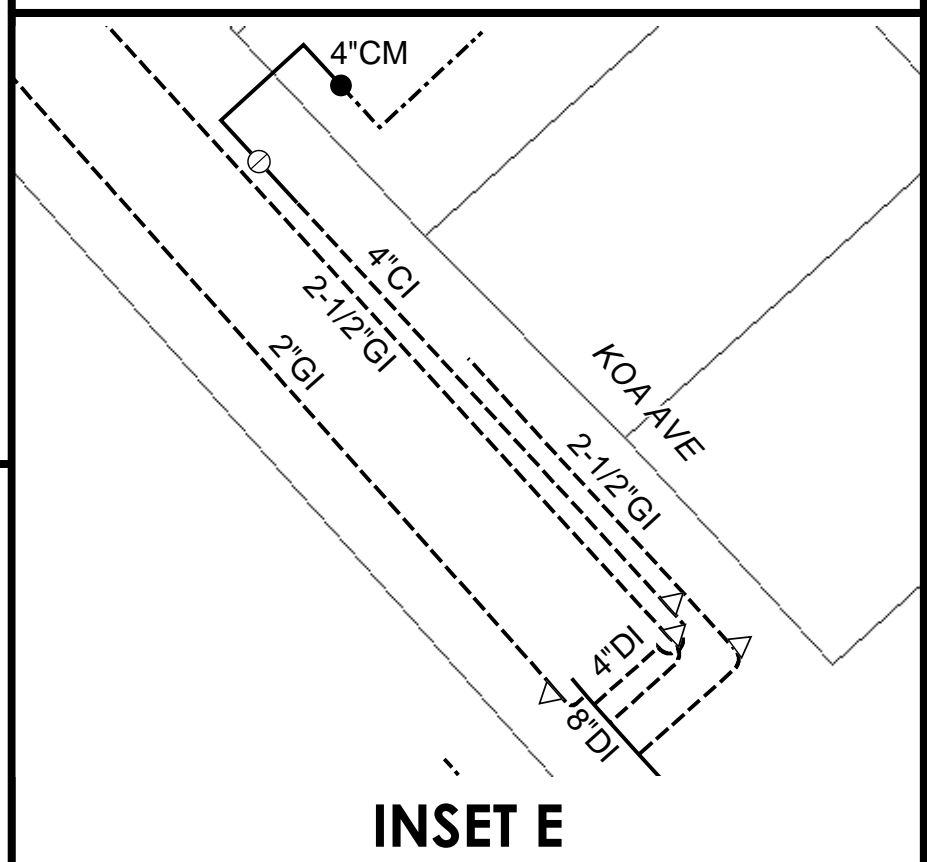
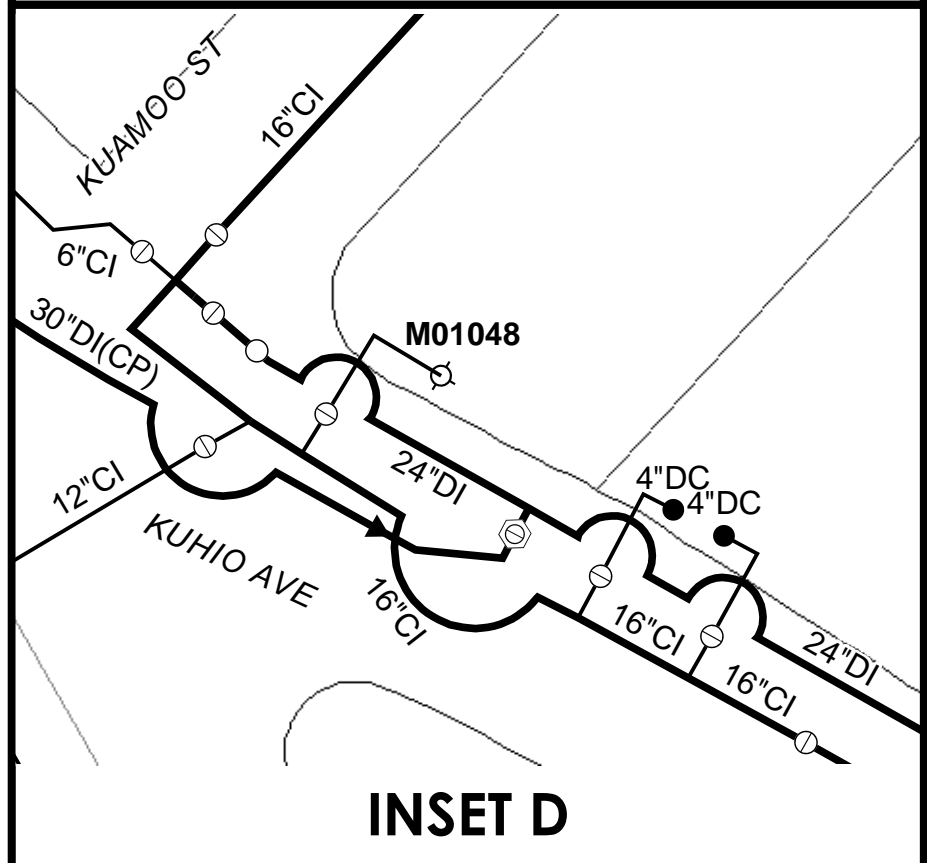
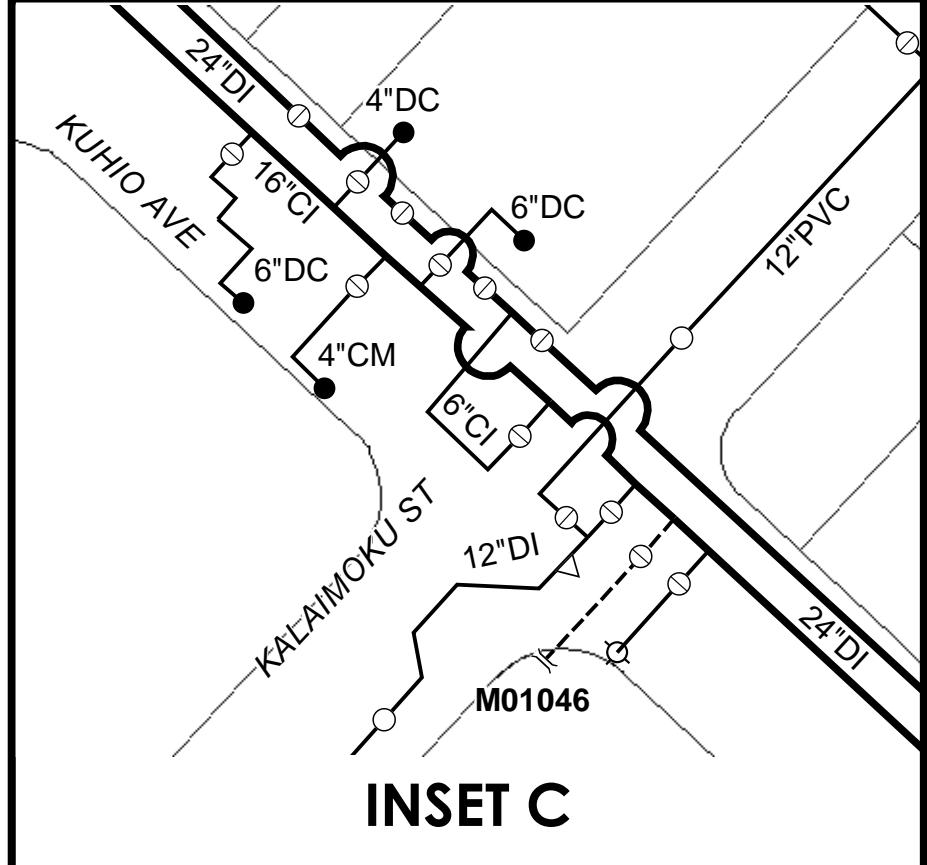
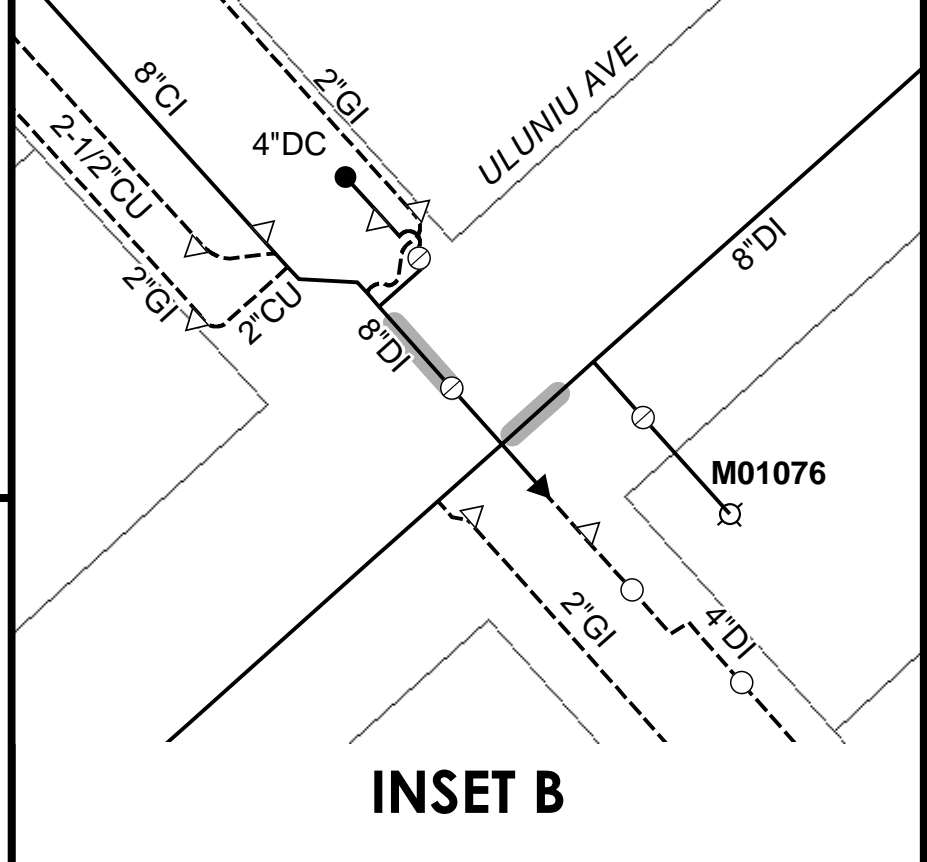
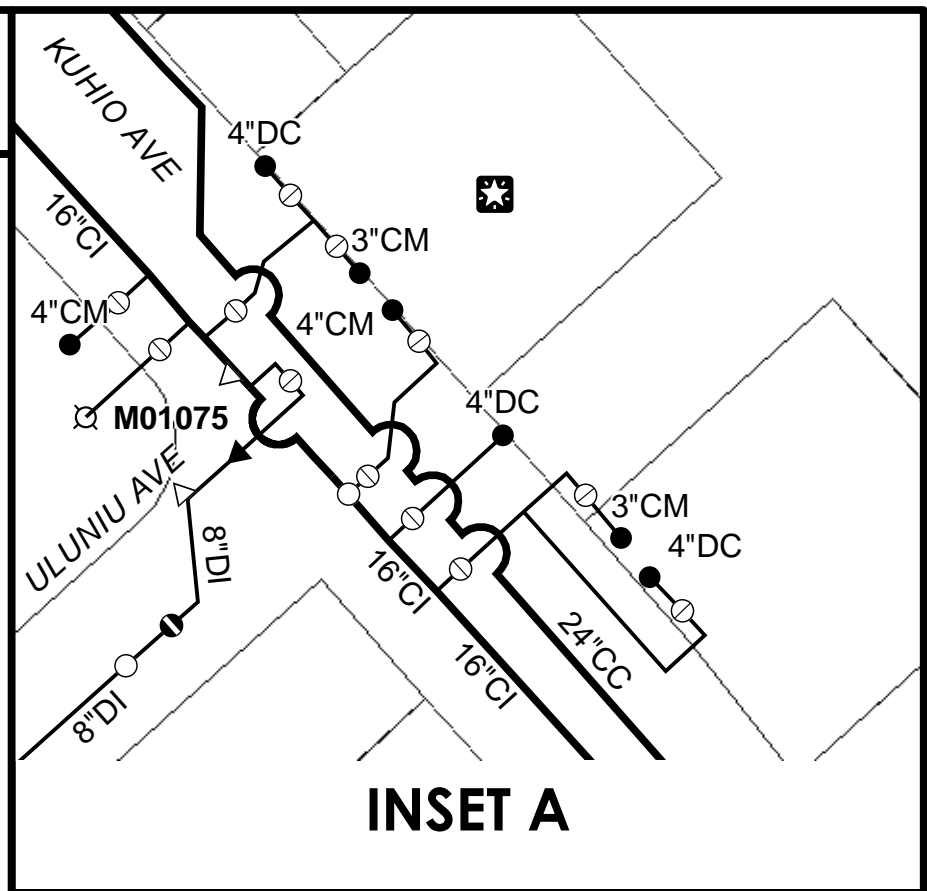
Attachment

# Tile: R38C46 (Metro)



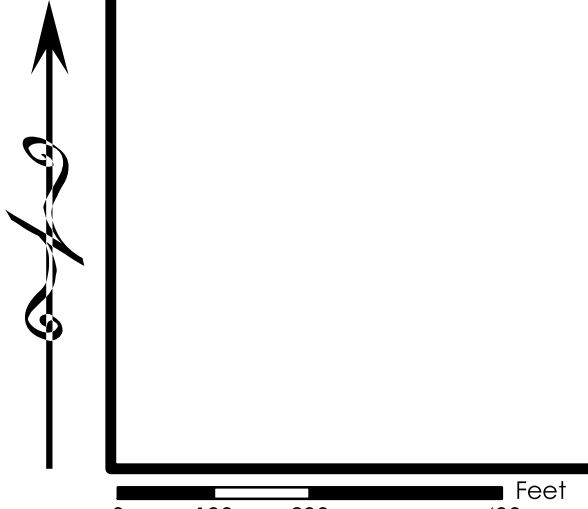
## LEGEND

- |  |                     |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
|--|---------------------|-----------------|-------|--------------------|-------|---------------------|----|-------------------|------|-------------|------|-----------|------|-------------|----|-----------|----|--------|----|--------------|----|-----------------|-----|--------------------|-----|-------|---|
| <p><b>WATER MAIN TYPES</b></p> <ul style="list-style-type: none"> <li>--- Service</li> <li>--- Bypass</li> <li>--- Distribution</li> <li>--- Lateral</li> <li>--- Maintenance</li> <li>--- Transmission</li> <li>--- Private</li> <li>--- Non-Potable</li> </ul> <p><b>PIPE CASINGS</b></p> <ul style="list-style-type: none"> <li>--- Concrete Jacket over DI pipe</li> <li>--- Pipeline Tunnel</li> </ul> <p><b>MISCELLANEOUS</b></p> <ul style="list-style-type: none"> <li>▭ Building Footprint</li> <li>▭ Facility</li> <li>- - - Inset Frame</li> <li>— Stream Centerline</li> </ul> <p><b>MATERIALS</b></p> <table border="0"> <tr><td>AC</td><td>ASBESTOS CEMENT</td></tr> <tr><td>AC-JM</td><td>AC-JOHNS MANSVILLE</td></tr> <tr><td>AC-KM</td><td>AC-KEASBEY MATTISON</td></tr> <tr><td>CC</td><td>CONCRETE CYLINDER</td></tr> <tr><td>CC-A</td><td>CC-AMERICAN</td></tr> <tr><td>CC-H</td><td>CC-HAWAII</td></tr> <tr><td>CC-S</td><td>CC-SOUTHERN</td></tr> <tr><td>CI</td><td>CAST IRON</td></tr> <tr><td>CU</td><td>COPPER</td></tr> <tr><td>DI</td><td>DUCTILE IRON</td></tr> <tr><td>GI</td><td>GALVANIZED IRON</td></tr> <tr><td>PVC</td><td>POLYVINYL CHLORIDE</td></tr> <tr><td>STL</td><td>STEEL</td></tr> </table> <p>CP CATHODIC PROTECTION<br/>NP NON-POTABLE</p> <p><b>BILLING METERS</b></p> <ul style="list-style-type: none"> <li>● CM Compound</li> <li>● DC Detector Check</li> <li>● FM FM</li> <li>● Unknown</li> </ul> <p><b>FITTINGS</b></p> <ul style="list-style-type: none"> <li>⊕ Cut &amp; Plug</li> <li>⊕ Emergency Connection</li> <li>⊕ Flow Tube</li> <li>⊕ Reducer</li> <li>⊕ Transition Coupling</li> </ul> <p><b>FIRE HYDRANT</b></p> <ul style="list-style-type: none"> <li>⊕ Fire Hydrant</li> <li>99 No Fire Hydrant Number</li> </ul> | AC                  | ASBESTOS CEMENT | AC-JM | AC-JOHNS MANSVILLE | AC-KM | AC-KEASBEY MATTISON | CC | CONCRETE CYLINDER | CC-A | CC-AMERICAN | CC-H | CC-HAWAII | CC-S | CC-SOUTHERN | CI | CAST IRON | CU | COPPER | DI | DUCTILE IRON | GI | GALVANIZED IRON | PVC | POLYVINYL CHLORIDE | STL | STEEL | <p><b>OPERATIONAL METERS</b></p> <ul style="list-style-type: none"> <li>● FL Flow</li> <li>● MS Master</li> <li>● TUR Turbine</li> <li>● Unknown</li> <li>⊕ Venturi</li> </ul> <p><b>PUMPS</b></p> <ul style="list-style-type: none"> <li>⊕ Lift</li> <li>⊕ Line</li> <li>⊕ Source</li> </ul> <p><b>RESERVOIR</b></p> <ul style="list-style-type: none"> <li>⊕ Reservoir</li> </ul> <p><b>SOURCES</b></p> <ul style="list-style-type: none"> <li>⊕ Shaft</li> <li>⊕ Source Well</li> <li>⊕ Spring</li> <li>⊕ Tunnel</li> <li>● Unknown</li> </ul> <p><b>VALVES</b></p> <ul style="list-style-type: none"> <li>○ Air Release</li> <li>⊕ Air Release BFGV</li> <li>⊕ Air Release BGGV</li> <li>⊕ Air Release Gate</li> <li>□ Altitude</li> <li>⊕ Backflow Preventor</li> <li>⊕ Bevel Gear Gate</li> <li>⊕ Butterfly</li> <li>⊕ Check</li> <li>⊕ Closed</li> <li>⊕ Control</li> <li>⊕ English</li> <li>⊕ Flap</li> <li>⊕ Float</li> <li>⊕ Gate</li> <li>⊕ Pressure Reducing</li> <li>⊕ Pressure Relief</li> <li>⊕ Pressure Sustaining</li> <li>⊕ Solenoid Control</li> <li>⊕ Spur Gear Gate</li> <li>⊕ Square Bottom Bevel Gear</li> <li>⊕ Stopcock</li> <li>⊕ Tapping</li> <li>⊕ Unknown</li> </ul> <p><b>WATER TREATMENT PLANTS</b></p> <ul style="list-style-type: none"> <li>⊕ Aeration</li> <li>⊕ Blender</li> <li>⊕ Chlorination</li> <li>⊕ GAC</li> <li>⊕ Recycled Water Facility</li> <li>⊕ Sand Filtration</li> </ul> |
| AC   | ASBESTOS CEMENT     |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| AC-JM  | AC-JOHNS MANSVILLE  |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| AC-KM  | AC-KEASBEY MATTISON |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CC   | CONCRETE CYLINDER   |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CC-A   | CC-AMERICAN         |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CC-H   | CC-HAWAII           |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CC-S   | CC-SOUTHERN         |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CI   | CAST IRON           |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| CU   | COPPER              |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| DI   | DUCTILE IRON        |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| GI   | GALVANIZED IRON     |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| PVC  | POLYVINYL CHLORIDE  |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |
| STL  | STEEL               |                 |       |                    |       |                     |    |                   |      |             |      |           |      |             |    |           |    |        |    |              |    |                 |     |                    |     |       |   |



This map is a schematic representation of the water distribution system. Some features have been exaggerated for clarity & may not be to scale.

Revisions as of: 4/28/2006



WALK



B DI



4 CI

2 in.



4 in.



12 in.

KUBA AVE

16 in.

8 CI

8 in.

P00

WALK  
CLOSER  
PLOW

99 in.

99 LINK

2 in.

6 CI

6 DI

6 in.

MID 1057

M03485

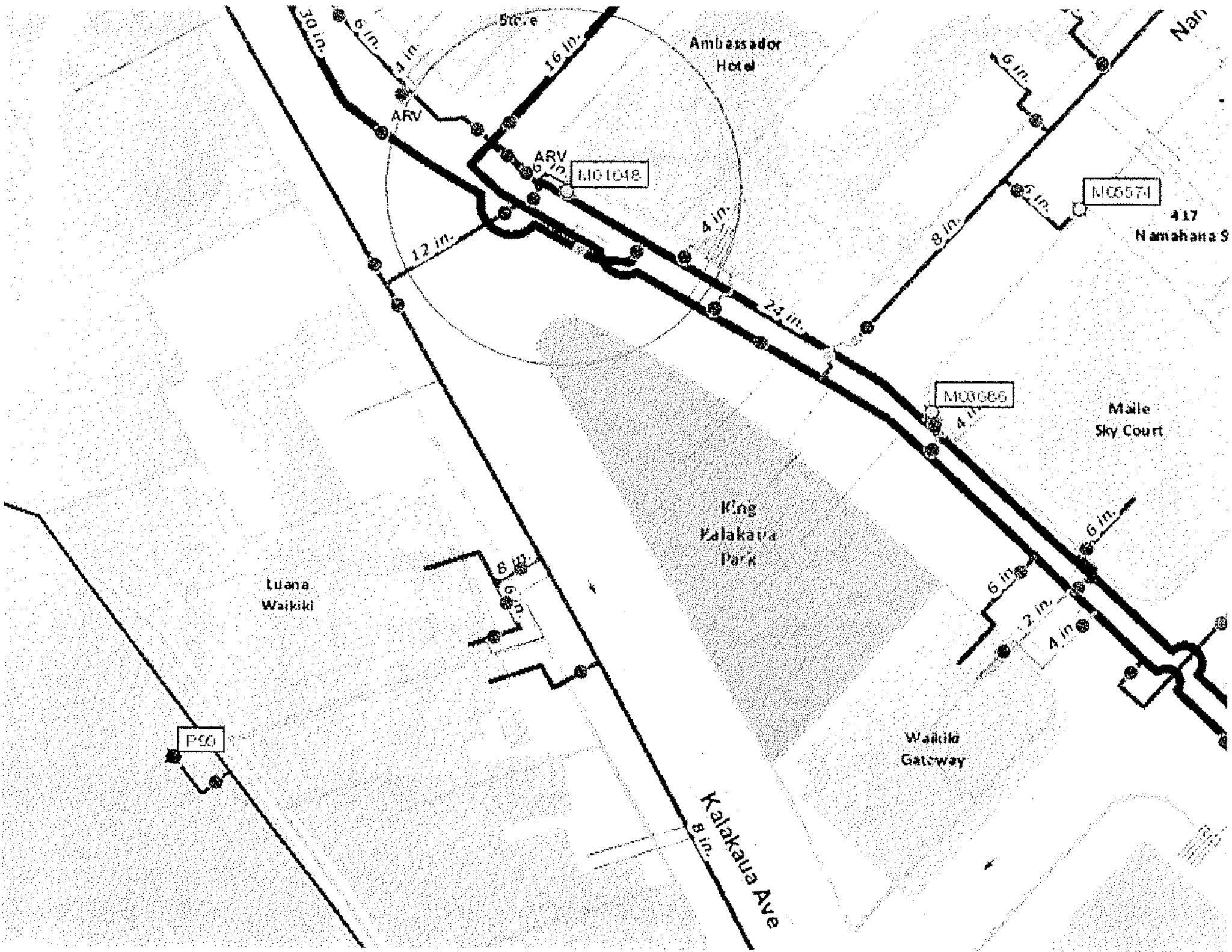
2 in.

6 CI

2 in.

6 DI





Ambassador Hotel

Nan

MO1042

MO6574

417  
Namahana S

MO3686

Malle  
Sky Court

King  
Kalakaua  
Park

Luana  
Waikiki

Waikiki  
Gateway

Kalakaua Ave  
8 in.

P-50

30 in.

6 in.

4 in.

575.6

16 in.

12 in.

ARV

ARV  
3 in.

4 in.

24 in.

8 in.

6 in.

6 in.

4 in.

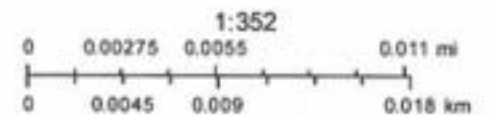
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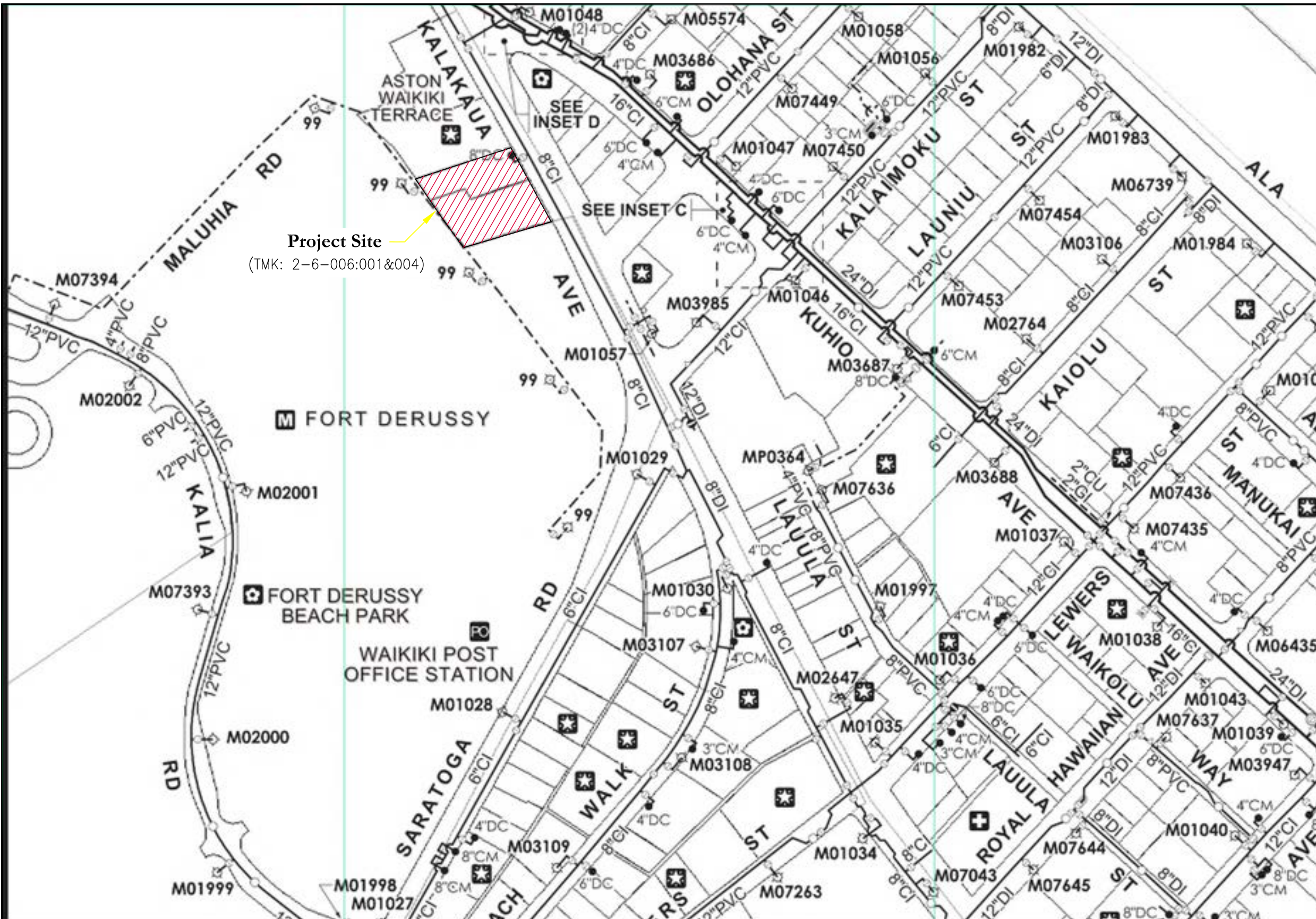
6 in.

12 in.

4 in.

8 in.



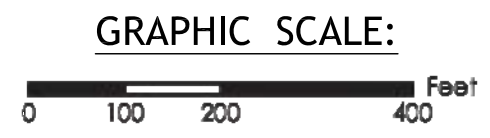


### LEGEND

<b>WATER MAIN TYPES</b>	<b>OPERATIONAL METERS</b>
----- Service	● FL Flow
----- Bypass	● MS Master
----- Distribution	● TUR Turbine
----- Lateral	● Unknown
----- Maintenance	● Venturi
----- Private	
----- Non-Potable	
<b>PIPE CASINGS</b>	<b>PUMPS</b>
==== Concrete Jacket over DI pipe	⊕ Lift
==== Pipeline Tunnel	⊕ Line
<b>MISCELLANEOUS</b>	⊕ Source
▭ Building Footprint	<b>RESERVOIR</b>
▭ Facility	⊕ Reservoir
- - - - Inset Frame	<b>SOURCES</b>
→ Stream Centerline	⊕ Shaft
	⊕ Source Well
	⊕ Spring
	⊕ Tunnel
	⊕ Unknown
<b>MATERIALS</b>	<b>VALVES</b>
AC ASBESTOS CEMENT	⊕ Air Release
AC-JM AC-JOHNS MANSVILLE	⊕ Air Release BPF
AC-KM AC-KEASBEY MATTISON	⊕ Air Release BGGV
CC CONCRETE CYLINDER	⊕ Air Release Gate
CC-A CC-AMERICAN	⊕ Altitude
CC-H CC-HAWAII	⊕ Backflow Preventor
CC-S CC-SOUTHERN	⊕ Bevel Gear Gate
CI CAST IRON	⊕ Butterfly
CU COPPER	⊕ Check
DI DUCTILE IRON	⊕ Closed
GI GALVANIZED IRON	⊕ Control
PVC POLYVINYL CHLORIDE	⊕ English
STL STEEL	⊕ Flap
CP CATHODIC PROTECTION	⊕ Float
NP NON-POTABLE	⊕ Gate
<b>BILLING METERS</b>	⊕ Pressure Reducing
● CM Compound	⊕ Pressure Relief
● DC Detector Check	⊕ Pressure Sustaining
● FM FM	⊕ Solenoid Control
● Unknown	⊕ Spur Gear Gate
<b>FITTINGS</b>	⊕ Square Bottom Bevel Gear
⊕ Cut & Plug	⊕ Stopcock
⊕ Emergency Connection	⊕ Tapping
⊕ Flow Tube	⊕ Unknown
⊕ Reducer	<b>WATER TREATMENT PLANTS</b>
⊕ Transition Coupling	⊕ Aeration
<b>FIRE HYDRANT</b>	⊕ Blender
⊕ Fire Hydrant	⊕ Chlorination
99 No Fire Hydrant Number	⊕ GAC
	⊕ Recycled Water Facility
	⊕ Sand Filtration

  
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 Technical Engineering Projects  
 City & County of Honolulu  
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This map is a schematic representation of the water distribution system. Some features have been exaggerated for clarity & may not be to scale.  
 Revisions as of: 4/28/2006



PARK KALIA - WAIKIKI DUE DILIGENCE  
 HONOLULU, OAHU, HAWAII

BWS FACILITY SYSTEMS MAP



## **Appendix C**

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### ***Site Grading, Runoff, and Storm Drainage System Information***

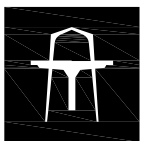
**Site Reconnaissance Photos**



PHOTO 1: EXISTING SIDEWALK FRONTING THE PROJECT SITE.  
DEPRESSED SIDEWALK AREA IS ADJACENT TO EXISTING  
TREE ALONG CURB LINE



PHOTO 2: DEPRESSED SIDEWALK AREA.



**WILSON OKAMOTO**  
CORPORATION  
ENGINEERS | PLANNERS | CONSULTANTS

**PARK KALIA - WAIKIKI DUE DILIGENCE**  
HONOLULU, OAHU, HAWAII

**SITE GRADING, FLOODING, AND STORM DRAINAGE SYSTEM**  
**SITE RECONNAISSANCE PHOTOS**



PHOTO 3: TRENCH DRAIN IN DEPRESSED AREA.



PHOTO 4: PONDING IN GUTTER.

# **Appendix D**

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## ***Traffic Information***

**Email Correspondence with Mel Hirayama, DPP, TRB**

## Lane Saito

---

**From:** Hirayama, Mel J. <mhirayama@honolulu.gov>  
**Sent:** Thursday, June 25, 2015 5:03 PM  
**To:** Lane Saito  
**Cc:** Matt Fujioka; Watanabe, Lance K.; Patterson, Jack R.; Uechi, Rika  
**Subject:** RE: ONE Waikiki Hotel Project - TRB Inquiry  
**Attachments:** OneWaikiki\_Concept.pdf

Lane...

As part of the WSD, in addition to the TIAR, there will be a condition to prepare a construction management plan and a traffic management plan (TMP). The TMP will need to take into consideration other modes of travel, which will include bike and pedestrian. A pedestrian access to the rear of the property will need to be considered. At this time, it will probably be controlled by a gate requiring guests to have a card to get access. A location for bicycle parking will also need to be provided, primarily for employees. Also, include transit incentives. For the wedding, is this for guest only or will locals be able to participate. Question is: if there is enough parking for a local event.

The other standard comments are driveway grade, max 5%, sight distance and recessing any gates. The ped connection at Kalakaua Avenue is good with the splitter in the walkway to the public sidewalk.

Lance/Jack/Rika... any comments?

Mel H. – TRB

---

**From:** Lane Saito [<mailto:lsaito@wilsonokamoto.com>]  
**Sent:** Tuesday, June 23, 2015 10:32 AM  
**To:** Hirayama, Mel J.  
**Cc:** Matt Fujioka; Watanabe, Lance K.  
**Subject:** ONE Waikiki Hotel Project - TRB Inquiry

Mel,

I have a couple of questions for TRB regarding City ROW improvements that could potentially be required for the proposed ONE Waikiki condo-hotel project. Please see attached pdfs for TMK Map, Project Location Map, and Conceptual Plan Layout and Information for your reference.

### Project Summary:

The project site is located at 2055/2057A Kalakaua Avenue at the now closed Kyo-ya restaurant site identified by TMKs: 2-6-006: 001& 004. The conceptual project plan is still in the works but at this time proposes to demolish the existing on-site structures and construct a 27 floor "5-star" condo-hotel named ONE Waikiki that includes 180 units, pool, fitness area, bar and lounge area, penthouse floor level wedding chapel, and restaurant (only planned function open to the public). An underground parking garage of 55 stalls (1 car per 4 units) will be provided for the facility. The porte cochere and underground parking garage entrance and exit layouts are shown in the attached conceptual plan layout. The new development will utilize the existing site driveway apron and location. Pedestrian access to the new development will be provided by three sidewalk connections along the Kalakaua Avenue frontage. A TIAR is currently being prepared for the project.

Questions for TRB:



1. At this time, besides work incidental to utility and sidewalk connection installation does TRB anticipate any frontage improvements that may be required along Kalakaua Avenue, in the City ROW, due to the project (add turning lane into site, road widening, sidewalk widening)? Kalakaua Avenue fronting the site is a one-way four lane road with a bike lane. The site is located between the Kalakaua/Kuhio Ave split and Olohana Street.
2. Any other improvements that TRB may require due to the proposed project?

Please let me know if you have any questions.

Thank you for your help,

**Lane Saito, P.E.**

Project Engineer



**WILSON OKAMOTO**  
CORPORATION  
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
T (808) 946-2277 F (808) 946-2253  
W <http://www.wilsonokamoto.com>

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# Appendix G:

## Early Consultation Comments and Response Letters



JOSH GREEN, M.D.  
GOVERNOR  
KE KIA'ĀINA



KEITH A. REGAN  
COMPTROLLER  
KA LUNA HO'OMALU HANA LAULĀ

MEDH-LENG SILLIMAN  
DEPUTY COMPTROLLER  
KA HOPE LUNA HO'OMALU HANA LAULĀ

**STATE OF HAWAII | KA MOKU'ĀINA O HAWAII**  
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELU A LAWELAWE LAULĀ**  
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)23.057

APR 20 2023

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

Dear Mr. Cheng:

Subject: Environmental Assessment Early Consultation  
Kalia Cultural Entertainment Venue  
Waikiki, Oahu, Hawaii  
TMK: [1] 2-6-006:001 and 004



Thank you for the opportunity to provide comments on the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call David DePonte of the Planning Branch at (808) 586-0492 or email at david.c.deponte@hawaii.gov.

Sincerely,

A blue ink signature of Christine L. Kinimaka.

CHRISTINE L. KINIMAKA  
Public Works Administrator

DD:mo



10773-03  
August 8, 2023

Ms. Christine Kinimaka  
Department of Accounting and General Services  
State of Hawaii  
1151 Punchbowl Street  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Ms. Kinimaka:

Thank you for your letter dated April 20, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. We acknowledge that the State of Hawaii Department of Accounting and General Services does not have any comments to offer at this time as the Proposed Project does not impact any of their facilities. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809

May 10, 2023

LD 0329

Keola Cheng, Director, Planning  
WILSON OKAMOTO CORPORATION  
1907 S. Beretania Street, Suite 400  
Honolulu, HI 96826

*Via email: [publiccomment@wilsonokamoto.com](mailto:publiccomment@wilsonokamoto.com)*

Dear Sirs:

**SUBJECT: Early Consultation for Environmental Assessment  
Kālia Cultural Entertainment Venue**  
**LOCATION: Waikiki, Honolulu, Island of Oahu, Hawaii**  
TMK: (1) 2-6-006:001 & -004

Thank you for the opportunity to review and comment on the subject project. The Land Division of the Department of Land and Natural Resources (DLNR) distributed copies of your request to DLNR's various divisions for their review and comment.

Enclosed are comments received from our Engineering Division. Should you have any questions, please feel free to contact Barbara Lee via email at [barbara.j.lee@hawaii.gov](mailto:barbara.j.lee@hawaii.gov). Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji  
Land Administrator

Attachments

cc: Central Files

JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809

April 18, 2023

LD 0329

MEMORANDUM

FROM: ~~TO~~:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division** (via email: [DLNR.Engr@hawaii.gov](mailto:DLNR.Engr@hawaii.gov))
- Div. of Forestry & Wildlife (via email: [Rubyrosa.T.Terrago@hawaii.gov](mailto:Rubyrosa.T.Terrago@hawaii.gov))
- Div. of State Parks
- Commission on Water Resource Management (via email: [DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))
- Office of Conservation & Coastal Lands
- Land Division – Oahu District (via email: [barry.w.cheung@hawaii.gov](mailto:barry.w.cheung@hawaii.gov))
- Aha Moku (via email: [leimana.k.damate@hawaii.gov](mailto:leimana.k.damate@hawaii.gov))

*Russell Tsuji*

TO: ~~FROM~~:  
SUBJECT:

Russell Y. Tsuji, Land Administrator  
**Early Consultation for Environmental Assessment**  
**Kālia Cultural Entertainment Venue**

LOCATION: Waikiki, Honolulu, Island of Oahu, Hawaii  
TMK: (1) 2-6-006:001 & -004


APPLICANT: **WILSON OKAMOTO CORPORATION on behalf of 2055 Kalākaua LLC**

Transmitted for your review and comment is information on the above-referenced project. Please review the attached information and submit any comments by the internal deadline of **May 08, 2023** to [barbara.j.lee@hawaii.gov](mailto:barbara.j.lee@hawaii.gov) at the Land Division.

If no response is received by the above due date, we will assume your agency has no comments at this time. Should you have any questions about this request, please contact Barbara Lee at the above email address. Thank you.

**BRIEF COMMENTS:**

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:   
 Print Name: Carty S. Chang, Chief Engineer  
 Division: Engineering Division  
 Date: May 5, 2023

Attachments  
Cc: Central Files



**DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION**

**LD/Russell Y. Tsuji**

**Ref: Early Consultation for Environmental Assessment**

**Kālia Cultural Entertainment Venue**

**Location: Waikiki, Honolulu, Island of Oahu, Hawaii**

**TMK: (1) 2-6-006:001 & -004**

**Applicant: Wilson Okamoto Corporation on behalf of 2055 Kalākaua  
LLC**

**COMMENTS**

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). Be advised that 44CFR, Chapter 1, Subchapter B, Part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service Center ([msc.fema.gov](http://msc.fema.gov)). Our Flood Hazard Assessment Tool (FHAT) (<http://gis.hawaiiinfip.org/FHAT>) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed:   
CARTY S. CHANG, CHIEF ENGINEER

Date: May 5, 2023



**WILSON OKAMOTO**  
CORPORATION  
INNOVATORS • PLANNERS • ENGINEERS

LD 0329

10773-03  
April 10, 2023

Ms. Dawn N. S. Chang  
Chairperson  
State of Hawaii  
Department of Land and Natural Resources  
1151 Punchbowl Street  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation  
for the Kālia Cultural Entertainment Venue  
Waikīkī, O'ahu, Hawai'i

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

2023 APR 14 PM 2:20

RECEIVED  
LAND DIVISION

Dear Ms. Dawn N. S. Chang:

On behalf of 2055 Kalākaua, LLC, Wilson Okamoto Corporation is currently preparing a Draft Environmental Assessment (EA) for the proposed Kālia Cultural Entertainment Venue project (Proposed Project) located in Waikīkī on the island of O'ahu. The proposed Project Site would be located off of Kalakaua Avenue identified by Tax Map Key (TMK) parcels: [1] 2-6-005:001 and 004. The Proposed Project involves use of land within the Waikīkī area delineated as the "Waikīkī Special District" which requires an EA pursuant to Chapter 343, Hawai'i Revised Statutes.

As part of the EA Early Consultation process, we are soliciting comments you may have on the Proposed Project. A summary of the Proposed Project and associated figures are enclosed for your review. Please submit comments via email to [publiccomment@wilsonokamoto.com](mailto:publiccomment@wilsonokamoto.com), or written comments via mail to:

Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawai'i 96826  
Attention: Mr. Keola Cheng

We would appreciate your written comments by May 10, 2023. If you have any questions or require additional information, please feel free to call Mr. Dalton Beauprez, or myself, at (808) 946-2277.

Sincerely,

*Keola Cheng*

Keola Cheng  
Director - Planning

Enclosures

cc: Mr. Will Nguyen, BlankSand Capital  
Ms. Wendy Matsukawa, Kobayashi Group



# Environmental Assessment Early Consultation Package:

Kālia Cultural Entertainment Venue - 2055 Kalākaua Avenue  
Waikīkī , O'ahu, Hawai'i

---

Applicant: 2055 Kalakaua LLC

Approving Agency: City and County of Honolulu DPP

**April 2023**

Wilson Okamoto Corporation

# **KĀLIA CULTURAL ENTERTAINMENT VENUE ENVIRONMENTAL ASSESSMENT EARLY CONSULTATION PACKAGE**

## **1. ENVIRONMENTAL ASSESSMENT - EARLY CONSULTATION**

The purpose of this Early Consultation package is to initiate the first step to comply with the Hawai'i Environmental Review process. 2055 Kalakaua, LLC (Applicant) is proposing to construct its Kālia Cultural Entertainment Venue project (Proposed Project) in Waikīkī on the island of O'ahu. As prescribed by § 343-5 (5), Hawai'i Revised Statutes (HRS) actions which, "Propose any use within the Waikiki area of Oahu, the boundaries of which are delineated in the land use ordinance as amended, establishing the "Waikiki Special District" require an Environmental Assessment (EA). The forthcoming EA will be prepared in accordance with Chapter 343, HRS, and Chapter 11-200.1, Hawai'i Administrative Rules (HAR), which will include an assessment of the potential environmental, social, cultural, and economic impacts associated with the Proposed Project. Pursuant to HRS §343-5(b), the City and County of Honolulu Department of Planning and Permitting (DPP) will be the "Approving Agency" and will determine the significance of potential environmental impacts.

Furthermore, the Proposed Project will also require the preparation and processing of a Waikiki Special District Major (WSD Major) Permit application as the Proposed Project is situated in the Resort Mixed Use Precinct, as illustrated in Exhibit 21-9.13 of the City's Land Use Ordinance (LUO) (Chapter 21, Revised Ordinances of Honolulu (ROH)). Thus, the Applicant plans to submit a WSD Major Permit Application to the DPP for processing after the EA process. Hence, the forthcoming EA will support the subsequent WSD Major Permit Application.

## **2. PROPOSED PROJECT – PROJECT DESCRIPTION**

The Applicant is proposing to construct its Kālia Cultural Entertainment Venue project which is envisioned as an open-air entertainment venue (See Figure 1). The Proposed Project is anticipated to encompass the following programming elements:

- A large lawn for guest seating;
- Flex activity spaces with landscaping;
- Stage with dressing room areas to support events;
- A two-story multi-purpose building with the following:
  - Vendor Booth;
  - Office;
  - Bar;
  - Food Preparation and Buffet;
  - Restrooms;
  - Enclosed seating areas;
  - A Tech Booth; and
  - A Lānai
- Pick-up/drop-off area and a loading zone; and
- Other support spaces such as elevators, janitorial rooms, etc.

**DESIGN PARTNERS INCORPORATED**  
 1000 KALANANĀ'OHU BLVD, SUITE 1000  
 HONOLULU, HI 96813  
 TEL: 508-261-1000  
 FAX: 508-261-1001

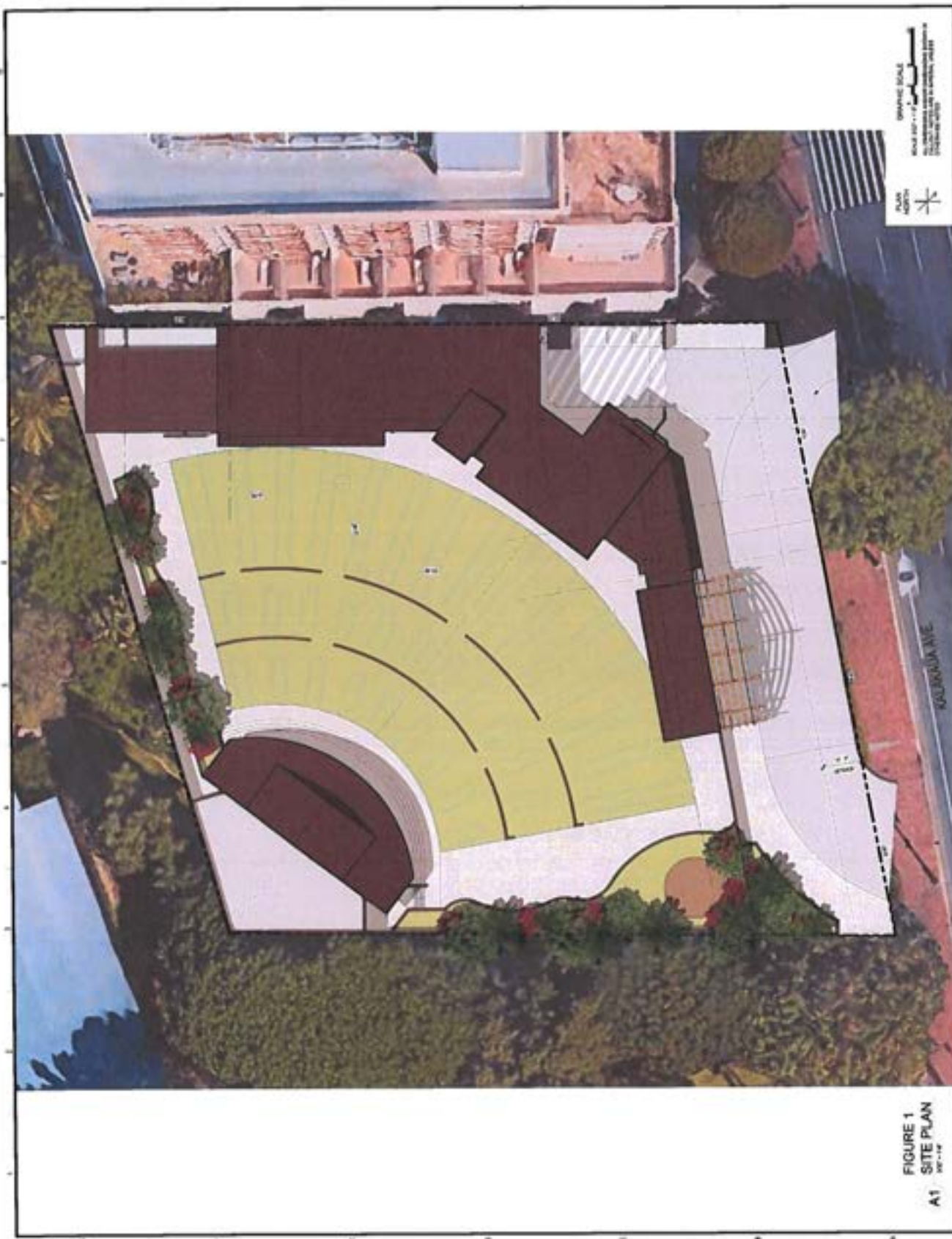
PROJECT NO. \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_

DATE: 08/15/11

SCALE: AS SHOWN

PROJECT: 2055 KALANĀ'OHU AVE  
 HONOLULU, HI 96815  
 DATE: 08/15/11

Project Name	2055 KALANĀ'OHU AVE
Client	HONOLULU, HI 96815
Architect	DESIGN PARTNERS INCORPORATED
Scale	AS SHOWN
Date	08/15/11
Sheet No.	A101
Project No.	



The lawn is anticipated to be designed to provide seating that could accommodate approximately 685 people, while the enclosed areas on the second level of the two-story structure is anticipated to provide seating for approximately 30 people, for a total of approximately 715 people (See Figure 2 and 3).

Access to the venue is anticipated to be via driveway off Kalakaua Avenue. The Proposed Project will provide a port cochere for visitor pick-up and drop-off along with sidewalks. Access to the venue is anticipated to take advantage of the overall region, by emphasizing the pedestrian-orientation of Waikiki, and is intended to promote the efficient use of multi-modal transportation choices over private automobiles, which reflects the needs of Waikiki workers, businesses, residents, and tourists. This provides an opportunity for the Applicant to maximize and optimize the current space available to implement the Proposed Project in line with the objectives of the Waikiki Special District.

The Project Site is currently occupied with the former Kyo-ya Restaurant and its associated parking structure, which has not been operational since 2007. Construction of the Proposed Project will require the demolition of the existing building and parking structure.

The Proposed Project is anticipated to be privately funded, and no Federal, State, or County funds are anticipated to be utilized.

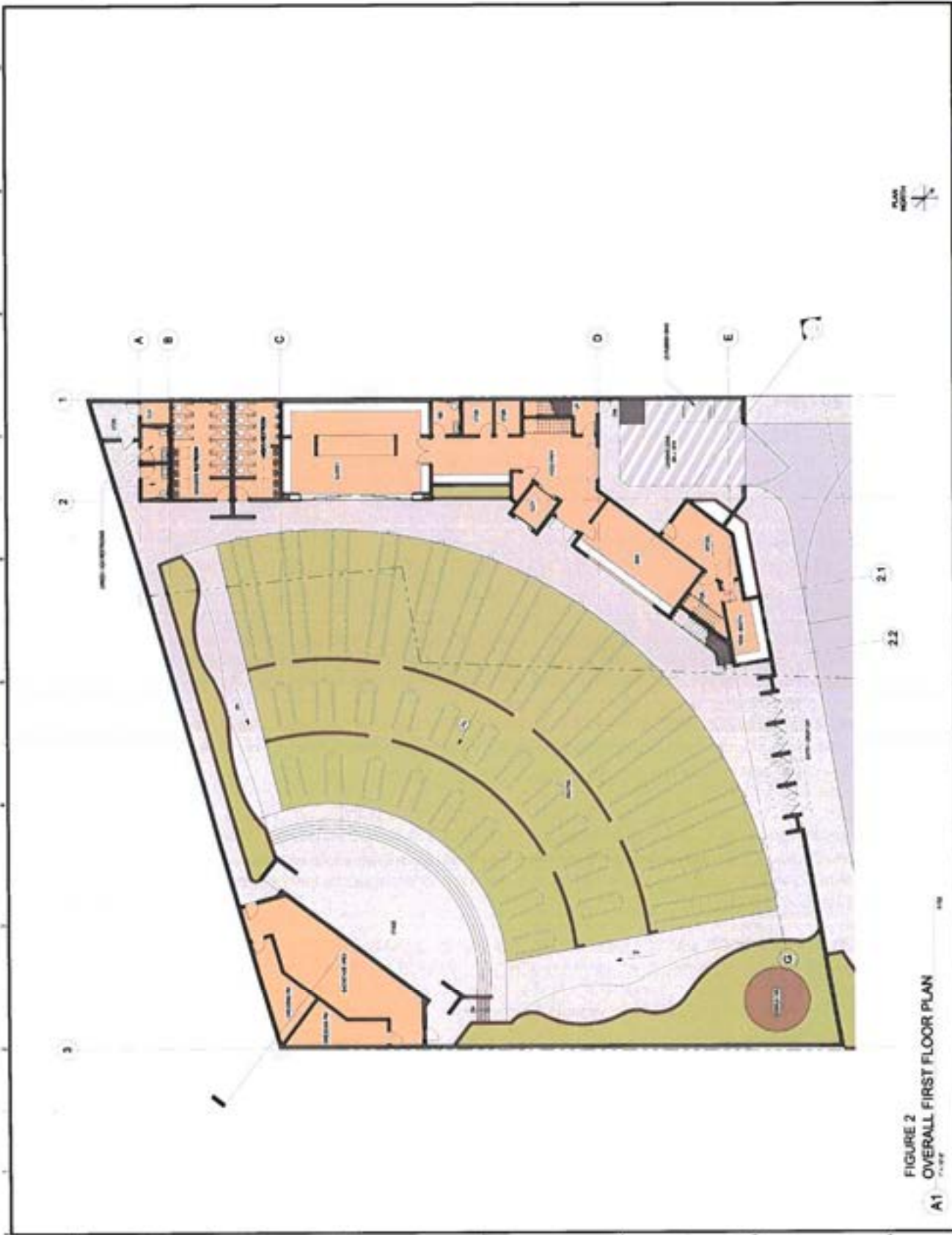
## **2.1. PROJECT LOCATION & SETTING**

The Project Site is located on the western edge of Waikiki, on the island of Oahu. Waikiki stretches along more than two miles from the Ala Wai Yacht Harbor to the Waikiki Wall Walkway at Kūhiō Beach Park and is a little more than a half mile at its widest point. The Project Site encompasses two Tax Map Key (TMK) parcels: [1] 2-6-006: 001 and 004 situated at 2055 Kalakaua Avenue (See Figure 4). Combined, these parcels cover an area of approximately 0.66 acres or approximately 28,750 SF. The Project Site is bounded by the Luana Waikiki Hotel and Suites to the north, Kalakaua Avenue to the east, the Fort DeRussy Army Chapel and Brothers in Valor Memorial to the south, and Maluhia Road to the west.

The surrounding area can be characterized as an urban resort area that is marked by diversity and contrast in building forms, uses, densities, and treatment of open spaces. Waikiki is designated as a special district by the City and County of Honolulu and is organized by various precincts. As the Proposed Project is situated in the Resort Mixed Use Precinct, several hotels and commercial uses are situated due east along Kalakaua Avenue. To the north, is the Apartment Precinct and the Apartment Mixed-Use Precinct with several condotels, apartment buildings, and other commercial uses that continue along Kuhio Avenue and towards the Ala Wai Canal. To the west, is the Public Precinct, which contains the larger Fort DeRussy Park Complex and Beach Park (See Figure 5).

Historically, the Project Site is situated within the ahupua'a of Waikiki, which was known as a place of political prominence due to the concentration of chiefs that lived and frequented the area. Waikiki translates as "spouting water," in reference to the wetlands and abundant freshwater resources that existed in the region. Waikiki was a watery expanse fed by mountain streams, underground springs, and tidal interaction with the waters of the Pacific.

The traditions of Waikiki and its place names indicate its significance as a nexus of interconnected ali'i histories and as a highly productive agricultural region. Waikiki was famous for its extensive irrigated taro fields and fishponds that covered the coastal plain. During the early post-contact era, early Asian immigrants continued to raise fish in Waikiki, along with livestock, while cultivating rice patties and other forms of agriculture. Starting in the second half of the 19<sup>th</sup> century, changes to the Waikiki landscape entailed improvements to transportation connections between Waikiki and Honolulu, and the development of Kapōlani Park and associated residential neighborhoods.



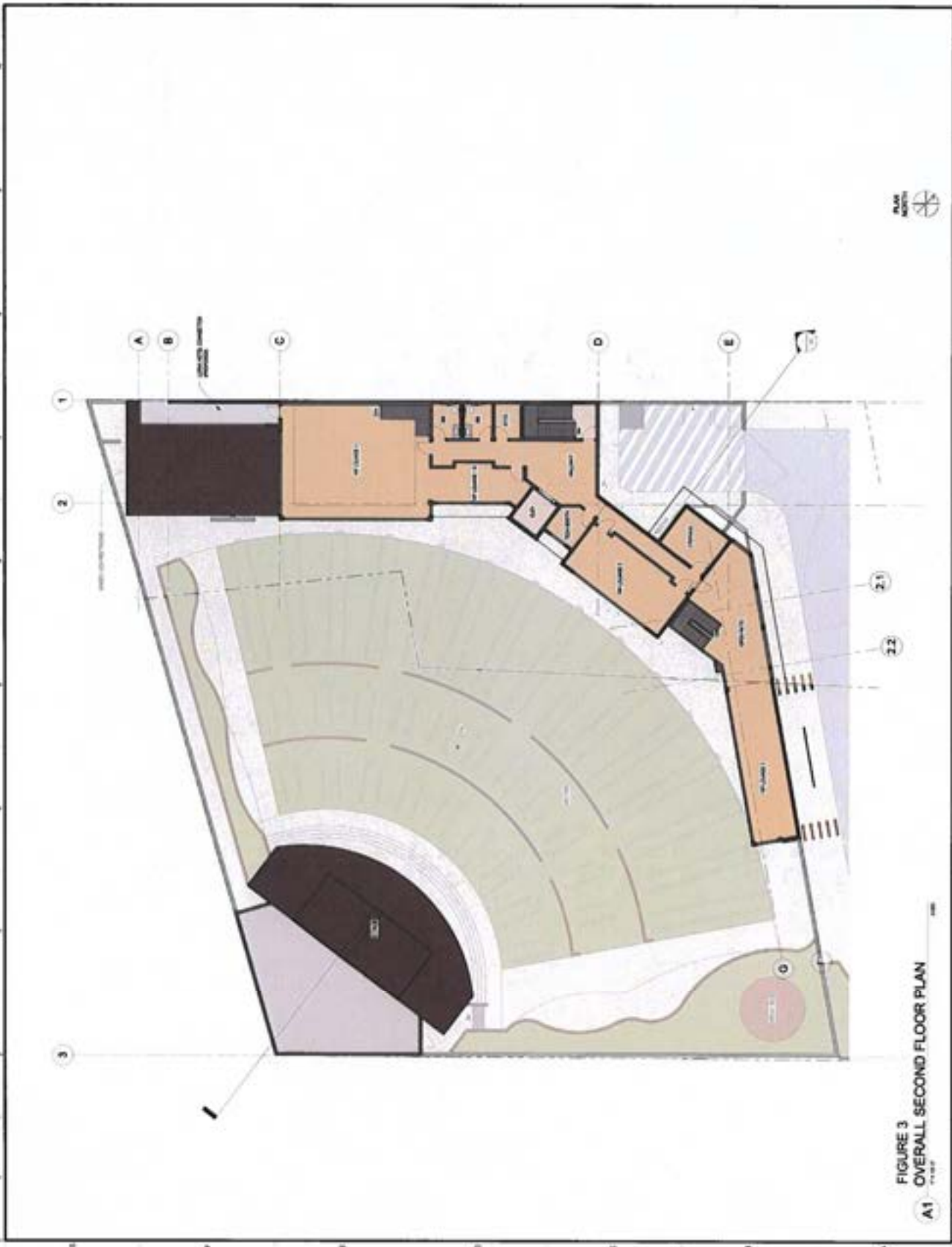
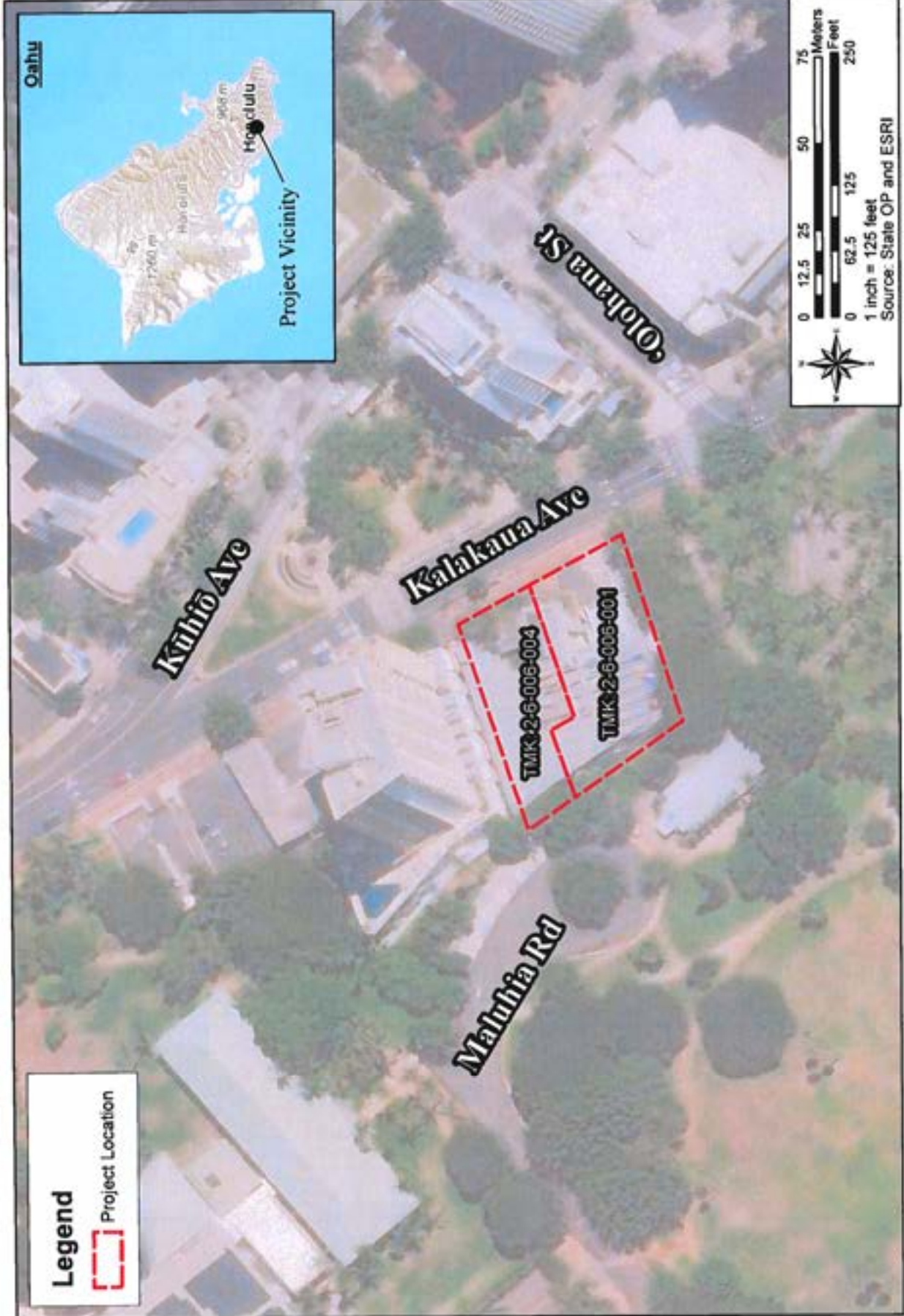



FIGURE 3  
OVERALL SECOND FLOOR PLAN  
A1





**FIGURE 4**

**PROJECT LOCATION MAP**

Kālia Cultural Entertainment Venue  
 Waikīkī, O'ahu, Hawai'i





FIGURE 5

**WAIKIKI SPECIAL DISTRICT MAP**

Kalia Cultural Entertainment Venue  
 Waikiki, O'ahu, Hawaii

The 20<sup>th</sup> century saw the definitive transformation of Waikīkī from a quiet retreat and agricultural breadbasket to a bustling tourist destination. As the popularity of Waikīkī among residents—particularly the foreign/haole population—and visitors grew, the region was eyed for development. The primary impetus for landscape change was construction of the Ala Wai Canal in the 1920s. The canal effectively cut off Waikīkī from the rest of the Honolulu urban and suburban landscape and created developable lands where before there were expansive wetland agricultural fields. During the post-war boom, Waikīkī was transformed into what can be considered as the economic engine of the State by driving the State's core tourism economy. The 1950s were the take-off point with visitor counts perennially hitting new highs each year at levels never experienced before. As more visitors frequented Waikīkī, the following decades saw more new buildings constructed, more properties developed along the coast, shoreline improvements being made to enhance the visitors' beach experience, and Waikīkī transformed into the resort destination it is known as today.

## **2.2 PURPOSE AND NEED**

As the Project Site has been vacant since 2007, the Applicant purchased the property in December 2022 to implement the Proposed Project at the "gate" of Waikīkī. Historically and culturally, Waikīkī's appeal has been a place of hospitality – a place where people gather, attracted by a wide variety of recreational and cultural activities. Waikīkī's physical attractiveness and desirability as a destination for residents, employees, and visitors rely greatly on the aesthetics and experiences which make it unique.

When Waikīkī was designated as a special district in 1976, Waikīkī was in danger of losing what made it a uniquely Hawaiian resort destination, as it was losing its Hawaiian sense of place. A Hawaiian sense of place is not just a particular architectural style that echoes our historical past, but it is also a reflection of attitudes, experiences, place, spaces, and symbols that we have embraced as reminders of and contributors to a uniquely Hawaiian experience.

Moreover, in direct response to the critical value of Hawai'i's tourism industry to the economic health of the State, it has become abundantly evident that the protection of Hawai'i's unique natural environment and host culture is critical. The Proposed Project is aimed to contribute towards sustainable tourism as well as cultural tourism. Sustainable tourism is largely defined as tourism that takes full account of its current and future economic, social and environmental impacts and addresses the needs of visitors, the industry, the environment and host communities. The Hawai'i Tourism Authority defines sustainable tourism as a way to maximize social and economic benefits to Hawai'i's communities and businesses while respecting, nourishing, preserving and enhancing Hawai'i's natural, cultural and human assets. Cultural tourism is defined as tourism related to multi-ethnic cultures that provide residents and visitors with enriching experiences and insights into their history, customs, arts, and traditions.

The Proposed Project is intended to pursue the responsible development of the Project Site, while aligning with and promoting the core tenets of sustainable and cultural tourism as defined above while also creating a Hawaiian sense of place. Specifically, the Proposed Project and its associated programming will seek to celebrate, promote, and perpetuate Hawai'i's natural environment and host culture while fostering local collaboration and strengthening community resilience. The Proposed Project will also provide a venue that encourages social interaction by creating spaces where people may congregate to experience a variety of recreational and cultural activities unique to Hawai'i.

## **2.3 PROJECT TIMELINE, REQUIRED PERMITS, AND APPROVALS**

Following design, permitting and construction of the Proposed Project, it is anticipated to start operating in 2024.

### **3. CONSULTATION**

This Early Consultation Package constitutes the first step in the EA process and is intended to notify stakeholders of the commencement of the preparation of an EA for the Proposed Project, as well as to solicit scoping input on the EA process.

This Early Consultation Package has been circulated to the following parties:

#### **Federal Agencies**

U.S. Environmental Protection Agency  
U.S. Department of the Interior, Fish and Wildlife Service

#### **Federal Representatives**

Senator Mazie Hirono  
Senator Brian Schatz  
Representative Jill Tokuda  
Representative Ed Case

#### **State Agencies**

Department of Accounting and General Services  
Department of Business, Economic Development and Tourism (DBEDT)  
DBEDT, Hawai'i State Energy Office  
DBEDT, Land Use Commission  
DBEDT, Creative Industries Division  
DBEDT, Office of Planning and Sustainable Development (OPSD)  
OPSD, Environmental Review Program  
DBEDT, Hawaii Tourism Authority  
DBEDT, Business Development and Support Division  
Department of Defense  
Department of Health (DOH)  
DOH, Clean Water Branch  
DOH, Environmental Management Division  
DOH, Hazard Evaluation and Emergency Response Office  
DOH, Wastewater Branch  
DOH, Safe Drinking Water Branch  
Department of Land and Natural Resources (DLNR)  
DLNR, Office of Coastal and Conservation Lands  
DLNR, Historic Preservation Division  
Department of Hawaiian Home Lands  
Department of Transportation (DOT)  
DOT, Highways Division  
DOT, Airports Division  
Office of Hawaiian Affairs

#### **State Representatives**

Senator Sharon Moriwaki  
Representative Adrian Tam

#### **City and County of Honolulu Agencies**

Board of Water Supply

Department of Community Services  
Department of Design and Construction  
Department of Environmental Services  
Department of Facility Maintenance  
Department of Parks and Recreation  
Department of Planning and Permitting  
Department of Transportation Services  
Honolulu Fire Department  
Honolulu Police Department  
Office of Climate Change, Sustainability, and Resiliency  
Office of the Mayor

**City Council**

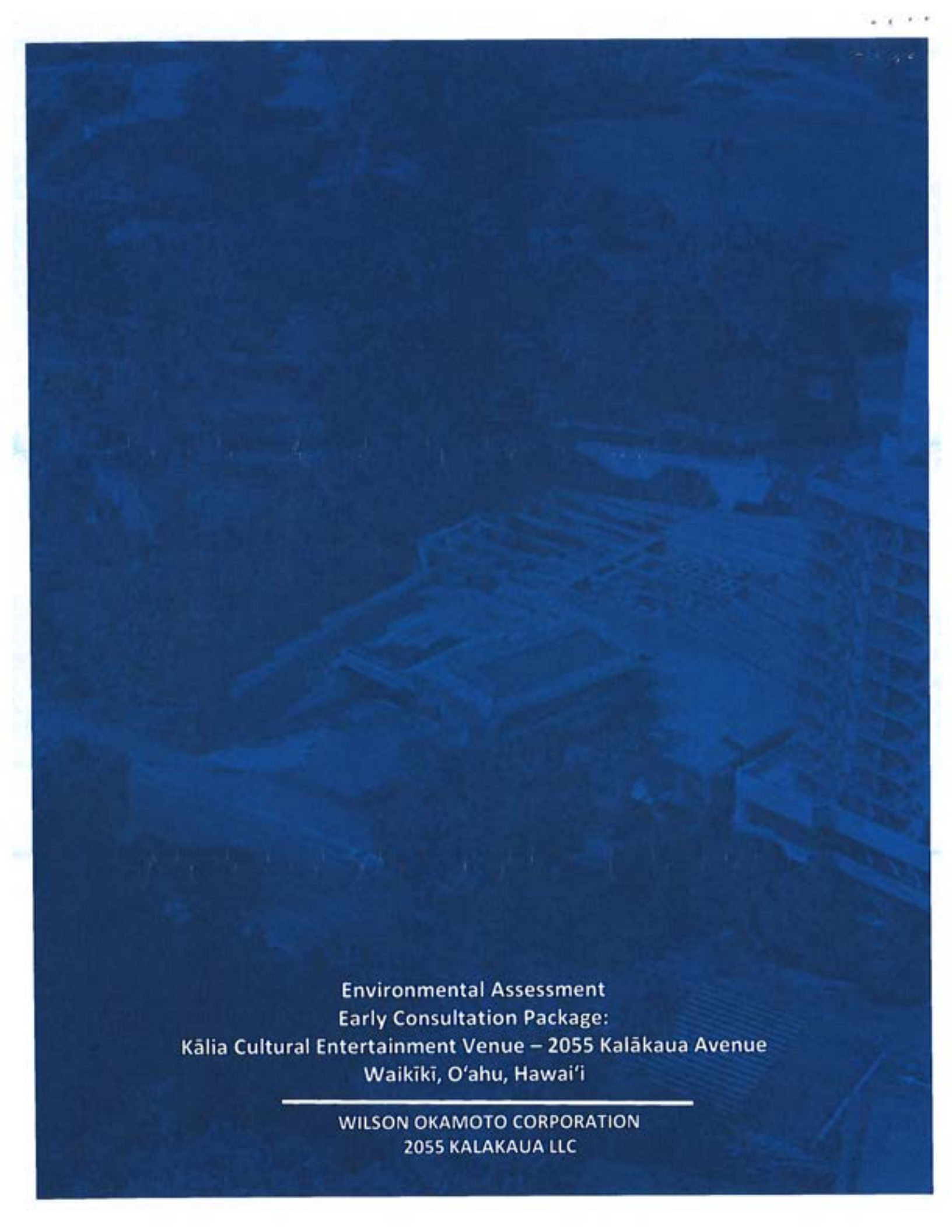
Councilmember Tommy Waters

**Utility Companies**

Hawa'i Gas  
Spectrum Hawa'i  
Hawaiian Telcom  
Hawaiian Electric Company

**Other Interested Parties and Individuals**

Hawa'i State Library  
Waikiki-Kapahulu Public Library  
Waikiki Neighborhood Board No. 9

An aerial photograph of a city grid, likely Waikiki, Hawaii, is shown in a dark blue, monochromatic style. The buildings and streets are visible as a pattern of light and dark blue rectangles. The overall tone is professional and modern.

Environmental Assessment  
Early Consultation Package:  
Kālia Cultural Entertainment Venue – 2055 Kalākaua Avenue  
Waikīkī, O‘ahu, Hawai‘i

---

WILSON OKAMOTO CORPORATION  
2055 KALAKAUA LLC



10773-03

August 8, 2023

Ms. Carty Chang  
Department of Land and Natural Resource  
City and County of Honolulu  
650 South King Street, 11<sup>th</sup> Floor  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikīkī, O‘ahu, Hawai‘i

Dear Ms. Chang:

Thank you for your letter dated April 12, 2022, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, has been reproduced and are appended to the Draft EA.

Please note that the Draft EA has been published and made available for review, and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
KA 'OIHANA HO'ONA'AUAO  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF FACILITIES AND OPERATIONS

May 5, 2023

Mr. Keola Cheng  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826



Re: Environmental Assessment Early Consultation  
for the Kalia Cultural Entertainment Venue, Waikiki, Oahu, Hawaii

Dear Mr. Cheng:

Thank you for your letter dated April 10, 2023. Based on the information provided, the proposed project will not impact Hawaii State Department of Education facilities.

Should you have any questions, please contact Cori China with the Facilities Development Branch, Planning Section, at (808) 784-5080 or via email at cori.china@k12.hi.us.

We appreciate the opportunity to comment.

Sincerely,

A handwritten signature in blue ink, appearing to read "Roy Ikeda".

Roy Ikeda  
Interim Public-Works Manager  
Planning Section

Rl:ctc

c: Facilities Development Branch





10773-01  
August 8, 2023

Mr. Roy Ikeda  
Department of Education  
State of Hawaii  
PO Box 2360  
Honolulu, HI 96804

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Mr. Ikeda:

Thank you for your letter dated May 5, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. We acknowledge that the State of Hawaii Department of Education does not have any comments to offer at this time as the project does not impact their facilities. A record of your comments, along with this response, has been reproduced and are appended to the Draft EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC



**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

May 8, 2023

**VIA EMAIL:** publiccomment@wilsonokamoto.com

Mr. Keola Cheng  
Director of Planning  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Cheng:

**Subject:** Environmental Assessment Early Consultation  
Kalia Cultural Entertainment Venue  
Waikiki, Oahu, Hawaii  
Tax Map Key: (1) 2-6-006: 001 and 004

Thank you for your letter dated April 10, 2023, requesting the Hawaii Department of Transportation's (HDOT) review and comments on the subject project. HDOT understands 2055 Kalakaua, LLC, is proposing to construct an open-air cultural entertainment venue located in Waikiki. The venue is designed to provide seating for approximately 715 people with a stage area and a two (2) story multi-purpose building. The project site falls within proximity of the Kalakaua Avenue (County jurisdiction) and Ala Moana Boulevard (State Route 92) intersection.

HDOT has the following comments:

1. The proposed project is approximately 3.58 miles from the property boundary of the Daniel K. Inouye International Airport. All projects within 5 miles from Hawaii State airports are advised to read the Technical Assistance Memorandum (TAM) for guidance with development and activities that may require further review and permits. The TAM can be viewed at this link: [http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports\\_08-01-2016.pdf](http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports_08-01-2016.pdf).
2. Federal Aviation Administration (FAA) regulation requires the submittal of FAA Form 7460-1 Notice of Proposed Construction or Alteration pursuant to the Code of Federal Regulations, Title 14, Part 77.9, if the construction or alteration is within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Construction

equipment and staging area heights, including heights of temporary construction cranes, shall be included in the submittal. The form and criteria for submittal can be found at the following website: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>.

3. Due to the proximity to the airport, the developer should be aware of potential noise from aircraft operations. There is also a potential for fumes, smoke, vibrations, odors, etc., resulting from occasional aircraft flight operations over or near the project location. These impacts may increase or decrease over time and depending on airport operations.
4. Based on the project information provided, the HDOT anticipates a potential adverse impact to HDOT highways. Submit a traffic assessment or Traffic Impact Analysis Report (TIAR) prepared and stamped by a licensed engineer. The TIAR and Environmental Assessment should include the following:
  - a. Description of existing trip generation at the site, existing traffic conditions and multimodal routes in the study area.
  - b. Forecasted traffic and multimodal conditions in the horizon year (year at full project build-out) both without the project and with the project. If the project construction is phased over multiple years, interim horizon years should be analyzed for the completion of each phase.
  - c. Analysis of existing and future safety conditions.
  - d. Recommendations of mitigations.
5. Determine applicability for the following HDOT permits:
  - a. Permit to Perform Work Upon State Highways is required for any work within the State highway right-of-way (ROW), (Hawaii Revised Statute [HRS] Chapter 264). The application includes the review and approval of construction drawings and a Traffic Management Plan.
  - b. Permit to Operate or Transport Oversize and/or Overweight Vehicles and Loads Over State Highways (HRS Chapter 291, Section 36).
  - c. Permit for the Occupancy and Use of State Highways (HRS Chapter 264).  
Note: This is applicable to underground and overhead power lines and utility pipelines within the State highway ROW.

The permit applications and instructions are available at the following link:  
<https://hidot.hawaii.gov/highways/home/doing-business/guide-to-permits>

Mr. Keola Cheng  
May 8, 2023  
Page 3

STP 8.3605

Please submit any subsequent land use entitlement related requests for review or correspondence to the HDOT Land Use Intake email address at [DOT.LandUse@hawaii.gov](mailto:DOT.LandUse@hawaii.gov).

If there are any questions, please contact Mr. Blayne Nikaido, Planner, Land Use Section of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at [blayne.h.nikaido@hawaii.gov](mailto:blayne.h.nikaido@hawaii.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Sniffen', written in a cursive style.

EDWIN H. SNIFFEN  
Director of Transportation



10773-01  
August 8, 2023

Mr. Edwin H. Sniffen  
Director of Transportation  
State of Hawai'i - Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawai'i 96813

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Mr. Sniffen:

Thank you for your e-mail dated May 8, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. Your comments have been considered in the preparation of the Draft Environmental Assessment, and we offer the following in response to the points raised:

1. The Project Site's proximity to Daniel K. Inouye International Airport is acknowledged, Proposed Project design and operations will comply with the guidance set forth in the referenced Technical Assistance Memorandum.
2. FAA regulations, specifically those pertaining to FAA Form 7460-1 will be considered and complied with.
3. The Applicant is aware of potential noise from aircraft operations, as well as other secondary impacts from those operations.
4. A Traffic Impact Report has been prepared and will be included in the forthcoming Draft EA.
5. As project design efforts progress, the Project Team will coordinate with DOT on the applicability of the permit requirements listed in your letter.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director – Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

**JOSH GREEN, M.D.**  
GOVERNOR  
KE KIA'ĀINA



**KENNETH S. HARA**  
MAJOR GENERAL  
ADJUTANT GENERAL  
KA 'AKUKANA KENELALA

**STEPHEN F. LOGAN**  
BRIGADIER GENERAL  
DEPUTY ADJUTANT GENERAL  
KA HOPE 'AKUKANA KENELALA

STATE OF HAWAII  
KA MOKU'ĀINA O HAWAII  
**DEPARTMENT OF DEFENSE**  
**KA 'OIHANA PILI KAUA**  
OFFICE OF THE ADJUTANT GENERAL  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

April 25, 2023



Mr. Keola Cheng  
Director - Planning  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

**SUBJECT:** Early Consultation Environmental Assessment for Kalia Cultural Entertainment Venue,  
Waikiki, Oahu, Hawaii, TMK: (1) 2-6-005:001 and 004

Dear Mr. Cheng:

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the project at this time.

Should there be any questions, please contact Mr. Tad T. Nakayama at 808-369-3490 or [tad.t.nakayama@hawaii.gov](mailto:tad.t.nakayama@hawaii.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Shao Yu L. Lee".

Shao Yu L. Lee, R.A.  
Captain, Hawaii National Guard  
Chief Engineering Officer



10773-01

August 8, 2023

Captain Shao Yu Lee  
Department of Defense  
State of Hawaii  
3949 Diamond Head Road  
Honolulu, HI 96816

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Captain Lee:

Thank you for your letter dated April 25, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. We acknowledge that the State of Hawaii Department of Defense does not have any comments to offer at this time. A record of your comments, along with this response, has been reproduced and are appended to the Draft EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
[www.boardofwatersupply.com](http://www.boardofwatersupply.com)



May 2, 2023

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
MAX J. SWORD  
NA'ALEHU ANTHONY  
JONATHAN KANESHIRO

EDWIN H. SNIFFEN, Ex-Officio  
WARREN K. MAMIZUKA, Acting Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ERWIN M. KAWATA  
Deputy Manager



Mr. Keola Cheng  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Your Letter Dated April 10, 2023 Requesting Comments on the Draft Environmental Assessment for the Proposed Kalia Cultural Entertainment Venue Project at 2055 Kalakaua Avenue, Tax Map Key: 2-6-006: 001, 004

Thank you for your letter regarding the proposed Kalia Cultural Entertainment Venue project.

The existing water system is currently adequate to accommodate the proposed development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Halawa Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come first-served basis. 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.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remain safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at <http://www.boardofwatersupply.com> and <http://www.protectohawater.org> for the latest updates and water conservation tips.



Mr. Keola Cheng  
May 2, 2023  
Page 2

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Water conservation measures are required for the proposed residential redevelopment. These measures may include utilization of nonpotable water for irrigation, using rain catchments, combination of drought tolerant plants and xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Barry Usagawa of our Water Resources Division at (808) 748-5900.

Very truly yours,

  
ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

*RY*



10773-03

August 8, 2023

Mr. Ernest Lau, P.E.  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, HI 96843

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikīkī, O‘ahu, Hawai‘i

Dear Mr. Lau:

Thank you for your letter dated May 2, 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix G.

We acknowledge that the existing Honolulu water system, which provides for the Waikīkī region, has been reduced due to the shut-down of the Hālawā Shaft pumping station as a proactive measure to prevent migration of fuel contamination from the ongoing Red Hill issue and that currently the BWS confirms the existing water system is adequate to accommodate the Proposed Project. However, the BWS will make a final decision on the availability of water when the building permit application is submitted for approval. Please note that we have taken your comments into consideration in preparing the EA and incorporated them with regards to the water system as it relates to the Proposed Project in Section 3.15.1 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

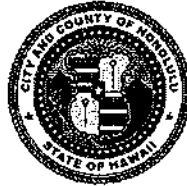
Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākāua LLC  
Mr. Matthew Pennaz, 2055 Kalākāua LLC

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)

RICK BLANGIARDI  
MAYOR



HAKU MILLES, P.E.  
DIRECTOR

BRYAN GALLAGHER, P.E.  
DEPUTY DIRECTOR

May 8, 2023

SENT VIA EMAIL

Mr. Keola Cheng  
[publiccomment@wilsonokamoto.com](mailto:publiccomment@wilsonokamoto.com)

Dear Mr. Cheng:

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki, Oahu, Hawaii

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any questions, please contact me at (808) 768-8480.

Sincerely,

  
Bryan Gallagher  
For Haku Milles, P.E., LEED AP  
Acting Director

HM:krm (900765)



10773-03  
August 8, 2023

Mr. Haku Milles  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street, 11<sup>th</sup> Floor  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikīkī, O‘ahu, Hawai‘i

Dear Mr. Milles:

Thank you for your letter dated May 8, 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue. We acknowledge that the City and County Department of Design and Construction does not have any comments to offer at this time. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix G.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**

1000 Ulu'ohia Street, Suite 215, Kapolei, Hawaii 96707  
Phone: (808) 768-3343 • Fax: (808) 768-3381  
Website: [www.honolulu.gov](http://www.honolulu.gov)

RICK BLANGIARDI  
MAYOR

WARREN K. MAMIZUKA  
ACTING DIRECTOR

TYLER K. SUGIHARA, P.E.  
ACTING DEPUTY DIRECTOR



IN REPLY REFER TO:  
DRM 23-252

May 11, 2023

Wilson Okamoto Corporation  
Attention: Mr. Keola Cheng  
1901 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826



Dear Mr. Cheng:

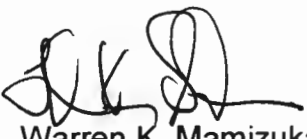
Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue, Waikiki, Oahu, Hawaii

Thank you for the opportunity to review and give input on the subject project.

We have no comments at this time, as the Department of Facility Maintenance does not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at (808) 768-3697.

Sincerely,

  
Warren K. Mamizuka  
Acting Director



10773-03

August 8, 2023

Mr. Warren Mamizuka  
Department of Facility Maintenance  
City and County of Honolulu  
1000 Ulu'ohia Street, Suite 215  
Kapolei, HI 96707

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Mr. Mamizuka:

Thank you for your letter dated May 11, 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue. We acknowledge that the City and County Department of Facility Maintenance does not have any comments to offer at this time. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix G.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

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/dpp](http://www.honolulu.gov/dpp)

RICK BLANGIARDI  
MAYOR



DAWN TAKEUCHI APUNA  
DIRECTOR

JIRO A. SUMADA  
DEPUTY DIRECTOR

May 10, 2023

2023/ELOG-710(GT)

Mr. Keola Cheng  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826



Dear Mr. Cheng:

**SUBJECT: Request for Pre-Assessment Comments  
Environmental Assessment for Kalia Cultural Entertainment Venue  
2055 Kalakaua Avenue - Waikiki  
Tax Map Keys 2-6-006: 001 and 004**

This is in response to your letter, received April 13, 2023, requesting comments on the scope and content to be addressed in a Draft Environmental Assessment (DEA), as required under Chapter 343, Hawaii Revised Statutes (HRS), for the Kalia Cultural Entertainment Venue (Project). The following items should be addressed in the DEA:

1. Please verify Tax Map Key (TMK) numbers listed on the cover letter of the application. The TMKs should be 2-6-006: 001 and 004.
2. Long-term Planning Policies and Objectives: The DEA should address the proposed Project's consistency with the relevant policies of the Oahu General Plan (OGP) and the Primary Urban Center Development Plan (PUCDP). After a preliminary review, we note the following:
  - a. The Project's goal is to promote cultural tourism while creating a Hawaiian sense of place in Waikiki and is aligned with the following policies of Primary PUCDP and objectives of the OGP.
    - (1) "2.4 Honolulu is the Pacific's leading city and travel destination.... With ongoing redevelopment and improvement, Waikiki remains the State's largest and most popular visitor destination. Higher-spending vacationers are attracted to Oahu's unique historic and cultural attractions." (PUCDP)

- (2) “3.4.1.2 The need to upgrade Waikiki...elicit private reinvestment in Waikiki’s physical plant.” (PUCDP)
- (3) “Objective G: To bring about orderly economic growth on Oahu. Concentrate economic activity and government services in the primary urban center...” (OGP)

b. The Project’s transportation plan should be aligned with the following policies and objectives:

- (1) V. Transportation and utilities

Objective A: To create a multi-modal transportation system that moves people and goods safely, efficiently, and at a reasonable cost and minimizes fossil fuel consumption and greenhouse gas emissions; serves all users, including limited income, elderly, and disabled populations; and is integrated with existing and planned development.

**Policy 5**

“...Work together with other alternative modes of transit and transit-oriented development to reduce automobile dependency and increase multi-modal travel.”

**Policy 6**

“Support the development of transportation plans, programs, and facilities that are based on Complete Streets features. Maintain and improve road, bicycle, pedestrian, and micromobility facilities in existing communities to eliminate unsafe conditions.” (OGP)

- (2) 3.5.2 Implement Transportation Demand Management Strategies:

- Enhance and improve pedestrian mobility.
- Comprehensively address pedestrian safety concerns related to vehicle speeding and excessive volumes on local streets and neighborhood collector streets.
- Encourage the full use of existing private and public parking garages. (PUCDP)

The DEA should provide more details on site transportation system design, and consistency with the above policies.



- c. Please provide information on how the project will promote the use of multi-modal transportation choices. The existing parking structure includes a carshare station. The DEA should address whether or not the Project will retain carshare, or provide any bike share or bicycle parking opportunities.
- d. The project design should be aligned with the OGP policy below:

VII. Physical development and urban design: 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 10: Discourage uses which are major sources of noise, air, and light pollution. (OGP)

Since the proposed project is an open-air entertainment venue, the DEA must consider its impact on the surrounding neighborhood.

- 3. Land Use Ordinance (LUO): Based on a review of our records, the Project site consists of a 28,761 square-foot lot located in the Resort Mixed Use Precinct (RMUP) of the Waikiki Special District (WSD). The Project must comply with the development standards applicable to the RMUP. Project compliance with these standards should be presented in the DEA, and will be confirmed during the review of future special district and building permits. The LUO is available on our website at:

<https://www.honolulu.gov/dpp/resources/ordinances.html>

Onsite Structures: The DEA should describe all existing structures on the site, and if any existing structures are proposed to remain in place, the DEA should describe their compliance with the LUO.

WSD: A Major Special District Permit is required for the Project. The DEA should address the WSD objectives with particular focus on the following:

- a. Emphasize a pedestrian-orientation in Waikiki. Acknowledge, enhance, and promote the pedestrian experience to benefit both commercial establishments and the community as a whole. Walkway systems shall be complemented by adjacent landscaping, open spaces, entryways, inviting uses at the ground level, street furniture, and human-scaled architectural details. Where appropriate, open spaces should be actively used to promote the pedestrian experience.

- b. Provide people-oriented, interactive, landscaped, open spaces to offset the high-density urban ambience. Open spaces are intended to serve a variety of objectives including visual relief, pedestrian orientation, social interaction, and fundamentally to promote a sense of “Hawaiianness” within the district. Open spaces, pedestrian pathways, and other ground level features should be generously supplemented with landscaping and water features to enhance their value, contribute to a lush, tropical setting, and promote a Hawaiian sense of place.

The frontage appears to be primarily dedicated to bus drop off, loading, and vehicular porte cochere uses. The DEA must consider alternatives to the frontage design along Kalakaua Avenue, including alternative access from Fort DeRussy, as well as alternatives that emphasize pedestrian-orientation by reducing the size, reorienting, or eliminating the porte cochere.

4. Traffic: A traffic study should be prepared as part of the DEA. The study should demonstrate traffic and pedestrian circulation and show how queuing will be accommodated on-site. It should demonstrate that the design of the porte cochere will not queue into the City right-of-way.
5. Wastewater: The municipal wastewater system is available and adequate to service the proposed 715-seat Kalia Cultural Entertainment Venue project. The Applicant will need to submit a Site Development Division Master Application Form for Sewer Connection and an Industrial Wastewater Discharge Permit Application.
6. Flood Zone: The DEA should identify the subject property’s Flood Zone, as mapped by the Federal Emergency Management Agency, and evaluate the proposed Project’s compliance with the City’s Flood Hazard Areas Ordinance (Chapter 21A, ROH), which is available online at:  
  
[https://www.honolulu.gov/rep/site/ocs/roh/ROH\\_Chapter\\_21A\\_.pdf](https://www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_21A_.pdf)
7. Coastal Hazards: The Project site may be susceptible to Sea Level Rise (SLR), tsunamis and storm surges. Mayor’s Directive 18-2, issued on July 16, 2018, requires all City departments and agencies to use the Hawaii *Sea Level Rise Vulnerability and Adaptation Report*, the *Sea Level Rise Guidance* and the *Climate Change Brief* in planning decisions. As a result, the Project must be evaluated for current and future susceptibility to coastal hazards such as flooding, SLR, wave action, tsunamis, and storm surges.

The DEA should also explore project alternatives, site design, project design features (elevated structures, alternative foundations, etc.), Best Management Practices, and appropriate mitigation measures to reduce potential impacts related

to coastal hazards to the extent possible. Relevant sources of information are available online at the following links:

- Mayor's Directive No. 18-2 (2018) regarding climate change and sea level rise:  
[www.honolulu.gov/rep/site/dpptod/climate\\_docs/MAYORS\\_DIRECTIVE\\_18-2.pdf](http://www.honolulu.gov/rep/site/dpptod/climate_docs/MAYORS_DIRECTIVE_18-2.pdf)
- Sea Level Rise Vulnerability and Adaptation Report:  
[http://climate.hawaii.gov/wp-content/uploads/2019/02/SLR-Report\\_Dec2017-with-updated-disclaimer.pdf](http://climate.hawaii.gov/wp-content/uploads/2019/02/SLR-Report_Dec2017-with-updated-disclaimer.pdf)
- State Sea Level Rise Exposure Area (SLR-XA) Mapping Tool:  
[www.pacioos.hawaii.edu/shoreline/slr-hawaii/](http://www.pacioos.hawaii.edu/shoreline/slr-hawaii/)
- Guidance for Using the SLR-XA:  
<https://climate.hawaii.gov/wp-content/uploads/2020/12/Guidance-for-Using-the-Sea-Level-Rise-Exposure-Area.pdf>
- Honolulu Office of Climate Change, Sustainability and Resiliency Climate Ready Oahu Web Explorer:  
[www.resilientoahu.org/water](http://www.resilientoahu.org/water)
- NOAA Storm Surge Mapping tool:  
<https://www.nhc.noaa.gov/nationalsurge/>

8. Wetlands and Sensitive Species:

The DEA should identify the presence or potential presence of any protected wetlands, sensitive habitat, flora species, and fauna species. The Department of Planning and Permitting (DPP) recommends reaching out the U.S. Fish and Wildlife Service (USFWS) to obtain a list of species that are known to occur, or may potentially occur, in the project vicinity. Known, mapped wetlands can be viewed on the USFWS National Wetlands Inventory *Wetlands Mapper*. The DEA must evaluate potential impacts to each identified sensitive species, and provide standard agency-required mitigation measures as well as any applicable site-specific mitigation measures to avoid or minimize potential impacts to each identified species, critical habitat, and habitat applicable to the site. The Wetlands Mapper is available online at:

<https://www.fws.gov/wetlands/data/mapper.html>.

Mr. Keola Cheng  
May 10, 2023  
Page 6

9. Historic Preservation: Please be advised that in December 2020, the State Historic Preservation Division (SHPD) began using a new online system to better track consultation requests: <https://shpd.hawaii.gov/hicris/landing>.

Because the new tracking system requires agency-to-agency requests, the DPP has created a generic request letter that consultants/property owners may use for projects that will eventually require DPP approval. This letter may be completed by a consultant or property owner and submitted to SHPD directly via their online system without the DPP's intervention to initiate requests before permit applications are submitted to the DPP. The letter includes a general DPP contact number and email, as well as blank fields where the property owner or their consultant can enter their contact information. The generic request letter is available online at:

[https://www.honolulu.gov/rep/site/dpp/dpp\\_docs/SHPD-Comment-Request.pdf](https://www.honolulu.gov/rep/site/dpp/dpp_docs/SHPD-Comment-Request.pdf)

Please contact the appropriate Neighborhood Board and any relevant neighborhood associations or commissions to request an opportunity to present the Project proposal at the next available Neighborhood Board meeting and/or association meeting(s). This is a requirement of the Major Special District Permit, and early consultation with the Neighborhood Board can be valuable as the Project is developed.

Finally, please follow our step-by-step instructions for the preparation of EAs that can be found on our website at:

[https://www.honolulu.gov/rep/site/dpp/dpp\\_docs/EA-instructions.pdf](https://www.honolulu.gov/rep/site/dpp/dpp_docs/EA-instructions.pdf)

Please utilize this resource as you prepare the disclosure document. We look forward to reviewing and providing additional comments on the Draft EA.

Thank you for the opportunity to comment on this proposal. Should you have questions, please contact Gerald Toyomura, of our Urban Design Branch, at (808) 768-8056.

Very truly yours,

  
Dawn Takeuchi Apuna  
Director



10773-03  
August 8, 2023

Ms. Dawn Takeuchi Apuna  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikīkī, O‘ahu, Hawai‘i

Dear Ms. Takeuchi Apuna:

Thank you for your letter dated May 10 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue.

We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA.

Moreover, we offer the following in response to the points raised:

1. Thank you for providing input on TMK citations, they have been corrected and reflected accurately In the forthcoming Draft EA.
2. The forthcoming Draft EA contains a discussion of the Proposed Project’s consistency with relevant policies o the O‘ahu General Plan (OGP), and the Primary Urban Center Development Plan (PUCDP). Further, the notes raised in your letter were considered in the preparation of the Draft EA.
3. It is acknowledged that the Proposed Project will be required to comply with development standards applicable to the Resort Mixed Use Precinct (RMUP) of the Waikiki Special District (WSD). Moreover, the Draft EA describes all existing structures on-site, and articulates that they will be removed to be replaced by the Proposed Project. It is further acknowledged that a Waikiki Special District Permit will be required for this Project, and a discussion of the Project’s compliance with WSD objectives is offered withing Chapter 4 of the forthcoming Draft EA.
4. A Traffic Impact Report has been prepared and has been incorporated and appended to the Draft EA.
5. It is noted that DPP has stated that the municipal wastewater system is available and adequate to service the proposed project. Moreover, it is understood that the applicant will need to submit a Site Development Division Master Application Form for Sewer Connection as well as an Industrial Wastewater Discharge Permit Application.
6. The DEA identifies and outlines the Proposed Project’s relationship to Flood Zones as mapped by FEMA.
7. It is understood that the Project may be susceptible to Sea Level Rise (SLR). The Draft EA contains a discussion of the Project’s relationship to climate change and SLR. The resources referenced in your letter were considered in the preparation of the Draft EA.

10627-01

Letter to Mr. Ernest Lau

Page 2

August 23, 2022

8. The Draft EA provides a discussion on the presence or potential presence of protected wetlands, sensitive habitat, flora species, and fauna species.
9. SHPD coordination is underway via HICRIS.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,



Keola Cheng

Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

711 KAPIOLANI BOULEVARD, SUITE 1600  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

RICK BLANGIARDI  
MAYOR



J. ROGER MORTON  
DIRECTOR

JON Y. NOUCHI  
DEPUTY DIRECTOR

4/23-XXXXXX

May 10, 2023

Keola Cheng, Director - Planning  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Cheng:

**SUBJECT:** Environmental Assessment Early Consultation for the Kalia Cultural Entertainment Venue  
Waikiki, Oahu, Hawaii

Thank you for the opportunity to provide written comments regarding the Environmental Assessment Early Consultation for the Kalia Cultural Entertainment Venue; Waikiki, Oahu, Hawaii. We have the following comments.

1. Transportation Impact Assessment (TIA). The applicant shall perform a TIA to examine the vehicle, pedestrian, bicycle, and public transit safety, stress, and comfort levels at the nearby intersections and driveways. The project shall construct corresponding improvements to mitigate these impacts by applying Complete Streets principles. The applicant shall discuss the future year growth rate, trip distribution, mode split, and route assignment assumptions used in the TIA.

The applicant shall submit all native files (e.g., Synchro, Excel, etc.) for the raw multi-modal counts (in the format specified at <https://geocounts.com/api/format/> and the example file at <https://bit.ly/DTS-count-sample>) and accompanying analyses to the Department of Transportation Services Regional Planning Branch (RPB) at [dtsplanningdiv@honolulu.gov](mailto:dtsplanningdiv@honolulu.gov). Please refer to the Department of Transportation Services (DTS) TIA Guide for multimodal assessment tools and recommended analyses. The TIA Guide can be found at <http://www4.honolulu.gov/docushare/dsweb/View/Collection-7723>.

2. Transportation Demand Management Strategies (TDM). The Draft Environmental Assessment shall address the project's actions to implement Transportation Demand Management strategies and implement Complete Streets strategies, including the following:
  - i. Dedicating space for shared micromobility or bikeshare at the Project site.
  - ii. Please refer to Pages 20 – 22 of the DTS' TIA Guide for example TDM Strategies. The TIA Guide can be found at <http://www4.honolulu.gov/docushare/dsweb/View/Collection-7723>
3. Complete Streets.
  - i. Refer to the Right-of-Way Widths for Planned Street Improvements Plan and map for data on street types including future bicycle, pedestrian, and transit priority configurations at: <https://www.honolulu.gov/completestreets/guidance.html>.
  - ii. Kalakaua Avenue fronting the project site is classified as a "Main Street" planned to have sidewalks, protected bike lanes, four travel lanes, and no on-street parking. The typical future street cross section will resemble in concept the third design on Page 69 of the City's Complete Streets Design Manual.
  - iii. The developer may construct Complete Streets improvements as recommended by the TIA or make a financial contribution equal to the cost on construction in lieu of such.
4. Bicycle Improvements.
  - i. Any proposed project driveways or improvements shall be designed to minimize the number and size of potential conflict areas with bicyclists and turning vehicles on the existing Kalakaua Avenue bike lane.
  - ii. A Priority 1 Protected Bike Lane project (Project ID 1-82 in the 2019 Oahu Bike Plan) is planned for Kalakaua Avenue fronting the Project site. Any driveways or improvements shall be designed to minimize the number and size of potential conflict areas with bicyclists, pedestrians, and turning vehicles.



- iii. Pursuant to Land Use Ordinance, Section 21-6.150, the Applicant shall include on-site bicycle storage in the site plan, as bicycle parking is critical to enable bicycle transportation use.

5. Pedestrian Improvements.

- i. Installation of lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape consistent with the Complete Streets furniture zone; and trash receptacles per the Complete Streets Design Manual, Pedestrian Master Plan, and any applicable streetscape plan.
- ii. Sidewalks. All internal Project sidewalks/pedestrian paths and those fronting the Project site shall integrate with the existing frontage sidewalks, and have a minimum of 5-foot, 8-foot preferred, pedestrian clear zone separate from the furniture and utility zone. Sidewalks shall incorporate the standards of the Honolulu Complete Streets Design Manual, including the placement of street furniture such as landscaping, signage, and lighting, which is intended to provide added protection for pedestrians. New sidewalks, curb ramps, curbs, and gutters must meet current Americans with Disabilities Act standards. New sidewalks, curb ramps, curbs and gutters must meet current City and Americans with Disabilities Act standards (ADA). The width should be determined based on the land use context.

6. Transit Improvements.

- i. The Project should provide a dedicated area for taxi, ridershare, and private charter bus pick-up and drop-off. This area should include safe and comfortable waiting areas and adequate signage.
- ii. The developer, management entity, or owners' association shall adopt (i.e., be responsible for litter removal, cleaning and maintenance of bus stop shelter, benches and floor area) any future bus stops fronting the Project site at no cost to the City.

7. Parking. A discussion regarding off-street parking and site generated parking demand should be added to this report. The project should consider Transit Oriented Development (TOD) core principals. The January 2017 report, *Trip and Parking Generation at Transit-Oriented Developments Number NITC-RR-767*, concludes that less parking is required than suggested in the *Institute of Transportation Engineers (ITE) Parking Generation Manual* for sites that are dense, mixed use, with low stress pedestrian environments, and adjacent to a

- high quality transit stop. We recommend the applicant provide the minimum TOD parking ratio, given that the Project is in close proximity to multiple high frequency transit routes on Kuhio Avenue.
8. Street Usage Permit. A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane, sidewalk, bicycle lane, or pedestrian mall on a City street.
  9. Neighborhood Impacts. The area representatives, neighborhood board, as well as the area guests, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.
  10. Disability and Communication Access Board (DCAB). Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with Americans with Disabilities Act requirements.

Should you have any questions, please contact Greg Tsugawa, of my staff, at (808) 768-6683.

Very truly yours,

J. Roger Morton  
Director

sw (Greg Tsugawa)  
"\\dtsfp1\dts\TPD\_Review\XXXXXX Kalia Entertainment Venue EA Early Consult\TEMPLATE\Response Letter - Kalia Entertainment Venue EA Early Consult (XXXXXX).docx"



10773-03  
August 8, 2023

Mr. J. Roger Morton, P.E.  
Department of Transportation Services  
City and County of Honolulu  
711 Kapi'olani Boulevard, Suite 1600  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kālia Cultural Entertainment Venue  
Waikīkī, O'ahu, Hawai'i

Dear Mr. Morton:

Thank you for your letter dated May 10 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue.

We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA. Moreover, we offer the following in response to the points raised:

Traffic impacts related to the Proposed Action are discussed in Chapter 3 of the EA, including parking demands and multi-modal improvements. Please note that a Traffic Impact Report, as well as a Traffic and Parking Management Plan were conducted in conjunction with the Proposed Action. The Draft EA outlines Transportation Demand Management strategies in relation to the Proposed Project, and discussion of the Project's relationship to Complete Streets Methodology, as well as Bicycle Facilities, Pedestrian Facilities, general multi-modal / transit facilities, as well as parking facilities is offered within the EA document as well.

We acknowledge your comments that a Street Usage Permit should be obtained for any construction-related work that may require the temporary closure of any traffic land or pedestrian mall on a City street.

Regarding your comments about neighborhood impacts related to the Proposed Action, please note that the Applicant and its representatives intend to attend the surrounding Neighborhood Board meetings to keep the surrounding areas apprised of the Proposed Action and will continue to do so through the duration of the Proposed Action.

We acknowledge that the various project plans should be reviewed and approved by the Disability and Communication Access Board. This has been incorporated into Section 4.3 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

10773-03

Letter to Mr. J. Rodger Morton

Page 2

August 8, 2023

We appreciate your participation in the EA review process.

Sincerely,

A handwritten signature in cursive script that reads "Keola Cheng".

Keola Cheng

Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC

Mr. Matthew Pennaz, 2055 Kalākaua LLC

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

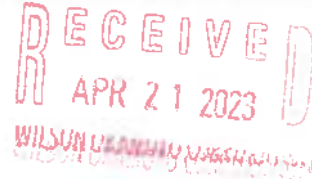
RICK BLANGIARDI  
MAYOR



SHELDON K. HAO  
FIRE CHIEF

JASON SAMALA  
DEPUTY FIRE CHIEF

April 17, 2023



Mr. Keola Cheng  
Director of Planning  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Environmental Assessment Early Consultation  
Kalia Cultural Entertainment Venue  
2055 Kalakaua Avenue  
Honolulu, Hawaii 96815  
Tax Map Keys: 2-6-005: 001 and 004

In response to your letter dated April 10, 2023, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires 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 (46 meters) 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; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

A fire department access road shall extend to within 50 feet (15 meters) 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; 2018 Edition, Section 18.2.3.2.1.)

2. Fire department access roads shall be in accordance with NFPA 1; 2018 Edition, Section 18.2.3.

Mr. Keola Cheng  
Page 2  
April 17, 2023

3. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Sections 18.3 and 18.4.
4. Submit civil drawings to the City and County of Honolulu's Department of Planning and Permitting and route them to the HFD for review and approval.

The abovementioned provisions are required by the HFD. This project may necessitate additional requirements be met as determined by other agencies.

Should you have questions, please contact Acting Battalion Chief Kendall Ching of our Fire Prevention Bureau at 808-723-7154 or [kching3@honolulu.gov](mailto:kching3@honolulu.gov).

Sincerely,



CRAIG UCHIMURA  
Acting Assistant Chief

CU/MD:bh



10773-03

August 8, 2023

Mr. Craig Uchimura  
Fire Department  
City and County of Honolulu  
636 South Street  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikīkī, O‘ahu, Hawai‘i

Dear Mr. Uchimura:

Thank you for your letter dated April 17, 2023, regarding the subject Early Consultation Package for the Kālia Cultural Entertainment Venue. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA Appendix G.

1. We acknowledge that HFD access roads will be provided to the Proposed Project as appropriate.
2. We acknowledge that a water supply, approved by the City and County, capable of supplying the required water flow for fire protection shall be provided for the Proposed Project.

Civil drawings will be submitted to the FD for review and approval as noted in Section 4.3 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

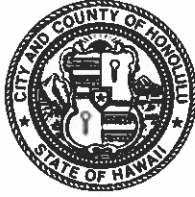
Sincerely,

Keola Cheng  
Director – Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813  
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulu.org



RICK BLANGIARDI  
MAYOR

ARTHUR J. LOGAN  
CHIEF

KEITH K. HORIKAWA  
RADE K. VANIC  
DEPUTY CHIEFS

OUR REFERENCE GH-EO

May 1, 2023

SENT VIA EMAIL

Mr. Keola Cheng  
publiccomment@wilsonokamoto.com

Dear Mr. Cheng:

This is in response to your letter dated April 10, 2023, requesting input on the Draft Environmental Assessment for the proposed Kalia Cultural Entertainment Venue to be located at 2055 Kalakaua Avenue in Waikiki.

The Honolulu Police Department (HPD) has reviewed the information provided and has some concerns. The HPD recommends that all necessary signs, lights, barricades, and other safety equipment be installed and maintained by the contractor during the construction phase of the project, as Kalakaua Avenue is a heavily traversed roadway by both pedestrians and vehicles.

The HPD also recommends that adequate notification be made to residents and visitors in the area prior to deliveries or possible road closures, as any impacts to pedestrian and/or vehicular traffic may cause issues and disruptions which could lead to complaints.

If there are any questions, please call Major Randall Platt of District 6 (Waikiki) at (808) 723-8639.

Sincerely,

Handwritten signature of Glenn Hayashi in black ink.

GLENN HAYASHI  
Assistant Chief of Police  
Support Services Bureau





10773-03

August 8, 2023

Mr. Darren Chun  
Honolulu Police Department  
City and County of Honolulu  
801 South Beretania Street  
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O‘ahu, Hawai‘i

Dear Mr. Chun:

Thank you for your letter dated May 1, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA Appendix G.

Please note as discussed in Section 3.11 of the EA that a Construction Management Plan has been recommended to mitigate short-term impacts related to construction work. The Applicant will ensure that this information is conveyed to the contractor for construction.

Moreover, the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director of Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

## Dalton Beauprez

---

**From:** Liu, Rouen <rouen.liu@hawaiianelectric.com>  
**Sent:** Thursday, April 20, 2023 3:29 PM  
**To:** Public Comment  
**Cc:** Kuwaye, Kristen  
**Subject:** EA Early consultation - Kalia Cultural Entertainment Venue

Dear Mr. Cheng,

Thank you for the opportunity to comment on the subject project EA. Hawaiian Electric Company has no objection. Should Hawaiian Electric 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. Please be sure the contractor submits the service request with adequate time in the schedule to when they expect energizing of electrical service. As the proposed Kalia Cultural Entertainment Venue project comes to fruition, please continue to keep us informed.

Should there be any questions, please contact me at 808-543-7245.

Thank you,  
Rouen Liu  
Permit Engineer  
Hawaiian Electric Company

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10773-01  
August 8, 2023

Mr. Rouen Liu  
Hawaiian Electric Company  
820 Ward Avenue  
Honolulu, Hawai'i 96814

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Mr. Liu:

Thank you for your e-mail dated April 21, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. We acknowledge that the Hawaiian Electric Company (HECO) has no objection to the Proposed Project. It is noted that should HECO have existing easements and facilities on the subject property, that HECO will need continued access for maintenance of our facilities. We will ensure that the project contractor (s) submit applicable service requests with adequate time in the schedule to when they expect energizing of electrical service.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng  
Director – Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC

## Dalton Beauprez

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**From:** Donaldson, James A <James.Donaldson@charter.com>  
**Sent:** Tuesday, April 18, 2023 11:56 AM  
**To:** Public Comment  
**Cc:** Tagawa, Joshua R  
**Subject:** EA for KALIA CULTURAL ENTERTAINMENT VENUE @ 2055 KALAKAUA AV  
**Attachments:** Contractor Notes 2016 (R3).pdf; KALIA CULTURAL ENTERTAINMENT VENUE-CATV MAP.pdf

Aloha Keola,

Thank you for the opportunity to review and comment on the proposed KALIA CULTURAL ENTERTAINMENT VENUE @ 2055 KALAKAUA AV Construction Project. According to our drawings. We may be affected by the proposed work. We have underground equipment nearby. The locations of existing CATV pull-boxes, duct routes, aerial routes, and crossings were not shown on the provided plans. Therefore, SPECTRUM is submitting drawings with information on the facilities within the project area. Please note these drawings are to be used for reference only. The exact locations, depth and routing of all underground CATV facilities must be verified in the field due to construction variances. In any case toning through the One Call Center will identify our facilities in the immediate area

At this time, SPECTRUM has coax and fiber that occupies both CATV and Hawaiian Telcom's (HTCO) duct systems. The sections of this project that is highlighted in your scope of work, may conflict with existing CATV and HTEL facilities.

This information has been provided to help minimize delays and prevent damage to existing CATV structures within the project area. Should you have any questions or concerns, please feel free to contact me at 808-292-7721, or email me at [James.Donaldson@charter.com](mailto:James.Donaldson@charter.com)

Attached:

- 1 CATV map of area
- Our contractor's notes

Thank you,

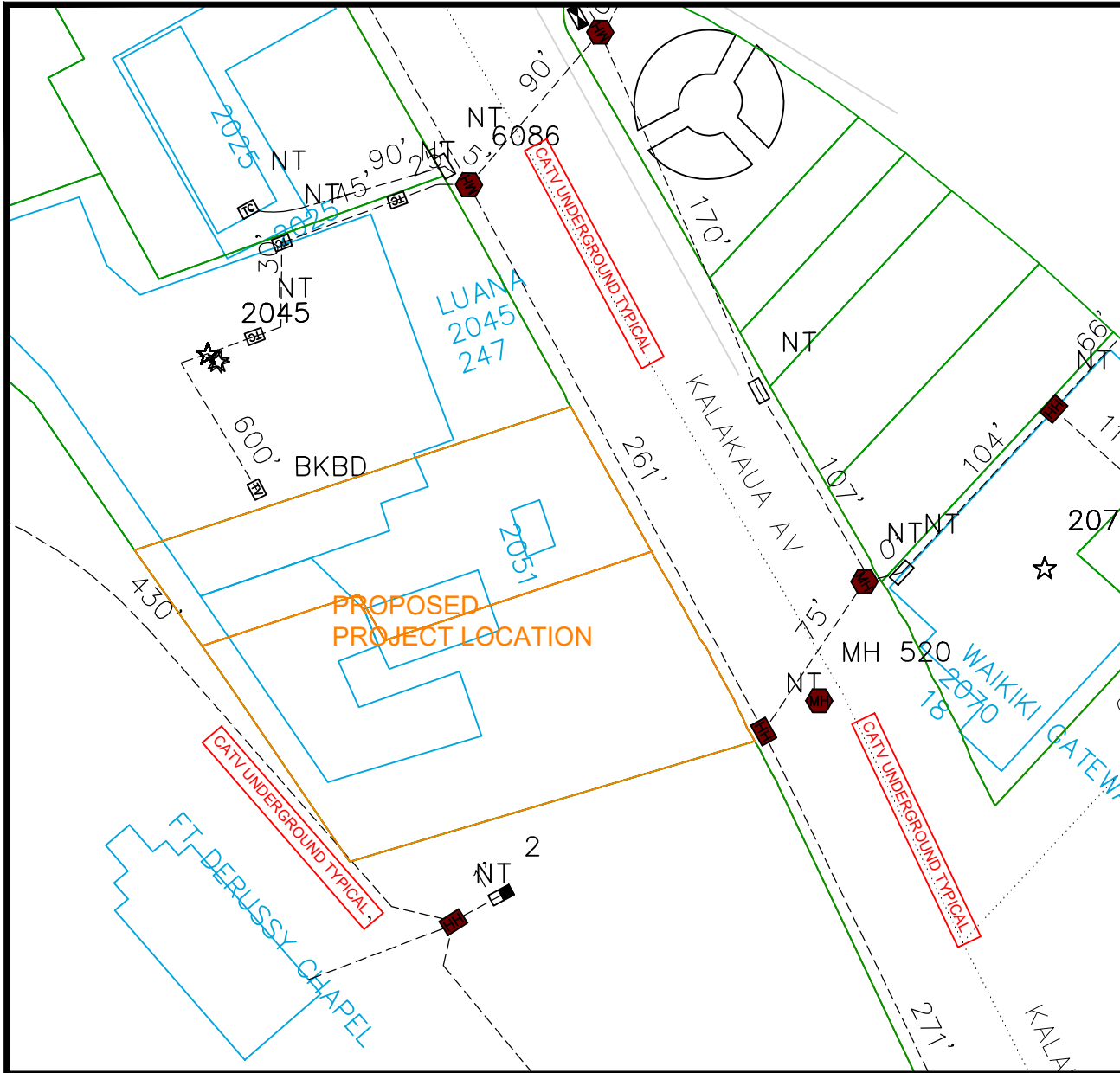
**James Donaldson**

SPECTRUM OSP Engineering | Construction Coordinator  
151 Pali'i St , Mililani Hi 96789

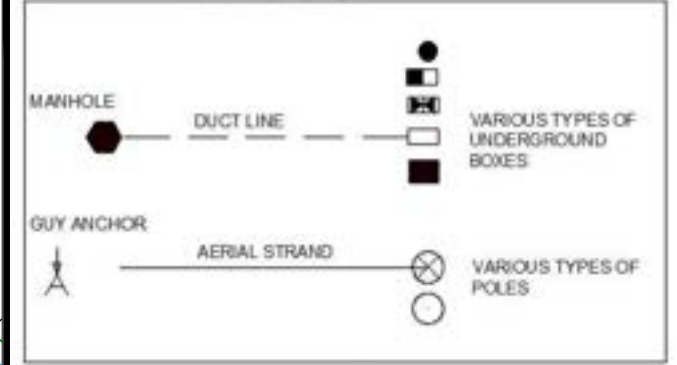
**T:** 808-292-7721

**E:** [james.donaldson@charter.com](mailto:james.donaldson@charter.com)

FILENAME : FILE  
 PLOT SCALE: PLOT



CATV MAP LEGEND:



LEGEND MAP

**KALIA CULTURAL ENTERTAINMENT VENUE**  
 2055 KALAKAUA AV  
 HONOLULU, HI 96815

DESCRIPTION: CATV MAP OF AREA

W.O.#: N/A  
 SCALE: NTS  
 DRAWN BY: JD DATE: 4-18-23  
 DESIGNED BY: JD  
 ENGINEERED BY: JD  
 ENG. PHONE #: 808-695-3161



200 AKAMAINUI STREET  
 MILILANI, HI 96789-3999  
 PHONE # (808) 625-2100

**GENERAL CONTRACTOR'S NOTES:**

- 1. THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL LICENSES AND PERMITS AND SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFULL PROSECUTION OF THE WORK.**
- 2. THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THESE UTILITIES AS A RESULT OF HIS OPERATIONS. ADJUSTMENTS TO THE NEW DUCTLINE ALIGNMENT, IF REQUIRED, SHALL BE MADE TO PROVIDE THE REQUIRED CLEARANCES.**
- 3. THE CONTRACTOR SHALL BRACE ALL POLES OR LIGHT STANDARDS NEAR THE NEW DUCTLINE, MANHOLE OR HANDHOLE DURING ITS OPERATIONS.**
- 4. THE CONTRACTOR SHALL SAW-CUT A.C. PAVEMENT, CONCRETE GUTTER, AND CONCRETE SIDEWALK WHEREVER NEW MANHOLES, HANDHOLES, PULLBOXES OR DUCTLINES ARE TO BE PLACED AND SHALL RESTORE TO EXISTING CONDITION OR BETTER.**
- 5. THE UNDERGROUND PIPES, CABLES, OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREAS. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.**
- 6. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE COST FOR SUPPLEMENTARY MEASURES, WHICH WILL BE REQUIRED BY THE CITY AND COUNTY, SHALL BE BORNE BY THE CONTRACTOR.**
- 7. PRIOR TO THE EXCAVATION OF THE DUCTLINE, THE CONTRACTOR SHALL REQUEST THAT OCEANIC CABLE COMPANY TO LOCATE EXISTING DUCTLINE WHEREVER REQUIRED.**
- 8. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTION NOT TO DAMAGE EXISTING CABLES OR DUCTS. ANY WORK INVOLVING EXISTING CABLES OR DUCTS SHALL BE DONE IN THE PRESENCE OF THE OCEANIC CABLE COMPANY INSPECTOR OR HIS REPRESENTATIVE. TEMPORARY CABLE AND DUCT SUPPORT SHALL BE PROVIDED WHEREVER NECESSARY.**

- 9. THE CONTRACTOR SHALL NOTIFY THE OCEANIC CABLE COMPANY INSPECTOR 72 HOURS PRIOR TO THE START OF WORK ON CATV INFRASTRUCTURE, POURING CONCRETE, OR BACKFILLING. OCEANIC'S INSPECTOR(S): PERRY SAMUELU AT 387-2496 OR PAUL CASPILLO AT 479-1637.**
- 10. WHEREVER CONNECTIONS TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES PRIOR TO EXCAVATION OF THE MAIN TRENCHES TO VERIFY THEIR LOCATIONS AND DEPTHS.**
- 11. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND FURNISH ALL LABOR AND EQUIPMENT NECESSARY TO INSTALL THE DUCTLINE IN PLACE COMPLETE.**
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT ALL REQUIRED LINES AND GRADES AND SHALL PRESERVE ALL BENCH MARKS AND WORKING POINTS NECESSARY TO LAY OUT THE WORK CORRECTLY. THE NEW DUCTLINE SHALL BE ADJUSTED BY THE CONTRACTOR TO SUIT THE EXISTING CONDITIONS AND THE DETAILS AS DESCRIBED IN THE PLANS.**
- 13. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE OF HAWAII, DEPARTMENT OF HEALTH.**
- 14. THE LOCATION OF CATV FACILITIES SHOWN ON PLANS ARE FROM EXISTING RECORDS WITH VARYING DEGREES OF ACCURACY AS TO ITS ACTUAL FIXED LOCATION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN CLOSE PROXIMITY OF CATV FACILITIES.**
- 15. THE CONTRACTOR SHALL OBTAIN EXCAVATION PERMIT CLEARANCE FROM OCEANIC'S ENGINEERING SECTION LOCATED AT 200 AKAMAINUI ST., MILILANI TECH PARK.**
- 16. FOR ANY FIELD ASSISTANCE OR VERIFICATION OF CATV FACILITIES, THE CONTRACTOR SHALL CALL OCEANIC CABLE AT 625-2100 AND ASK FOR THE OSP ENGINEERING DEPARTMENT.**
- 17. ANY WORK REQUIRED TO RELOCATE CATV FACILITIES SHALL BE DONE BY OCEANIC CABLE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION REQUIREMENTS AND ASSOCIATED COSTS.**
- 18. ANY DAMAGE TO OCEANIC'S FACILITIES SHALL BE REPORTED TO OTWC'S TOC DEPARTMENT AT 625-8169.**

- 19. THE CONTRACTOR SHALL TUNNEL UNDER EXISTING CONCRETE CURB AND GUTTER AS NECESSARY TO EXTEND CONDUIT INTO EXISTING CATV PULLBOX AND INTO THE PROPOSED POWER SUPPLY PULLBOX.**
- 20. ALL EXISTING IMPROVEMENTS THAT ARE DISTURBED DURING THE CONSTRUCTION PHASE SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION AT NO COST TO THE CITY IN ACCORDANCE WITH CITY'S STANDARDS.**
- 21. AT LOCATIONS WHERE EXISTING CATV PULLBOX REPLACEMENT IS PROPOSED, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTION NOT TO DAMAGE THE EXISTING CABLES IN THE PULLBOX. ALL DAMAGES TO EXISTING CABLES SHALL BE REPAIRED BY OCEANIC CABLE AND PAID FOR BY THE CONTRACTOR.**
- 22. COORDINATE ALL PENETRATION OF TELEPHONE PULLBOXES WITH HAWAIIAN TEL INSPECTOR.**
- 23. SMOOTH FINISH INSIDE WALL OF EXISTING PULLBOXES AND HANDHOLES TO ITS ORIGINAL CONDITION OR BETTER.**
- 24. ALL NEW CONCRETE ENCASED CONDUIT SHALL BE PVC PIPE-SCHEDULE 40. ALL NEW DIRECT-BURIED CONDUIT SHALL BE PVC PIPE-SCHEDULE 80. USE OF ANY OTHER MATERIAL TYPE (GTS, ETC.) SHALL BE LIMITED TO MATCHING EXISTING FACILITIES. CONNECTION OF DISSIMILAR MATERIALS TO REQUIRE APPROVAL FROM OTWC INSPECTOR AND ENGINEERING DEPT.**
- 25. THE CONTRACTOR SHALL PLACE POLY CORD THROUGH OUT PROJECT, AND SECURE IN MANHOLES, HANDHOLES, AND PULLBOXES.**
- 26. FOR 3" CONDUITS OR LARGER, THE CONTRACTOR SHALL INSTALL NEPTCO WP1800 MULETAPE OR APPROVED EQUAL IN ALL DUCTLINES, LEAVE MULETAPE IN PLACE FOR FUTURE USE AS A PULL OR FISH LINE, UNLESS OTHERWISE NOTED. REFERENCE GTE MATERIAL CODE NO. 571154. ALL DUCTS SHALL BE CAPPED TO PREVENT ENTRY OF FOREIGN MATERIAL DURING CONSTRUCTION AND AT COMPLETION OF INSTALLATION. ENDBELLS ARE REQUIRED FOR CONDUITS 2" AND LARGER.**
- 27. PENETRATION INTO PULLBOXES IF NECESSARY TO BE FROM FACTORY INSTALLED OPENING OR FROM BRICKS POSITION. PENETRATION FROM PULLBOX WALLS IS NOT ACCEPTABLE.**
- 28. BENDS IN THE DUCT ALIGNMENT, DUE TO CHANGES IN GRADE SHALL HAVE A MINIMUM RADIUS OF 20-FEET. ALL 90-DEGREE C-BENDS AT A POLE OR AT THE BUILDING FLOOR SLAB PENETRATION, SHALL HAVE A BEND RADIUS OF 10 TIMES THE DIAMETER OF THE DUCT OR GREATER.**



29. **MINIMUM LENGTH OF CONDUIT USED SHALL NOT BE LESS THAN 5- FEET IN LENGTH. USE OF PARTIAL CONDUIT SECTIONS ALLOWABLE IS AT OTWC INSPECTOR(S) DISCRETION.**
30. **ALL CONDUITS SHALL ENTER THROUGH THE END "SHORT WALL" OF THE PULL-BOX. ENTRY SHALL BE AT 90 DEGREE (PERPENDICULAR) TO WALL FACE WITH BENDS NO LESS THAN 12" FROM EXTERIOR WALL.**
31. **A MINIMUM OF (2) PRECAST SECTIONS MUST BE USED ON ALL 2X4 OR 2X6 PULLBOXES.**
32. **ALL NEW CONSTRUCTION SHALL UTILIZE CONCRETE PRECAST BASE UNLESS OTHERWISE APPROVED OR SPECIFIED BY OTWC INSPECTOR(S).**
33. **WHEN THREE (3) OR MORE 4" CONDUITS ENTER ONE END WALL OF ANY PULLBOX, ONLY BRICK BASES WILL BE ALLOWED UNLESS OTHERWISE INSTRUCTED/APPROVED BY OTWC INSPECTOR(S).**
34. **TWO MINIMUM LAYERS OF BRICKS TO BE USED LOWER THAN THE LOWEST DUCT ENTERING THE PULLBOX. TOP LAYER OF BRICK TO BE FLUSH WITH TOP OF CONDUIT OR HIGHER.**
35. **FOR UPGRADE/REPAIRS TO EXISTING PULL-BOXES, BRICKS MAY BE USED AND SHALL ALWAYS BE AT LEAST TWO LAYERS LOWER THAN THE LOWEST DUCT ENTERING THE PULLBOX.**
36. **AT NO TIME SHALL CEMENT MORTAR, WOOD, OR ANY OTHER MATERIAL BE USED BETWEEN PRECAST SECTIONS.**
37. **LEVELING OR RAISING OF BOXES TO GRADE MUST BE DONE:**
  - A. **PRE-CAST BASE(S) – USING GRAVEL LAYER UNDER BASE (TYPE 3B OR EQUIVALENT APPROVED BY OTWC INSPECTOR)**
  - B. **BRICK BASE(S) – ADJUSTMENTS TO BRICKWORK SECTION. THE PERMANENT INSTALLATION OF WOODEN WEDGES TO ACCOMPLISH THIS PURPOSE WILL NOT BE ACCEPTED.**
38. **5/8" x 8' COPPER GROUND RODS SHALL BE PLACED IN ALL PULLBOXES UNLESS OTHERWISE DIRECTED BY OCEANIC TIME WARNER CABLE. GROUND RODS WILL BE PLACED IN THE CORNER 3" TO 4" FROM THE WALL AND AWAY FROM ANY CONDUIT WITH NO MORE THAN 8" STICKING UP ABOVE GROUND.**
39. **TRENCHING TO BE BY HAND DIGGING NEAR AND ACROSS EXISTING UTILITY LINES.**
40. **MINIMUM CLEARANCE BETWEEN STREET LIGHT STAND AND FIRE HYDRANTS SHALL BE THREE FEET.**

- 41. UNDERGROUND UTILITIES SHOWN HEREON IS FOR INFORMATION ONLY. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INSTALLATION.**
- 42. FOR UNDERGROUND CABLE LOCATING AND MARKING, FIVE WORKING DAYS ADVANCE NOTICE IS REQUIRED. THREE WORKING DAYS ADVANCE NOTICE IS REQUIRED FOR ANY INSPECTION BY A DESIGNATE REPRESENTATIVE. CONTRACTOR SHALL TAKE NECESSARY PRECAUTION NOT TO DAMAGE ANY EXISTING CABLES OR DUCTS. OCEANIC'S INSPECTOR OR DESIGNATED REPRESENTATIVE IS REQUIRED TO BE AT ANY JOB SITE WHENEVER THERE WILL BE A BREAKAGE INTO OR ENTRY INTO ANY STRUCTURE THAT CONTAIN OCEANIC'S FACILITIES.**
- 43. CONCRETE STRENGTH SHALL BE 3000 PSI IN 28 DAYS.**
- 44. CURING AND BACKFILLING. MAINTAIN CONCRETE IN A MOIST CONDITION FOR 24 HOURS MINIMUM FOR 3,000 PSI AND 48 HOURS MINIMUM FOR 2,500 PSI BEFORE COMPACTED. BACKFILLING: 72 HOURS MINIMUM BEFORE PERMITTING MOTOR TRAFFIC LOAD ON DUCTLINE. CURING METHOD SHALL MEET OCEANIC TWC INSPECTOR'S APPROVAL.**
- 45. INSTALL 8-MIL. THICK ORANGE COLOR WARNING TAPE 4-INCH WIDE ENTIRE LENGTH OF TRENCH WHEN PLACING CATV CONDUITS. TAPE SHOULD READ "CAUTION BURIED CABLE LINE BELOW". MANUFACTURED BY HARRIS INDUSTRIES, INC. CATALOG NUMBER UT-43 OR EQUIVALENT TAPE. TAPE TO BE INSTALLED 12-INCHES BELOW GRADE.**
- 46. AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL WITH A SQUARE FRONT NOT LESS THAN 12-INCH LONG AND HAVING A DIAMETER OF 1/4-INCH LESS THAN THE INSIDE DIAMETER OF DUCT, SHALL BE PULLED THROUGH EACH DUCT AFTER WHICH A BRUSH WITH STIFF BRISTLES SHALL BE PULLED THROUGH TO MAKE CERTAIN THAT NO PARTICLES OF EARTH, SAND, OR GRAVEL HAVE BEEN LEFT INSIDE. DUCTS SHALL BE COMPLETELY DRY AND CLEAN.**
- 47. METALLIC ENTRANCE CONDUITS SHALL BE GROUNDED.**
- 48. ALL CONDUITS WITHIN A BUILDING SHALL:**
- A) BE INSTALLED IN THE SHORTEST AND STRAIGHTEST POSSIBLE RUN.**
  - B) HAVE NO SECTION LONGER THAN 100-FEET NOR CONTAIN MORE THAN TWO 90-DEGREE BENDS. AN APPROVED SIZED JUNCTION BOX OR GUTTER BOX SHALL BE PLACED IF THIS IS EXCEEDED.**
  - C) ALL BENDS SHALL BE LONG SWEEP-RADIUS BENDS BUT THE INSIDE RADIUS OF THE BEND MUST NEVER BE LESS THAN TEN TIMES THE DIAMETER OF THE CONDUIT.**

**49. ALL CONSTRUCTION MUST BE INSPECTED AND APPROVED BY OCEANIC PRIOR TO THE INSTALLATION OF ANY OF ITS FACILITIES AND THE ENERGIZING OF ITS SYSTEM.**

**50. CONTRACTOR AND/OR CUSTOMER SHALL PROVIDE OCEANIC WITH SUFFICIENT INSTALLATION TIME IN THEIR OCCUPANCY TIME TABLE.**

*FILE:ContraNotes.doc*



10773-03  
August 8, 2023

Mr. James Donaldson  
SEPCTRUM OSP Engineering  
151 Pali'i St , Mililani Hi 96789  
Mililani, Hawai'i 96789

Subject: Environmental Assessment Early Consultation for the  
Kalia Cultural Entertainment Venue  
Waikiki O'ahu, Hawai'i

Dear Mr. Donaldson:

Thank you for your e-mail dated April 18, 2023, regarding the subject Early Consultation Package for the Kalia Cultural Entertainment Venue. Your comments have been considered in the preparation of the Draft Environmental Assessment.

Thank you for providing notice and information regarding existing SPECTRUM facilities within the project area. The design team will coordinate with your office on resolving / avoiding potential design and construction conflicts.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.


Sincerely,

Keola Cheng

Director - Planning

cc: Mr. Will Nguyen, 2055 Kalākaua LLC  
Mr. Matthew Pennaz, 2055 Kalākaua LLC



An aerial photograph of a city, likely Honolulu, Hawaii, showing a dense urban area with various buildings and streets. The image is overlaid with a semi-transparent green filter. The text is centered in the lower portion of the image.

**Draft Environmental Assessment  
Kalia Cultural Entertainment Venue – 2055 Kalākaua Avenue  
Waikiki, O‘ahu, Hawai‘i**

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**WILSON OKAMOTO CORPORATION  
2055 Kalākaua Ave LLC**