DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2014/ED-7(GT)

July 29, 2015

Ms. Jessica Wooley
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 South Beretania Street, Room 5-217
Honolulu, Hawaii 96813

Dear Director:

SUBJECT:	Chapter 343, Hawaii Revised Statutes Final Environmental Assessment (FEA)
Project:	133 Kaiulani Condo Hotel Development
Applicant:	MK Development Consulting, LLC
Agent:	Kusao & Kurahashi, Inc. (Keith Kurahashi)
Location:	131 and 133 Kaiulani Avenue, 2401, 2407 and 2413 Prince Edward Street, and 2410 Koa Avenue – Waikiki
Tax Map Key:	2-6-23: 29, 37 and 76
Proposal:	The construction of a 32-story condo hotel with up to 260 units which includes back-of-house facilities, recreation facilities, retail commercial, and other site appurtenances. This project will exceed the 240-foot height limit with a 350-foot-high building; encroach into the transitional height setback along Kaiulani and Koa Avenues (up to 20 feet and 25 feet, respectively); exceed the maximum density or floor area ratio (FAR) of 3.5 with a FAR of 4.0; and provide less than the minimum 50 percent open space with only 39 percent open space. The project will provide some public benefits.

Enclosed and incorporated by reference is the FEA prepared by the Applicant for the project. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that the preparation of an Environmental Impact Statement is not required, and have issued a Finding of No Significant Impact. Please publish this in the **August 8, 2015**, issue of the Office of Environmental Quality Control (OEQC) Environmental Notice.

We have enclosed two hard copies of the FEA, as well as a copy on compact disc. Also, enclosed is a completed OEQC publication form and project summary, and will submit the same publication form and project summary via electronic mail to your office.

Should you have any questions, please contact Gerald Toyomura of our Urban Design Branch at 768-8056.

Very truly yours,

George I. Atta, FAICP
Director

Enclosure: FEA, two hard copies and one disk
One copy of OEQC Publication Form

Doc 1265338

APPLICANT ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (JULY 2015 REVISION)

Project	133 Kaiulani Condo Hotel Development
HRS S343-5 Trigger:	Project within the Waikiki area
Island:	Oahu
District:	Waikiki
TMK:	(1) 2-6-23: 29, 37 and 76
Permits:	City and County of Honolulu: Planned Development-Resort Permit, Waikiki Special District Permit, Major; Zoning Adjustment for Signage Master Plan; Surface Encroachment Variance; Subdivision for Pedestrian Access Easement; Sidewalk Variance; Construction Dewatering Permit; Building Permits; Flood Study; Trenching Permit; Grading Permit; Drain Connection; Sewer Connection; Street Usage; Construction Plan Review; Conditional Use Permit for Joint Development; State of Hawai'i: National Pollutant Discharge Elimination Permit for Construction Stormwater; Construction Noise Permit; Industrial Wastewater Discharge; Archaeological Inventory Survey; and Burial Treatment Plan.
Approving Agency:	Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawaii 96813 Contact: Gerald Toyomura - (808) 768-8056
Applicant:	MK Development Consulting, LLC 1288 Ala Moana Boulevard, Suite 201 Honolulu, Hawaii 96814
Consultant:	Kusao & Kurahashi, Inc. 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawaii 96822 Contact: Keith Kurahashi - (808) 988-2231

Status (check one only):

_DEA-AFNSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day comment period ensues upon publication in the periodic bulletin.
X FEA-FONSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov; no comment period ensues upon publication in the periodic bulletin.
__FEA-EISPN	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day consultation period ensues upon publication in the periodic bulletin.
__Act 172-12 EISPN	Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov. No environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.

__DEIS	The applicant simultaneously transmits to both the OEQC and the approving agency a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
__FEIS	The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__ Section 11-200-23 Determination	The approving agency simultaneous transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.
__Statutory hammer Acceptance	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.
__Section 11-200-27 Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.
__Withdrawal (explain)	

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

The construction of a 32-story condo hotel with up to 260 units which includes back-of-house facilities, recreation facilities, retail commercial, and other site appurtenances. This project will exceed the 240-foot height limit with a 350-foot-high building; encroach into the transitional height setback along Kaiulani and Koa Avenues (up to 20 feet and 25 feet, respectively); exceed the maximum density or floor area ratio (FAR) of 3.5 with a FAR of 4.0; and provide less than the minimum 50 percent open space with only 39 percent open space. The project will provide some public benefits.

FINAL ENVIRONMENTAL ASSESSMENT

133 KAIULANI CONDO HOTEL DEVELOPMENT

WAIKĪKĪ, HONOLULU, O'AHU, HAWAI'I

TAX MAP KEY: 2-6-23: 29, 37 and 76

APPLICANT

MK DEVELOPMENT CONSULTING, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, HI 96814

AGENT

KUSAO & KURAHASHI, INC.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

JULY 2015

FINAL ENVIRONMENTAL ASSESSMENT

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JULY 2015

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APPENDICES (CONTINUED)

Acronyms

44CFR – Title 44 of the Code of Federal Regulations
ADA – Americans with Disability Act
AIS – Archaeological Inventory Survey
APE – Area of Potential Effect
Avg – Average
B/R – Bedroom
BSC – BSC KVSC, LLC
BWS – Board of Water Supply

CF – Cubic Feet
CIA - Cultural Impact Assessment
City – City and County of Honolulu
CSH – Cultural Surveys Hawaii
CUP – Conditional Use Permit
CY – Calendar Year

dB - Decibel
dBA – A weighed decibels
DES – Department of Environmental Services
DLNR – Department of Land and Natural Resources
DNL – Day-Night Sound Level
DOH – Department of Health
DP – Development Plan
DPP – Department of Planning and Permitting

EA – Environmental Assessment
EIS – Environmental Impact Statement
ENV – Department of Environmental Services
F – Fahrenheit
FAR – Floor Area Ratio
FEA – Final Environmental Assessment
FEMA – Federal Emergency Management Agency
FHA – Federal Housing Administration
FIRM – Flood Insurance Rate Maps
FIS – Flood Insurance Study
FU – Fixture Unit

gpd – Gallons Per Day
gpm – Gallons Per Minute
HAR – Hawaii Administrative Rules
HECO – Hawaiian Electric Company
HRS – Hawaii Revised Statues
HTCO – Hawaiian Telecom
HUD – U.S. Department of Housing and Urban Development
GET – General Excise Taxes

JaC – Jaucus sand

LCA – Land Court Award
LEED – Leadership in Energy and Design
LID – Low Impact Development
LUO – Land Use Ordinance
MK – MK Development Consulting, LLC
MSL – Mean Sea Level
NFIP – National Flood Insurance Program
NPDES – National Pollutant Discharge Elimination System

OIBC – Oahu Island Burial Council
OTWC – Oceanic Time Warner Cable
PD-R – Planned Development-Resort
Project – 133 Kaiulani Condo-hotel Development
PUC – Primary Urban Center
PUC – Public Utility Commission (only in a quotation in Section8.6.13 of the Final Environmental Assessment)
PUCDP – Primary Urban Center Development Plan
sf – Square Feet
SFHA – Special Flood Hazard Area
SHPD – State Historic Preservation Division
SIHP – State Inventory of Historic Properties
TMP – Traffic Management Plan
USFWS – United States Fish and Wildlife Service
WSD – Waikiki Special District
WWB – Wastewater Branch

FINAL ENVIRONMENTAL ASSESSMENT
133 KAIULANI CONDO HOTEL DEVELOPMENT
WAIKĪKĪ, HONOLULU, O'AHU, HAWAI'I

1. GENERAL INFORMATION

A.	APPLICANT	MK Development Consulting, LLC 1288 Ala Moana Boulevard, Suite 201 Honolulu, Hawai'i 96814 Kathryn Inouye Its Manager (808) 692-0041
B.	OWNER	BSC KVSC, LLC 1288 Ala Moana Boulevard, Suite 288 Honolulu, Hawai'i 96814 Bryan K.K. Li Vice President (808) 738-8403
C.	APPROVING AGENCY	Department of Planning & Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawai'i 96813
D.	TAX MAP KEYS	2-6-23: 29, 37 and 76
E.	AGENT	Kusao & Kurahashi, Inc. Planning and Zoning Consultants 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawai'i 96822
F.	LOCATION	131 and 133 Kaiulani Avenue, 2401, 2407 and 2413 Prince Edward Street and 2410 Koa Avenue (Figure 1, Location and Zoning Map)
G.	LOT AREA	45,622 square feet
H.	ZONING	Resort Mixed Use Precinct (Figure 1)
I.	STATE LAND USE	Urban
J.	DEVELOPMENT PLAN Land Use Map: Public Infrastructure Map:	 Resort (Figure 2) No improvements affecting the Project Site (Figure 3)
K.	SPECIAL DISTRICT	Waikiki Special District (Figure 4)

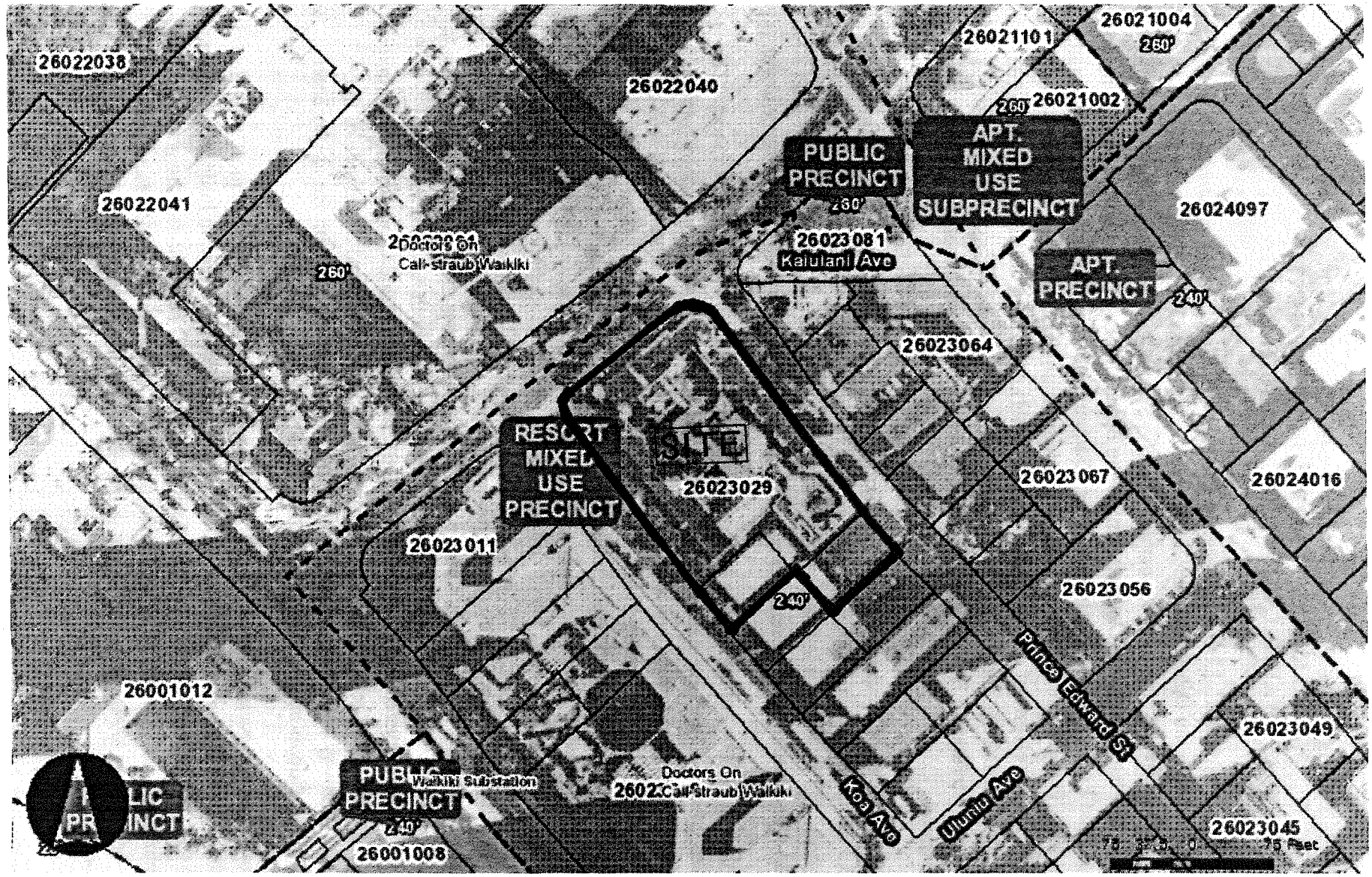
L.	EXISTING USE	King's Village Commercial Complex Apartment Building Apartment/Commercial Building
M.	AGENCIES CONSULTED PRIOR TO PREPARATION OF DRAFT ENVIRONMENTAL ASSESSMENT	City Councilmember Stanley Chang (Phone Call) Board of Water Supply (**Appendix 8**) Department of Planning and Permitting (**Appendix 15**, Sewer Connection Application) Department of Transportation Services Department of Land and Natural Resources State Historic Preservation Division (**Appendix 6**) Waikiki Improvement Association (Section 15.2) Waikiki Neighborhood Board Chair and Zoning Committee Chair (Section 15.1 and **Appendix 14**)
N.	Hawaii Revised Statutes Environmental Review Triggers	Development in the Waikiki Special District Use of City Lands (Landscape and Sewerline)

2. PROJECT INFORMATION SUMMARY

The Applicant, MK Development Consulting, LLC (MK), proposes the 133 Kaiulani Condo Hotel Development (the "Project") in Waikīkī, Honolulu, on O'ahu. The Applicant is submitting this Final Environmental Assessment ("FEA") for the proposed 133 Kaiulani Condo Hotel Development. The Applicant plans to submit a Planned Development-Resort ("PD-R") and Waikiki Special District ("WSD") permit applications for the proposed 133 Kaiulani Condo Hotel Development to the Department of Planning and Permitting (DPP) for processing. The Project will be located on a 45,622 square foot site in Waikīkī (the "Project Site") and will involve the demolition of the existing structures on the property and the development of a new condo hotel. The King's Village, Prince Edwards Apartments and Hale Waikiki will be demolished to make way for the new condo hotel.

The Project Site is bounded by Kaiulani Avenue to the northwest, Prince Edward Street to the northeast, apartment and commercial developments to the southeast, and Koa Avenue to the southwest. The Sheraton Princess Kaiulani Hotel is located across Kaiulani Avenue. The Alamo/Enterprise Car Rental, Hawaii Ebbtide Hotel, Waikiki Paradise Apartment, and Aloha Condo Honolulu are located across Prince Edward Street. The Hyatt Regency Waikiki is located across Koa Avenue.

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



	133 Kaiulani Author: Kusao & Kurahashi, Inc. Date: 3/21/2014	Notes: Location and Zoning Map Powered by ArcGIS Server 10 © City & County of Honolulu, All Rights Reserved, 2014 Note: Data represented on this map is not intended to replace site survey.

FIGURE 1

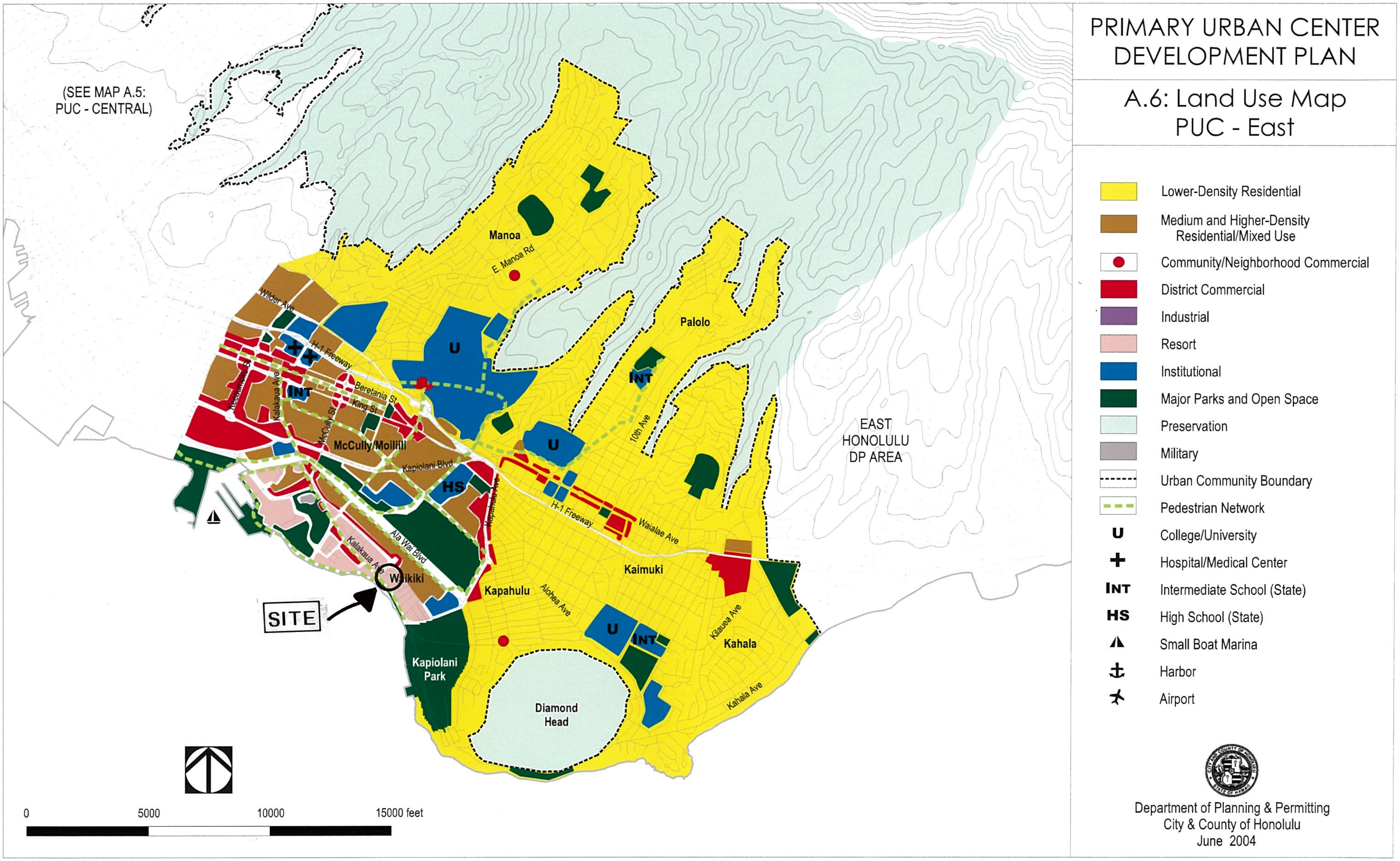

PRIMARY URBAN CENTER DEVELOPMENT PLAN
A.6: Land Use Map
PUC - East
Lower-Density Residential
Medium and Higher-Density Residential/Mixed Use
Community/Neighborhood Commercial
District Commercial
Industrial
Resort
Institutional
Major Parks and Open Space
Preservation
Military
Urban Community Boundary
Pedestrian Network
U College/University
Hospital/Medical Center
INT Intermediate School (State)
HS High School (State)
Small Boat Marina
Harbor
Airport
Department of Planning & Permitting
City & County of Honolulu
June 2004
(SEE MAP A.5: PUC - CENTRAL)
EAST HONOLULU DP AREA
Manoa
E. Manoa Rd
Palolo
10th Ave
Wilder Ave
H-1 Freeway
Beretania St
King St
McCully St
Kalakaua Ave
McCully/Moiliili
Kapiolani Blvd
Kapahulu Ave
Waialae Ave
Kaimuki
Kapahulu
Alohea Ave
Kilauea Ave
Kahala
Kahala Ave
Ala Wai Blvd
Waikiki
SITE
Kapiolani Park
Diamond Head
0
5000
10000
15000 feet

FIGURE 2

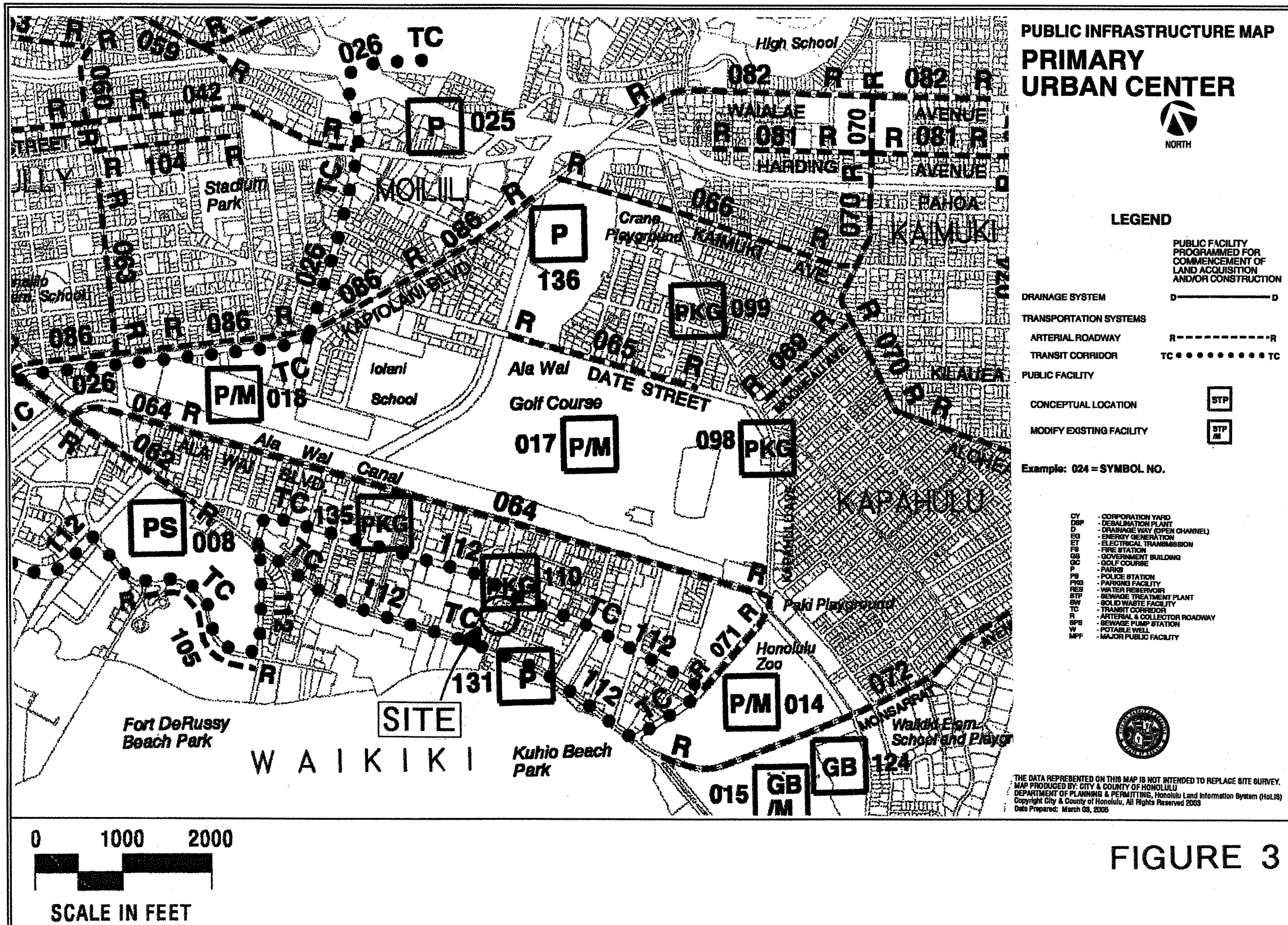
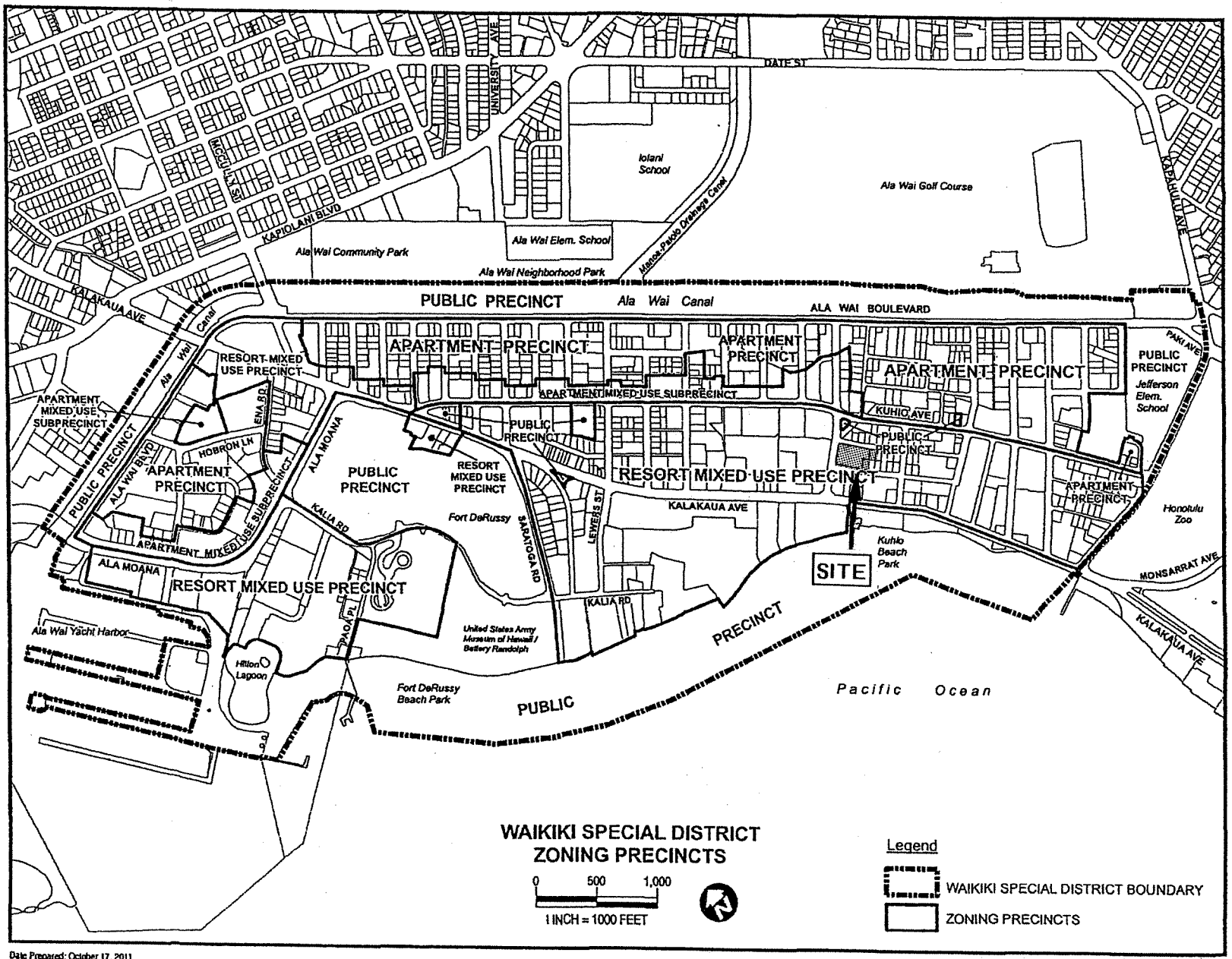

PUBLIC INFRASTRUCTURE MAP
PRIMARY URBAN CENTER
NORTH
LEGEND
PUBLIC FACILITY PROGRAMMED FOR COMMENCEMENT OF LAND ACQUISITION AND/OR CONSTRUCTION
DRAINAGE SYSTEM
TRANSPORTATION SYSTEMS
ARTERIAL ROADWAY
TRANSIT CORRIDOR
PUBLIC FACILITY
CONCEPTUAL LOCATION
MODIFY EXISTING FACILITY
Example: 024 = SYMBOL NO.
CY - CORPORATION YARD
DSP - DESALINATION PLANT
D - DRAINAGE WAY (OPEN CHANNEL)
EG - ENERGY GENERATION
ET - ELECTRICAL TRANSMISSION
FS - FIRE STATION
GB - GOVERNMENT BUILDING
GC - GOLF COURSE
P - PARKS
PS - POLICE STATION
PKG - PARKING FACILITY
RES - WATER RESERVOIR
STP - SEWAGE TREATMENT PLANT
SW - SOLID WASTE FACILITY
TC - TRANSIT CORRIDOR
R - ARTERIAL & COLLECTOR ROADWAY
SPS - SEWAGE PUMP STATION
W - POTABLE WELL
MPF - MAJOR PUBLIC FACILITY
THE DATA REPRESENTED ON THIS MAP IS NOT INTENDED TO REPLACE SITE SURVEY.
MAP PRODUCED BY: CITY & COUNTY OF HONOLULU
DEPARTMENT OF PLANNING & PERMITTING, Honolulu Land Information System (HoLIS)
Copyright City & County of Honolulu, All Rights Reserved 2003
Date Prepared: March 03, 2005
High School
WAIALAE AVENUE
HARDING AVENUE
PAHOA
KAIMUKI
MOILIILI
Stadium Park
Crane Playground
KAIMUKI AVE
KAPIOLANI BLVD
Iolani School
Ala Wai Golf Course
DATE STREET
Ala Wai Canal
ALA WAI BLVD.
KAPAHULU
Paki Playground
Honolulu Zoo
MONSARRAT
Waikiki Elem. School and Playgr
Fort DeRussy Beach Park
SITE
WAIKIKI
Kuhio Beach Park
0 1000 2000
SCALE IN FEET

FIGURE 3



Date Prepared: October 17, 2011

EXHIBIT 21-9.13

FIGURE 4

2.1 THE PROJECT

The Project includes the replacement of all existing buildings and structures on the Project Site (including King's Village, Prince Edward Apartments and Hale Waikiki) with a new commercial and parking podium and a condo hotel tower above.

Although for sales purposes the Project will have 244 condo hotel units, because two of the units will have two keyed entrances and can be used as separate units, DPP considers the Project to have 246 condo hotel units. We will use 246 as the condo hotel unit count for discussion purposes in this Final Environmental Assessment. The new condo hotel Project will provide approximately 246 condo hotel units, (168) Studio, (73) 1-Bedroom, (1) 2-bedroom, and (2) 3-bedroom units (which will also function as two 1-bedroom lockout units, for a total of 4 units). The contemplated structure is currently planned to have a 350-foot, 32-story tower, with a basement and mechanical equipment, mechanical rooms and an elevator shaft on the roof extending up to an additional 18 feet.

Based on similar properties in Waikīkī, MK projects that at any given time approximately 85% of the condo hotel units will be in a hotel rental program, less than 2% of the condo hotel units will be used as permanent residences, and the remaining approximately 13% of the condo hotel units are anticipated to be used as part-time residences or vacation homes. MK will provide parking based on the Project being a hotel, but will provide additional parking of one parking stall per unit for five of the condo hotel units. In the event the Project is no longer a hotel, the 1:1 parking may increase in the future. MK will also provide ample park dedication for the Project at a 4,125 square foot pocket park on Prince Edwards Street.

A basement will consist of back of house spaces. The ground floor will be composed of a large retail space, a smaller retail space, hotel lobby with 24-hour clerk service and support spaces. The current plans consist of parking stalls in the podium. The condo hotel reception area, lobby lounge, bar lounge, full-service restaurant as well as multiple event spaces and executive offices will be on the amenity deck above the parking floors. The open, podium area on the amenity deck will be utilized as an outdoor dining terrace and main pool deck. The tower above the amenity deck will mostly be condo hotel units with the fitness center and spa occupying a portion of the floor above the amenity deck.

At ground level, the Project will provide a porte-cochere for valet drop off with loading, trash and vehicular access. At the Kaiulani Avenue and Koa Avenue corner the Project will provide an ample open-space plaza to serve as the main pedestrian access to both the condo hotel and retail functions. A cohesive paved and landscaped area will connect the plaza, wrap around Kaiulani Avenue with access to the retail portion, and connect to the Prince Edward Street side of the property. The pathway will continue and connect to a landscaped pocket park for use by condo hotel guests, Waikīkī residents and the general public.

Through the PD-R process, the Applicant will request a 4.0 floor area ratio to allow for a development of approximately 258,195 square feet, to build the proposed 246 room

condo hotel. Also to be requested in the PD-R application will be a 350-foot height and relief from the transitional height setback to reduce the impact on views from surrounding buildings. This will allow a more slender tower oriented in the profile of the existing Hyatt Regency Waikiki West Tower.

Preliminary conceptual plans and photos showing the proposed improvements are provided in **Appendices 1A through 1P**.

2.2 PUBLIC BENEFITS

The Project will provide multiple public benefits including:

- An increase in public open space available to the public, including a 4,125 square foot pocket park on Prince Edward Street, all to be maintained by condo hotel operator or association.
- Greater average setback along Koa Avenue, Kaiulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- An economic and job-creating stimulus for the local economy.
- An increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

MK proposes the following additional package of community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA (Americans with Disabilities Act) improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

The Project further implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
The Project is intended to become an important retail and condo hotel destination located near the heart of Waikīkī which meets the demands of today's urban resort destination visitor.

2.3 POTENTIAL ADVERSE IMPACTS

Potential adverse impacts include the following:

2.3.1 Temporary Loss of Retail and Dining on the Project Site

There will be a temporary loss of retail and dining jobs associated with the King's Village and Hale Waikiki, when these existing businesses are demolished for construction. This will also result in the loss of GET revenue from these existing businesses during the construction period.

2.3.2 Displacement of Existing Tenants

The Project will displace the existing commercial and apartment tenants at the King's Village, Prince Edward Apartments and Hale Waikiki. These structures will be demolished to allow the redevelopment of the site with a new condo hotel.

2.3.3 Construction Impacts

Short term construction impacts will be related to noise, air quality and stormwater runoff. There will also be short term impacts related to vehicular and pedestrian traffic related to the construction at the Project Site.

2.4 MITIGATION MEASURES

2.4.1 Job Replacement

Although there will be a loss of about 200 full-time and part-time jobs from the existing development at King's Village, Prince Edward Apartments and Hale Waikiki, the proposed redevelopment is expected to result in the creation of approximately 320 full-time jobs and 64 part-time jobs more than offsetting the jobs lost. Additionally, there will be temporary construction jobs for 30-month construction period that will peak at 250-300 on-site jobs plus ancillary support services.

2.4.2 Increased Tax Revenues

Although there will be a reduction in GET collections during construction, the future projected increase in sales, GET collections and hotel room tax from the Project will more than off-set the tax revenues lost during construction.

2.4.3 Tenant Information and Notice

The tenants have been informed and updated on the redevelopment plans, and their leases and license agreements specifically acknowledge the potential for redevelopment and/or are either short term or cancellable upon written notice. The existing tenants at the Project Site will be informed of the construction start date as soon as possible. The tenants will also be appropriately notified of their lease or license termination, and should have ample time to make alternative arrangements when the Project moves forward.

2.4.4 Construction Practices

2.4.4.1 Noise

Y. Ebisu & Associates has prepared the "Acoustic Study for the 133 Kaiulani Project, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated April 2014. The study in its entirety is provided in **Appendix 2**.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures, from that Acoustic Study, includes a discussion of mitigation measures for the Project that is summarized as follows:

Traffic noise mitigation in the form of closure of windows and air conditioning is recommended.

The use of coarse finishes for the circulation driveway surfaces will prevent the tire squeal noise for typical circulation speeds within the parking structure.

The use of properly muffled construction equipment will be required on the job site.

Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

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

2.4.4.2 Air Quality

B.D. Neal has prepared an "Air Quality Study for the 133 Kaiulani Condo Hotel Development" ("Air Quality Study") dated April 2014. The study in its entirety is provided in **Appendix 3**.

Section 8.0, Conclusions and Recommendations, from that Air Quality Study, describes mitigation measures for the Project and is summarized as follows:
As recommended, during demolition and construction, to control dust, active work areas and any temporary unpaved work roads will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Wind erosion of inactive areas of the site that have been disturbed will be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks will be covered when traveling on roadways to prevent windage. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions, that may occur as a result of trucks tracking dirt onto paved roadways in the Project area.

During construction phases, increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers will be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

2.4.4.3 Stormwater Runoff

MK will utilize the following dust control measures to minimize impact of stormwater runoff during the demolition and construction period:

a) Plan the different phases of construction, to minimize the amount of dust-generating materials and activities, centralize on-site vehicular traffic routes, and locate potential dust-generating equipment in areas of least impact;
b) Provide an adequate water source at the site prior to start-up of construction activities;
c) Landscape and provide rapid covering of bare areas, including slopes as soon as practical;
d) Minimize dust from shoulders and access roads;
e) Provide adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Control dust from debris being hauled away from the Project site. Also, control dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

2.4.4.4 Traffic

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

2.4.5 Traffic Improvements

Although traffic operations (level of service) with the Project in 2017 are expected to remain similar to conditions without the Project in 2017, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report 133 Kaiulani" ("Traffic Impact Report") dated April 2015 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 4**. The report recommends the following traffic mitigation measures:

"Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e.,*

automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.

During the design phase of the Project, MK will work to implement the recommendations of the Traffic Impact Report.

The condo hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage as needed to satisfy bike-user demand. MK will encourage its employees to use public transit and carpools and will encourage and assist tenants in doing the same for their employees.

The following is the projected time line for the Project:

1. November 2015 Submit Construction Management Permit (CMP)
2. February 2016 Issuance of Building Permit
3. January 2018 Submit Traffic Management Plan (TMP)
4. April 2018 Issuance of Certificate of Occupancy
5. April 2019 Post Traffic Impact Assessment Report (TIAR)

The Applicant understands that roadway and sidewalk improvements will be required to enhance the pedestrian, bicycle and vehicular circulation in and around the development, including the conversion of Kaiulani Avenue to two-way between Kalakaua and Koa Avenues. The Applicant will discuss these improvements and possible cost sharing with the Princess Kaiulani and 2424 Kalakaua Avenue.

The Applicant's traffic consultant will meet with traffic staff at the Department of Transportation Services and Department of Planning and Permitting to determine final location of driveways and loading docks and the treatment of traffic flow to minimize vehicular impacts to the surrounding public streets.

In addition to the initial Traffic Impact Report, at the request of DPP, a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" ("Two-Way Conversion Report) dated August 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 5**. The Two-Way Conversion Report stated the following in its Recommendations and Conclusion:

"V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the design of the two-way conversion of Kaiulani Avenue.

1. Modify the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue.
2. Modify the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications. In addition, modify the traffic signal phasing and timing as necessary."

"VI. CONCLUSION

The proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. The proposed project entails the conversion of Kaiulani Avenue between Kalakaua Avenue and Koa Avenue. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes."

MK agrees to pay its fair share for the improvements for the conversion of Kaiulani Avenue from a one-way to a two-way roadway between Kalakaua Avenue and Koa Avenue. MK understands that two other planned developments will also benefit from the conversion and will work towards an agreement on the fair share participation of these developments as well, with a goal of the improvements being constructed prior to the certificate of occupancy being issued for the first development that proceeds with development.

2.4.6 Noise (Acoustical) Long Term Impacts

Y. Ebisu & Associates has prepared the "Acoustic Study for the 133 Kaiulani Project, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated April 2014. The study in its entirety is provided in **Appendix 2**. The following details mitigation measures for potential long term noise impacts related to traffic and air conditioning equipment:

"Traffic Noise. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected since traffic noise increases associated with project traffic are not significant....

"Traffic noise mitigation measures are recommended for all proposed residential units on the south (makai) face of the tower building, and for those units at Locations Ewa1 and Mauka2 (see Figures 12 through 14). Traffic noise mitigation measures in the form of closure and air conditioning of the residential units would be acceptable."

2.5 UNRESOLVED ISSUES

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

- A PD-R Permit application will be submitted for review by DPP and approval by the City Council.
- A WSD Permit, Major application will be submitted for review and approval by the DPP at a later date.
- A surface encroachment variance, subdivision application for a pedestrian easement and a surface encroachment variance, related to improvements in the City's right-of-way area and in the front yard to have the sidewalk meander through the City's right-of-way and the front yard.
- A Signage Master Plan application will be submitted for review and approval by the DPP as a Zoning Adjustment at a later date.
- A Conditional Use Permit (CUP), Minor for Joint Development will be submitted for review and approval by the DPP at a later date.
- Building Permits, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.
- An NPDES Permit for construction over an acre and possibly for dewatering effluent (although not expected) will be submitted to the Department of Health (DOH).
- A Construction Noise Permit will be submitted to the DOH.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.
- Communications with existing tenants impacted by the Project will continue beyond the completion of the FEA.

2.6 COMPATIBILITY WITH LAND USE PLANS AND POLICIES

- State Land Use - The Project Site is situated within the State land use Urban district. Within that district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The existing developments on the Project Site as well as the Project's planned improvements and proposed uses are consistent with this Urban designation.

- General Plan - The Project will comply with policies related to improving visitor facilities and timing new development with infrastructure.
- PUCDP - The Project will comply with policies related to the support of the visitor industry with updated facilities, enhance the walking experience in Waikīkī, and comply with the land use map designation of Resort.
- Zoning - The Project will be developed in accordance with development standards achievable through the processing of a PD-R permit application process within the WSD. The proposed commercial use (retail) and condo hotel use are permitted uses in the Resort Mixed Use Precinct of the WSD for the specific parcels which comprise the Project Site.

2.7 REQUIRED GOVERNMENTAL PERMITS AND APPROVALS

- City: PD-R Permit; WSD Permit, Major; Surface Encroachment Variance; Subdivision for Pedestrian Easement; Sidewalk Variance; CUP (Minor) for Joint Development; Building Permits; Trenching Permit; Grading Permit; Drain Connection Permit; Street Usage Permit; Sign Master Plan (Zoning Adjustment); and Construction Plan Approval.
- State: NPDES Permit for construction over an acre and possibly for dewatering effluent (although not expected); Construction Noise Permit; Archaeological Inventory Survey; Burial Treatment Plan; and Industrial Wastewater Discharge.

2.8 ALTERNATIVES CONSIDERED

2.8.1 Alternative I: No Action

The possibility of taking no action was considered and rejected, as the existing King's Village, Prince Edward Apartments and Hale Waikiki structures are dated and all would need to be significantly upgraded or replaced to be competitive in today's dynamic retail, residential and condo hotel markets serving Waikīkī and O`ahu generally.

The existing development on the property with their depressed rents does not provide a return that covers the financing of the purchase price of the property.

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikīkī properties.

2.8.2 Alternative II: Renovation of the Existing Structures

MK considered renovating the existing structures; however, the condition and design of the existing structures do not lend themselves to an economically viable renovation alternative. The projected cost for renovation would be approximately $20 to $25 million, with no economically viable return to support such an investment in renovation.

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikīkī properties. Projected rents are not expected to achieve market rents after a renovation.

Other older retail properties in Waikīkī have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

2.8.3 Alternative III: Develop within the WSD Standards (No PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the development standards of the WSD, it would also create a land area of sufficient size and layout to develop a modest size condo hotel with about 136 units and 134,819 square feet of floor area.

This property has three front yards, where most properties in Waikīkī have one front yard, with some having two front yards. It is only on rare occasions that a property will have three front yards. This reduces the development potential significantly, because although one half of the street right-of-way fronting the property is added to the zoning lot area, the increase provides a gain of 1.0 FAR times the area of one half of the street right-of-way, whereas elimination of the 15-foot front yard would allow this area to be considered public open space providing a gain of 10 times the yard area. On the basis of keeping the one front yard that has the greatest area, the resultant elimination of the two other front yards provides a net gain in floor area of about 50,000 square feet.

Another consideration in Alternative III was the visual impact of 240-foot tower following the Waikiki Special District (WSD) Design Guidelines. About 70% of the ocean views between the two Hyatt towers would have been blocked following a 240-foot height limit. A visual comparison of what would be permitted following the WSD Design Guidelines and the proposed development requesting flexibility in design standards (through a Planned Development-Resort, PD-R permit process) is provided in Figure 5 Comparison of Alternatives III & IV, "Allowable Massing Study Comparison" diagram.

Alternative III would result in a tower that would not entirely sit within the profile of the Aston Waikiki Beach Tower and the 240-foot tower would be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head"

The Figure 6 "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. With Alternative III the tower would sit closer to Prince Edward Street, as the height setback from Koa Avenue will have to be met and a portion of the 240-foot tower would sit in the area not within the existing profile of the Aston Waikiki Beach Tower.

The 136 condo hotel units do not provide a critical mass that the Applicant feels is necessary to develop an economically viable condo hotel. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service. The Applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.

2.8.4 Alternative IV: Develop with Various Modifications to the WSD Standards through the PD-R – **Preferred Alternative**

MK considered a redevelopment scenario which would require, among other things, a request to modify development standards of the WSD in order to:

a. Allow a height limit of 350 feet and
b. Allow density over and above that permitted by the WSD development standards (up to 4.0 FAR).
c. Allow encroachment into the transitional height setback.

The PD-R process would extend the processing time for MK to secure the necessary permits and approvals, but would also provide for the critical mass that is needed for an economically viable hotel.

This alternative would provide for an improved design not possible under the "No Action" and "Renovation of the Existing Structures" alternatives. The improved design will allow for conveying a Hawaiian sense of place, improved streetscape, enhanced pedestrian experience, and significant public open space.

The building orientation is provided in **Appendix 1D** page 16. This alternative would minimize impact to mauka-makai views, with most of the tower situated in the profile of the Hyatt Regency Waikiki West Tower, as shown in **Appendix 1D** page 18, when compared with the impact to mauka-makai views of Alternatives V and VI, Figures 8 and 10, respectively.

Alternatives IV, V, and VI were evaluated for the Project in **Appendix 1I** Shadow Study and **Appendix 1N** Street View Analysis.

The overall impact on Shadows for each of the alternatives is discussed in Section 8.7.2.8 of this Final EA. The overall impact on other street/public views is discussed in Section 8.7.3.10 of this Final EA.

The improvements in the Project are geared toward achieving the goal of the WSD guidelines as well as incorporating concepts that will enhance open space. Specific WSD objectives which will be met by the Preferred Alternative include the following:

"(f) Provide for the ability to renovate and redevelop existing structures which otherwise might experience deterioration. . . ."

The Preferred Alternative will allow several aging structures to be replaced by a vibrant, attractive and well-designed visitor destination.

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

The Preferred Alternative will not only result in a new condo hotel that will help maintain Waikīkī's capacity to support visitor accommodations, especially in light of the recent and future planned reductions in the number of hotel units available in Waikīkī. It will also provide much needed employment opportunities both during and after the construction of the Project.*"(h) Provide opportunities for creative development capable of substantially contributing to rejuvenation and revitalization in the special district, and able to facilitate the desired character of Waikiki for areas susceptible to change."*

The Preferred Alternative would result in the rejuvenation and revitalization of the King's Village and neighboring properties.

"(m) Provide people-oriented, interactive, landscaped open spaces to offset the high-density urban ambience."

The Preferred Alternative would include upgraded and inviting landscaping along Koa Avenue, Kaiulani Avenue and Prince Edward Street. Landscaping on the upper level of the Project will also provide visual relief for the overlooking taller buildings nearby, offering a pleasant change from the typical rooftop view of lower structures.

The Preferred Alternative will also result in implementation of the City's vision for Waikīkī as described in the PUCDP. Specifically, the vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

The Preferred Alternative will also result in the following community benefits that would not be achieved under Alternatives 1 through 3:

- An increase in public open space available to the public, including a 4,125 square foot pocket park on Prince Edward Street, all to be maintained by condo hotel operator or association.
- Greater average setback along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- An economic and job-creating stimulus for the local economy.
- An increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

MK proposes the following additional package of community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.

- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

The Preferred Alternative, Alternative IV, also provides the following benefits:

Although private views are not protected, Alternative IV will result in the 350-foot tower situated mostly within the profile of the Hyatt Regency Waikiki West Tower and of all the redevelopment alternatives (Alternatives III, V and VI), provides the greatest protection to mauka-makai primary views from the Governor Cleghorn and other buildings situated mauka of the Project Site and the least visual impact on the view from the Princess Kaiulani. The impact to the primary views from the Governor Cleghorn Building and other buildings situated mauka of the Project Site is shown in Figure 5.

Alternative IV will also result in no impact to the existing view of Diamond Head from the Punchbowl Lookout, since all of the tower will be located within the shadow of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 6.

The foundations for Alternative IV would be located within the existing King's Village basement, creating a much lower chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend less into the mauka neighborhood than Alternatives III, V, and VI.

Alternative IV would also result in the greatest distance between Kaiulani Avenuue and the Project driveways and loading areas, when compared to Alternatives III, V, and VI.

This Preferred Alternative was selected based on the benefits described above, including: no impact on existing views from the Punchbowl Lookout towards Diamond Head; the much lower potential for disturbing iwi and/or artifacts; the lesser impact of shadows; the minimal impact to views from the Princess Kaiulani; the lower impact on views from the Governor Cleghorn and other buildings located mauka of the Project Site versus Alternatives III, V, and VI; and the impact to traffic based on driveways located further from Kailulani Avenue, than Alternatives III, V, and VI.

2.8.5 Alternative V – Mauka-Makai Orientation with 350 Foot Height (PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the WSD PD-R development standards of the LUO, it would also create a land area of sufficient size and layout to develop a condo-hotel with about 244 units and 252,300 square feet of floor area. A site plan showing the podium and tower foot prints and how the tower would affect the view from the Governor Cleghorn Building and providing a brief description of this alternative is provided in **Appendix 1D**.

The building orientation is provided in Figure 7, "Alternate Mauka-Makai Design Study Alternate V". This alternative would have a greater impact to mauka-makai views, than Alternative IV, with most of the tower situated in the view channel between the Hyatt Regency Waikiki West Tower and East Tower, as shown in Figure 8, "Alternate Mauka-Makai Design Study Alternate V – View from Gov. Cleghorn", when compared with the impact to mauka-makai views of Alternatives IV, Figure 8.

Alternatives IV, V, and VI were evaluated for the Project in **Appendix 1I** Shadow Study and **Appendix 1N** Street View Analysis.

The overall impact on Shadows for each of the alternatives is discussed in Section 8.7.3.8 of this Final EA. The overall impact on other street/public views is discussed in Section 8.7.3.10 of this Final EA.

Alternative V will result in the 350-foot tower situated in the view channel between the two Hyatt Regency Waikiki towers and block primary views from the Governor Cleghorn Building and other buildings situated mauka of the Project Site, as shown in Figure 8,. This orientation would also block significantly more views from the Princess Kaiulani than Alternative IV which had a very narrow profile when viewed from Princess Kaiulani. About 52% of the ocean views between the two Hyatt towers would have been blocked.

Alternative V will also result in significant impact to the view of Diamond Head from the Punchbowl Lookout, since much of the tower will be located outside of the shadow of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 7.

The foundations for Alternative V would be outside of the existing King's Village basement, creating a higher chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend farther into the mauka neighborhood than Alternative IV.

This alternative would require greater encroachment into the transitional height setback and yards than with Alternative IV.

Alternative V would also affect traffic with driveways and loading areas located closer to Kaiulani Avenue than with Alternative IV.

Due to the greater impact on views from the Punchbowl Lookout towards Diamond Head; the greater potential for disturbing iwi and/or artifacts; the greater impact on shadows; the impact to views from the Princess Kaiulani, the Governor Cleghorn and other buildings located mauka of the Project Site; the impact to traffic; and the greater encroachment into the height setback and yards, this Alternative was not selected.

2.8.6 Alternative VI – Mauka-Makai Orientation with 240 Foot Height (PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the WSD PD-R development standards of the LUO, it would also create a land area of sufficient size and layout to develop a modest size condo-hotel with about 144 units and 205,200 square feet of floor area. A site plan showing the podium and tower foot prints show how the tower would affect the view from the Governor Cleghorn Building and a brief description of the Project is provided in Figure 9, "Alternate Mauka-Makai Design Study Alternative VI".

The building orientation is provided in Figure 9. This alternative would have a greater impact to mauka-makai views, than Alternative IV, with most of the tower situated in the view channel between the Hyatt Regency Waikiki West Tower and East Tower, as shown in Figure 10, "Alternate Mauka-Makai Design Study Alternative VI - View", when compared with the impact to mauka-makai views of Alternatives IV, Figure 10.

Alternatives IV, V, and VI were evaluated for the Project in **Appendix 1I** Shadow Study and **Appendix 1N** Street View Analysis.

The overall impact on Shadows for each of the alternatives is discussed in Section 8.7.3.8 of this Final EA. The overall impact on other public views is discussed in Section 8.7.3.10 of this Final EA.

Alternative VI will result in the 240-foot tower situated in the view channel between the two Hyatt Regency Waikiki towers and block primary views from the Governor Cleghorn Building (as shown in Figure 10) and other buildings situated mauka of the Project Site. This orientation would also block significantly more views from the Princess Kaiulani than Alternative IV which had a very narrow profile when viewed from Princess Kaiulani. About 65% of the ocean views between the two Hyatt towers would have been blocked.

Alternative VI will also result in significant impact to the view of Diamond Head from the Punchbowl Lookout, since much of the tower will be located outside of the shadow of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 9.

The foundations for Alternative VI would be outside of the existing King's Village basement, creating a higher chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend farther into the mauka neighborhood than Alternative IV.

This alternative would require greater encroachment into the transitional height setback and yards than with Alternative IV.

Alternative VI would also affect traffic with driveways and loading areas located closer to Kaiulani Avenue than with Alternative IV.

Due to the greater impact on views from the Punchbowl Lookout towards Diamond Head; the greater potential for disturbing iwi and/or artifacts; the greater impact on shadows; the impact to views from the Princess Kaiulani, the Governor Cleghorn and other buildings located mauka of the Project Site; the impact to traffic; and the greater encroachment into the height setback and yards, this Alternative was not selected.

In addition, the 144 condo hotel units do not provide a critical mass that the Applicant feels is necessary to develop an economically viable condo-hotel. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service. The Applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.

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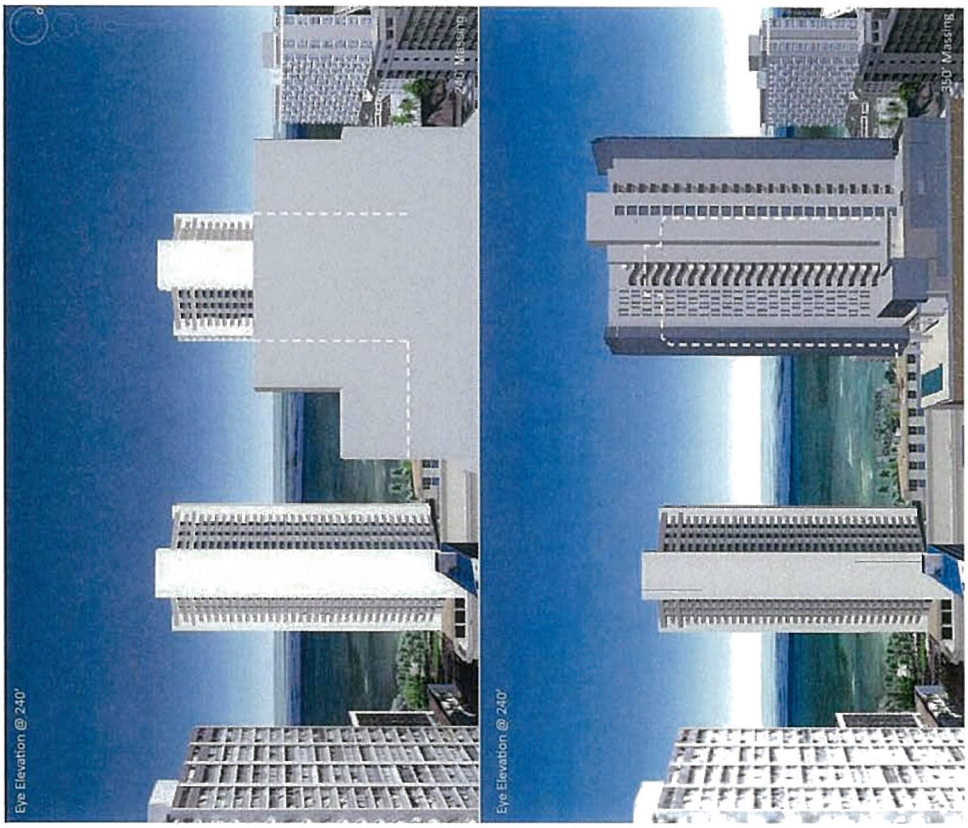
FIGURE 5

VIEW FROM WAIKIKI SKYTOWER (2410 CLEGHORN ST.)



Massing allowable without a PDR shown in grey. Hyatt West tower profile shown in background white dashed line.

Proposed Alternative with PDR in grey. Hyatt West tower profile shown in background white dashed line.

FIGURE 6

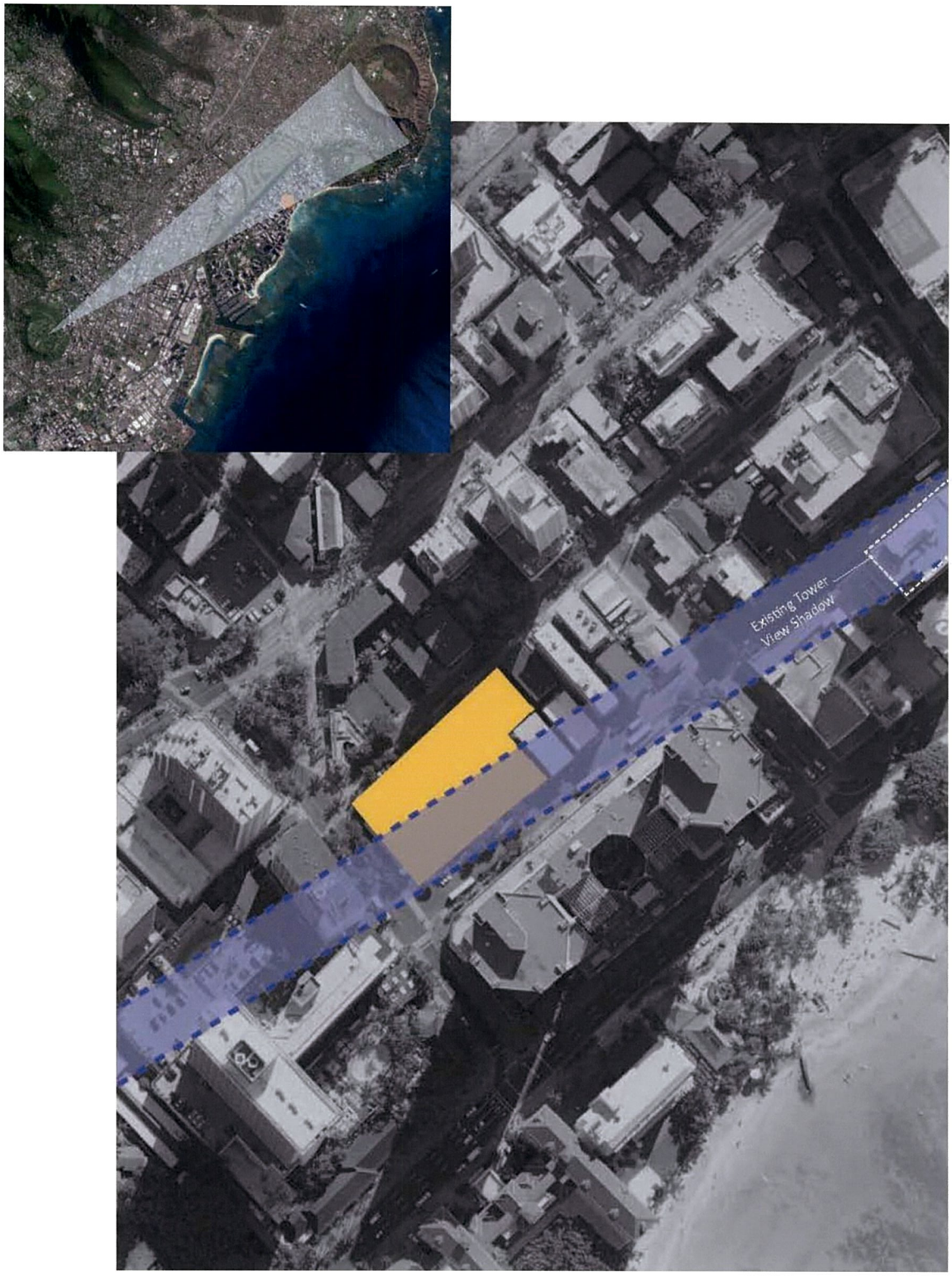


FIGURE 7
Alternative V

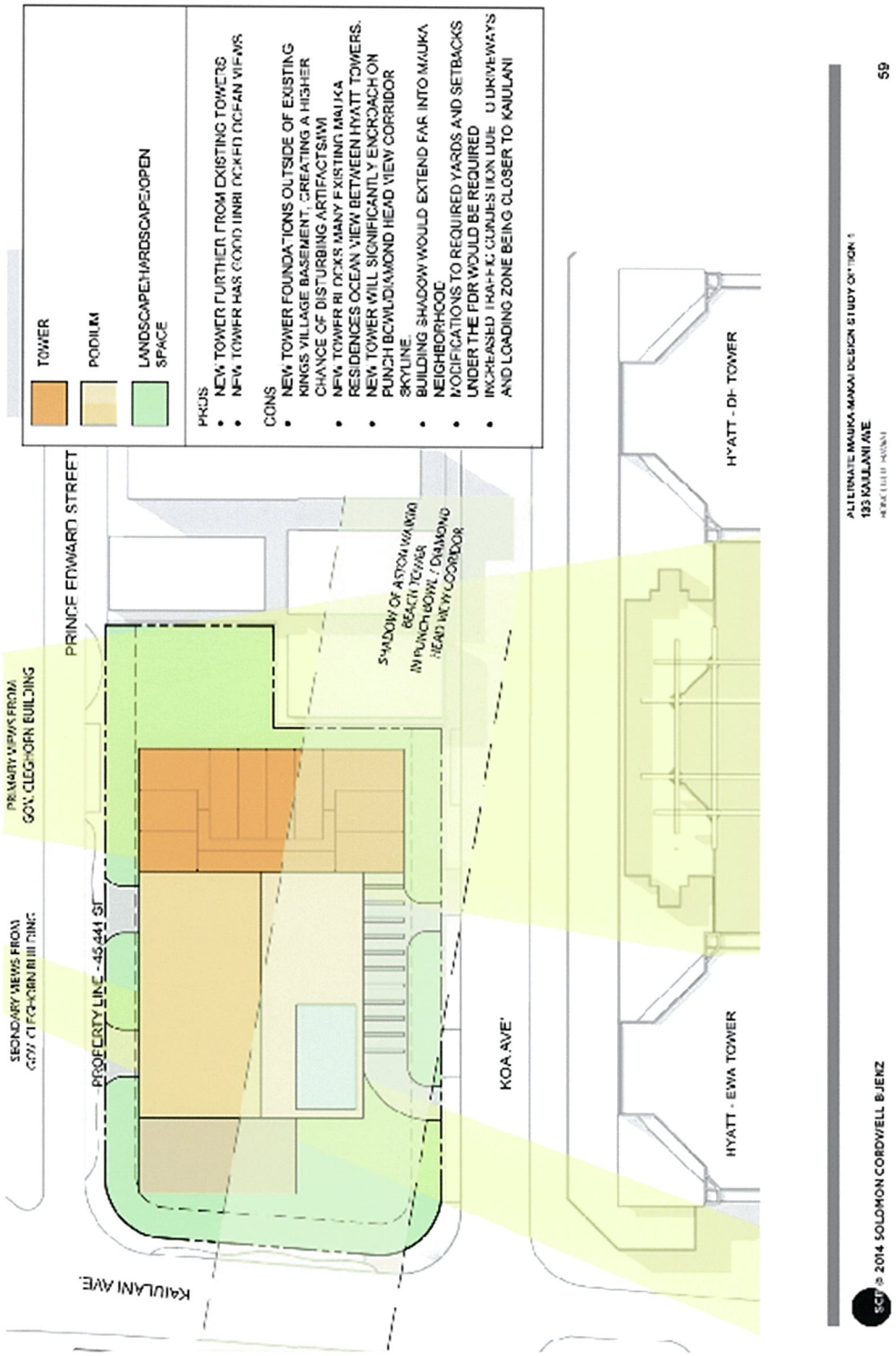


FIGURE 8
Alternative V

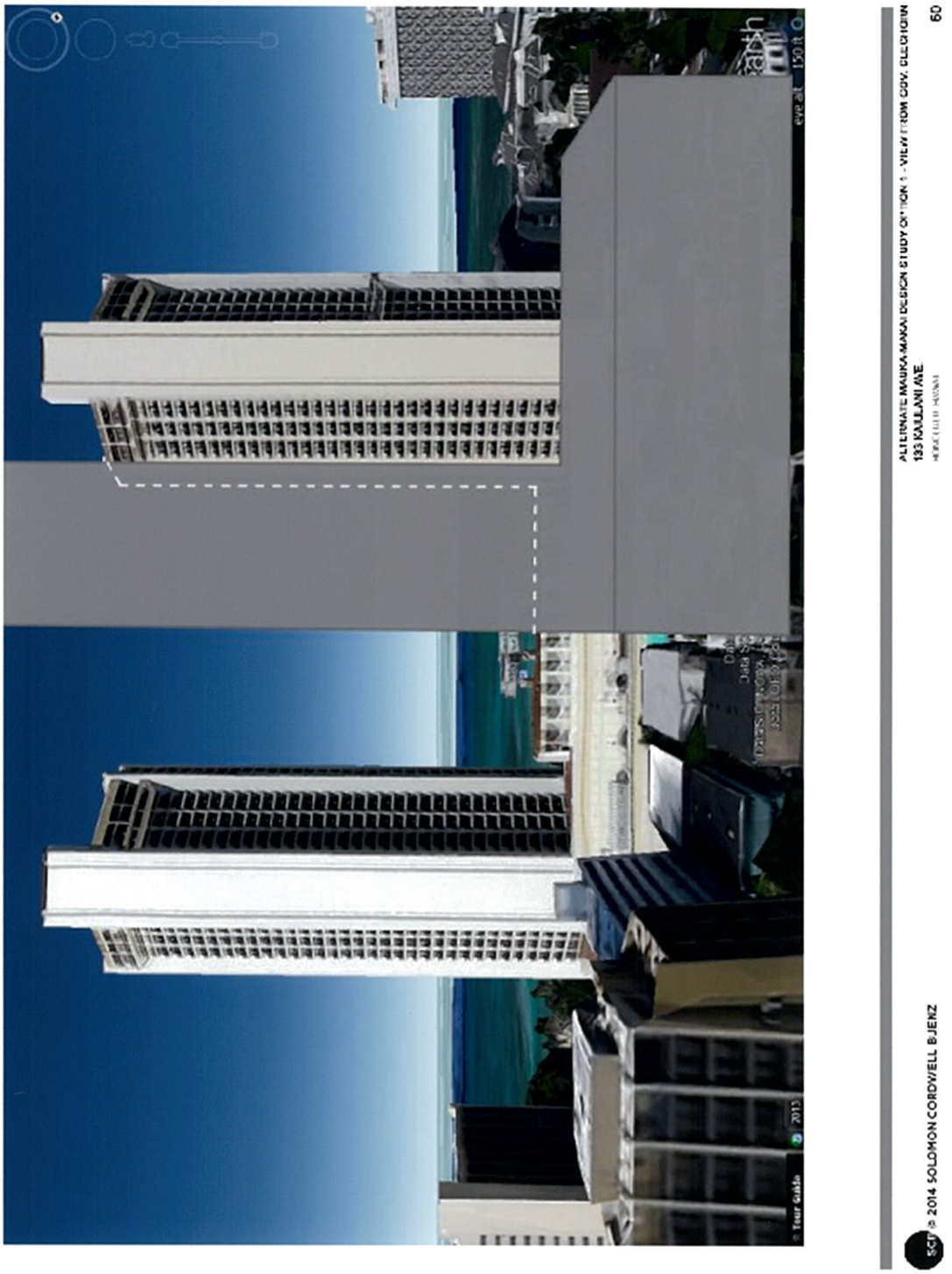


FIGURE 9
Alternative VI

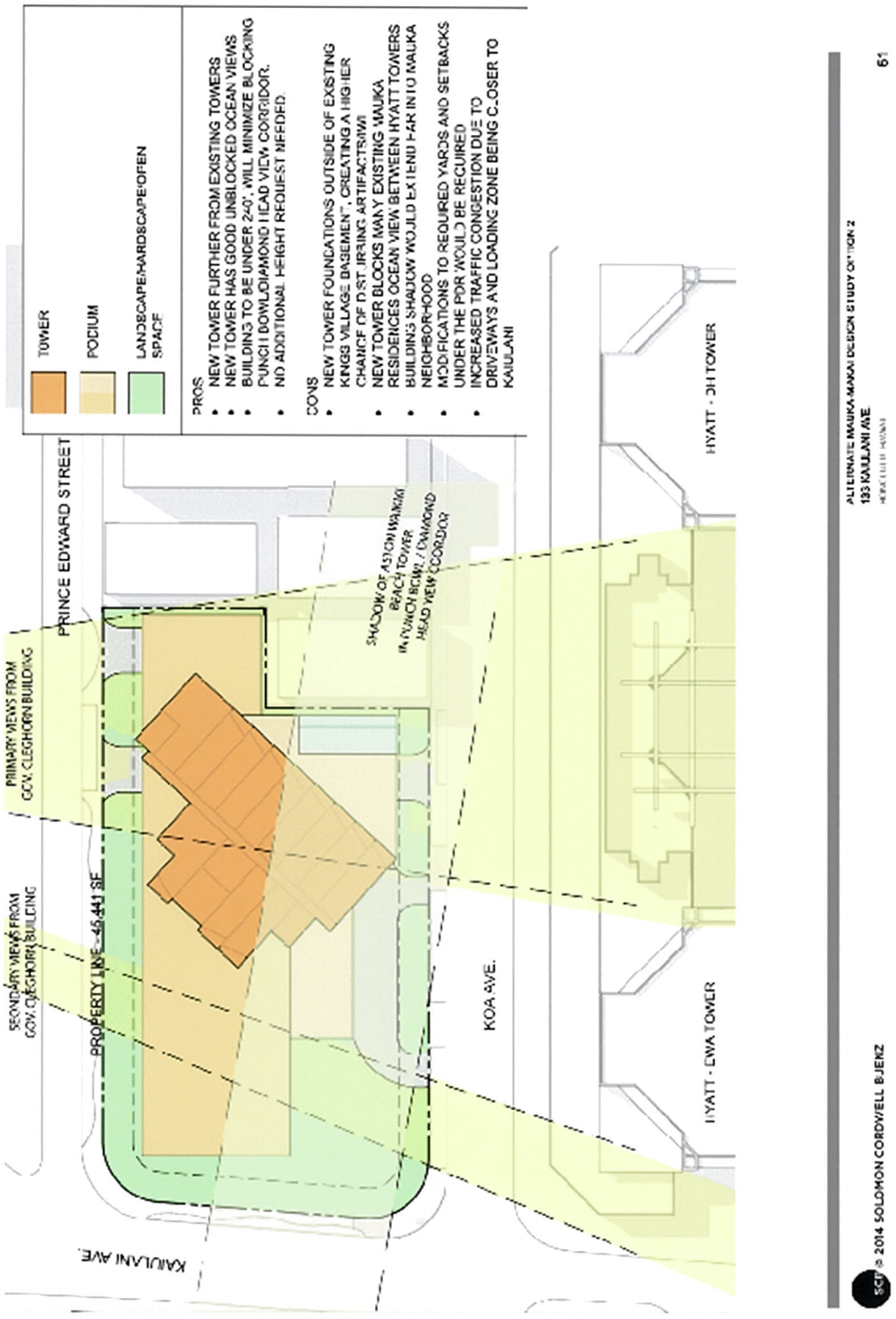
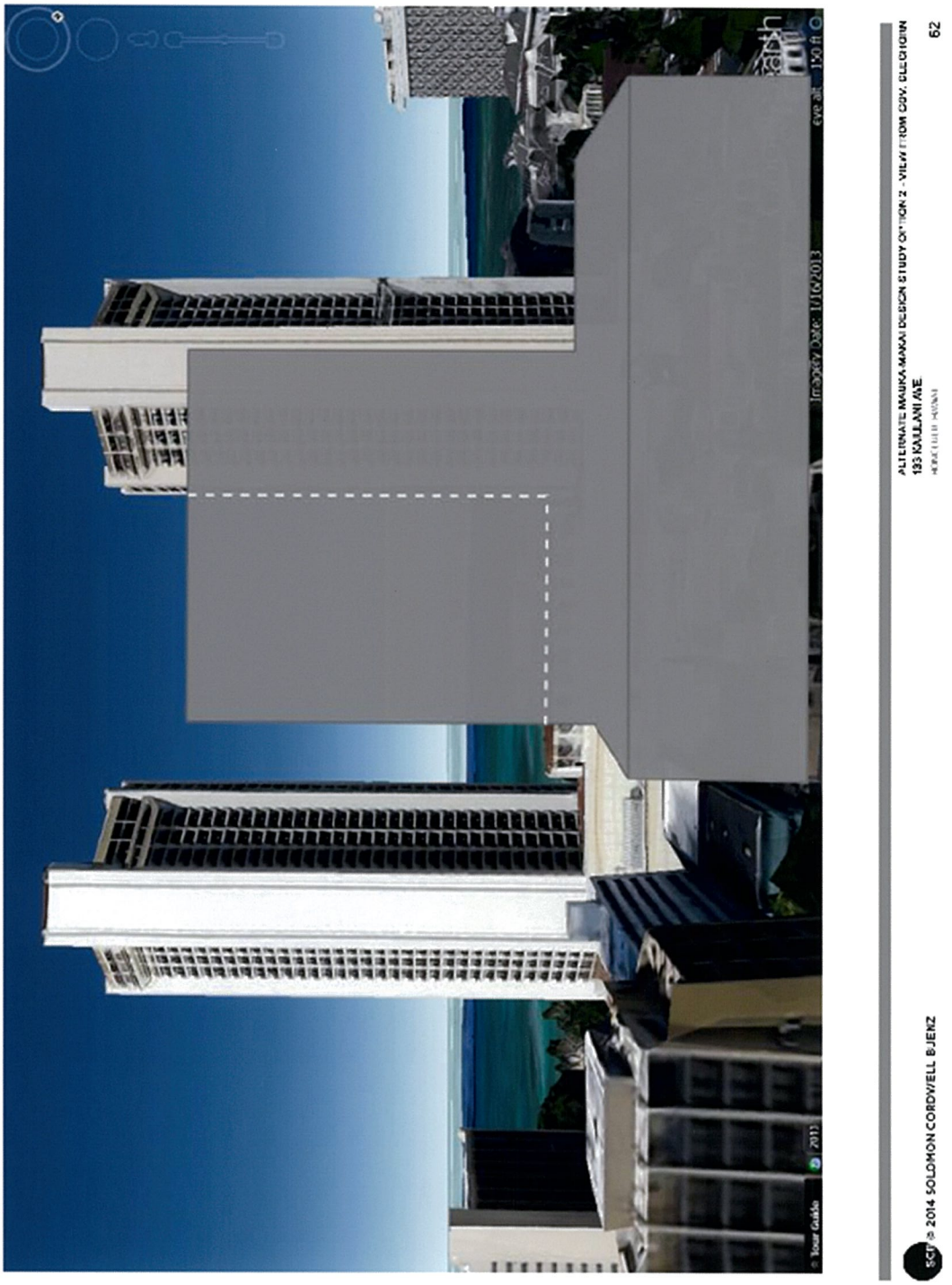


FIGURE 10
Alternative VI



3. PURPOSE OF AND NEED FOR THE PROJECT

The Project is necessary given the age and condition of the existing structures, as well as the deteriorating economics associated with operating the same. The King's Village development is 42 years old, while the Prince Edward Apartments and Hale Waikiki are 56 and 59 years old, respectively. The redevelopment will result in a new condo hotel development with retail, dining, condo hotel units, and accessory uses to the condo hotel, including back of house functions and parking.

4. PROJECT DESCRIPTION

4.1 MAP

The Project Site is located in the Primary Urban Center of Honolulu. The Project is located on a 45,622 square foot lot in the center of Waikīkī (see Figure 4) and involves the existing King's Village, Prince Edward Apartments and Hale Waikiki. The Project Site is bounded Kaiulani Avenue to the northwest, Prince Edward Street to the northeast, apartment and commercial developments to the southeast, and Koa Avenue to the southwest. The Sheraton Princess Kaiulani Hotel is located across Ka'iulani Avenue. The Alamo/Enterprise Car Rental, Hawaii Ebbtide Hotel, Waikiki Paradise Apartment, and Aloha Condo Honolulu are located across Prince Edward Street. The Hyatt Regency Waikiki is located across Koa Avenue.

4.2 GENERAL DESCRIPTION OF THE ACTION

4.2.1 Existing Condition – King's Village

King's Village is situated on 37,125 square feet of land and has 64,258 square feet of floor area over three floors. King's Village, built in 1972, has 19 retail shops and 7 restaurants.

The underground parking for King's Village is accessed via a driveway on Koa Avenue. The parking lot provides approximately 62 parking stalls on one level. Today, the retail stores and dining facilities in King's Village collectively provide jobs for approximately 200 full-time and part-time employees.

The retail businesses and restaurants operate from 10:00 am to 11:00 pm, daily.

4.2.2 Existing Condition – Prince Edward Apartments

Prince Edward Apartments is situated on a 4,125 square foot lot with 13 one-bedroom apartment units. There are 12 apartment units each 394 square feet in size and one apartment with 788 square feet for a total square footage of 5,516 square feet. The building has two parking stalls located on Prince Edward Street. The building was built in 1958.

4.2.3 Existing Condition – Hale Waikiki

Hale Waikiki is situated on a 4,372 square foot lot with a four ground floor retail shops and 10 apartment units in the upper two floors above. The total floor area in the three story building is 5,250 square feet. No parking is provided for this structure.

4.2.4 Proposed Development – Condo Hotel with Retail and Restaurant

The Project includes the replacement of all existing buildings and structures on the Project Site (including King's Village, Prince Edward Apartments and Hale Waikiki) with a new commercial and parking podium and a condo hotel tower above.

The new condo hotel will provide approximately 246 condo hotel units, (168) Studio, (73) 1-Bedroom, (1) 2-bedroom, and (2) 3-bedroom units (will also function as two 1-bedroom lockout units, for a total of 4 units). The contemplated structure is currently planned to have a 350-foot, 32-story tower, with a basement and mechanical equipment, mechanical rooms and an elevator shaft on the roof extending up to an additional 18 feet.

A basement will consist of back of house spaces. The ground floor will be composed of a large retail space, condo hotel lobby with 24 hour clerk service and support spaces. The current plans consist of parking stalls in the podium. The condo hotel reception area, lobby lounge, bar lounge, full-service restaurant as well as multiple event spaces and executive offices will be on the amenity deck above the parking floors. The open, podium area on the amenity deck will be utilized as an outdoor dining terrace and main pool deck. The tower above the amenity deck will mostly be condo hotel units with the fitness center and spa occupying a portion of the floor above the amenity deck.

At ground level, the Project will provide a porte-cochere for valet drop off with loading, trash and vehicular access. At the Kaiulani Avenue and Koa Avenue corner the Project will provide an ample open-space plaza to serve as the main pedestrian access to both the condo hotel and retail functions. A cohesive paved and landscaped area will connect the plaza, wrap around Kaiulani Avenue with access to the retail portion, and connect to the Prince Edward Street side of the property. The pathway will continue and connect to a landscaped pocket park for use by condo hotel guests, Waikīkī residents and the general public.

Through the PD-R process, the Applicant will request a 4.0 floor area ratio to allow for a development of approximately 258,195 square feet, to build the proposed 246 room condo hotel. Also to be requested in the PD-R application will be a 350-foot height and relief from the transitional height setback to reduce the impact on views from surrounding buildings. This will allow a more slender tower oriented in the profile of the existing Hyatt Regency Waikiki West Tower.

The Project will provide the following design features that will provide a significant improvement over the existing dated facilities on the Project Site:

- Landscape and building elements that will convey a Hawaiian sense of place.
- Greater average setback and improved streetscape along Kaiulani Avenue, Prince Edward Street and Koa Avenue to enhance the pedestrian experience for visitors and local residents alike.
- Significant public open space along the perimeter of the Project to maintain and enhance the inviting, park-like setting.
- Associated utility, parking, and infrastructure improvements.

The Project involves the removal of approximately 74,630 square feet of existing commercial and apartment floor area at King's Village, Prince Edward Apartments and Hale Waikiki, with a proposed redevelopment of 258,195 square feet of new condo hotel, retail and dining floor area.

Preliminary conceptual plans and photos showing the proposed improvements are provided in **Appendices 1A through 1P**.

4.3 USE OF PUBLIC FUNDS OR LANDS

The Project will not involve the use of public funds. The Project may involve upgrade of infrastructure within the existing City right-of-ways and may also involve improvement of the existing sidewalk within the existing City right-of-ways. This potential use of public lands is one of the secondary requirements for the processing of this Environmental Assessment. The Project is considering upgrading, using and maintaining the public sidewalks/right-of-way to get a better, cohesive design.

4.4 PHASING AND TIMING OF ACTION

The construction of the Project is estimated to take approximately 30 months.

Construction is anticipated to begin in 2016, once MK receives all required permits and approvals, including: acceptance of the FEA; approval a PD-R Permit by the City Council; approval of the Project design under the WSD provisions by the DPP; Surface Encroachment Variance; Subdivision for Pedestrian Easement; Sidewalk Variance; CUP (Minor) for Joint Development; Building Permits; Trenching Permit; Grading Permit; Drain Connection Permit; Street Usage Permit; Sign Master Plan (Zoning Adjustment); Construction Plan Approval; NPDES Permit for construction over an acre and possibly for dewatering effluent (although not expected); Construction Noise Permit; Archaeological Inventory Survey; Burial Treatment Plan; and Industrial Wastewater Discharge; and secures project financing. If started in 2016, the Project would open in 2018.

4.5 SUMMARY OF TECHNICAL CHARACTERISTICS

4.5.1 Use Characteristics

The King's Village today, contains approximately 19 stores, selling a variety of products and services to visitor and local shoppers. King's Village also offers 7 fine dining and fast food facilities.

The Prince Edward Apartments consists of 13 one-bedroom rental apartment development.

The Project involves the removal of approximately 74,630 square feet of existing commercial and apartment floor area at King's Village, Prince Edward Apartments and Hale Waikiki, with a proposed redevelopment of 258,195 square feet of new condo hotel, retail and dining floor area.

King's Village, Hale Waikiki and Prince Edward Apartments provide jobs for approximately 200 full-time and part-time employees. The Project when completed will provide approximately 320 full-time and 64 part-time jobs. Additionally, there will be temporary construction jobs for 30-month construction period that will peak at 250-300 on-site jobs plus ancillary support services. The King's Village and Hale Waikiki operate from 10:00 am to 11:00 pm daily.

The proposed condo hotel will operate 24/7, as do most hotels. The retail facility is expected to operate 6:00 am to 1:00 am. The dining facility in the condo hotel is expected to operate from 6:00 am to 11:00 pm.

4.5.2 Physical Characteristics

King's Village

King's Village is situated on 37,125 square feet of land and has 64,258 square feet of floor area over three floors. King's Village, built in 1972, has 19 retail shops and 7 restaurants.

The underground parking for King's Village is accessed via a driveway on Koa Avenue. The parking lot provides approximately 62 parking stalls on one level.

Prince Edward Apartments

Prince Edward Apartments is situated on a 4,125 square foot lot with 13 one-bedroom apartment units. There are 12 apartment units each 394 square feet in size and one apartment unit with 788 square feet for a total square footage of 5,516 square feet. The building has two parking stalls located on Prince Edward Street. The building was built in 1958.

Hale Waikiki

Hale Waikiki is situated on a 4,372 square foot lot with four ground floor retail shops and 10 apartment units. The total floor area in the three story building is 5,250 square feet. No parking is provided for this structure.

Proposed Development – Condo Hotel with Retail and Restaurant

The Project includes the replacement of all existing buildings and structures on the Project Site (including King's Village, Prince Edward Apartments and Hale Waikiki) with a new commercial and parking podium and a condo hotel tower above.

The new condo hotel will provide approximately 246 condo hotel units, (168) Studio, (73) 1-Bedroom, (1) 2-bedroom, and (2) 3-bedroom units (will also function as two 1-bedroom lockout units, for a total of 4 units). The contemplated structure is currently planned to have a 350-foot, 32-story tower, with a basement and mechanical equipment, mechanical rooms and an elevator shaft on the roof extending up to an additional 18 feet.

A basement will consist of back of house spaces. The ground floor will be composed of a large retail space, condo hotel lobby and support spaces. The current plans consist of parking stalls in the podium. The condo hotel reception area, lobby lounge, bar lounge, full-service restaurant as well as multiple event spaces and executive offices will be on the amenity deck above the parking floors. The open, podium area on the amenity deck will be utilized as an outdoor dining terrace and main pool deck. The tower above the amenity deck will mostly be condo hotel units with the fitness center and spa occupying a portion of the floor above the amenity deck.

At ground level, the Project will provide a porte-cochere for valet drop off with loading, trash and vehicular access. At the Kaiulani Avenue and Koa Avenue corner the Project will provide an ample open-space plaza to serve as the main pedestrian access to both the condo hotel and retail functions. A cohesive paved and landscaped area will connect the plaza, wrap around Kaiulani Avenue with access to the retail portion, and connect to the Prince Edward Street side of the property. The pathway will continue and connect to a landscaped pocket park for use by condo hotel guests, Waikīkī residents and the general public.

Through the PD-R process, the Applicant will request a 4.0 floor area ratio to allow for a development of approximately 258,195 square feet, to build the proposed 246 room condo hotel. Also to be requested in the PD-R application will be a 350-foot height and relief from the transitional height setback to reduce the impact on views from surrounding buildings. This will allow a more slender tower oriented in the profile of the existing Hyatt Regency Waikiki West Tower.

Preliminary conceptual plans and photos showing the proposed improvements are provided in **Appendices 1A through 1P**.

4.6 HISTORIC PERSPECTIVE

4.6.1 Archaeological Inventory Survey

Cultural Surveys Hawai`i ("CSH") prepared an archaeological inventory survey plan for the Project, titled " Archaeological Inventory Survey Plan for the 133 Kaiulani Project" (the "Archaeological Inventory Survey") and dated April 2014.

A copy of the Archaeological Inventory Survey Plan is provided in **Appendix 6**.

Section 2.4 Cultural Consultation of the Archaeological Inventory Survey is provided below:

"Pursuant to the AIS consultation requirements outlined in HAR § 13-284-5(e) and HAR § 13-276-5(g), CSH worked with the project proponents and Dawn Chang of Ku'iwalu to integrate cultural consultation with potentially knowledgeable Native Hawaiian groups and individuals and SHPD throughout the project's AIS investigation. This consultation effort, carried out from November 2013 to March 2014, included public presentations and discussion before the O'ahu Island Burial Council, meetings with previously recognized cultural descendants to burials found in the Waikīkī area, and meetings with the SHPD Archaeology Branch and Culture and History Branch staff. A summary and the results of this consultation effort are in Section 5 of this report. Additionally, to support the project's environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014)."

Section 3.1 Traditional and Historical Background of the Archaeological Inventory Survey states as follows:

"The project area is located in the 'ili (land division) of Uluniu and Kapuni within the ahupua'a (larger land division) of Waikīkī, O'ahu. The 'ili of Uluniu and Kapuni abutted the 'ili of Kaluaoku on the northwest along the 'Āpuakēhau Stream, Auaukai on the northeast and Hamohamo on the south east and southwest (Figure 11).

"Uluniu translates as "coconut grove," (Pukui and Elbert 1986:370; Pukui et al. 1974:215) and Kapuni translates as "the surrounding" (Pukui et al. 1974:90). 'Āpuakēhau, literally "basket [of] dew," was the former stream and northern boundary of the 'ili, which had its outlet at the present Royal Hawaiian Hotel. It was probably named for a rain. (Pukui et al. 1974:13).

"The marshland of Waikīkī was watered from streams in the Makiki, Mānoa, and Pālolo Valleys and from springs in Mānoa (Punahou and Kānewai). The name Waikīkī, which means "spouting water" according to Pukui et al. (1974:223), was well adapted to the character of the swampy land of ancient Waikīkī, where

water from the upland valleys would gush forth from underground. Before the construction of the Ala Wai Canal, the Mānoa and Pālolo Streams did not merge until deep within Waikīkī. As they entered the flat Waikīkī Plain, the names of the streams changed. The Mānoa Stream became the Kālia and the Pālolo Stream became the Pāhoa. They joined near Hamohamo (now an area mauka of the Kapahulu Library) and then divided into three new streams, Kuekaunahi, 'Āpuakēhau, and Pi'inaio. The Kuekaunahi Stream once emptied into the sea at Hamohamo (near the intersection of 'Ōhua and Kalākaua Avenues). The 'Āpuakēhau, also called the Muliwai o Kawehewehe, or "the stream that opens the way" (Kanahele 1995:7) on some maps, emptied in the ocean at Helumoa and Kaluaokau. The Pi'inaio entered the sea at Kālia as a wide delta. The land between these three streams was called Waikolu, meaning "three waters" (Kanahele 1995:7-8)."

Section 10 Project Effect and Mitigation Recommendations states as follows:

"Section 10 Project Effect and Mitigation Recommendations

The following project effect discussion and cultural resource management recommendations are intended to facilitate project planning and support the proposed project's required historic preservation consultation. For the purposes of this archaeological inventory survey (AIS), the project's APE is defined as the entire approximately 1.05-acre project area. The surrounding built environment is urban (paved streets and low rise and high-rise buildings) and the proposed project construction is unlikely to impose additional auditory, visual, or other environmental impacts to any surrounding potential historic properties (for example historic buildings or structures). Accordingly, an AIS APE beyond the actual project area itself is not warranted."

"10.1 Project Effect

CSH's project specific effect recommendation is "effect, with agreed upon mitigation commitments." The mitigation measures described below will help alleviate the project's impact on SIHP # 50-80-14-7598 and SIHP # 50-80-14-7599 and assist with the proper identification, documentation, and treatment of any additional archaeological historic properties encountered during project construction."

"10.2 Mitigations Recommendations

"10.2.1 Burial Treatment Plan

It is recommended that a burial treatment plan be prepared in accordance with HAR §13-300 and in consultation with SHPD, the community, and appropriate Hawaiian organizations for SIHP # 50-80-14-7599 Feature 2, a previously identified most likely Native Hawaiian burial site documented during the current AIS.

"10.2.2 Archaeological Monitoring

In order to mitigate the potential impact to SIHP # 50-80-14-7598 (a culturally enriched A-horizon), or any as yet unidentified archaeological cultural resources within the project area, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits. A program of on-site archaeological monitoring is recommended for all subsurface project construction activities below 18 inches within the project area. The approximately 400 linear feet of new sewer line installation within adjacent City-owned streets associated with the project will be included within the project's archaeological monitoring program."

MK will implement the recommendations of the Archaeological Inventory Survey.

5. ALTERNATIVES

5.1 Alternative I: No Action

The possibility of taking no action was considered and rejected, as the existing King's Village, Prince Edward Apartments and Hale Waikiki structures are dated and all would need to be significantly upgraded or replaced to be competitive in today's dynamic retail, residential and hotel markets serving Waikīkī and O`ahu generally.

The existing development on the property with their depressed rents does not provide a return that covers the financing of the purchase price of the property. The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikīkī properties.

5.2 Alternative II: Renovation of the Existing Structures

MK considered renovating the existing structures; however, the condition and design of the existing structures do not lend themselves to an economically viable renovation alternative. The projected cost for renovation would be approximately $20 to $25 million, with no economically viable return to support such an investment in renovation.

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikīkī properties. Projected rents are not expected to achieve market rents after a renovation.

Other older retail properties in Waikīkī have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the

International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

5.3 Alternative III: Develop within the WSD Design Guideline Standards (No PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the development standards of the WSD, it would also create a land area of sufficient size and layout to develop a modest size condo hotel with about 136 units and 134,819 square feet of floor area.

This property has three front yards, where most properties in Waikīkī have one front yard, with some having two front yards. It is only on rare occasions that a property will have three front yards. This reduces the development potential significantly, because although one half of the street right-of-way fronting the property is added to the zoning lot area, the increase provides a gain of 1.0 FAR times the area of one half of the street right-of-way, whereas elimination of the 15-foot front yard would allow this area to be considered public open space providing a gain of 10 times the yard area. On the basis of keeping the one front yard that has the greatest area, the resultant elimination of the two other front yards provides a net gain in floor area of about 50,000 square feet.

Another consideration in Alternative III was the visual impact of 240-foot tower following the Waikiki Special District (WSD) Design Guidelines. About 70% of the ocean views between the two Hyatt towers would have been blocked following a 240-foot height limit. A visual comparison of what would be permitted following the WSD Design Guidelines and the proposed development requesting flexibility in design standards (through a Planned Development-Resort, PD-R permit process) is provided in Figure 5 - Comparison of Alternatives III & IV, "Allowable Massing Study Comparison" diagram.

Alternative III would result in a tower that would not entirely sit within the profile of the Aston Waikiki Beach Tower and the 240-foot tower would will be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head" The Figure 6 "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. With Alternative III the tower would sit closer to Prince Edward Street, as the height setback from Koa Avenue will have to be met and a portion of the 240-foot tower would sit in the area not within the existing profile of the Aston Waikiki Beach Tower.

The 136 condo hotel units do not provide a critical mass that the Applicant feels is necessary to develop an economically viable condo hotel. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service. The

Applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.

5.4 Alternative IV: Develop with Various Modifications to the WSD Standards through the PD-R – Preferred Alternative

MK considered a redevelopment scenario which would require, among other things, a request to modify development standards of the WSD in order to:

a. Allow a height limit of 350 feet.
b. Allow density over and above that permitted by the WSD development standards (up to 4.0 FAR).
c. Allow encroachment into the transitional height setback.

The PD-R process would extend the processing time for MK to secure the necessary permits and approvals, but would also provide for the critical mass that is needed for an economically viable condo hotel.

This alternative would provide for an improved design not possible under the "No Action" and "Renovation of the Existing Structures" alternatives. The improved design will allow for conveying a Hawaiian sense of place, improved streetscape, enhanced pedestrian experience, and significant public open space.

The improvements in the Project are geared toward achieving the goal of the WSD guidelines as well as incorporating concepts that will enhance open space. Specific WSD objectives which will be met by the Preferred Alternative include the following:

"(f) Provide for the ability to renovate and redevelop existing structures which otherwise might experience deterioration. . . ."

The Preferred Alternative will allow several aging structures to be replaced by a vibrant, attractive and well-designed visitor destination.

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

The Preferred Alternative will not only result in a new condo hotel that will help maintain Waikīkī's capacity to support visitor accommodations, especially in light of the recent and future planned reductions in the number of hotel units available in Waikīkī. It will also provide much needed employment opportunities both during and after the construction of the Project.

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

The Preferred Alternative would result in the rejuvenation and revitalization of the King's Village and neighboring properties.
"(m) Provide people-oriented, interactive, landscaped open spaces to offset the high-density urban ambience."

The Preferred Alternative would include upgraded and inviting landscaping along both Koa Avenue, Kaiulani Avenue and Prince Edward Street. Landscaping on the upper level of the Project will also provide visual relief for the overlooking taller buildings nearby, offering a pleasant change from the typical rooftop view of lower structures. The Preferred Alternative will also result in implementation of the City's vision for Waikīkī as described in the PUCDP). Specifically, the vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

The Preferred Alternative will also result in the following community benefits that would not be achieved under Alternatives 1 through 3:

- An increase in public open space available to the public, including a 4,125 square foot pocket park on Prince Edward Street, all to be maintained by condo hotel operator or association.
- Greater average setback along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo hotel rooms in Waikīkī of which approximately 85% are anticipated to operate to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- An economic and job-creating stimulus for the local economy.
- An increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of

collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

MK proposes the following additional package of community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

The Preferred Alternative, Alternative IV, also provides the following benefits:

Although private views are not protected, Alternative IV will result in the 350-foot tower situated mostly within the profile of the Hyatt Regency Waikiki West Tower and of all the redevelopment alternatives (Alternatives III, V and VI), provides the greatest protection to mauka-makai primary views from the Governor Cleghorn and other buildings situated mauka of the Project Site and the least visual impact on the view from the Princess Kaiulani. The impact to the primary views from the Governor Cleghorn Building and other buildings situated mauka of the Project Site is shown in Figure 5. Alternative IV will also result in no impact to the existing view of Diamond Head from the Punchbowl Lookout, since all of the tower will be located within the profile of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 6.

The foundations for Alternative IV would be located within the existing King's Village basement, creating a much lower chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend less into the mauka neighborhood than Alternatives III, V, and VI.

Alternative IV would also result in the greatest distance between Kaiulani Avenuue and the Project driveways and loading areas, when compared to Alternatives III, V, and VI.

This Preferred Alternative was selected based on the benefits described above, including: no impact on existing views from the Punchbowl Lookout towards Diamond Head; the much lower potential for disturbing iwi and/or artifacts; the lesser impact of shadows; the

minimal impact to views from the Princess Kaiulani; the lower impact on views from the Governor Cleghorn and other buildings located mauka of the Project Site versus Alternatives III, V, and VI; and the impact to traffic based on driveways located further from Kailulani Avenue, than Alternatives III, V, and VI.

5.5 Alternative V – Mauka-Makai Orientation with 350 Foot Height (PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the WSD PD-R development standards of the LUO, it would also create a land area of sufficient size and layout to develop a condo-hotel with about 244 units and 252,300 square feet of floor area. A site plan showing the podium and tower foot prints and how the tower would affect the view from the Governor Cleghorn Building, while providing a brief description of this alternative is provided in Figure 7.

Alternative V will result in the 350-foot tower situated in the view channel between the two Hyatt Regency Waikiki towers and block primary views from the Governor Cleghorn Building and other buildings situated mauka of the Project Site, as shown in Figure 8. This orientation would also block significantly more views from the Princess Kaiulani than Alternative IV which had a very narrow profile when viewed from Princess Kaiulani. About 52% of the ocean views between the two Hyatt towers would have been blocked.

Alternative V will also result in significant impact to the view of Diamond Head from the Punchbowl Lookout, since much of the tower will be located outside of the profile of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 7.

The foundations for Alternative V would be outside of the existing King's Village basement, creating a higher chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend farther into the mauka neighborhood than Alternative IV.

This alternative would require greater encroachment into the transitional height setback and yards than with Alternative IV.

Alternative V would also affect traffic with driveways and loading areas located closer to Kaiulani Avenue than with Alternative IV.

Due to the greater impact on views from the Punchbowl Lookout towards Diamond Head; the greater potential for disturbing iwi and/or artifacts; the greater impact on shadows; the impact to views from the Princess Kaiulani, the Governor Cleghorn and other buildings located mauka of the Project Site; the impact to traffic; and the greater encroachment into the height setback and yards, this Alternative was not selected.

5.6. Alternative VI – Mauka-Makai Orientation with 240 Foot Height (PD-R)

Clearing the Project Site not only provides an opportunity for MK to start with a clean slate and develop in accordance with the WSD PD-R development standards of the LUO, it would also create a land area of sufficient size and layout to develop a modest size condo-hotel with about 144 units and 205,200 square feet of floor area. A site plan showing the podium and tower foot prints show how the tower would affect the view from the Governor Cleghorn Building and a brief description of the Project is provided in Figure 9 for this alternative.

Alternative VI will result in the 240-foot tower situated in the view channel between the two Hyatt Regency Waikiki towers and block primary views from the Governor Cleghorn Building (as shown in Figure 10) and other buildings situated mauka of the Project Site. This orientation would also block significantly more views from the Princess Kaiulani than Alternative IV which had a very narrow profile when viewed from Princess Kaiulani. About 65% of the ocean views between the two Hyatt towers would have been blocked.

Alternative VI will also result in significant impact to the view of Diamond Head from the Punchbowl Lookout, since much of the tower will be located outside of the profile of the Aston Waikiki Beach Tower, where no Diamond Head views would be affected, Figure 9.

The foundations for Alternative VI would be outside of the existing King's Village basement, creating a higher chance of disturbing iwi and/or artifacts.

The building shadow of this tower would extend farther into the mauka neighborhood than Alternative IV.

This alternative would require greater encroachment into the transitional height setback and yards than with Alternative IV.

Alternative VI would also affect traffic with driveways and loading areas located closer to Kaiulani Avenue than with Alternative IV.

Due to the greater impact on views from the Punchbowl Lookout towards Diamond Head; the greater potential for disturbing iwi and/or artifacts; the greater impact on shadows; the impact to views from the Princess Kaiulani, the Governor Cleghorn and other buildings located mauka of the Project Site; the impact to traffic; and the greater encroachment into the height setback and yards, this Alternative was not selected.

In addition, the 144 condo hotel units do not provide a critical mass that the Applicant feels is necessary to develop an economically viable condo-hotel. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service. The

Applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.

6. ENVIRONMENTAL SETTING

6.1 LOCAL AND REGIONAL PERSPECTIVE

MK proposes the 133 Kaiulani Condo Hotel Development (the "Project") in Waikīkī, Honolulu, on O'ahu. MK plans to submit, in addition to this FEA, a PD-R and WSD permit applications for the proposed 133 Kaiulani Condo Hotel Development to DPP for processing. The Project will be located on a 45,622 square foot site in Waikīkī (the "Project Site") and will involve the demolition of the existing structures on the property and the development of a new condo hotel. The King's Village, Prince Edwards Apartments and Hale Waikiki will be demolished to make way for the new condo hotel.

The Project Site is bounded Kaiulani Avenue to the northwest, Prince Edward Street to the northeast, apartment and commercial developments to the southeast, and Koa Avenue to the southwest. The Sheraton Princess Kaiulani Hotel is located across Ka'iulani Avenue. The Alamo/Enterprise Car Rental, Hawaii Ebbtide Hotel, Waikiki Paradise Apartment, and Aloha Condo Honolulu are located across Prince Edward Street. The Hyatt Regency Waikiki is located across Koa Avenue.

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

6.2 RARE OR UNIQUE ENVIRONMENTAL RESOURCES

6.2.1 Flora

AECOS Inc. prepared a "Biological Survey at King's Village Shopping Complex in Waikīkī (TMK: 2-6-023: 029, 037, & 076), Island of O'ahu". A complete copy is attached as **Appendix 7**. The Botanical Resources Assessment "Discussion" section states in part as follows:

"No plant species currently protected or proposed for protection under either federal or state endangered species statutes (DLNR, 1998; USFWS; 2005a, 2005b, 2013) were detected during the course of our survey, nor are any expected to occur at King's Village."

The "Conclusions" section states as follows:

"No issues with respect to natural resources are present at King's Village that would impose restrictions on or raise concerns with any proposed redevelopment plans."

6.2.2 Fauna

AECOS Inc. prepared a "Biological Survey at King's Village Shopping Complex in Waikīkī (TMK: 2-6-023: 029, 037, & 076), Island of O'ahu". A complete copy is attached as **Appendix 7**. The Botanical Resources Assessment "Discussion" section states in part as follows:

"No avian or mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs were detected during the course of this survey, nor are any expected to occur in this location (DLNR, 1998; USFWS; 2005a, 2005b, 2013).

"There is no federally delineated Critical Habitat encompassing the site (USFWS, 2012). There is no equivalent statute under state law."

The "Conclusions" section states as follows:

"No issues with respect to natural resources are present at King's Village that would impose restrictions on or raise concerns with any proposed redevelopment plans."

6.3 RELATED PROJECTS IN THE REGION

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

6.3.1 Gray's Beach Restoration Project

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

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

This project is intended to enhance recreational and aesthetic enjoyment of the area and provide protection for the backshore. The restored beach is expected to facilitate lateral access along the shoreline and enhance recreational opportunities.

Pending receipt of the required permits and approvals, project construction was expected to begin in early 2011 and be completed by the end of 2011. It is BSC's general understanding that the Gray's Beach Restoration Project has been put on hold, but that permitting for this development could begin again this year or next year.

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

6.3.2 Princess Kaiulani Renovation & Development and the Replacement of the Moana Surfrider Hotel Diamond Head Tower with a New Tower

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

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

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

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

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

Long term impacts from Kyo-ya's resort condo hotel, condominium, and commercial development will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the Project. However, based on Kyo-ya's Final

EIS and BSC's Draft EA, both projects are anticipated to result in minimal impact on the existing level of service of the intersections, surrounding the projects.

Other positive long term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City and County tax revenues) from the two developments. The synergy which will be created by these two adjacent redevelopment projects in the heart of Waikīkī is expected to result in an exponential increase in positive impacts and public benefits.

6.3.3 Hilton Hawaiian Village - Village Master Plan

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

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

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

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

This proposed development is located at the far west end of Waikīkī about a half mile from the Project Site, thus, the roadways affected by construction at this site should not result in cumulative impacts with the construction occurring at the

Project Site. Based on the Hilton schedule, there will not be an overlap in the construction schedules for the Hilton and 133 Kaiulani Avenue. Should the first tower be delayed, it's possible that there will be some overlap in construction periods.

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

6.3.4 Waikiki Landing

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

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

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

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

Long term impacts from the Waikiki Landing will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the MK Project. The Project's traffic impact report indicates there will be no significant impact on traffic, related to level of service at surrounding intersections. Other positive long

term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City tax revenues) from the two developments.

6.3.5 Royal Hawaiian Market Place

The proposed development is situated on a 7,200 square foot lot at the corner of Royal Hawaiian Avenue and Lauula Street. The Project will replace 20 temporary tarp and plywood retail kiosks about 10 feet by 10 feet in size by a two-story structure with 3,395 square feet on the ground floor and 1,380 square feet on the second floor. This represents a relatively small commercial development with existing retail, dining and an existing 218-foot concrete masonry structure with a money exchange/take-out food shop that will remain.

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

This Applicant's schedule should have the project construction completed prior to the anticipated start of construction of the MK Project and there should be no cumulative construction impacts.

6.3.6 The International Market Place

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

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

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

Construction is expected to be completed before ground breaking occurs on the 133 Kaiulani Development and there should be limited or no overlap in construction.

6.3.7 2121 Kuhio – Ritz Carlton

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

The applicant proposes to develop a 37-story, 350-foot structure. The original plan for 2121 Kuhio included a five story podium with the ground floor lobby, three levels of parking and fifth and sixth floor of condo hotel support uses. The new design is based on an 8-story shared podium with shared resident services, recreational amenities, vehicular access and off-street parking with 2139 Kuhio. Above this podium will be a 29-story tower.

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

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

2121 Kuhio broke ground in August of 2013 and completion is expected by mid-2016. Construction is expected to be completed before ground breaking occurs on the 133 Kaiulani Development and there should be limited or no overlap in construction.

6.3.8 2139 Kuhio – Ritz Carlton

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

The Applicant plans to begin construction this year and projects to complete construction by mid-2016. Construction is expected to be completed before

ground breaking occurs on the 133 Kaiulani Development and there should be limited or no overlap in construction.

6.3.9 Waikiki Parc Hotel Renovation

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

1. Provide streetscape enhancements, landscaping and special roadway paving along Kalia and Helumoa Roads.
2. Enhance existing pedestrian hotel entrance and drop off fronting Kalia Road and porte cochere on Helumoa Road.
3. Renovate ground floor lobby, restrooms and back-of-house facilities, and improvements to the existing restaurant.
4. Renovate the 8th floor pool deck to include refurbishing of the existing pool, adding a new pool, lounge chairs, poolside dining tables and chairs and renovating the existing pool bar.
5. Renovate the 8th floor by removing guest rooms and providing a new restaurant, kitchen, dining room, fitness center and hospitality room.
6. Renovate the 8th floor outdoor gathering area with landscaped wind screens and retractable roof awning and create a garden with outdoor dining tables and chairs.
7. Renovating the existing 297 rooms into all 1-bedroom and 2-bedroom rooms (reducing the unit count to 126 rooms).
8. Provide a new roof top open-air terrace.
9. Extend elevator and stairs to the roof top.
10. Provide façade improvements to the face of the parking garage, to enhance existing architectural treatment such as post and beam articulation, trellises and canopy extensions.
11. Replacing the exterior glazing of the building façade and change out all hand rails and guard rails.

Construction is anticipated to begin in the fall of 2016, and be completed by 2018. MK expects that there will be an overlap in construction periods. The service roads expected to be used during the construction of improvements at the Waikiki Parc Hotel and the service roads expected to be used during construction of the 133 Kaiulani Street are different groups of roads and routing in and out of Waikīkī are expected to be at the Ewa end for Waikiki Parc and the Diamond Head end for 133 Kaiulani.

6.4 POPULATION AND GROWTH CHARACTERISTICS

The Project will result in a slight reduction in the number of permanent residents in Waikīkī with the elimination of about 23 rental apartment units. However, 10 of those units have been uninhabitable for several years.

The Project will increase the visitor population potential of Waikīkī with the development of 246 condo hotel rooms, of which approximately 85% are anticipated to be in a hotel rental program. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, one block from Waikiki Beach.

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

7.1 STATE LAND USE

The Project Site is within the State Land Use Urban district. Within that district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The existing developments on the Project Site as well as the proposed developments are consistent with this Urban designation.

7.1.1 Hawaii State Plan

Goals

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

Project replaces an aging non-competitive asset with a proposed condo hotel development will provide an economic and job-creating stimulus for the local economy.

- The temporary local construction jobs will peak at 300, plus ancillary support services. Based on a Department of Business, Economic Development and Tourism economic report, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
- When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions.
- Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for O'ahu in 2014) the Project will generate $23 million in visitor spending annually.

The Project provides much needed hotel rooms in Waikīkī with 246 additional condo hotel rooms, which will help to replace 2,254 hotel units that have been lost in recent years.

The Project will also provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

The money provided in GET taxes, the hotel room tax, and income tax collections from employees at the condo hotel all provide a revenue source that will assist the State in implementing each of the State Functional Plans.

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

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

The Project's overall design will reflect a "Hawaiian Sense of Place" by including a lush tropical landscape in public open spaces, a water feature, a pocket park, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places to accommodate cultural programs, such as Hula recitals by local Halaus.

The "Hawaiian Sense of Place" is derived from cultural perceptions that are taught, as well as sensory aspects that are felt. The cultural component of the landscape is expressed through the use of native Hawaiian and Polynesian-introduced plants that have always been important to the Hawaiian culture: Hala, Kukui, Coconut Palm and many others. These native plants, with their strong cultural heritage, have been included because of their historic significance to Waikīkī.

The pocket park will feature a Hawaiian garden to provide an amenity not only for residents and guests, but the larger community. A more diverse plant palette will be used and will incorporate endemic, indigenous and Polynesian-introduced plants such as Hala, Kukui, 'Ohi'a Lehua, Hapu'u, 'A'ali'I, Na'u, Pualoalo.

In addition to these native plants, many of the exotics that visitors have come to associate with Hawai'i are used. These have been included because our "Hawaiian Sense of Place" is perceived not only through our culture, but our senses of sight, smell, touch, taste and sound. Plumerias,

Gingers, Heliconias, "Queen Emma" Spider Lilies, Anthuriums, and Spathoglottis are all incorporated within the landscape.

A subtle water-feature along Koa Avenue will add tropical feel to the area by providing the sound of falling water over natural stone amongst a tropical landscape. These features further tie into the overall consistency of the public space throughout Waikīkī.

7.1.2 State Functional Plan – Agriculture

The Project will not affect objectives, policies and actions recommended in the Agriculture Plan, except that it will generate a demand for some of the local fruits, vegetables and other island products in their restaurant and retail store on the ground floor, in support of the Consumption and Demand, Objective C.

7.1.3 State Functional Plan – Conservation Lands

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

7.1.4 State Functional Plan – Education

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

The Project does have a slight potential to generate permanent school age children since it is anticipated that a small percentage of the units may not in a hotel rental. However, based on existing condo hotels in Waikīkī, these units are often used as vacation homes by their owners and not as primary residences.

This Project with about 244 condo hotel units is projected to have about 85% of the condo hotel units in a hotel rental program, with a great majority of the remaining 15% of the condo hotel units used as part-time residences or personal vacation homes. It is anticipated that less than 2% of the condo hotel units will be used as permanent primary residences. Thus it is anticipated that there may be up to 37 units which will not be in a hotel rental program, but these 37 units will not all be permanent residences, as many will be second homes (vacation homes), retirement homes, or rented as vacation units outside of the hotel rental program, as occurs in other condo hotels. Even using the 15%, however, there will not be a significant increase on the school system. Starting with the 37 units and subtracting the 23 existing apartment units on the Project site, there is a potential for a 14 additional unit increase. Without eliminating any of these units as second homes, retirement homes or private vacation rentals, the 14 permanent residence unit increase would generate 2 students in grades K through 12 (0.12 x 14) based on Department of Education standards for Waikīkī. This will not have a

significant impact on the schools in the area, as the schools have sufficient space to accommodate any anticipated increase in students generated by the Project.

7.1.5 State Functional Plan – Higher Education

The Project will not affect the Policies, Goals and Implementing Actions of the Higher Education Plan. The State Functional Plan for Higher Education reflects the Department of Education Strategies to address the policies and priority guidelines of the Hawaii State Plan and the goals of the Board of Education and the concerns of the State Education Functional Plan Advisories Committee. It serves as the mechanism for implementing the Hawaii State Plan as it relates to the directions and programs of the Department of Education.

The Project is a condo hotel development and will not be involved in policies and programs related to the directions of the Board of Education or the programs of the Department of Education.

7.1.6 State Functional Plan – Economy

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

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

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

The Project replaces an aging non-competitive asset with a proposed condo hotel development will provide an economic and job-creating stimulus for the local economy.

- The temporary local construction jobs will peak at 300, plus ancillary support services. Based on a Department of Business, Economic Development and Tourism economic report, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
- When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions.

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

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

(10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

The Project provides much needed hotel rooms (244 condo hotel rooms, 85% of which are anticipated to be placed in a hotel rental program) in Waikīkī in a sector that has lost employment with 2,254 hotel units that have been lost in recent years and expected future losses of hotel units.

7.1.7 State Functional Plan – Energy

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

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- MK intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- MK will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The 'open air' nature of the center will reduce the projected energy consumption from the lighting and mechanical systems.
- Passive lighting will be maximized and the makai to mauka orientation of the pedestrian open spaces will take advantage of the trade wind circulation.
- MK intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be

collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

- MK will reduce the Project's material waste through effective construction and operational recycling programs.

7.1.8 State Functional Plan – Health

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

The six major health issues in the State Functional Plan for Health include:

1. Health Promotion and Disease Prevention
2. Communicable Diseases Prevention and Control
3. Special Population with Impaired Access to Health Care
4. Healthcare Services (Acute, Long-term, Primary and Emergent) for Rural Communities
5. Environmental Health and Protection
6. Department of Health Leadership

The Project will not be affecting these major health issues of the State Functional Plan for Health.

7.1.9 State Functional Plan – Historic Preservation

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

MK has been working with the Oahu Burial Council and cultural descendants.

"10.2 Mitigations Recommendations

"10.2.1 Burial Treatment Plan

It is recommended that a burial treatment plan be prepared in accordance with HAR §13-300 and in consultation with SHPD, the community, and appropriate Hawaiian organizations for SIHP # 50-80-14-7599 Feature 2, a previously identified most likely Native Hawaiian burial site documented during the current AIS.

"10.2.2 Archaeological Monitoring

In order to mitigate the potential impact to SIHP # 50-80-14-7598 (a culturally enriched A-horizon), or any as yet unidentified archaeological cultural resources within the project area, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits. A program of on-site archaeological monitoring is recommended for all subsurface project construction activities below 18 inches within the project area. The approximately 400 linear feet of new sewer line installation within adjacent City-owned streets associated with the project will be included within the project's archaeological monitoring program."

MK will implement the recommendations of the Archaeological Inventory Survey.

7.1.10 State Functional Plan – Housing

The Project will not affect the Policies, Goals and Implementing Actions of the Housing Plan. Although there is a potential for a slight percentage of the units not being placed in the hotel program, only a few will become permanent residences, many will become private short term rentals or vacation homes. The few that become permanent residences will not be affordable based on the location and quality of the constructed units. The Project will not provide housing for the very low and lower income households which is the goal of the State Functional Plan for Housing.

7.1.11 State Functional Plan – Human Services

The Project will not affect the Policies, Goals and Implementing Actions of the Human Services Plan, which will primarily be guided by public agencies and private social service agencies. Priority issues of the Human Services Functional Plan include Elderly Care, Children and Family Support, Self-Sufficiency (related to help with medical coverage, child care, and job training), and Service Delivery

Improvements. The Project as a condo hotel will not be providing services to help in resolving these priority issues.

7.1.12 State Functional Plan – Recreation

The Project with its additional 246 condo hotel units, the vast majority of which are anticipated to be available for rental to visitors, will increase the number of visitors that will be utilizing the recreation areas, including the beach at Waikīkī, and other recreational areas around the island. The Project will include onsite recreational amenities for its guests, including a swimming pool and deck and a spa, fitness area. The Project will provide a park on Prince Edward Street open to the public but maintained by the hotel/association.

However, when viewed in the overall picture of the visitor accommodations in Waikīkī, the Project will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

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

7.1.13 State Functional Plan – Tourism

The Project with its new condo hotel units is consistent with Objective I.A. which calls for "Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry."
The Project also implements Policy I.A.2. by maximizing benefits to the residents of the State in general and revenues to State and County governments specifically. The Project will generate an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel

room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

In addition, the Project will provide the following additional community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project. This planned donation will support Action II.A.7. f. which proposed a beach recovery program to restore sand on Waikiki Beach.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

The Project is located in Waikīkī (the State's primary visitor destination area) with adequate infrastructure and support services is consistent with Policy II.A.8.

7.1.14 State Functional Plan – Transportation

The condo hotel operator intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. Bike racks will be provided in the parking garage as needed to satisfy bike-user demand. MK will encourage its employees to use public transit and carpools and will encourage and assist tenants in doing the same for their employees. The goals of the TMP are consistent with Policies I.C.2 (ride share) and I.C.5. (Bikeway program).

7.2 GENERAL PLAN

The compliance of the Project with the General Plan objectives is discussed as follows:

7.2.1 Economic Activity

General Plan Objective B - To maintain the viability of O`ahu's visitor industry.

Policy 2 - Provide for a high quality and safe environment for visitors and residents in Waikīkī.

The Project will be a significant upgrade from existing facilities and provide a high quality and safe environment for visitors and residents in Waikīkī. The public benefits will include increasing the opportunities with new visitor accommodations in Waikīkī; enhanced open space available to the public; a greater average setback along Kaiulani Avenue, Prince Edward Street and Koa Avenue; and provision of an economic stimulus to a local and national economy that had been suffering through the impacts of a recession. The development will also result in an increase in property values for the City and County of Honolulu (resulting in increased property taxes) and generate additional tax revenue in terms of GET and transient taxes to the State.

The Project is intended to become an important addition to existing visitor accommodations in Waikīkī. It will upgrade an older, underutilized area in Waikīkī with a new condo hotel development, adding to the inventory of hotel rooms that have been decreasing in recent years.

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

MK proposes to provide a community benefit package that will:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to

allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

Policy 9 - Encourage the visitor industry to provide a high level of service to visitors.

The Project will upgrade existing facilities to improve the visitor accommodation experience in Waikīkī. That experience will also include enhanced open space available to visitors and local residents.

7.2.2 Energy

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

Policy 3 - Support programs and projects which contribute to the attainment of energy self-sufficiency on O`ahu.
The existing buildings that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures. MK intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements. MK will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. The 'open air' nature of the center will reduce the projected energy consumption from the lighting and mechanical systems. Passive lighting will be maximized and the makai to mauka orientation of the pedestrian open spaces will take advantage of the trade wind circulation.

MK intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency. MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. MK will reduce the Project's material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. The same will be further discussed in Section 8.3.2 of this FEA.

7.2.3 Physical Development and Urban Design

General Plan Objective A - 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.

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

As noted in this FEA various public service agencies have indicated that water supply, sewage treatment (with improvements provided by MK), and quasi-public utilities are adequate to support the Project. Drainage impacts will be reduced with the provision of additional landscaped open space. See "Engineering Report 133 Kaiulani" attached as **Appendix 8**.

The "Traffic Impact Report 133 Kaiulani" ("Traffic Impact Report") dated May 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 4.** The Traffic Impact Report indicates there will be no significant impact on traffic related to level of service at surrounding intersections. Additional mitigation measures to reduce traffic impacts will be implemented based on the recommendations provided in the Traffic Impact Report and the Two-Way Conversion Report (**Appendix 5**).

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

The phasing of the Project will not require more supporting services than are available, other than wastewater improvements provided by the Applicant, as discussed in the previous sections.

7.3 PRIMARY URBAN CENTER DEVELOPMENT PLAN (PUCDP)

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

7.3.1 Vision For The PUCDP's Future

7.3.1.1 Honolulu is the Pacific's Leading City and Travel Destination

"With ongoing redevelopment and improvement, Waikīkī remains the State's largest and most popular visitor destination."

The proposed action will result in the redevelopment and improvement of this important site. The Project will provide 246 additional condo hotel units in Waikīkī of which approximately 85% are anticipated to operate in a hotel rental program. The units will help to replace some of the hotel units that have been lost

in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

7.3.2 Land Use and Transportation

7.3.2.1 Visitor Industry

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

MK proposes to invest approximately $180 million to replace the older improvements on this Project Site with a new condo hotel facility. This development will help in replacing some of the hotel units lost in Waikīkī. This private reinvestment in Waikīkī's physical plant will implement this important vision statement of the PUCDP.

7.3.2.2 Walking

"Regional pedestrian networks are appropriate for the central Honolulu and Pearl Harbor areas. Districts with existing high levels of pedestrian activity include Waikīkī and Downtown. . . Additional elements of the network are new promenades and other pedestrian improvements to city streets (e.g., Punchbowl Street, Nimitz Highway in the Downtown area, Ward Avenue, Young Street, Keeaumoku Street and Kalākaua Avenue."

MK plans to improve the pedestrian experience along Koa Avenue, Kaiulani Avenue and Prince Edward Street with enhanced public open space and mostly greater setbacks than currently exist. These extended setback areas will be part of the increased open space provided on the Project Site.

A significant increase in open space available to the public and landscaping along these thoroughfares will greatly enhance the pedestrian experience through Waikīkī and provide relief from the urban forms in Waikīkī.

7.3.2.3 Bicycles

"To encourage bicycle ridership, the City has employed a Bicycle Coordinator, installed bike racks on all its buses and on many of Honolulu's streets, and has planned and partially developed a system of bikeways."

The Honolulu Bicycle Master Plan (dated April 1999) proposes a bike lane along the makai side of Kalākaua Avenue from Ala Moana Boulevard to Kapahulu Avenue. MK plans to provide bicycle racks in the new parking structure to accommodate employees that may bicycle to work, using the new bike lane planned for Kalākaua Avenue. MK understands that Bikeshare Hawaii will be starting their bike share program in early 2016, prior to the opening of this Project.

7.4 LAND USE MAP PUC – EAST

The Project Site is located in an area designated Resort on the PUCDP Land Use Map (PUC - East); and the Project's proposed condo hotel and retail uses are consistent with this designation.

7.5 Land Use Ordinance (Sec. 21-9.80 Waikiki Special District)

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

7.5.1.1 Promote a Hawaiian Sense of Place

The Project's concept design includes landscaped yards and public open space, water features, canopy trees, a plaza at the corner of Koa Avenue and Kaiulani Avenue, and a pocket park (to accommodate cultural programs, such as Hula recitals by local Halaus). A waterwall is planned fronting the porte cochere on Koa Avenue.

7.5.1.2 Optimum Community Benefits

The development of the Project Site will provide the following community benefits:

- An increase in public open space available to the public, including a 4,125 square foot pocket park on Prince Edward Street, all to be maintained by condo hotel operator or association.

- Greater average setback along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo hotel units in Waikīkī of which approximately 85% are anticipated to operate in a hotel rental program. The units will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki.An economic and job-creating stimulus for the local economy.
- An increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

MK proposes the following additional package of community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and Recreation and the Waikiki Improvement Association to determine what can be done in

the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

7.5.1.3 Variety of Compatible Land Uses

The Project will include a condo hotel, retail, and dining in a mixed use venue of compatible land uses in support of the resort and residential community in Waikīkī and the larger island wide residential community.

7.5.1.4 Multimodal Transportation in Waikīkī

The Project will further the WSD objective to support the efficient use of multimodal transportation in Waikīkī and encourage the use of public transit, while balancing the critical need for adequate parking at the Project Site. The Project will take advantage of the existing bus facilities that exist along Kuhio and Kalakaua Avenues in providing for the needs of employees and condo hotel guests. Convenient bike racks will be provided in the parking garage as needed to satisfy bike-user demand.

The condo hotel operator intends to implement a TMP which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees at the Project Site.

7.5.1.5 Support Visitor and Resident Needs

The Project will provide commercial support for visitors and residents with retail development and dining experiences in a conveniently located mixed use development. The redevelopment of the Project Site will enhance the visitor experience in Waikīkī.

7.5.1.6 Rejuvenation and Revitalization in the Special District

The Project will replace the Project Site's older development with a new condo-condo hotel, retail and dining. The new improved development may serve as a catalyst for redevelopment of neighboring properties that are presently underutilized.

7.5.1.7 Hawai'i's Tropical Climate and Ambience

The Project will take advantage of Hawai'i's tropical climate and ambiance with a pocket park and setback and yard areas at street level that will include tropical landscaping and a water feature.

The Project will also include lanais for each of the condo hotel units allowing the occupants to take advantage of the tropical climate and ocean views from their units.

The open, podium area on the amenity deck located on the 7th floor will be utilized as an outdoor dining terrace and main pool deck. This open amenity decks will allow the condo hotel guests to take advantage of Hawai'i's tropical climate and the ocean and mauka views from the decks.

7.5.1.8 Diamond Head View from Punchbowl

The 350-foot portion of the tower will be in the view profile of the Aston Waikiki Beach Tower and will have no impact of the view of Diamond Head from the Punchbowl Lookout (see **Appendix 9**). The Applicant designed this Project to minimize the impact on the view of Diamond Head from Punchbowl.

7.5.1.9 Pedestrian Orientation in Waikīkī; People-Oriented, Interactive Landscaped Open Spaces

The Project, through its landscaped public open space at the pocket park and setback areas and its landscaped yard areas will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site. The ground floor commercial will provide an inviting amenity to visitors and residents alike.

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

7.5.2.1 Significant Public Views

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

and

(7) View of Diamond Head from Ala Wai Boulevard between McCull Street and Kapahulu Avenue."

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.2 Preserve, Maintain, and Enhance These Views

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.3 Historic Properties

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

Although two of the apartment buildings are over 50 years old neither is listed as historic on either the State or Federal Register of Historic Properties. However, as part of the review process, the Applicant understands that the WSD permit application will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division for their review and comment.

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

The design of buildings and structures will reflect a Hawaiian sense of place, as described in this section.

7.5.3.1 Uses and Structures Allowed in Required Yards and Setbacks

Should roof eaves, awnings (including retractable awnings) and other sunshade devices be provided, they will not be more than 42 inches vertically or horizontally beyond the building face for buildings under 60 feet in height. On buildings over 60 feet in height, roof eaves may extend more than 42 inches into a required yard, street setback or height setback area if the resulting roof form is integral to a cohesive, coherent design character for the structure. In no case, will such extension exceed one-half the width of the required yard or height setback.

7.5.3.2 Curb Cuts

Curb cuts for driveway openings and sight distances at all intersections will comply with the design standards of the DTS. The Project Site presently has two curb cuts on Koa Avenue and three curb cuts on Prince Edward Street.

The proposed development will have three curb cuts on Koa Avenue and one curb cut on Prince Edward Street, dropping from the five present curb cuts to four curb cuts.

7.5.3.3 Design Guidelines.

General Guidelines

The only general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 240-foot height limit. MK will be requesting through the PD-R process a 350-foot height limit and relief from the transitional height setback to reduce the impact on views from surrounding buildings. This will allow a more slender tower oriented in the profile of the existing Hyatt Regency Waikiki West Tower.

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

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

Building Materials. MK will be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment. A variety of building materials will be employed, including natural materials and textured concrete and plaster.

Building Scale, Features and Articulation. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include varying bay widths. The MK will also provide lanais on each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.
Exterior Building Colors. The use of reflective materials will be limited.
Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

Ground Level Features

a. Within the development, attention will be given to pedestrian-oriented ground level features, which will draw pedestrians into the retail entry and

the condo hotel lobby. A close indoor-outdoor relationship will be promoted with the partially open condo hotel lobby. Design priority will include the visual links through the development connecting the sidewalk and other public areas with on-site open spaces, such as the public open space and pocket park.

b. Building facades at the ground level along open spaces and major streets (including Kalākaua Avenue, Kūhiō Avenue, Kapahulu Avenue, Ala Wai Boulevard and Ala Moana Boulevard) will include as appropriate open lobbies, arcade entrances, and display windows, and may include outdoor dining where it is permitted. Although not along a major street or open space, the Project will have a partially open condo hotel lobby and display windows at the proposed retail shop that are visible from Kalākaua Avenue. The window front design for the retail store on the ground floor at 133 Kaiulani will be a high quality, visually pleasing design consistent with the intent of the Waikiki Special Design District Guidelines as well as the condo hotel it is situated within. The window front design will be varied and provide areas of open visibility into the store as well as areas of visual product displays showing customers the varied offerings found within in an upgraded fashion. Any areas of window frontage containing fixture displays shall be designed to face outward and have a finished and upgraded appearance from the exterior.

c. All commercial uses located at ground level, other than as required by paragraph "b", at least one-half of the total length of the building façade along streets shall be devoted to open lobbies, arcade entrances, display windows and outdoor dining where permitted. At least one-half of the total length of the commercial/retail façade along Koa Avenue, Kaiulani Avenue and Prince Edward Street will be devoted to the retail entry and display windows.

d. The Project will include a partially open condo hotel lobby.

e. Although the buildings will not be situated between a street and the shoreline or between a street and open spaces, the ground level pedestrian way will provide visual links between the street and the partially open condo hotel lobby.

f. Where blank walls occur fronting a street or open space, they shall be screened with heavy landscaping or appropriately articulated exterior surfaces.

g. No ground level parking facilities are proposed.

h. The partially open condo hotel lobby will be open to its Koa Avenue frontage.

Outdoor Lighting

Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and public rights-of-way.

7.5.3.4 Planned Development-Resort (PD-R)

a. The Project meets the requirements for processing of a PD_R permit application, including a zoning of resort mixed use precinct and a minimum size of 1 acre (the Project is 1.05 acres in size).
b. The proposed condo hotel, retail and dining facilities are permitted uses in the resort mixed use precinct.
c. The proposed development is requesting an FAR (floor area ratio) of 4.0; a building height of 350 feet; a modification of the precinct transitional height setback; the 15-foot required yard will be met; given the increase in open space and public open space provided by the Project over the existing open space and the provision of public open space where none is presently provided and the provision of open space amenity decks on the 7th floor, MK is requesting 39% open space for the zoning lot; landscaping requirements will be met; and other development and design standards of the mixed use resort precinct will be met.

7.5.3.5 Landscaping

a. Some trees six inches or greater in trunk diameter may be removed or relocated in order to allow appropriate development of the Project Site.
b. The parking structure will be landscaped or articulated with designs to reduce the impact of a solid wall.
c. Newly introduced landscape will include fragrant, lush, tropical vegetation and native plant species, where appropriate.
d. Fences or walls exceeding 36 inches in height, except for moss rock walls, shall be landscaped with vine or hedge planting or other approved vegetation on the street side. The only exception will be retractable fences to secure the property after business hours.
e. All landscape areas will have an adequate irrigation system.

7.5.3.6 Height Regulations

a. Rooftop height exemptions as allowed in the special district will be used, for mechanical appurtenances and utilitarian and architectural features.
b. Coastal height setbacks are not applicable for this development located mauka of Koa Avenue.

7.5.3.7 Parking

MK understands that ground floor uses other than dwellings are exempt from off-street parking requirements.

7.5.3.8 Vending Carts

Vending carts are not planned at this time.

7.5.4 Resort Mixed Use Precinct

7.5.4.1 Permitted Uses

The Resort Mixed Use Precinct allows as permitted uses the Project's proposed condo hotel, retail, and dining uses.

7.5.4.2 Development Standards

Development Standard	Resort Mixed Use Precinct	Project
Minimum lot area (square feet)	10,000	45,622 square feet
Minimum lot width and depth (feet)	50	Average - 300 width and 400 depth
Yards - Front (feet) - Side	15 0	15-foot average
Maximum Density (FAR)	1.0 (plus ½ of the abutting right-of-way) without PD-R 4.0 subject to PD-R approval (plus 1/2 of abutting right-of-way area)	4.0 subject to PD-R approval
Minimum open space (percent of zoning lot)	0 without PD-R 50% with PD-R but may be modified with beneficial public open spaces and related amenities are provided	39%
Open Space Bonus Max FAR	With PD-R 10 sf/1 sf of public open space 5 sf/1 sf of open space 3 sf/1 sf of arcade area 1 sf/1 sf of rooftop landscape 3.5 FAR without PD-R 4.0 subject to PD-R approval	 6,347 x 10 = 63,470 sf 236 x 5 = 1,180 sf 2,280 x 1 = 2,280 sf 400 x 1 = 400 sf Total = 67,330 sf 4.0
Maximum Height (feet)	240 feet per zoning map 350 feet subject to PD-R approval	350 feet
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	Encroaches 23'-9" on Koa Ave. and 23'-7 ½" on Kaiulani Ave.

7.5.4.3 Parking

The parking requirement for the Project, based on 246 condo hotel rooms is 62 stalls (parking is not required for the ground floor retail space).

MK plans to provide 272 parking stalls with 65 stalls for the condo hotel units and 207 stalls for off-site parking use by others.

7.5.4.4 Loading

The loading requirement based on the 258,195 square feet of floor area with about 9,111 square feet of retail space, will be 5 loading stalls, three full size (12' by 35') and 2 smaller loading stalls (8.5' by 19'). MK will provide three full size stalls and two smaller loading stalls, as required.

Appendix 10 provides a diagram that shows the service truck (loading vehicles) access route and diagrams depicting adequate turning radius for vehicles to reverse into the loading stall on the access lane on the east side of the Project.

7.6 WAIKIKI SPECIAL DISTRICT GUIDELINES

The proposed development will satisfy the objectives and standards of the WSD as follows:

7.6.1 Hawaiian Sense of Place

The Project's overall design will reflect a "Hawaiian Sense of Place" by including a lush tropical landscape in public open spaces, a water feature, a pocket park, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places to accommodate cultural programs, such as Hula recitals by local Halaus.

The "Hawaiian Sense of Place" is derived from cultural perceptions that are taught, as well as sensory aspects that are felt. The cultural component of the landscape is expressed through the use of native Hawaiian and Polynesian-introduced plants that have always been important to the Hawaiian culture: Hala, Kukui, Coconut Palm and many others. These native plants, with their strong cultural heritage, have been included because of their historic significance to Waikīkī.

The pocket park will feature a Hawaiian garden to provide an amenity not only for residents and guests, but the larger community. A more diverse plant palette will be used and will incorporate endemic, indigenous and Polynesian-introduced plants such as Hala, Kukui, 'Ohi'a Lehua, Hapu'u, 'A'ali'I, Na'u, Pualoalo.
In addition to these native plants, many of the exotics that visitors have come to associate with Hawai'i are used. These have been included because our "Hawaiian Sense of Place" is perceived not only through our culture, but our senses of sight, smell, touch, taste and sound. Plumerias, Gingers, Heliconias, "Queen Emma" Spider Lilies, Anthuriums, and Spathoglottis are all incorporated within the landscape.

A subtle water-feature along Koa avenue will add tropical feel to the area by providing the sound of falling water over natural stone amongst a tropical landscape. These features further tie into the overall consistency of the public space throughout Waikīkī.

The building façade will be varied with a high degree of articulation. The overall exterior and interior design and finish materials will be selected to convey a contemporary tropical Hawaiian feel. From an aerial view, the high level of articulation will include varying bay widths. MK will also provide lanais on each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. At the pedestrian level specifically, native tapa patterns have been integrated into the façade of the building on all sides, and stone walls, wooden benches, stone walkways, and other natural elements in all areas of public interaction further promote a "Hawaiian Sense of Place".

7.6.2 Building Design

"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."

As noted, the following guidelines, including the **mauka/makai orientation** are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" as follows:

"...Significant views are identified in Section 9.80-3(a) of the LUO and include:

- Views of Diamond Head from as many vantage points as possible, but especially from Ala Wai Boulevard and the Punchbowl Lookout.
- Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue.
- Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard.
- Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade.
- Views of Ala Wai Yacht Harbor from Magic Island Park."

The Project will not affect any of these significant public views described here and in Section 21-9.80-3(a) of the Land Use Ordinance.

The Project responds to Hawaii's climate with lanais and a swimming pool and deck to allow visitors to enjoy the tropical climate of Hawaii and provides a pocket park at the ground level to further experience the tropical climate. Also at the ground level small plaza at the entrance to the commercial enterprise at the corner of Kaiulani Avenue and Koa Avenue, which relates well to the human scale.

7.6.2.1 Orientation & Form

As noted in Section 7.6.2 above, since the Project will not affect the significant public views that the mauka/makai orientation was intended to protect, there is some flexibility afforded in the building orientation. Section 2.8 for a detailed analysis and alternatives considered.

A very important view that we are fully protecting is the view of Diamond Head from Punchbowl. The 350-foot tower is oriented in an Ewa-Diamond Head direction to fall within the view profile of the Aston Waikiki Beach Tower. The orientation of the 350-foot tower is also placed in the profile of the Hyatt Regency Waikiki West Tower to minimize the impact on makai views of neighboring condominiums and other high rise developments.

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include varying bay widths. The building will also provide lanais on each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

7.6.2.2 Open Space

The Project, through its landscaped public open space at the pocket park and setback areas and its landscaped yard areas will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site.

7.6.2.3 Parking Facilities

The parking podium will be located above ground floor and will contain approximately 272 parking stalls, which is 210 stalls in excess of the 62 parking stalls required under the LUO for hotel. This location is noted in the "Waikiki Special District Design Guidelines" as appropriate for parking in a structure.

7.6.2.4 Articulation, Scale, Material Color

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include varying bay widths. The MK will also provide lanais on each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

MK will be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment.

A variety of building materials will be employed, including natural materials and textured concrete and plaster. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

These elements of articulation, material and color are in keeping with the recommendation of the "Waikiki Special District Design Guidelines"

7.6.2.5 Entries, Lobbies & Arcades

MK plans open landscaped entry areas leading visitors into the Project at Koa Avenue and Kaiulani Avenue intersection. Additional landscaped public open space and landscaped yard areas will provide an inviting perimeter to the Project. The entry to the retail on the ground floor will have a nice plaza fronting it, inviting pedestrians to enter. The plaza will also lead to the entry to the partially open condo hotel lobby on Koa Avenue.

7.6.2.6 Visual Links

This building is not located between a public space and a shoreline, mountain view, open space or landmark, and is not subject to the visual link criteria. However, MK does plan to have a partially open condo hotel lobby at their porte cochere on Koa Avenue.

7.6.2.7 Features in Required Yards

The following features will enhance the open space and improve the appearance of the streetscape:

- A porte cochere is planned along Koa Avenue, up to five feet from the property line with the remaining five feet of yard being improved with landscaping and a water feature.
- Lei stands are not proposed at this time.
- Walls & Fences – Fences and/or walls may be used to secure the pocket park in the evenings, respecting the front yard setback. The landscape elements will also have walls less than 36 inches in height to provide separation from walkways, including seat walls as a rest stop and/or gathering place for pedestrians.
- Shading Devices - Shading devices such as roof overhangs and eaves are proposed, and may encroach into the required yards no more than the amount permitted by the LUO.

- Outdoor Dining - Outdoor dining facilities are being considered and will meet WSD criteria. Vending carts are not proposed at this time.
- Rooftop Design and Equipment Screening - Rooftop machinery, equipment and utility installations will not exceed the established height limit and will be screened from view.

7.6.2.8 Roof Design and Equipment Screening

Rooftop machinery, equipment and utility installations (if any) will be screened from view (as required by the LUO) to prevent undesirable views and vistas from surrounding buildings, as well as from Punchbowl and Diamond Head.

7.6.2.9 Landscaping

As indicated in the preliminary concept plan, landscaping will be provided to improve the streetscape along Koa Avenue, Kaiulani Avenue, and Prince Edward Street and enhance the pedestrian experience for visitors and local residents alike. There will be significant public open space around the perimeter of the Project and at the proposed pocket park to maintain and enhance the inviting, park-like setting. The landscaping will promote and create the image for Waikīkī as a tropical resort destination.

7.6.2.10 Water Features and Artwork

A water feature, waterwall, will be provided within the Koa Avenue yard, fronting the porte cochere.

7.6.2.11 Sidewalk & Paving

Public walkways will be constructed to match the existing sidewalks on Koa Avenue, Kaiulani Avenue and Prince Edward Street or will be upgraded to a design acceptable to the City's Department of Facility Maintenance.

7.6.2.12 Signage

MK has not designed the proposed signs for the Project; however, the proposed signs will meet LUO requirements, possibly through development of a Sign Master Plan to be submitted as a Zoning Adjustment. If illuminated, the lighting will comply with the WSD guidelines.

7.6.2.13 Lighting

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

7.6.3 Urban Design Controls

7.6.3.1 Waikiki Gateways and Fort DeRussy

The Project is not situated near any of the five Waikiki Gateways nor is it situated near Fort DeRussy.

7.6.3.2 Major Streets

The Project site does not abut any of the Major Streets identified in the WSD Design Guidelines. Due to the increase in public open space and landscape within the required yards, the proposed design will improve pedestrian flow and offer visual relief for motorists. Landscaping and trees will be located to accentuate the tropical outdoor experience.

7.6.3.3 Waikiki Promenade

The Project is not situated along the Waikiki Promenade and will not affect the Waikiki Promenade.

7.6.3.4 Coastal Height Setback

The Project is not located near the shoreline; therefore it is not subject to a coastal height setback.

7.6.3.5 Mini Parks

A pocket park (small mini park) approximately 4,125 square feet, is planned within the Project Site on Prince Edward Street. The pocket park will be maintained by condo hotel operator or association.

7.6.3.6 Significant Public Views

As mentioned earlier, he Project will not impact the significant views that are identified in the WSD Design Guidelines and Section 9.80-3(a) of the LUO.

7.6.3.7 Public Pedestrian Access

The Project will not affect existing public pedestrian access in Waikīkī. Due to the size, shape and location of the property, new public pedestrian access is not needed or warranted.

7.6.3.8 Historic Structures, Significant Sites and Landmarks

Although two of the apartment buildings are over 50 years old neither is listed as historic on either the State or Federal Register of Historic Properties.

7.7 LIST OF NECESSARY APPROVALS

The Project will require acceptance of the FEA by DPP. The following is a preliminary list of the anticipated permits, approvals and reviews that are required prior to construction of the Project.

7.7.1 City and County of Honolulu

- PD-R Permit
- WSD Permit, Major
- Surface Encroachment Variance
- Subdivision for Pedestrian Easement
- Sidewalk Variance
- CUP for Joint Development
- Building Permits
- Trenching Permit
- Grading Permit
- Drain Connection
- Street Usage
- Sign Master Plan Approval (Zoning Adjustment)
- Construction Plan Approval

7.7.2 State of Hawaii

- NPDES Permit for construction over an acre and possibly for dewatering effluent (although not expected)
- Construction Noise Permit
- Archaeological Inventory Survey
- Industrial Wastewater Discharge Permit

8. PROBABLE IMPACTS

8.1 IMPACTS OF THE NATURAL OR HUMAN ENVIRONMENT ON THE PROJECT

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

8.2 DIRECT AND INDIRECT IMPACTS

As noted in this FEA and "Engineering Report 133 Kaiulani" attached as **Appendix 8,** various public service agencies have indicated that water supply, sewage treatment (with improvements provided by BSC), and quasi-public utilities are adequate to support the Project. Drainage impacts will be reduced with the provision of additional landscaped open space.

The "Traffic Impact Report 133 Kaiulani" ("Traffic Impact Report") dated May 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 4.** The Traffic Impact Report indicates there will be no significant impact on traffic related to level of service at surrounding intersections. Additional mitigation measures to reduce traffic impacts will be implemented based on the recommendations provided in the Traffic Impact Report and the Two-Way Conversion Report (**Appendix 5**).

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

8.3 GENERAL PUBLIC BENEFITS

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

8.3.1 Community Benefits

The development of the Project Site will provide the following community benefits:

- An increase in public open space available to the public, including a 4,125 square foot pocket park on Prince Edward Street, all to be maintained by condo hotel operator or association.
- Greater average setback along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo hotel rooms in Waikīkī of which 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,418 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- An economic and job-creating stimulus for the local economy.

- An increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $311,000 to $4,540,000, an increase of $4,229,000), a portion of the General Excise Taxes ("GET") for rail estimated at $123,000, and estimated hotel room tax (portion of $2,176,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,108,000 and hotel room tax (major portion of $2,176,000). Total taxes generated annually estimated at $7,947,000.

MK proposes the following additional package of community benefits:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikīkī will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikīkī.
- Provide up to $200,000 to support certain bathrooms in Waikīkī being kept open after 10:00 pm. Will work with the Department of Parks and
- Recreation and the Waikiki Improvement Association to determine what can be done in the way of private participation, possibly in the form of funding security to allow two bathrooms near the police substation to remain open between 10:00 pm and 6:00 am daily.

8.3.2 Sustainable Strategies

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

*"[§226-108] **Sustainability.** Priority guidelines and principles to promote sustainability shall include:*

(1) Encouraging balanced economic, social, community, and environmental priorities;
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;
(3) Promoting a diversified and dynamic economy;
(4) Encouraging respect for the host culture;
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;
(6) Considering the principles of the ahupuaa system; and
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii."

MK's Project will help to provide the economic stimulus needed to keep our construction trades working, while providing some long term economic benefit in new jobs. This will also serve to upgrade our visitor plant to provide some of the hotel units needed to replace hotel units lost over the years. The Project will provide community benefits described earlier, including greater public open space, a pocket park for the public, and support for efforts to widen the beach area or support projects that protects the sand from eroding. This Project represents a balance between the economic, social, community and environmental priorities.

The Project will live within the natural resources and limits of the State as the Project is supported by adequate existing infrastructure for its development, with the exception of a short (75-foot long) sewer line that MK will provide.

The Project will provide a dynamic boost to the economy with the creation of more visitor industry jobs. Although it does not represent diversifying the economy, it does help support our number one industry, tourism.

Evidence of respect for the host culture is found in MK's contracting with CSH to work with the Project proponents and Dawn Chang of Ku'iwalu to integrate cultural consultation with potentially knowledgeable Native Hawaiian groups and individuals and SHPD throughout the Project's AIS investigation. This consultation effort, carried out from November 2013 through March 2014, included public presentations and discussion before the O'ahu Island Burial Council, meetings with previously recognized cultural descendants to burials found in the Waikīkī area, and meetings with the SHPD Archaeology Branch and Culture and History Branch staff.

This consultation effort afforded these different concerned parties the opportunity to provide input on the AIS testing strategy, and, as a result of this consultation, the number of AIS test excavations was increased twice in response to consulting party concerns. The consultation effort also fostered discussion regarding how

faunal and human bone was distinguished in the field during AIS investigations. The consultation effort lead to the Project's cultural monitoring program during AIS fieldwork. Additionally, the consultation effort provided a means to review and come to consensus regarding this AIS report's Project effect and mitigation recommendations. CSH would like to thank all the agencies and individuals that participated in this consultation effort.

Additionally, to support the Project's environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014), described in greater detail in Section 15.3 of this FEA.
The Project is moving forward by redeveloping an existing urban area to meet the needs of the present generation, while not compromising the needs of future generations. This Project will provide much needed employment for this generation and future generations, while minimizing impact to the island's natural resources.

The Project sits within the ahupuaa that includes Waikīkī the economic engine of the island and State. The proposed development supports the continued success of Waikīkī by providing a new visitor accommodation near the heart of Waikīkī. MK is doing their part in achieving a sustainable Hawai'i.

8.3.3 Waikiki Special District

The Project will achieve several of the key objectives of the WSD guidelines and result in demonstrable contributions that benefit the community and the stability, function and overall ambiance of Waikīkī. The following are anticipated public benefits:

8.3.3.1 Enhanced Open Space

The Project will result in open space that is usable and visible to the public and that creates visual relief. The ground level open space will be approximately 14,380 square feet. The majority of this open space will be open to the public along the landscaped public sidewalks (yard area) along Koa Avenue, Kaiulani Avenue and Prince Edward Street and at the proposed pocket park. The resulting area, combined with the open area from property line to edge of curb creates an environment that allows expansive walkways with extensive landscaping. These publicly accessible open spaces are an important component of this proposed development and represent a marked improvement over the existing open space located on the property.

8.3.3.2 Hawaiian Sense of Place

The Project's design will reflect a "Hawaiian Sense of Place" with the Project's concept design including landscaped public open space, a water feature, canopy trees and gathering places to accommodate cultural programs, such as Hula

recitals by local Halaus. The pocket park will include a landscaped gathering place open to the public.

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include varying bay widths. The MK will also provide lanais on each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

8.4 DEMOGRAPHIC IMPACTS

8.4.1 Residential Population

The Project will result in a slight reduction in the number of permanent residents in Waikīkī with the elimination of about 23 rental apartment units. However, 10 of those units have been uninhabitable for several years.

8.4.2 Visitor Population

The Project will increase the visitor population potential of Waikīkī with the development of 246 condo hotel rooms. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, one block from Waikiki Beach.

8.4.3 Character or Culture of the Neighborhood

The character and culture of the surrounding neighborhood will not change, as the existing development within the surrounding neighborhood with its focus on hotel, retail, dining and entertainment is similar to the development being proposed for the Project Site. The revitalization of this property could provide an incentive for neighboring properties on Koa Avenue and Prince Edward Street to also redevelop and revitalize their properties with a needed upgrading of facilities in this part of Waikīkī.

8.4.4 Displacement of Tenants

The Project will result in the displacement of the existing tenants at the King's Village and the renters at the Prince Edward Apartments and Hale Waikiki during the construction period and thereafter. The tenants have been informed and updated as redevelopment plans have continued, and their leases and license agreements specifically acknowledge the potential for redevelopment and are either short term or cancellable upon written notice.

The existing tenants at the Project Site will be informed of the construction start as early as possible.

8.5 HOUSING IMPACTS

The Project will result in a slight reduction in the number of permanent residents in Waikīkī with the elimination of about 23 rental apartment units. However, 10 of those units have been uninhabitable for several years.

8.6 PUBLIC SERVICES

8.6.1 Access and Transportation

The "Traffic Impact Report 133 Kaiulani" ("Traffic Impact Report") dated May 2014 was prepared by Wilson Okamoto Corporation and is provided in its entirety in **Appendix 4**.

8.6.2 Area Roadway System

The area roadway system is described as follows:

"The proposed project site is located adjacent to Kaiulani Avenue in Waikiki. Kaiulani Avenue originates at Kalakaua Avenue as a two-lane, one-way (northbound) roadway that transitions into a four-lane, two-way roadway at Koa Avenue until Prince Edward Street. At the intersection with Prince Edward Street and Kanekapolei Street, Kaiulani Avenue transitions back to a one-way (northbound) roadway with two lanes between Prince Edward Street and Kuhio Avenue (see Figure 3). Southwest of the project site, Kaiulani Avenue intersects Kalakaua Avenue. Kalakaua Avenue is a predominantly four-lane, one-way (eastbound) roadway generally oriented in the east-west direction that with Ala Wai Boulevard forms a couplet system that provides access through Waikiki. At the signalized intersection with Kaiulani Avenue, the Kalakaua Avenue approach has an exclusive left-turn lane and three through lanes.

"North of the intersection with Kalakaua Avenue, Kaiulani Avenue intersects Koa Avenue. At this unsignalized intersection, both approaches of Kaiulani Avenue have two lanes that serve all traffic movements. The east leg of the intersection is comprised of Koa Avenue which is a one-lane, one-way (eastbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. The west leg of the intersection is comprised of the entrance to the existing porte cochere for the Princess Kaiulani Hotel.

"Further north, Kaiulani Avenue intersects Kanekapolei Street and Prince Edward Street. At this unsignalized intersection, the northbound approach of Kaiulani Avenue has two lanes that serve all traffic movements. The southbound approach of the intersection is comprised of Kanekapolei Street which serves as a connector roadway between this intersection and Ala Wai Boulevard. At the intersection with Prince Edward Street and Kaiulani Avenue, the Kanekapolei Street approach has two southbound lanes that serve all traffic movements. The

eastbound approach of the intersection is comprised of the existing driveways for the Princess Kaiulani Hotel and the adjacent Ohana East Hotel. The driveway for the Princess Kaiulani Hotel is a two-lane, two-way driveway that leads to the parking structure while the driveway for the Ohana East Hotel is a one-lane, one-way (exiting) driveway. The westbound approach of the intersection is comprised of Prince Edward Street which is a one-lane, one-way (westbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. At the intersection with Kaiulani Avenue and Kanekapolei Street, the Prince Edward Street approach has one stop-controlled lane that serves left-turn and right-turn traffic movements.

"North of the intersection with Kaiulani Avenue and Prince Edward Street, Kanekapolei Street intersects Kuhio Avenue. At the signalized intersection with Kuhio Avenue, the northbound approach of Kanekapolei Street has two lanes that serve left-turn and through traffic movements while the southbound approach has two lanes that serve all traffic movements. Kuhio Avenue is a predominantly four-lane, two-way roadway that also serves as an access roadway through Waikiki. At the intersection with Kanekapolei Street, the eastbound approach of Kuhio Avenue has an exclusive left-turn lane, one through lane, and a shared through and right-turn lane while the westbound approach has two lanes that serve all traffic movements.

"East of the intersection with Kanekapolei Street, Kuhio Avenue intersects Kaiulani Avenue. At this signalized intersection, the eastbound approach of Kuhio Avenue has two lanes that serve left-turn and through traffic movements while the westbound approach has two lanes that serve through and right-turn traffic movements. The Kaiulani Avenue approach of the intersection has one through lane and an exclusive right-turn lane.

"Further east, Kuhio Avenue intersects Uluniu Avenue. At this signalized T-intersection, the eastbound approach of Kuhio Avenue has two lanes that serve through and right-turn traffic movements while the westbound approach has two lanes that serve left-turn and through traffic movements. Uluniu Avenue is a predominantly one-lane, one-way (southbound) roadway that serves as a connector roadway between Kuhio Avenue and Kalakaua Avenue.

"South of the intersection with Kuhio Avenue, Uluniu Avenue intersects Prince Edward Street and Koa Avenue. At the unsignalized intersection with Prince Edward Street, the Uluniu Avenue approach has one lane that serves through and right-turn traffic movements while the Prince Edward Street approach has one stop-controlled lane that serves left-turn and through traffic movements. At the unsignalized intersection with Koa Avenue, the Uluniu Avenue approach has one stop-controlled lane that serves left-turn and through traffic movements while the Koa Avenue approach has one stop-controlled lane that serves through and right-turn traffic movements.

"Further south, Uluniu Avenue intersects Kalakaua Avenue. At this signalized T-intersection, the Uluniu Avenue approach has two left-turn lanes. The Kalakaua Avenue approach of the intersection has three through lanes."

8.6.3 Traffic Impacts

The Traffic Impact Report's "Conclusion" states:

"VII. CONCLUSION

"The proposed 133 Kaiulani development entails the replacement of the existing King's Village Shopping Center with a new multi-use development that will include condo/hotel units, commercial/retail uses, and on-site parking. Traffic operations in the vicinity of the proposed development are expected to remain similar to existing and without project conditions. As such, with the implementation of the aforementioned recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity."

8.6.4 Traffic Mitigation Measures

The Traffic Impact Report section titled "Recommendation" states as follows: *"Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design:*

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

During the design phase of the Project, MK will work to implement the recommendations of the Traffic Impact Report.

The condo hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided near the Project entries, with additional racks in the parking garage as needed to satisfy bike-user demand. MK will encourage its employees to use public transit and carpools and will encourage and assist tenants in doing the same for their employees.

In addition to the initial Traffic Impact Report, at the request of DPP, a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" ("Two-Way Conversion Report) dated August 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 5**. The Two-Way Conversion Report stated the following in its Recommendations and Conclusion:

"V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the design of the two-way conversion of Kaiulani Avenue.

1. Modify the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue.
2. Modify the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications. In addition, modify the traffic signal phasing and timing as necessary."

"VI. CONCLUSION

The proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. The proposed project entails the conversion of Kaiulani Avenue between Kalakaua Avenue and Koa Avenue. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity

rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes."

MK agrees to pay its fair share for the improvements for the conversion of Kaiulani Avenue from a one-way to a two-way roadway between Kalakaua Avenue and Koa Avenue. MK understands that two other planned developments will also benefit from the conversion and will work towards an agreement on the fair share participation of these developments as well, with a goal of the improvements being constructed prior to the certificate of occupancy being issued for the first development that proceeds with development.

8.6.5 Water

Sato & Associates, Inc. has prepared an "Engineering Report 133 Kaiulani" dated October 2014 for the Project that is included in its entirety in **Appendix 8**. Included in this Report is a discussion on Water, provided below:

"3.1 WATER

"Domestic"

"The property is serviced by a 2-inch meter (Premise ID 1060075, S/N 0170096). The 2-1/2" Type E copper lateral taps off a 12-inch line within Kaiulani Street. The 2-inch meter has a maximum capacity of 160 gpm and a maximum of 631 fixture units (FU) based on a flush valve system.

"The property has an average water consumption of 16,530 gallons per day (gpd) based on the usage within the last seven (7) years. Water consumption data for the property dating back to the November 2004 is included in Appendix B.

"The capacity of the existing domestic water meter is not adequate to support the proposed development. A 4-inch domestic meter will be needed."

"Fixture Unit Calculations for Residential Units

"Studio		
2	*Lavatory*	*1.2 FU*
1	*Water Closet (Tank)*	*1.7 FU*
1	*Tub/Shower*	*1.6 FU*
1	*Kitchen Sink*	*1.6 FU*
1	*Washing Machine*	*2.0 FU*
		8.1 FU Per Unit
"One Bedroom		
3	*Lavatory*	*1.8 FU*
2	*Water Closet (Tank)*	*3.4 FU*
1	*Tub/Shower*	*1.6 FU*

1	*Kitchen Sink*	*1.6 FU*
1	*Washing Machine*	*2.0 FU*
		10.4 FU Per Unit
"Two Bedroom and Three Bedroom		
4	*Lavatory*	*2.4 FU*
2	*Water Closet (Tank)*	*3.4 FU*
2	*Tub/Shower*	*3.2 FU*
1	*Kitchen Sink*	*1.6 FU*
1	*Dishwasher*	*1.5 FU*
1	*Washing Machine*	*2.0 FU*
		14.1 FU Per Unit

"168 Units x 8.1 FU =	*1360.8 FU*
72 Units x 10.4 FU =	*748.8 FU*
4 Units x 14.1 FU =	*56.4 FU*
	2166.0 FU

"Fixture units for amenities, retail and restaurant will be developed during design."

"Fire Protection

"The building fire protection system is serviced by a 6-inch detector check meter (S/N 5169709) on the Kaiulani Street side of the property. Downstream of the meter is a standpipe with siamese connections located within the landscape planter.

"There are two (2) fire hydrants in the vicinity of the property. One is near the property's corner of Kaiulani Avenue and Prince Edward Street. The other is on the corner of Kaiulani Avenue and Koa Avenue, on the opposite side of the property. See Existing Water System in Appendix C.

"The capacity of the existing fire protection water meter to support the proposed development will be evaluated when the required fire flow is determined."

"Cross Connection

"Cross connection to the Board of Water Supply's (BWS) water system is regulated by backflow preventers. Backflow preventers are typically located immediately downstream of the water meter within private property prior to any branches or tees. Presently, there is no backflow prevention assembly immediately downstream of the water meter.

"The proposed development will require a backflow prevention assembly after the meter and before any branches or tees. Size of the backflow preventer will be

determined when the domestic meter size, building piping system size and allowable pressure drop is ascertained."

"Preliminary discussions with BWS indicate that the existing water system is presently adequate to service the proposed development. The availability of water will be confirmed at the time of Building Permit approval."

Water Use

Water use for the Project is determined using the following standard, 350 gallons per hotel unit or 86,100 gallons per day. In addition, the water use for landscaping is shown in the table below:

Description	Formula	Level 1	Level 7	Level 9	Total
Total landscaped area (s.f.)	n/z	9.000	425	530	9,955
Total landscaped area (ac)	Total landscaped area (s.f.)/43,560 s.f. per acre	0.21	0.01	0.01	0.23
Water demand (gallons per week)	Total landscaped area (ac) x 40,731 gallons per week	8,415	397	496	9,308
Water demand (gallons per day)	Water demand (gallons per week)/	1,202	57	71	1,330

Total water use (hotel and landscaping) for the Project will be 87,430 gallons per day.

Mitigation Measures

The existing buildings on the Project that are proposed to be demolished were built in the 1950's to 1970s and do not incorporate the latest water efficient fixtures.

MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

8.6.6 Wastewater

Sato & Associates, Inc. has prepared an "Engineering Report 133 Kaiulani" dated October 2014 for the Project that is included in its entirety in **Appendix 8**. Included in this Report is a discussion on Sanitary Sewer, provided below:

"3.2 SANITARY SEWER

"The property is serviced by four (4) sewer laterals, two on each side of the property. The laterals on Prince Edward Street discharge into a 6-inch sewer line. The laterals on Koa Avenue discharge into an 8-inch sewer line. Both lines are collected by an-8-inch in Uluniu Street. The sewer lines continue on Kuhio Avenue, Kanekapolei Street, Ala Wai Boulevard and Lewers Street before discharging into the Beach Walk Wastewater Pump Station. See Existing Sanitary Sewer System in Appendix C.
"The Department of Planning and Permitting, Wastewater Branch (WWB) has indicated that existing City sewer system that receives the property's wastewater flows has inadequate capacity, particularly the 6-inch, 8-inch and 27-inch lines in Koa Ave, Prince Edward St, Uluniu Ave and Ala Wai Blvd.

"WWB has calculated that the present site generates approximately 11,200 gpd. This is based on an average per capita wastewater flow of 801 gallons per day and an equivalent population of 1401 capita per acre for a community business land use. Calculation as follows:

"Avg $Flow_{exist}$ *= 1.0 ac × 140 cpa × 80 gpd/capita = 11,200 gpd*

"As a comparison, based on water consumption data, WWB recognizes a 15,700 gpd water consumption with a 20% deduction for landscape irrigation. Wastewater flow by this method of calculation yields 12,560 gpd.

"Avg $Flow_{exist}$ *= 15,700 gpd - 0.20(15,700) gpd = 12,560 gpd*
"The proposed development will generate approximately 38,601 gpd of wastewater flow plus the flow from the proposed restaurant. Restaurant flow is based upon the number of seats and the type of restaurant. That flow will be developed when more information is known. Residential units generating 37,184 gpd and retail generating 1,417 gpd with calculation as follows:

"Breakdown of Residential/Hotel Units
(Use Hotel Units since the number of units is greater)

Type of Unit	*No of Units*	*Capita/Unit*	*Capita*
Studio	*184*	*2.0*	*368*
1 B/R	*88*	*2.0*	*176*
3 B/R	*3*	*2.8*	*8.4*
	275		*552.4*

"Avg $Flow_{proposed\ residential}$ *=551.6 capita × 80 gpd/capita = 44,128 gpd*

"Avg $Flow_{proposed\ retail}$ *= 8,500 sf × 1 employee/150 sf floor area × 25 gpd/employee = 1,417 gpd*

"Off-Site Sewer Improvements

"Presently, the City's sewer system receiving the property's wastewater flows has inadequate capacity. An appeal letter had been filed with the Department of Environmental Services (ENV). In turn ENV has confirmed the inadequacy, however, only the sewer lines in Uluniu Ave. In light of this response, a sewer connection to the existing manhole at the intersection of Kaiulani Ave and Prince Edward St is proposed.

"The City has approved a Sewer Connection Application (letter dated July 11, 2014) provided the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream, as required, to meet hydraulic requirements.

"The proposed off-site sewer improvements would be designed and constructed by the developer and approved by the City. In order to make the line a public sewer and not private (serving only one entity) existing flows may be intercepted by the new sewer line or a stub-out may be provided. After construction, the sewer line would be dedicated to the City such that they will own, operate and maintain the sewer line."

3-1 | Proposed Off-Site Sewer Improvements

Wastewater Use

Wastewater use for the Project is determined using the following standards:

Category	Capita/ unit	Sf/ capita	Unit	Square feet	Capita/ sub-total	GPD/ capital	GPD
Studio	2		168		336	80	26,880
1 bedroom	2		73		146	80	11,680
2 bedroom	3		1		3	80	224
3 bedroom (Two units used as 4– 1 bedroom)	2		4		8	80	640
Retail		150		8,500	57	25	1,417
Total							**40,841**

Wastewater use is estimated to be 40,841 gallons per day. There is no difference between the capita per unit of the studio, 1 bedroom, 2 bedroom or 3 bedroom used as a hotel unit or as a residential unit and no difference in the projected flow from these units.

Mitigation Measures

The City has approved a Sewer Connection Application (letter dated July 11, 2014), **Appendix 15**, provided the Applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream, as required, to meet hydraulic requirements.

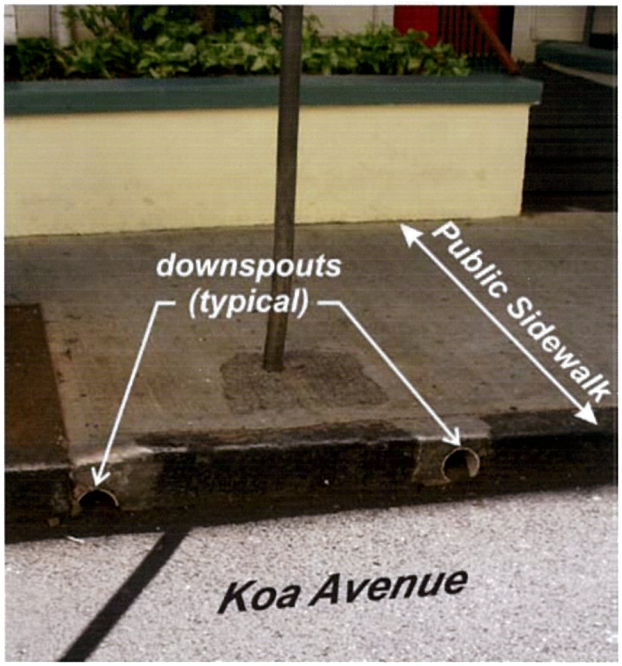
The existing buildings on the Project that are proposed to be demolished were built in the 1950's to 1970s and do not incorporate the latest wastewater efficient fixtures.

MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

8.6.7 Drainage and Storm Water Quality

Sato & Associates, Inc. has prepared a "Engineering Report 133 Kaiulani" dated October 2014 for the Project that is included in its entirety in **Appendix 8**. Included in this Report is a discussion on Storm Drainage, provided below:

"The vast majority of the site is covered by impervious ground cover: pavement and roof. Storm water runoff generated at the perimeter store fronts is directed towards the public sidewalk. Storm water runoff generated within the site is collected by floor drains and roof drains with downspouts which daylight at the face of the curbs on all three streets at the perimeter of the site. The storm water runoff continues to surface flow along the roadway where it is collected by the City's catch basins or drain inlets. The collected runoff is conveyed below grade by the City's drainage system and outfalls into the Ala Wai Canal. See Existing Storm Drainage System in Appendix C.



2-1 Downspouts at the Face of the Curb towards the public sidewalk. Storm water runoff generated within the site is collected by floor drains and roof drains with downspouts which daylight at the face of the curbs on all three streets at the perimeter of the site. The storm water runoff continues to surface flow along the roadway where it is collected by the City's catch basins or drain inlets. The collected runoff is conveyed below grade by the City's drainage system and outfalls into the Ala Wai Canal. See Existing Storm Drainage System in Appendix C.

"WQV = PxCxAx3630
P = Water Quality Design Storm Depth (1")
C = Runoff Coefficient
A = Area in Acres
C = 0.05 + 0.009 x % Impervious
C = 0.05 + 0.009 x 80% (Assume)
= .77

WQV = (1")(0.77)(1.05)(3630)
= 0.81 x 3630
= 2.940 CF

"For runoff leaving the site, bio-filter with appropriate LID (low impact development) biofiltration post-construction control BMP's will have to be implemented."

"Approved methods are:

1. *Vegetated Bio-filter*
2. *Green Roof*
3. *Enhanced Swale*
4. *Vegetated Swale*
5. *Vegetated Buffer Strip*
6. *Tree Box Filter*

"The projects will have to try to incorporate these methods of low impact developments into the drainage system."

Mitigation Measures

MK will utilize the following dust control measures to minimize impact of stormwater runoff during the demolition and construction period:

a) Plan the different phases of construction, to minimize the amount of dust-generating materials and activities, centralize on-site vehicular traffic routes, and locate potential dust-generating equipment in areas of least impact;
b) Provide an adequate water source at the site prior to start-up of construction activities;
c) Landscape and provide rapid covering of bare areas, including slopes as soon as practical;
d) Minimize dust from shoulders and access roads;
e) Provide adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Control dust from debris being hauled away from the Project site. Also, control dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

MK will follow Best Management Practices in dealing with stormwater runoff during the post construction period.

In addition, MK will utilize the following Best Management Practices in dealing with storm water during demolition and construction.

1) No stockpiling of materials or debris shall be allowed in the right-of-way.
2) Install temporary stabilized construction entrance/exit at the ingress/egress of the site.
3) Install temporary compost filter sock and silt fence at the perimeter of the site prior to the start of the Project and be maintained until completion of the Project and ground cover has been fully established.
4) Install temporary sediment control filter at catch basins before any work commences. Sediment control filters shall remain until after completion of Project and ground cover has been fully established.
5) Water sprayed through nozzles shall be used to control dust.
6) At the end of trenching operations, the existing catch basins surrounding the Project site shall be inspected and any accumulated sediment and debris found in the catch basin shall be removed. Flushing into the catch basin and inlets are prohibited.
7) Contractor to periodically inspect silt fence, stabilized construction entrance, catch basin and inlet filters especially during heavy rainfall. Contractor shall also ensure drainage through filter material is maintained.
8) Good housekeeping shall be utilized to ensure protection of roadways from mud, dirt and debris.
9) Contractor shall ensure that all tires of construction vehicles are sufficiently cleaned off so that dirt or debris is not traced off the construction site. Washing of tires with water will not be acceptable unless the runoff is contained and does not enter the storm drain system or onto the roadway.

MK will follow Best Management Practices in dealing with stormwater runoff during the post construction period.

A) Provide landscaped areas to the maximum extent possible to maximize infiltration and minimize runoff.
B) Provide automatic irrigation system to landscaped areas with programmable irrigation timing to minimize excess runoff.
C) Provide loading area under cover and paved with concrete.
D) Routinely clean leaves, trash and other debris at parking areas an deck.
E) Affix stencil on all storm drain inlets with language prohibiting dumping of improper materials.

8.6.8 Solid Waste Disposal

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

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

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

The condo hotel operator intends to implement a recycling program targeting bottles, cans, cardboard, paper, cooking oils, and kitchen wet wastes. Following completion of the Project, the condo hotel operator will maintain a waste management recycling system.

MK will consider recycling the construction waste generated by the demolition of the structures on the Project Site. The demolition contractor will be directed to contact the various companies that offer their services in recycling metals and other construction wastes and will direct their use of one of these companies subject to availability of services.

8.6.9 Public Schools

This Project with about 246 condo-hotel units is projected to have about 85% of their units in a hotel program. There may be about 37 units which will not be under a hotel operation, but these 37 units will not all be permanent residences, as many will be second homes (vacation homes), retirement homes and some may be rented as vacation units outside of the hotel operation, as occurs in other condo-hotels. If we subtract from the 37 units the 23 existing apartment units on the Project site, we have the potential for a 14 unit increase. If we do not eliminate any units as second homes, retirement homes or private vacation rentals, the 14 apartment unit increase would generate 2 students in grades K through 12 (0.12 x 14) based on Department of Education standards for Waikiki. This will not have a significant impact on the schools in the area, which have sufficient space to accommodate any increase in students generated by the Project.

8.6.10 Parks

All though the Project will provide recreational amenities on property for condo hotel guests, the guests are also expected to use the surrounding park and recreational areas, particularly Waikiki Beach which is located about a block away. In addition, the Project includes a pocket park that will be open to the public.

8.6.11 Police

Initial response will be provided by patrol officers assigned to District 6, which operates out of the Police Substation located at 2405 Kalākaua Avenue next to Kūhiō Beach, approximately 550 feet away from the Project Site. The administrative offices for District 6 operate out of the Alapai Headquarters.

8.6.12 Fire

The Waikiki Fire Station 7 with its engine and ladder company will provide primary response in case of an emergency. The Waikiki Fire Station is located less than a mile away and will be able to quickly respond to a fire on the Project Site.

8.6.13 Utilities

Sato & Associates, Inc. has prepared an "Engineering Report 133 Kaiulani" dated May 2014 for the Project that is included in its entirety in **Appendix 8**. Included in this Report is a discussion on Electric and Communications, provided below:

"3.3 ELECTRIC AND COMMUNICATIONS

"Hawaiian Electric Company's (HECO), Hawaiian Telecom's (HTCO), and Oceanic Time Warner Cable's (OTWC) existing facilities serving this area consist of aerial cables attached to a joint overhead pole line on the south side of Prince Edward Street and underground ductlines, containing their respective cables, in Kaiulani and Koa Avenues. In general, where OTWC does not have its own underground duct system, OTWC will enter into a leasing agreement with HTCO for space in HTCO's duct system, currently this is true of the underground ductlines on Kaiulani and Koa Avenues.

"The proposed electric and communications service connections would be developed in accordance with the specifications and standards of HECO, HTCO and OTWC. As State Public Utility Commission (PUC) regulated public utilities, HECO and HTCO are responsible for the development of off-site facilities that meet island-wide needs, such as power generating plants and power and signal transmission lines, and facilities that serve regional needs of the West Oahu area. Presently, the existing off-site facilities that would serve this development are HECO's Kapahulu Substation, located adjacent to the fire station on Kapahulu Avenue and HECO's Kuhio Substation, located on Kuhio Avenue and HTCO's Waikiki central office located on Kapuni Street. OTWC is a State Department of Commerce and Consumer Affairs cable television franchisee. Recently, HTCO was also granted a cable television franchise. Although not a PUC regulated utility, Oceanic's off-site facility construction policy is to provide such facilities where the anticipated revenue from the prospective service connections warrants the expenditure. Both HTCO and OTWC offer video, broadband and telephone services. The design and construction of the proposed onsite electric and communications service ductlines would need to meet the respective utility company's standards.

"OFFSITE ELECTRIC

"HECO has indicated that electric service to the site will be extended from HECO's Kuhio Avenue regional duct system through the existing duct system on Kaiulani Avenue. HECO further indicated that there is sufficient capacity to serve the proposed development. However, as a public utility, HECO has an obligation to provide service to all legitimate requestors and cannot "reserve" current capacity for any specific project.

"It is understood that the existing overhead line along Prince Edward Street will not impact construction of the proposed development and, therefore, is to remain in place.

Mitigation

The Project will support sustainability and energy conservation on-site as follows:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- MK intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- MK will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The 'open air' nature of the center will reduce the projected energy consumption from the lighting and mechanical systems.
- Passive lighting will be maximized and the makai to mauka orientation of the pedestrian open spaces will take advantage of the trade wind circulation.
- MK intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

- MK will reduce the Project's material waste through effective construction and operational recycling programs.

"OFFSITE COMMUNICATIONS

Telephone and cable television service will be extended to the site from the existing HTCO manhole and duct system located at the Kaiulani Avenue/Prince Edward Street intersection. Separate conduit laterals will be provided for HTCO and OTWC, however, all conduits will be connected to HTCO's duct system since OTWC does not presently have an underground duct system in Kaiulani Avenue. Both utility companies indicate that they currently have sufficient capacity to serve the proposed development.

"ONSITE

"The onsite electric and communications systems would consist of concrete encased, PVC conduits that will be extended to the HECO transformer pad location and the building telecommunications room/space. If the distance from the service connection point to the aforementioned is great, the respective utility company may require a handhole."

8.7 ENVIRONMENTAL IMPACTS

8.7.1 Environmentally Sensitive Area

The Project is situated in an area with the potential for burial sites, some of which may be Native Hawaiian burial sites. The Project's impact on such burial sites will be determined by the Archaeological Inventory Survey being conducted at the present time for the Project Site. Since there is no endangered flora or fauna on the Project Site and no other environmentally sensitive features on the Project Site, the Project Site, except for potential burials, is not considered to be environmentally sensitive.

8.7.2 Historical and Archaeological Resources

Cultural Surveys Hawai`i prepared an archaeological inventory survey plan for the Project, titled "Revised Archaeological Inventory Survey Plan for the 133 Ka'iulani Project" (Revised Archaeological Inventory Survey Plan) and dated April 2014.

A copy of this Revised Archaeological Inventory Survey Plan is provided in **Appendix 6**.

The Archaeological Inventory Survey was approved by the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources on November 5, 2014 (**Appendix 6**). The letter noted that "The report adequately

describes the project, environs, cultural and historical background, previous investigations, methods, and field and laboratory results. It also presents sufficient historic properties descriptions and site significance assessments."
The Revised Archaeological Inventory Survey Plan's "Traditional and Historical Background" states as follows:

"3.1 Traditional and Historical Background

"The project area is located in the 'ili (land division) of Uluniu and Kapuni within the ahupua'a (larger land division) of Waikīkī, O'ahu. The 'ili of Uluniu and Kapuni abutted the 'ili of Kaluaoku on the northwest along the 'Āpuakēhau Stream, Auaukai on the northeast and Hamohamo on the south east and southwest (Figure 13).

Uluniu translates as "coconut grove," (Pukui and Elbert 1986:370; Pukui et al. 1974:215) and Kapuni translates as "the surrounding" (Pukui et al. 1974:90). 'Āpuakēhau, literally "basket [of] dew," was the former stream and northern boundary of the 'ili, which had its outlet at the present Royal Hawaiian Hotel. It was "probably named for a rain" (Pukui et al. 1974:13).

The marshland of Waikīkī was watered from streams in the Makiki, Mānoa, and Pālolo Valleys and from springs in Mānoa (Punahou and Kānewai). The name Waikīkī, which means "spouting water" according to Pukui et al. (1974:223), was well adapted to the character of the swampy land of ancient Waikīkī, where water from the upland valleys would gush forth from underground. Before the construction of the Ala Wai Canal, the Mānoa and Pālolo Streams did not merge until deep within Waikīkī. As they entered the flat Waikīkī Plain, the names of the streams changed. The Mānoa Stream became the Kālia and the Pālolo Stream became the Pāhoa. They joined near Hamohamo (now an area mauka of the Kapahulu Library) and then divided into three new streams, Kuekaunahi, 'Āpuakēhau, and Pi'inaio (Figure 12). The Kuekaunahi Stream once emptied into the sea at Hamohamo (near the intersection of 'Ōhua and Kalākaua Avenues). The 'Āpuakēhau, also called the Muliwai o Kawehewehe, or "the stream that opens the way" (Kanahele 1995:7) on some maps, emptied in the ocean at Helumoa and Kaluaokau. The Pi'inaio entered the sea at Kālia as a wide delta. The land between these three streams was called Waikolu, meaning "three waters" (Kanahele 1995:7-8)."

The Archaeological Inventory Survey Plan's "Project Effect and Mitigation Recommendations" states as follows:

"Section 10 Project Effect and Mitigation Recommendations

"The following project effect discussion and cultural resource management recommendations are intended to facilitate project planning and support the

proposed project's required historic preservation consultation. For the purposes of this archaeological inventory survey (AIS), the project's APE for archaeological historic properties is defined as the entire approximately 1.05-acre project area. The surrounding built environment is urban (paved streets and low rise and high-rise buildings) and the proposed project construction is unlikely to impose additional auditory, visual, or other environmental impacts to any surrounding potential archaeological historic properties outside the project area footprint. Accordingly, although no specific studies were done to evaluate this APE definition, an AIS APE beyond the actual project area footprint does not seem warranted based on the surrounding built environment.

"10.1 Project Effect

"CSH's project specific effect recommendation is "effect, with agreed upon mitigation commitments." The mitigation measures described below will help alleviate the project's impact on SIHP # 50-80-14-7598 and SIHP # 50-80-14-7599 and assist with the proper identification, documentation, and treatment of any additional archaeological historic properties encountered during project construction.

"10.2 Mitigations Recommendations

"10.2.1 Burial Treatment Plan

"The isolated human skeletal fragment (SIHP # 50-80-14-7599) was identified during an AIS investigation and is therefore defined as a "previously identified" burial under Hawaii state burial law (HAR §13-300-2). It is a requirement of Hawai'i state burial law that the treatment of the previously identified burial site within the project area be addressed in a project-specific burial treatment plan prepared for the consideration of the O'ahu Island Burial Council (OIBC) (HAR §13-300-33). The burial treatment plan will incorporate appropriate input from SHPD, the recognized lineal/cultural descendants, and the OIBC.

"10.2.2 Archaeological Monitoring

"In order to mitigate the potential impact to SIHP # 50-80-14-7598 (a culturally enriched A-horizon), or any as yet unidentified archaeological cultural resources within the project area, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits. A program of on-site archaeological monitoring is recommended for all subsurface project construction activities below 18 inches within the project area. The approximately 400 linear feet of new sewer line installation within adjacent City-

owned streets associated with the project will be included within the project's archaeological monitoring program."

MK will implement the recommended mitigation actions described by the Revised Archaeological Inventory Survey.

8.7.3 Natural Resources

8.7.3.1 Water Resources

There are no potable or surface fresh water resources on the Project Site. The Project Site is located in Waikīkī, on the mauka side of Koa Avenue, about 500 feet from the shoreline. The waters off the south shore of O`ahu, including Waikīkī, are designated Class A by the State DOH. Rules of the State DOH indicate that the purpose of the Class A designation is to protect these waters for recreational use and aesthetic enjoyment. Because there are no fresh water features on the sites, the Project is not anticipated to adversely impact these resources.

8.7.3.2 Flood Plain Management

Sato & Associates, Inc. has prepared an "Engineering Report 133 Kaiulani" dated October 2014 for the Project that is included in its entirety in **Appendix 8**. Included in this Report is a discussion on Flood Zone, provided below:

The Applicant had applied to the Federal Emergency Management Agency (FEMA) to take the property out of the Special Flood Hazard Area (SFHA) and has received a Letter of Map Amendment Determination Document stating in part "This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply." The FEMA Letter of Map Amendment Determination Document and a copy of the applicable January 19, 2011 FIRM map are provided in **Appendix 13**.

8.7.3.3 Topography and Soils

In general, the Project Site is relatively flat with elevations along the Koa Avenue property boundary ranging from about 5.9 to 6.5 feet. The elevations along Kaiulani Avenue range from 5.9 to 6.5 feet. The elevations along Prince Edward

Street range from 5.7 to 6.0 feet. Elevations within the interior areas of the King's Village are slightly higher.

The U.S. Department of Agriculture, Soil Conservation Service Soil Survey Report for the Island of O`ahu classifies the soil for this area as Jaucus sand (JaC) under the Jaucus Series. This series consists of excessively drained soil that occurs on narrow, coastal plains adjacent to the ocean. The soil develops from the wind and water eroded sand from coral and seashells. This type of soil is found in terrain that is nearly level to strongly sloping, ranging in elevation from sea level to 650 feet. Annual rainfall will usually be between 10 and 30 inches with a mean annual soil temperature of 75 degrees Fahrenheit. Jaucus soils are geographically linked with Pūlehu, Mokulē`ia, Kaloko and Lualualei soils.

Jaucus soils are used for pasture, sugarcane growth, truck crops, alfalfa, wildlife habitat, urban and recreational development. Natural vegetation for this soil consists of the following: kiawe, bristly foxtail, koa haole, Bermuda grass, Australian saltbush and finger grass.

Jaucus sand, 0 to 15 percent slopes (JaC), are characterized by runoff that is very slow to slow and water erosion that is slight. Wind erosion, however, presents an imminent hazard where vegetation has been removed. These soils are single grain, sand, pale to very pale brown in color and more than 60 inches deep. In most cases, accumulation of organic matter and alluvium makes surface layer appear dark brown. Soil is neutral to moderate alkaline. Permeability is rapid and available water capacity is .5 to 1.0 inch per foot of soil. Root can penetrate to a depth of 5 feet or more. Lack of stability and firmness make the workability for this soil difficult.

Jaucus sand (JaC) primary use is for pasture, sugarcane growth, truck crops and urban development.

8.7.3.4 Noise

Y. Ebisu & Associates has prepared the "Acoustic Study for the 133 Kaiulani Project, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated April 2014. The study in its entirety is provided in **Appendix 2**.

SUMMARY

Chapter I, Summary, summarizing the potential acoustic impacts of the Project states as follows:

"The existing and future traffic noise levels in the vicinity of the proposed 133 Kaiulani Project in Waikiki (see FIGURE 1) were evaluated for their potential impacts and their relationship to the current FHA/HUD noise standards. The traffic noise level increases along the access roadways to and

from the project site were calculated. No significant increases in traffic noise are predicted to occur along Ala Wai Boulevard, Kuhio Avenue, Kalakaua Avenue, or Kaiulani Avenue as a result of project plus non-project traffic, following project build-out by CY 2017. Moderate increases in the relatively low traffic noise levels along Prince Edward Street are predicted to occur as a result of project traffic by CY 2017. Traffic and the various mauka-makai cross streets as a result of project traffic following project build-out by CY 2015. Traffic noise from Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing residential and resort units which front Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue.

"Future traffic noise levels are predicted to exceed the FHA/HUD standard of 65 DNL at all units on the Makai face of the project's proposed hotel tower, as well as at those units on the Ewa and mauka faces of the proposed hotel tower closest to Kalakaua Avenue and Kuhio Avenue, respectively. Noise mitigation measures in the form of closure and air conditioning are recommended for the affected units.

"Larger increases in traffic noise levels of 0.8 and 1.1 DNL are predicted to occur along Prince Edward Street as a result of the proposed 133 Kaiulani Project development. However, these increases will be difficult to measure or perceive, and are not considered significant because of the relatively low baseline noise levels along Prince Edward Street without the project.

"Unavoidable, but temporary, noise impacts may occur during the excavation and building erection activities within the project area, and particularly during the earthwork 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.

MITIGATION MEASURES

Chapter VII. Discussion Of Project-Related Noise Impacts And Possible Mitigation Measures includes a discussion of mitigation measures for the Project states in part as follows:

"Traffic Noise. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project traffic since traffic noise increases associated with project traffic are not significant. Along Prince Edward Street, where project related traffic noise levels should be less than 65

DNL at 50 feet from the centerline due to the relatively low traffic volumes along that roadway. Along the high volume roadways (Kalakaua Avenue, Kuhio Avenue, and Ala Wai Boulevard), where existing traffic noise levels are the highest, the contributions of future traffic noise level increases from the project range from 0.0 to 0.1 DNL, while contributions from non-project related traffic range from 0.2 to 0.4 DNL. At some of the hotel units in the proposed hotel tower building of the project, predicted traffic noise levels will exceed the 65 DNL FHA/HUD standard for residences and noise sensitive receptors, and traffic noise mitigation measures are recommended. The primary contributors to these high traffic noise levels are existing and future traffic along Kuhio and Kalakaua Avenues.

"Traffic noise mitigation measures are recommended for all proposed hotel units on the south (makai) face of the tower building, and for those units at Locations Ewa1, Ewa2, and Mauka2(see Figures 12 through 14). Traffic noise mitigation measures in the form of closure and air conditioning of the hotel units would be acceptable.

"Because of the relatively small increases in traffic noise attributable to project related traffic, the proposed project is not expected to generate adverse noise impacts along the roadways servicing the project traffic. Special traffic noise mitigation measures should not be required at existing receptors along these roadways. Potential noise impacts from tire squeal within the project's parking structure should be minimized through the use of coarse finishes for the circulation driveway surfaces within the parking structure.

"General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the project is not known. It is expected that actual construction 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 15 depicts the range of noise levels of various types of construction equipment when measured at 50 feet distance from the equipment.

"Typical levels of exterior noise from construction activity (excluding pile driving activity) at various distances from the job sites are shown in Figure 16. Figure 16 is useful for predicting exterior noise levels at short distances (within 100 feet) from the work when visual line of sight exists between the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from construction equipment to existing resort, residential, and commercial buildings will range from 15 feet to 300+ feet, with corresponding average noise levels of 96 to 70 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of Figure 16 should be reduced by approximately 8 dBA when the work is occurring at least 100 feet 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 16.

"Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities are located at the Hale Waikiki, Capri, and 2413 Prince Edward apartment units on the adjacent lots (#30, #39, and #40) Diamond Head of the project site. Predicted construction activities at these buildings during the site preparation and building erection phases of the work ranged from 96 to 72 dBA (plus or minus 5 dBA). The highest noise levels at a commercial building during construction are expected to occur at the existing car rental establishment (Lot #63) across Prince Edward Street during site preparation and building erection work, where buffer distances are relatively small (in the order of 40 to 60 feet). At the makai wall of this commercial building, construction noise levels could intermittently exceed 84 dBA. Interior noise levels at this commercial building should be less than 64 dBA since its makai wall is solid without ventilation openings. Adverse impacts from construction noises are not expected to be in the 'public health and welfare' category due to the temporary nature of the work, an due to the administrative controls available to the regulation of construction noise. Instead, these 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+ dB at 50 feet distance), and due to the exterior nature of the work (excavation, grading, 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 feet from the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 to 40 foot 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.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 17 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"

MK will implement the mitigation measures recommended during the construction period.

8.7.3.5 Air Quality

B.D. Neal has prepared an Air Quality Study. The study in its entirety is provided in **Appendix 3**. The following are excerpts from the report:

SUMMARY

Section I, Summary, summarizing the potential acoustic impacts of the Project states as follows:

"BSC KVSC, LLC is proposing the 133 Kaiulani Project in Waikiki on the island of Oahu on the site of the existing King's Village Shopping Center. The proposed project will consist of the replacement of the shopping center with 275 condo-hotel units, approximately 8,500 square feet of commercial/retail space, parking and other amenities. This study examines the potential short- and long-term air quality impacts that could occur as a result of construction and use of the proposed facilities and suggests mitigative measures to reduce any potential air quality impacts where possible and appropriate.

"Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

"Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given location. The climate of the Waikiki area is very much affected by its leeward and coastal situation. Winds are predominantly trade winds from the east northeast except for occasional periods when kona storms may generate strong winds from the south or when the trade winds are weak and landbreeze-seabreeze circulations may develop. Wind speeds typically vary between about 5 and 15 miles per hour providing relatively good ventilation much of the time. Temperatures in leeward areas of Oahu are generally very moderate with average daily temperatures ranging from about 70°F to 84°F. The extreme minimum temperature recorded at Honolulu Airport is 54°F, while the extreme maximum temperature is 95°F. This area of Oahu is one of the drier locations in the state with rainfall often highly variable from one year to the next. Monthly rainfall has been measured to vary from as little as a trace to as much as 10 inches. Average annual rainfall amounts to about 21 inches with summer months being the driest.

"The present air quality of the project area appears to be reasonably good based on nearby air quality monitoring data. Air quality data from the nearest monitoring stations operated by the Hawaii Department of Health suggest that all air quality standards are currently being met, although occasional exceedances of the more stringent state standards for carbon monoxide may occur near congested roadway intersections.

"If the proposed project is given the necessary approvals to proceed, there may be some short- and/or long-term impacts on air quality that may occur either directly or indirectly as a consequence of project construction and use. Short-term impacts from fugitive dust could occur during the project construction phase. To a lesser extent, exhaust emissions from stationary and mobile construction equipment, from the minor disruption of traffic, and from workers' vehicles may also affect air quality during the period of construction. State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. Hence, an effective dust control plan must be implemented to ensure compliance with state regulations. Fugitive dust emissions can be controlled to a large extent by watering of active work areas, using wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures to consider include limiting the area that is disturbed at any given time and/or mulching or chemically stabilizing inactive areas that have been worked. Paving and landscaping of project areas early in the construction schedule will also reduce dust emissions. Exhaust emissions can be mitigated by moving construction equipment and workers to and from the project site during off-peak traffic hours.

"To assess the potential long-term impact of emissions from project-related motor vehicle traffic operating on roadways in the project area after construction is completed, a computerized air quality modeling study was undertaken. The air quality modeling study estimated current worst-case concentrations of carbon monoxide at intersections in the project vicinity and predicted future levels both with and without the proposed project. During worst-case conditions, model results indicated that present 1-hour and 8-hour worst-case carbon monoxide concentrations are well within both the state and the national ambient air quality standards. In the year 2017 without the project, worst-case carbon monoxide concentrations were predicted to remain nearly unchanged, and concentrations would remain well within standards. With the project in the year 2017, estimated worst-case carbon monoxide concentrations indicated only minimal or no impact compared to the without project case. Concentrations would remain well within standards. Due to the negligible impact the project is expected to have, implementing mitigation measures for long-term traffic-related air quality impacts is unnecessary and unwarranted."

MITIGATION MEASURES

Section 8.0, Conclusions and Recommendations summarizing mitigation measures for the Project states as follows:

"The major potential short-term air quality impact of the project could occur from the emission of fugitive dust during construction. Uncontrolled fugitive dust emissions from construction activities could amount to about 1.2 tons per acre per month, depending on rainfall. To control dust, active work areas and any temporary unpaved work roads should be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. 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. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area. Establishment of landscaping early in the construction schedule will also help to control dust.

"During construction phases, emissions from engine exhausts (primarily consisting of carbon monoxide and nitrogen oxides) will also occur both from on-site construction equipment and from vehicles used by construction workers and from trucks traveling to and from the project. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

"After the proposed project is completed, any long-term impacts on air quality in the project area due to emissions from project related motor vehicle traffic should be negligible. Worst-case concentrations of carbon monoxide should remain within both the state and the national ambient air quality standards. Implementing any air quality mitigation measures for long-term traffic-related impacts is unnecessary and unwarranted."

MK will implement the mitigation measures recommended during the construction period.

8.7.3.6 Visual Impacts

In order to minimize visual impact to Diamond Head from Punchbowl, the 350-foot tower is oriented in an Ewa-Diamond Head direction to fall within the view profile of the Aston Waikiki Beach Tower. The orientation of the 350-foot tower is also placed in the profile of the Hyatt Regency Waikiki West Tower to minimize makai views of neighboring condominiums and other high rise developments.

8.7.3.7 Pedestrian Wind Impacts

Rowan Williams Davies & Irwin Inc. (RWDI) has prepared a "Pedestrian Wind Assessment" for the 133 Kaiulani Project, dated April 10, 2014. The study in its entirety is provided in **Appendix 11**. On January 19, 2015, RWDI provided a memorandum updating the Pedestrian Wind Assessment to reflect a new design for the structure based on wind tunnel testing data. This memorandum is provided in its entirety in **Appendix 11**.

As stated in the memorandum:

.....

"All locations have passed the wind safety criteria.

"Grade level wind conditions are similar to those predicted in the report entitled 133 Kaiulani Pedestrian Wind Assessment, due to the similarity in building location, orientation and general massing, especially the large podium structure.

"For the existing configuration, wind conditions at grade level are expected to be comfortable for walking or better throughout the year. With the addition of the proposed development, wind conditions are expected to remain comfortable for walking or better in general. One exception to these appropriate wind conditions is expected in a localised area along the east side of the building (Locations 9, 10 and 12). Uncomfortable wind conditions are expected in this area as a result of winds accelerating between the proposed development and the existing building to the east (see Image 1).

.....

"Wind speeds which are higher than typically desired in an amenity space are expected on the terrace areas which are exposed to northeasterly winds (Locations 35 and 37 through 45). This is largely due to downwashing along the east facing tower façade. Acceleration of winds around the tower corner is also expected. The addition of wind control elements, such as local dense landscaping, porous wind screens, overhead canopies and overhead trellises is expected to result in appropriate wind conditions for the space.

"The lobby area at the 7th and 8th floors has changed significantly from the original design. The open area below the tower structure is expected to be subjected to northeasterly winds, similar to the terrace areas."

MK will implement the recommended mitigation measures as appropriate, subject to approval by DPP.

8.7.3.8 Shadow Analysis

The effect of shadows from the Project structures on surrounding properties on July 21, September 21, and December 21 of each year is depicted on pages 37, 38 and 39, respectively, in the **Appendix 1-I**.

Alternative IV

On the June 21st plan, page 37, shadows from the Project will affect the Hyatt Regency Waikiki's West Tower from about 8:00 am to about 10:00 am when the shadow falls on the roof of the podium. At no time does the shadow affect the Hyatt Regency Waikiki pool deck or open outdoor spaces over the podium. Between 10:00 am and just before 2:00 pm, shadows remain mostly on the Project Site and Koa Avenue. Between the period just before 2:00 pm and 4:00 pm shadows from the Project affect Prince Edward Street and several low-rise structures on several parcels located across Prince Edward Street.

On the September 21st plan, page 37, shadows from the Project will affect the Princess Kaiulani from about 8:00 am to noon. These shadows do not affect the Princess Kaiulani pool area and to a certain extent are screened by the Princess Tower. Between noon and 2:00 pm, shadows affect Prince Edward Street and the parcel across Prince Edward Street at the corner of Kaiulani Avenue, with some overlap from the shadow from the Hyatt Regency Waikiki's West Tower. Between 2:00 pm and 4:00 pm shadows from the Project with significant overlap from the west tower of the Hyatt Regency Waikiki affects several parcels located across Prince Edward Street.

On the December 21st plan, page 37, shadows from the Project will affect the Princess Kaiulani from about 8:00 am to noon. These shadows do not affect the Princess Kaiulani pool area. Between noon and 4:00 pm, shadows from the Project in combination with shadows from both towers of the Hyatt Regency affects several parcels located across Prince Edward Street.

Alternative V

On the June 21st plan, page 38, shadows from the Project will affect the Hyatt Regency Waikiki's West Tower from about 8:00 am to about 10:00 am when the shadow falls on the roof of the podium. At no time does the shadow affect the Hyatt Regency Waikiki pool deck or open outdoor spaces over the podium. Between 10:00 am and noon, shadows remain mostly on the Project Site and Koa Avenue. Between the period just after noon and 4:00 pm shadows from the Project affect Prince Edward Street and several low-rise structures on several parcels located across Prince Edward Street, with some shadow overlap coming from the Princess Kaiulani development.

On the September 21st plan, page 38, shadows from the Project will stay mostly on the Project Site and surrounding streets from 8:00 am to noon. Between noon and 2:00 pm, shadows affect Prince Edward Street and the parcel across Prince Edward Street at the corner of Kaiulani Avenue. Between 2:00 pm and 4:00 pm shadows from the Project with significant overlap from the west tower of the Hyatt Regency Waikiki affects several parcels located across Prince Edward Street.

On the December 21st plan, page 38, shadows from the Project will affect the Princess Kaiulani from about 8:00 am to noon. These shadows do not affect the Princess Kaiulani pool area. Between noon and 4:00 pm, shadows from the Project in combination with shadows from both towers of the Hyatt Regency affects several parcels located across Prince Edward Street.

Alternative VI

On the June 21st plan, page 39, shadows from the Project will affect the Hyatt Regency Waikiki's West Tower from about 8:00 am to about 10:00 am when the shadow falls on the roof of the podium. At no time does the shadow affect the Hyatt Regency Waikiki pool deck or open outdoor spaces over the podium. Between 10:00 am and noon, shadows remain mostly on the Project Site and Koa Avenue. Between the period just after noon and 4:00 pm shadows from the Project affect Prince Edward Street and several low-rise structures on several parcels located across Prince Edward Street, with some shadow overlap coming from the Hyatt Regency Waikiki West Tower.

On the September 21st plan, page 39, shadows from the Project will stay mostly on the Project Site and surrounding streets from 8:00 am to noon. Between noon and 2:00 pm, shadows affect Prince Edward Street and the parcel across Prince Edward Street at the corner of Kaiulani Avenue. Between 2:00 pm and 4:00 pm shadows from the Project with significant overlap from the west tower of the Hyatt Regency affects several parcels located across Prince Edward Street.

On the December 21st plan, page 39, shadows from the Project will affect the Princess Kaiulani from about 8:00 am to noon. These shadows do not affect the Princess Kaiulani pool area. Between noon and 4:00 pm, shadows from the Project in combination with shadows from both towers of the Hyatt Regency affects several parcels located across Prince Edward Street.

Conclusion

The Project shadows to a certain extent affect the low-rise developments across Prince Edward Street, with some overlap of existing shadows from the Princess Kaiulani and both towers of the Hyatt Regency Waikiki. In most instances shadow impacts do not become significant until after 3:00 pm or 4:00 pm and in many instances involve overlapping shadows from existing structures nearby.

8.7.3.9 Climate Change and Sea Level Rise

The change in climate has been triggered by greenhouse gas emissions, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, which are key contributors to the unprecedented increases in global atmospheric warming over the past century. Although attempts are being made to reduce these emissions, these trends are projected to continue and increase in the future creating significant challenges for island communities such as Hawai'i.

The effects of climate change in Hawai'i is increasingly evident with the rise in air temperature; an increase in the sea's surface temperatures; an increase in sea levels; an increase in rain intensity, while there has been a decrease in rainfall; and a decrease in stream flows,
It is unlikely that sea level rise will increase the risk of flooding during the life of the structure, since the Project was designed to accommodate any rising sea levels by raising the Project finish grade to 9 feet MSL (mean sea level).

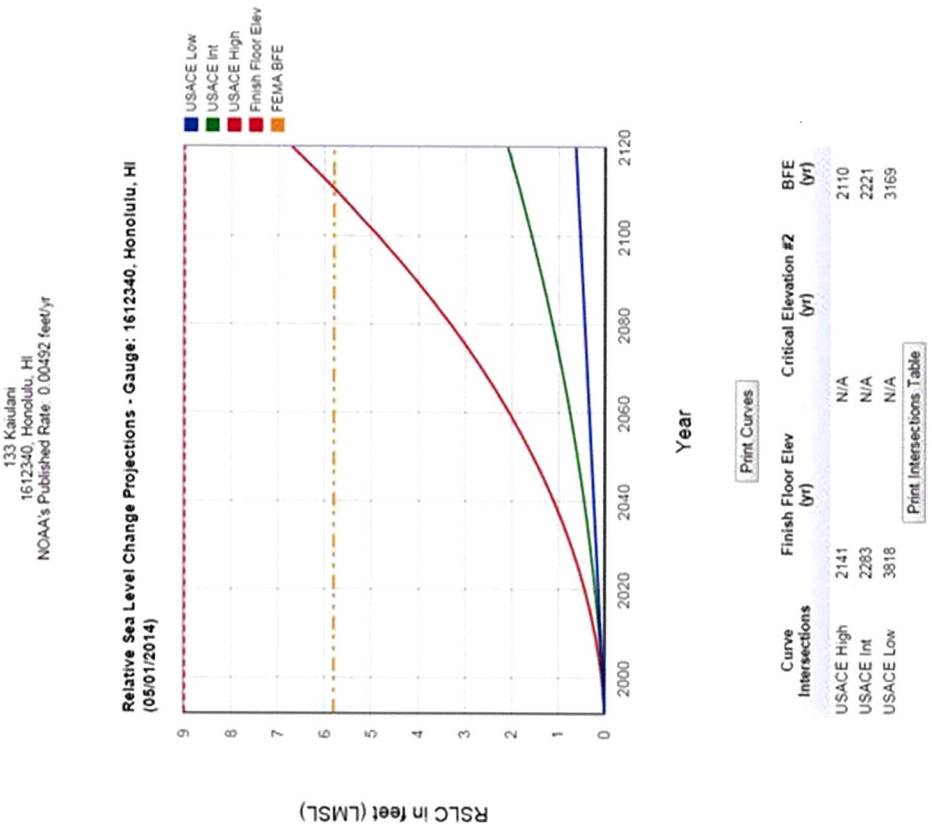
Based on the Army Corp of Engineering on-line information, it appears that the sea level rising rate would reach the building's lobby floor anywhere between 2141 and 3818 (see Figure 11 – Sea Level Rise). Taking the more recent event 2141 and opening of the hotel in 2018, the 123 years far exceeds the life of the structure. Say the building had a 60 year life, the mean sea level would rise anywhere 0.42 – 3.10 feet. Waikīkī would be functional with a 2 foot sea level rise. The new structure sited at 9 feet MSL will be safe from rising sea level for the life of the structure.

In order to minimize this Project's impact on climate change, MK will support sustainability and energy conservation on-site as follows:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- MK intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- MK will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The 'open air' nature of the center will reduce the projected energy consumption from the lighting and mechanical systems.

- Passive lighting will be maximized and the makai to mauka orientation of the pedestrian open spaces will take advantage of the trade wind circulation.
- MK intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- MK will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.
- MK will reduce the Project's material waste through effective construction and operational recycling programs.

FIGURE 11 – SEA LEVEL RISE



133 Kaiulani
1612340, Honolulu, HI
NOAA's Published Rate: 0.00492 feet/yr
All values are expressed in feet relative to LMSL

Year	USACE Low	USACE Int	USACE High
1992	0.00	0.00	0.00
1995	0.02	0.02	0.02
2000	0.04	0.05	0.06
2005	0.06	0.08	0.13
2010	0.09	0.12	0.21
2015	0.11	0.16	0.31
2020	0.14	0.21	0.43
2025	0.16	0.26	0.57
2030	0.19	0.32	0.72
2035	0.21	0.38	0.90
2040	0.24	0.44	1.09
2045	0.26	0.51	1.30
2050	0.28	0.59	1.53
2055	0.31	0.66	1.78
2060	0.34	0.75	2.05
2065	0.36	0.83	2.34
2070	0.38	0.93	2.64
2075	0.41	1.02	2.96
2080	0.43	1.12	3.30
2085	0.46	1.23	3.66
2090	0.48	1.34	4.04
2095	0.51	1.45	4.44
2100	0.53	1.57	4.86
2105	0.56	1.69	5.29
2110	0.58	1.82	5.74
2115	0.61	1.95	6.21
2120	0.63	2.09	6.70

Print Table

8.7.3.10 Street/Public View Analysis

Although, as noted in Section 7.6.2, the Project will not affect the significant public views that the mauka/makai orientation was intended to protect, the Applicant has provided a Street/Public View photographic analysis. This photographic analysis provided in **Appendix 1N** compares views of Alternative IV, an east/west building orientation with a 350-foot height, with most of the building located in the profile of the Hyatt Regency Waikiki west tower, Alternative V, a mauka/makai building orientation with a 350-foot height , and

Alternative VI, a mauka/makai building orientation with a 240-foot height limit, from various streets surrounding the Project Site.

Viewpoint 1 Kalakaua Avenue at the International Market Place looking east

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures and landscaping on the mauka side of Kalakaua Avenue.

Viewpoint 2 – Kalakaua Avenue at Moana Surfrider looking east

At this angle, Alternative IV has the greatest impact on the view of the sky over the Princess Kaiulani shopping mall and Alternative VI has the least impact on this view.

Viewpoint 3 – Kalakaua Avenue at Kaiulani Avenue looking north

At this angle, Alternative IV has the greatest impact on the view of primarily the sky over the King's Village shopping center and Alternative VI has the least impact on this view. However, the podium level for each alternative blocks a little of the view of the Koolaus.

Viewpoint 4 – Kaiulani Avenue between Kalakaua Avenue and Koa Avenue looking north

At this angle, Alternative IV has the greatest impact on the view of primarily the sky over the King's Village shopping center and Alternative VI has the least impact on this view. However, the podium level for each alternative blocks a little of the view of the Koolaus.

Viewpoint 5 – Kaiulani Avenue between Koa Avenue and Prince Edward Street looking east

At this angle, all alternatives at the podium level have about the same impact, with the podiums sliding mauka to makai depending on the alternative. However at the tower level, Alternative V has the greatest impact on the view looking east and Alternative IV has the least impact on this view.

Viewpoint 6 – Kuhio Avenue at Nahua Street looking east

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures on the makai side of Kuhio Avenue, including the Outrigger East and the Miramar Hotel which will be replaced by a department store and parking garage at the International Market Place.

Viewpoint 7 – Kuhio Avenue at Kaiulani Avenue at looking east

At this angle, Alternative IV has the greatest impact on the view of primarily the sky over the King's Village shopping center and Alternative VI has the least impact on this view. A portion of the view being affected in each alternative is already impacted by the Hyatt Regency Waikiki East Tower.

Viewpoint 8 – Kanekapolei Avenue at Kuhio Avenue looking south

At this angle, Alternative VI has the greatest impact on the view of primarily the sky over the King's Village shopping center and Alternative IV has the least impact on this view. A portion of the view being affected by Alternative IV is already impacted by the Hyatt Regency Waikiki West Tower.

Viewpoint 9 – Kanekapolei Avenue at Ala Wai Boulevard looking south

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view. A portion of the view being affected by Alternative IV is already impacted by the Hyatt Regency Waikiki West Tower, which reduces the visual impact of Alternative IV.

Viewpoint 10 – Kaiulani Avenue at Ala Wai Boulevard looking south

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view. A portion of the view being affected by Alternative IV is already impacted by the Hyatt Regency Waikiki West Tower, which reduces the visual impact of Alternative IV.

Viewpoint 11 – Kaiulani Avenue at Tusitala Street looking south

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative IV has the least impact on this view. A portion of the view being affected by Alternative IV is already impacted by the Hyatt Regency Waikiki West Tower, which reduced the visual impact of Alternative IV.

Viewpoint 12 – Kaiulani Avenue at Cleghorn Street looking south

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view. A portion of the view being affected by Alternative IV is already impacted by the Hyatt Regency Waikiki West Tower, which reduced the visual impact of Alternative IV.

Viewpoint 13 – Kaiulani Avenue at Kuhio Avenue looking south

At this angle, Alternative VI has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative IV has the least impact on this view. A portion of the view being affected by Alternative IV and Alternative VI is already impacted by the Hyatt Regency Waikiki West Tower, which reduced the visual impact of these alternatives.

Viewpoint 14 – Kuhio Avenue at Uluniu Avenue looking west

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures on the makai side of Kuhio Avenue.

Viewpoint 15 – Kuhio Avenue at Liliuokalani Avenue looking west

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures on the makai side of Kuhio Avenue.

Viewpoint 16 – Prince Edward Street at Liliuokalani Avenue looking west

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible above an apartment building on Prince Edward Street and Alternative IV has the least impact on this view.

Viewpoint 17 – Prince Edward Street at Uluniu Avenue looking west

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible above an apartment building on Prince Edward Street and Alternative VI has the least impact on this view. A portion of the view being affected by Alternative IV and V is already impacted by the Hyatt Regency Waikiki West Tower, which reduces the visual impact of these alternatives.

Viewpoint 18 – Koa Avenue at Uluniu Avenue looking west

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible above a couple of apartment buildings on Uluniu Avenue and Alternative IV has the least impact on this view.

Viewpoint 19 – Koa Avenue at Liliuokalani Avenue looking west

At this angle, Alternative V has the greatest impact on the view of primarily the sky visible above a couple of apartment buildings on Koa Avenue and Alternative VI has the least impact on this view.

Viewpoint 20 – Kalakaua Avenue at Liliuokalani Avenue looking west

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures on the mauka side of Kalakaua Avenue.

Viewpoint 21 – Kalakaua Avenue at Uluniu Avenue looking west

At this angle, none of the structures in any of the alternatives are visible. They are screened from view by existing structures on the mauka side of Kalakaua Avenue.

Viewpoint 22 – Kalakaua Avenue fronting the Hyatt Regency Waikiki East Tower looking northwest

At this angle, Alternative IV has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view.

Viewpoint 23 – Kalakaua Avenue between the Hyatt Regency Waikiki East and West Towers

At this angle, Alternative IV has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view.

Viewpoint 24 – Kuhio Beach looking North between the Hyatt Regency Waikiki East and West Towers

At this angle, Alternative IV has the greatest impact on the view of primarily the sky visible in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view.

Viewpoint 25 – View from the Ocean looking North between the Hyatt Regency Waikiki East and West Towers

At this angle, Alternative V has the greatest impact on the view of primarily the Koolau Mountain Range in the view channel between the Hyatt Regency Waikiki East and West Tower and Alternative VI has the least impact on this view.

Conclusion

By assigning a value of 1 for the least impacting alternative and three for most impacting alternative and 2 for the alternative that is neither, we come up with the following tally:

Total	Alternative IV	Alternative V	Alternative VI
Number of 1s – least impact	6	0	13
Number of 2s – mid level impact	5	13	1
Number of 3s – greatest impact	8	6	5

Although through a simple ranking method Alternative VI due to its lesser height had the least impact on views, Alternative VI does not represent a feasible development. As mentioned earlier, in addition to other concerns with Alternative VI, the 144 condo hotel units do not provide a critical mass that the Applicant feels is necessary to develop an economically viable condo-hotel. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service. The Applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.

Alternative IV ranked second in relation to this Street View Analysis. However, in the realm of protected views in the Waikiki Special District, one of the high ranking protected views is the view from the Punchbowl lookout of Diamond Head and the horizon line. Of the three alternatives, only Alternative IV extensiely protects the view of Diamond Head. See **Appendix 1O** for Punchbowl to Diamondhead views for Alternatives IV, V and VI.

Also, as mentioned earlier, "The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."

As noted, the following guidelines, including the **mauka/makai orientation** are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" as follows:

"...Significant public views are identified in Section 9.80-3(a) of the LUO and include:

- Views of Diamond Head from as many vantage points as possible, but especially from Ala Wai Boulevard and the Punchbowl Lookout.
- Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue.
- Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard.

- Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade.
- Views of Ala Wai Yacht Harbor from Magic Island Park."

The Project will have minimal effect any of these significant public views described here and in Section 21-9.80-3(a) of the Land Use Ordinance.

The Project responds to Hawaii's climate with lanais and a swimming pool and deck to allow visitors to enjoy the tropical climate of Hawaii and provides a pocket park at the ground level to further experience the tropical climate. Also at the ground level small plaza at the entrance to the commercial enterprise at the corner of Kaiulani Avenue and Koa Avenue, which relates well to the human scale. See **Appendix 1P**.

Since the Project will have minimal effect the significant public views that the mauka/makai orientation was intended to protect, there is some flexibility afforded in the building orientation.

A very important view that we are extensively protecting is the view of Diamond Head from Punchbowl. The 350-foot tower is oriented in an Ewa-Diamond Head direction to fall within the view profile of the Aston Waikiki Beach Tower. The orientation of the 350-foot tower is also placed in the profile of the Hyatt Regency Waikiki West Tower to minimize the impact on makai views of neighboring condominiums and other high rise developments.

8.8 COASTAL ZONE MANAGEMENT

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

The Project is located about 500 feet from the shoreline on the mauka side of Koa Avenue. Development on the mauka and makai side of Kalākaua Avenue provides a buffer for any impacts from the Project Site on the ocean and shoreline area. The proposed development will not affect protected coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

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

8.8.1 Objectives

8.8.1.1 Recreational resources

"Provide coastal recreational opportunities accessible to the public."

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

8.8.1.2 Historic resources

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

Although two of the apartment buildings are over 50 years old neither is listed as historic on either the State or Federal Register of Historic Properties, nor are they considered potential candidates for either register.

8.8.1.3 Scenic and open space resources

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

The Project located behind (mauka of) the Hyatt Regency Waikiki Beach Resort and Spa, 500 feet mauka of the shoreline will not affect the quality of coastal scenic and open space resources.

8.8.1.4 Coastal ecosystems

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

The Project located behind (mauka of) the Hyatt Regency Waikiki Beach Resort and Spa, 500 feet mauka of the shoreline will not affect the coastal ecosystem.

8.8.1.5 Economic uses

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

The Project will provide a new condo hotel to better serve visitors to Waikīkī, providing an important visitor accommodation that meets the needs of today's

visitors. The Project will generate new jobs and tax revenues for the City and State as described in greater detail earlier in this FEA.

8.8.1.6 Coastal hazards

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

The Applicant had applied to the Federal Emergency Management Agency (FEMA) to take the property out of the Special Flood Hazard Area (SFHA) and has received a Letter of Map Amendment Determination Document stating in part "This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply." The FEMA Letter of Map Amendment Determination Document and a copy of the applicable January 19, 2011 FIRM map is provided in **Appendix 13**.

8.8.1.7 Managing development

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

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

8.8.1.8 Public Participation

"Stimulate public awareness, education, and participation in coastal management."

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

8.8.1.9 Beach protection

"Protect beaches for public use and recreation."

The Project located behind (mauka of) the Hyatt Regency Waikiki Beach Resort and Spa, 500 feet mauka of the shoreline will not affect the public's use of the nearby beaches and ocean recreation areas.

8.8.1.10 Marine resources

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

The condo hotel operator will promote the protection, use, and development of marine and coastal resources, assuring their sustainability, by providing access for their guests to use Kuhio Beach.

8.8.2 Policies

8.8.2.1 Recreational resources

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

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

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

(i) *"Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;"*
The Project will not affect coastal resources, since it is located behind (mauka of) the Hyatt Regency Waikiki Beach Resort and Spa, 500 feet mauka of the shoreline will not affect

(ii) *"Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;"*
The Project will not damage coastal resources and will not trigger this requirement for replacement of such resources or monetary compensation. However, MK is offering to set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.

(iii) *"Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;"*
Extensive public access to the shoreline is provided from the Police Substation on Kalakaua Avenue next to the Diamond Head

Tower all the way to the Kaimana Beach Hotel, a distance of about 0.9 miles.

(iv) *"Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;"*
Shoreline parks and other recreation facilities are provided in Waikīkī and along this portion of Kuhio Beach, extensive access provides continuous access along the shoreline.

(v) *"Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;"*
The State and City have provided excellent beach access and recreational use along this portion of Kuhio Beach.

(vi) *"Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;"*
The State and City have such standards in place and have established such standards and does regulate drainage to protect the quality of coastal waters, particularly in areas where water quality is not up to the desired standard.

(vii) *"Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and"*
The Project located behind (mauka of) the Hyatt Regency Waikiki Beach Resort and Spa, 500 feet mauka of the shoreline will not provide new shoreline recreational opportunities.

(viii) *"Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6;"*
It would not be reasonable to require dedication of a shoreline area for this Project and dedication requirements of section 46-6 would not be triggered in this action.

8.8.2.2 Historic resources

(A) *"Identify and analyze significant archaeological resources;"*
Cultural Surveys Hawai`i prepared an archaeological inventory survey plan for the Project, titled "Revised Archaeological Inventory Survey Plan for the 133 Ka'iulani Project" (Revised Archaeological Inventory Survey Plan) and dated April 2014.
The Archaeological Inventory Survey was approved by the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources on November 5, 2014 (**Appendix 6**). The letter noted that "The report adequately describes the project, environs, cultural and historical

background, previous investigations, methods, and field and laboratory results. It also presents sufficient historic properties descriptions and site significance assessments."

(B) *"Maximize information retention through preservation of remains and artifacts or salvage operations; and"*
The isolated human skeletal fragment (SIHP # 50-80-14-7599) was identified during an AIS investigation and is therefore defined as a "previously identified" burial under Hawai'i state burial law (HAR §13-300-2). It is a requirement of Hawai'i state burial law that the treatment of the previously identified burial site within the Project area be addressed in a project-specific burial treatment plan prepared for the consideration of the O'ahu Island Burial Council (OIBC) (HAR §13-300-33). The burial treatment plan will incorporate appropriate input from SHPD, the recognized lineal/cultural descendants, and the OIBC.

(C) *"Support state goals for protection, restoration, interpretation, and display of historic resources;"*
MK supports these State goals, and has taken this opportunity to find, protect, interpret and reinter historic resources.

8.8.2.3 Scenic and open space resources

(A) *"Identify valued scenic resources in the coastal zone management area;"*
The Project site located 500 feet from the shoreline, does not provide or contain any valued scenic resources.

(B) *"Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;"*
The Project has been situated mauka of the Hyatt Waikiki Beach Resort and Spa's west tower to minimize existing public views to and along the shoreline and will replace existing urban development that will not result in the alteration of natural landforms.

(C) *"Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and"*
The Project will not affect shoreline open space or scenic resources.

(D) *"Encourage those developments that are not coastal dependent to locate in inland areas;"*
This Project is not coastal dependent and is located 500 feet inland.

8.8.2.4 Coastal ecosystems

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

(B) This Project is located 500 feet inland from the shoreline and is a redevelopment project which will not affect the protection, use, and development of marine and coastal resources.

(C) *Improve the technical basis for natural resource management;*
This Project located 500 feet inland from the shoreline does not provide an opportunity or nexus for providing technical information on natural resource management.

(D) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
This Project will not affect the valuable coastal ecosystem, being 500 feet inland from the shoreline.

(E) *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
This Project does not involve stream diversion, channelization or similar land and water uses involving competing water needs.

(F) *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures;*
This Project will provide a significant increase in landscape open space that will capture and retain runoff on property, reducing current impact of stormwater runoff.

8.8.2.5 Economic uses

(A) *Concentrate coastal dependent development in appropriate areas;*
The Project is not a coastal dependent development and is appropriately located 500 feet from the shoreline..

(B) *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*
The Project is not a coastal dependent development and is appropriately located 500 feet from the shoreline.

(C) *Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*
(i) *Use of presently designated locations is not feasible;*
(ii) *Adverse environmental effects are minimized; and*
(iii) *The development is important to the State's economy;*
The Project at its present location is feasible and not located along or near the shoreline (500 feet mauka). The Project will result in

an economic and job-creating stimulus for the local economy, during the construction period as well as for the future. The Project will also result in an increase in property values for the City and County of Honolulu (the "City") resulting in increased property taxes and hotel room tax and generates additional tax revenue to the State in terms of collections from General Excise Taxes ("GET") and hotel room tax.

8.8.2.6 Coastal hazards;

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

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

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

The Project has been removed from a flood district and is not within any storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.

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

The Project is not within a Special Flood Hazard Area and is not subject to the Federal mandatory flood insurance requirement.

(D) Prevent coastal flooding from inland projects;

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

8.8.2.7 Managing development;

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

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

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

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

(C) *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process;*
This Project is not a coastal development.

8.8.2.8 Public participation;

(A) *Promote public involvement in coastal zone management processes;*
This policy is probably directed towards State and County agencies.

(B) *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*
Again appears to be more a State and County agency responsibility. This FEA provides a discussion of coastal management zone guidelines and policies and the Project's compliance with these in a report that will be available to the public on OEQC's website and at DPP's office.

(C) *Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts;*
This is a State and County agency policy. Due to the location of this Project, 500 feet from the shoreline, coastal issues and conflicts do not occur.

8.8.2.9 Beach protection;

(A) *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
The Project with its new condo hotel structure is located 500 feet inland from the shoreline and will not affect shoreline processes or potential loss of improvements due to erosion.

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

(C) *Minimize the construction of public erosion-protection structures seaward of the shoreline;*
This Project does not involve erosion-protection structures.

(D) *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
This Project does not involve inducing or cultivating vegetation in a beach transit corridor.

(E) *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor;*
This Project does not involve a beach transit corridor or any encroachments to such a corridor.

8.8.2.10 Marine resources;

(A) *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
This Project does not involve the use or development of coastal resources.

(B) *Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*
This Project does not affect marine and coastal resources or activities.

(C) *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
This policy should be implemented by the State.

(D) *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*
Another policy that should be implemented by the State.

(E) *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*
Another policy that should be implemented by the State.

8.9 CUMULATIVE IMPACTS WITH OTHER RELATED PROJECTS

As discussed earlier, other projects planned and under construction in the area, including Gray's Beach, Hilton Hawaiian Village, Waikiki Landing, Royal Hawaiian Market Place, International Market Place, 2121 Kuhio – Ritz Carlton, and 2139 Kuhio – Ritz Carlton are expected to be completed by the time construction begins on the Project and there will be no cumulative construction impacts. Princess Kaiulani , Diamond Head Tower Redevelopment, and Waikiki Parc Hotel Renovation could be under construction at the same time as the 133 Kaiulani Project and with the exception of the Waikiki Parc Hotel (due to its distance from 133 Kaiulani) will require coordination of traffic mitigation measures to address the cumulative construction impacts. Due to the reduction in infrastructure impacts, sewer and water demand, at the International Market Place, the Princess Kaiulani and Diamond Head Tower Redevelopment, and the Waikiki Parc Hotel there will be an off-set to some of the increase in infrastructure requirements for the 133 Kaiulani Development and the other planned developments described here. The Gray's Beach project involves beach widening through mining off-shore sand and will not result in cumulative impacts with the redevelopment and expansion projects.

The traffic study for 133 Kaiulani Development has concluded that "Traffic operations in the vicinity of the proposed development are expected to remain similar to existing and without project conditions. As such, with the implementation of the aforementioned recommendations, the proposed 131 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity." Both the nearby Princess Kaiulani and Diamond Head Tower development and the International Market Place redevelopment are expected to result in a reduction in traffic generated compared to the existing and former existing uses on the property which will help to off-set the increase in traffic generated by the 133 Kaiulani Development.

8.10 POPULATION AND GROWTH IMPACTS

The Project will result in a slight reduction in the number of permanent residents in Waikīkī with the elimination of about 23 rental apartment units. However, 10 of those units have been uninhabitable for several years.

The Project will increase the visitor population potential of Waikīkī with the development of 246 condo hotel rooms. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, one block from Waikiki Beach.

8.11 CULTURAL IMPACT ASSESSMENT

Cultural Surveys Hawai`i, Incorporated prepared the "Cultural Impact Assessment for the King's Village Redevelopment Project, Waikīkī Ahupua`a, Honolulu (Kona) District, O`ahu" dated January 2014. A complete copy of this report is attached as **Appendix 12**. The summary and recommendations portion of the assessment is provided below:

"Section 8 Summary and Recommendations

"CSH undertook this CIA at the request of BSC KVSC, LLC. The research broadly covered the entire ahupua'a of Waikīkī, including the 1.05-acre project area.

"8.1 Results of Background Research

"Background research for this study yielded the following results which are presented in approximate chronological order:

1. *"1. The project area is located within the 'ili of Kapuni and Uluniu in the modern day ahupua'a of Waikīkī in the area known as Waikīkī Kai. The name Waikīkī translates as "water spurting from many sources," and reveals the character of the intact watershed system of Waikīkī prior to European Contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground.*
2. *A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately AD 1400. This, in combination with coconut groves and fishponds along the*

shoreline, enabled the growth of a sizeable population, including the coastal village of Waikīkī, which most likely centered around the mouth of 'Āpuakēhau Stream in the vicinity of the project area.

3. *Numerous wahi pana, 'ōlelo no'eau, 'oli, and mo'olelo are associated with Waikīkī which suggests the ahupua'a's historical significance, abundance of natural resources, and the presence of a viable Native Hawaiian population. These include mo'olelo of Ka-lua-'Ōlohe, the heiau of Papa'ena'ena and 'Āpuakēhau, the high priest Ka'opulupulu, the warrior Kawelo, the life-giving stones of Kapaemahu and Kapuni.*
4. *Cultural layers excavated throughout Waikīkī Kai and radiocarbon dated to approximately AD 1400 to 1800 provide evidence of this habitation, cultivation, and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes. In close proximity to the project area are cultural layers indicative of habitation at the Princess Ka'iulani Hotel (SIHP # -7066, Runyon et al. 2010), the Moana Hotel (SIHP # -1974, Simons et al. 1991; SIHP # -7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP # -5796, Yucha et al. 2009).*
5. *At least seven heiau and other religious sites were located in Waikīkī Kai, including Helumoa Heiau (also called 'Āpuakēhau Heiau) (Thrum 1907a:44) and Nā Pōhaku 'Ola Kapaemahu a Kapuni (commonly called the Wizard Stones) (Paglinawan 1997; Thrum 1907b:139–141) in the vicinity of the project area. These sites are connected through mo'olelo to 'Āpuakēhau Stream, which once flowed to the north of the project area.*
6. *Four of these heiau were associated with human sacrifice, including Helumoa Heiau (Thrum 1907a:44). Sacrificial drownings of kauwā also took place in Waikīkī (Ka Loea CIA for the King's Village Redevelopment Project, Waikīkī, Honolulu (Kona), O'ahu 100 TMKs: [1] 2-6-023:029, 037, and 076 (por.) Cultural Surveys Hawai'i Job Code: WAIKĪKĪ 123 Summary and Recommendations Kālai'āina 1899, translation in Sterling and Summers 1978:33). In addition, excavations and surveys have documented a high density of burials within the Jaucus sand deposits of Waikīkī, including 24 burials at the Moana Hotel (SIHP # -1974, Simons et al. 1991).*
7. *Historic trails on the south side of O'ahu included a trail along the coastal area of Waikīkī most likely where the present Kalākaua Avenue is located, near the project area. 'Ī'ī describes the trail going through the 'ili of Kapuni where the project area is located ('Ī'ī 1959:92–94).*
8. *Waikīkī Kai was a place of royal residence, starting with Mā'ilikūkahi in approximately AD 1490 (Kamakau n.d., cited in McAllister 1933:74) and extending through Kamehameha ('Ī'ī 1959:17). The 'ili of Kaluaokau and of Helumoa, adjacent to the 'ili of the project area, were places of previous royal residence.*
9. *During the Māhele, there were 437 land claims in Waikīkī Ahupua'a of which only 243 were awarded. Within the 'ili of Kapuni and Uluniu, only one land claim (LCA 00104FL), which includes the project area, was awarded to M. Kekuanaoa who also owned land in other 'ili of Waikīkī. The LCA included a house lot in a*

coconut grove which most likely referred to the land in Uluniu and Kapuni, where a coconut grove once stood. LCAs in nearby lots are also described as containing many fishponds and lo'i. The nearby 'ili of Kaluaokau was granted to William Lunalilo (LCA 8599, 'Āpana 31) and bequeathed to Queen Emma.

10. *Oral histories indicate early twentieth century gathering practices of several varieties of limu and wana along the Waikīkī coast, and the catching of manini in the nearshore waters and moi, shrimp, 'oama, mullet, 'a'awa, āholehole, pāpio, and 'o'opu in 'Āpuakēhau.*
11. *Oral histories also indicate the Waikīkī School, the Kawaiha'o Church Waikīkī Branch, and its associated cemetary were located in the vinicity of the project area directly across Kalākaua Avenue from the Moana Hotel. The Waikīkī Theatre, also in close proximity, opened in 1936.*

"8.2 Results of Community Consultations

"CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural descendants of Waikīkī in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to a total of 78 individuals or groups; seven responded, and two of these kama'āina and/or kūpuna (elder) met with CSH for a more in-depth interview. CSH is still awaiting written responses from SHPD and OHA. This community consultation gathered the following information:

"1. Mr. Edward Halealoha Ayau of Hui Mālama I Nā Kūpuna 'O Hawai'i Nei recalled conducting a reinterment on Prince Edward Street. The project area is bound on the mauka side by Prince Edward Street.
2. *Mrs. Winona (Nona) Kamai and her daughter Dwynn shared their memories of Waikīkī and the project area. King's Alley, the former name for King's Village, was once a place CIA for the King's Village Redevelopment Project, Waikīkī, Honolulu (Kona), O'ahu 101 TMKs: [1] 2-6-023:029, 037, and 076 (por.) Cultural Surveys Hawai'i Job Code: WAIKĪKĪ 123 Summary and Recommendations of employment for Dwynn. She recalled cultural demonstrations such as lei making, coconut frond weaving, and hula performances by kumu hula Aloha Dalire and her hālau.*
3. *In 1972, Bishop Museum opened the Heritage Theater at King's Alley. According to Dwynn, an exhibit pertaining to the Hawaiian Monarchy in Waikīkī was on display. Double decker buses provided transportation between Bishop Museum in Kalihi, the Falls of Clyde ship at Aloha Tower, and the Heritage Theater in Waikīkī. The theater was open for many years before downsizing to a bookstore and gift shop.*
4. *The cultural landscape of Waikīkī extends beyond the modern division of Waikīkī Kai. Mr. Becket shared the locations of two culturally significant sites. SIHP # -5463 is located in Wa'ahila Valley on the lower slope of Wa'ahila Ridge. Although # -5463 is designated as a house site, the Committee for the Preservation of Cultural Sites and Properties, under the O'ahu Council of Hawaiian Civic Clubs, has determined it is likely a heiau. The other site is located*

at Kamanele Park in Mānoa Valley and the Committee similiary has determined it is likely a pre-Contact heiau.

5. *La Pietra Hawai'i School for Girls was built over a po'okanka class heiau, Papa'ena'ena. Although the heiau is completely demolished, Mr. Becket recalled having a conversation with the late Marion Kelly, anthropologist and activist, during the 1980s-1990s regarding possible remnants of the lower portion of Papa'ena'ena Heiau below the school. CSH and Mr. Becket investigated a portion of Kapi'olani Park below La Pietra. The outcome was deemed inconclusive.*
6. *Diamond Head Lighthouse was the former site of the Pahu-a-Maui Heiau. The lighthouse is now owned and operated by the Coast Guard. Mr. Becket recalled seeing a photo of a dry stacked wall with the Diamond Head Lighthouse built on it. The location of the former dry stacked wall is possibly the current site of a caretaker's home or administrative building for the Coast Guard.*
7. *The land of Waikīkī Kai was comprised of a vast agricultural system including lo'i and fishponds. The great-great-great grandfather of Mr. Clarence Medeiros Jr. was conveyed LCA 1268 via Nakai. The 1.60-acre parcel consisted of lo'i. Mr. Medeiros' maternal great-great grandfather, Zen Man Sing, arrived in Hawai'i from China in 1888. Shortly after his arrival he worked in Waikīkī with relatives planting rice and taro.*

"8.3 Recommendations

"Based on information gathered for the cultural and historic background and community consultation detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH identifies below these potential impacts (Nos. 1-2) and makes two recommendations (Nos. 3-4):

"1. Although Native Hawaiians likely conducted traditional practices within the project area, there are no customary practices occurring on these lands at this time. A trail formerly cut through the project area toward Papa'ena'ena Heiau and at one time there may have been other cultural resources connected to the project area including lo'i. Although the lands of the project area have since been developed, there is a possibility remnants of these cultural resources may still exist. CIA for the King's Village Redevelopment Project, Waikīkī, Honolulu (Kona), O'ahu 102 TMKs: [1] 2-6-023:029, 037, and 076 (por.) Cultural Surveys Hawai'i Job Code: WAIKĪKĪ 123 Summary and Recommendations
2. *There is a high possibility iwi kūpuna, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural finds. The project area contains Jaucus sand deposits, the preferred sediment for interment of the dead. In addition, a community participant indicated performing a reinterment mauka of the project area.*
3. *Personnel involved in the construction activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials (or other cultural finds) be identified during ground disturbance, the*

construction contractor should immediately cease all work and the appropriate agencies should be notified pursuant to applicable law.

4. *BSC KVSC, LLC should consult with the cultural descendants of Waikīkī to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts are uncovered during construction or long-term maintenance for the project.*

MK will continue its meetings with community members and descendants, in an effort to consider other ideas and options that may benefit the local Waikīkī community.

MK's community outreach also included meetings with the WNB Chair and Zoning Committee Chair, SHPD and OIBC. This outreach is discussed in more detail in Section 15 of this FEA.

9. CONFORMANCE WITH SMA GUIDELINES

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

The Project is located about 500 feet from the shoreline on the mauka side of Koa Avenue. Existing ocean front lots and the Hyatt Regency Waikiki provide a buffer for any impacts from the Project Site on the ocean and shoreline area. The Project will not affect coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

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

The Project will replace existing urban resort commercial and apartment developments that have long been established on the properties and contributed to the long-term productivity of the properties. The proposed redevelopment of the Project Site is important to the maintenance and enhancement of the long-term productivity of these properties. The commercial facilities are in need of replacement, as they have outlived their beneficial economic life and have been experiencing diminishing returns. The existing apartment facilities are also in need of replacement as they represent underutilization of a valuable property in Waikīkī. Replacement of these existing uses with a high rise condo hotel development will better utilize these properties and provide a beneficial economic use and benefits to tourism and the City and State with increased tax revenues.

11. DESCRIPTION OF IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The King's Village, Prince Edward Apartments and Hale Waikīkī represent existing irreversible and irretrievable commitments of the land to urban resort commercial and residential development. However, all three of the buildings have become obsolete or have outlived their

usefulness as efficient and attractive visitor facilities capable of supporting the visitor industry in Waikīkī. Income from each of the three developments do not provide a reasonable return on investment and are unable to compete in today's resort market as a viable retail development or apartment use.

12. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

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

12.1 LOSS OF RETAIL AND DINING ON THE PROJECT SITE

The loss of retail and dining jobs associated with the King's Village and Hale Waikiki and the loss of GET revenue during the construction period.

12.2 DISPLACEMENT OF EXISTING TENANTS

The displacement of the existing commercial and apartment tenants at the King's Village, Prince Edward Apartments and Hale Waikiki, during the construction period and thereafter.

12.3 CONSTRUCTION IMPACTS

Short term construction impacts related to noise and air quality. There will also be short term impacts related to vehicular and pedestrian traffic related to the construction at the Project Site.

13. MITIGATION MEASURES

13.1 JOB REPLACEMENT

Although there will be a loss of about 200 full-time and part-time jobs from the existing development at King's Village, Prince Edward Apartments and Hale Waikiki. The proposed redevelopment is expected to result in the creation of approximately 320 full-time jobs and 64 part-time jobs more than offsetting the jobs lost. Additionally, there will be temporary construction jobs for 30-month construction period that will peak at 250-300 on-site jobs plus ancillary support services.

13.2 INCREASED TAX REVENUES

Although there will be a reduction in GET collections during construction, the future projected increase in sales, GET collections and hotel room tax from the Project will more than off-set the tax revenues lost during construction.

13.3 TENANT INFORMATION AND NOTICE

The tenants have been informed and updated on the redevelopment plans, and their leases and license agreements specifically acknowledge the potential for redevelopment and are either short term or cancellable upon written notice.

The existing tenants at the Project Site will be informed on the construction start date as soon as possible. The tenants will also be appropriately notified of their lease or license termination, and should have ample time to make alternative arrangements when the Project moves forward.

13.4 CONSTRUCTION PRACTICES

13.4.1 Noise

Y. Ebisu & Associates has prepared the "Acoustic Study for the 133 Kaiulani Project, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated April 2014. The study in its entirety is provided in **Appendix 2**.

Chapter VII. Discussion Of Project-Related Noise Impacts And Possible Mitigation Measures, from that Acoustic Study, includes a discussion of mitigation measures for the Project that is summarized as follows:

Traffic noise mitigation in the form of closure of windows and air conditioning is recommended.

The use of coarse finishes for the circulation driveway surfaces will prevent the tire squeal noise for typical circulation speeds within the parking structure.

The use of properly muffled construction equipment will be required on the job site.

Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

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

13.4.2 Air Quality

B.D. Neal has prepared an "Air Quality Study for the 133 Kaiulani Condo-Hotel Development" ("Air Quality Study") dated April 2014. The study in its entirety is provided in **Appendix 3**.

Section 8.0, Conclusions and Recommendations, from that Air Quality Study, describes mitigation measures for the Project and is summarized as follows:

As recommended, during demolition and construction, to control dust, active work areas and any temporary unpaved work roads will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Wind erosion of inactive areas of the site that have been disturbed will be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks will be covered when traveling on roadways to prevent windage. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the Project area.

During construction phases, increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers will be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

13.4.3 Traffic

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

13.5 TRAFFIC IMPROVEMENTS

Although traffic operations (level of service) with the Project in 2017 are expected to remain similar to conditions without the Project in 2017, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report 133 Kaiulani" ("Traffic Impact Report") dated May 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 4**. The report recommends the following traffic mitigation measures:

"Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*

4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

During the design phase of the Project, MK will work to implement the recommendations of the Traffic Impact Report.

In addition to the initial Traffic Impact Report, at the request of DPP, a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" ("Two-Way Conversion Report) dated August 2014 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 5**. The Two-Way Conversion Report stated the following in its Recommendations and Conclusion:

"V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the design of the two-way conversion of Kaiulani Avenue.

1. Modify the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue.
2. Modify the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications. In addition, modify the traffic signal phasing and timing as necessary."

"VI. CONCLUSION

The proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. The proposed project entails the conversion of Kaiulani Avenue between Kalakaua Avenue and Koa Avenue. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes."

MK agrees to pay its fair share for the improvements for the conversion of Kaiulani Avenue from a one-way to a two-way roadway between Kalakaua Avenue and Koa Avenue. MK understands that two other planned developments will also benefit from the conversion and will work towards an agreement on the fair share participation of these

developments as well, with a goal of the improvements being constructed prior to the certificate of occupancy being issued for the first development that proceeds with development.

13.6 ACOUSTICAL (NOISE) LONG TERM IMPACTS

Y. Ebisu & Associates has prepared the "Acoustic Study for the 133 Kaiulani Project, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated April 2014. The study in its entirety is provided in **Appendix 2**. The following details mitigation measures for potential long term noise impacts related to traffic and air conditioning equipment:
"Traffic Noise. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected since traffic noise increases associated with project traffic are not significant....

"Traffic noise mitigation measures are recommended for all proposed residential units on the south (makai) face of the tower building, and for those units at Locations Ewa1 and Mauka2 (see Figures 12 through 14). Traffic noise mitigation measures in the form of closure and air conditioning of the residential units would be acceptable."

14. SUMMARY OF UNRESOLVED ISSUES

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

- A PD-R Permit application will be submitted for review by DPP and approval by the City Council.
- A WSD Permit, Major application will be submitted for review and approval by the DPP at a later date.
- A surface encroachment variance, subdivision application for a pedestrian easement and a surface encroachment variance, related to improvements in the City's right-of-way area and in the front yard to have the sidewalk meander through the City's right-of-way and the front yard.
- A Signage Master Plan application will be submitted for review and approval by the DPP as a Zoning Adjustment at a later date.
- A Conditional Use Permit (CUP), Minor for Joint Development will be submitted for review and approval by the DPP at a later date.
- Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.
- An NPDES Permit for construction over an acre and possibly for dewatering effluent (although not expected) will be submitted to the Department of Health (DOH).
- A Construction Noise Permit will be submitted to the DOH.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.

- Communications with existing tenants impacted by the Project will continue beyond the completion of the FEA.

15. COMMUNITY INPUT

MK has been proactive in keeping the community and cultural descendants apprised of the Project's progress, and have solicited comments and concerns to be identified and incorporated in plans as applicable. Some specific actions taken to date are summarized below.

15.1 WAIKIKI NEIGHBORHOOD BOARD

A meeting was conducted with Mr. Bob Finley, Chair of the Waikiki Neighborhood Board No. 9 and Mr. Jeff Merz (Chair of the New Projects Committee) on March 25, 2014 to discuss the Project in anticipation of appearing at the April 8, 2014 Board meeting. At the April 8, 2014 Board meeting, a presentation of the Project was made by Keith Kurahashi, Planning and Zoning consultant. Following the presentation and an opportunity for the Board to express questions, comments and concerns, the Board voted to support the concept of the King's Village Renovation Project, with a vote of 11-1-0. A copy of the Board minutes is provided in **Appendix 14**.

The Applicant has recently modified the design of the Project to address an unexpected and significant increase in the projected construction costs, that came in way over budget. The value engineering to bring those costs down has resulted in a more efficient tower design and a reduction in the size of the basement. The entire tower will now be at the 350-foot height, eliminating the 240-foot step section of tower. This has resulted in a narrower tower (reduced the total width by 8 feet between the podium and 240 feet), but now the entire tower is at 350 feet in height. This has also allowed the entire tower to be located in the profile of the Aston Waikiki Beach Tower when viewed from the Punchbowl Lookout, looking toward Diamond Head. The earlier design resulted in a portion of the existing view of Diamond Head from Punchbowl being blocked by the 240-foot tower.

At the February 10, 2015 Board meeting, a presentation of the modified Project was made by Keith Kurahashi, Planning and Zoning consultant. Following the presentation was an opportunity for the Board to express questions, comments and concerns. A copy of the Board minutes is provided in **Appendix 14**.

15.2 WAIKIKI IMPROVEMENT ASSOCIATION

A presentation of the Project was made to Mr. Rick Egged, President of the Waikiki Improvement Association, on April 8, 2014. A presentation to the Waikiki Improvement Association Board was made on May 27, 2014. The Waikiki Improvement Association Board voted to support the Project, with just one abstention.

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

15.3 CULTURAL OUTREACH

Cultural Surveys Hawai`i ("CSH") prepared an archaeological inventory survey plan for the Project, titled " Archaeological Inventory Survey Plan for the 133 Kaiulani Project" (the "Archaeological Inventory Survey") and dated April 2014. A copy of the Archaeological Inventory Survey Plan is provided in **Appendix 6**.

As part of their work on the Archaeological Inventory Survey, Section 5 Cultural Consultation of the Archaeological Inventory Survey is provided in part below:

"Section 5 Cultural Consultation

CSH worked with the project proponents and Dawn Chang of Ku'iwalu to integrate cultural consultation with potentially knowledgeable Native Hawaiian groups and individuals and SHPD throughout the project's AIS investigation. This consultation effort, carried out from November 2013 through March 2014, included public presentations and discussion before the O'ahu Island Burial Council, meetings with previously recognized cultural descendants to burials found in the Waikīkī area, and meetings with the SHPD Archaeology Branch and Culture and History Branch staff.

This consultation effort afforded these different concerned parties the opportunity to provide input on the AIS testing strategy, and, as a result of this consultation, the number of AIS test excavations was increased twice in response to consulting party concerns. The consultation effort also fostered discussion regarding how faunal and human bone was distinguished in the field during AIS investigations. The consultation effort lead to the project's cultural monitoring program during AIS fieldwork. Additionally, the consultation effort provided a means to review and come to consensus regarding this AIS report's project effect and mitigation recommendations. CSH would like to thank all the agencies and individuals that participated in this consultation effort.

Additionally, to support the project's environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014). The results of public outreach undertaking for the CIA investigation are summarized below.

"5.1 Consultation Meetings and OIBC Presentations

"November 19, 2013 King's Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm, at the Kobayashi Group offices

Attendees:
Cultural Descendants: Kala Keli'inoi, JR Keoneakapu Williams, Kekaimalino Kaopio, Ipo Paia, Ka'anohi Kaleikini, Mana Caceres

Project Proponents: Kathy Inouye, Elton Wong, Russell Kaupu
O'ahu Island Burial Council Kona Representative: Hinaleimoana Wong-Kalu
CSH: Matt McDermott
Ku'iwalu: Dawn Chang

"Discussion:

- *The project proponents provided an overview of the project and the existing conditions of the project area. This included discussion of the approximately 80 percent of the project area that is within the footprint of the large sub-surface parking garage. It also included a discussion of the approximately 400 linear feet of sewer line that would be installed in adjacent City-owned streets as part of the project.*
- *CSH provided a PowerPoint presentation that covered the cultural and historical background for the project area, as well as the results of prior archaeological work that has been done in the vicinity. This was summarized as a predicative model of what was likely to be found in the project area.*
- *Based on the predictive model, CSH went over the proposed AIS testing strategy—with nine test excavations (Trenches 1 through 9) proposed. These test excavations were all located outside the boundaries of the large subsurface parking garage that covers roughly 80 percent of the project area. This subsurface parking garage was clearly dug to below the water table so it is highly unlikely that intact archaeological deposits are located in the subsurface parking garage footprint. The cultural descendants agreed with the proposal to of focus the AIS effort outside the subsurface parking garage.*
- *The cultural descendants approved the AIS testing strategy.*
- *The cultural descendants asked that the AIS fieldwork be conducted under a cultural monitoring program, which the project proponents agreed to.*
- *The schedule for the AIS testing was given.*

"November 20, 2013 King's Village SHPD on-site visit 8:00 to 8:30 am, at the project area

Attendees:
Cultural Descendants: JR Keoneakapu Williams, Kekaimalino Kaopio
SHPD: Susan Lebo (Lead O'ahu Island Archaeologist)
CSH: Matt McDermott

"Discussion:

- *Speaking to a hardcopy printout of the PowerPoint presentation used at the November 19, 2013 cultural descendant meeting, CSH provided SHPD with same background information regarding the project description, the project area, and the project area's cultural, historical, and archaeological background.*
- *With SHPD, the interior of the project area's large subsurface parking garage was inspected and it was confirmed that approximately 80 percent of the project area had been previously dug to below the water table during the installation of this parking garage.*

- *SHPD approved the proposed nine test excavations for the AIS sampling strategy (Trenches 1 through 9)*
- *SHPD expressed concern about the project's approximately 400 linear feet of sewer line—whether or not it was feasible or appropriate to conduct AIS testing along this sewer line alignment. SHPD indicated that this matter should be discussed with the cultural descendants.*

"December 5, 2013 King's Village SHPD meeting 2:30 to 3:30 pm, at SHPD Offices in Kapolei *Cultural Surveys Hawai'i Job Code: WAIKIKI 119 Cultural Consultation AISR for the 133 Ka'iulani Project, Waikīkī Ahupua'a, Honolulu, O'ahu 168 TMK: [1] 2-6-023:029, 037, and 076*

Attendees:
SHPD: Susan Lebo (Lead O'ahu Island Archaeologist)
CSH: Matt McDermott

"Discussion:
- *CSH provided an update to SHPD regarding the timing of the AIS fieldwork*

"December 11, 2013 OIBC Presentation and Discussion

- *The project proponents provided an overview of the project and the existing conditions of the project area.*
- *CSH spoke to a PowerPoint presentation, going over the cultural and historical background for the project area, as well as the results of prior archaeological work that has been done in the vicinity. This was summarized as a predicative model of what was likely to be found in the project area.*
- *Based on the predictive model, CSH went over the proposed AIS testing strategy—with nine test excavations (Trenches 1 through 9) proposed.*
- *The OIBC members were appreciative of the project update and asked that they continue to be kept informed as the AIS fieldwork was completed and the AIS report was underway.*

"January 14, 2014 King's Village SHPD Meeting 2:30 to 3:30 pm, at Kalanimoku Building

Attendees:
Cultural Descendants: Ka'anohi Kaleikini
SHPD: Susan Lebo (Lead O'ahu Island Archaeologist)
CSH: Matt McDermott

"Discussion:
- *CSH provided an overview of the AIS results of Trenches 1 through 9, including the likely human vertebra found in Trench 1 and the disturbed culturally enriched sand A horizon that was found beneath the Prince Edward apartments.*
- *After discussion, it was agreed that there would be additional AIS test excavations, which became Trenches 10 through 13.*

"January 30, 2014 King's Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm, at the Kobayashi Group offices

Attendees:
Cultural Descendants: Kala Keli'inoi, Ka'anohi Kaleikini, JR Keoneakapu Williams, Kekaimalino Kaopio, Mana Caceres, Makoa Caceres
Project Proponents: Kathy Inouye, Russell Kaupu Cultural Surveys Hawai'i Job Code: CSH: Matt McDermott,
Ku'iwalu: Dawn Chang)

"Discussion:

- *CSH provided an overview of the AIS results of Trenches 1 through 13, including the likely human vertebra found in Trench 1 and the disturbed culturally enriched sand A horizon that was found beneath the Prince Edward apartments.*
- *After discussion, it was agreed that there would be additional AIS test excavations, the exact number and placement would be worked out in consultation with SHPD.*

"February 7, 2014 King's Village SHPD meeting 2:00 to 3:00 pm at SHPD offices in Kapolei

Attendees:
Cultural Descendants: Ka'anohi Kaleikini
SHPD: Susan Lebo (Lead O'ahu Island Archaeologist), Kawika Farm (SHPD Culture and Historic Branch)
CSH: Matt McDermott

"Discussion:

- *CSH provided an overview of the AIS results of Trenches 1 through 13, including the likely human vertebra found in Trench 1 and the disturbed culturally-enriched sand A horizon that was found beneath the Prince Edward apartments. CSH also summarized the comments of the cultural descendants at the January 30th 2014 cultural descendant meeting.*
- *CSH summarized how the distinction between faunal and human bone was made during the AIS fieldwork.*
- *There was discussion about whether or not disarticulated, fragmented human remains found during an AIS should be treated as a burial site under Hawai'i State burial law (HAR § 13-300).*
- *Kawika Farm indicated that the direction he has been given from SHPD's Culture and History Branch Chief and SHPD's Attorney General's Office advisors was that all human remains found during AIS were to be considered burial sites under Hawai'i burial law, and that unless there was evidence to the contrary, SHPD ethnicity determinations for these burial sites should be Native Hawaiian.*
- *After discussion, it was agreed that there would be additional AIS test excavations, which became Trenches 14 through 16.*

"March 11, 1014 King's Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm at the Kobayashi Group offices

Attendees:
Cultural Descendants: Kala Keli'inoi, Ka'anohi Kaleikini, Mana Caceres, Aliikaua
Project Proponents: Kathy Inouye, Elton Wong, Russell Kaupu
O'ahu Island Burial Council Kona Representative: Hinaleimoana Wong-Kalu,
CSH: Matt McDermott,
Ku'iwalu: Dawn Chang

"Discussion:

- *CSH provided an overview of the AIS results of Trenches 1 through 16.*
- *The cultural descendants expressed their satisfaction with the AIS testing effort.*
- *The cultural descendants approved the AIS mitigation recommendations consisting of an archaeological monitoring program during construction and a burial treatment plan for the vertebra fragment found in Trench 1. It was explained that based on SHPD guidance, this vertebra fragment would be considered a Native Hawaiian burial site.*
- *The cultural descendants did not want to see the project's sewer line subject to AIS investigation. They would prefer that the sewer line be part of the project's archaeological monitoring program. They understood that under a monitoring program any human skeletal remains found in the sewer line would be inadvertent finds and not previously identified and they accepted this. They thought it would be more appropriate to deal quickly with treatment decisions for any human remains in the sewer line as inadvertent finds than to drag out the decision as previously identified remains through the burial treatment plan process.*

"March 12, 2014 OIBC Presentation and Discussion

- *CSH provided an overview of the AIS results of Trenches 1 through 16.*
- *CSH provide an overview of the AIS reports mitigation recommendations: burial treatment plan and archaeological monitoring program.*
- *The project proponents gave an update on project design and schedule.*
- *The OIBC said they appreciated the update and that they looked forward to the burial treatment plan.*

16. PARTIES CONSULTED

The list of agencies, organizations, public utilities, property owners, and other individuals that were provided copies (cd's or hard copies) of the DEA is provided in **Appendix 16**. Their timely comments have been included and responded to in this FEA in **Appendix 17**, which includes a list o those responding.

17. PERSONS AND FIRMS PREPARING THIS FEA

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai`i 96822

Design Partners Incorporated
Architects
Honolulu Office
1580 Makaloa Street, Suite 1100
Honolulu, Hawai'i 96814

Wilson Okamoto Corporation
Traffic Study
1907 S. Beretania St., Suite 400
Honolulu, Hawai`i 96826

Sato & Associates, Inc.
Engineering Report
2046 South King Street
Honolulu, Hawai'i 96826

Cultural Surveys Hawai`i
Archaeological Inventory Survey
Cultural Impact Assessment
P. O. Box 1114
Kailua, Hawai`i 96734

Y. Ebisu & Associates
Acoustical Study
1126 12th Avenue, Room 305
Honolulu, Hawai'i 96816

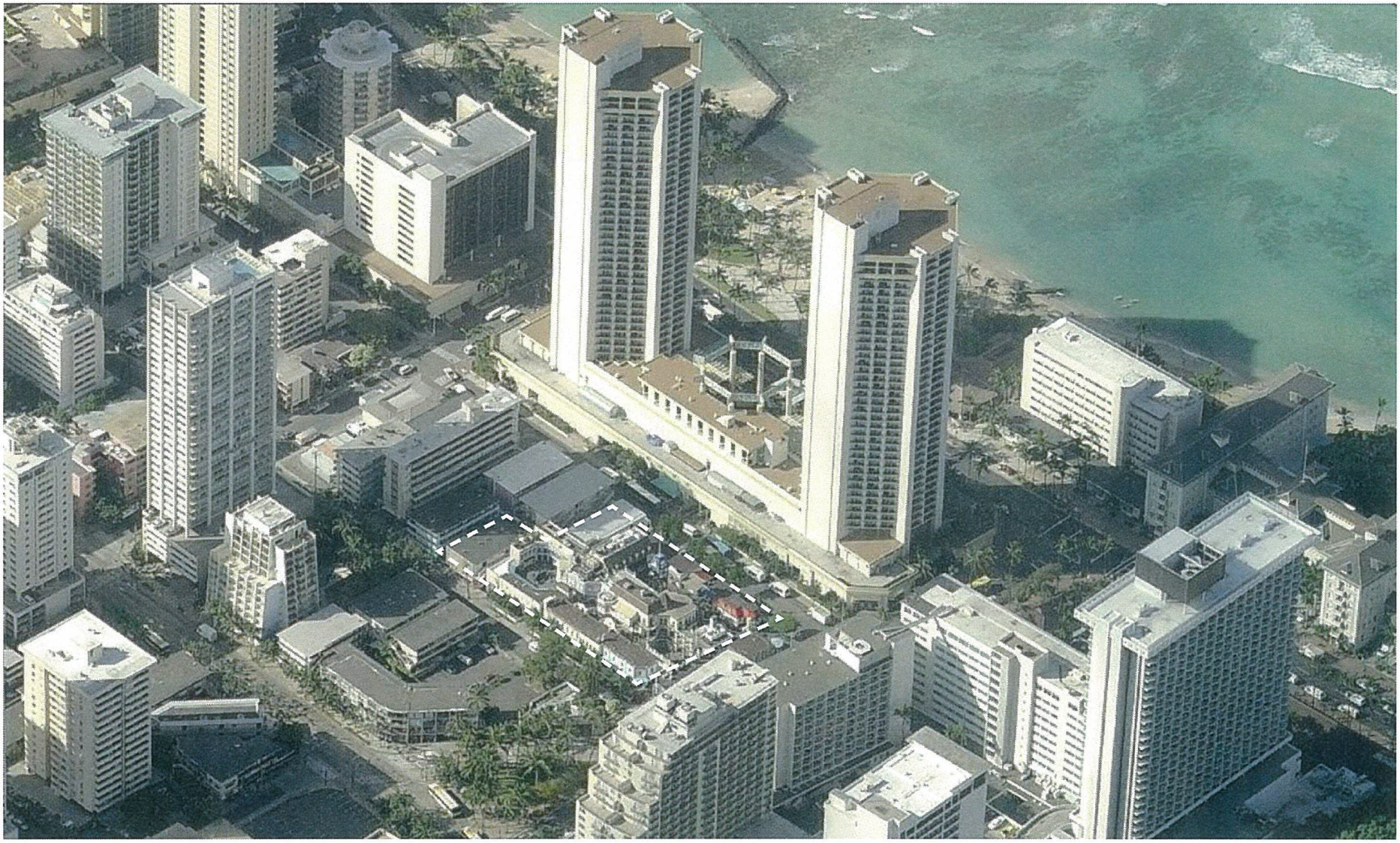
Barry D. Neal
Air Quality
Certified Consulting Meteorologist
Atmospheric Research & Technology, LLC
P.O. Box 1808
Kailua-Kona, Hawai'i 96745

AECOS Inc
Biological Study – Flora/Fauna
45-939 Kamehameha Highway, Suite 104
Kaneohe, Hawai'i 96744

Rowan Williams Davies & Irwin Inc.
Pedestrian Wind Study
Consulting Engineers & Scientists
650 Woodlawn Road West, Guelph, Ontario, Canada N1K 1B8

APPENDIX 1A

SITE AERIAL VIEWS AND PHOTOS



SCB

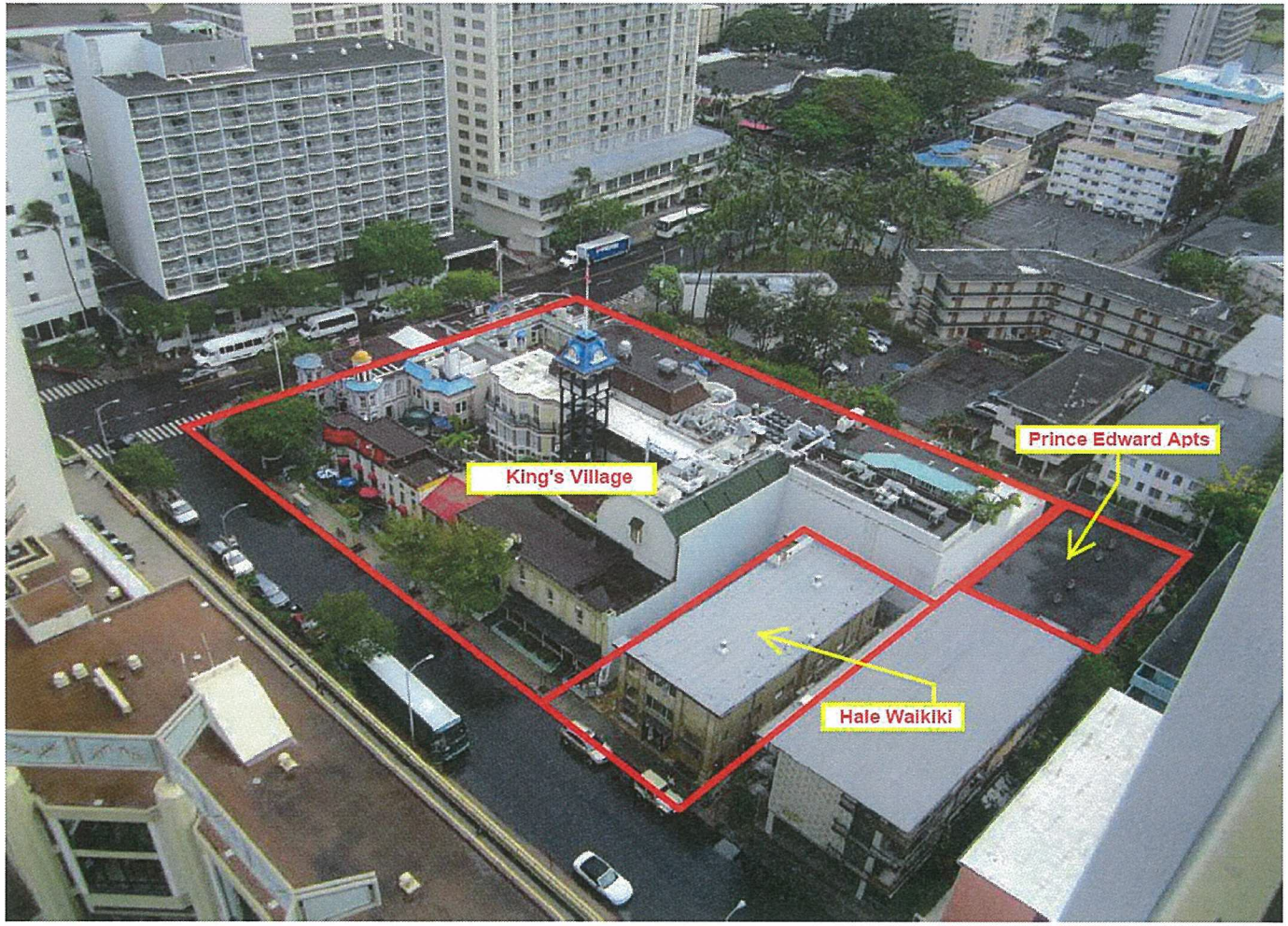
SITE AERIAL VIEW 10.16.2014

133 KAIULANI AVE

Honolulu, Hawaii 2012036.000

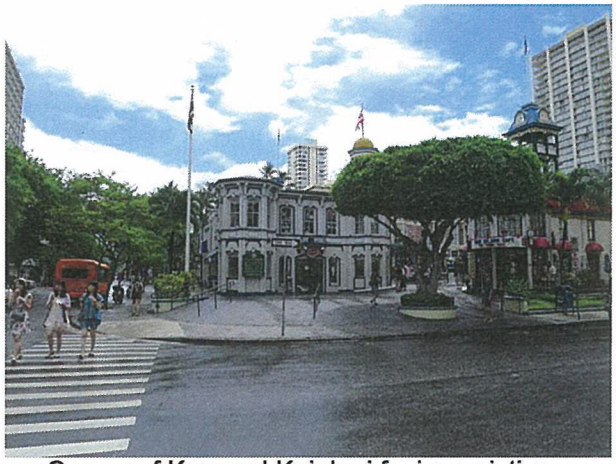
SITE AERIAL PLAN
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000



SITE - EXISTING
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000



Corner of Koa and Kaiulani facing existing Kings Village

Corner of Koa and Kaiulani looking East down Koa ave.

Corner of Koa and Kaiulani looking towards Sheraton Princess Kaiulani Hotel

Corner of Koa and Kaiulani looking up Kaiulani at Kings Village side walk

Design Partners Incorporated

PHOTOS OF EXISTING SITE
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

Corner of Prince Edward and Kaiulani
facing existing Kings Village

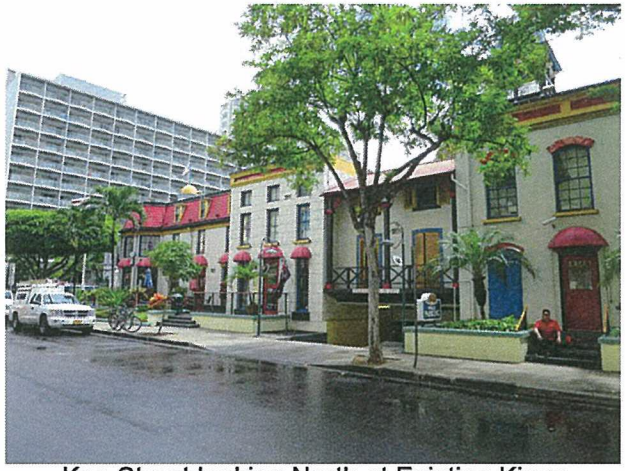
Corner of Prince Edward and Kaiulani
looking East down Koa ave.

Corner of Prince Edward and Kaiulani
looking East down existing Kings Village

Existing 2413 Prince Edward Street,
location of new pocket park.

View of Existing Hyatt Hotel along Koa St. looking North

Existing Hale Waikiki on Koa Street to be part of new development



Koa Street looking North at Existing Kings Village

Existing Hyatt Hotel from Koa Street across from Existing Kings Village.

Design Partners Incorporated

PHOTOS OF EXISTING SITE
133 KAIULANI AVE
Honolulu, Hawaii

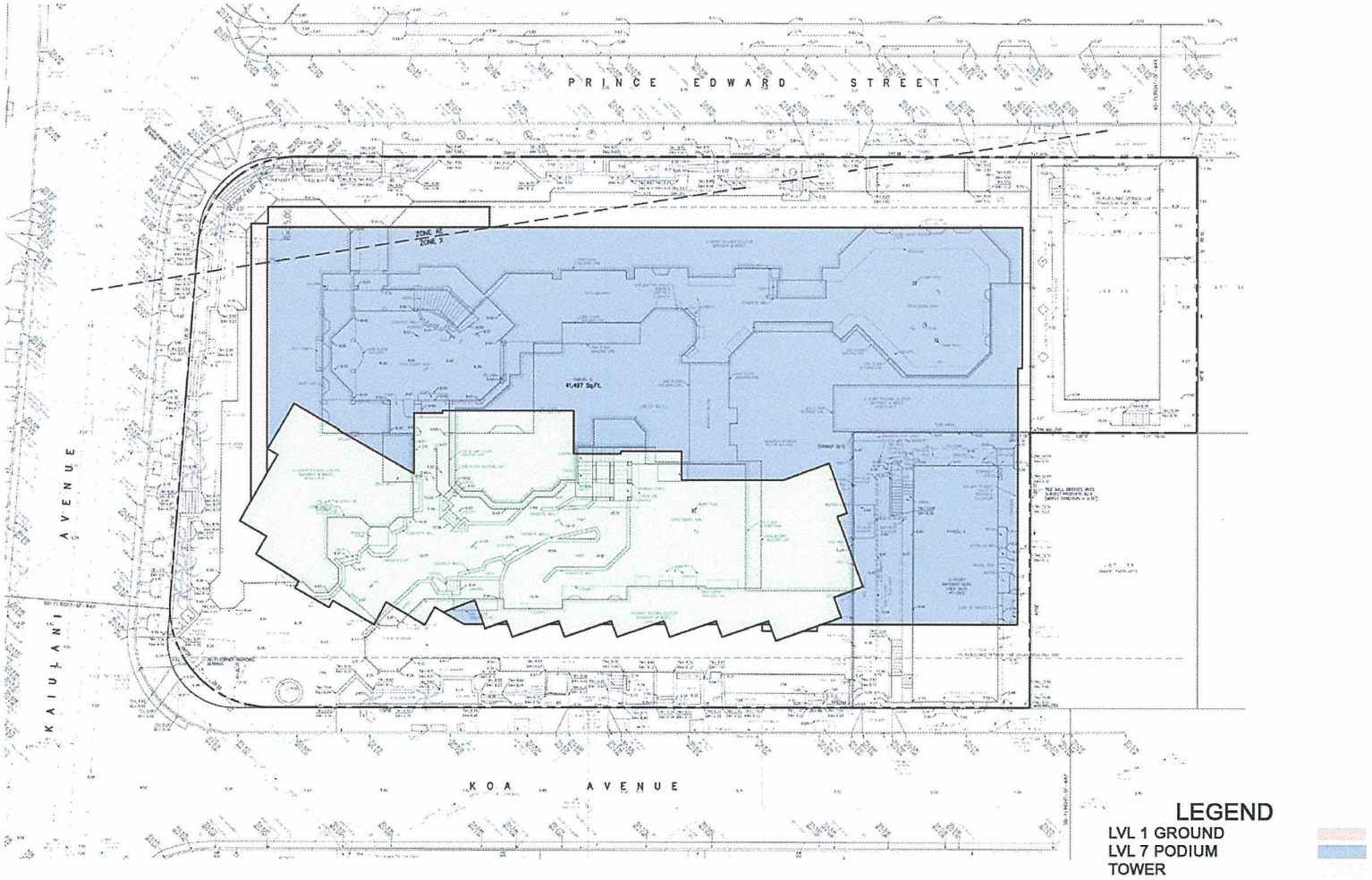
10.16.2014
2012036.000

APPENDIX 1B

NEW CONSTRUCTION WITH EXISTING UNDERLAY

FAR CALCULATIONS

SITE ANALYSIS

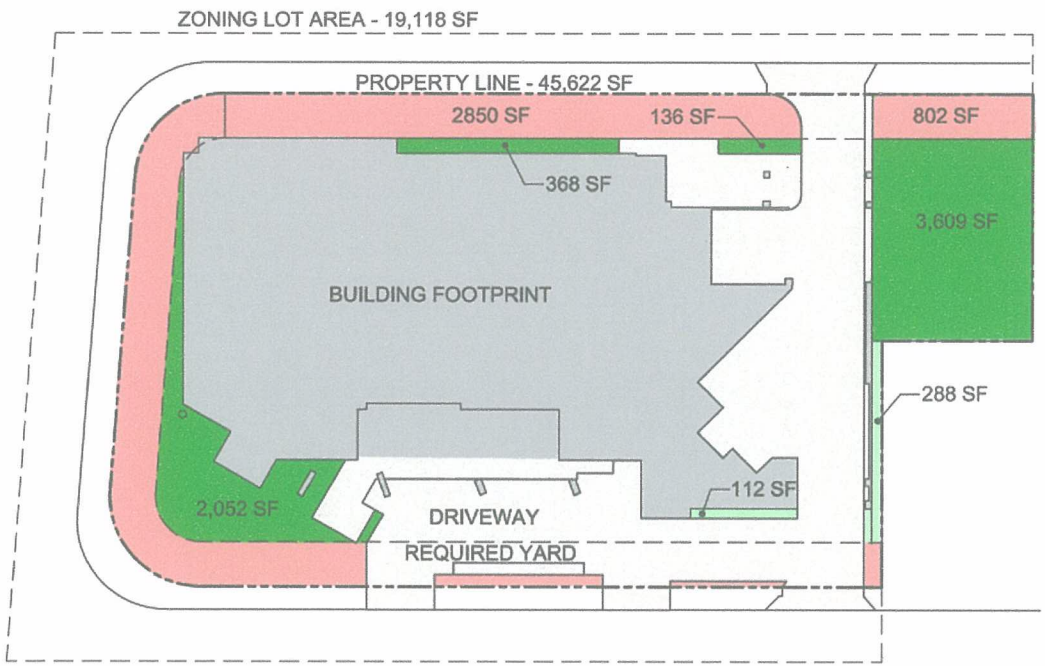


Design Partners Incorporated

SITE - NEW CONSTRUCTION W/ EXISTING UNDERLAY 10.16.2014

133 KAIULANI AVE

Honolulu, Hawaii 2012036.000



BUILDING FOOTPRINT

PUBLIC OPEN SPACE AREA

LANDSCAPED OPEN SPACE AREA

ZONING LOT AREA	45,622 SF + 19,118 SF = 64,740 SF
BASE FAR = 1.0	64,740 SF
OPEN SPACE BONUS	GND LVL 3,609+368+136+2,052 = 6,165 x 10 = 61,650 SF. GND LVL 288 + 112 = 400 x 5 = 2,000 SF RF. EVENT LWN. 2,280 SF X 1 = 2,280 SF GARDEN/LAWN NEAR POOL 400 SF X 1 = 400 SF.
	TOTAL OPEN SPACE BONUS = 66,330 SF.
NEW FAR = 2.03	64,740 SF + 66,330 SF = 131,070 SF / 64,740 SF = 2.03

*FAR - 2.03 UP TO FAR OF 4.0 WILL NEED TO BE NEGOCIATED WITH DPP USING ADDITIONAL PUBLIC BENEFITS

*WITH CONSIDERATION FOR 3-SIDE HARDSHIP AT PRINCE EDWARD ST. THE REVISED FAR IS 2.59

OPEN SPACE BONUS	GND LVL (4,411)+368+136+2,850+2,052=9,817 x10 = 98,170 SF. GND LVL 236 + 112 = 400 x 5 = 2,000 SF RF. EVENT LWN. 2,280SF X 1 = 2,280 SF GARDEN/LAWN NEAR POOL 400 SF X 1 = 400 SF.
	TOTAL OPEN SPACE BONUS = 102,850 SF.
NEW FAR = 2.59	64,740 SF + 102,850 SF = 167,590 SF / 64,740 SF = 2.59

Design Partners Incorporated

SITE - FAR CALCULATIONS
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000


OHANA EAST
(150 KAIULANI)
WAIKIKI TOWER
(2408 CROWNHORN)
BUS #2, 8, 13, 19, 20, 23, 42, 98A
TWO WAY
165'-8"
298'-4"
ONE WAY
45, 622 SF
257'-9"
ONE WAY
82'-6"
PACIFIC MONARCH
(2427 KUHIO)
HYATT REGENCY
PARKIN
BUS #22

APPENDIX 1C

PUNCHBOWL VIEW CORRIDOR

SITE
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

SITE ANALYSIS -PUNCH BOWL VIEW CORRIDOR
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

SITE ANALYSIS -PUNCH BOWL VIEW CORRIDOR 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing view of Diamond Head.

VIEW STUDY -FROM PUNCH BOWL
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

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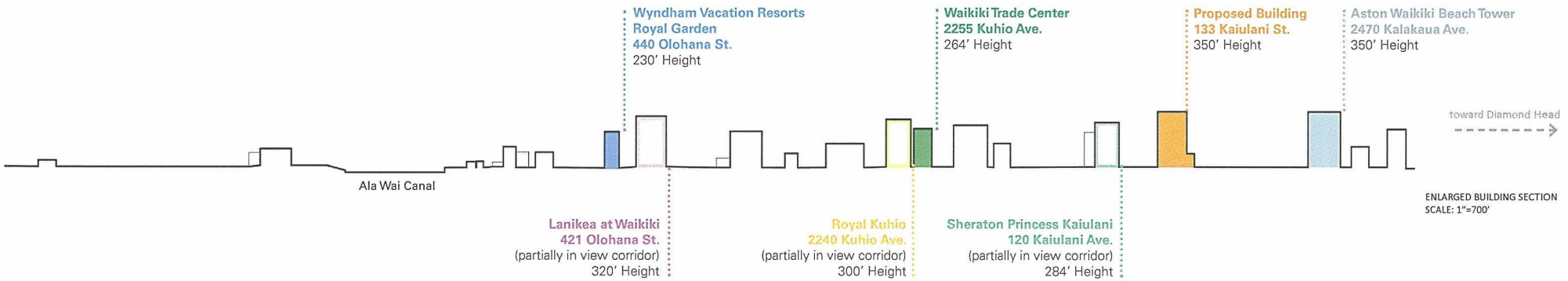
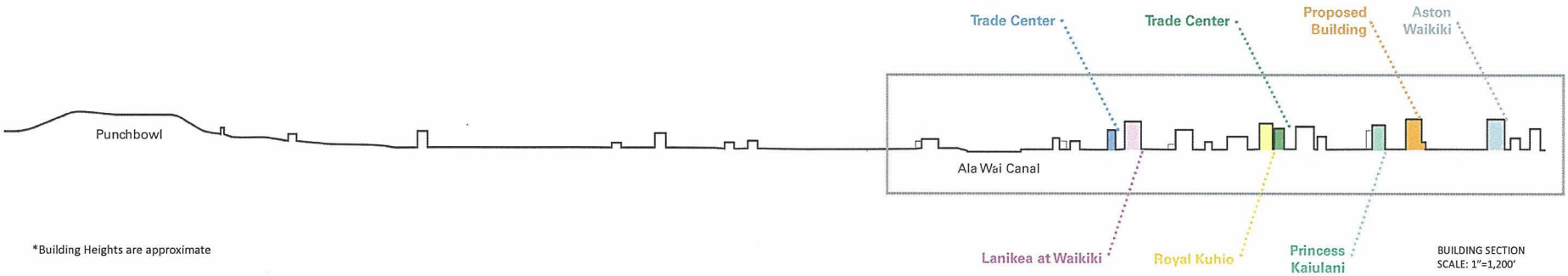
VIEW STUDY -FROM PUNCH BOWL
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000





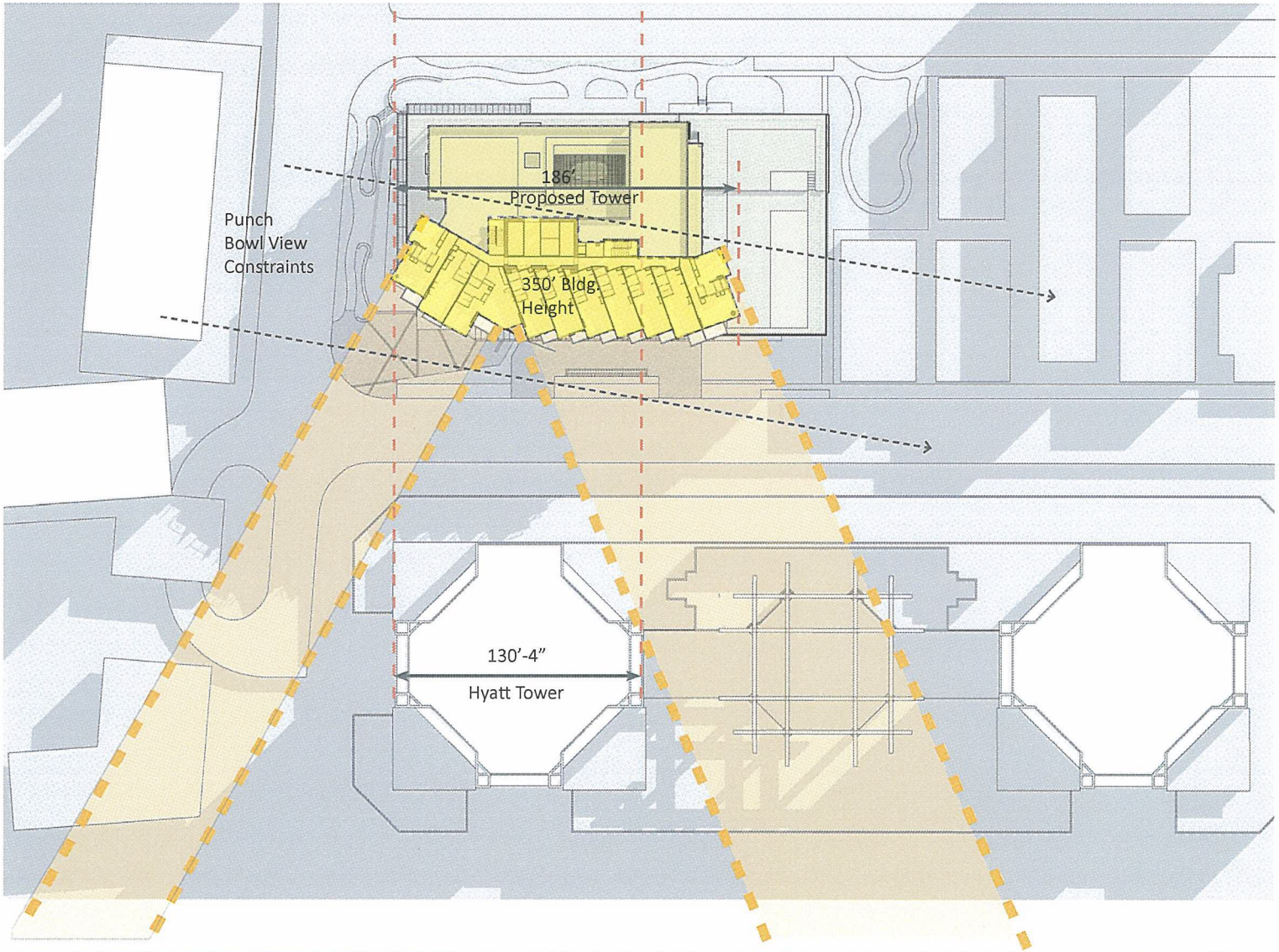
*Building Heights are approximate

SECTION STUDY- THROUGH VIEW CORRIDOR
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

APPENDIX 1D

BUILDING ORIENTATION & VIEWS



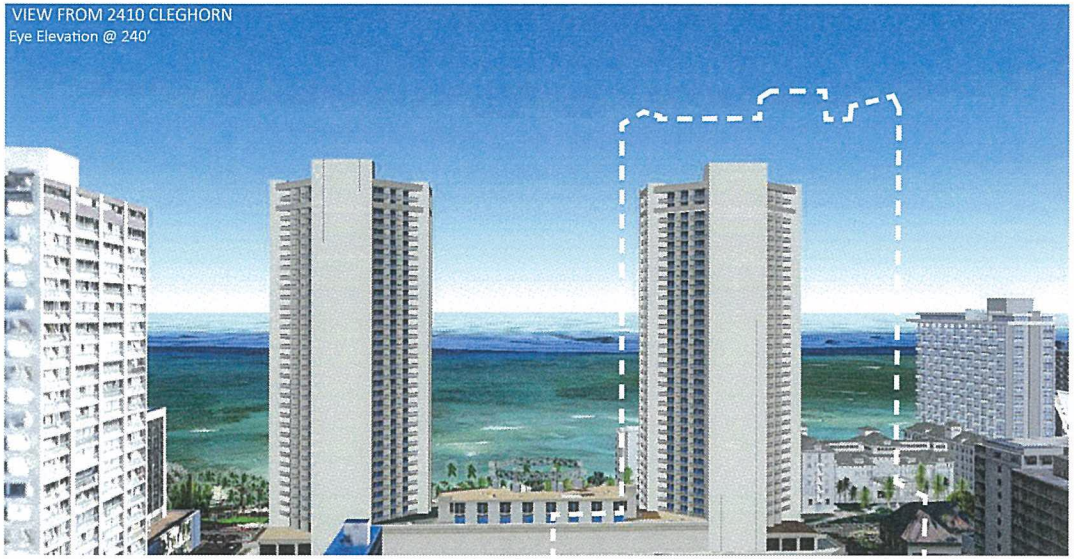
Site & View Contrstraints

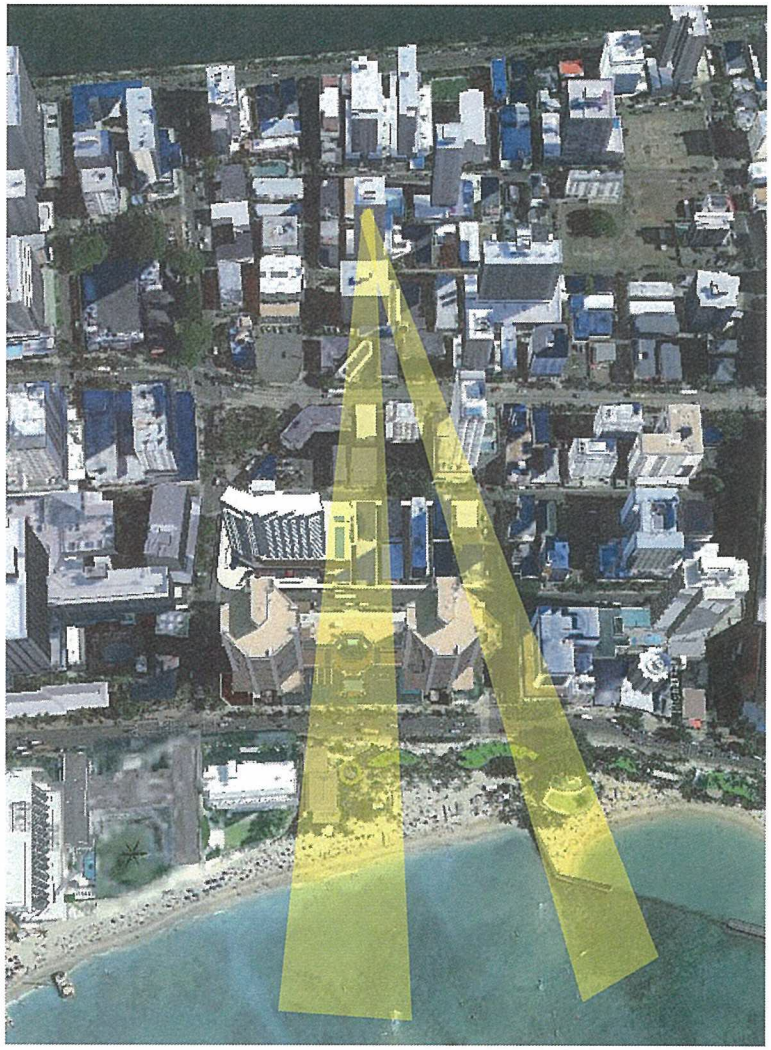
Mauka/Makai Views:
The proposed tower has an Ewa/Diamondhead orientation, but the bulk of the tower falls within the Makai view shadow of the existing Hyatt tower.

The proposed tower plan and residential unit layouts are oriented to maximize ocean views between the adjacent towers.

Punch Bowl/Diamond Head View corridor:
Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing views of Diamond Head from Punch Bowl Lookout.

SITE ANALYSIS - BUILDING ORIENTATION & VIEWS 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000



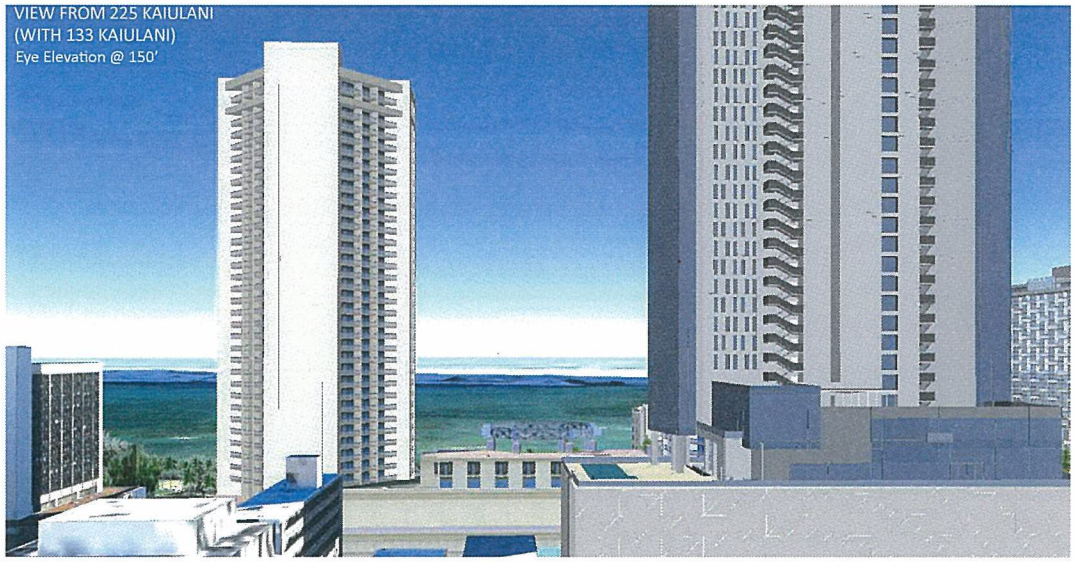


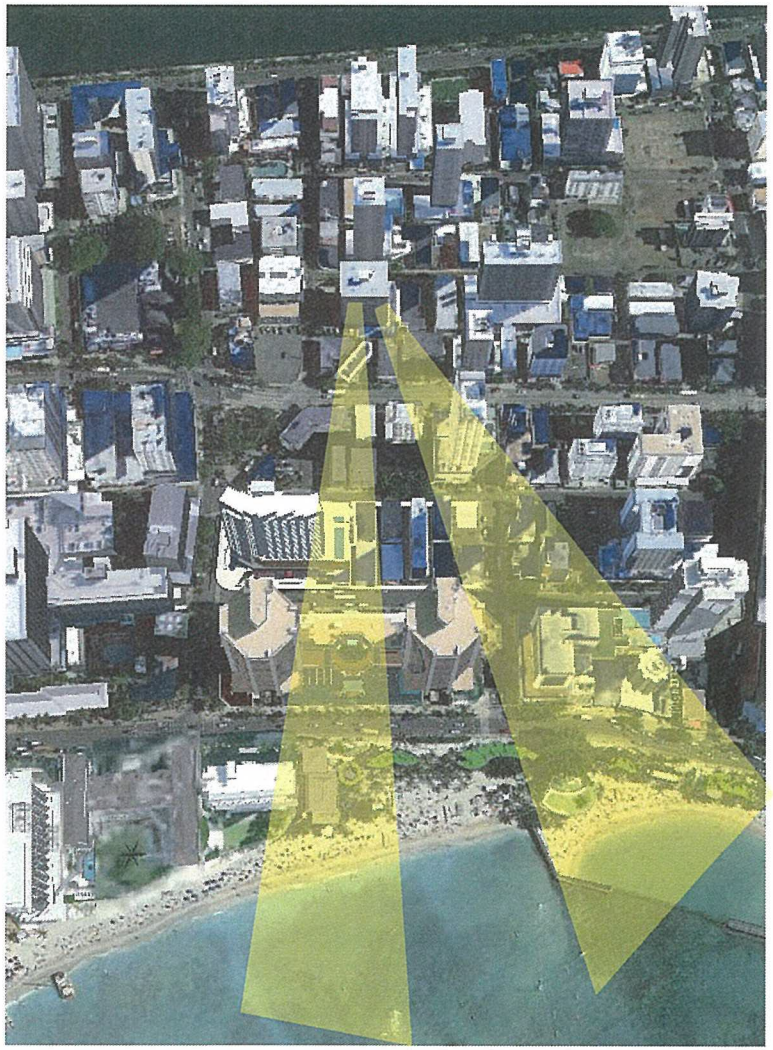
VIEW FROM WAIKIKI SKYTOWER (2410 CLEGHORN ST)

VIEW STUDY FROM WAIKIKI SKYTOWER
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

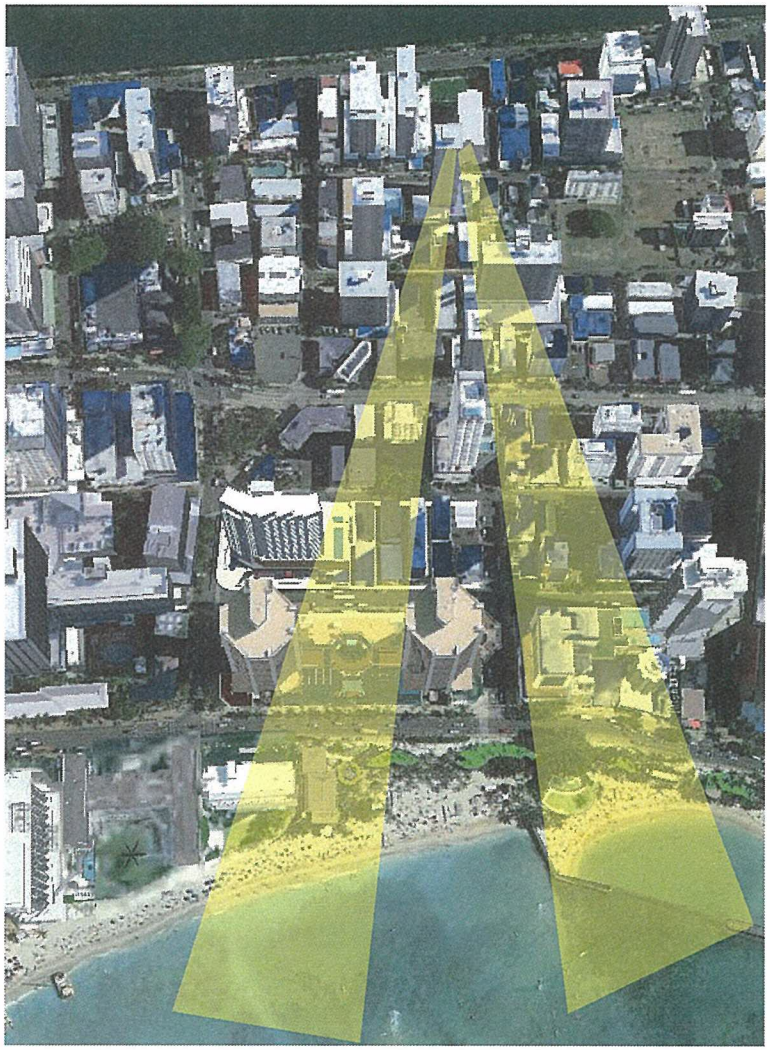
2012036.000





VIEW FROM GOVERNOR CLEGHORN APTS (225 KAIULANI AVE)

VIEW STUDY FROM GOVERNOR CLEGHORN APTS 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

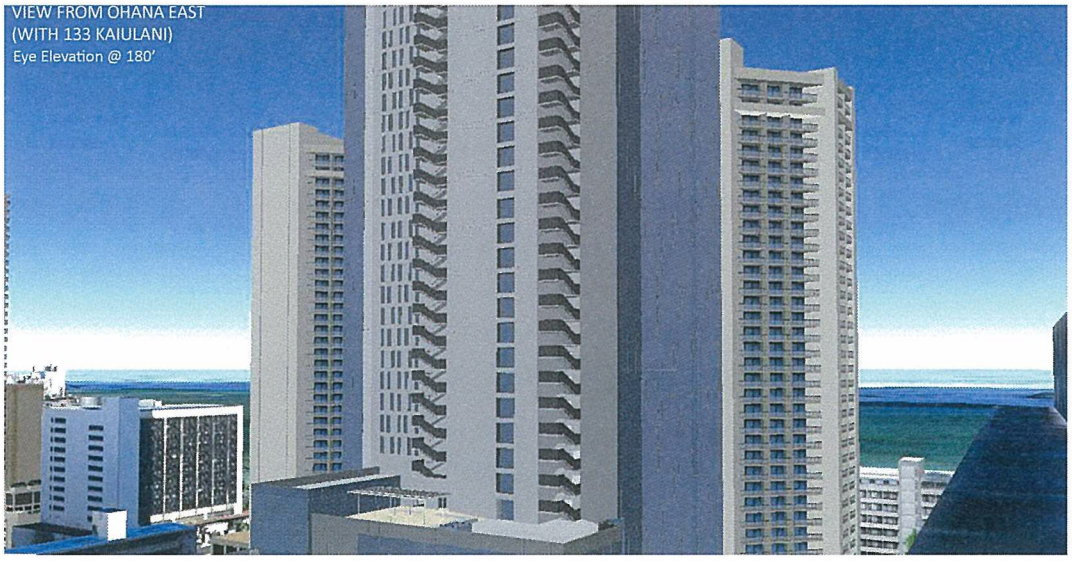


VIEW FROM WAIKIKI TOWNHOUSE (2421 TUSITALA)

VIEW STUDY FROM WAIKIKI TOWNHOUSE
133 KAIULANI AVE
Honolulu, Hawaii

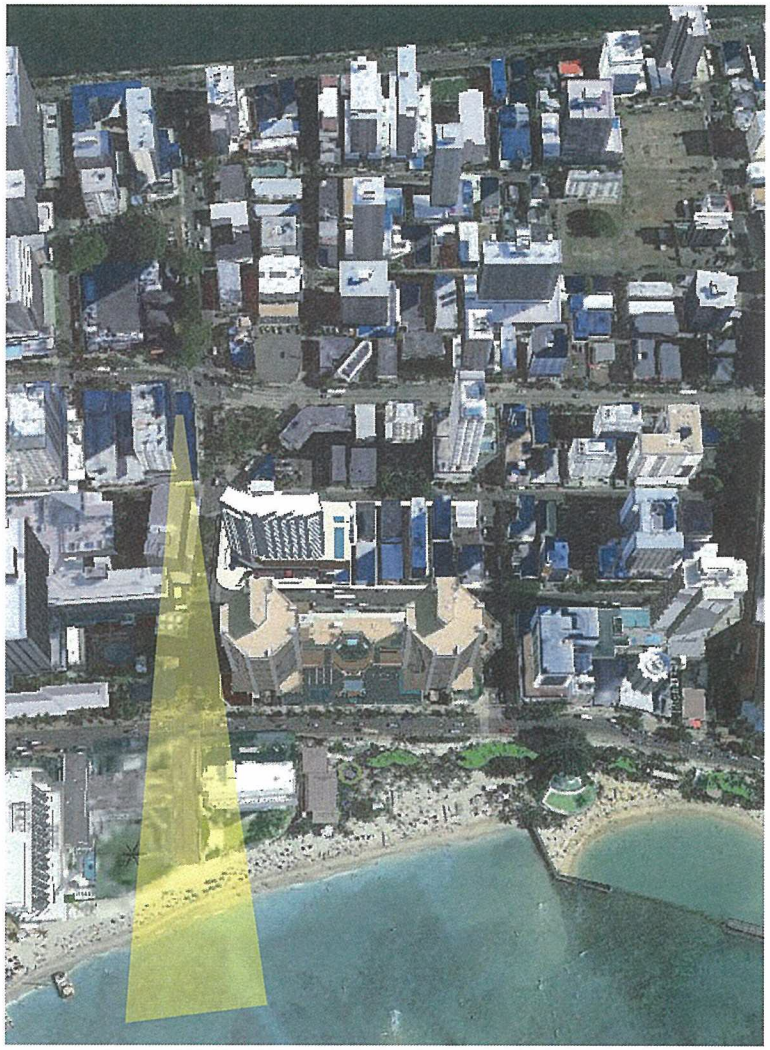
10.16.2014

2012036.000



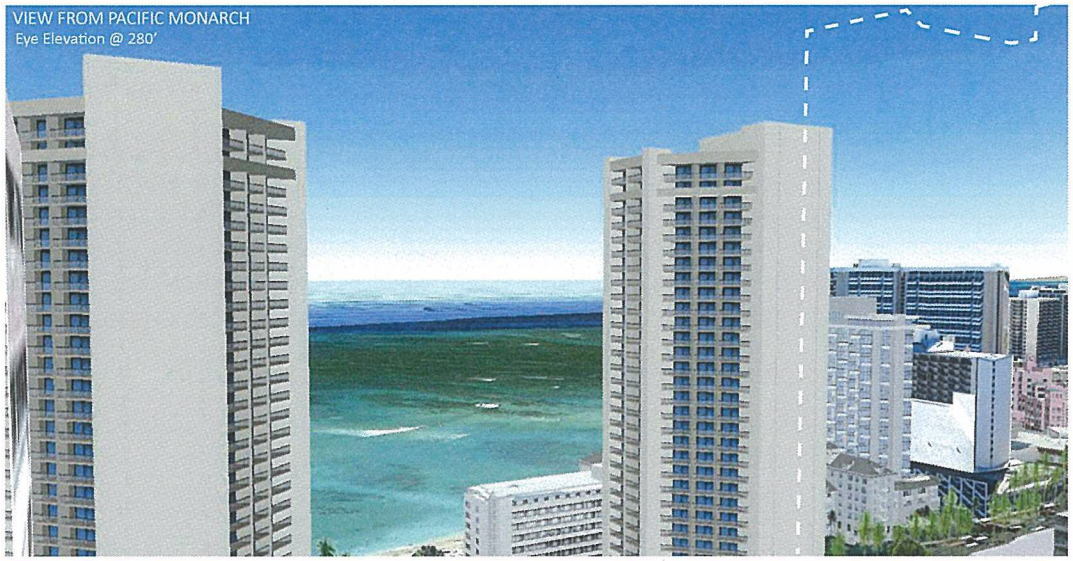
VIEW FROM OHANA EAST, (150 KAIULANI AVE)
MAUKA SIDE OF TOWER

VIEW STUDY FROM OHANA EAST (MAUKA SIDE) 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000



VIEW FROM OHANA EAST, (150 KAIULANI AVE)
MAKAI SIDE OF TOWER

VIEW STUDY FROM OHANA EAST (MAKAI SIDE) 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

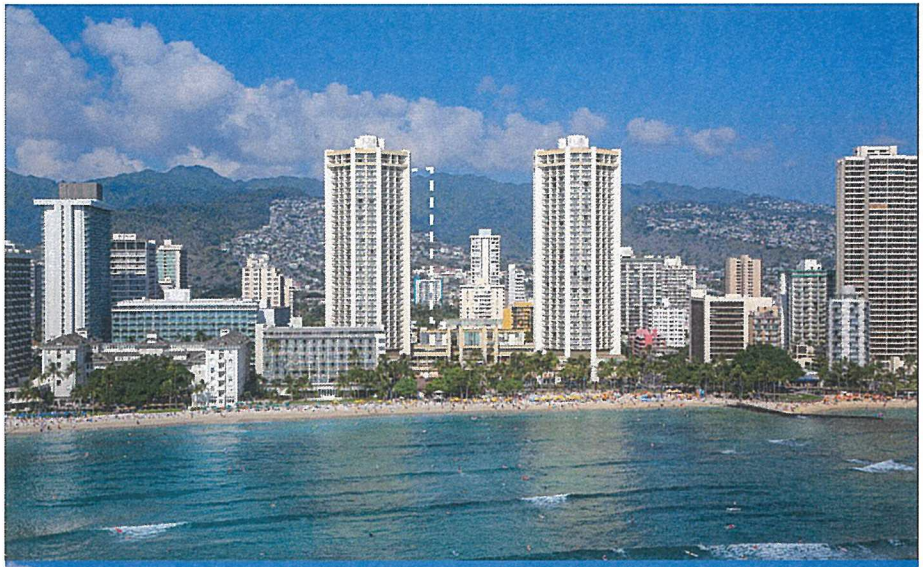


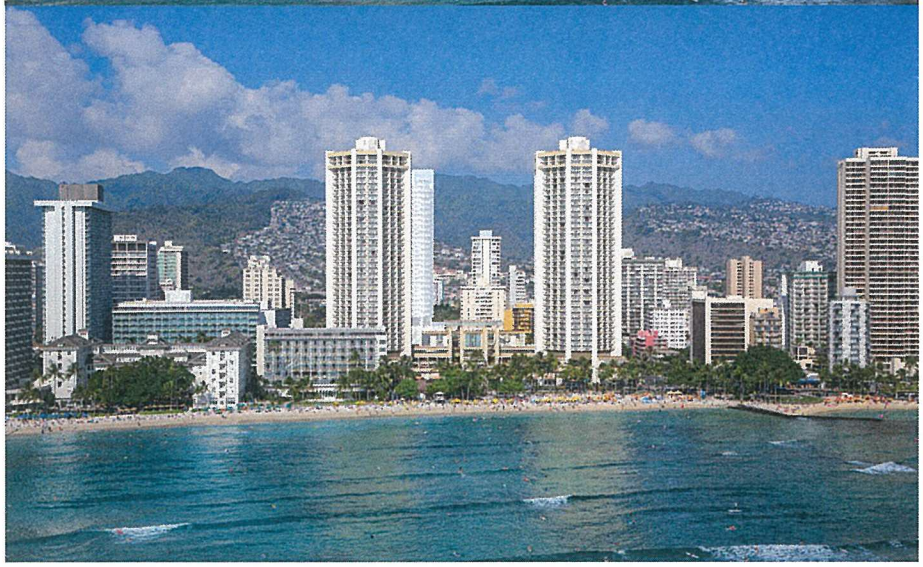
VIEW FROM PACIFIC MONARCH (2427 KUHIO AVE)

VIEW STUDY FROM PACIFIC MONARCH
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

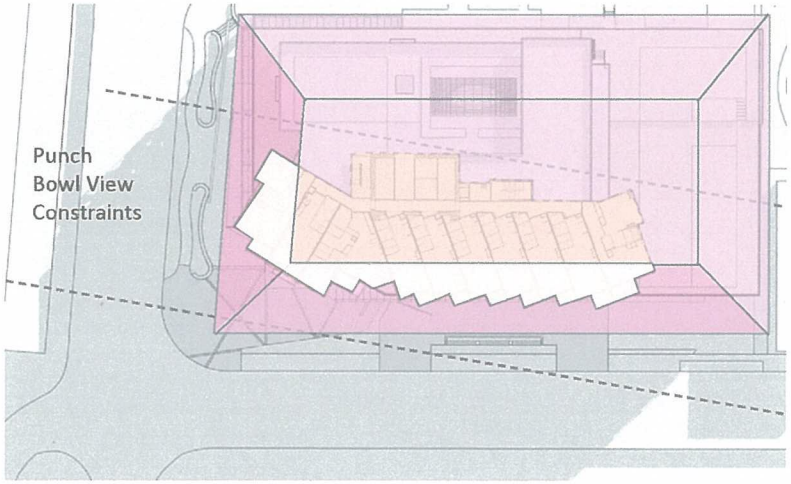




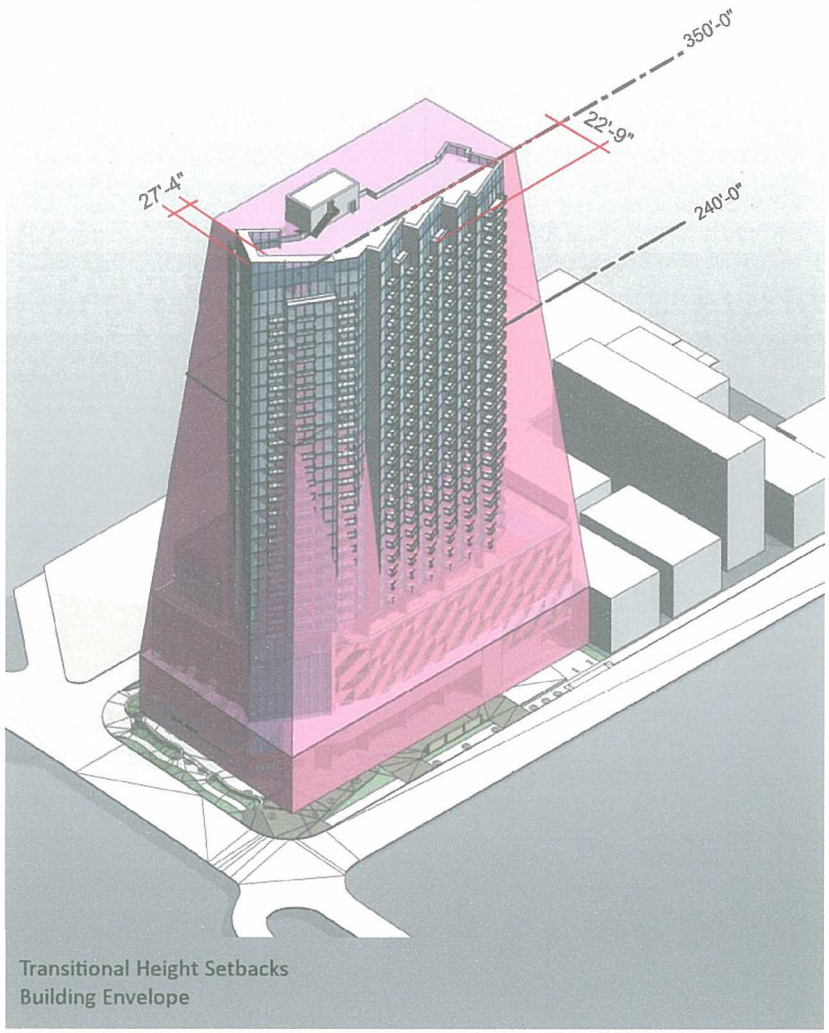
MAUKA - MAKAI VIEW STUDY - WITH & W/OUT 133 K 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

APPENDIX 1E

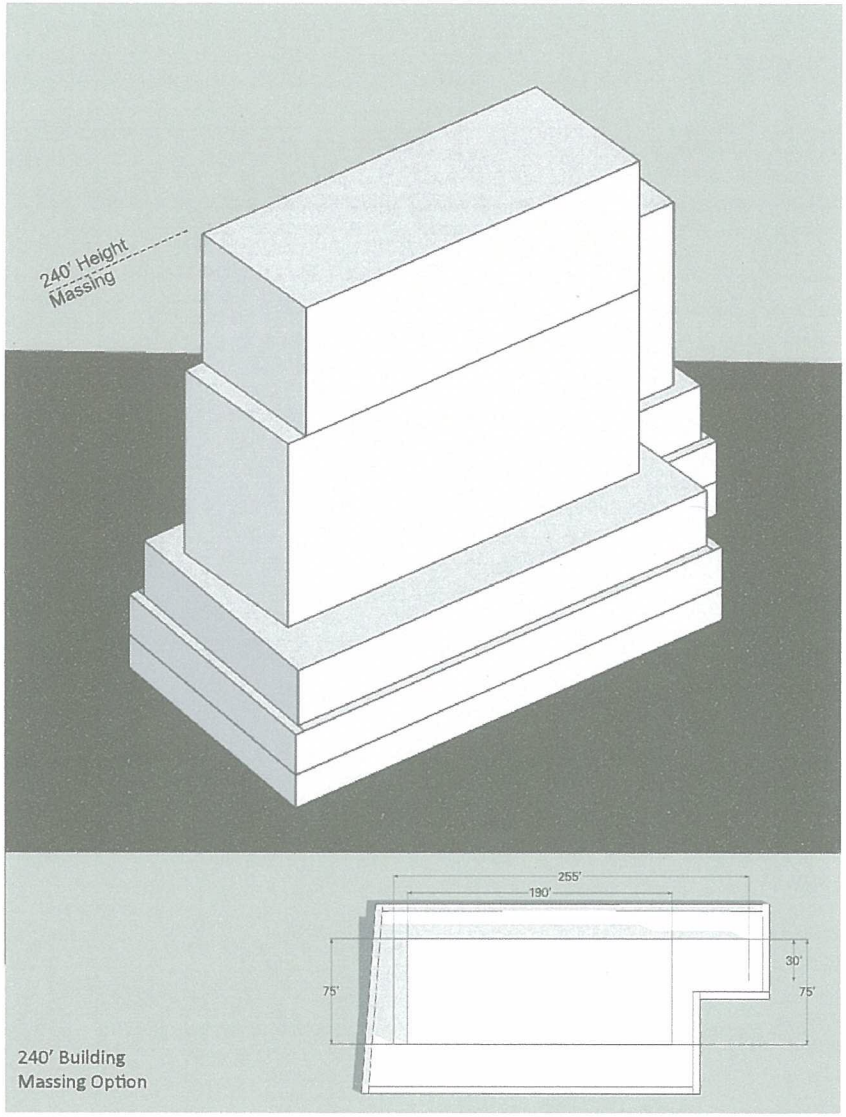
TRANSITIONAL HEIGHT SETBACKS



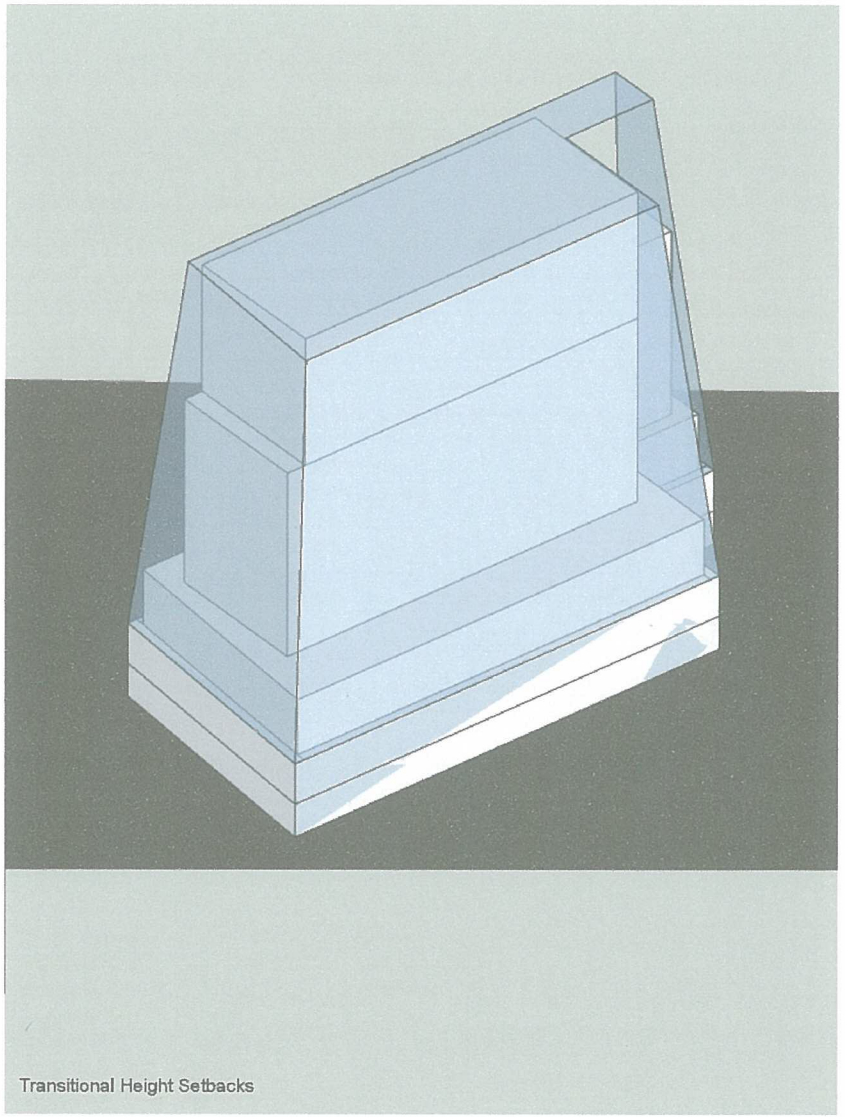
Transitional Height Setbacks
Plan Overlay - Punch Bowl View Constraints



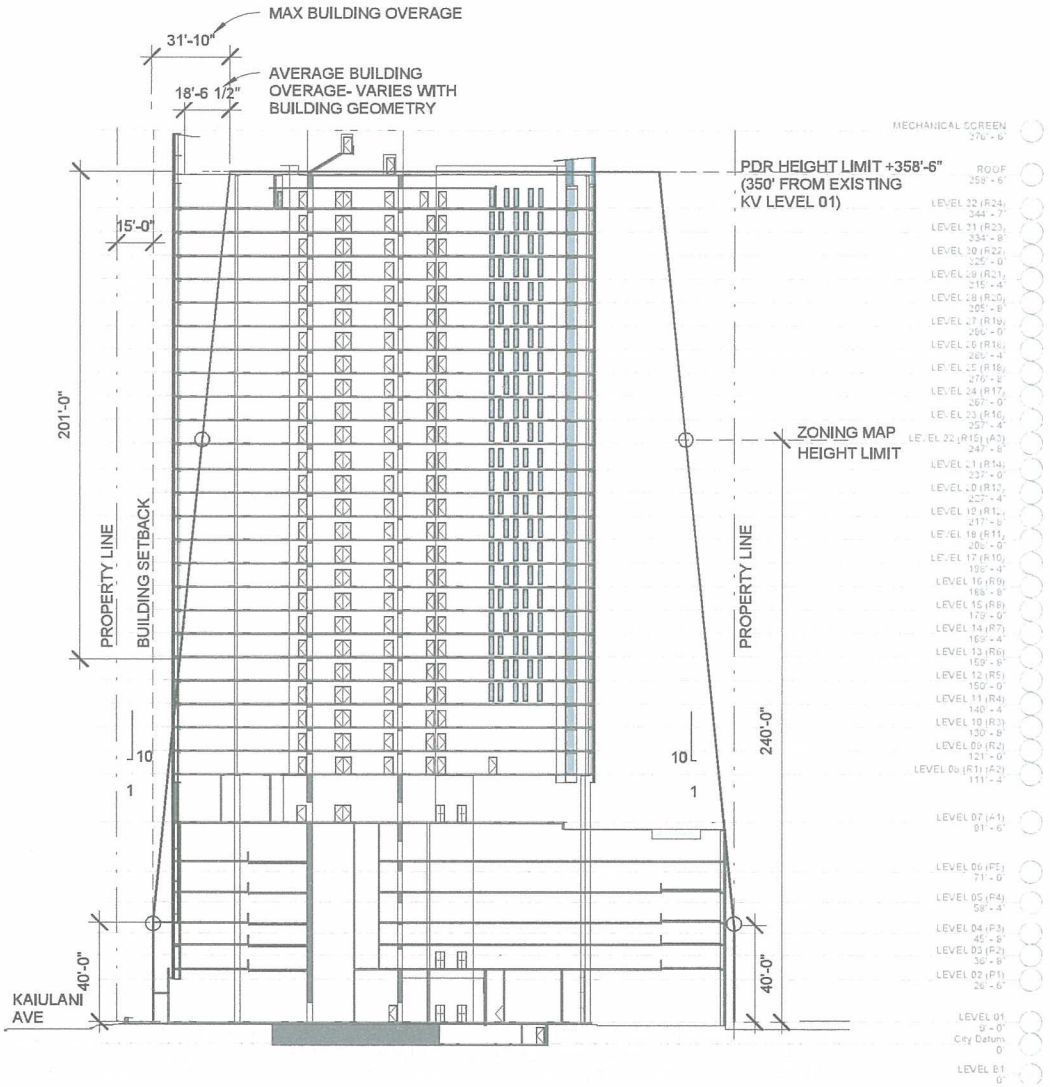
Transitional Height Setbacks
Building Envelope

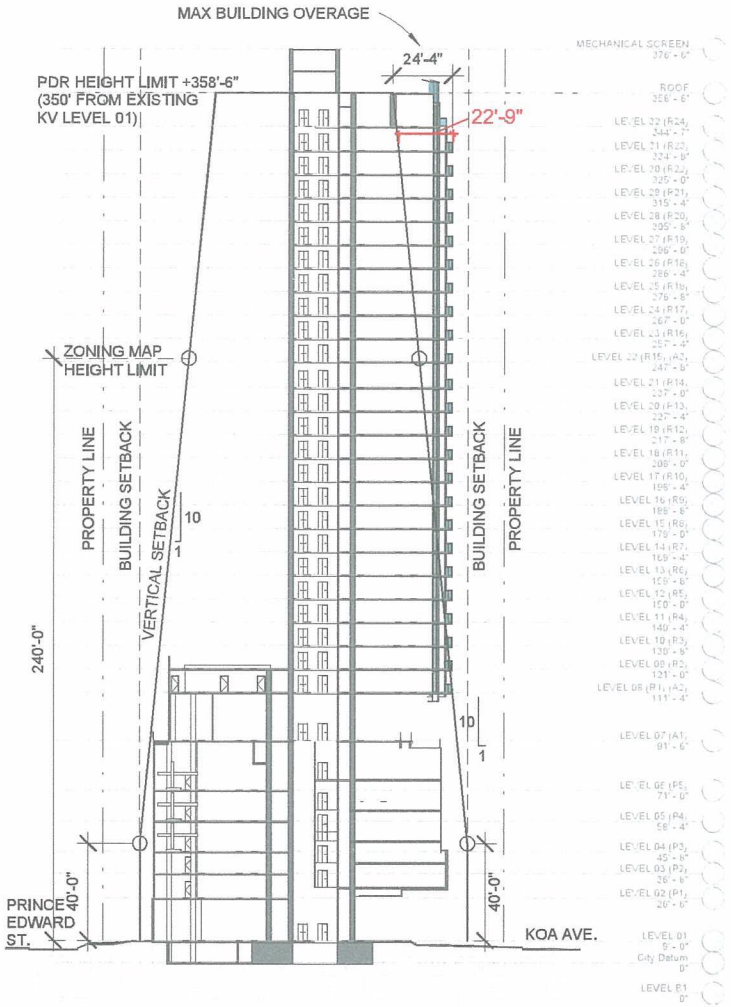


240' Building
Massing Option



Transitional Height Setbacks





TRANSITIONAL HEIGHT SETBACKS
133 KAIULANI AVE
Honolulu, Hawaii

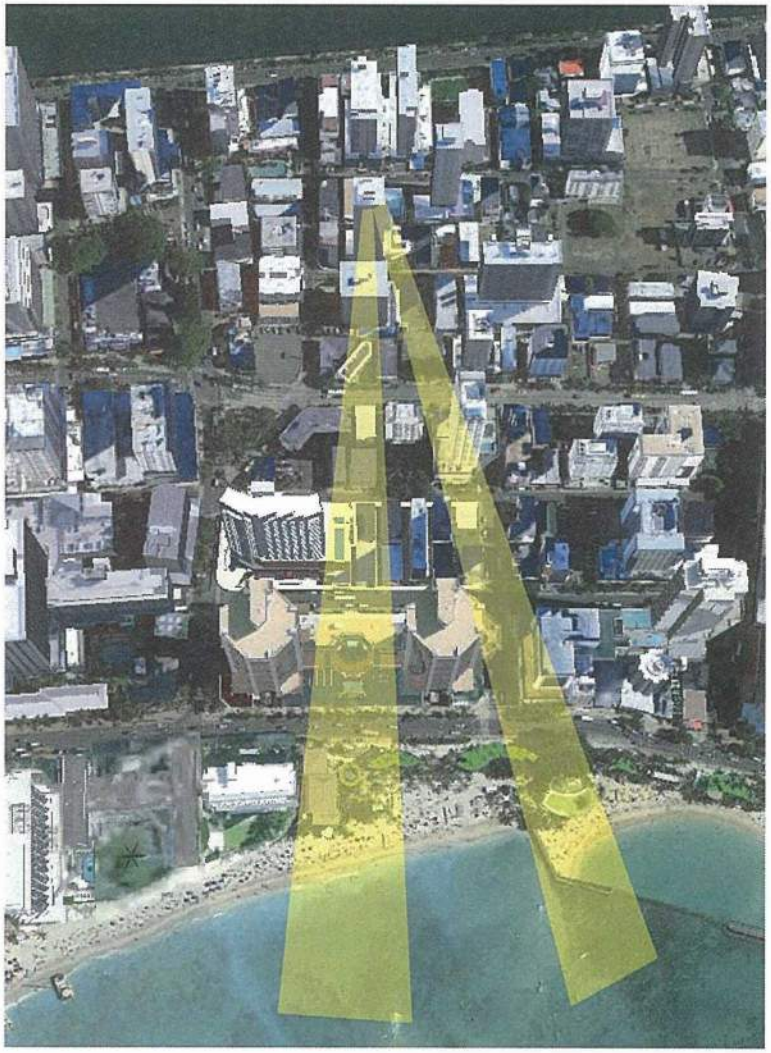
10.16.2014
2012036.000

APPENDIX 1F

MASSING STUDY

Massing allowable without a PDR shown in grey. Hyatt West tower profile shown in background white dashed line.

Proposed Alternative with PDR in grey. Hyatt West tower profile shown in background white dashed line.



VIEW FROM WAIKIKI SKYTOWER (2410 CLEGHORN ST.)

**Massing allowable without a PDR shown in grey.
Hyatt West tower profile shown in background white dashed line.**

Proposed Alternative with PDR in grey. Hyatt West tower profile shown in background white dashed line.

VIEW FROM GOVERNOR CLEGHORN APTS (225 KAIULANI AVE)

240' MASSING STUDY COMPARISON
133 KAIULANI AVE
Honolulu, Hawaii

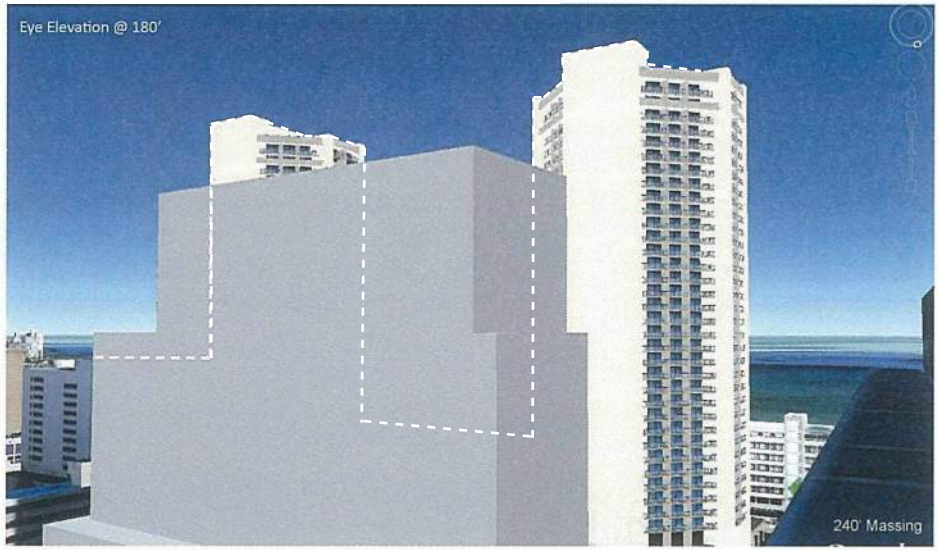
10.16.2014
2012036.000

Massing allowable without a PDR shown in grey. Hyatt West tower profile shown in background white dashed line.

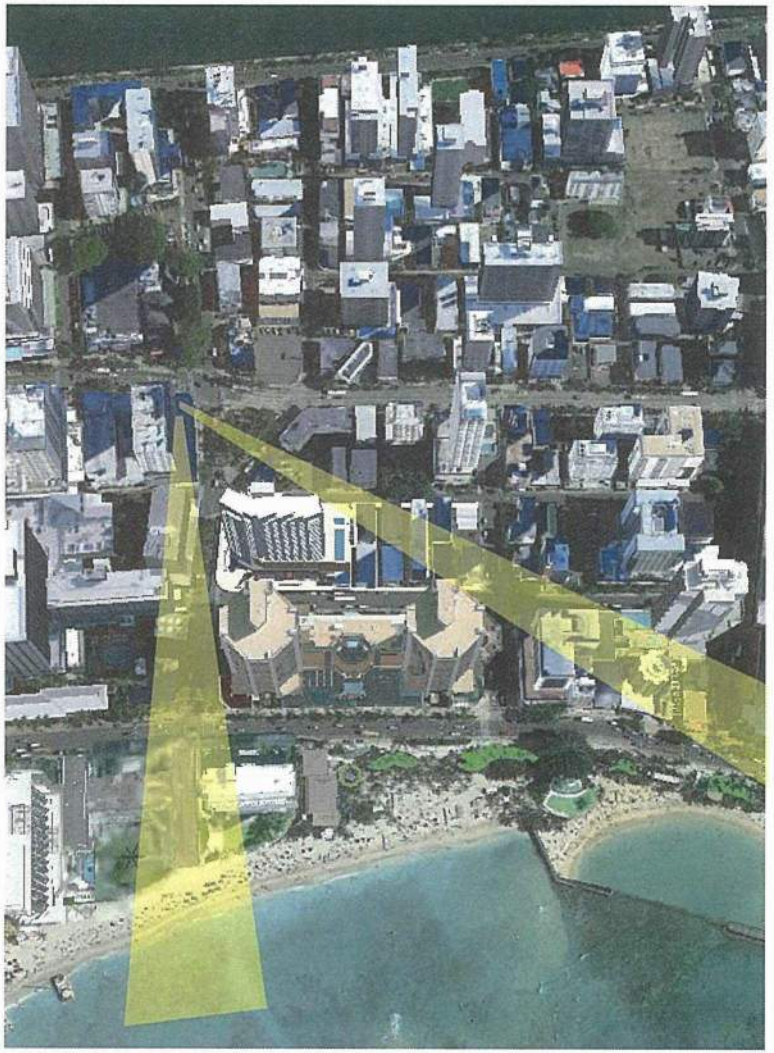
Proposed Alternative with PDR in grey. Hyatt West tower profile shown in background white dashed line.

VIEW FROM WAIKIKI TOWNHOUSE (2421 TUSITALA)

Massing allowable without a PDR shown in grey. Hyatt West tower profile shown in background white dashed line.



Proposed Alternative with PDR in grey. Hyatt West tower profile shown in background white dashed line.



VIEW FROM OHANA EAST, (150 KAIULANI AVE)
MAUKA SIDE OF TOWER

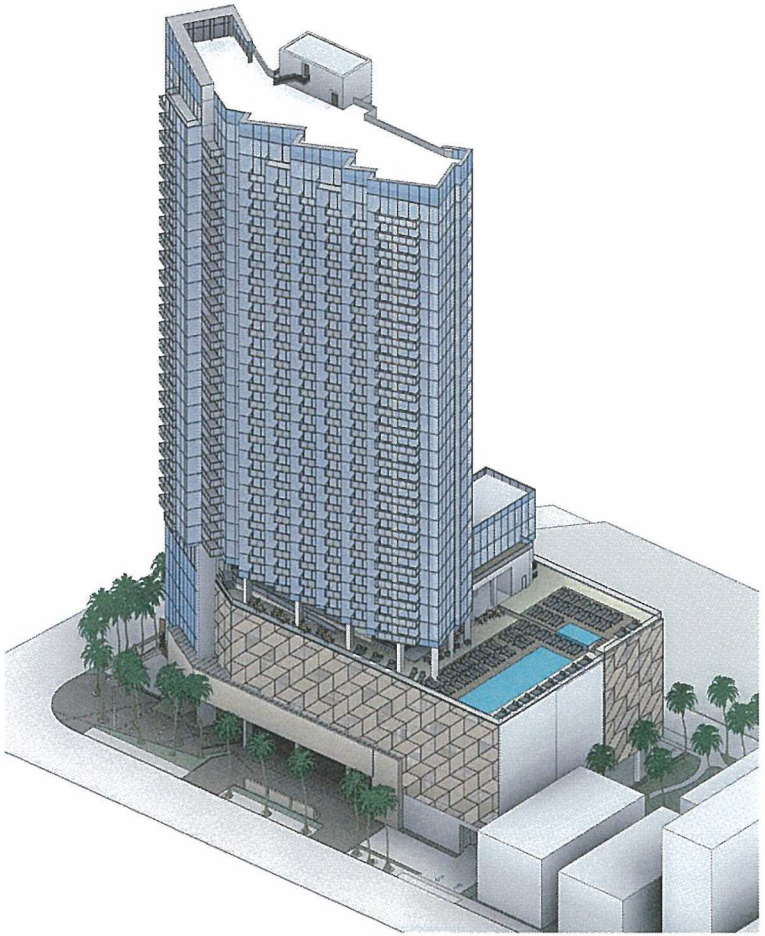
APPENDIX 1G

AXONOMETRIC VIEWS

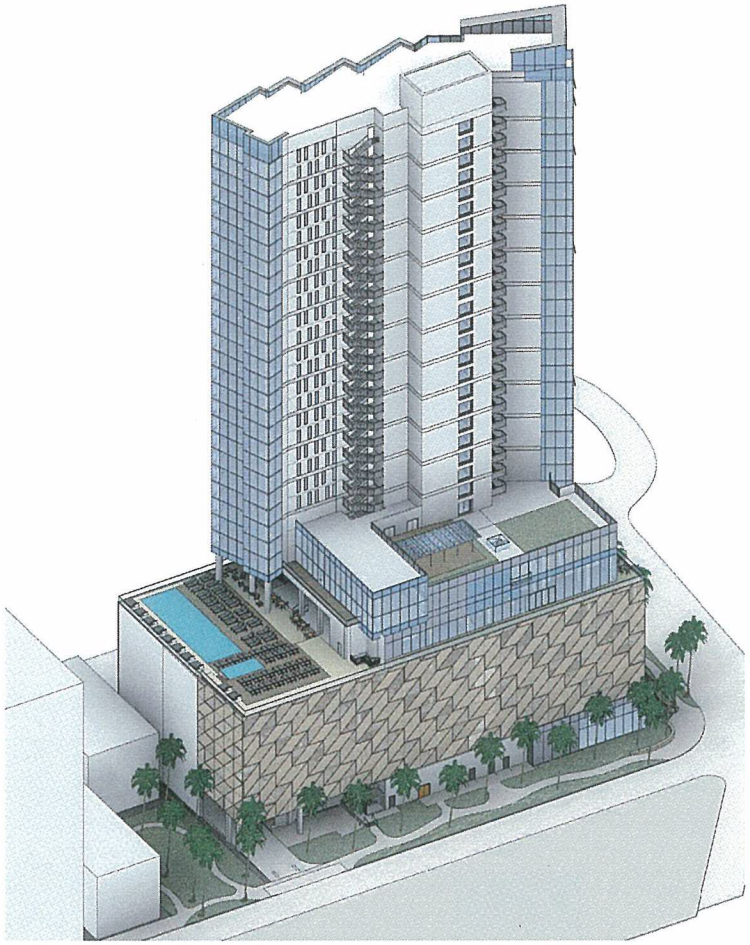
BUILDING EXTERIOR MATERIALS

PODIUM CLADDING DETAIL

AXON VIEW - LOOKING EAST

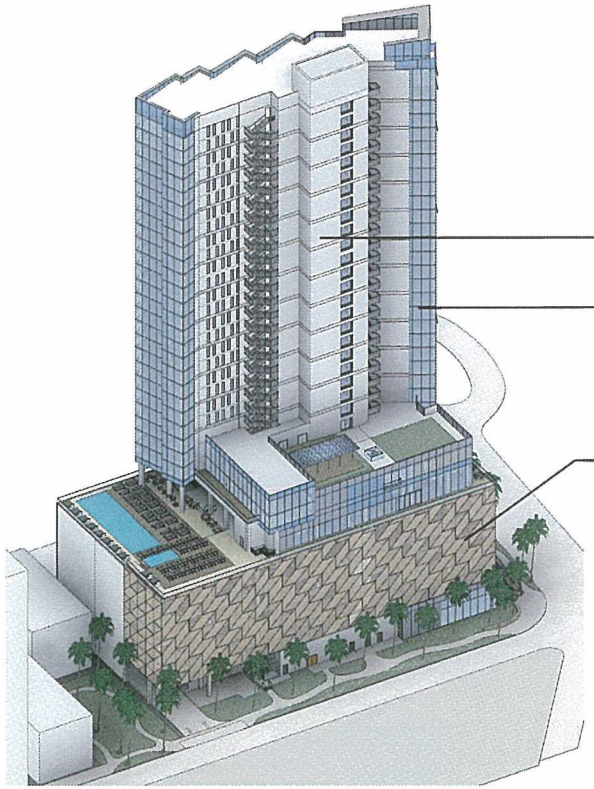


AXON VIEW - LOOKING NORTH



AXON VIEW - LOOKING WEST

AXON VIEW - LOOKING SOUTH



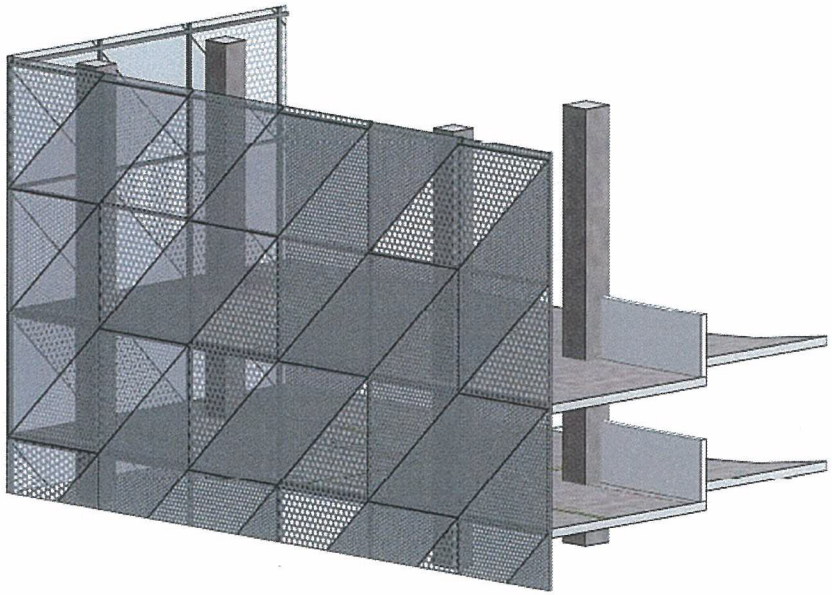
OFF-WHITE PAINT ON CONCRETE

DUAL PANE, LOW-E GLAZING WITH CLEAR BLUE-GREY TINT, SPANDREL GLAZING AND GLASS BALCONY GUARDRAILS TO MATCH

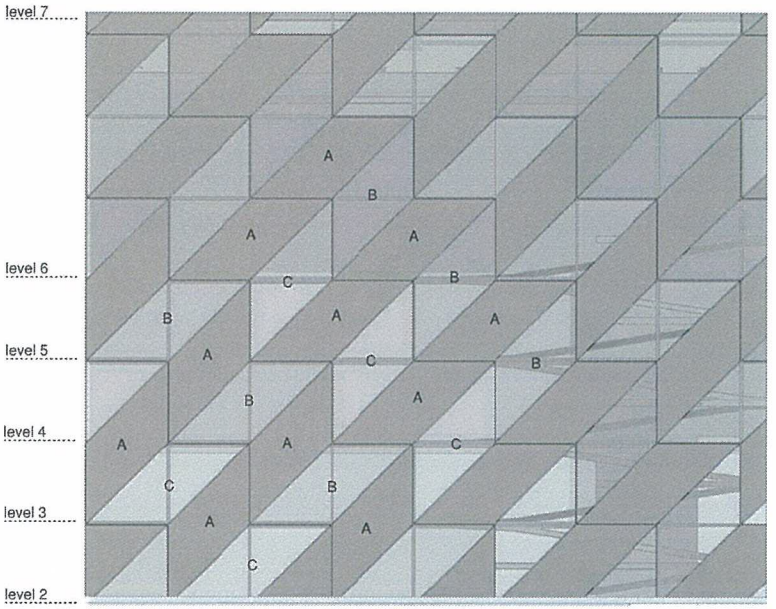
PERFORATED METAL PANELS IN KAPA PATTERN, SEE DETAIL SHEET

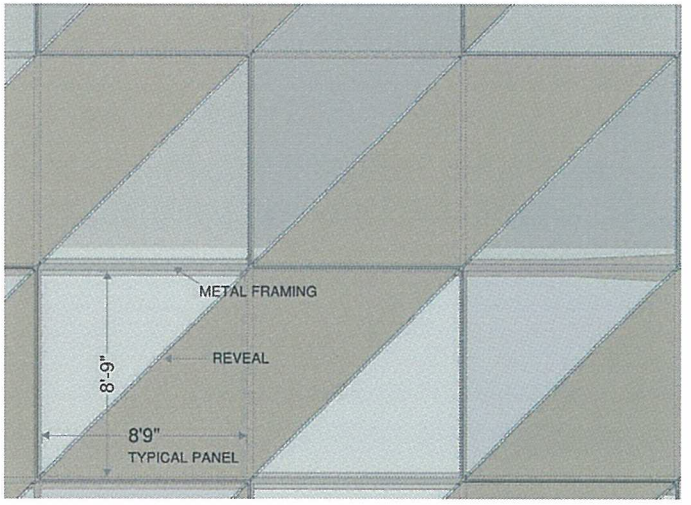
NATURAL STONE VENEER CLADDING AT PORTE COCHERE

Design Partners Incorporated



METAL PANELS WITH-VARYING PERFORATION DENSITY. MEETS 50% OPEN FOR VENTILATED GARAGE.



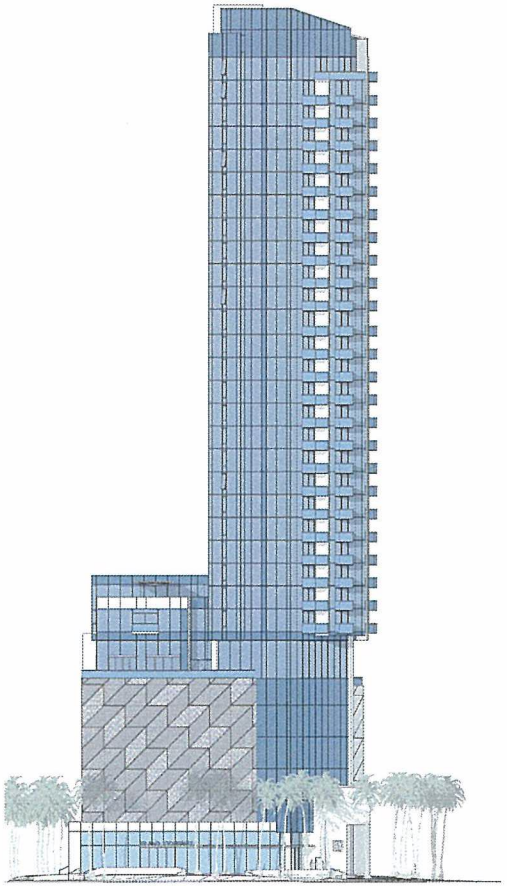


PODIUM CLADDING DETAIL
133 KAIULANI AVE
Honolulu, Hawaii

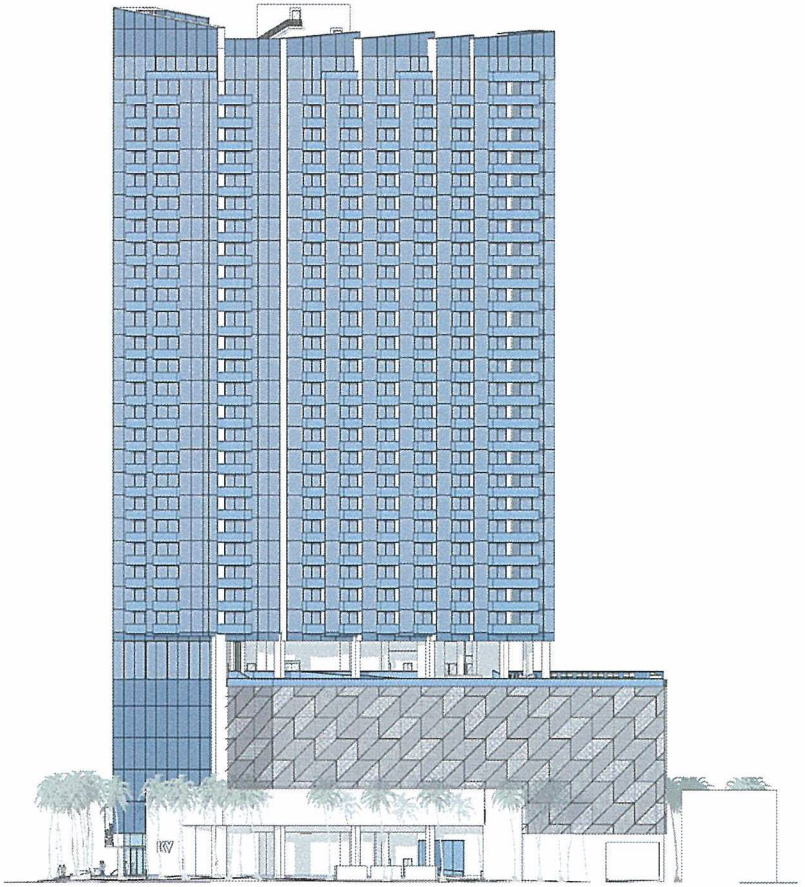
10.16.2014
2012036.000

APPENDIX 1H

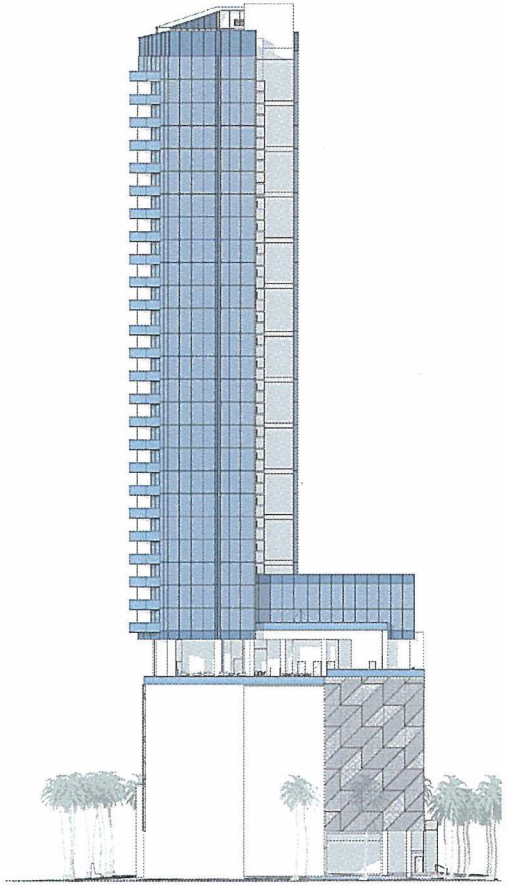
BUILDING ELEVATIONS



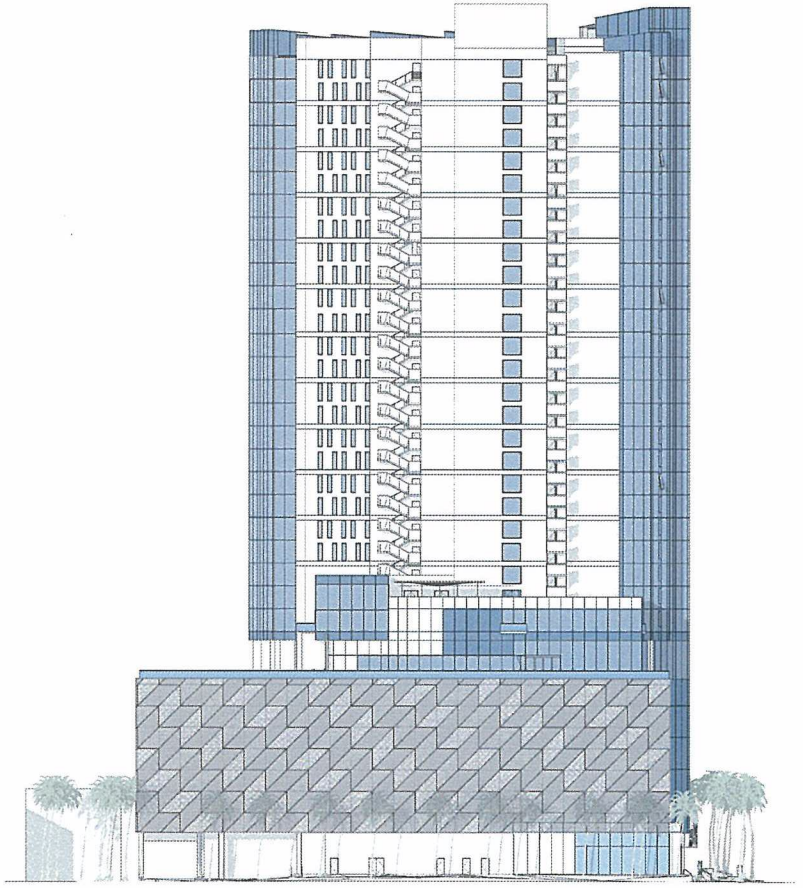
BUILDING ELEVATION - WEST (EWA)



BUILDING ELEVATION - SOUTH (MAKAI)



BUILDING ELEVATION - EAST (D.H.)



BUILDING ELEVATION - NORTH (MAUKA)

APPENDIX 1I

SHADOW STUDY

SUMMER SOLSTICE
06.21

EQUINOX
09.21 / 03.21

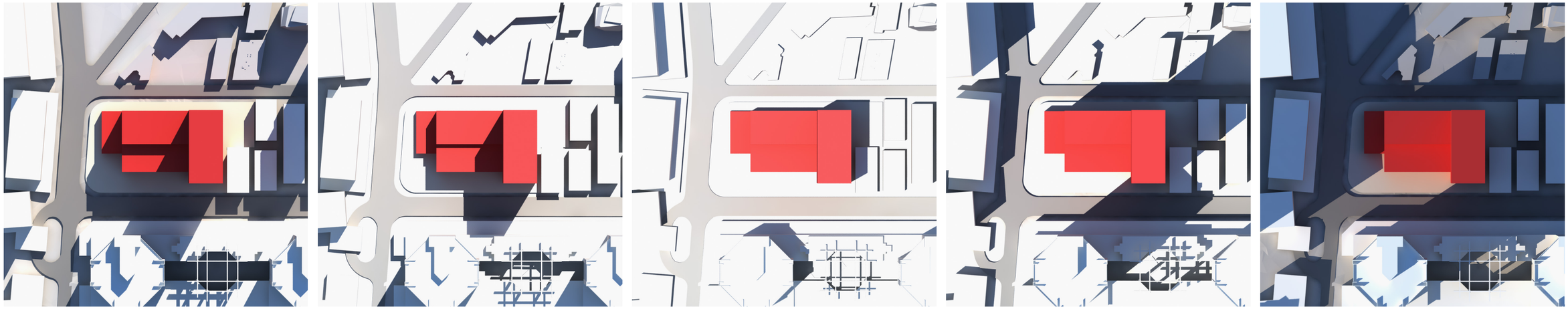
WINTER SOLSTICE
12.21

8 AM | 10 AM | 12 PM | 2 PM | 4 PM

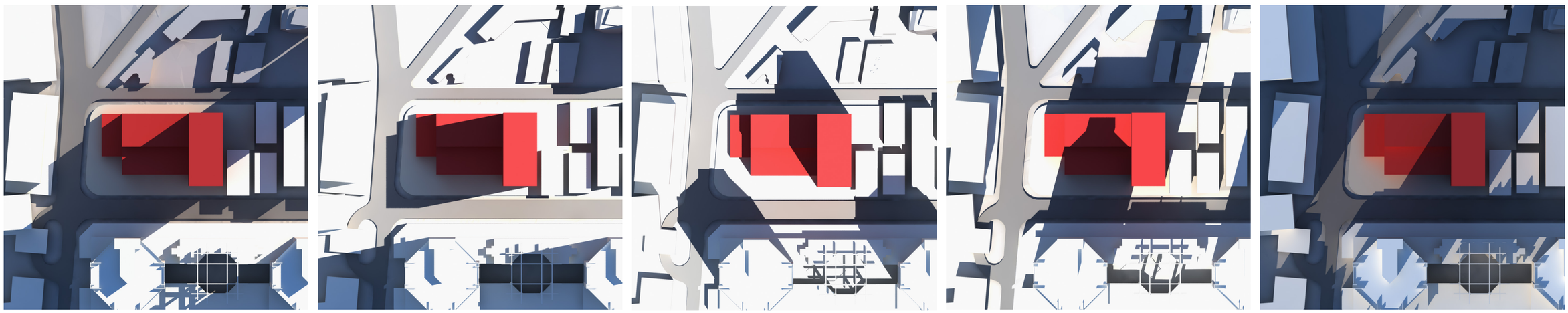
SHADOW STUDY - ALTERNATIVE IV
133 KAIULANI AVE
Honolulu, Hawaii

07.08.2015
2012036.000

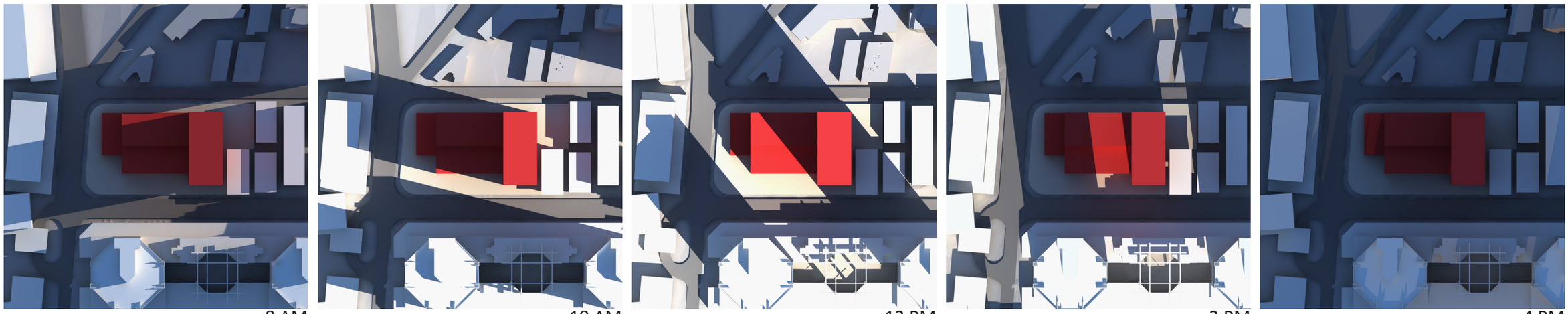
SUMMER SOLSTICE
06.21



EQUINOX
09.21 / 03.21



WINTER SOLSTICE
12.21



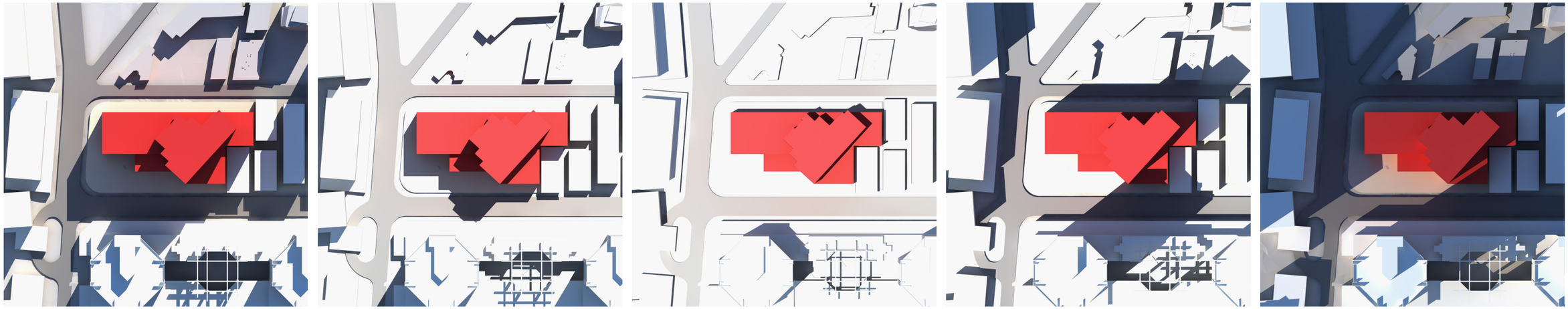
8 AM | 10 AM | 12 PM | 2 PM | 4 PM

SHADOW STUDY - ALTERNATIVE V
133 KAIULANI AVE
Honolulu, Hawaii

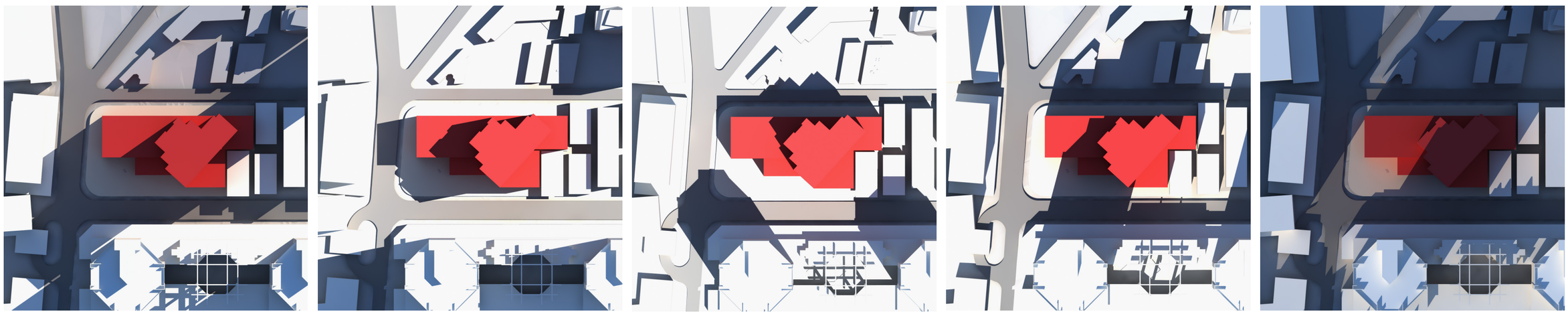
07.08.2015

2012036.000

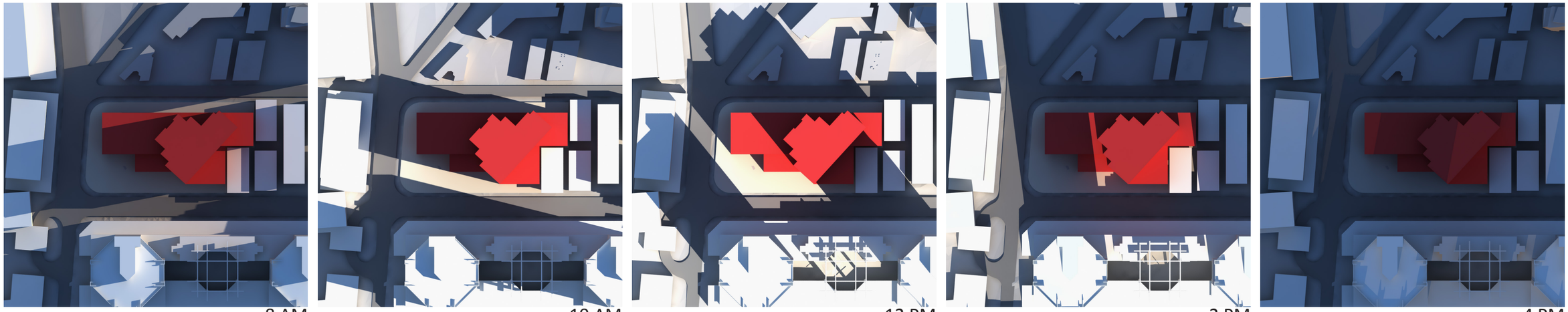
SUMMER SOLSTICE
06.21



EQUINOX
09.21 / 03.21



WINTER SOLSTICE
12.21



8 AM | 10 AM | 12 PM | 2 PM | 4 PM

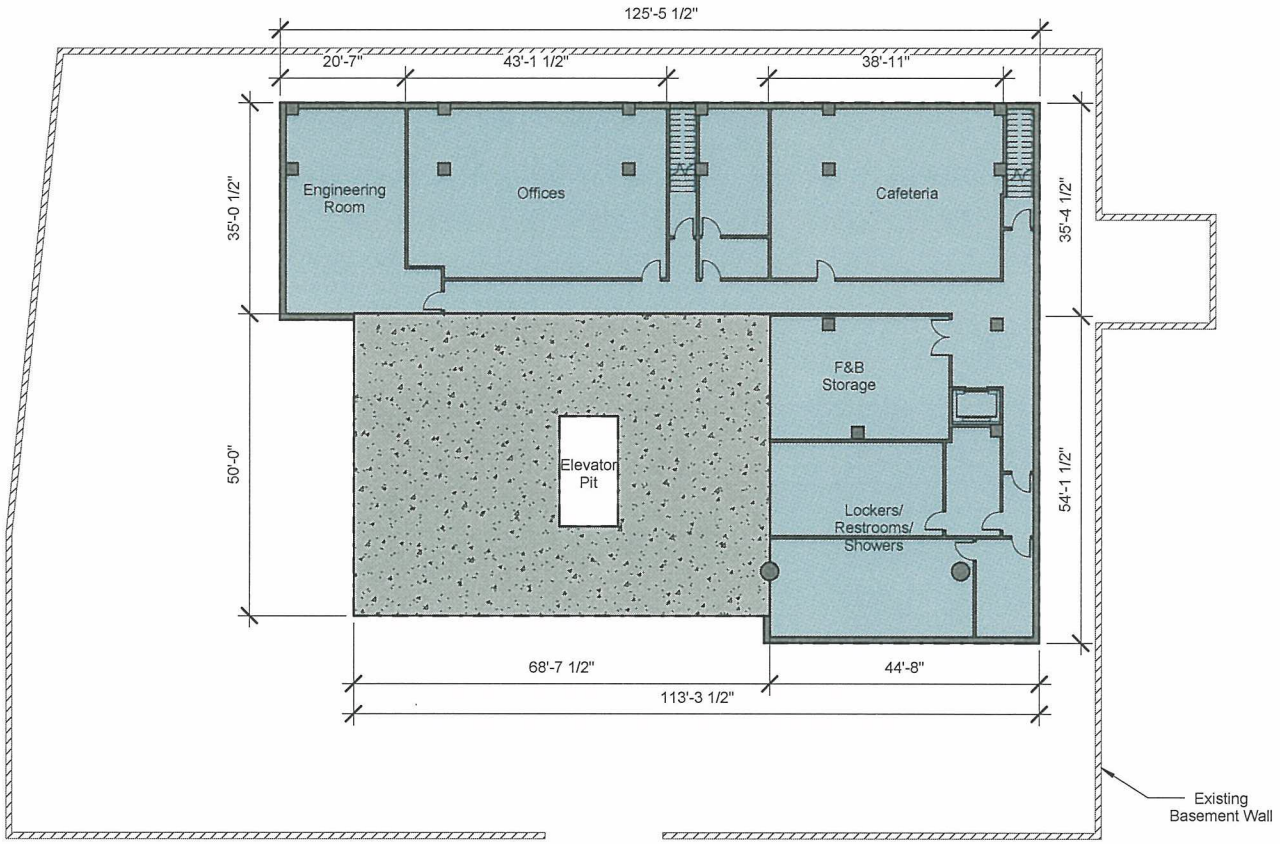
SHADOW STUDY - ALTERNATIVE VI
133 KAIULANI AVE
Honolulu, Hawaii

07.08.2015

2012036.000

APPENDIX 1J

BUILDING FLOOR PLANS

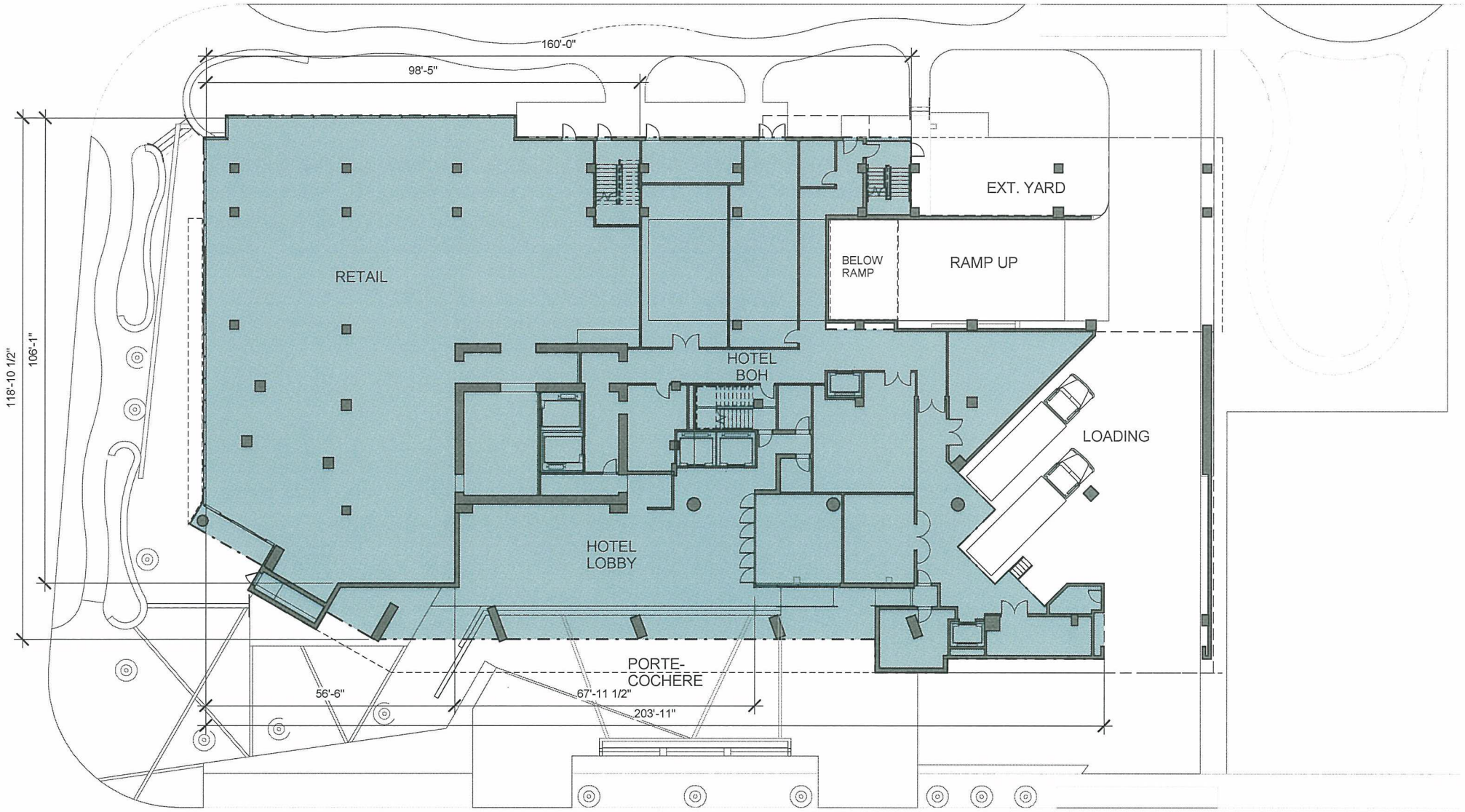


LEVEL B1 PLAN - BASEMENT

BUILDING PLANS
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

0 10' 20'

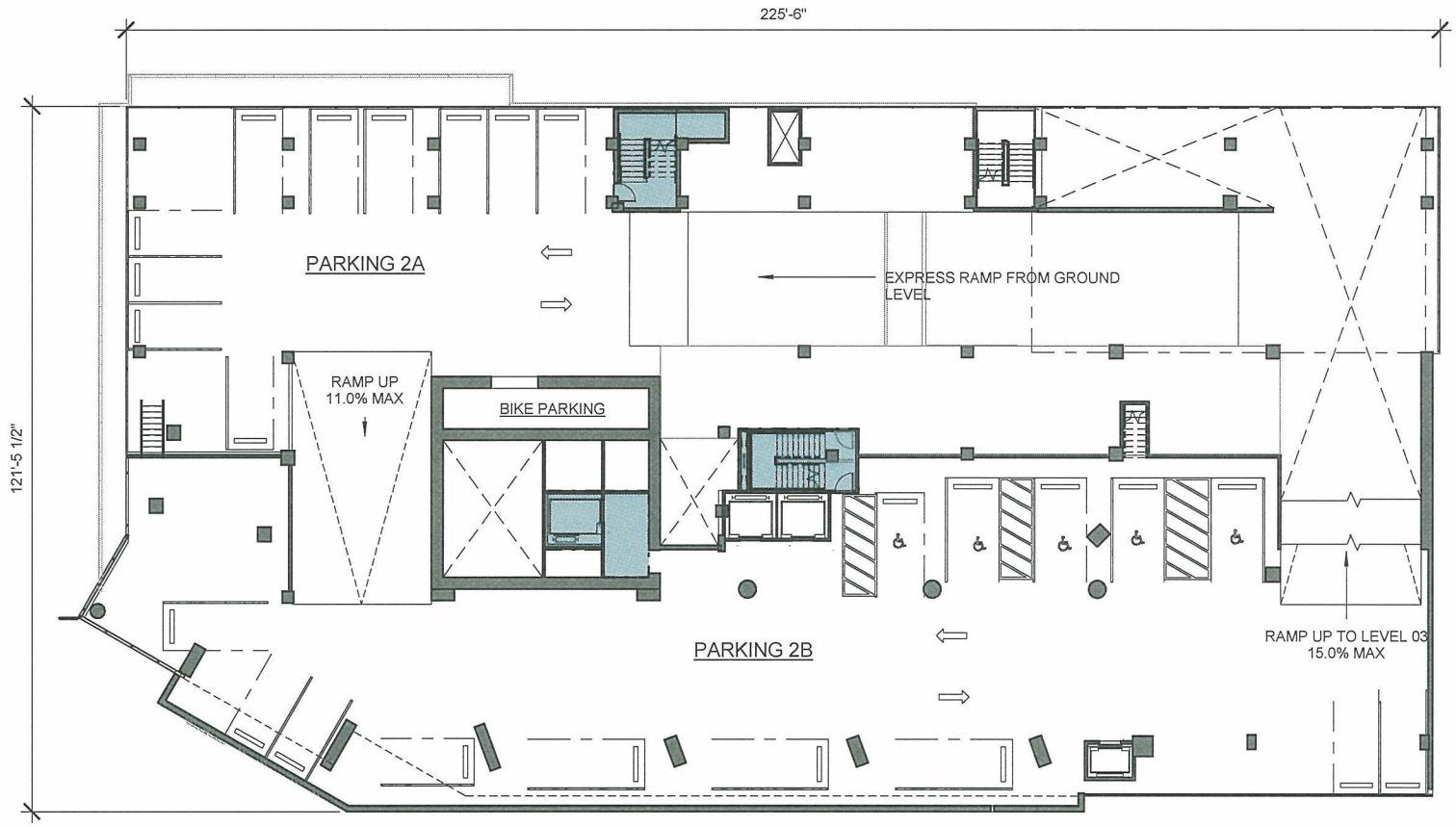


LEVEL 01 PLAN - RETAIL + GROUND FLOOR LOBBY

BUILDING PLANS
133 KAIULANI AVE
Honolulu, Hawaii

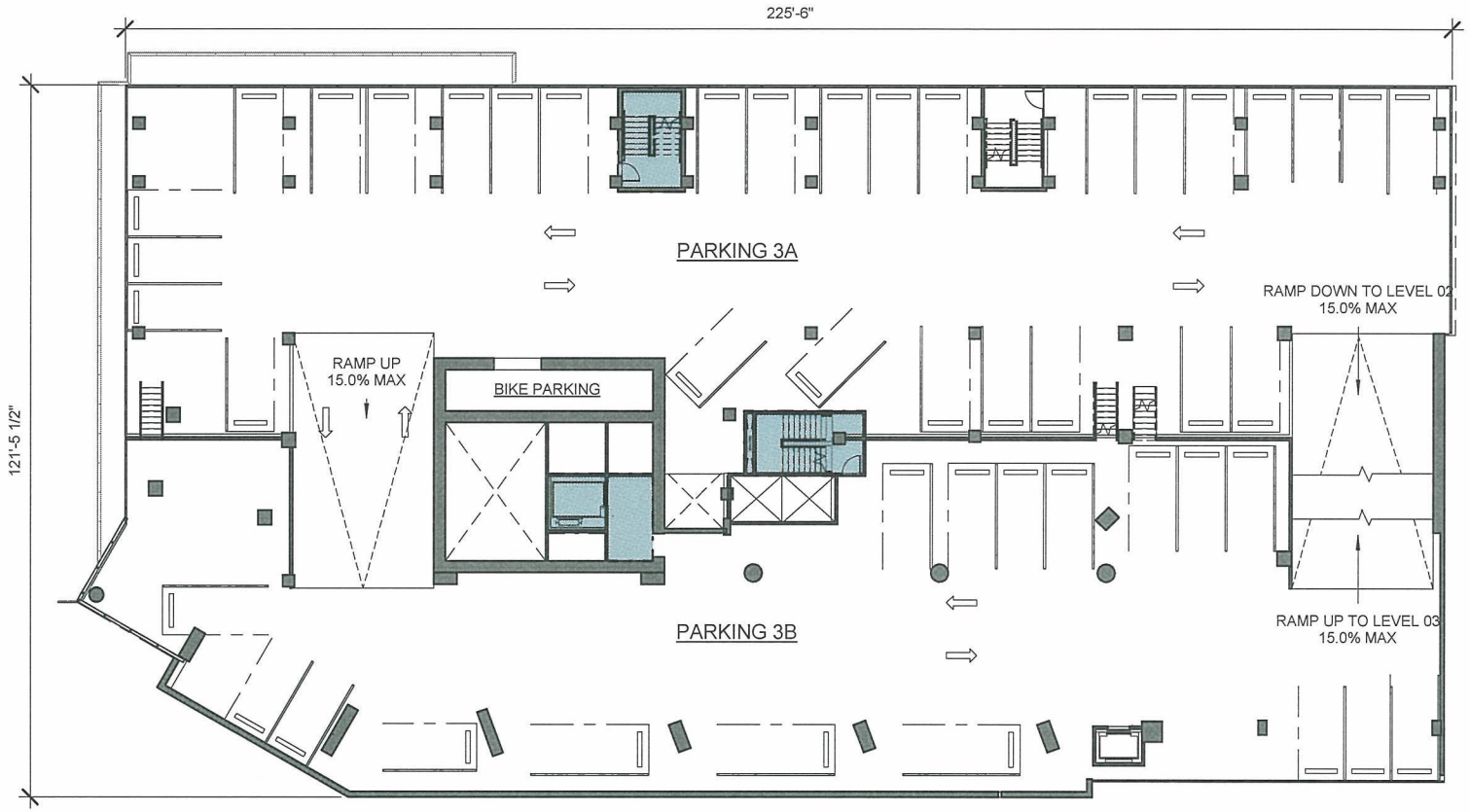
10.16.2014
2012036.000

0 10' 20'



LEVEL 02 PLAN - PARKING

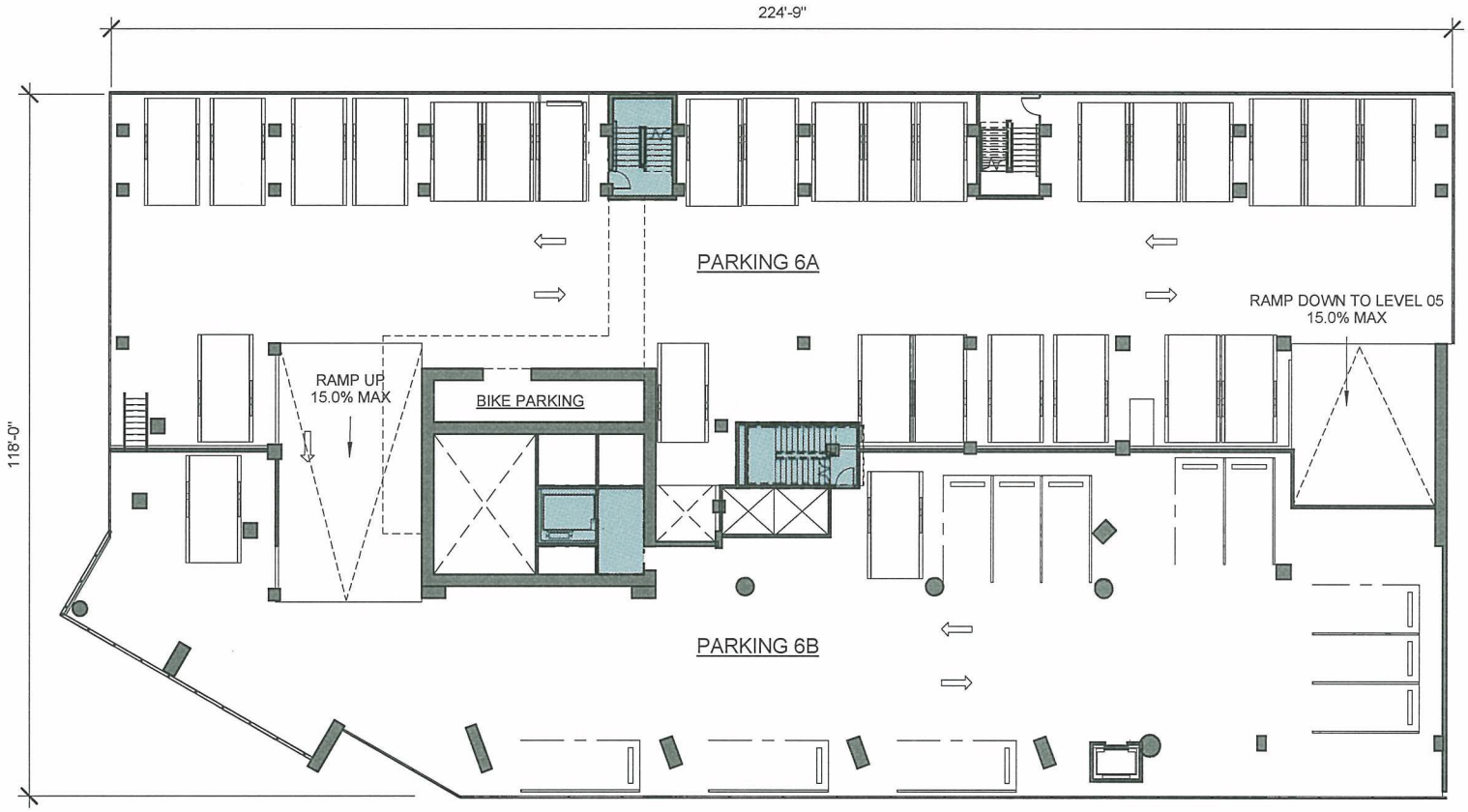
PARKING SPACE COUNT LEVEL 02	
PARKING SPACES:	19
ACCESSIBLE SPACES:	5
TANDEM SPACES:	0
TOTALS:	24



LEVEL 03-05 PLANS - TYPICAL PARKING LEVELS

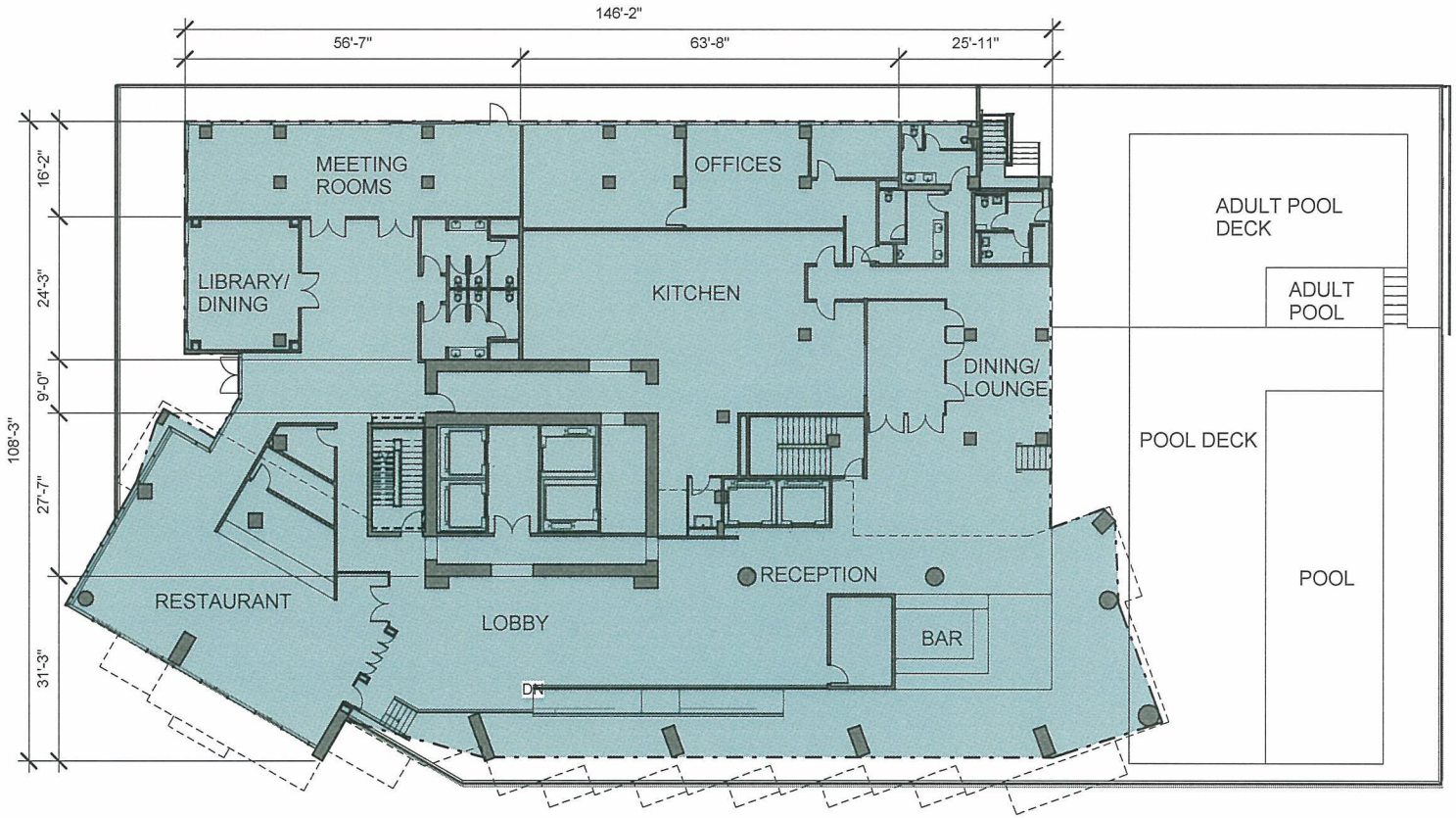
PARKING SPACE COUNT LEVEL 03	
PARKING SPACES:	46
ACCESSIBLE SPACES:	0
TANDEM SPACES:	0
TOTALS:	46

PARKING SPACE COUNT TYP. LEVELS 04-05	
PARKING SPACES:	6
3 LEVEL STACKER:	0
2 LEVEL STACKER:	33 (66 spaces)
TANDEM SPACES:	0
TOTALS:	72

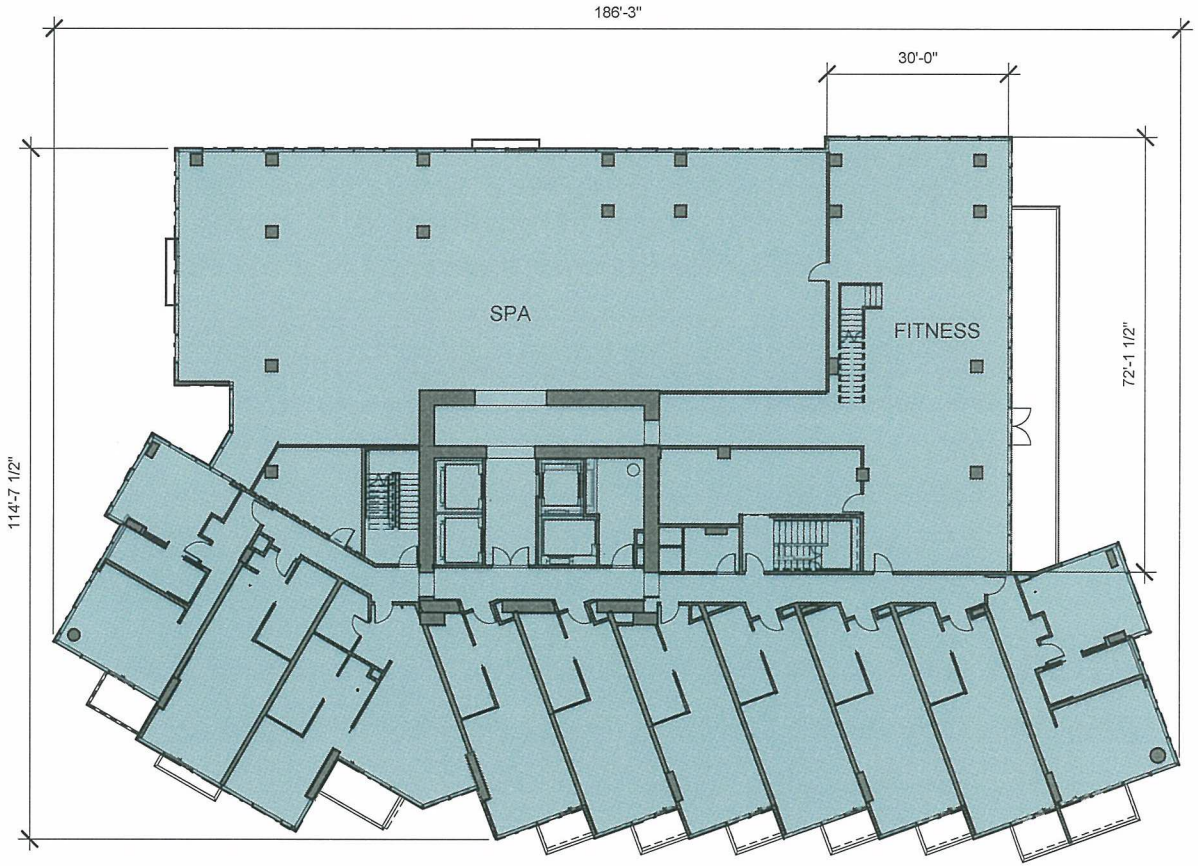


LEVEL 06 PLAN - UPPER PARKING LEVEL

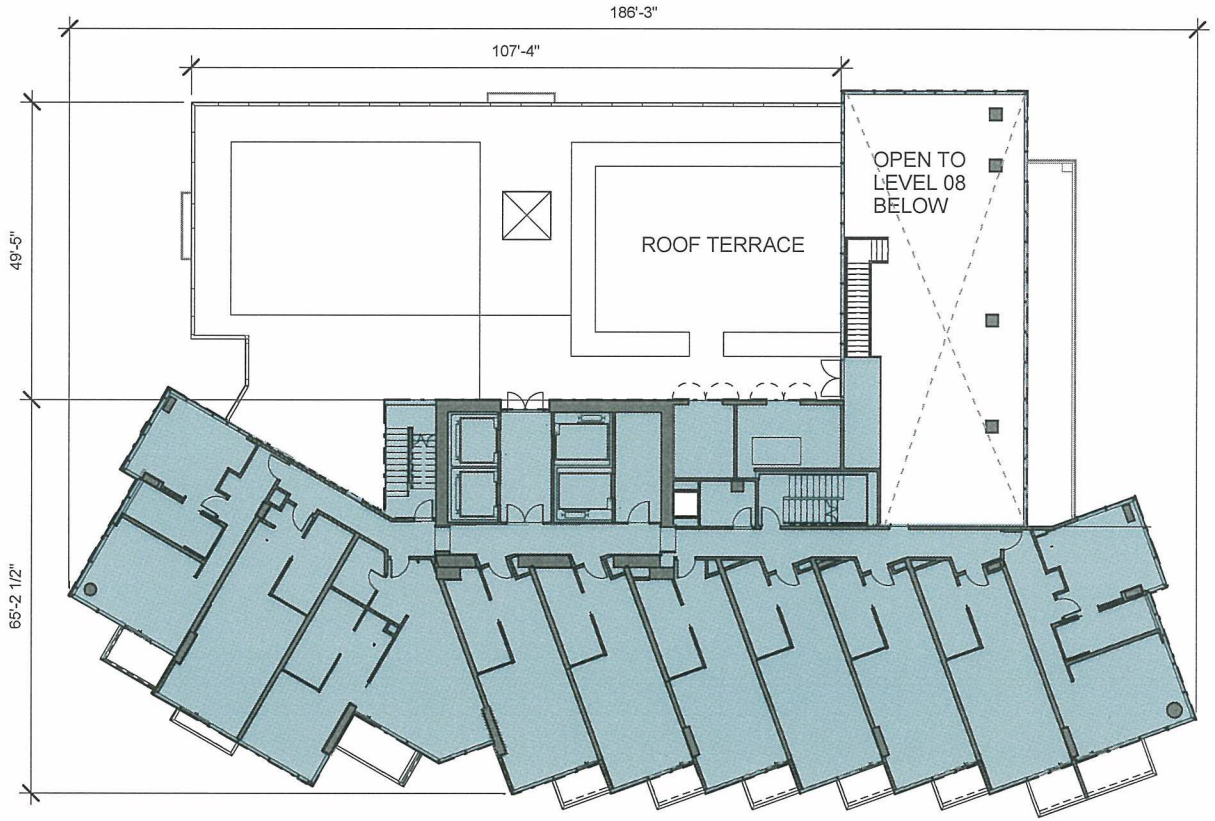
PARKING SPACE COUNT LEVEL 06	
PARKING SPACES:	11
3 LEVEL STACKER:	0
2 LEVEL STACKER:	27 (54 spaces)
TANDEM SPACES:	0
TOTALS:	65



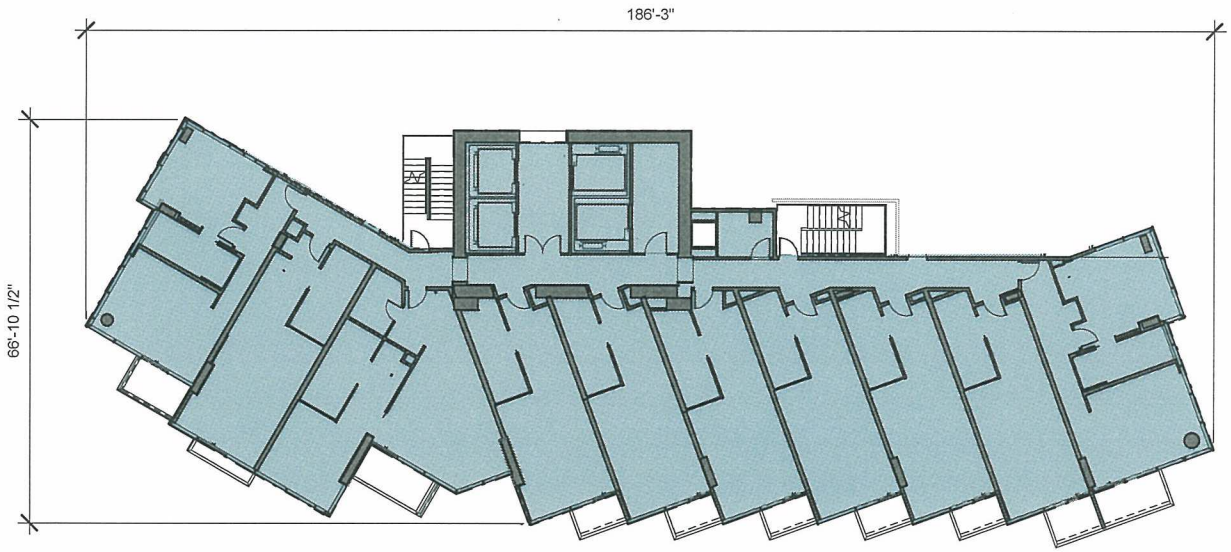
LEVEL 07 PLAN - LOBBY & AMENITY LEVEL



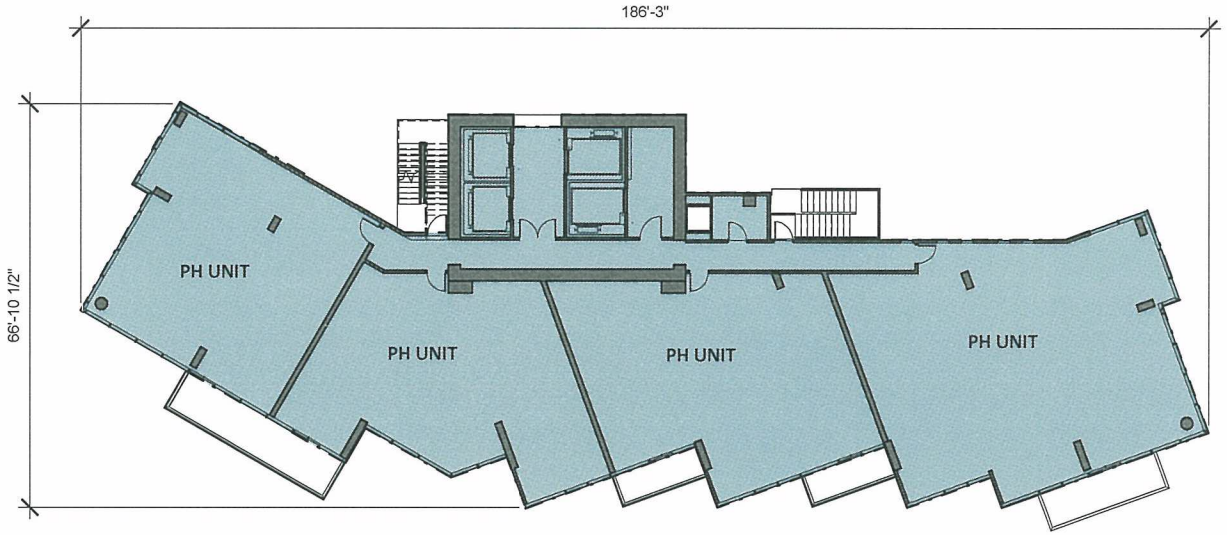
LEVEL 08 PLAN - RESIDENTIAL + AMENITY



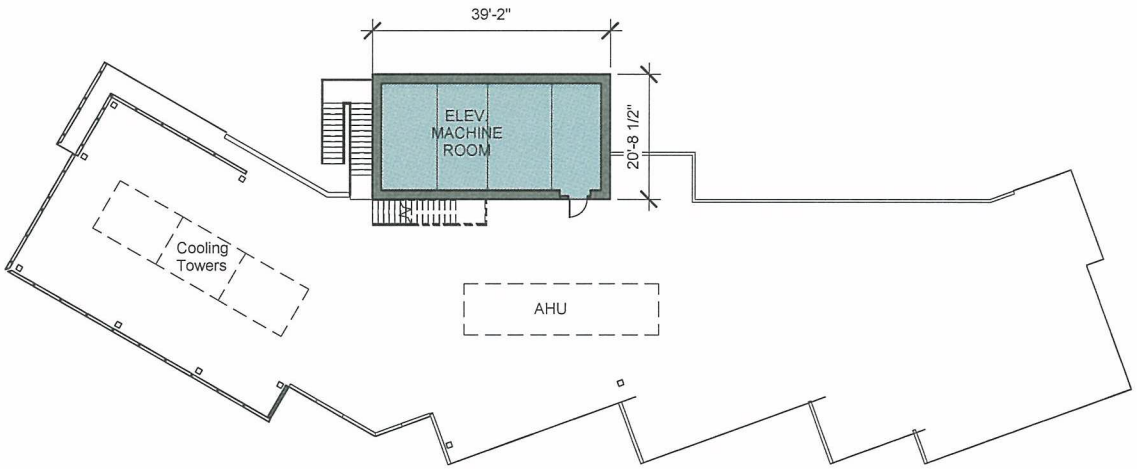
LEVEL 9 PLAN - RESIDENTIAL + AMENITY



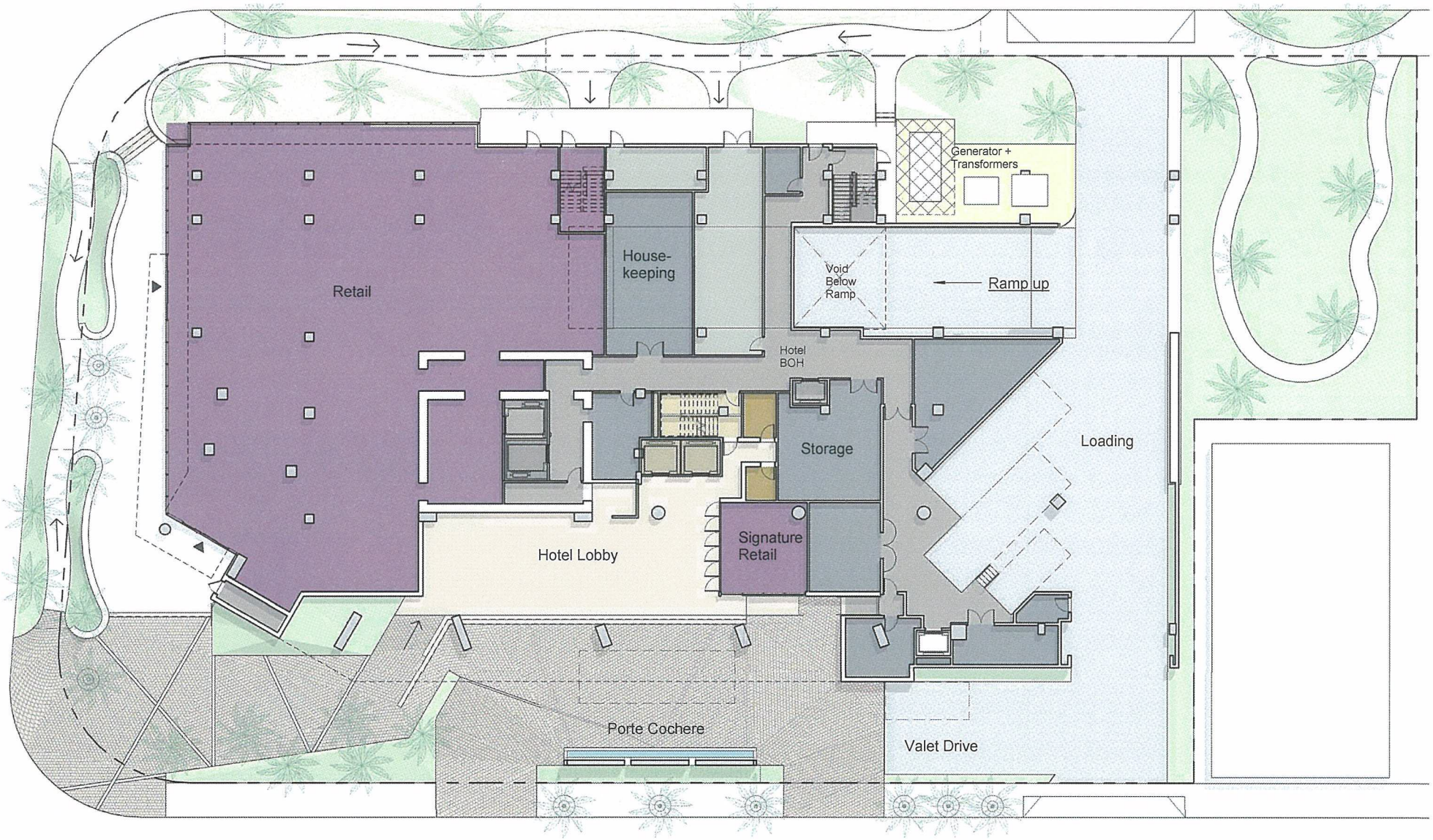
LEVEL 10-31 PLAN - TYPICAL RESIDENTIAL FLOOR



LEVEL 32 PLAN- PENTHOUSE UNITS



ROOF LEVEL PLAN- MECHANICAL



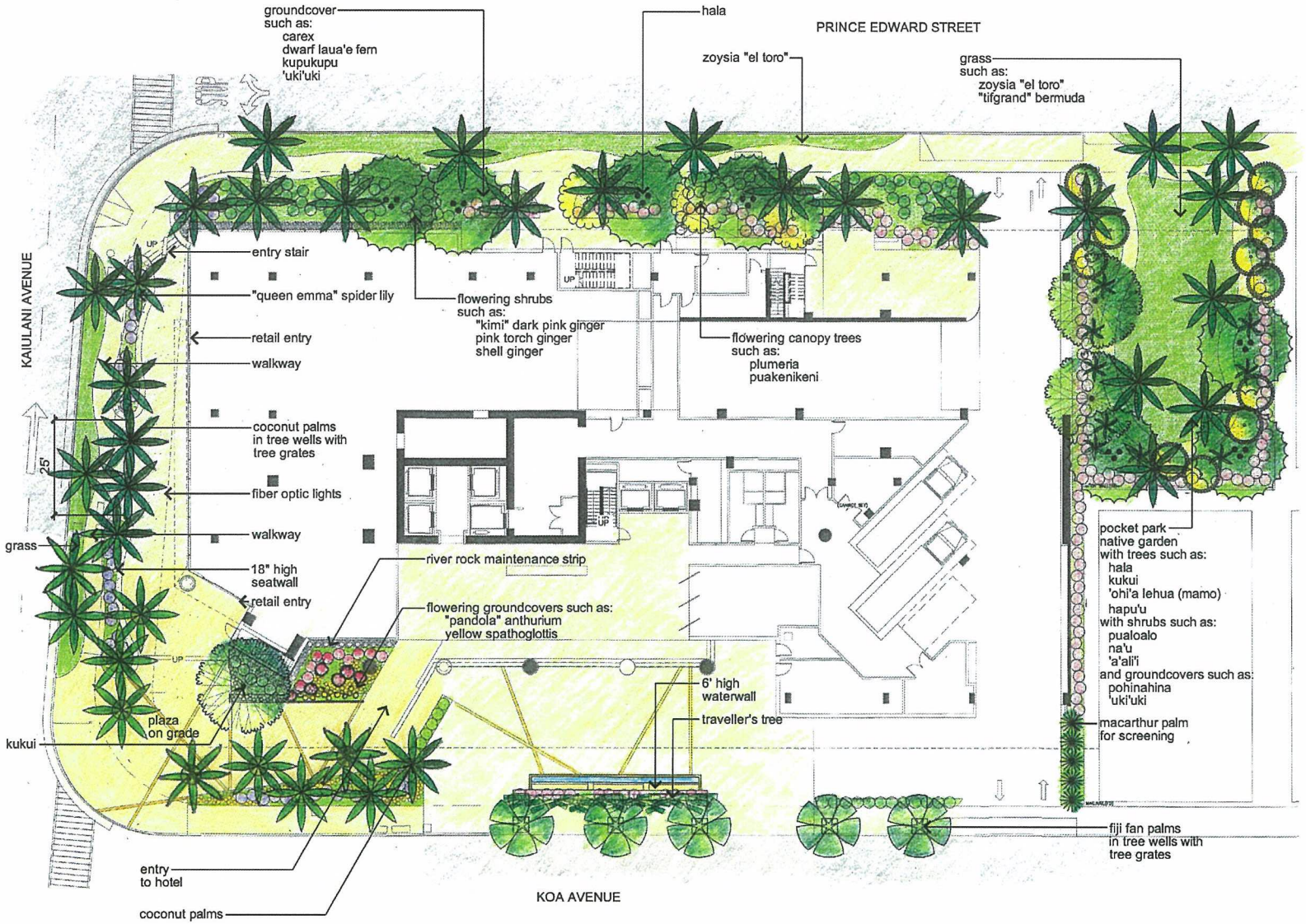
GROUND FLOOR PLAN
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

0 10' 20'

APPENDIX 1K

LANDSCAPE PLAN



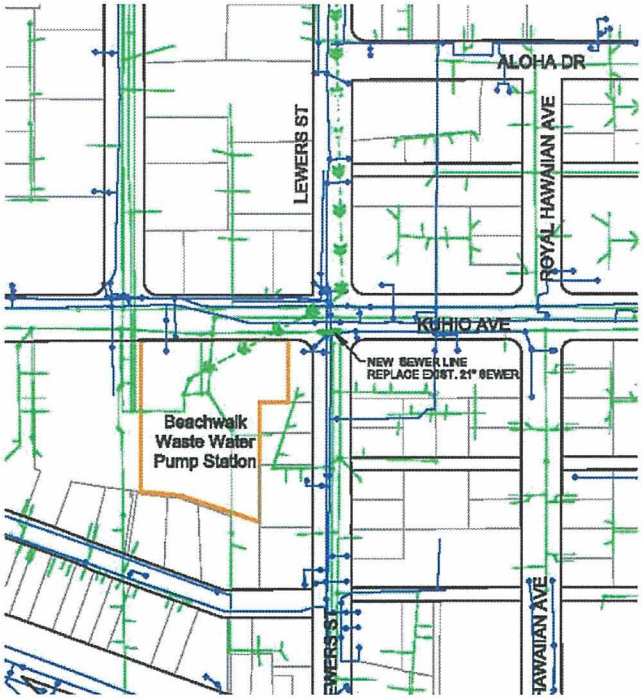
walter kimura moloda landscape architects

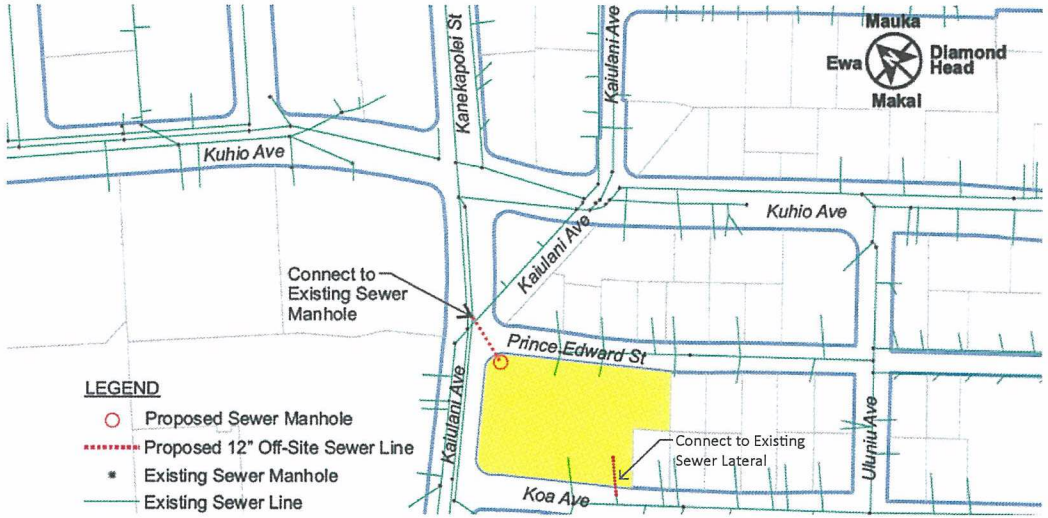
LANDSCAPE PLAN
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

APPENDIX 1L

PROPOSED OFF-SITE SEWER

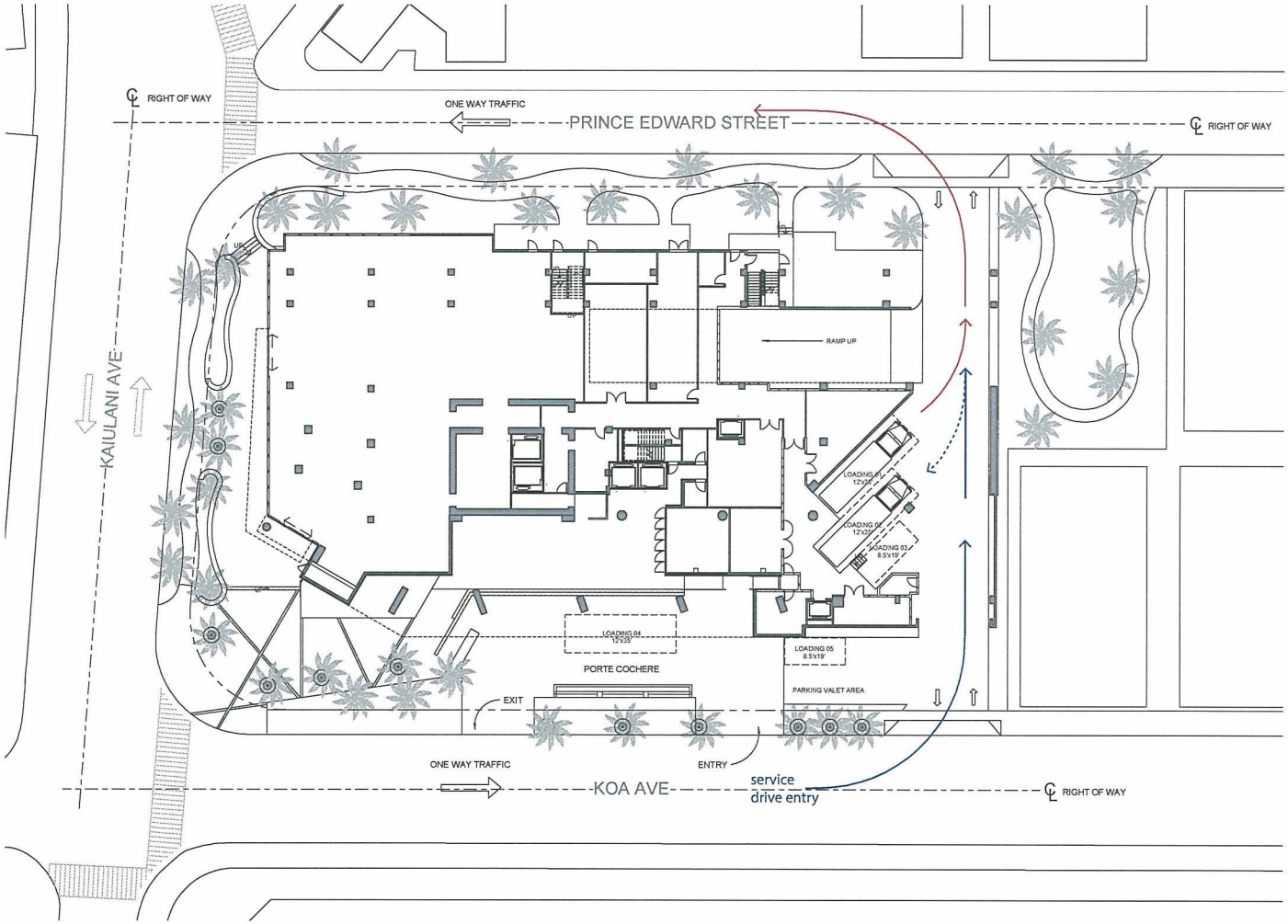




3-1 | Proposed Off-Site Sewer Improvements – Alternate Connection

APPENDIX 1M

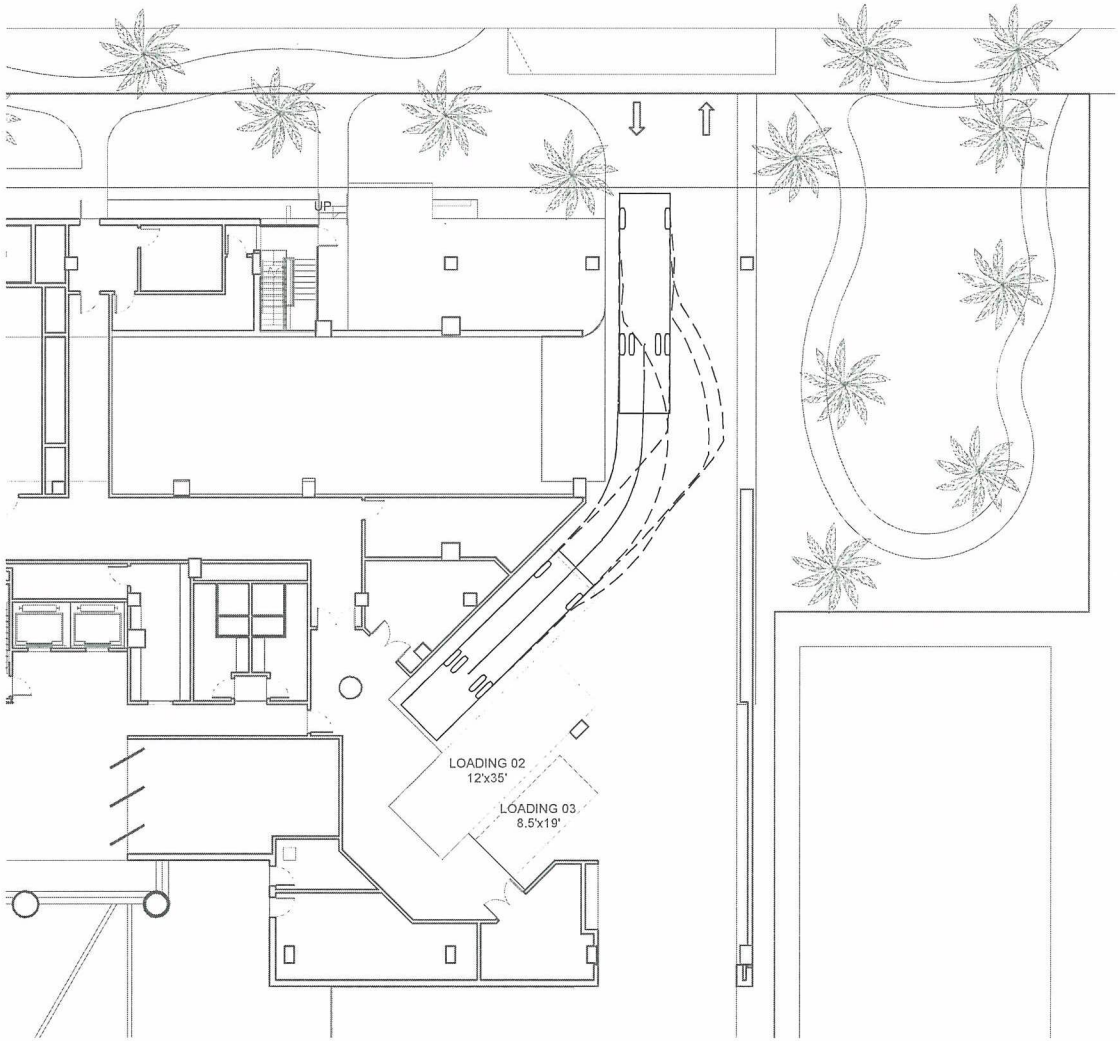
SERVICE TRUCK CIRCULATION



SERVICE TRUCK CIRCULATION
133 KAIULANI AVE
Honolulu, Hawaii

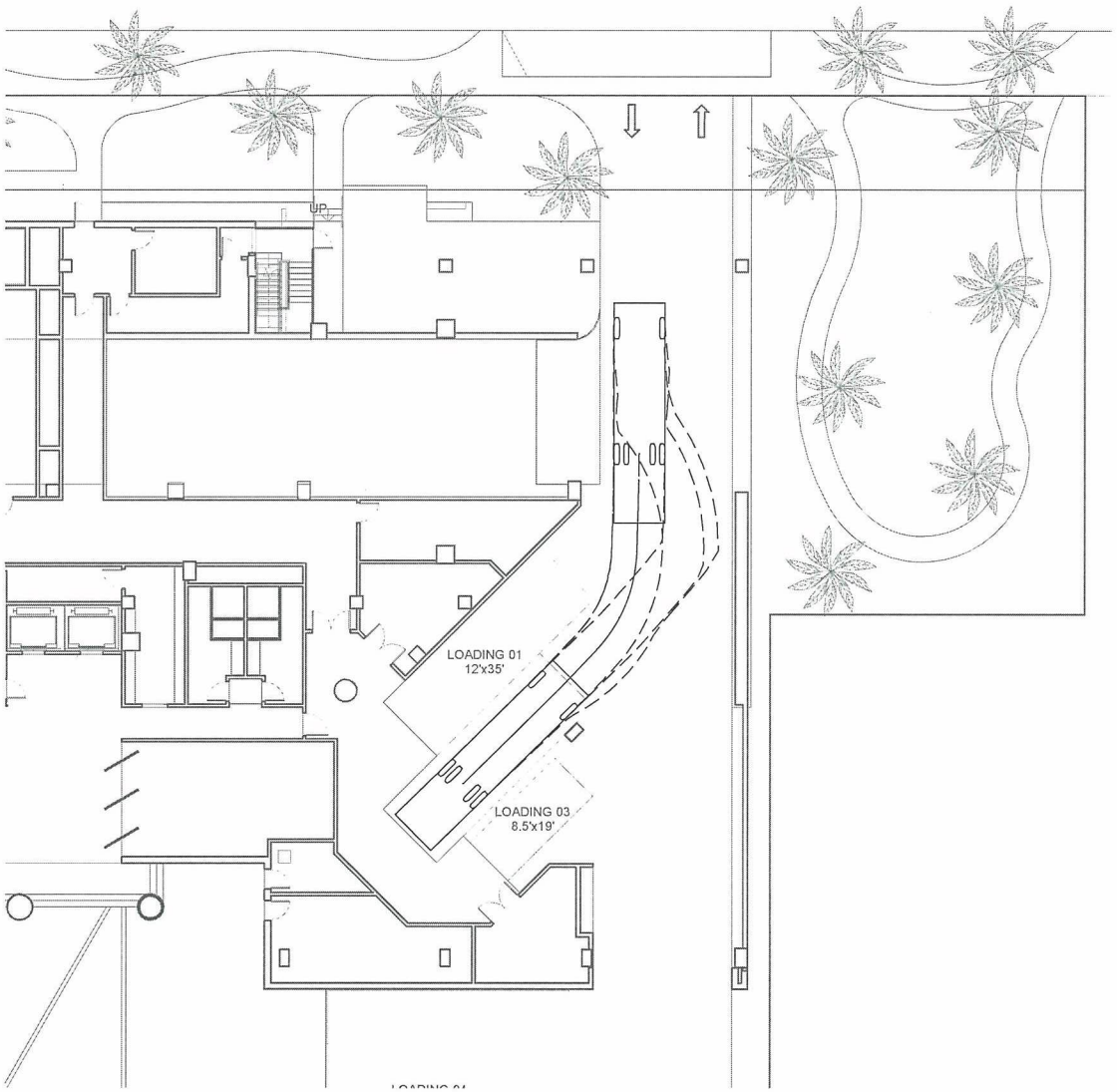
10.16.2014

2012036.000



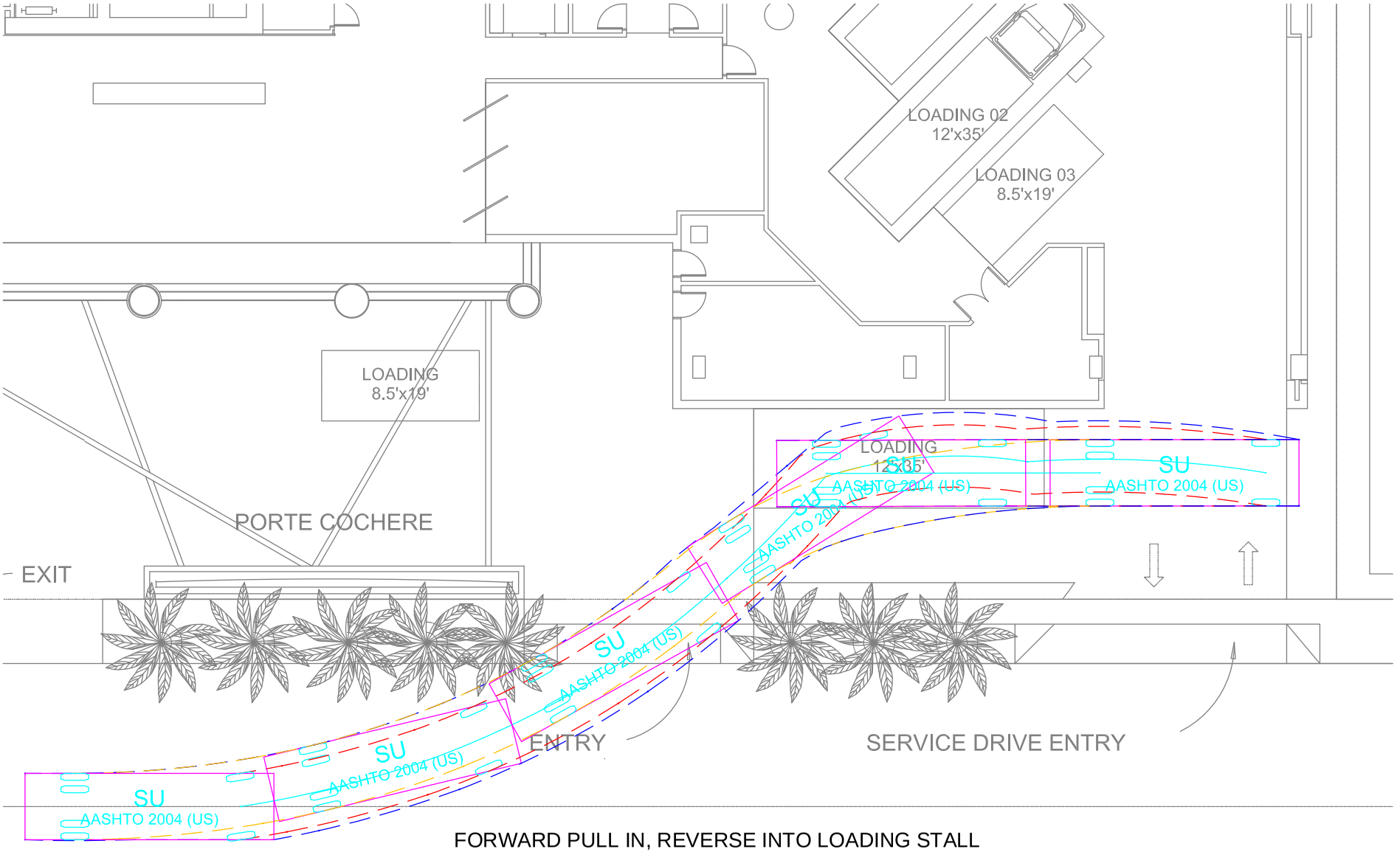
SERVICE TRUCK CIRCULATION- LOADING 01
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000



SERVICE TRUCK CIRCULATION- LOADING 02
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000



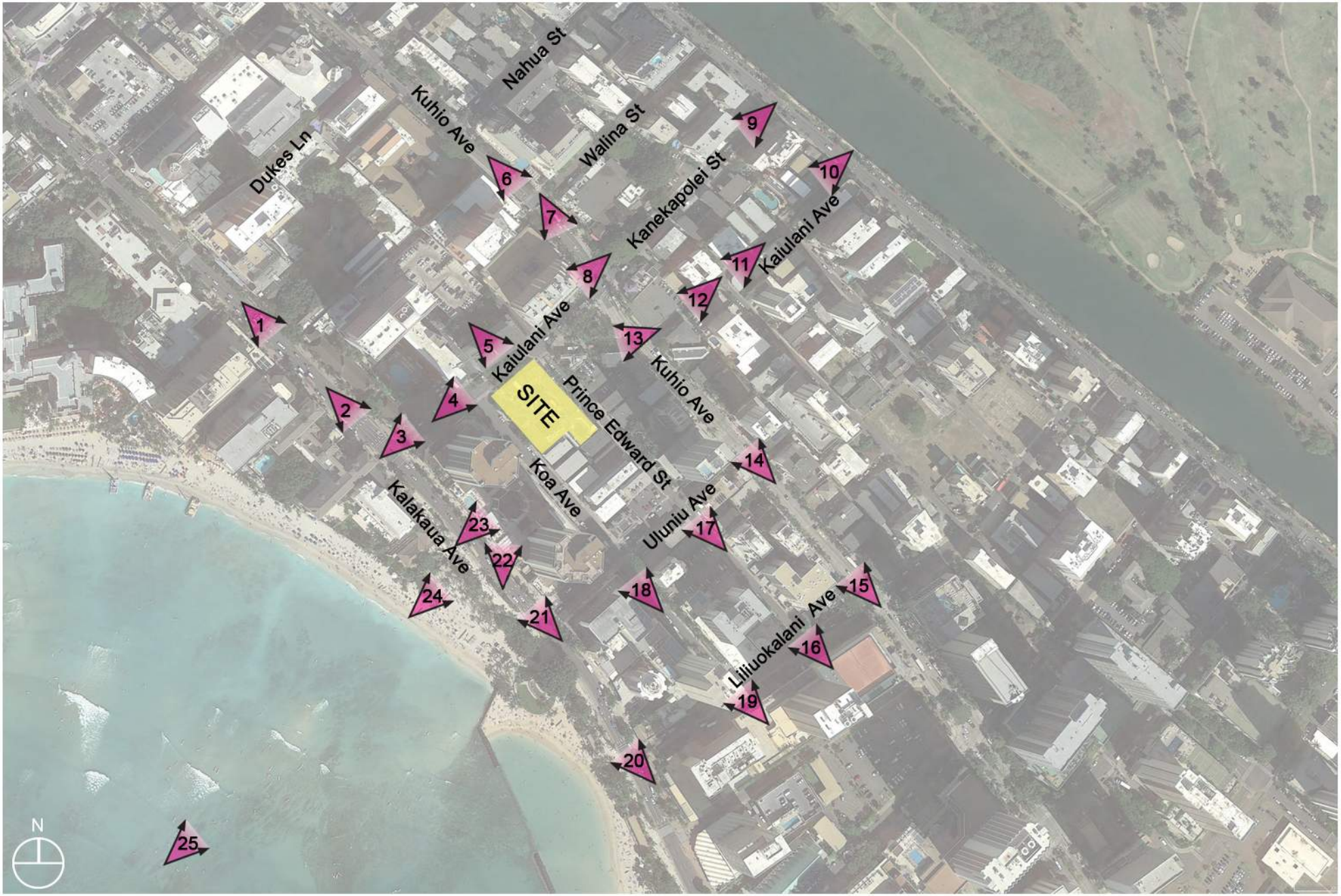
FORWARD PULL IN, REVERSE INTO LOADING STALL

SERVICE TRUCK CIRCULATION- LOADING 04
133 KAIULANI AVE
Honolulu, Hawaii

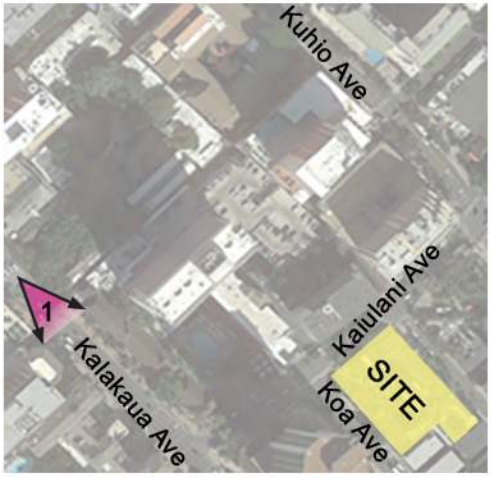
10.16.2014
2012036.000

APPENDIX 1N

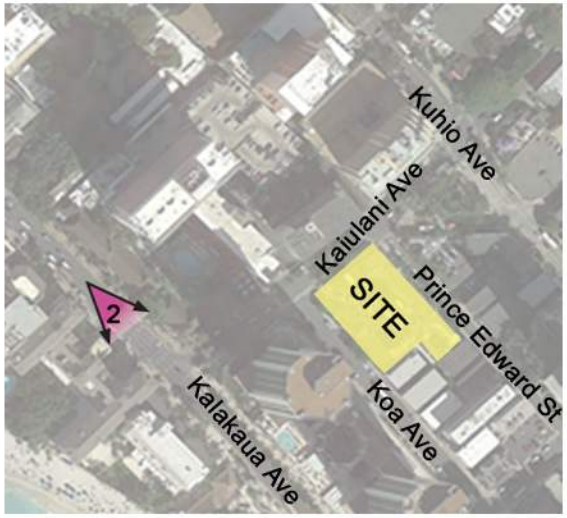
STREET VIEW STUDY



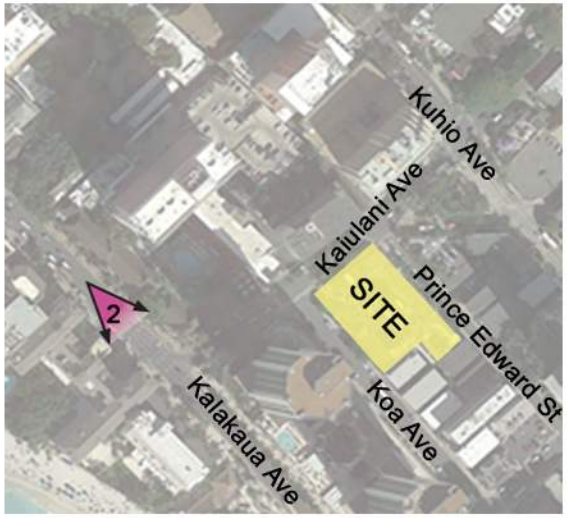
STREET VIEW STUDY
133 KAIULANI AVE.
HONOLULU, HAWAII



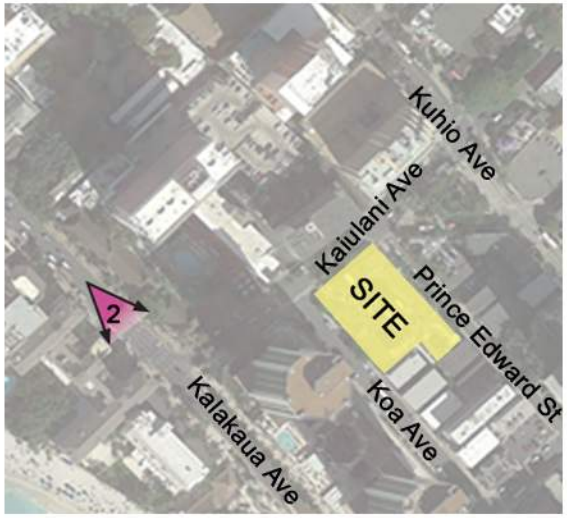
VIEW 1: Kalakaua Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-No.



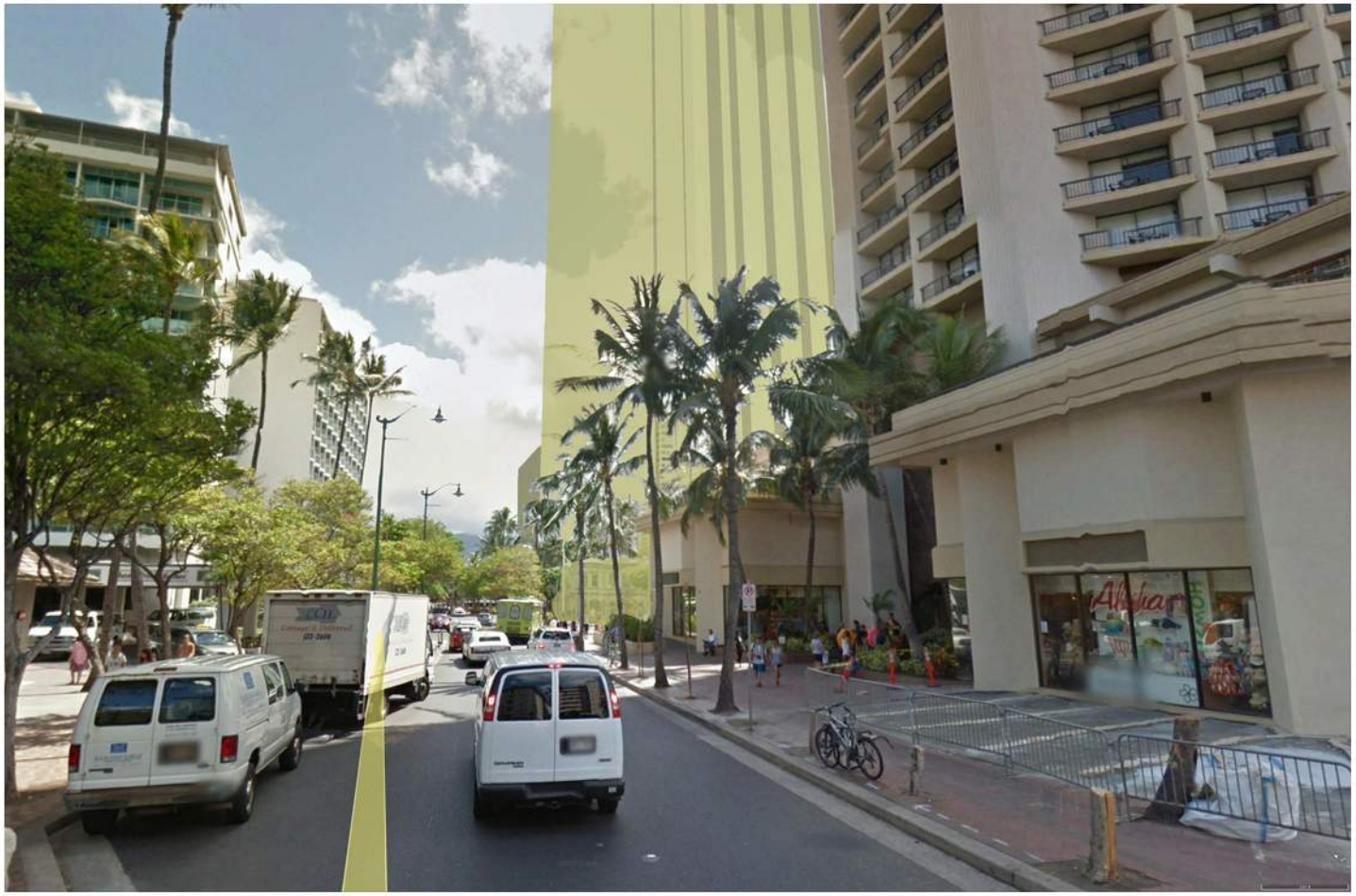
VIEW 2a: Kalakaua Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.

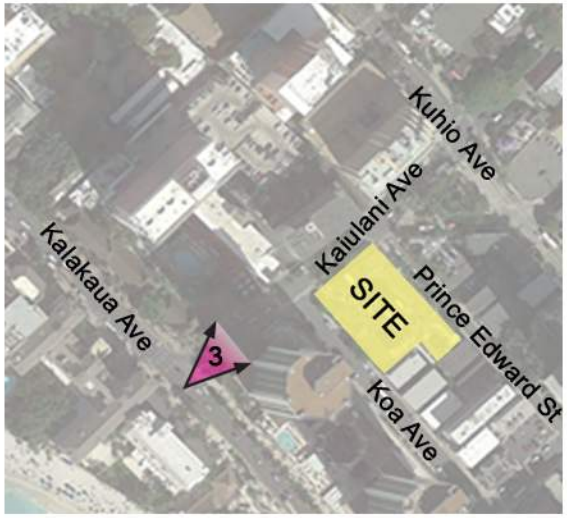


VIEW 2b: Kalakaua Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.

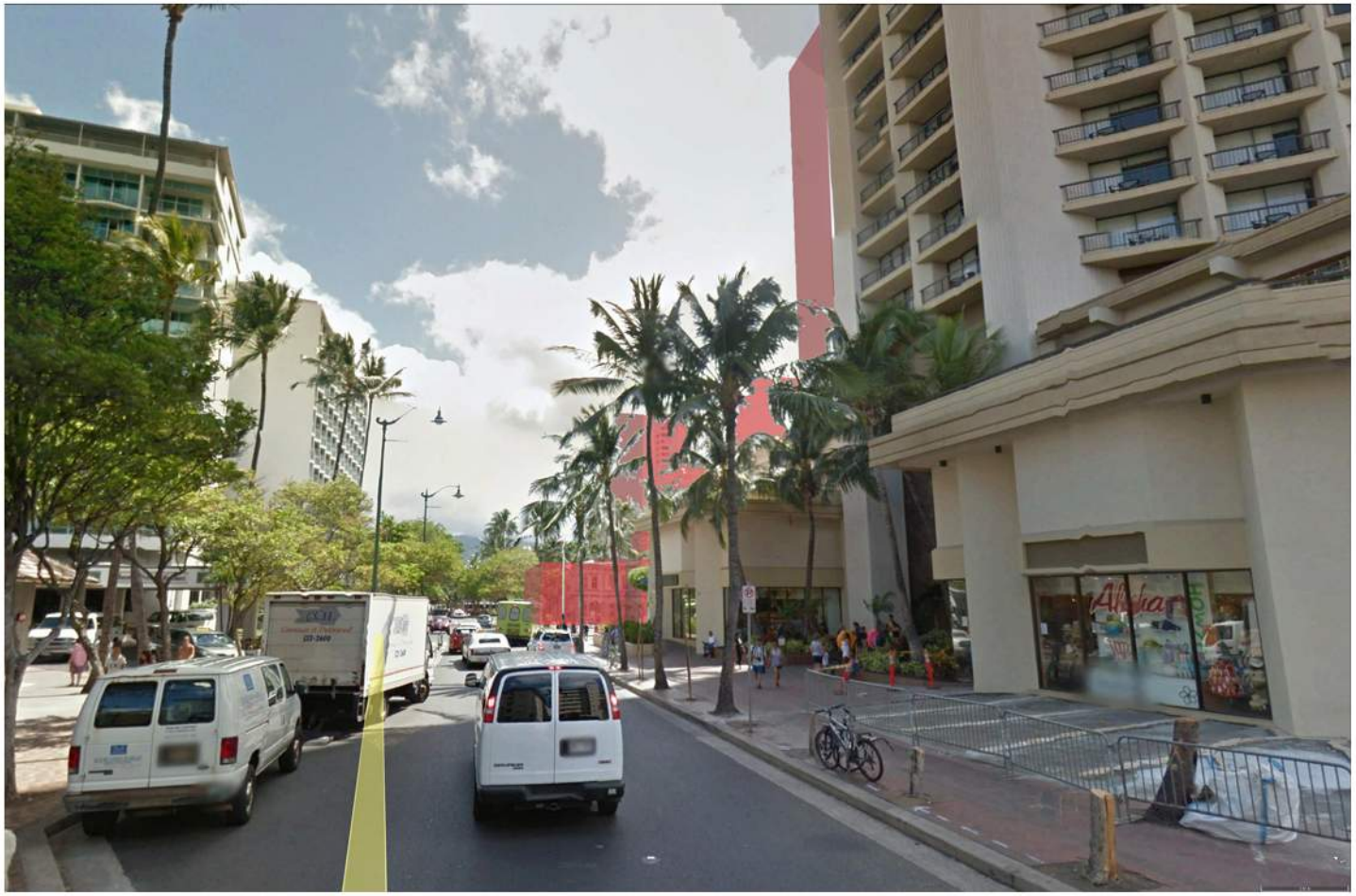


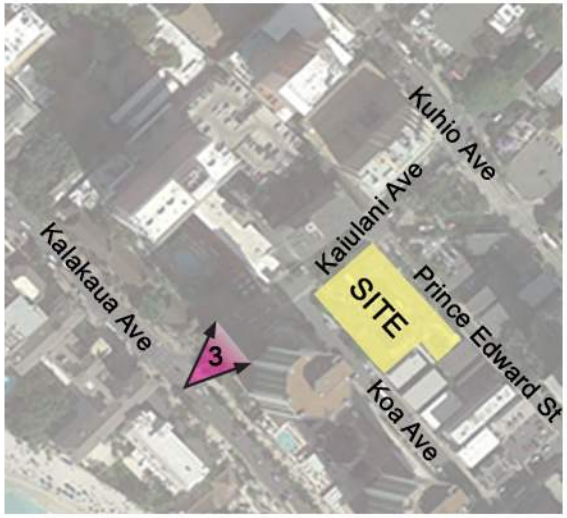
VIEW 2c : Kalakaua Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.



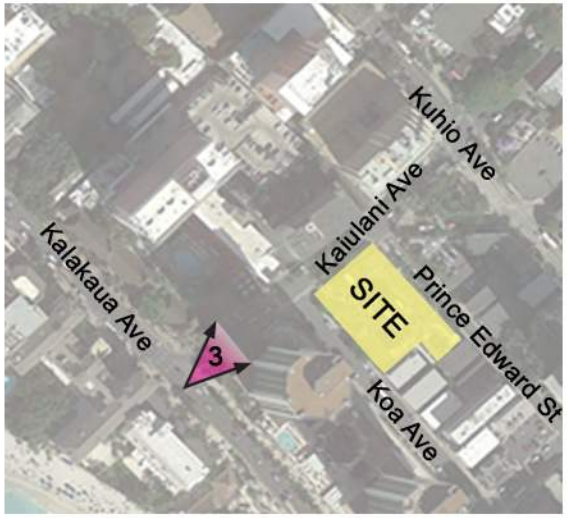


VIEW 3a : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

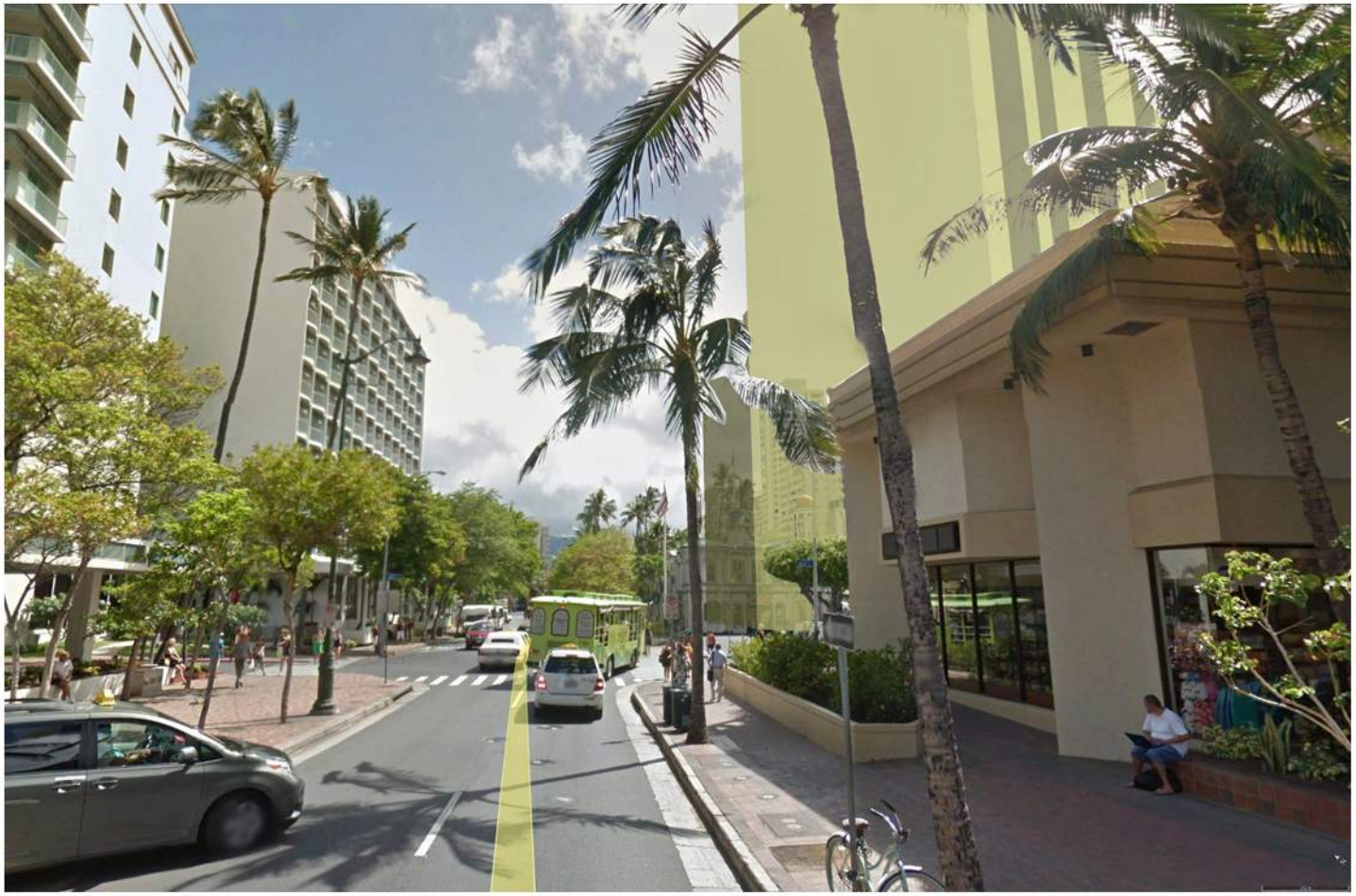


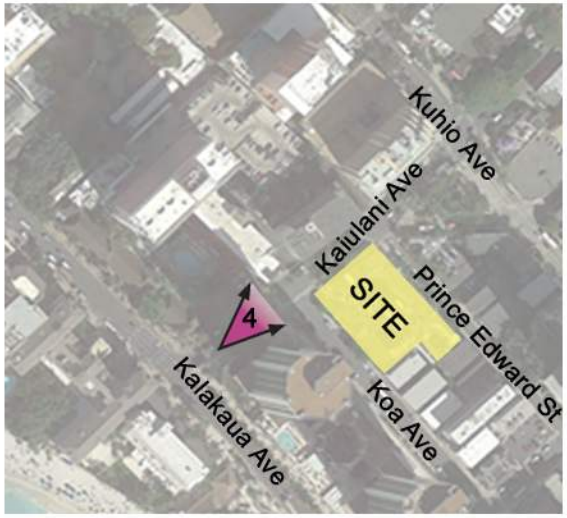


VIEW 3b : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

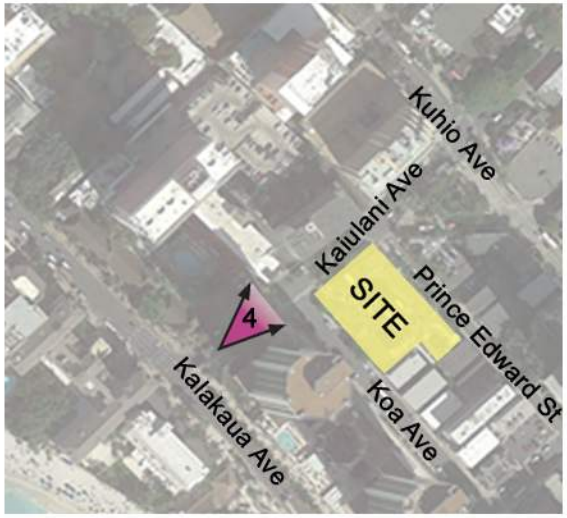


VIEW 3c : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

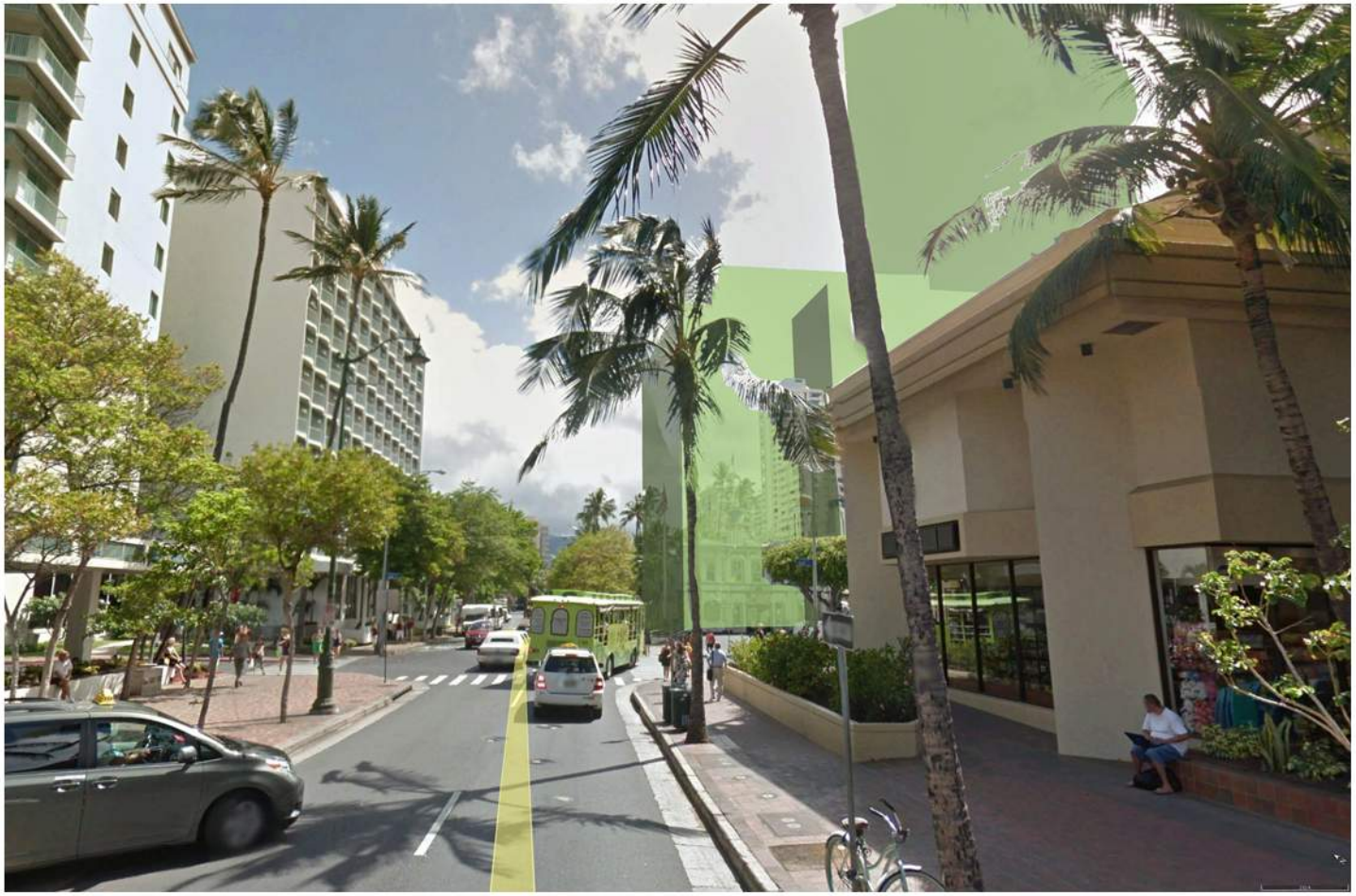


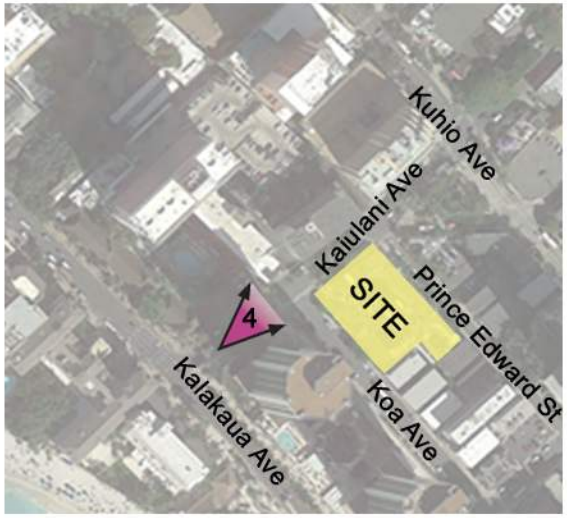


VIEW 4a: Kaiulani Avenue. Major Street-No. Facing-North. Significant View-No. Building Visability-Yes. Building is situated east of setback.

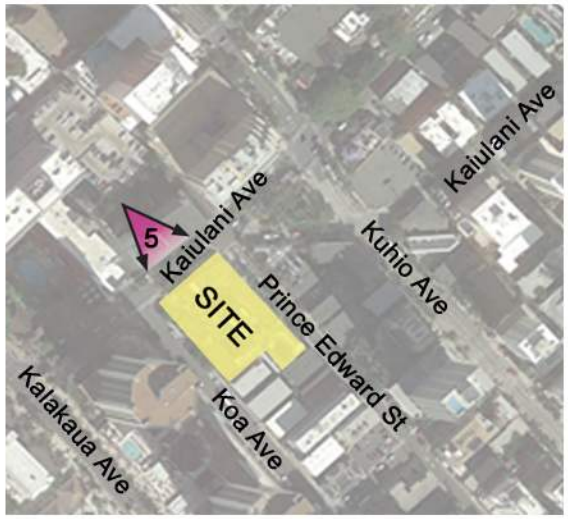


VIEW 4b: Kaiulani Avenue. Major Street-No. Facing-North. Significant View-No. Building Visability-Yes. Building is situated on the setback.

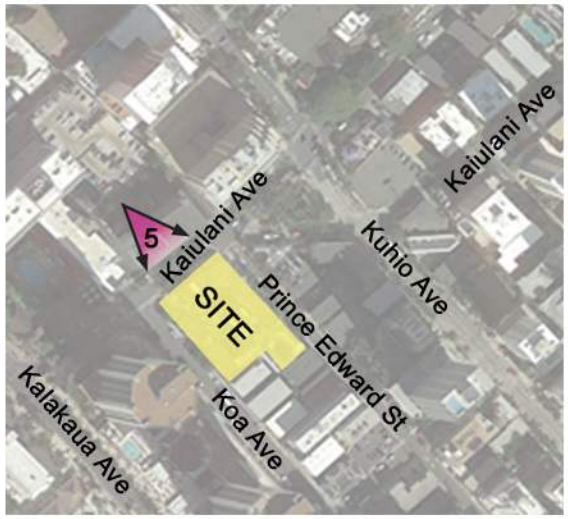




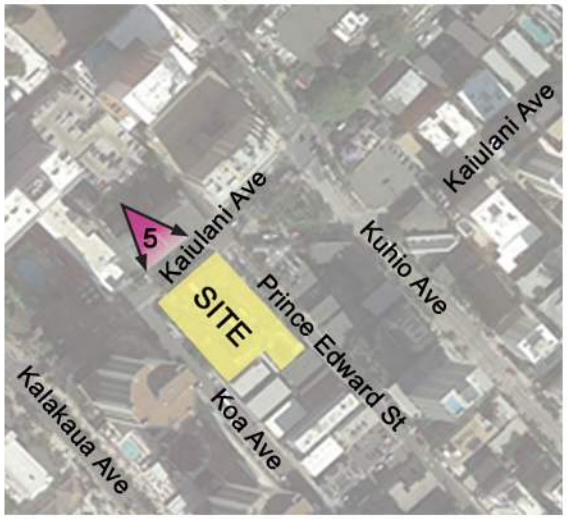
VIEW 4c : Kaiulani Avenue. Major Street-No. Facing-North. Significant View-No. Building Visability-Yes. Building is situatedon the setback.



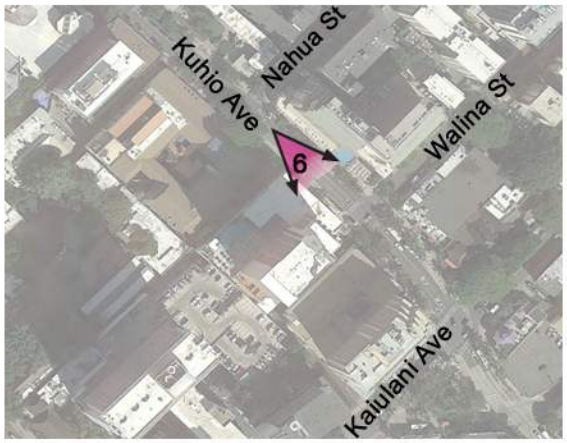
VIEW 5a : Kaiulani Avenue. Major Street-No. Facing-East. Significant View-No. Building Visability-Yes. Building is situated east of setback.



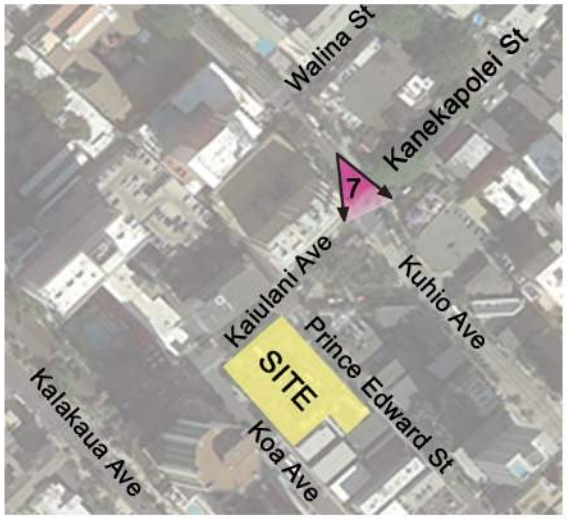
VIEW 5b : Kaiulani Avenue. Major Street-No. Facing-East. Significant View-No. Building Visability-Yes. Building is situated on the setback.



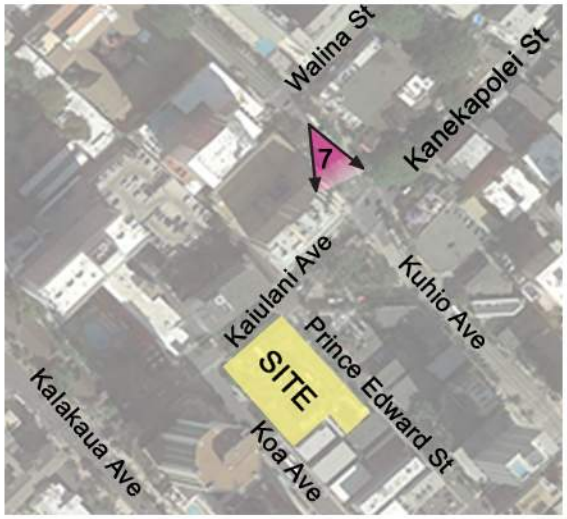
VIEW 5c : Kaiulani Avenue. Major Street-No. Facing-East. Significant View-No. Building Visability-Yes. Building is situated on the setback.



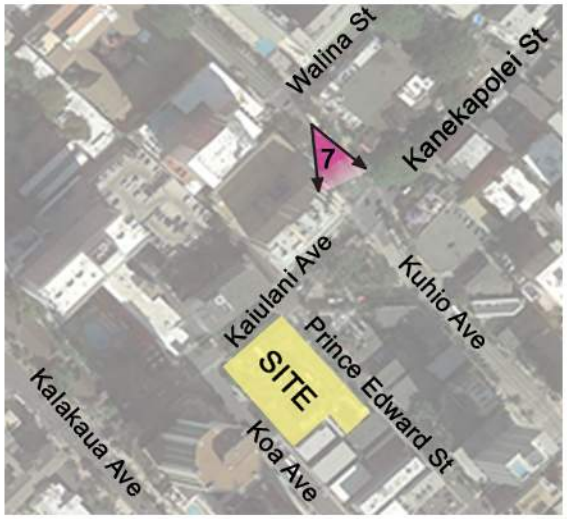
VIEW 6: Kuhio Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-No.



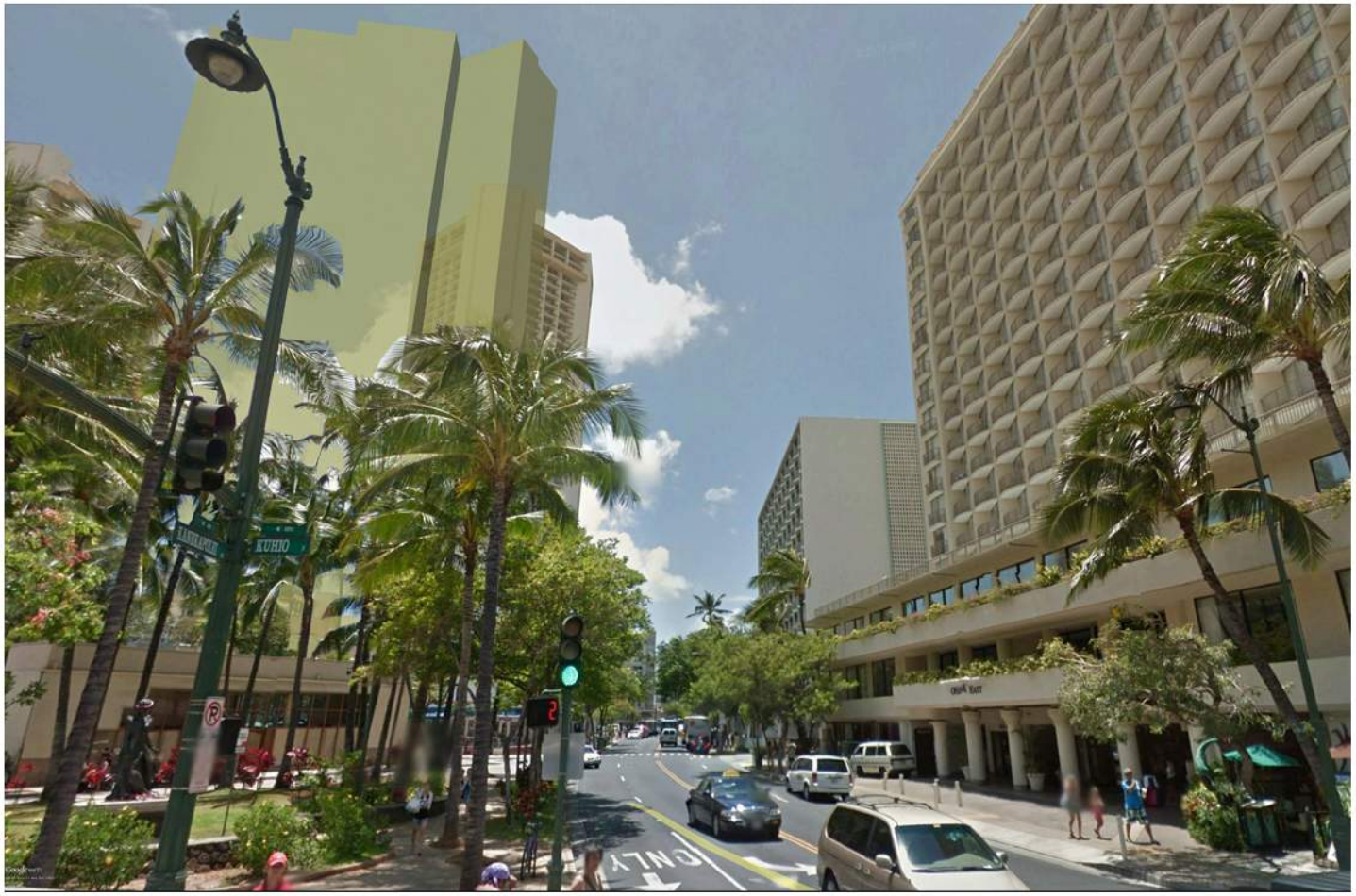
VIEW 7a : Kuhio Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.



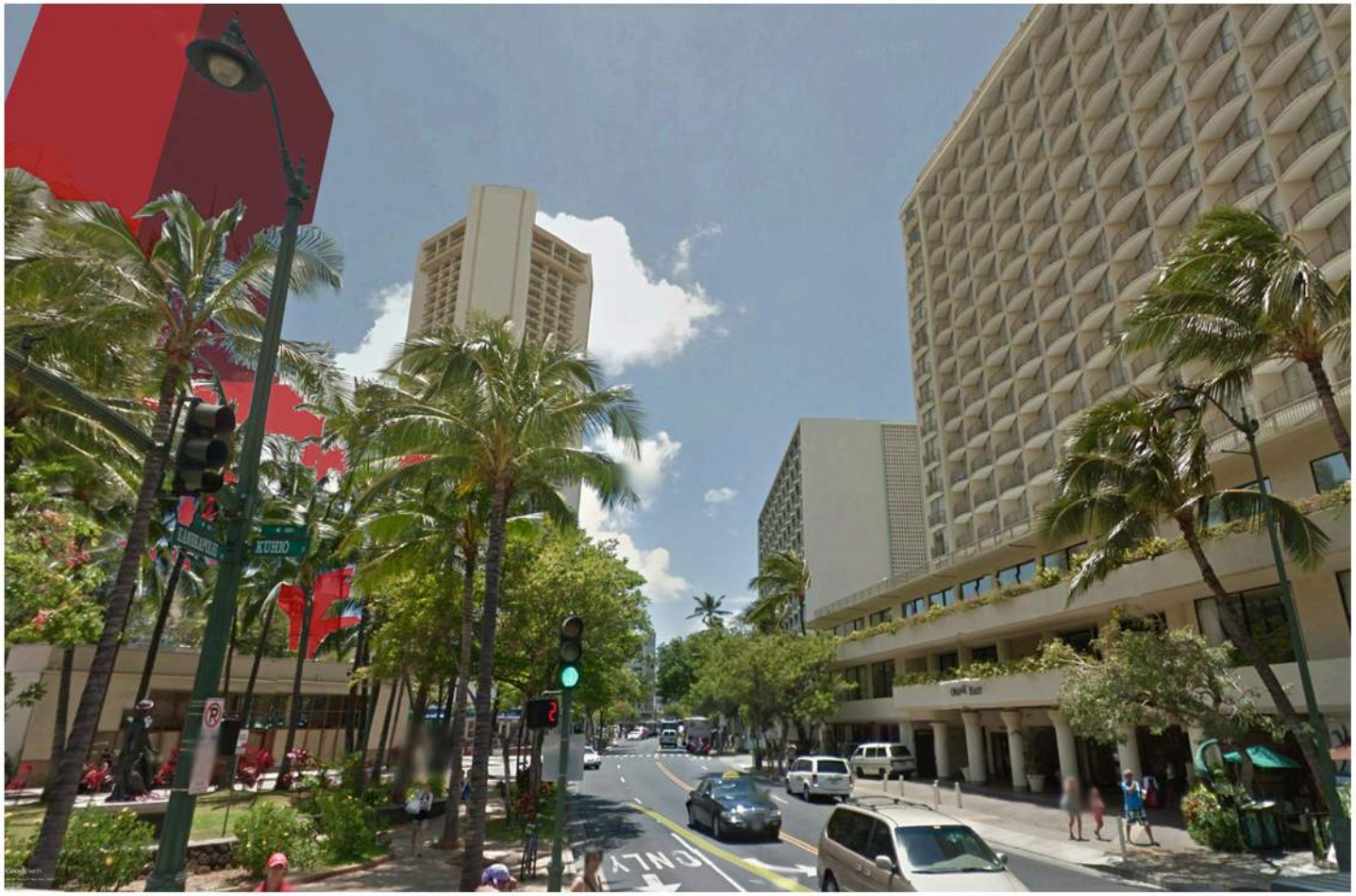
VIEW 7b: Kuhio Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.



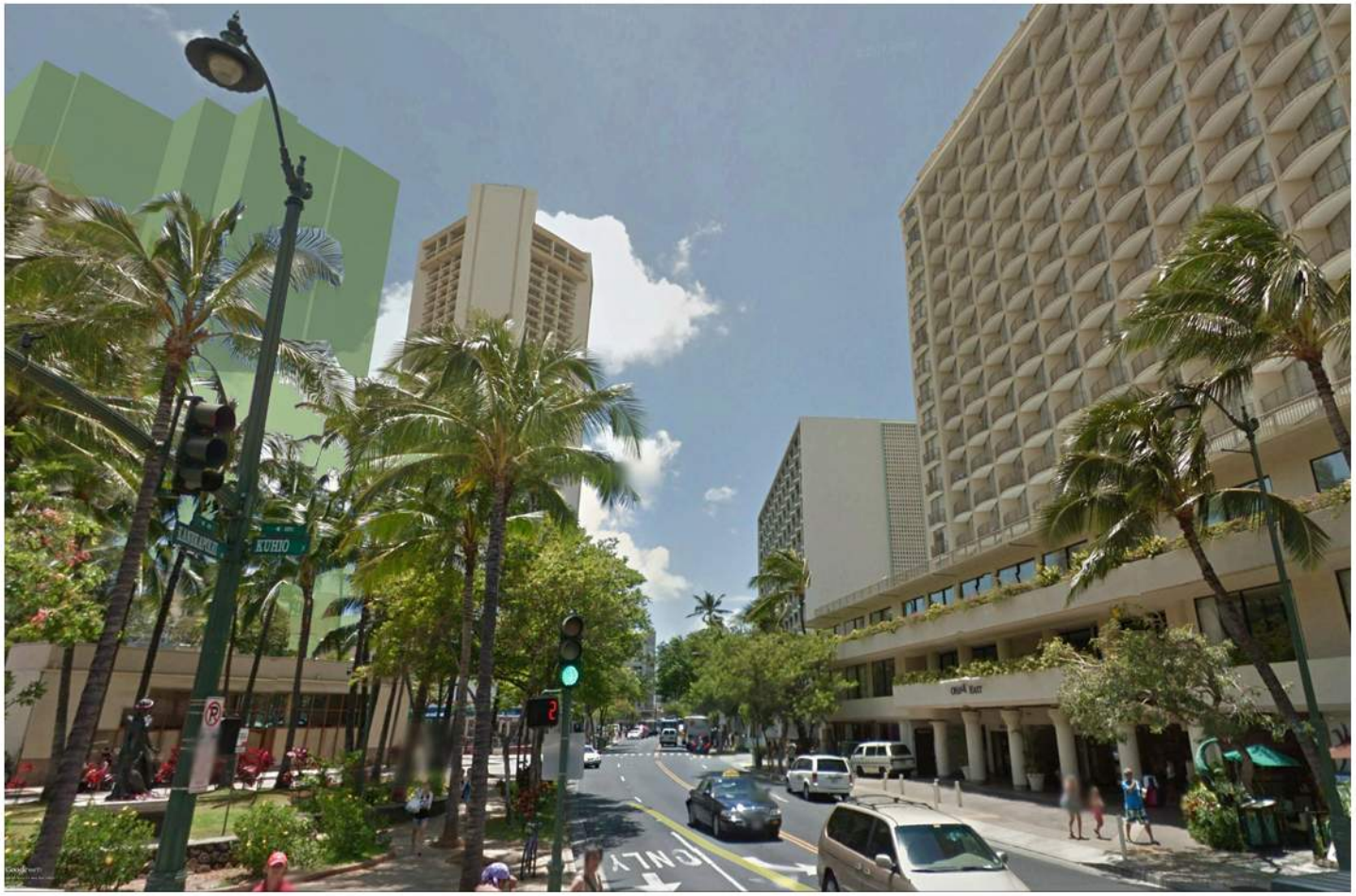
VIEW 7c : Kuhio Avenue. Major Street-Yes. Facing-East. Significant View-Yes. Building Visability-Yes.

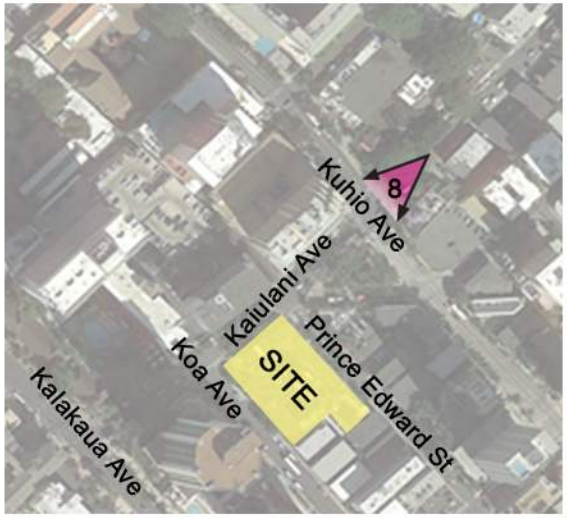


VIEW 8a : Kanekapolei St. (at Kuhio Avenue). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

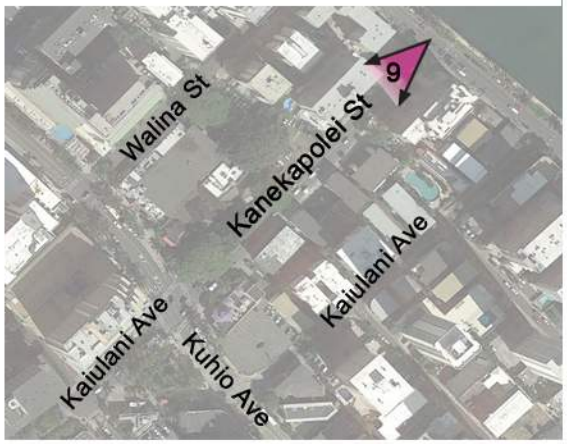


VIEW 8b : Kanekapolei St. (at Kuhio Avenue). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

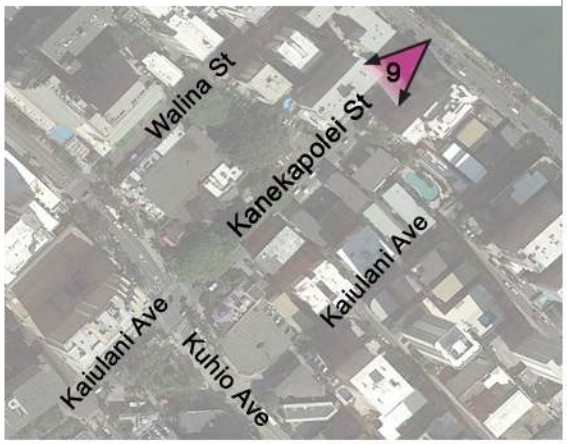




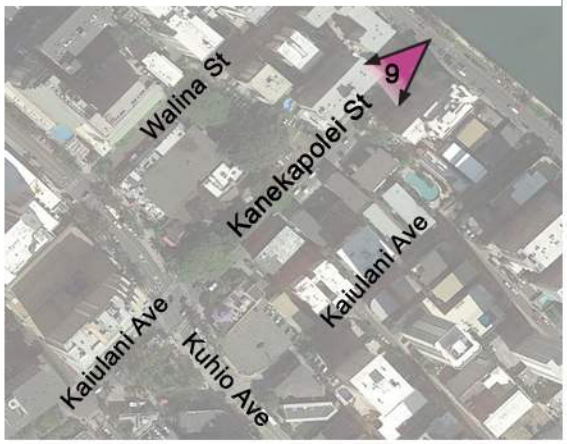
VIEW 8c : Kanekapolei St. (at Kuhio Avenue). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



VIEW 9a : Kanekapolei Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



VIEW 9b : Kanekapolei Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

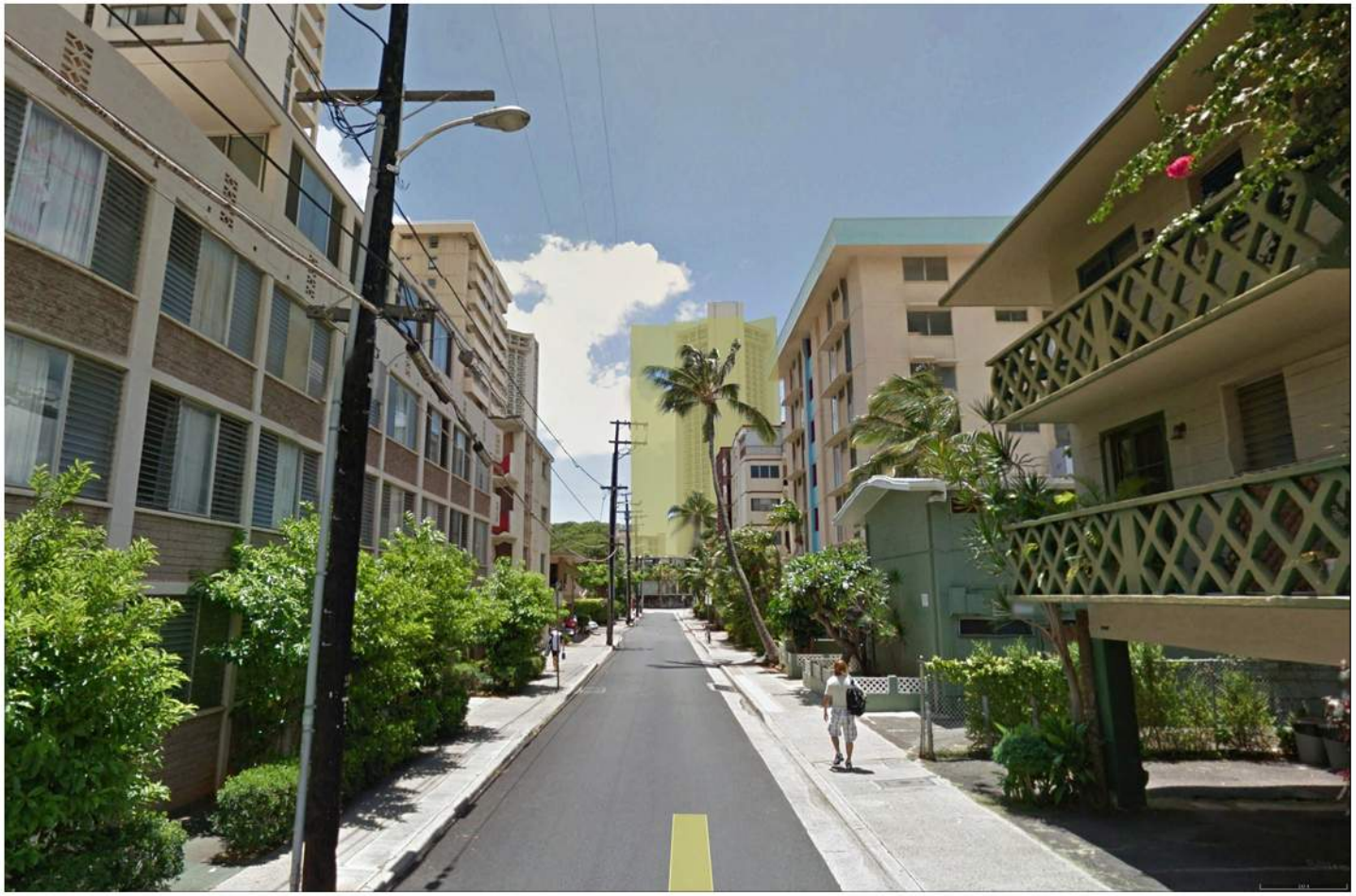


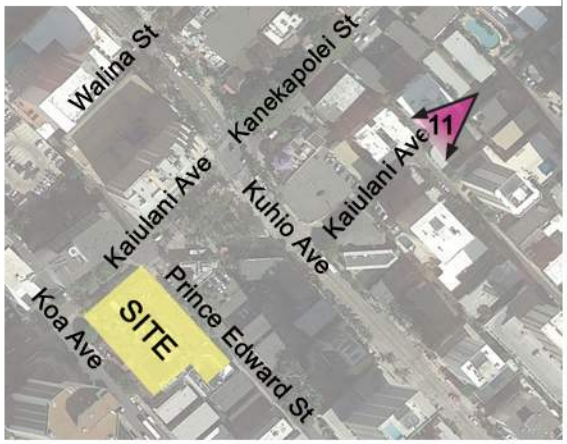
VIEW 9c : Kanekapolei Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

VIEW 10a : Kaiulani Avenue (at Ala Wai Blvd.). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

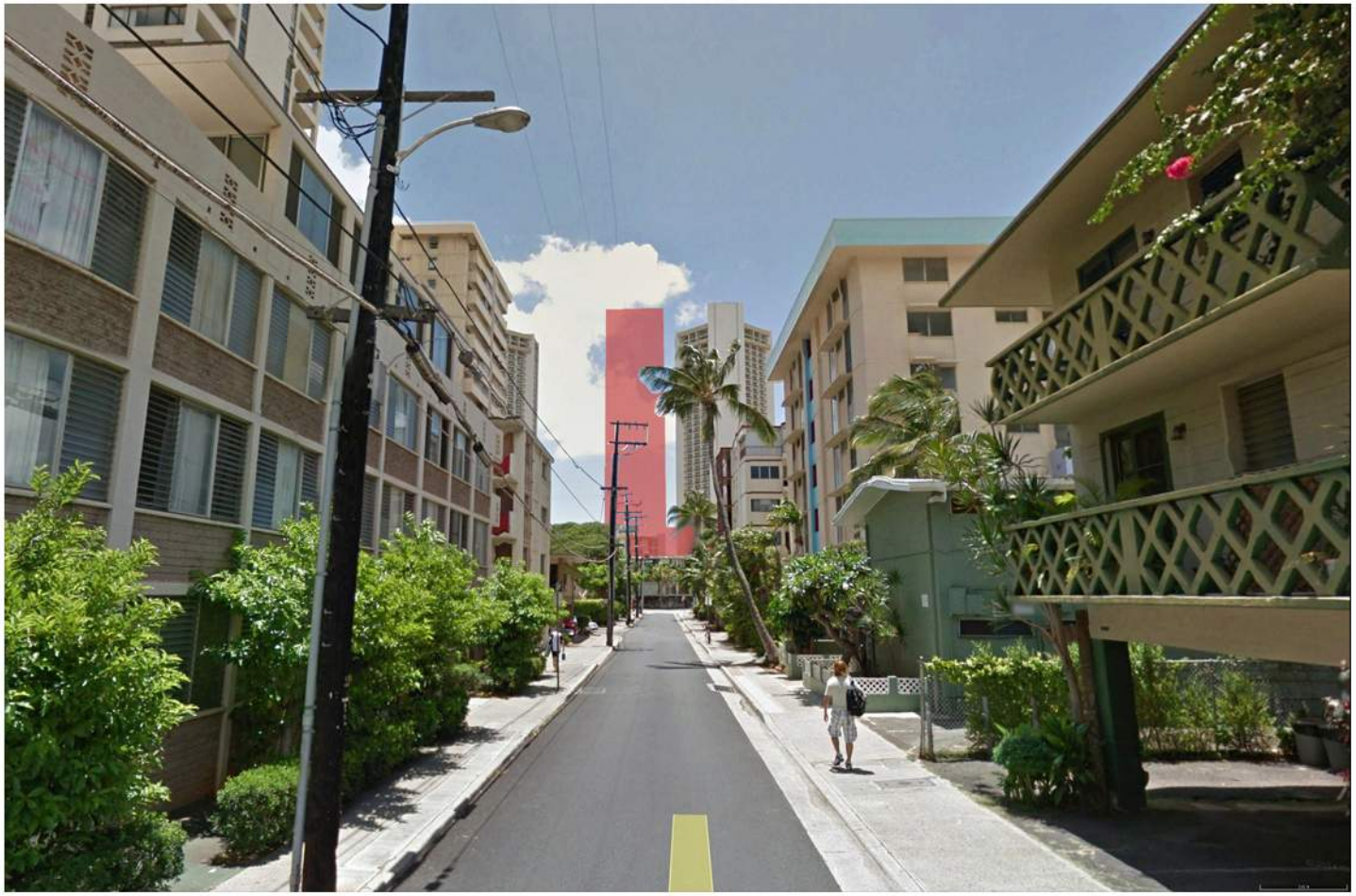
VIEW 10b : Kaiulani Avenue (at Ala Wai Blvd.). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

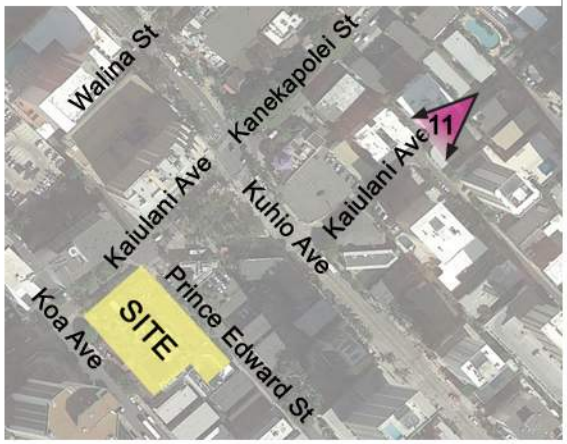
VIEW 10c : Kaiulani Avenue (at Ala Wai Blvd.). Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



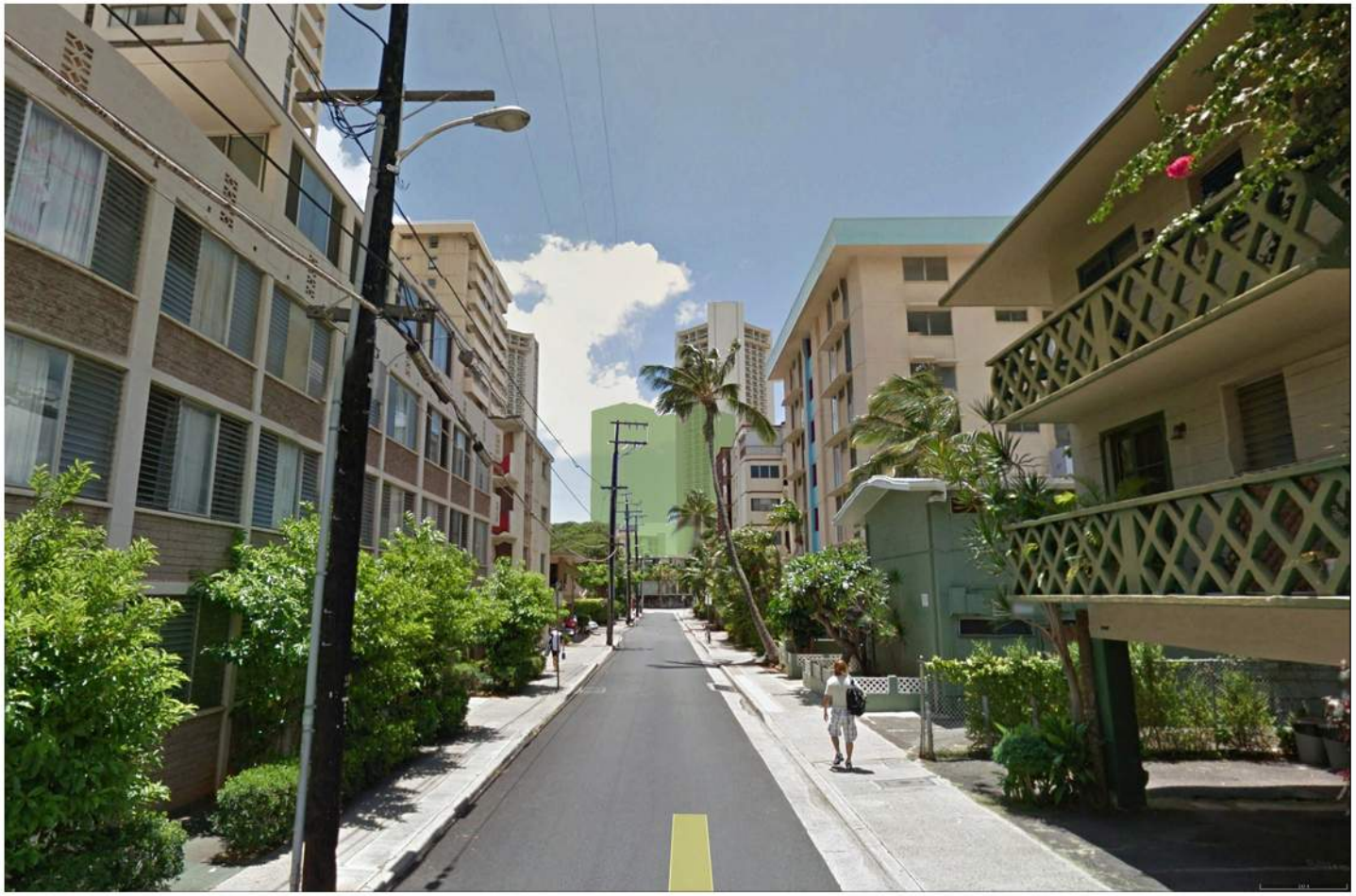


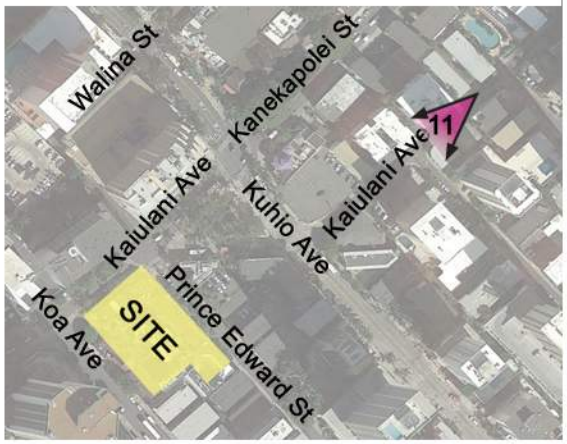
VIEW 11a : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



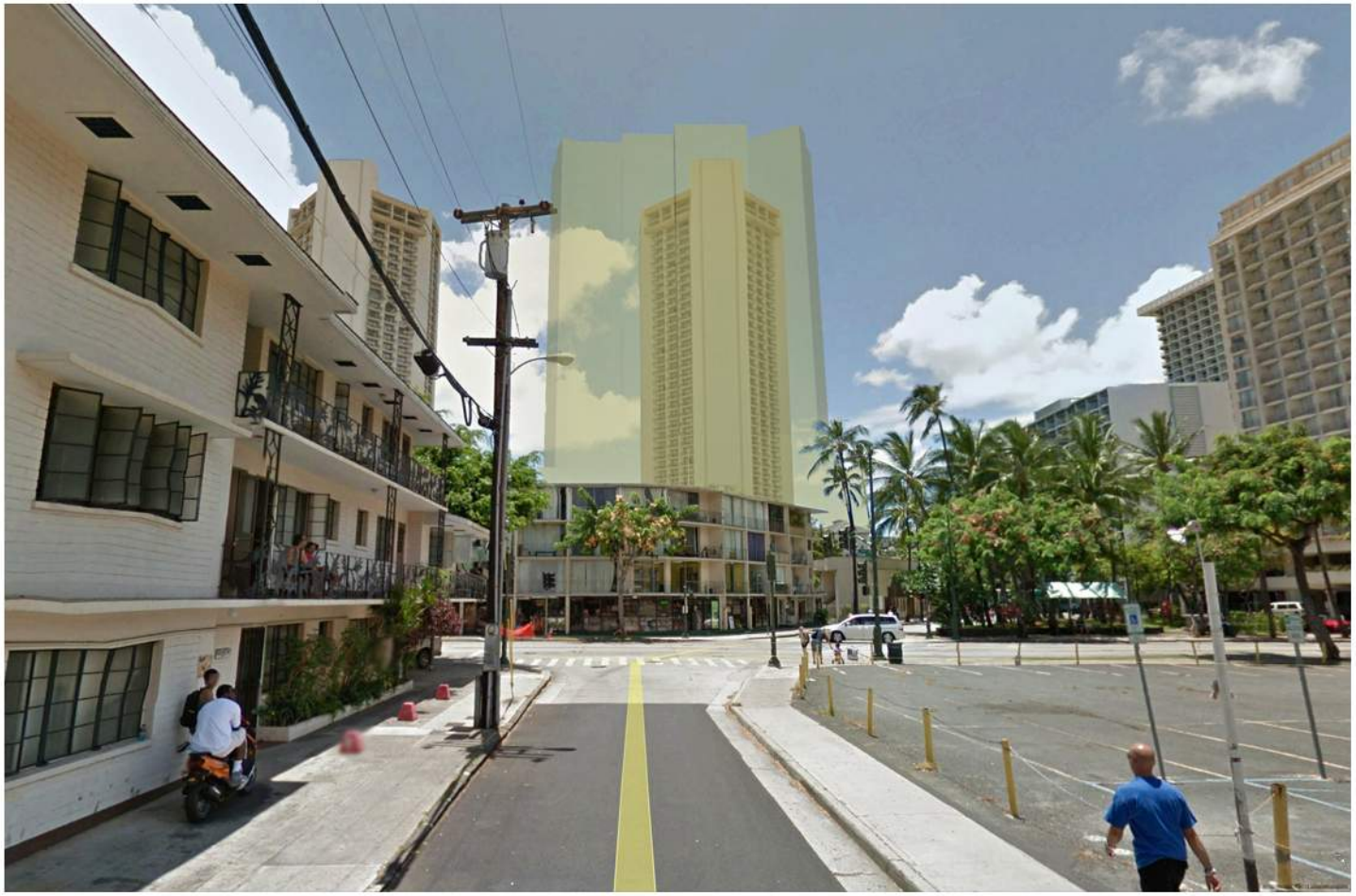


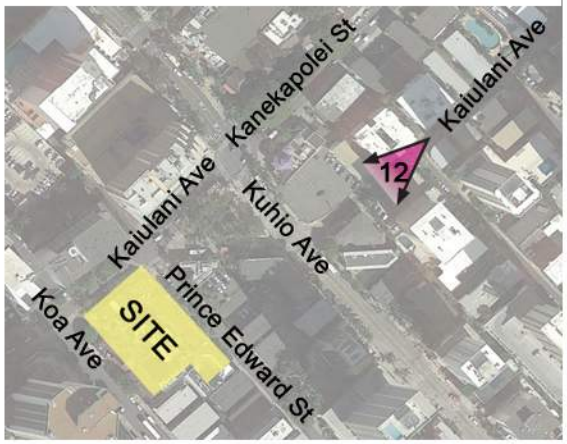
VIEW 11b : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



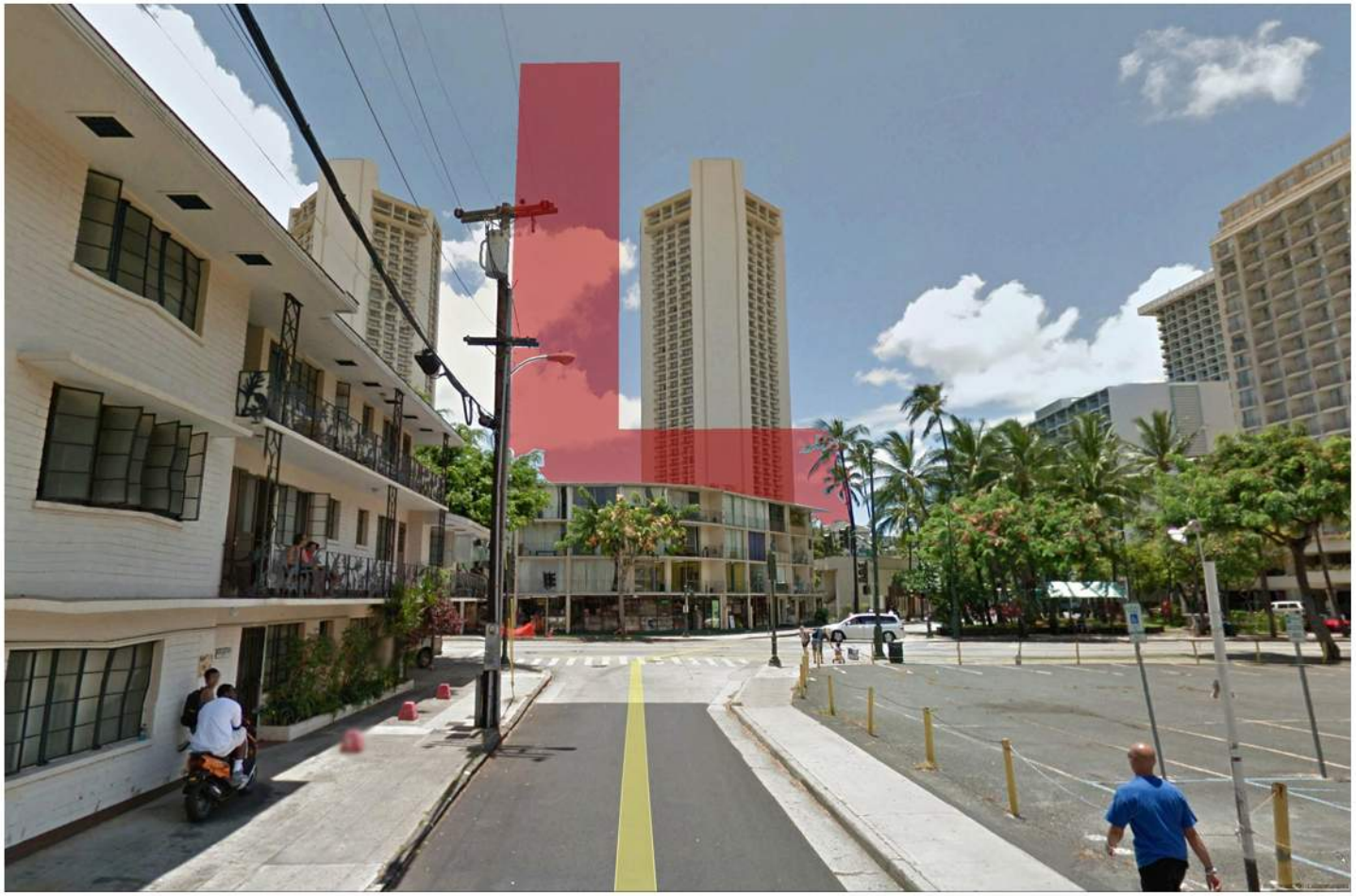


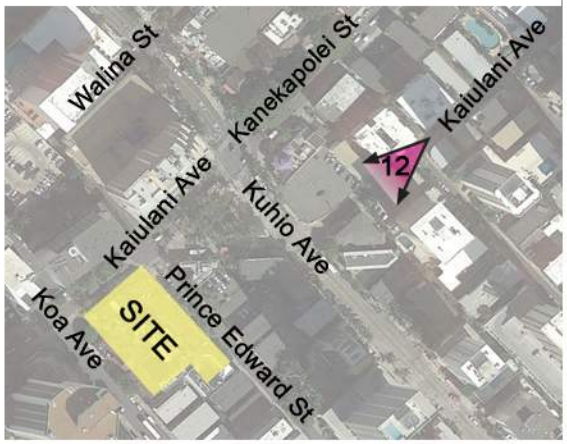
VIEW 11c : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



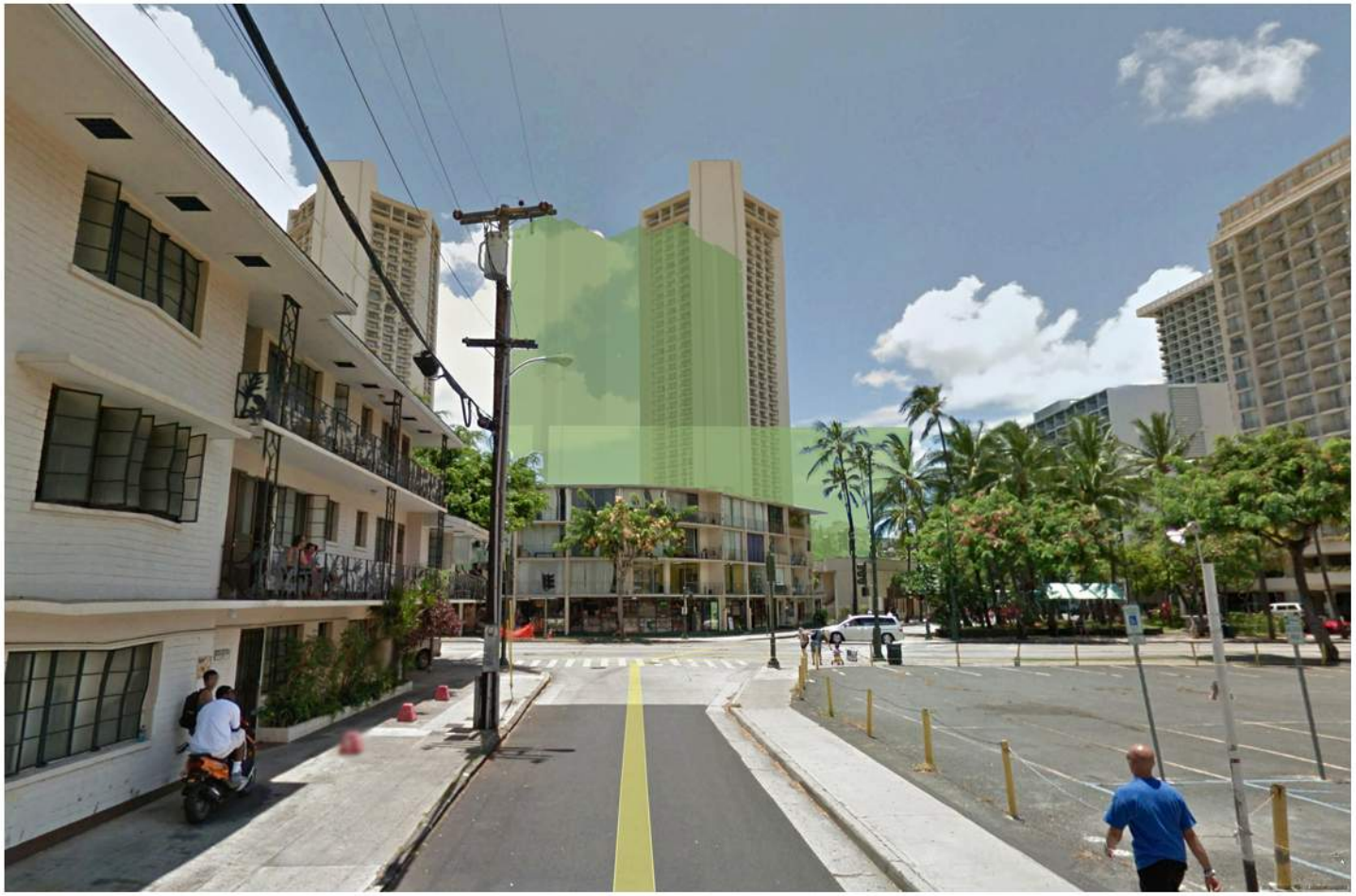


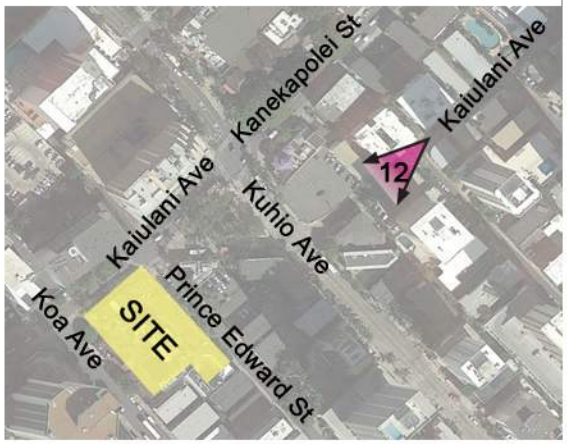
VIEW 12a : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



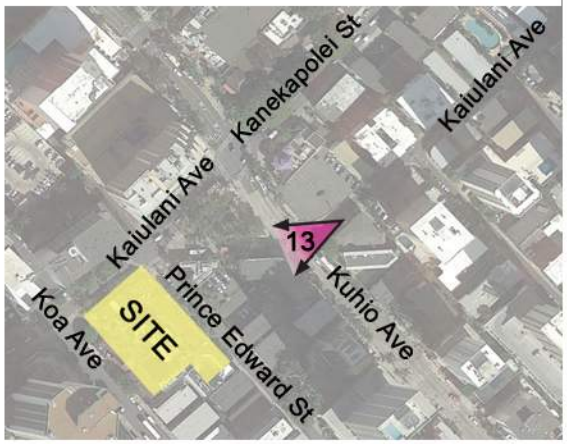


VIEW 12b : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

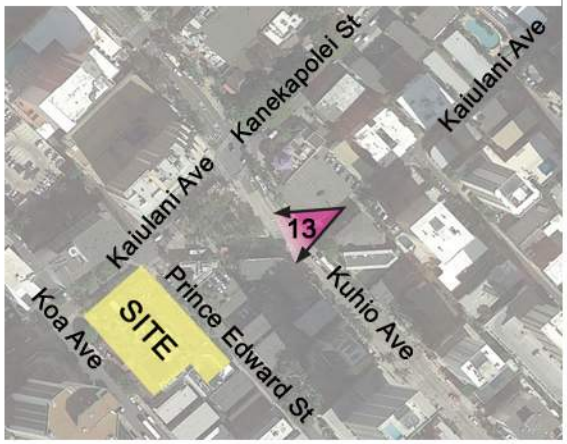




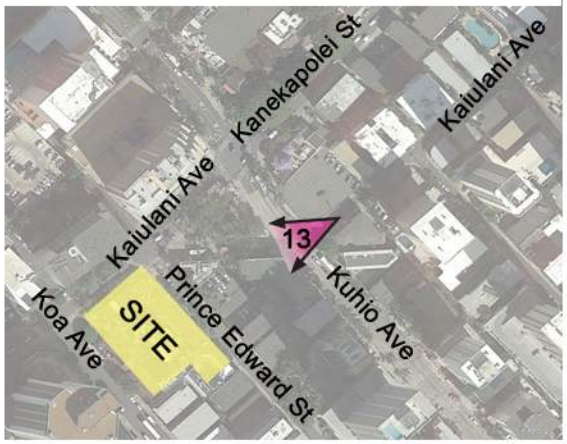
VIEW 12c : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.



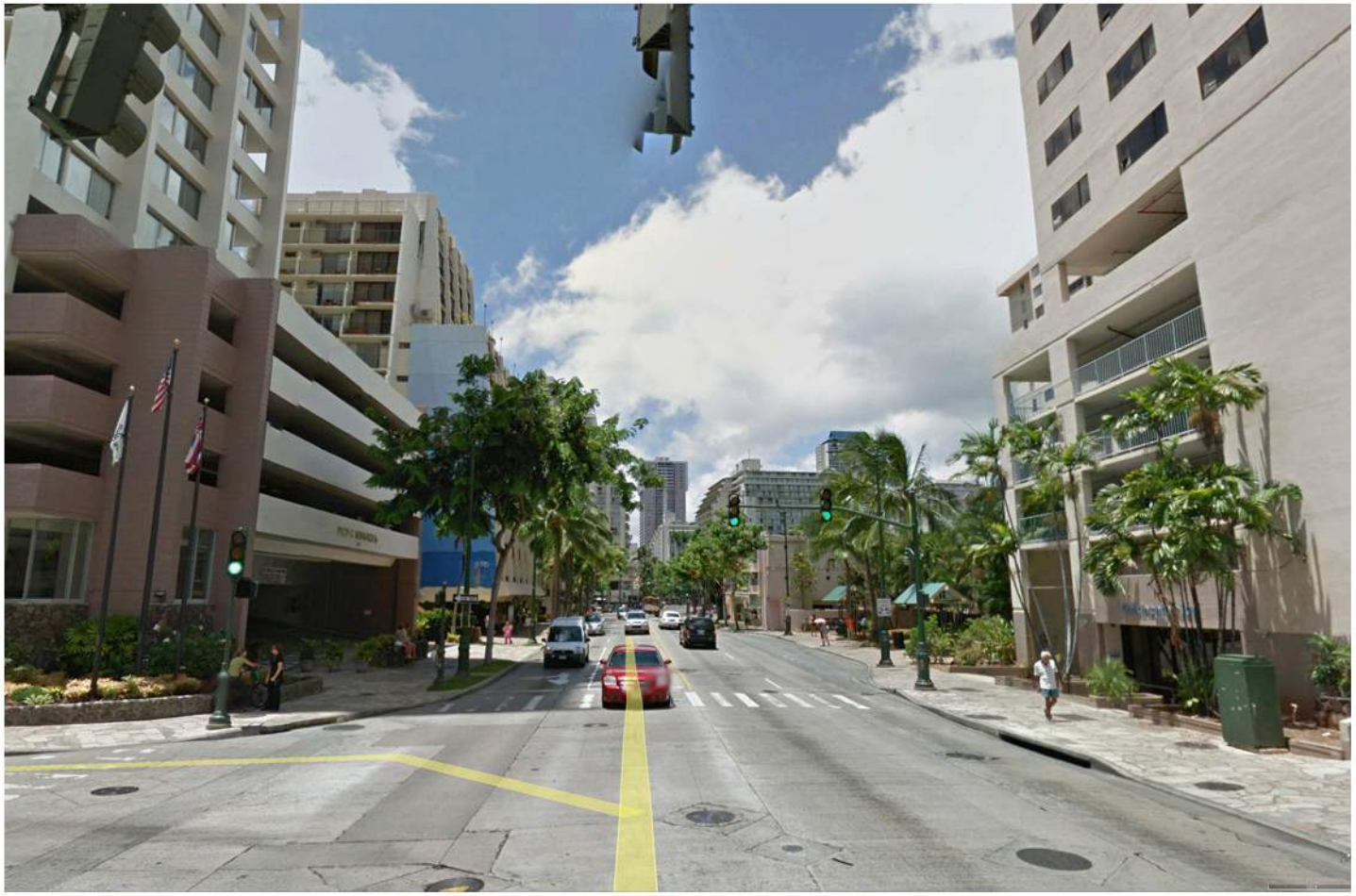
VIEW 13a : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

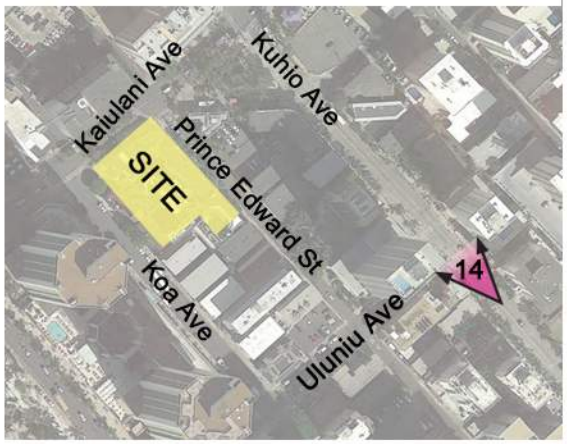


VIEW 13b : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

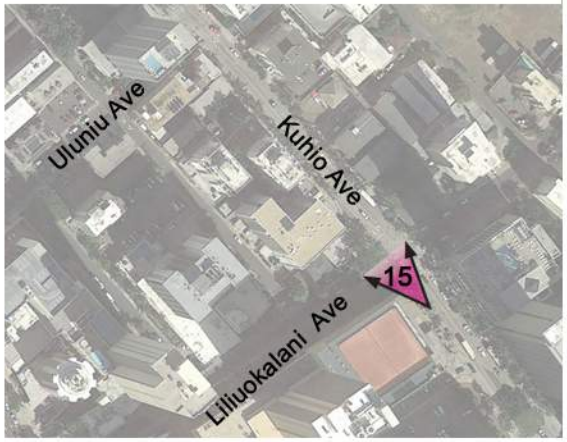


VIEW 13c : Kaiulani Avenue. Major Street-No. Facing-South. Significant View-No. Building Visability-Yes.

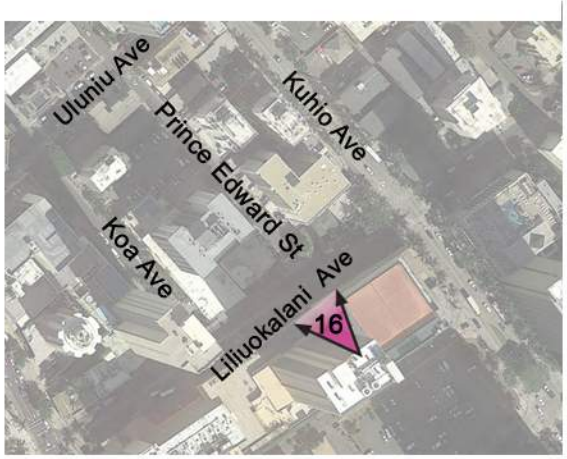




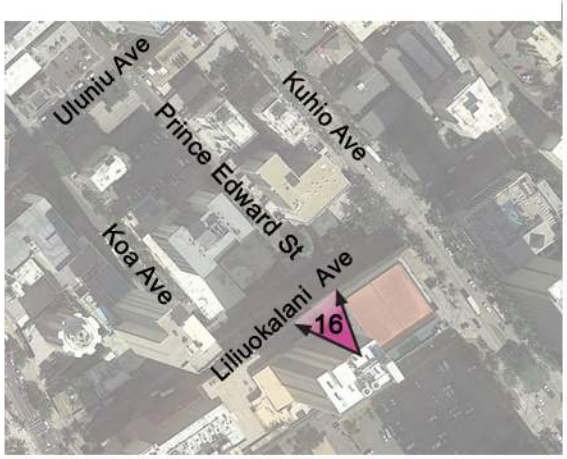
VIEW 14: Kuhio Avenue. Major Street-Yes. Facing-West. Significant View-Yes. Building Visability-No.



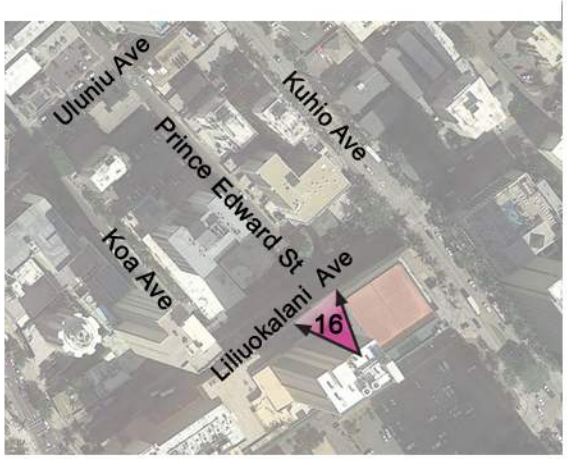
VIEW 15: Kuhio Avenue. Major Street-Yes. Facing-West. Significant View-Yes. Building Visability-No.



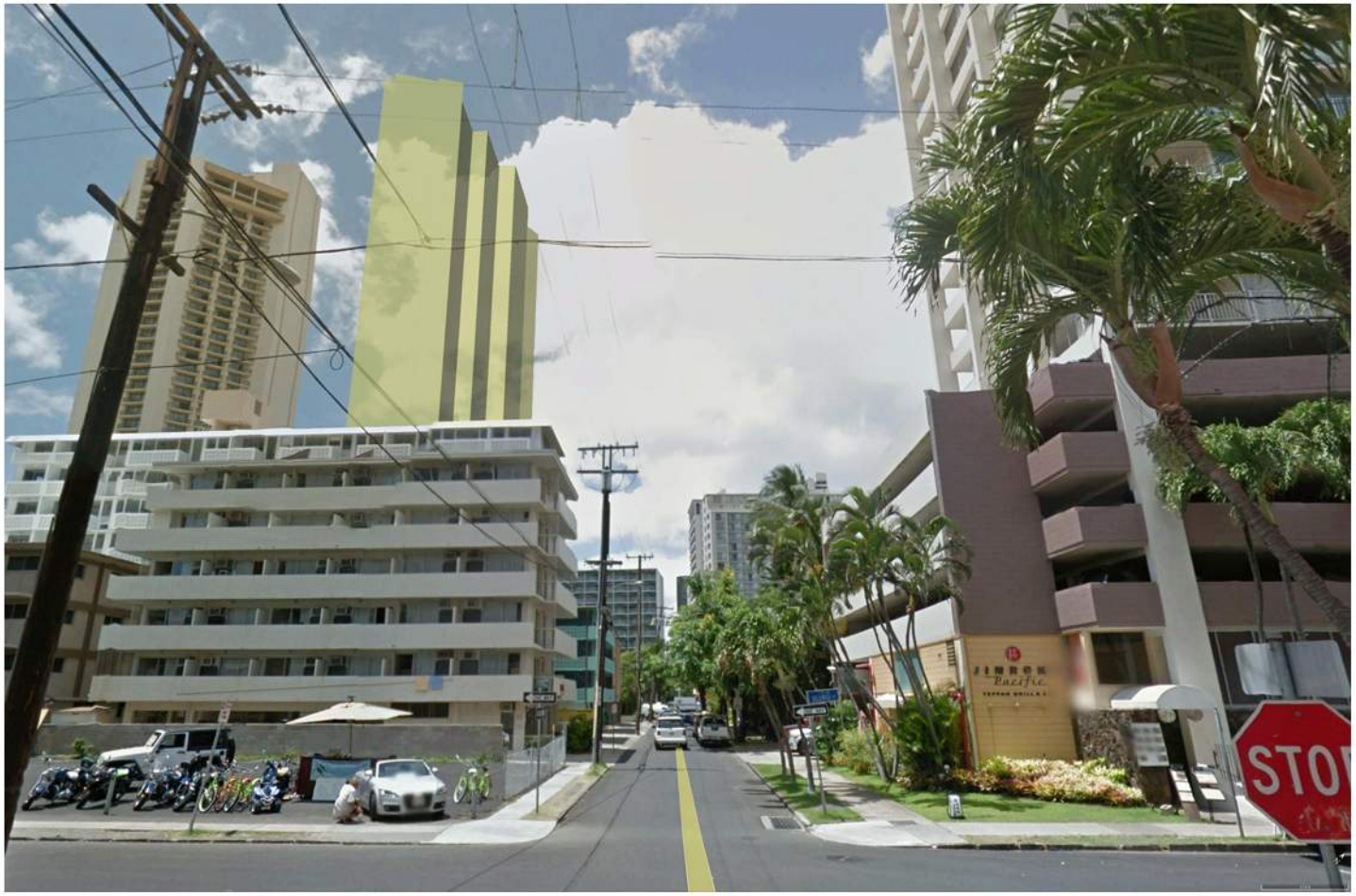
VIEW 16a : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

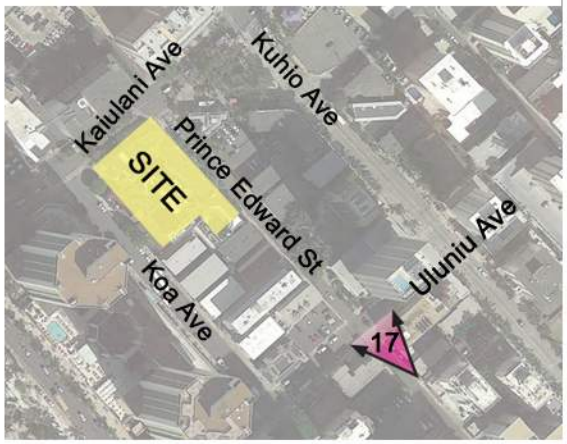


VIEW 16b : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

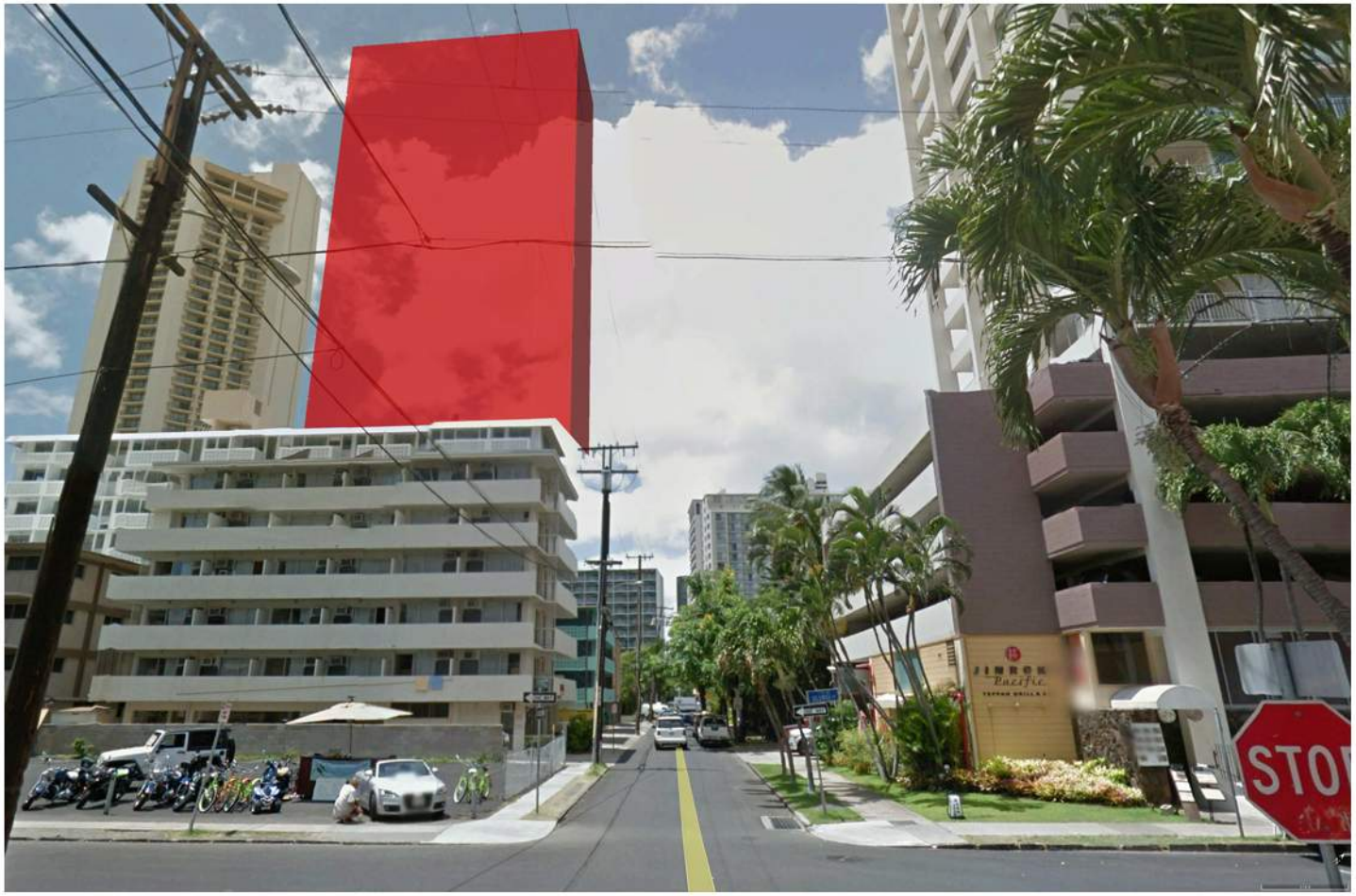


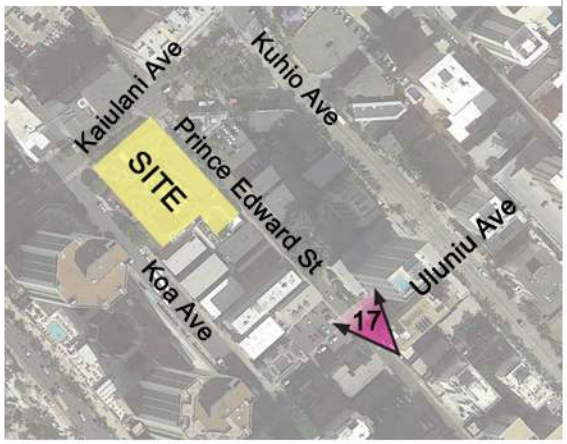
VIEW 16c : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



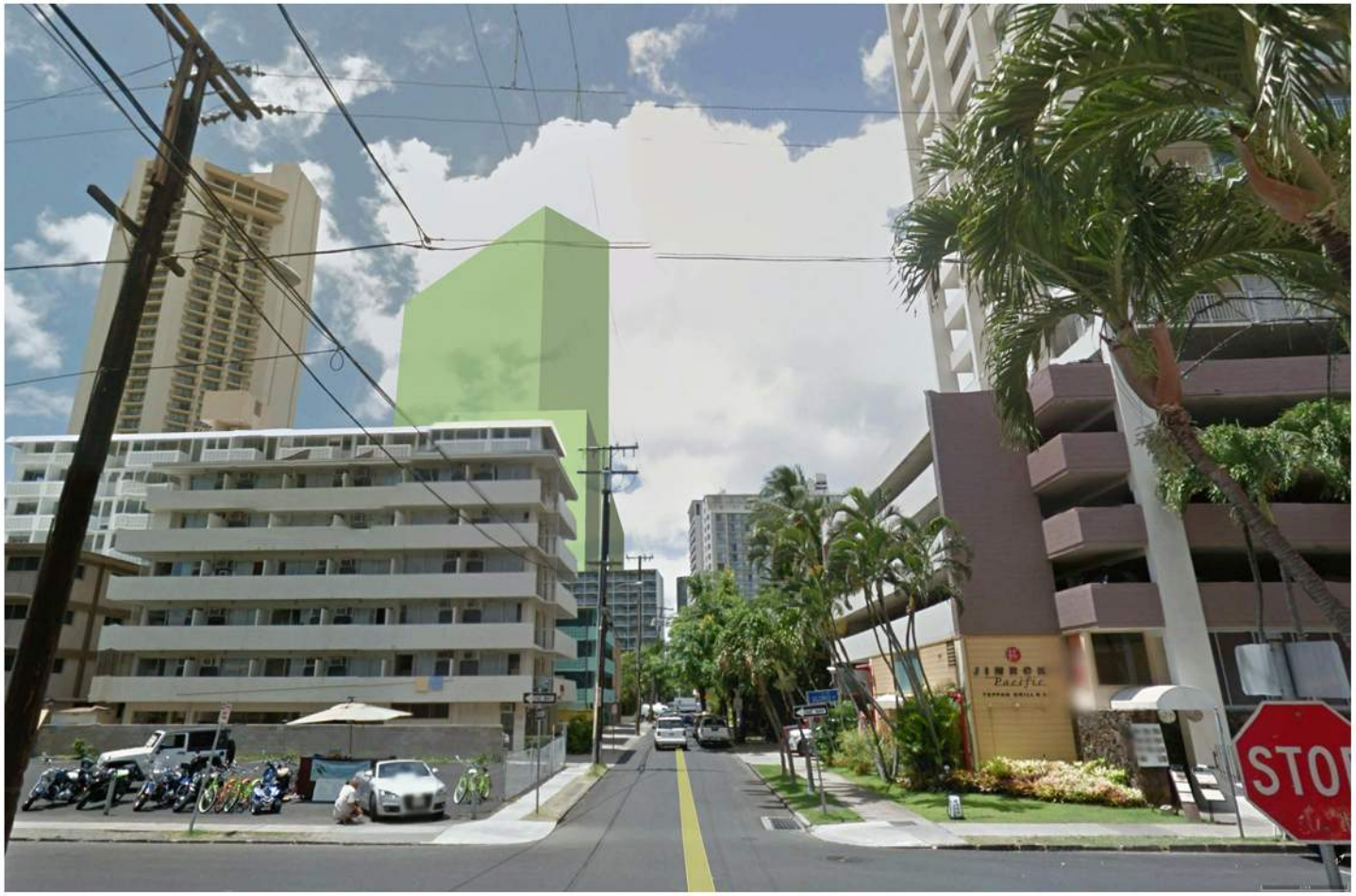


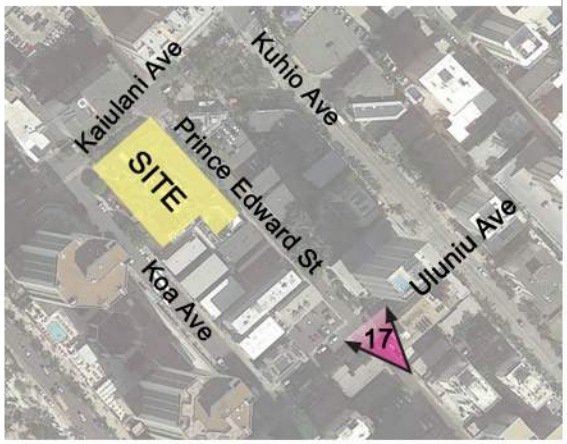
VIEW 17a : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



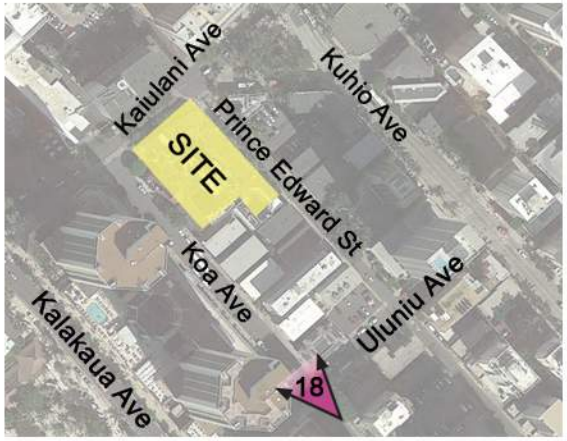


VIEW 17b : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

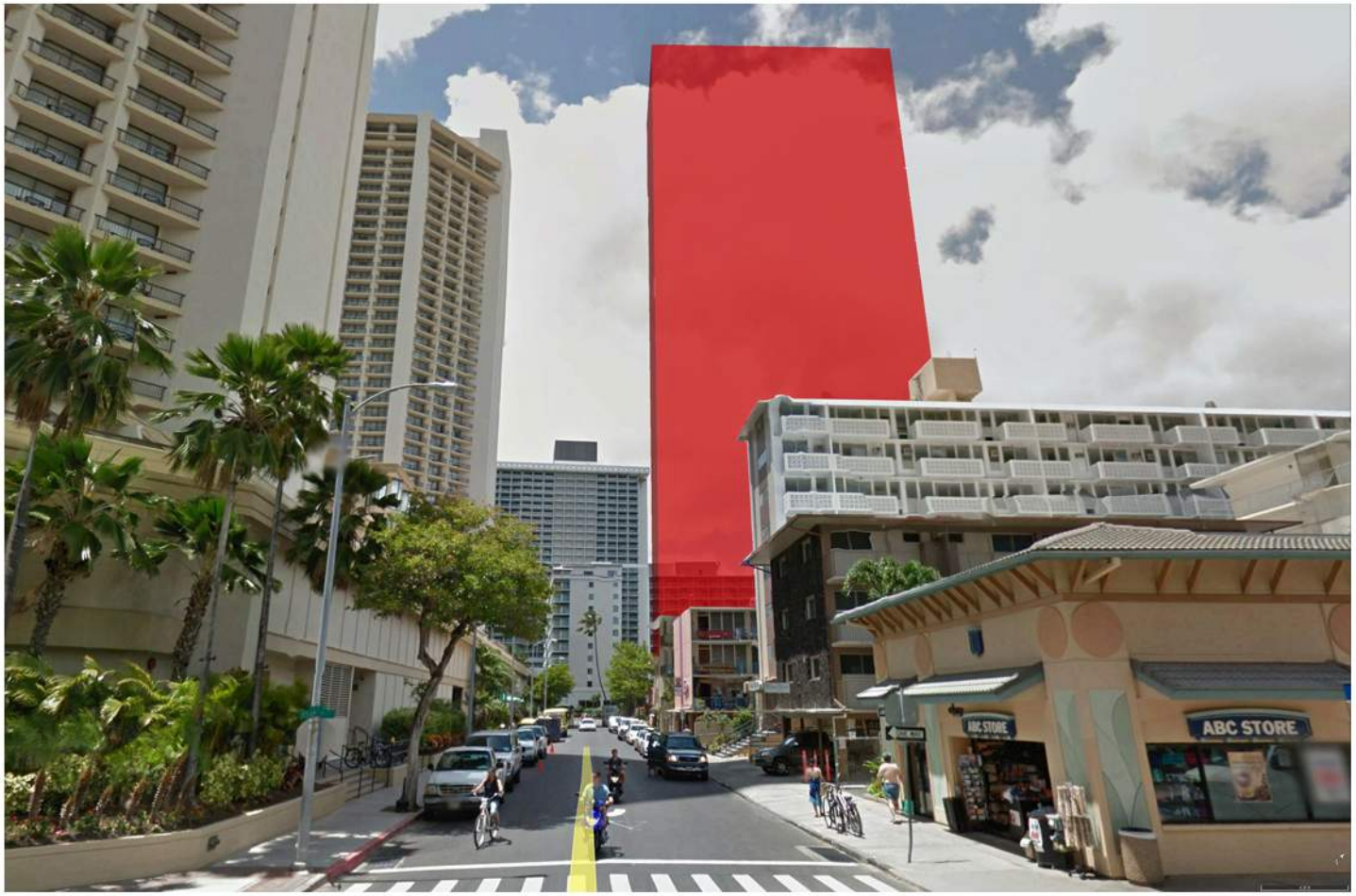


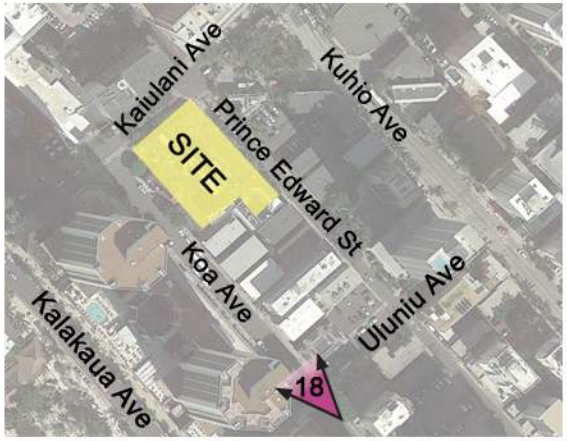


VIEW 17c : Prince Edward Street. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



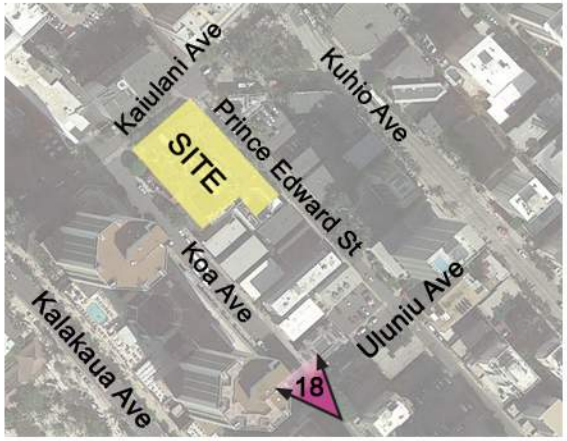
VIEW 18a : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



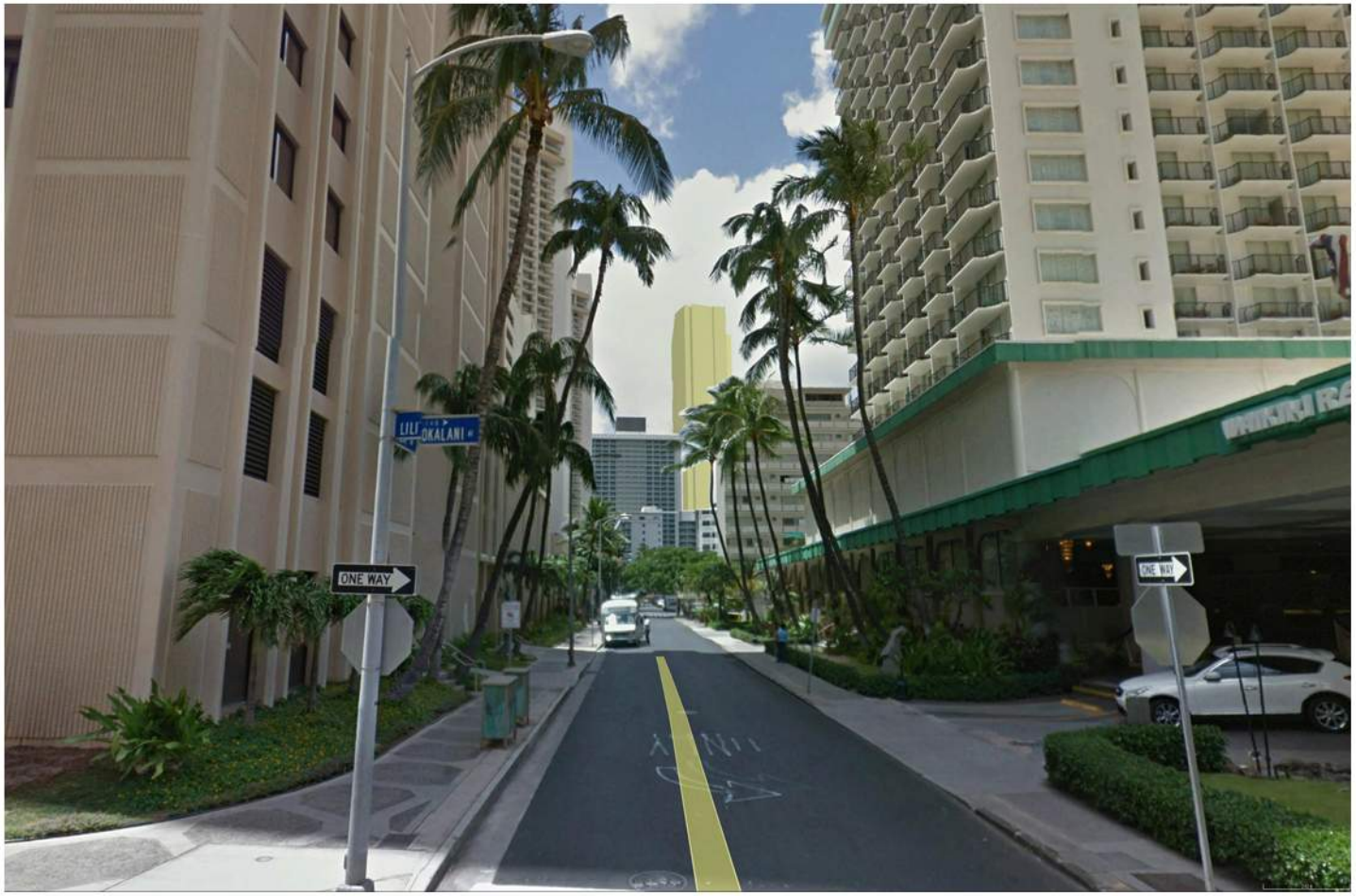


VIEW 18b : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

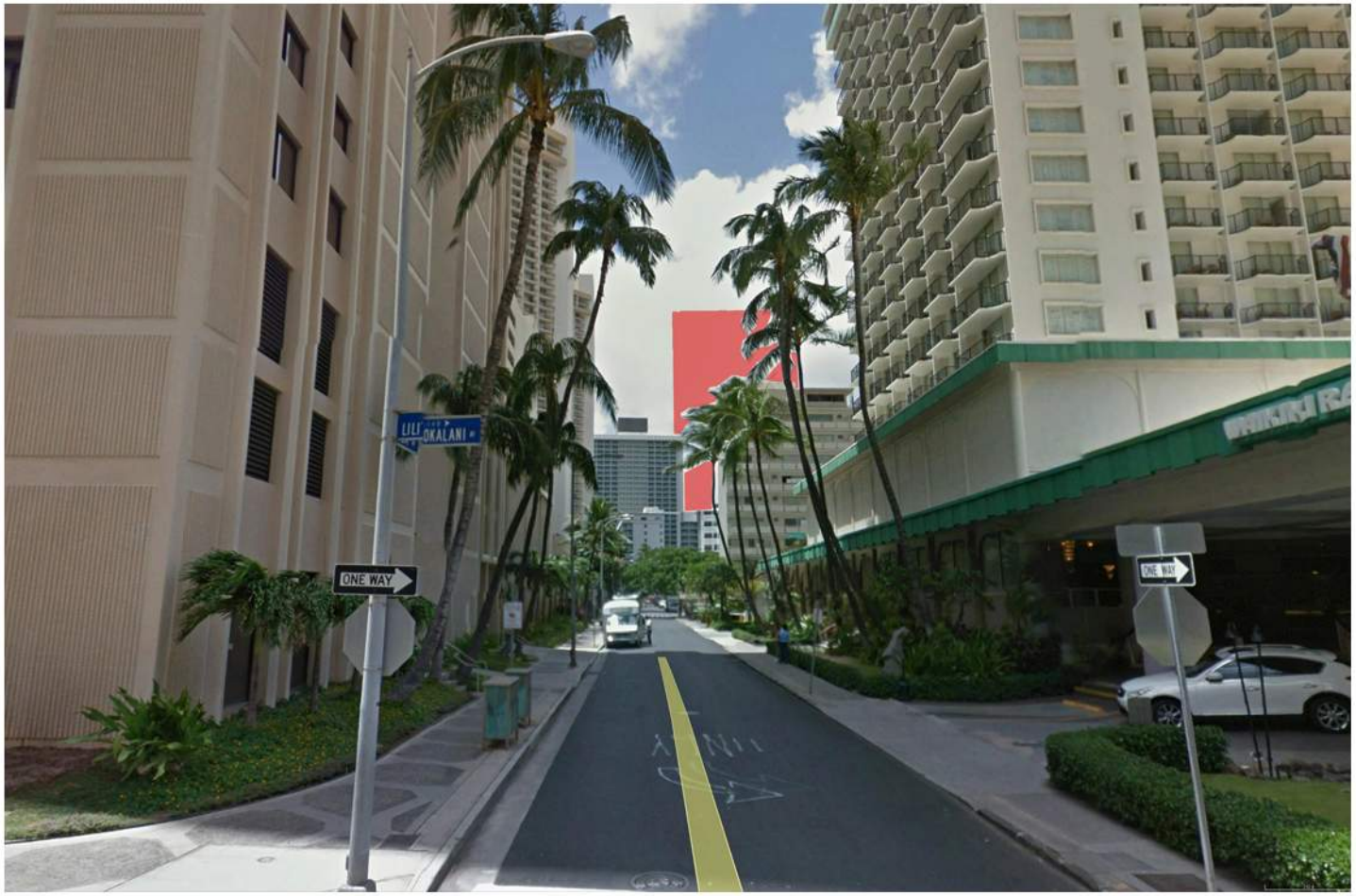
STREET VIEW STUDY - ULUNIU AVE AND KOA AVE - WEST - ALT V
133 KAIULANI AVE.
HONOLULU, HAWAII



VIEW 18c : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



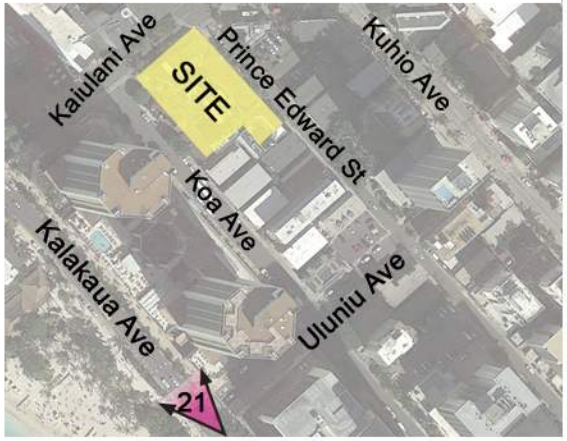
VIEW 19a : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.



VIEW 19b : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

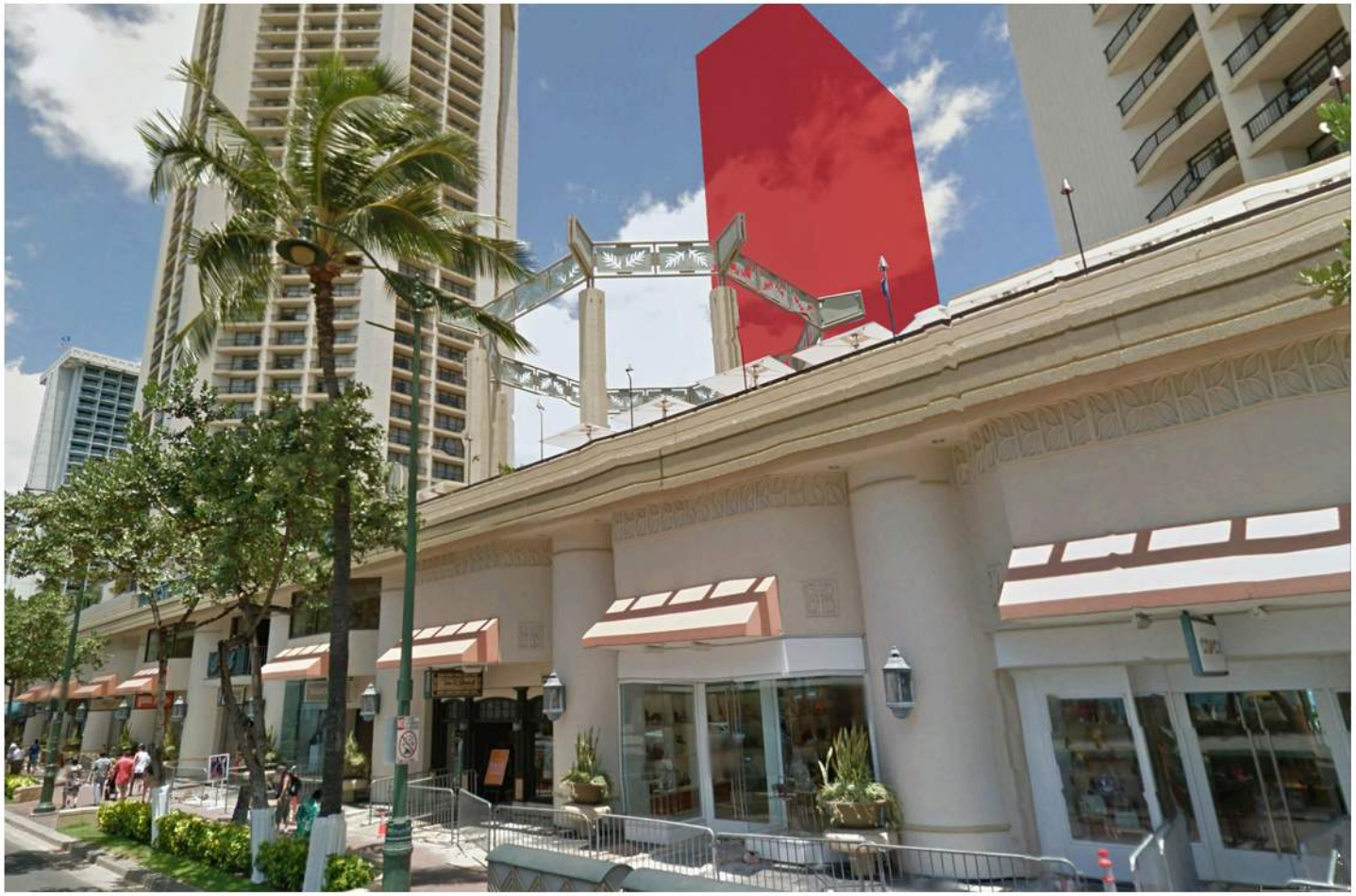
VIEW 19c : Koa Avenue. Major Street-No. Facing-West. Significant View-No. Building Visability-Yes.

VIEW 20: Kalakaua Avenue. Major Street-Yes. Facing-West. Significant View-Yes. Building Visability-No.

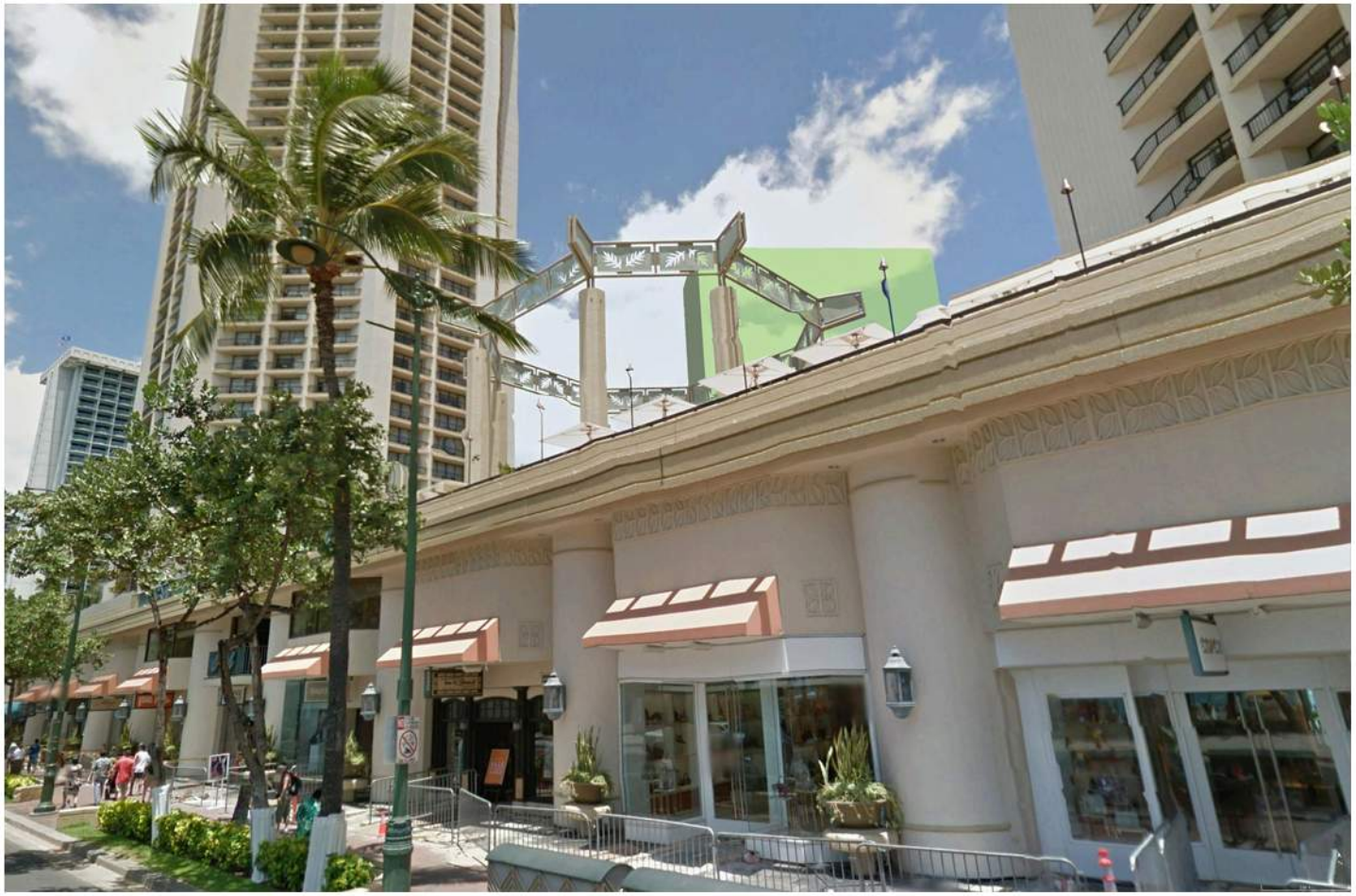


VIEW 21: Kalakaua Avenue. Major Street-Yes. Facing-West. Significant View-Yes. Building Visability-No.

VIEW 22a : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

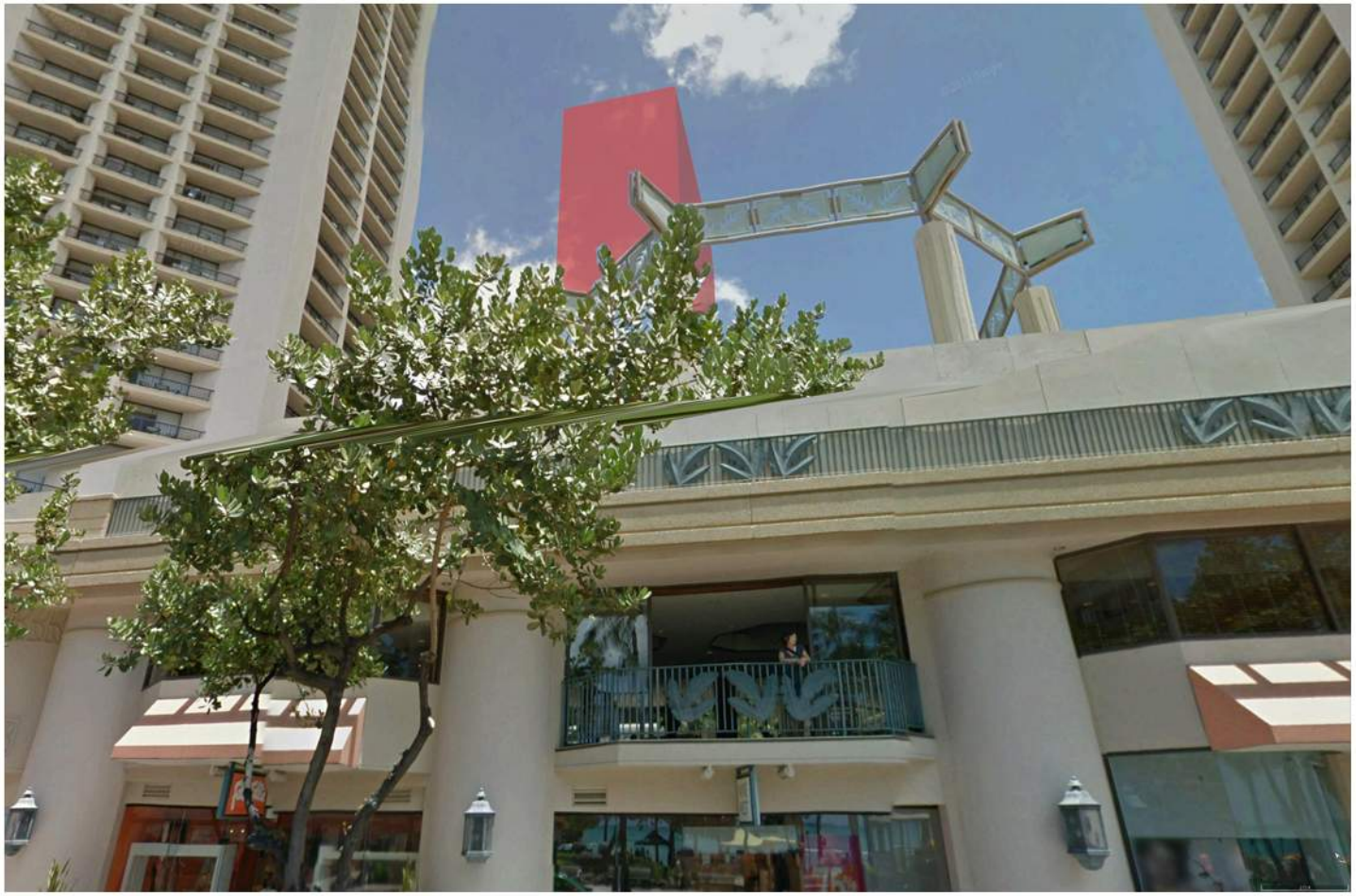


VIEW 22b : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.



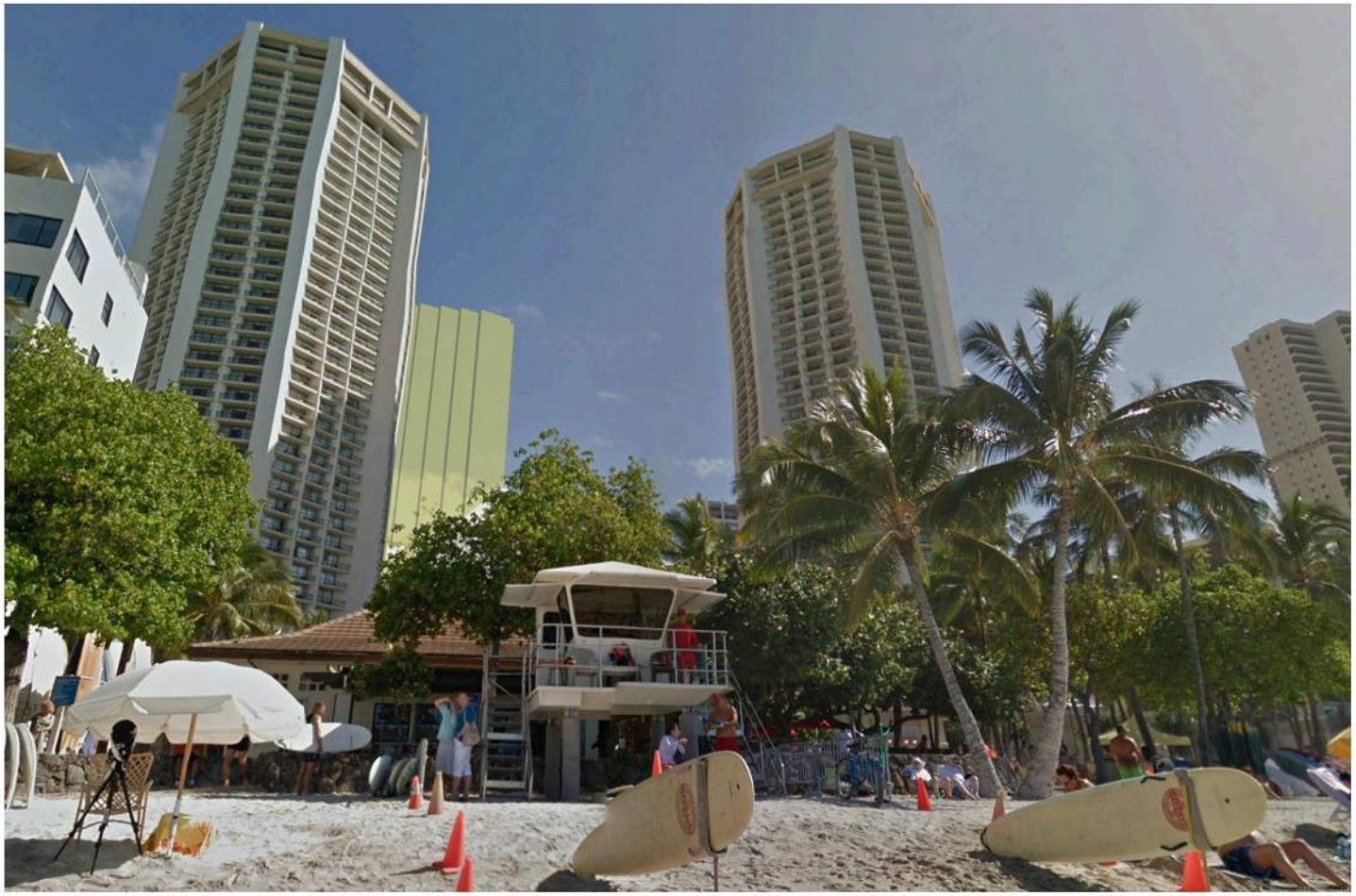
VIEW 22c : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

VIEW 23a : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

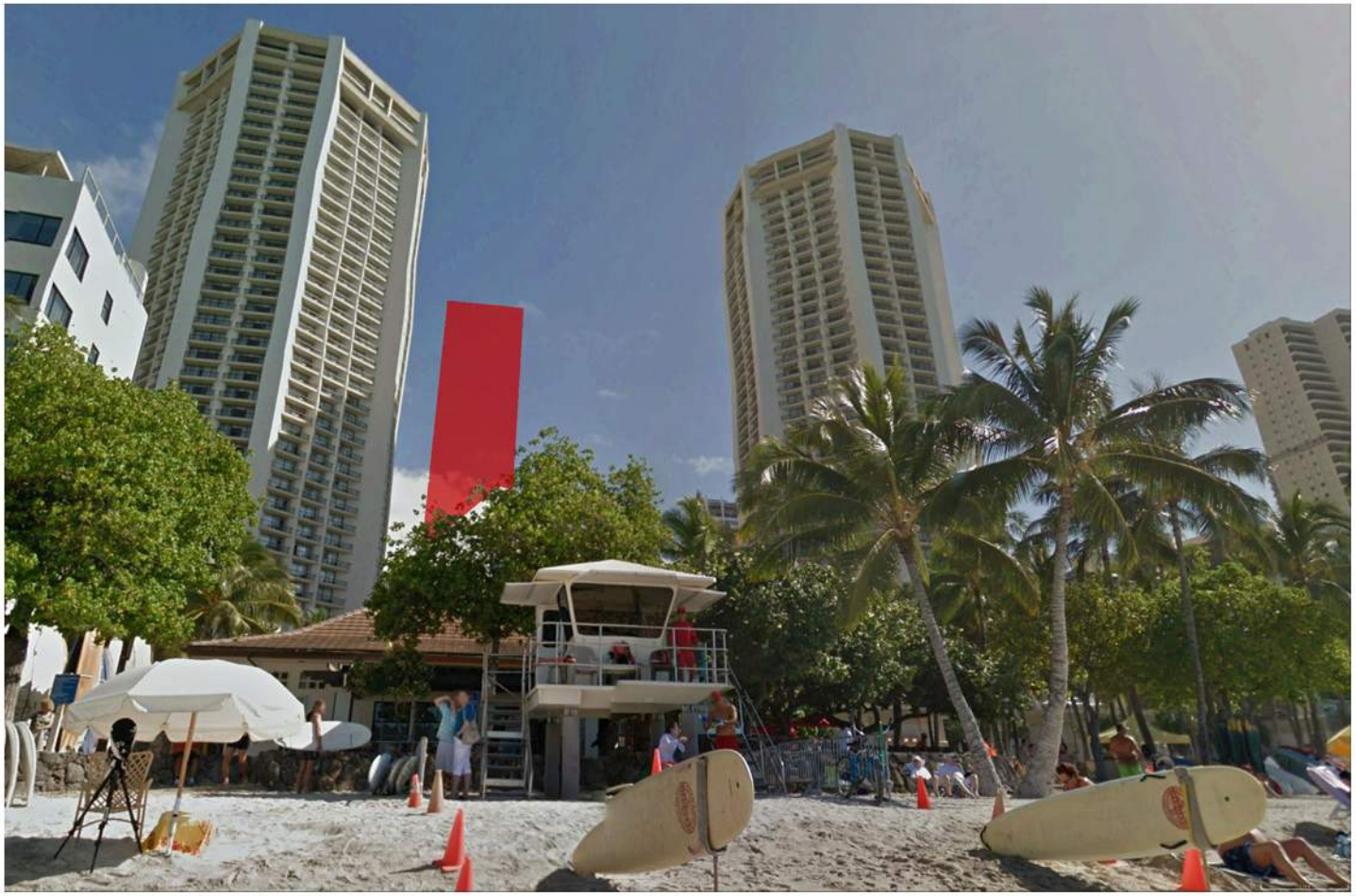


VIEW 23b : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-Yes.

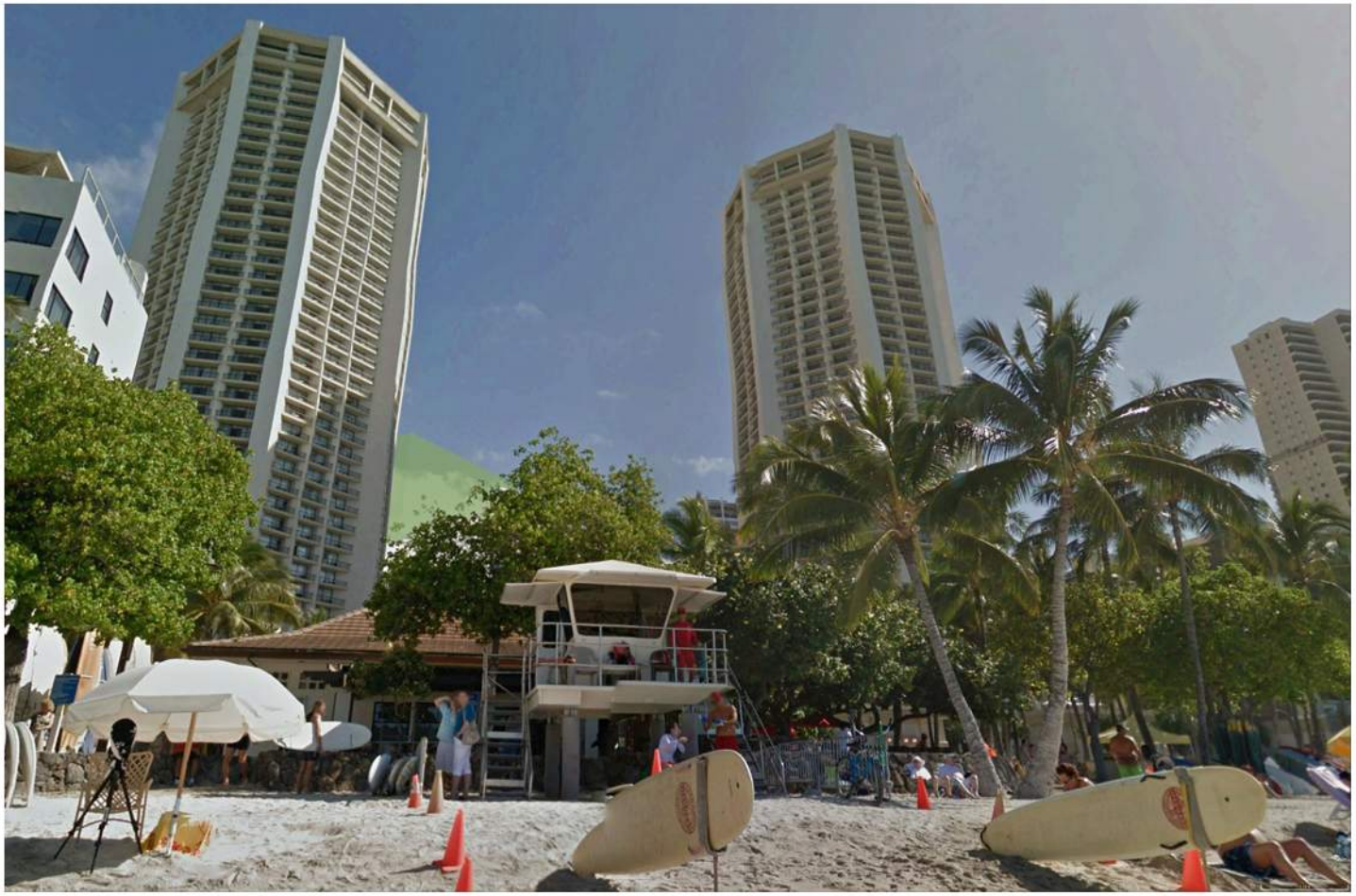
VIEW 23c : Kalakaua Avenue. Major Street-Yes. Facing-North. Significant View-No. Building Visability-No.



VIEW 24a : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes



VIEW 24b : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes



VIEW 24c : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes

VIEW 25a : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes

VIEW 25b : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes

VIEW 25c : Waikiki Beach View. Facing-North. Significant View-No. Building Visibility-Yes

APPENDIX 1O

PUNCHBOWL TO DIAMOND HEAD VIEW CORRIDOR

Punchbowl to Diamondhead View.
Facing-East.
Significant View-Yes.
Blocking Diamondhead-No.

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing view of Diamond Head.

ALT IV VIEW

EXISTING VIEW

PUNCHBOWL TO DIAMOND HEAD VIEW CORRIDOR - ALT IV
133 KAIULANI AVE.
HONOLULU, HAWAII

Punchbowl to Diamondhead View.
Facing-East.
Significant View-Yes.
Blocking Diamondhead-Yes.

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

Alternate V does not fit within the existing building sky-line and blocks the Punchbowl to Diamond Head View Corridor.

ALT V VIEW

EXISTING VIEW

PUNCHBOWL TO DIAMOND HEAD VIEW CORRIDOR - ALT V
133 KAIULANI AVE.
HONOLULU, HAWAII

Punchbowl to Diamondhead View.
Facing-East.
Significant View-Yes.
Blocking Diamondhead-Yes.

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

Alternate VI is entirely below 240'.

ALT VI VIEW

EXISTING VIEW

PUNCHBOWL TO DIAMOND HEAD VIEW CORRIDOR - ALT VI
133 KAIULANI AVE.
HONOLULU, HAWAII

APPENDIX 1P

PROPOSED STREETSCAPE

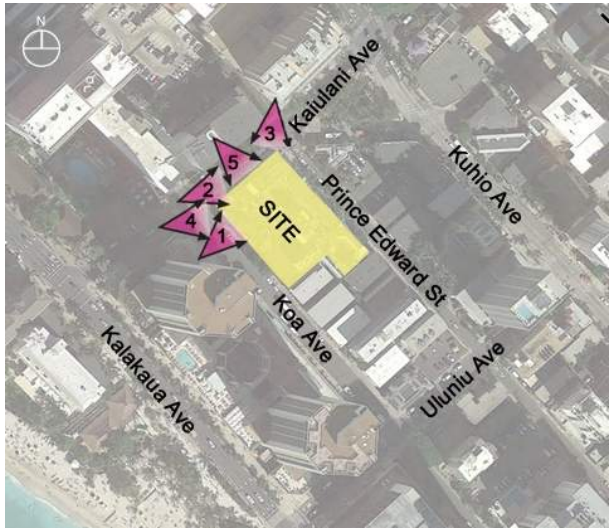
VIEW 1 - KOA AVE - FACING NORTH

VIEW 2 - KAIULANI AVE - FACING NORTH

VIEW 3 - CORNER OF PRINCE EDWARD ST. AND KAIULANI AVE - FACING SOUTH

VIEW 4 - CORNER OF KOA AVE. AND KAIULANI AVE - FACING NORTH

VIEW 5 - KAIULANI AVE - FACING EAST



VIEW KEY MAP

APPENDIX 2

ACOUSTIC STUDY

ACOUSTIC STUDY FOR THE 133 KAIULANI PROJECT WAIKIKI, OAHU, HAWAII

Prepared for:

BSV KVSC, LLC

Prepared by:

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

APRIL 2014

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CHAPTER I. SUMMARY

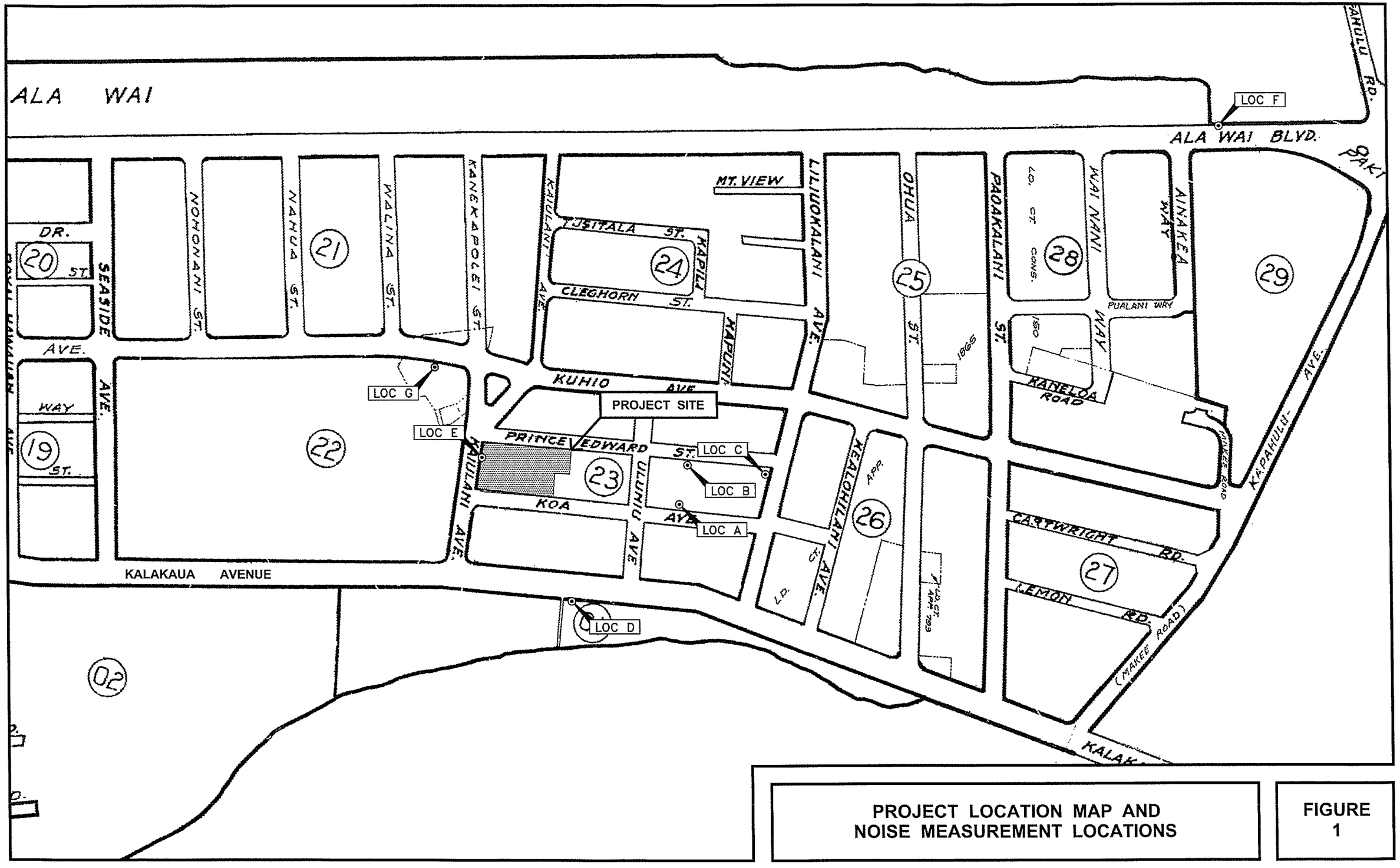
The existing and future traffic noise levels in the vicinity of the proposed 133 Kaiulani Project in Waikiki (see Figure 1) were evaluated for their potential impacts and their relationship to the current FHA/HUD noise standard. The traffic noise level increases along the access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Ala Wai Boulevard, Kuhio Avenue, Kalakaua Avenue, or Kaiulani Avenue as a result of project plus non-project traffic following project build-out by CY 2017. Moderate increases in the relatively low traffic noise levels along Prince Edward Street are predicted to occur as a result of project traffic by CY 2017. Traffic noise from Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing residential and resort units which front Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue.

Future traffic noise levels are predicted to exceed the FHA/HUD standard of 65 DNL at all units on the makai face of the project's proposed hotel tower, as well as at those units on the Ewa and mauka faces of the proposed hotel tower closest to Kalakaua Avenue and Kuhio Avenue, respectively. Noise mitigation measures in the form of closure and air conditioning are recommended for the affected units.

The 133 Kaiulani Project traffic will add no more than 0.1 DNL additional units of noise along the high volume and high noise level roadways such as Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue. The total increases in future traffic noise levels along these high volume streets resulting from both project and non-project traffic are not expected to exceed 0.5 DNL by CY 2017.

Larger increases in traffic noise levels of 0.8 and 1.1 DNL are predicted to occur along Prince Edward Street as a result of the proposed 133 Kaiulani Project development. However, these increases will be difficult to measure or perceive, and are not considered to be significant because of the relatively low baseline noise levels along Prince Edward Street without the project.

Unavoidable, but temporary, noise impacts may occur during the excavation and building erection activities within the project area, and particularly during the earthwork 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 1

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future noise environment in the environs of the proposed 133 Kaiulani 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 related 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.

Potential noise impacts at planned hotel / commercial units of the project due to traffic noise were also evaluated. 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.

Table 1, derived from Reference 1, presents current federal noise standards and acceptability criteria for residential land uses. Land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system are shown in Figure 2. 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 the Waikiki area, DNL levels tend to be high and greater than 65 DNL due to the higher concentration of tour and city buses, and due to the higher activity levels during the nighttime period.

In the project area, traffic noise levels along the Rights-of-Way of Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue are greater than 65 DNL due to the large volumes of traffic and heavy vehicles (trucks and buses) on those major thoroughfares. Adding to the noise from the normal traffic along the various roadways are the relatively high noise levels of tour buses idling at curbside, sirens on police and emergency vehicles, mopeds and motorcycles, outdoor mechanical equipment (fans and air conditioning equipment) at the commercial and resort buildings, maintenance activities, and garbage and delivery truck operations.

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 and other noise sensitive uses. This standard is applied nationally (Reference 2), 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 3, a lower level of 55 DNL is considered to be 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.

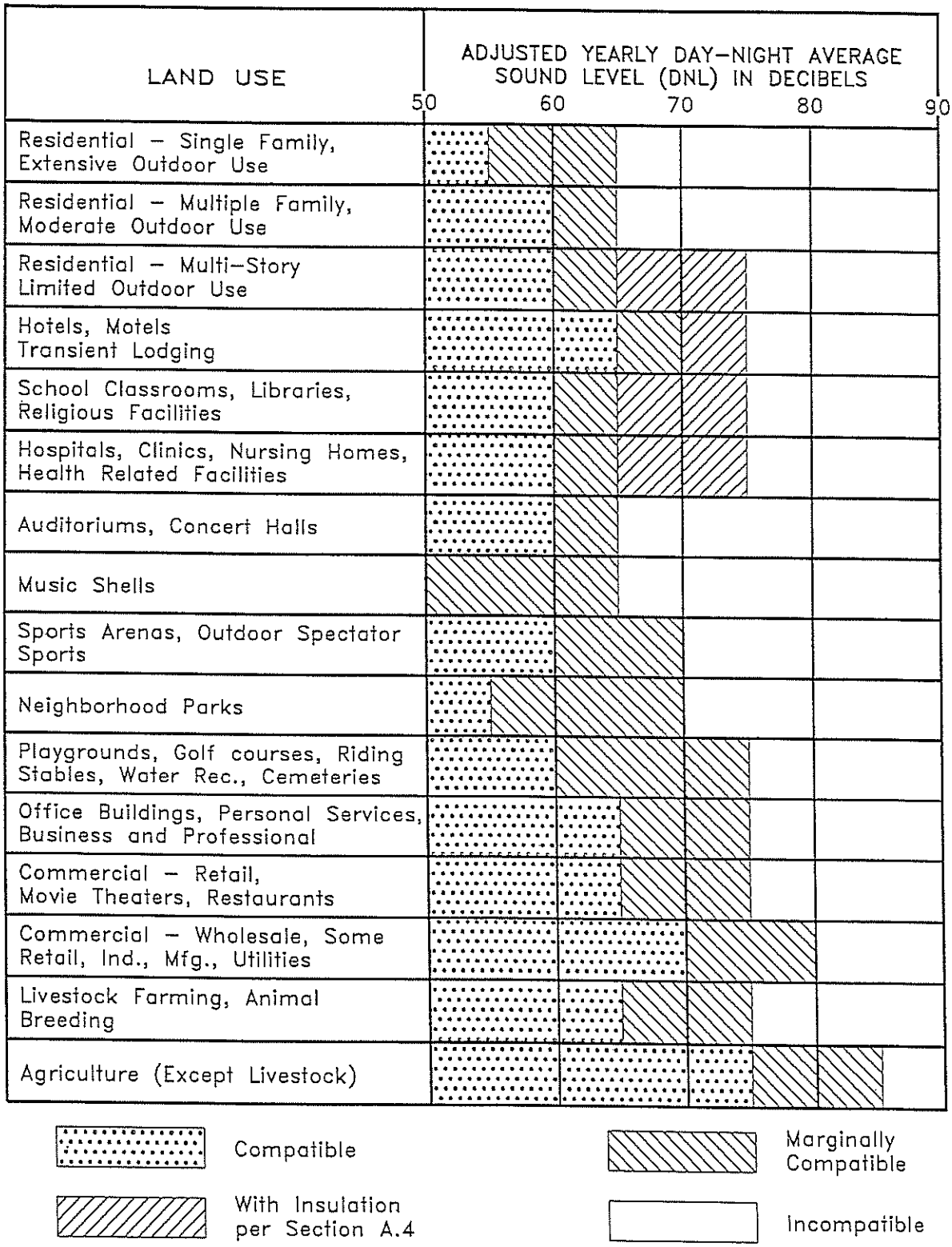
TABLE 1

EXTERIOR NOISE EXPOSURE CLASSIFICATION (RESIDENTIAL LAND USE)

NOISE EXPOSURE CLASS	DAY–NIGHT SOUND LEVEL	EQUIVALENT SOUND LEVEL	FEDERAL (1) STANDARD
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 Unacceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable

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.



LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY–NIGHT AVERAGE SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.
(Source: American National Standards Institute S12.9–1998/Part 5)

FIGURE 2

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.

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 4). Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for single family residential lands equate to approximately 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

Historical existing traffic and background ambient noise levels were obtained in the project environs during November 2013. These readings were used to provide a basis for describing the existing noise environment in the project environs. Traffic noise measurements along Kuhio Avenue, Kalakaua Avenue, and Ala Wai Boulevard were obtained at Locations G, D, and F, respectively, as shown in Table 2. The locations of these three measurement sites and other traffic noise measurement locations are shown in Figure 1. All measurement locations were at ground level except for Location G, which was on the sixteenth floor lanai of the Waikiki Ohana East Hotel.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2017 for a weekday were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (Reference 5). Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Pavement" propagation loss factor. The traffic data and forecasts for the project (Reference 6) were the primary sources of data inputs to the model. Appendix C summarizes the AM and PM peak hour traffic volumes for CY 2013 and 2017 which were available from the project's traffic study. 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 approximately equal to the 24-hour DNL; except for Ala Wai Boulevard, where the 24-hour DNL was assumed to be approximately 1 dB less than the AM peak hour Leq(h). These assumptions were based on calculated traffic noise levels using the traffic counts from References 7 through 9, which are shown graphically in Figures 3 through 7.

Traffic noise calculations for both the existing and future conditions in the project environs were developed for ground level and elevated receptors. 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 133 Kaiulani Project, and noise impact risks evaluated. The relative contributions of the project's traffic to the total noise levels along the Waikiki roadways 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.

TABLE 2

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
A. 40 FT from the center-line of Koa Avenue (11/20/13)	0805 TO 0905	30	109	12	42	65.9	65.9
A. 40 FT from the center-line of Koa Avenue (11/20/13)	1205 TO 1305	30	91	10	32	63.8	64.8
A. 40 FT from the center-line of Koa Avenue (11/20/13)	1554 TO 1654	30	136	17	27	65.7	64.8
B. 40 FT from the center-line of Prince Edward St. (11/20/13)	0941 TO 1041	25	59	2	3	60.2	59.6
B. 40 FT from the center-line of Prince Edward St. (11/21/13)	1312 TO 1412	25	33	3	5	61.8	60.8
C. 44 FT from the center-line of Liliuokalani Ave. (11/20/13)	1053 TO 1153	28	247	18	46	64.6	63.9

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
C. 44 FT from the center-line of Liliuokalani Ave. (11/20/13)	1441 TO 1541	28	311	25	52	64.0	64.6
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	0700 TO 0800	36	630	28	48	65.8	65.9
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	1200 TO 1300	36	683	28	86	67.7	67.4
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	1553 TO 1653	36	1,055	20	67	67.2	67.4
E. 42 FT from the center-line of Kaiulani Ave. (11/21/13)	0900 TO 1000	30	238	33	62	69.3	69.4
E. 42 FT from the center-line of Kaiulani Ave. (11/21/13)	1440 TO 1540	30	287	17	44	68.3	68.1

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
F. 50 FT from the center-line of Ala Wai Blvd. (11/26/13)	0700 TO 0800	35	1,617	24	36	67.4	67.7
F. 50 FT from the center-line of Ala Wai Blvd. (11/26/13)	1700 TO 1800	35	1,345	12	35	67.6	67.0
G. 194 FT from the center-line of Kuhio Ave. (11/25/13)	1600 TO 1700	32	878	63	83	67.2	67.4*
G. 194 FT from the center-line of Kuhio Ave. (11/26/13)	0700 TO 0800	32	553	47	58	65.9	65.9*

* 2.6 dB added to measured Leq for Loc. G due to shielding effects from lanai below.

FIGURE 3
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA B72771100000; KUHIO AVENUE BETWEEN NAHUA AND WALINA; 5/5/10

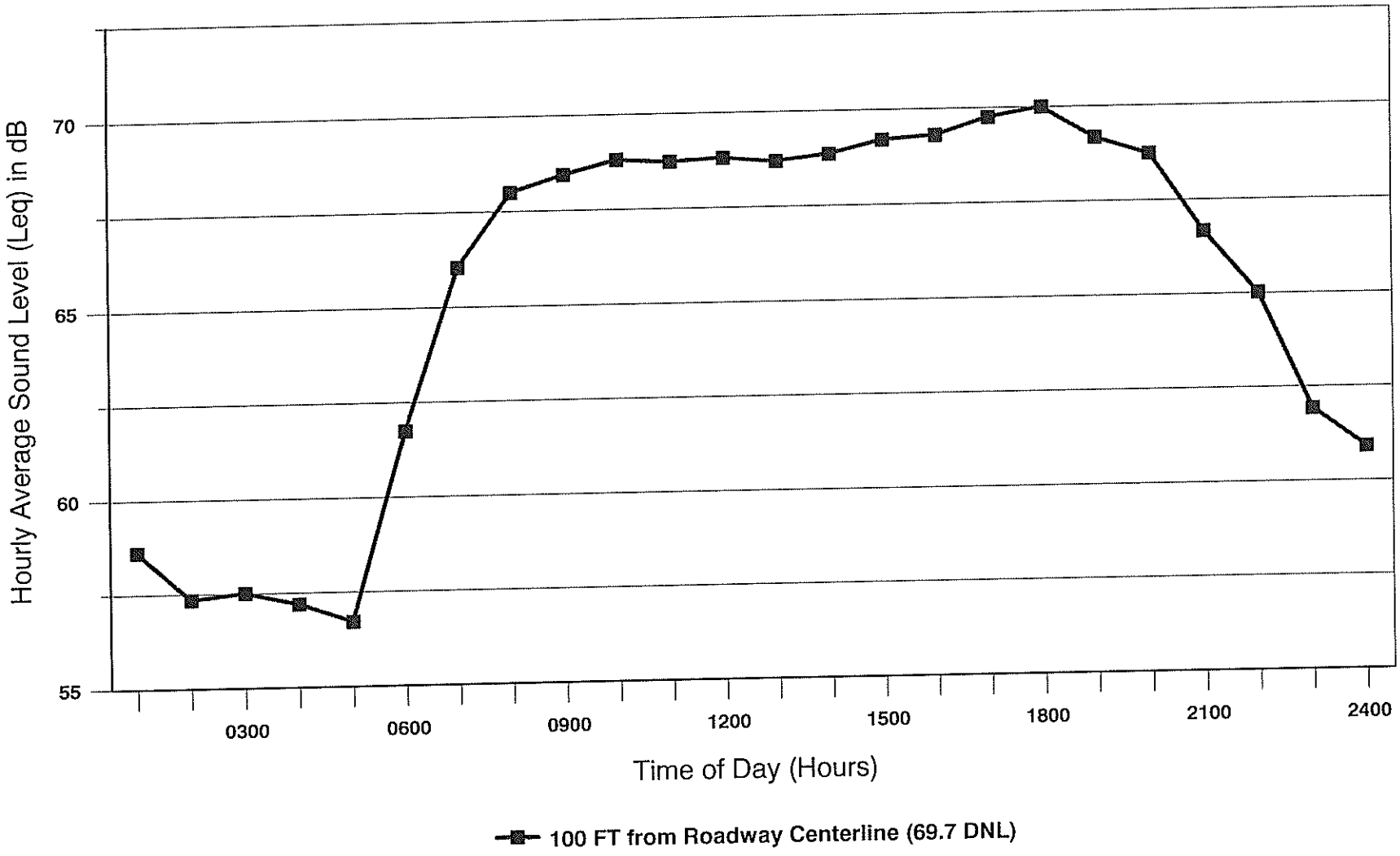
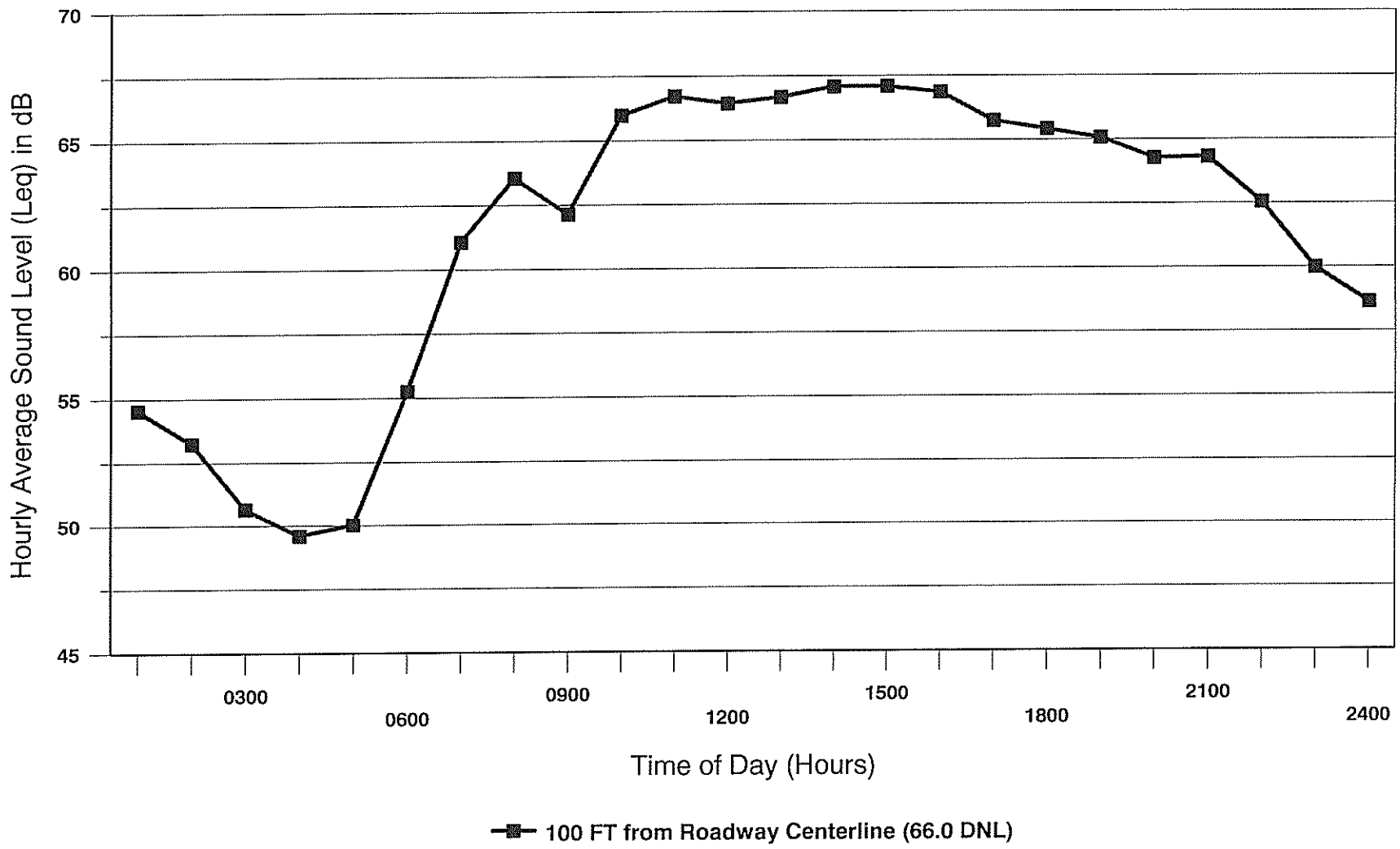


FIGURE 4
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. B72761200176, KALAKAUA AVENUE BETWEEN ULUNIU AND LILIUOKALANI; 2/4/11



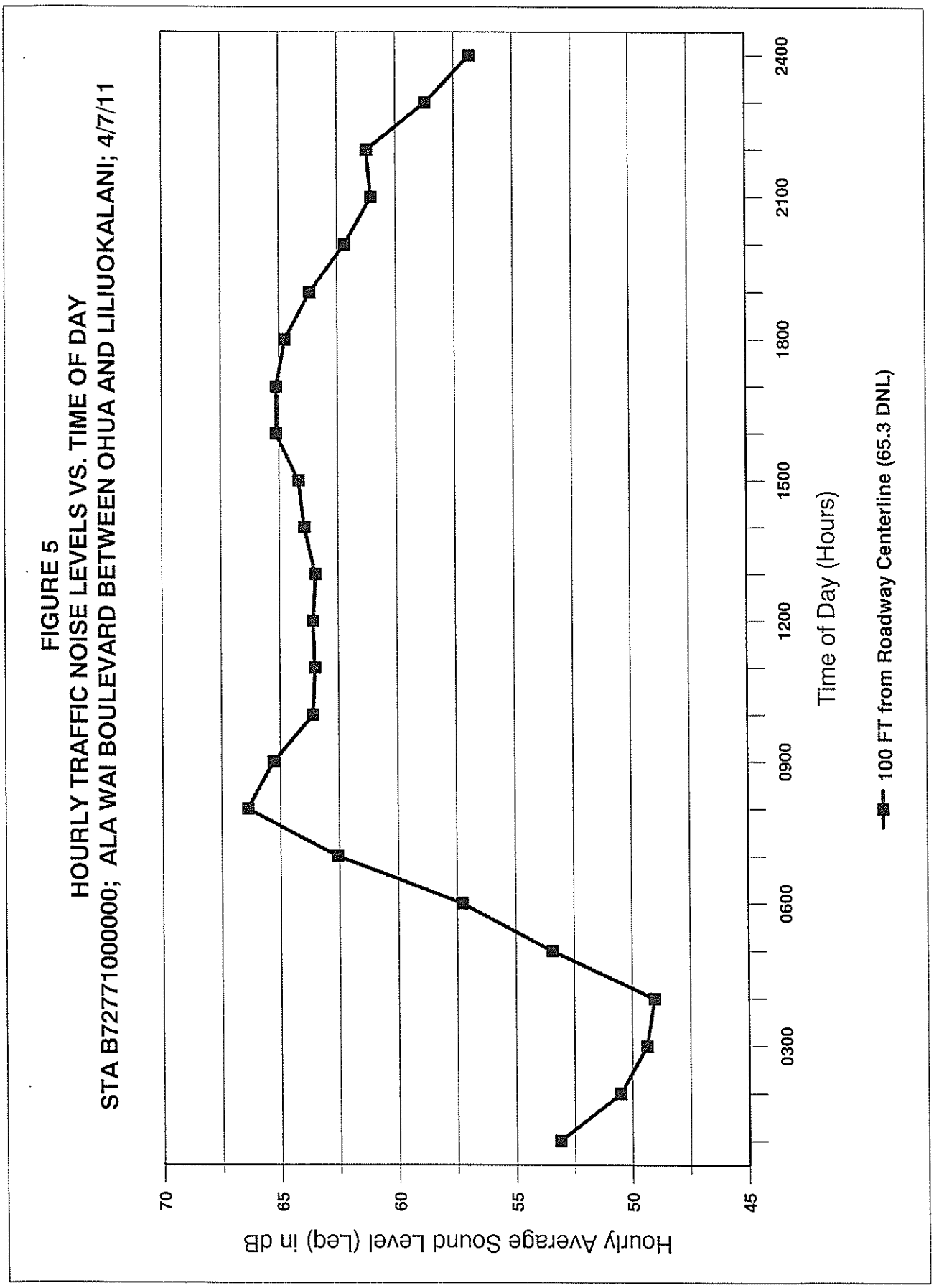


FIGURE 5
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA B72771000000; ALA WAI BOULEVARD BETWEEN OHUA AND LILIUOKALANI; 4/7/11
Hourly Average Sound Level (Leq) in dB
70
65
60
55
50
45
0300
0600
0900
1200
1500
1800
2100
2400
Time of Day (Hours)
100 FT from Roadway Centerline (65.3 DNL)

FIGURE 6
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. B72774100000, KAIULANI AVE. BETWEEN KALAKAUA AVE. AND KOA AVE.; 2/4/11

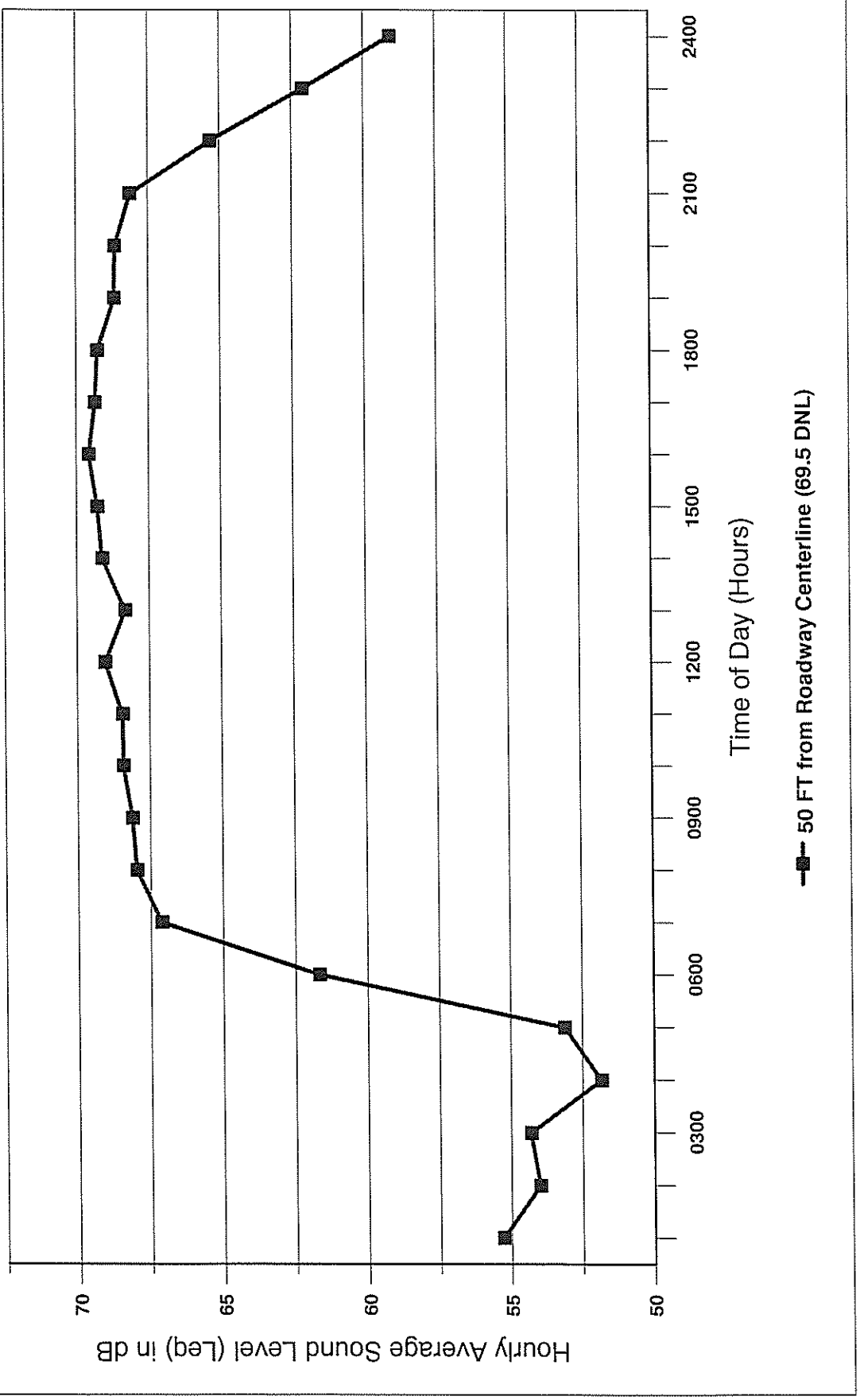
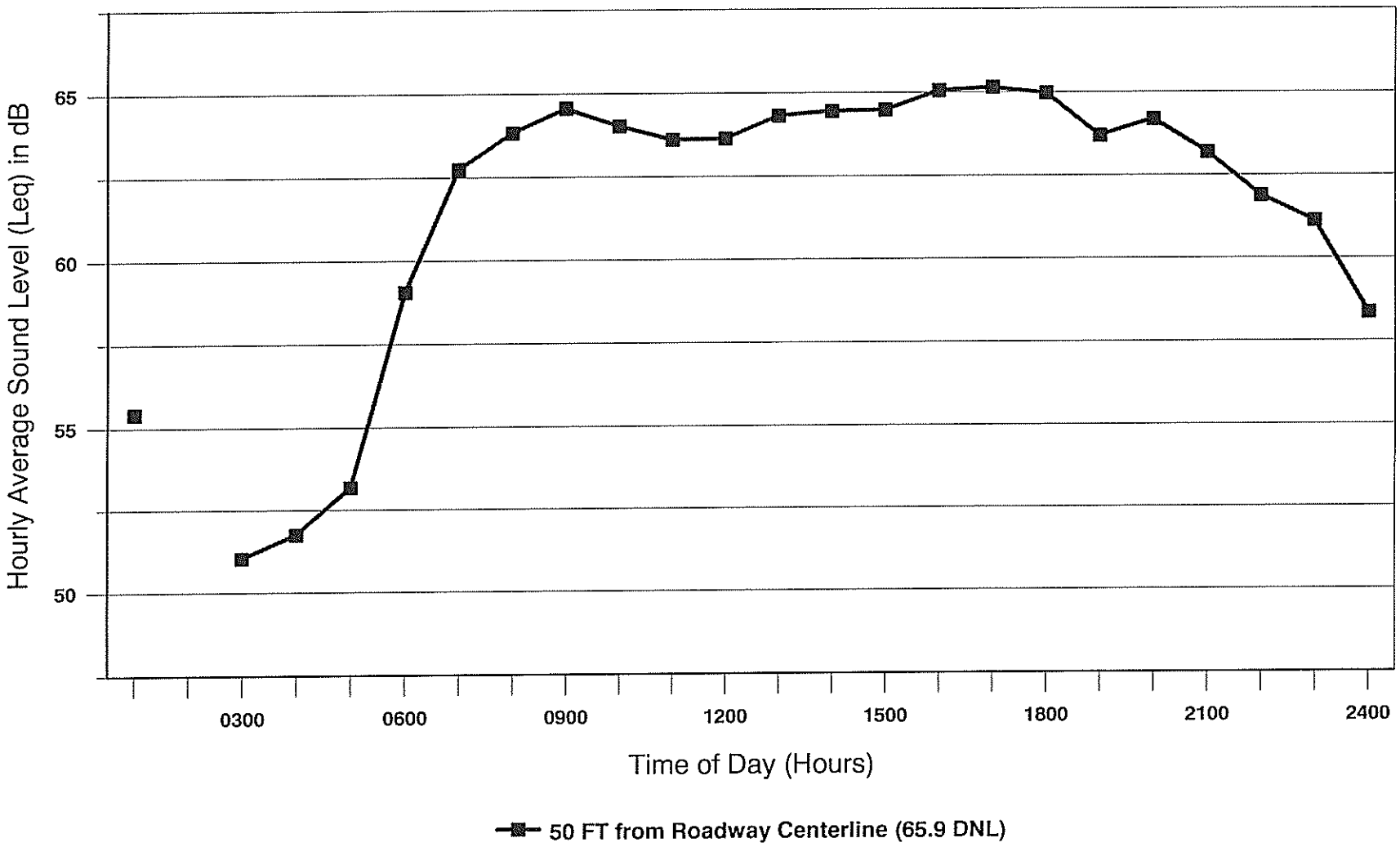


FIGURE 7
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. B72774100013, KANEKAPOLEI ST. BETWEEN KUHIO AVE. AND ALA WAI BLVD.; 4/20/11



V. EXISTING ACOUSTICAL ENVIRONMENT

Major contributors to the existing background ambient noise levels within the project area are: traffic along Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue; refuse collection trucks; tour buses and delivery trucks which are idling or positioning at curbside; loud motorcycles and mopeds; the sirens of emergency and police vehicles; and nearby construction activities.

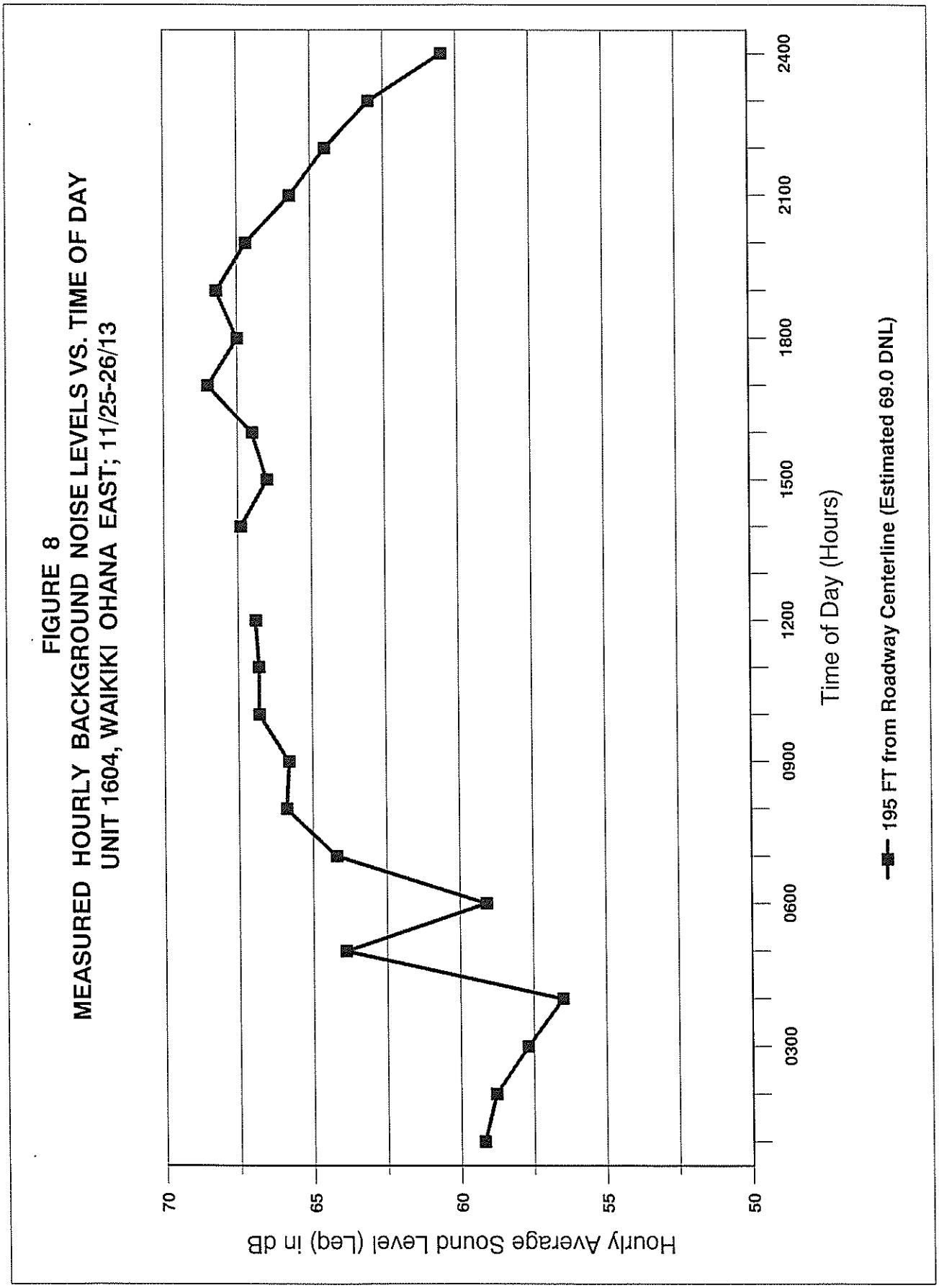
The typical hourly variations in noise levels within the project area are controlled by motor vehicle traffic along two high volume roadways: Kalakaua Avenue and Kuhio Avenue. Traffic noise levels tend to be lowest during the early morning hours between 3:00 and 5:00 AM, and tend to be highest during the AM and PM peak commuting hours. Figure 8 presents the measured hourly variations of traffic noise levels at Location G alongside Kuhio Avenue, with the large peaks associated with non-traffic sources, such as emergency sirens. Sample strip charts of the louder noise events which were recorded at noise measurement Location G during the early morning and late afternoon periods are shown in Figures 9 and 10. These louder noise events can range from 90 to 105 dBA, and are clearly audible above the other background ambient noise sources.

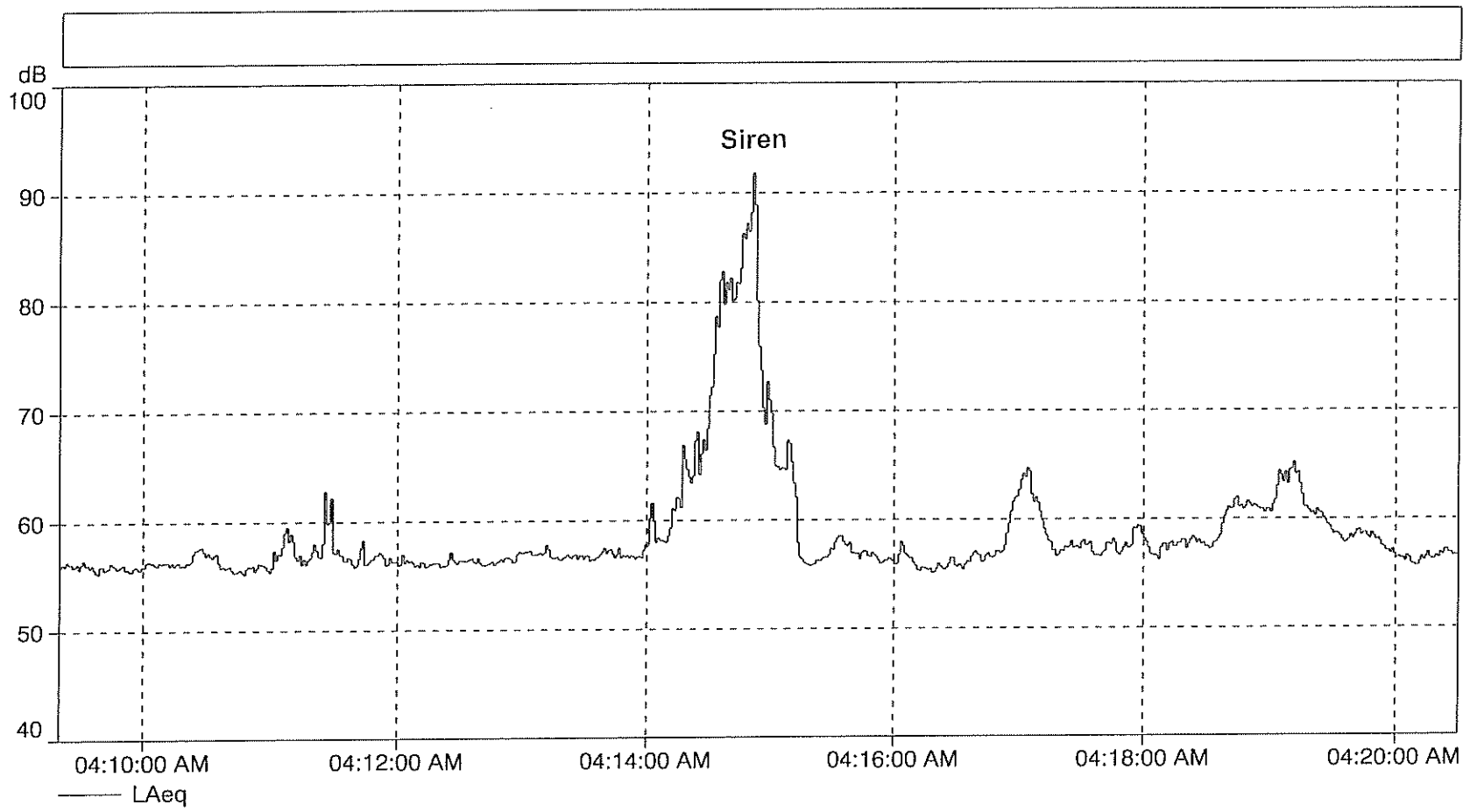
The existing AM or PM peak hour traffic volumes and their noise contributions at 50, 75, and 100 feet setback distances from the centerlines of the roadways servicing the project are shown in Appendix C and Table 3. The corresponding setback distances from the roadways' centerlines to their corresponding 65, 70, and 75 DNL traffic noise contours for ground level receptors are shown in Table 4. Based on the results shown in Tables 3 and 4, as well as the measured sound levels at the various locations, it was concluded that existing background noise levels in the project environs currently exceed 65 DNL at essentially all buildings which front Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue. In addition, at the upper floors of buildings which front the lower volume streets such as Prince Edward Street, distant traffic noise plus the other non-traffic noise sources in the area can cause ambient noise levels to exceed 65 DNL. At those receptor locations which front Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue, existing background ambient noise levels exceed 65 DNL, and are approaching 70 DNL.

At low and mid-rise receptor locations which are partially shielded from traffic noise, existing background ambient noise levels can be lower due to the noise shielding effects of the buildings. Noise reductions of 5 to 15 dBA can be expected from these noise shielding effects.

Table 5 presents the calculations of existing traffic noise levels in DNL at various locations on the project site at the various faces of the proposed 133 Kaiulani building for various receptor feet elevations up to 338 feet above ground level. The beneficial effects of shielding from existing buildings, as well as the additive noise contributions from the adjoining streets, are included in the existing sound level predictions shown in

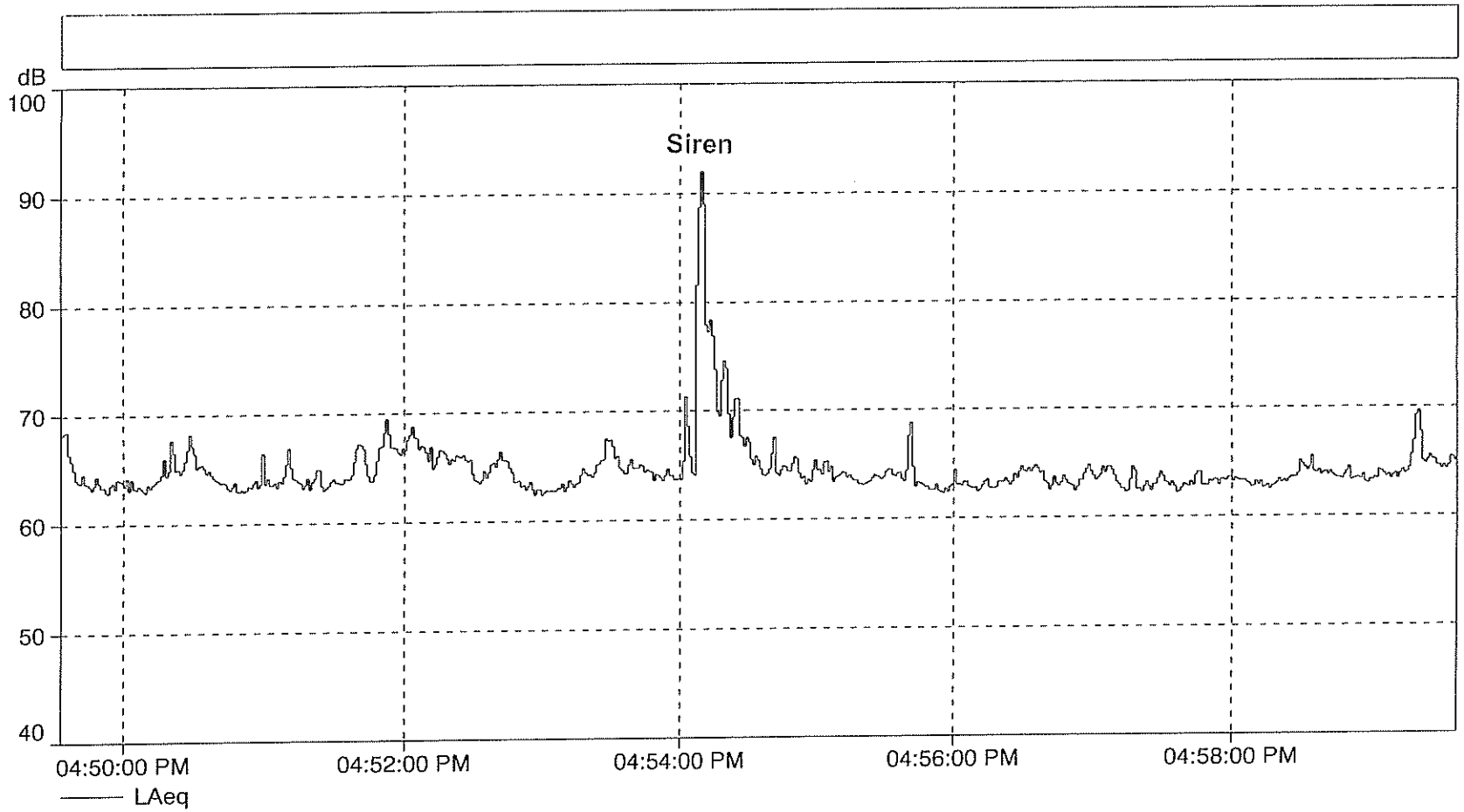
FIGURE 8
MEASURED HOURLY BACKGROUND NOISE LEVELS VS. TIME OF DAY
UNIT 1604, WAIKIKI OHANA EAST; 11/25-26/13





MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "G" (4:54 PM, NOVEMBER 26, 2013)

FIGURE 9



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "G" (4:54 PM, NOVEMBER 25, 2013)

FIGURE 10

TABLE 3

EXISTING (CY 2013) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Ala Wai Blvd. W. of Kanekapolei St., AM	35	2,388	2,304	29	55	69.4	67.6	66.4
Ala Wai Blvd. E. of Kanekapolei St., AM	35	2,326	2,244	28	54	69.1	67.3	66.0
Kuhio Ave. W. of Kanekapolei St., PM	32	1,173	996	77	100	68.9	66.8	65.5
Kuhio Ave. Between Kanekapolei & Kaiulani, PM	32	953	809	63	81	68.0	65.9	64.6
Kuhio Ave. Between Kaiulani & Uluniu, PM	32	1,038	882	68	88	68.3	66.3	65.0
Kuhio Ave. E. of Uluniu Ave., PM	32	1,003	852	66	85	68.2	66.1	64.8
Kalakaua Ave. W. of Kaiulani Ave., PM	36	1,580	1,453	32	95	69.4	67.5	66.3
Kalakaua Ave. Between Kaiulani & Uluniu, PM	36	1,198	1,102	24	72	68.2	66.3	65.1
Kalakaua Ave. E. of Uluniu Ave., PM	36	1,391	1,280	28	83	68.8	67.0	65.7
Kaiulani Ave. Between Kalakaua & Koa, PM	30	324	266	16	42	66.9	65.1	63.8
Kaiulani Ave. Between Koa & Prince Edward, PM	30	347	285	17	45	67.2	65.4	64.1
Kanekapolei St. Between Prince Edward & Kuhio, AM	30	508	453	25	30	66.9	65.1	63.8
Kanekapolei St. Between Kuhio & Ala Wai, PM	30	525	485	34	6	61.8	60.0	58.8
Kaiulani Ave. Between Prince Edward & Kuhio, PM	25	136	127	4	5	55.3	53.6	52.4
Kaiulani Ave. N. of Kuhio Ave., PM	30	120	111	4	5	56.1	54.4	53.2
Koa Ave. Between Kaiulani & Uluniu, AM	30	251	168	18	65	66.8	65.0	63.9
Koa Ave. E. of Uluniu Ave., AM	30	187	125	13	49	65.6	63.8	62.6
Prince Edward St. E. of Uluniu Ave., PM	25	83	67	6	10	62.9	61.1	60.0
Prince Edward St. Between Uluniu & Kaiulani, AM	25	188	173	6	9	63.4	61.6	60.5
Uluniu Ave. Between Koa & Kalakaua, AM	28	280	258	8	14	59.7	57.9	56.8
Uluniu Ave. Between Prince Edward & Koa, AM	28	225	207	7	11	58.7	57.0	55.8
Uluniu Ave. Between Kuhio & Prince Edward, AM	28	253	232	8	13	59.3	57.6	56.4

TABLE 4

EXISTING AND CY 2017 DISTANCES TO 65, 70, AND 75 DNL CONTOURS

STREET SECTION	65 DNL SETBACK (FT)		70 DNL SETBACK (FT)		75 DNL SETBACK (FT)	
	EXISTING	CY 2017	EXISTING	CY 2017	EXISTING	CY 2017
Ala Wai Blvd. W. of Kanekapolei St.	110	118	35	37	< 12	12
Ala Wai Blvd. E. of Kanekapolei St.	100	113	33	36	< 12	12
Kuhio Ave. W. of Kanekapolei St.	112	122	40	44	15	17
Kuhio Ave. Between Kanekapolei & Kaiulani	92	102	34	37	13	14
Kuhio Ave. Between Kaiulani & Uluniu	100	107	35	39	13	15
Kuhio Ave. E. of Uluniu Ave.	96	105	35	37	13	13
Kalakaua Ave. W. of Kaiulani Ave.	137	147	44	46	15	15
Kalakaua Ave. Between Kaiulani & Uluniu	102	109	34	36	12	12
Kalakaua Ave. E. of Uluniu Ave.	117	125	38	41	12	13
Kaiulani Ave. Between Kalakaua & Koa	77	77	25	25	< 12	< 12
Kaiulani Ave. Between Koa & Prince Edward	82	77	27	25	< 12	< 12
Kanekapolei St. Between Prince Edward & Kuhio	77	85	25	27	< 12	< 12
Kanekapolei St. Between Kuhio & Ala Wai	24	24	< 12	< 12	< 12	< 12
Kaiulani Ave. Between Prince Edward & Kuhio	< 12	< 12	< 12	< 12	< 12	< 12
Kaiulani Ave. N. of Kuhio Ave.	< 12	< 12	< 12	< 12	< 12	< 12
Koa Ave. Between Kaiulani & Uluniu	75	77	24	25	< 12	< 12
Koa Ave. E. of Uluniu Ave.	57	59	19	19	< 12	< 12
Prince Edward St. E. of Uluniu Ave.	31	36	< 12	< 12	< 12	< 12
Prince Edward St. Between Uluniu & Kaiulani	35	41	< 12	13	< 12	< 12
Uluniu Ave. Between Koa & Kalakaua	15	15	< 12	< 12	< 12	< 12
Uluniu Ave. Between Prince Edward & Koa	< 12	< 12	< 12	< 12	< 12	< 12
Uluniu Ave. Between Kuhio & Prince Edward	13	14	< 12	< 12	< 12	< 12

Notes:

(1) All setback distances are from the roadways' centerlines.
(2) See Tables 3 and 6 for traffic volume, speed, and mix assumptions.
(3) Setback distances are for ground level receptors.
(4) "Pavement" conditions assumed along all roadways.

TABLE 5

EXISTING AND 2017 TRAFFIC NOISE LEVELS
(VARIOUS ELEVATIONS, DNL)

RECEPTOR LOCATION	SETBACK DIST. FROM EXIST. C/L	RECEPTOR ELEVATION	EXISTING (CY 2013) DNL	FUTURE (CY 2017) BUILD DNL
Ewa1	54 FT from Kaiulani Ave.	103 FT Above Ground	69	68
Ewa1	54 FT from Kaiulani Ave.	142 FT Above Ground	69	67
Ewa1	54 FT from Kaiulani Ave.	192 FT Above Ground	69	67
Ewa1	54 FT from Kaiulani Ave.	230 FT Above Ground	69	67
Ewa1	54 FT from Kaiulani Ave.	240 FT Above Ground	69	67
Ewa1	54 FT from Kaiulani Ave.	263 FT Above Ground	69	67
Ewa1	54 FT from Kaiulani Ave.	327 FT Above Ground	68	67
Ewa1	54 FT from Kaiulani Ave.	338 FT Above Ground	68	67
Ewa2	49 FT from Kaiulani Ave.	103 FT Above Ground	68	67
Ewa2	49 FT from Kaiulani Ave.	142 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	192 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	230 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	240 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	263 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	327 FT Above Ground	68	66
Ewa2	49 FT from Kaiulani Ave.	338 FT Above Ground	68	66
Ewa3	41 FT from Kaiulani Ave.	0 FT Above Ground	69	68
Ewa3	41 FT from Kaiulani Ave.	50 FT Above Ground	69	68
Makai1	50 FT from Koa Ave.	50 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	103 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	142 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	192 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	230 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	240 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	263 FT Above Ground	68	67
Makai1	50 FT from Koa Ave.	327 FT Above Ground	67	66
Makai1	50 FT from Koa Ave.	338 FT Above Ground	67	66
Makai2	51 FT from Koa Ave.	50 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	103 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	142 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	192 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	230 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	240 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	263 FT Above Ground	68	67
Makai2	51 FT from Koa Ave.	327 FT Above Ground	68	66
Makai2	51 FT from Koa Ave.	338 FT Above Ground	68	66

TABLE 5 (CONTINUED)

EXISTING AND 2017 TRAFFIC NOISE LEVELS
(VARIOUS ELEVATIONS, DNL)

RECEPTOR LOCATION	SETBACK DIST. FROM EXIST. C/L	RECEPTOR ELEVATION	EXISTING (CY 2013) DNL	FUTURE (CY 2017) BUILD DNL
Mauka1	100 FT from Kaiulani Ave.	103 FT Above Ground	67	59
Mauka1	100 FT from Kaiulani Ave.	142 FT Above Ground	67	61
Mauka1	100 FT from Kaiulani Ave.	192 FT Above Ground	67	62
Mauka1	100 FT from Kaiulani Ave.	230 FT Above Ground	67	64
Mauka1	100 FT from Kaiulani Ave.	240 FT Above Ground	67	64
Mauka1	100 FT from Kaiulani Ave.	263 FT Above Ground	67	64
Mauka1	100 FT from Kaiulani Ave.	327 FT Above Ground	66	64
Mauka1	100 FT from Kaiulani Ave.	338 FT Above Ground	66	64
Mauka2	47 FT from Prince Edward St.	103 FT Above Ground	66	66
Mauka2	47 FT from Prince Edward St.	142 FT Above Ground	67	66
Mauka2	47 FT from Prince Edward St.	192 FT Above Ground	67	66
Mauka2	47 FT from Prince Edward St.	230 FT Above Ground	67	66
DH1	73 FT from Prince Edward St.	103 FT Above Ground	66	63
DH1	73 FT from Prince Edward St.	142 FT Above Ground	66	65
DH1	73 FT from Prince Edward St.	192 FT Above Ground	66	65
DH1	73 FT from Prince Edward St.	230 FT Above Ground	66	65
DH2	91 FT from Koa Ave.	103 FT Above Ground	66	62
DH2	91 FT from Koa Ave.	142 FT Above Ground	66	64
DH2	91 FT from Koa Ave.	192 FT Above Ground	66	64
DH2	91 FT from Koa Ave.	230 FT Above Ground	66	64
DH3	83 FT from Koa Ave.	240 FT Above Ground	66	65
DH3	83 FT from Koa Ave.	263 FT Above Ground	66	62
DH3	83 FT from Koa Ave.	327 FT Above Ground	66	63
DH3	83 FT from Koa Ave.	338 FT Above Ground	66	63
Receiver DT	68 FT from Prince Edward St.	86 FT Above Ground	65	61
Receiver RES	119 FT from Koa Ave.	86 FT Above Ground	66	59

TABLE 5 (CONTINUED)

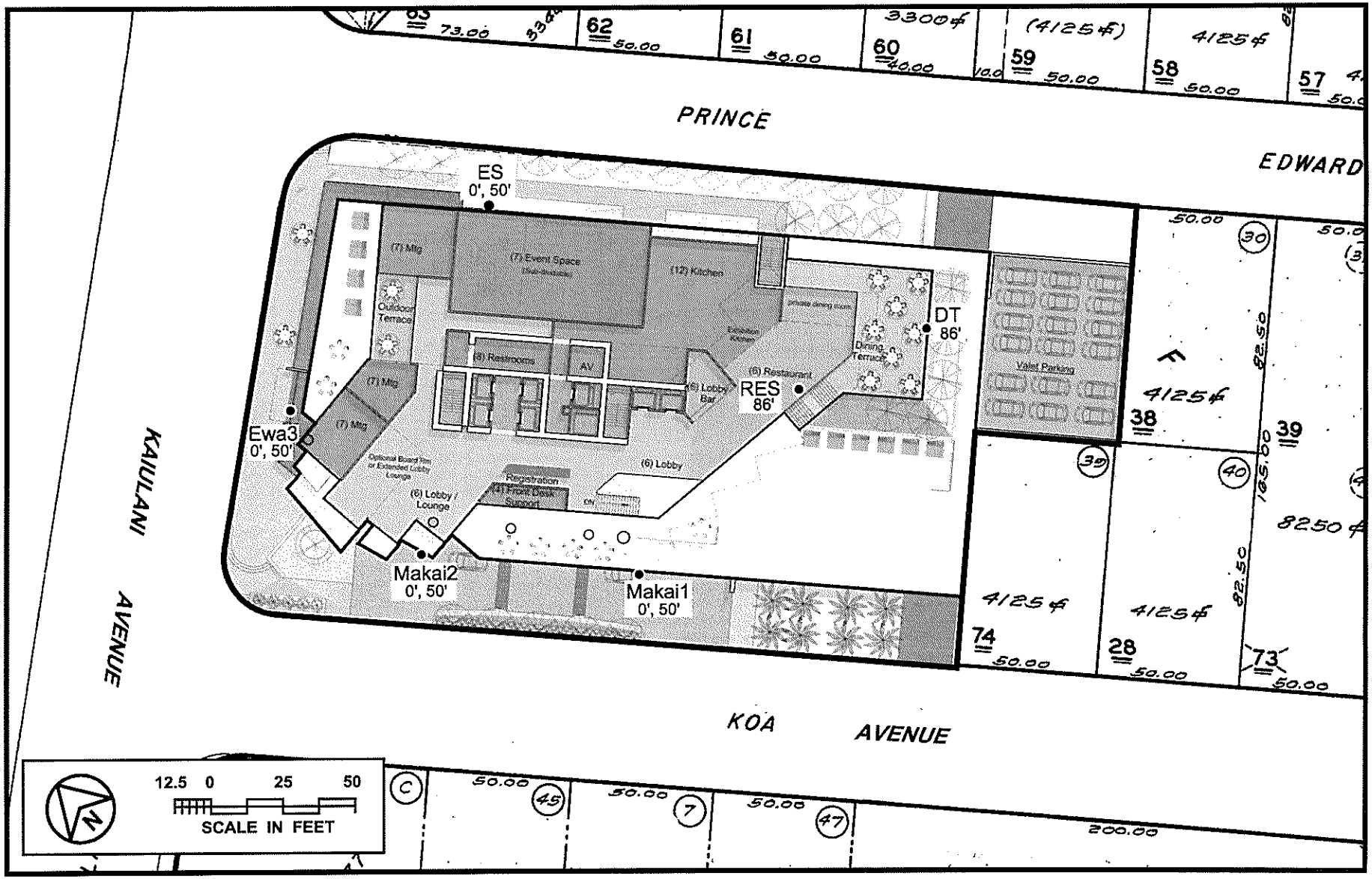
EXISTING AND 2017 TRAFFIC NOISE LEVELS
(VARIOUS ELEVATIONS, DNL)

RECEPTOR LOCATION	SETBACK DIST. FROM EXIST. C/L	RECEPTOR ELEVATION	EXISTING (CY 2013) DNL	FUTURE (CY 2017) BUILD DNL
Receiver ES	38 FT from Prince Edward St.	50 FT Above Ground	67	67
Receiver PAT	136 FT from Kaiulani Ave.	103 FT Above Ground	66	59

Table 5. Figures 11 through 14 depict the various receptor locations of Table 5 in relationship to the various faces of the planned 133 Kaiulani building.

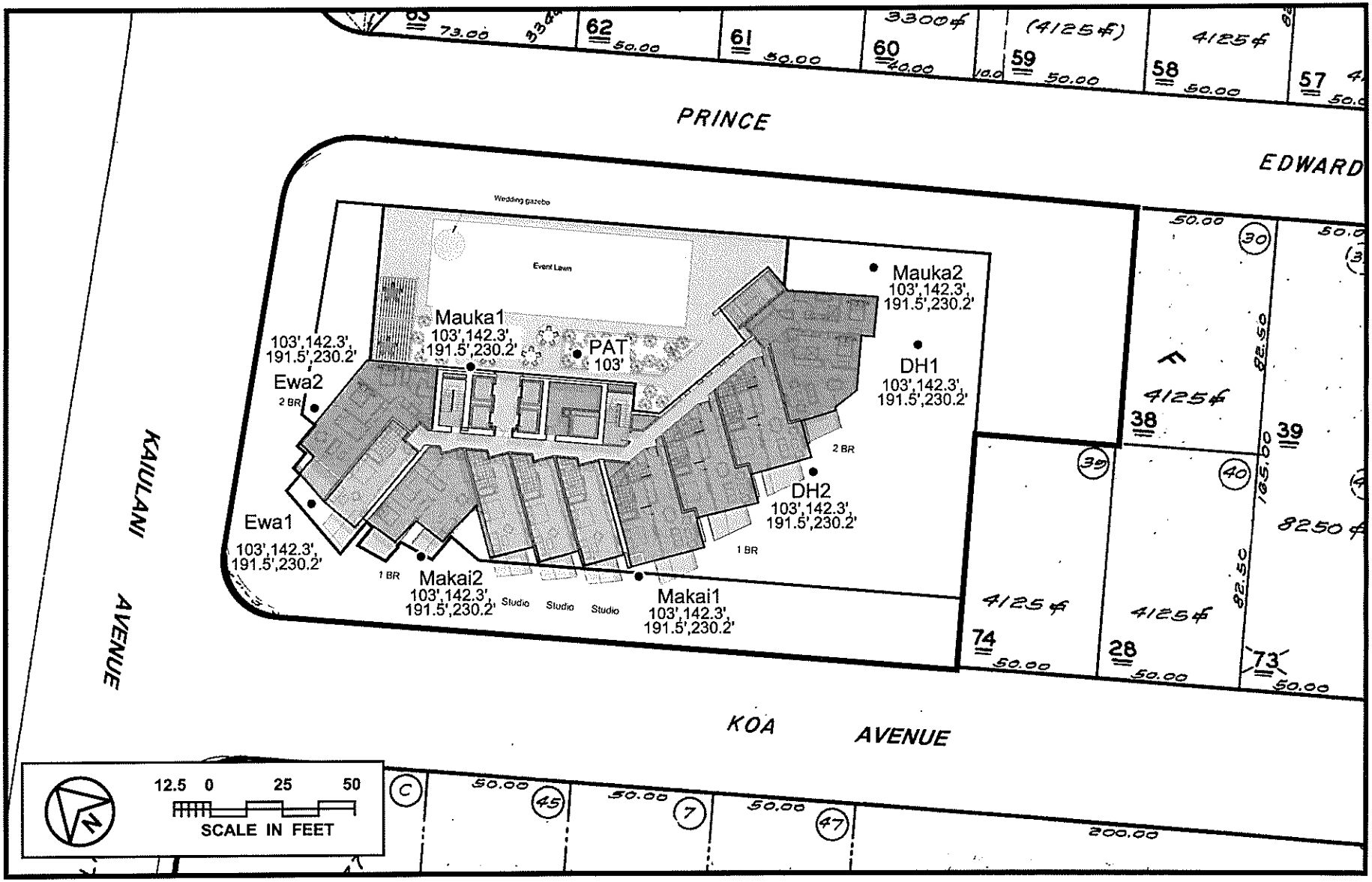
As indicated in Table 5, the existing noise levels at the faces of the proposed tower building are highest on the Koa Avenue (south or makai face) side, and are lowest on the east side. Existing traffic noise levels at the high elevations are currently greater than 65 DNL at all four faces of the proposed tower building due to the absence of noise shielding effects from the proposed new building.

Aircraft noise levels at the project site do not exceed 60 DNL, which is the level above which the Hawaii State Department of Transportation, Airports Division, considers to be unacceptable for residences. The most recently published airport noise contours for Honolulu International Airport indicate that the project site is located beyond (or outside) the 60 DNL contour for the Year 2008. Therefore, special noise mitigation measures for aircraft noise should not be required.



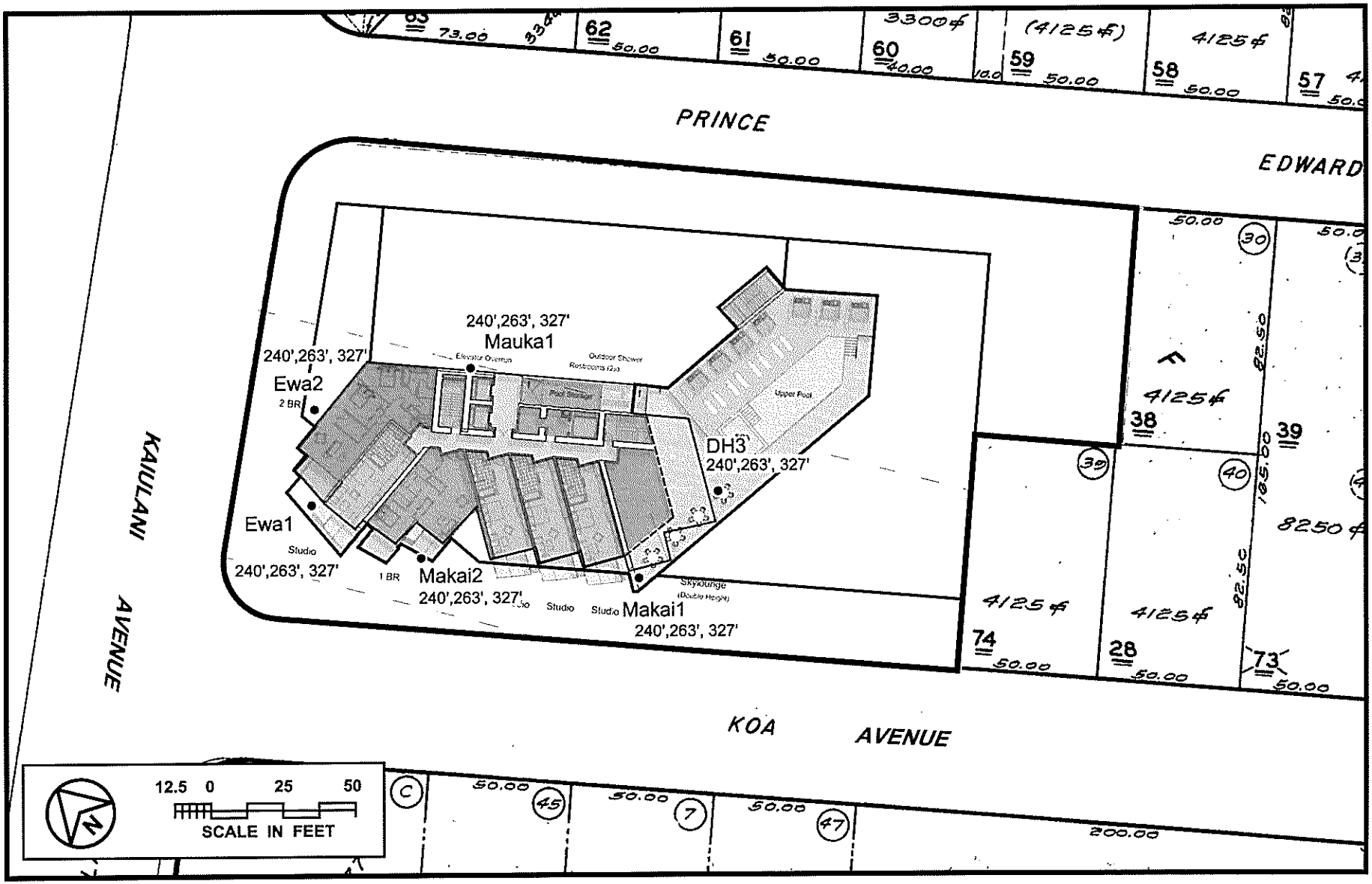
RECEPTOR LOCATIONS TO LEVEL 08 - MAIN AMENITY; 133 KAIULANI

FIGURE 11



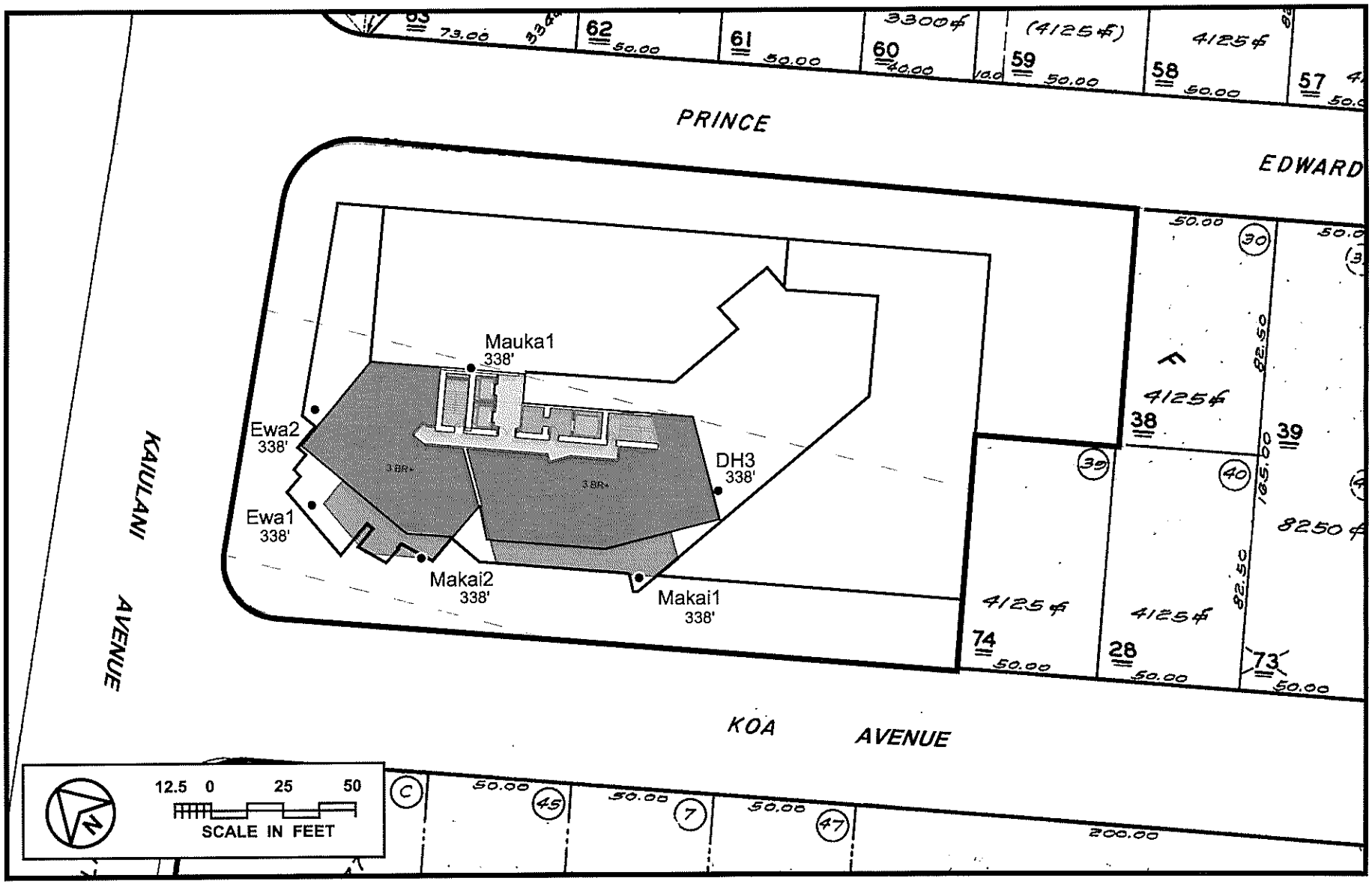
RECEPTOR LOCATIONS LEVEL 09 TO 22 - LOWER LEVEL RESIDENTIAL TIER; 133 KAIULANI

FIGURE 12



RECEPTOR LOCATIONS LEVEL 23 TO 31 - MID-LEVEL AND UPPER-LEVEL RESIDENTIAL TIER; 133 KAIULANI

FIGURE 13



RECEPTOR LOCATIONS LEVEL 32
PENTHOUSE LEVEL; 133 KAIULANI

FIGURE 14

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for CY 2017 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.

Table 6 contains the CY 2017 traffic volumes and noise levels at 50, 75, and 100 feet from the roadways' centerlines for the Build Alternative during the AM or PM peak hour. Table 4 contains the setback distances to the 65, 70, and 75 DNL contours for CY 2017 under the Build Alternative. Future average vehicle speeds and traffic mixes along all roadways were assumed to be identical to those used for CY 2013 (see Table 3).

In CY 2017, the dominant traffic noise sources in the project area will continue to be traffic noise from Ala Wai Boulevard, Kuhio Avenue, and Kalakaua Avenue. This situation will continue to occur with or without the proposed project.

Table 7 presents the predicted increases in future traffic noise levels associated with non-project and project related traffic by CY 2017. The traffic noise contributions from the 133 Kaiulani Project have been separated from the non-project contributions in Table 7. Except for the 0.8 and 1.1 dB (or DNL) increase in traffic noise along Prince Edward Street attributable to project traffic, the predicted increases in traffic noise from the 133 Kaiulani Project traffic should not exceed 0.5 dB. Along Kaiulani Avenue mauka of Prince Edward Street and Kuhio Avenue, and along Uluniu Avenue, future traffic noise levels should remain below 60 DNL at 50 feet setback distance from the roadways' centerlines.

Calculations of future traffic noise levels following project build-out in CY 2017 and at the faces of the proposed 133 Kaiulani tower building were performed as shown in Table 5. The receptor locations where the calculations were performed are shown in Figures 12 through 14. As indicated in Table 5, traffic noise levels at the lower floors of the proposed hotel tower building on all faces should decrease (by 0 to 8 DNL) due to the traffic noise shielding effects of the proposed building. The largest reductions in traffic noise levels are expected to occur directly above the Patio Deck within the Lower Residential Tier (Locations Mauka1 and PAT in Figure 12). At the upper floors of all faces of the proposed hotel tower building, future traffic noise levels are predicted to decrease by 1 to 4 DNL due to the noise shielding effects of the proposed building.

As indicated in Table 5, future traffic noise levels at all of the hotel units on the Ewa1, Ewa2, Makai1, Makai2, and Mauka2 faces of the proposed hotel tower will exceed the 65 DNL FHA/HUD noise standard following project build out in CY 2017. On the Mauka1, DH1, DH2, and DH3 faces, future traffic noise levels are predicted to not exceed the 65 DNL standard at all elevations.

TABLE 6

FUTURE (CY 2017) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR, BUILD)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Ala Wai Blvd. W. of Kanekapolei St., AM	35	2,619	2,528	31	60	69.7	67.9	66.7
Ala Wai Blvd. E. of Kanekapolei St., AM	35	2,519	2,431	30	58	69.5	67.7	66.5
Kuhio Ave. W. of Kanekapolei St., PM	32	1,302	1,105	86	111	69.3	67.3	66.0
Kuhio Ave. Between Kanekapolei & Kaiulani, PM	32	1,058	898	70	90	68.4	66.3	65.1
Kuhio Ave. Between Kaiulani & Uluniu, PM	32	1,130	959	75	96	68.7	66.6	65.4
Kuhio Ave. E. of Uluniu Ave., PM	32	1,090	925	72	93	68.6	66.5	65.2
Kalakaua Ave. W. of Kaiulani Ave., PM	36	1,697	1,561	34	102	69.7	67.9	66.6
Kalakaua Ave. Between Kaiulani & Uluniu, PM	36	1,293	1,189	26	78	68.5	66.7	65.4
Kalakaua Ave. E. of Uluniu Ave., PM	36	1,485	1,366	30	89	69.1	67.3	66.0
Kaiulani Ave. Between Kalakaua & Koa, PM	30	328	269	16	43	67.0	65.2	63.9
Kaiulani Ave. Between Koa & Prince Edward, AM	30	324	266	16	42	66.9	65.1	63.8
Kanekapolei St. Between Prince Edward & Kuhio, AM	30	565	503	28	34	67.4	65.6	64.3
Kanekapolei St. Between Kuhio & Ala Wai, PM	30	523	484	33	6	61.7	60.0	58.8
Kaiulani Ave. Between Prince Edward & Kuhio, PM	25	140	130	4	6	55.8	54.0	52.9
Kaiulani Ave. N. of Kuhio Ave., PM	30	120	111	4	5	56.1	54.4	53.2
Koa Ave. Between Kaiulani & Uluniu, AM	30	259	174	18	67	66.9	65.1	64.0
Koa Ave. E. of Uluniu Ave., AM	30	195	130	14	51	65.7	63.9	62.8
Prince Edward St. E. of Uluniu Ave., PM	25	103	84	7	12	63.7	61.9	60.8
Prince Edward St. Between Uluniu & Kaiulani, AM	25	235	216	7	12	64.5	62.7	61.6
Uluniu Ave. Between Koa & Kalakaua, AM	28	280	258	8	14	59.7	57.9	56.8
Uluniu Ave. Between Prince Edward & Koa, AM	28	225	207	7	11	58.7	57.0	55.8
Uluniu Ave. Between Kuhio & Prince Edward, AM	28	263	242	8	13	59.4	57.6	56.5

TABLE 7

CALCULATIONS OF PROJECT AND NON-PROJECT TRAFFIC NOISE CONTRIBUTIONS (CY 2017) (PEAK HOUR LEQ OR DNL)

STREET SECTION	NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC	PROJECT TRAFFIC
Ala Wai Blvd. W. of Kanekapolei St.	0.2	0.1
Ala Wai Blvd. E. of Kanekapolei St.	0.4	0.0
Kuhio Ave. W. of Kanekapolei St.	0.4	0.0
Kuhio Ave. Between Kanekapolei & Kaiulani	0.4	0.0
Kuhio Ave. Between Kaiulani & Uluniu	0.2	0.1
Kuhio Ave. E. of Uluniu Ave.	0.3	0.1
Kalakaua Ave. W. of Kaiulani Ave.	0.3	0.0
Kalakaua Ave. Between Kaiulani & Uluniu	0.4	0.0
Kalakaua Ave. E. of Uluniu Ave.	0.3	0.0
Kaiulani Ave. Between Kalakaua & Koa	-0.2	0.2
Kaiulani Ave. Between Koa & Prince Edward	-0.3	0.0
Kanekapolei St. Between Prince Edward & Kuhio	0.0	0.4
Kanekapolei St. Between Kuhio & Ala Wai	-0.1	0.0
Kaiulani Ave. Between Prince Edward & Kuhio	0.0	0.5
Kaiulani Ave. N. of Kuhio Ave.	0.0	0.0
Koa Ave. Between Kaiulani & Uluniu	0.0	0.1
Koa Ave. E. of Uluniu Ave.	0.0	0.1
Prince Edward St. E. of Uluniu Ave.	0.0	0.7
Prince Edward St. Between Uluniu & Kaiulani	0.0	0.8
Uluniu Ave. Between Koa & Kalakaua	0.0	0.0
Uluniu Ave. Between Prince Edward & Koa	0.0	0.0
Uluniu Ave. Between Kuhio & Prince Edward	0.0	0.1

The dominant traffic noise sources in the immediate vicinity of the project site will continue to be traffic noise from Kuhio Avenue, Koa Avenue, and Kalakaua Avenue. As indicated in Table 5, hotel units which are closest to Kuhio Avenue (Mauka2) or Kalakaua and Koa Avenues (Ewa1, Ewa2, Makai1, and Makai2) are all expected to be exposed to traffic noise levels greater than 65 DNL, and are expected to be in the "Significant Exposure, Normally Unacceptable" noise exposure category in respect to the FHA/HUD noise standard for residences. However, hotel units of the proposed tower building which are partially shielded from Kuhio, Koa, or Kalakaua Avenues (Mauka1, DH1, DH2, and DH3) are predicted to experience traffic noise levels less than 65 DNL due to the beneficial shielding effects of the project's new tower building.

Aircraft noise levels over the project site should not change significantly between CY 2008 and 2017, and should remain at or near the current levels and between 55 and 60 DNL. Aircraft noise mitigation measures should not be required.

CHAPTER VII. DISCUSSION OF PROJECT-RELATED NOISE IMPACTS AND POSSIBLE MITIGATION MEASURES

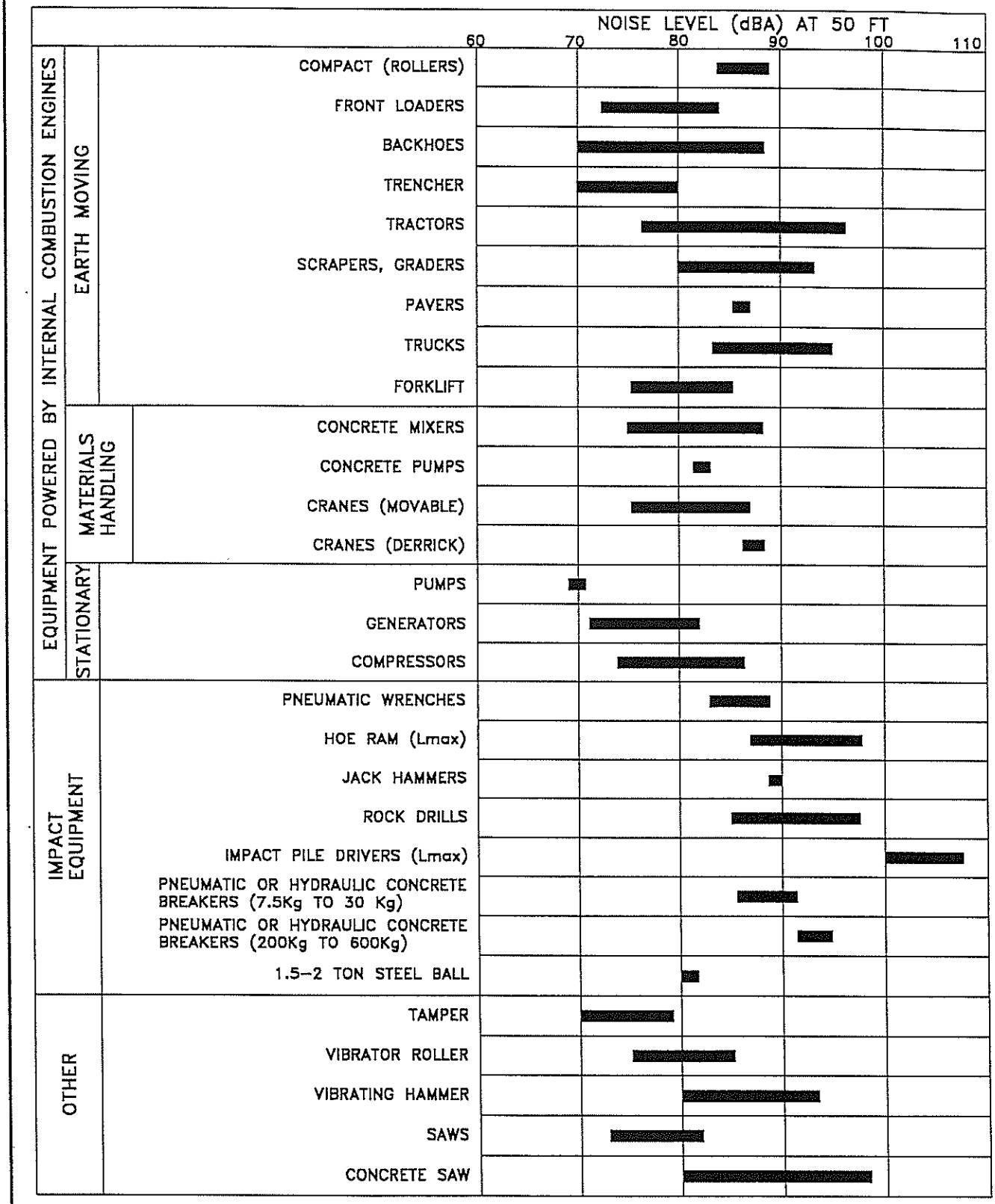
Traffic Noise. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected since traffic noise increases associated with project traffic are not significant. Along Prince Edward Street, where project related traffic noise level increases are greatest, total project plus non-project traffic noise levels should be less than 65 DNL at 50 feet from the centerline due to the relatively low traffic volumes along that roadway. Along the high volume roadways (Kalakaua Avenue, Kuhio Avenue, and Ala Wai Boulevard), where existing traffic noise levels are highest, the contributions of future traffic noise level increases from the project range from 0.0 to 0.1 DNL, while the contributions from non-project traffic range from 0.2 to 0.4 DNL. At some of the hotel units in the proposed hotel tower building of the project, predicted traffic noise levels will exceed the 65 DNL FHA/HUD standard for residences and noise sensitive receptors, and traffic noise mitigation measures are recommended. The primary contributors to these high traffic noise levels are existing and future traffic along Kuhio and Kalakaua Avenues.

Traffic noise mitigation measures are recommended for all proposed hotel units on the south (makai) face of the tower building, and for those units at Locations Ewa1, Ewa2, and Mauka2 (see Figures 12 through 14). Traffic noise mitigation measures in the form of closure and air conditioning of the hotel units would be acceptable.

Because of the relatively small increases in traffic noise attributable to project related traffic, the proposed project is not expected to generate adverse noise impacts along the roadways servicing the project traffic. Special traffic noise mitigation measures should not be required at existing receptors along these roadways. Potential noise impacts from tire squeal within the project's parking structure should be minimized through the use of coarse finishes for the circulation driveway surfaces within the parking structure.

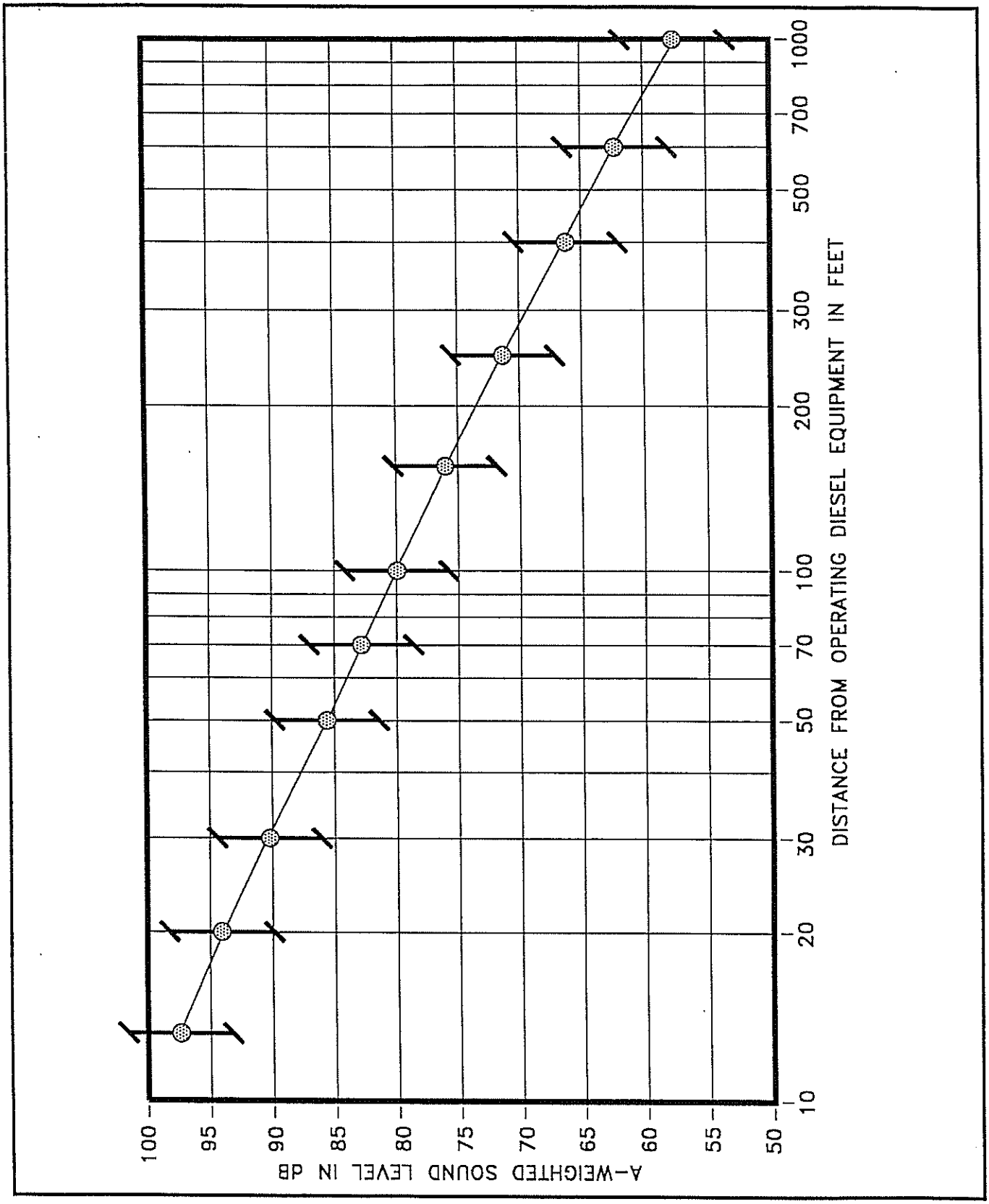
General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the project is not known. It is expected that actual construction work will be moving from one location on the project site to another 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 15 depicts the range of noise levels of various types of construction equipment when measured at 50 feet distance from the equipment.

Typical levels of exterior noise from construction activity (excluding pile driving activity) at various distances from the job sites are shown in Figure 16. Figure 16 is useful for predicting exterior noise levels at short distances (within 100 feet) from the work when visual line of sight exists between the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances



RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS

FIGURE 15



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 16

from the construction equipment to existing resort, residential, and commercial buildings will range from 15 feet to 300+ feet, with corresponding average noise levels of 96 to 70 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of Figure 16 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 feet 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 16.

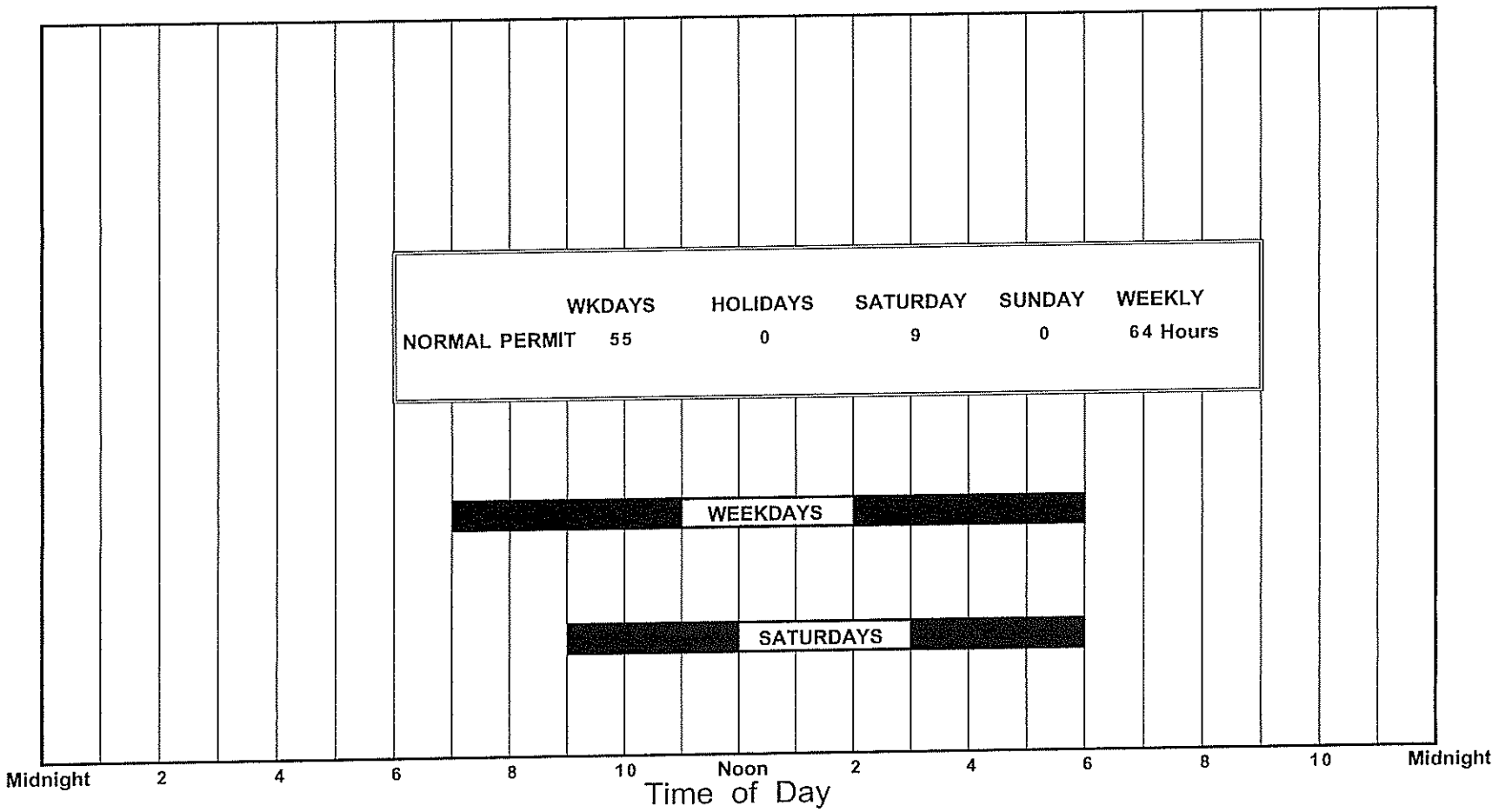
Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities are located at the Hale Waikiki, Capri, and 2413 Prince Edward apartment units on the adjacent lots (#30, #39, and #40) Diamond Head of the project site. Predicted construction noise levels at these buildings during the site preparation and building erection phases of the work ranged from 96 to 72 dBA (plus or minus 5 dBA). The highest noise levels at a commercial buidling during construction are expected to occur at the existing car rental establishment (Lot #63) across Prince Edward Street during site preparation and building erection work, where buffer distances are relatively small (in the order of 40 to 60 feet). At the makai wall of this commercial building, construction noise levels could intermittently exceed 84 dBA. Interior noise levels at this commercial building should be less than 64 dBA since its makai wall is solid without ventilation openings. 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, and due to the administrative controls available for regulation of construction noise. Instead, these 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+ dB at 50 feet distance), and due to the exterior nature of the work (excavation, grading, 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 feet from the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 feet to 450 feet 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.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities.

Figure 17 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.



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

FIGURE 17

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, l979.

(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) "FHWA Traffic Noise Model User's Guide;" FHWA-PD-96-009, DOT-VNTSC-FHWA-98-1, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).

(6) "Traffic Impact Report, 133 Kaiulani;" Wilson Okamoto Corporation; March 2014.

(7) Hourly traffic counts at Station #B72761200176, Kalakaua Avenue Between Uluniu and Liliuokalani; Hawaii State Department of Transportation; February 4, 2011.

(8) Hourly traffic counts at Station #B72771000000, Ala Wai Boulevard Between Ohua and Liliuokalani; Hawaii State Department of Transportation; April 7, 2011.

(9) Hourly traffic counts at Station #B72771100000, Kuhio Avenue Between Nahua and Walina; Hawaii State Department of Transportation; May 5, 2010.

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).

TABLE I

A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

	TERM	SYMBOL
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) (1)	$L_{eq(T)}$
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 a $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

TABLE II

RECOMMENDED DESCRIPTOR LIST

	TERM	A-WEIGHTING	ALTERNATIVE[1] A-WEIGHTING	OTHER[2] WEIGHTING	UNWEIGHTED
1.	Sound (Pressure)[3] 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[4] 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 Leq(1). Time may be specified in non-quantitative terms (e.g., could be specified as Leq(WASH) to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF BASE YEAR AND YEAR 2017 TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	******** CY 2013 ******		CY 2017 (NO BUILD)		*** CY 2017 (BUILD) ****	
	AM	PM	AM	PM	AM	PM
Ala Wai Blvd. W. of Kanekapolei (WB) *	2,388	2,085	2,585	2,257	2,619	2,264
Ala Wai Blvd. E. of Kanekapolei (WB) *	2,326	1,918	2,518	2,077	2,519	2,079
Kuhio Ave. W. of Kanekapolei (EB)	480	766	508	873	513	886
Kuhio Ave. W. of Kanekapolei (WB)	272	407	287	411	310	416
Two-Way	752	1,173	795	1,284	823	1,302
Kuhio Ave. Btwn. Kanekapolei & Kaiulani (EB)	431	644	462	719	468	734
Kuhio Ave. Btwn. Kanekapolei & Kaiulani (WB)	219	309	234	325	234	325
Two-Way	649	953	696	1,043	702	1,058
Kuhio Ave. Btwn. Kaiulani & Uluniu (EB)	489	682	520	729	545	748
Kuhio Ave. Btwn. Kaiulani & Uluniu (WB)	224	356	241	382	241	382
Two-Way	713	1,038	761	1,111	786	1,130
Kuhio Ave. E. of Uluniu (EB)	355	559	383	604	402	608
Kuhio Ave. E. of Uluniu (WB)	373	444	391	473	395	482
Two-Way	728	1,003	774	1,077	797	1,090
Kalakaua Ave. W. of Kaiulani (EB)	1,132	1,580	1,198	1,677	1,206	1,697
Kalakaua Ave. Btwn. Kaiulani & Uluniu (EB)	829	1,198	895	1,293	895	1,293
Kalakaua Ave. E. of Uluniu (EB)	1,085	1,391	1,151	1,485	1,151	1,485
Kaiulani Ave. Btwn. Kalakaua & Koa (NB)	263	324	263	308	271	328
Kaiulani Ave. Btwn. Koa & Prince Edward (NB)	158	211	170	193	170	193
Kaiulani Ave. Btwn. Koa & Prince Edward (SB)	154	137	154	127	154	127
Two-Way	311	347	324	320	324	320
Kanekapolei St. Btwn. Prince Edward & Kuhio (NB)	337	317	337	307	394	319
Kanekapolei St. Btwn. Prince Edward & Kuhio (SB)	171	138	171	138	171	138
Two-Way	508	455	508	445	565	457
Kanekapolei St. Btwn. Kuhio & Ala Wai (NB)	264	366	264	355	292	362
Kanekapolei St. Btwn. Kuhio & Ala Wai (SB)	155	159	157	159	158	161
Two-Way	419	525	421	514	450	523
Kaiulani Ave. Btwn. Prince Edward & Kuhio (NB)	95	136	95	136	114	140
Kaiulani Ave. N. of Kuhio (NB)	48	120	48	120	48	120
Koa Ave. Btwn. Kaiulani & Uluniu (EB)	251	218	251	218	259	238
Koa Ave. E. of Uluniu (EB)	187	174	187	174	195	194
Prince Edward St. E. of Uluniu (WB)	63	83	63	83	71	103

APPENDIX C (CONTINUED)

SUMMARY OF BASE YEAR AND YEAR 2017 TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	******** CY 2013 ******		CY 2017 (NO BUILD)		*** CY 2017 (BUILD) ****	
	AM	PM	AM	PM	AM	PM
Prince Edward St. Btwn. Uluniu & Kaiulani (WB)	188	105	188	105	235	135
Uluniu Ave. Btwn. Koa & Kalakaua (SB)	280	220	280	220	280	220
Uluniu Ave. Btwn. Prince Edward & Koa (SB)	225	179	225	179	225	179
Uluniu Ave. Btwn. Kuhio & Prince Edward (SB)	253	183	253	183	263	207

Notes:

* CY 2013 traffic data estimated from Wilson Okamoto Corporation traffic counts of 9/1/11 escalated by 2 percent per year (uncompounded) from 2011 to 2013.

* CY 2017 traffic data (No Build) estimated from Wilson Okamoto Corporation traffic counts of 9/1/11 escalated by 2 percent per year (uncompounded) from 2011 to 2017.

* CY 2017 traffic data (Build) derived from 2017 (No Build) estimates by adding 34 and 7 vph during the AM and PM peak hours, respectively, to the AM and PM peak volumes west of the Kanekapolei intersection.

* CY 2017 traffic data (Build) derived from 2017 (No Build) estimates by adding 1 and 2 vph during the AM and PM peak hours, respectively, to the AM and PM peak volumes east of the Kanekapolei intersection.

APPENDIX 3

AIR QUALITY STUDY

AIR QUALITY STUDY

FOR THE PROPOSED

133 KAIULANI CONDO-HOTEL DEVELOPMENT

WAIKIKI, OAHU, HAWAII

Prepared for:

BSC KVSC, LLC

April 2014

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1.0 SUMMARY

BSC KVSC, LLC is proposing the 133 Kaiulani Condo-Hotel Development in Waikiki on the island of Oahu. The development would involve the demolition of the existing King's Village Shopping Center, Prince Edwards Apartments and Hale Waikiki. The proposed development will include 275 condo-hotel units, approximately 8,500 square feet of commercial/retail space, parking and other amenities. This study examines the potential short- and long-term air quality impacts that could occur as a result of construction and use of the proposed facilities and suggests mitigative measures to reduce any potential air quality impacts where possible and appropriate.

Both federal and state standards have been established to maintain ambient air quality. At the present time, seven parameters are regulated including: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. Hawaii air quality standards are comparable to the national standards except those for nitrogen dioxide and carbon monoxide which are more stringent than the national standards.

Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given location. The climate of the Waikiki area is very much affected by its leeward and coastal situation. Winds are predominantly trade winds from the east northeast except for occasional periods when kona storms may generate strong winds from the south or when the trade winds are weak and landbreeze-seabreeze circulations may develop. Wind speeds typically vary between about 5 and 15 miles per hour providing relatively good ventilation much of the time.

Temperatures in leeward areas of Oahu are generally very moderate with average daily temperatures ranging from about 70°F to 84°F. The extreme minimum temperature recorded at Honolulu Airport is 54°F, while the extreme maximum temperature is 95°F. This area of Oahu is one of the drier locations in the state with rainfall often highly variable from one year to the next. Monthly rainfall has been measured to vary from as little as a trace to as much as 10 inches. Average annual rainfall amounts to about 21 inches with summer months being the driest.

The present air quality of the project area appears to be reasonably good based on nearby air quality monitoring data. Air quality data from the nearest monitoring stations operated by the Hawaii Department of Health suggest that all air quality standards are currently being met, although occasional exceedances of the more stringent state standards for carbon monoxide may occur near congested roadway intersections.

If the proposed project is given the necessary approvals to proceed, there may be some short- and/or long-term impacts on air quality that may occur either directly or indirectly as a consequence of project construction and use. Short-term impacts from fugitive dust could occur during the project construction phase. To a lesser extent, exhaust emissions from stationary and mobile construction equipment, from the minor disruption of traffic, and from workers' vehicles may also affect air quality during the period of construction. State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. Hence, an effective dust control plan must be implemented to ensure compliance with state regulations. Fugitive dust emissions can be controlled to a large extent by watering of

active work areas, using wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures to consider include limiting the area that is disturbed at any given time and/or mulching or chemically stabilizing inactive areas that have been worked. Paving and landscaping of project areas early in the construction schedule will also reduce dust emissions. Exhaust emissions can be mitigated by moving construction equipment and workers to and from the project site during off-peak traffic hours.

To assess the potential long-term impact of emissions from project-related motor vehicle traffic operating on roadways in the project area after construction is completed, a computerized air quality modeling study was undertaken. The air quality modeling study estimated current worst-case concentrations of carbon monoxide at intersections in the project vicinity and predicted future levels both with and without the proposed project. During worst-case conditions, model results indicated that present 1-hour and 8-hour worst-case carbon monoxide concentrations are well within both the state and the national ambient air quality standards. In the year 2017 without the project, worst-case carbon monoxide concentrations were predicted to remain nearly unchanged, and concentrations would remain well within standards. With the project in the year 2017, estimated worst-case carbon monoxide concentrations indicated only minimal or no impact compared to the without project case. Concentrations would remain well within standards. Due to the negligible impact the project is expected to have, implementing mitigation measures for long-term traffic-related air quality impacts is unnecessary and unwarranted.

2.0 INTRODUCTION

BSC KVSC, LLC is proposing the 133 Kaiulani Condo-Hotel Development in Waikiki on the island of Oahu (see Figure 1 for project location). The project site is bounded by Kaiulani Avenue to the west, Koa Avenue to the south, Prince Edward Street to the north, and other commercial uses to the east. The development will involve the demolition of the existing structures on the property and the development of a new condo-hotel. The existing structures to be demolished include the King's Village, Prince Edwards Apartments and Hale Waikiki. The new condo-hotel development will provide 275 condo-hotel units, approximately 8,500 square feet of commercial/retail uses, onsite parking, and amenities such as recreational and storage areas. Access to the development will be provided via a new driveway off Prince Edward Street. The project is expected to be completed and occupied by 2017.

The purpose of this study is to describe existing air quality in the project area and to assess the potential short- and long-term direct and indirect air quality impacts that could result from construction and use of the proposed facilities as planned. Measures to mitigate project impacts are suggested where possible and appropriate.

3.0 AMBIENT AIR QUALITY STANDARDS

Ambient concentrations of air pollution are regulated by both national and state ambient air quality standards (AAQS). National AAQS are specified in Section 40, Part 50 of the Code of Federal Regulations (CFR), while State of Hawaii AAQS are defined

in Chapter 11-59 of the Hawaii Administrative Rules. Table 1 summarizes both the national and the state AAQS that are specified in the cited documents. As indicated in the table, national and state AAQS have been established for particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone and lead. The state has also set a standard for hydrogen sulfide. National AAQS are stated in terms of both primary and secondary standards for most of the regulated air pollutants. National primary standards are designed to protect the public health with an "adequate margin of safety". National secondary standards, on the other hand, define levels of air quality necessary to protect the public welfare from "any known or anticipated adverse effects of a pollutant". Secondary public welfare impacts may include such effects as decreased visibility, diminished comfort levels, or other potential injury to the natural or man-made environment, e.g., soiling of materials, damage to vegetation or other economic damage. In contrast to the national AAQS, Hawaii State AAQS are given in terms of a single standard that is designed "to protect public health and welfare and to prevent the significant deterioration of air quality".

Each of the regulated air pollutants has the potential to create or exacerbate some form of adverse health effect or to produce environmental degradation when present in sufficiently high concentration for prolonged periods of time. The AAQS specify a maximum allowable concentration for a given air pollutant for one or more averaging times to prevent harmful effects. Averaging times vary from one hour to one year depending on the pollutant and type of exposure necessary to cause adverse effects. In the case of the short-term (i.e., 1- to 24-hour) AAQS, both national and state standards allow a specified number of exceedances each year.

The Hawaii AAQS are in some cases considerably more stringent than the comparable national AAQS. In particular, the Hawaii 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit.

The national AAQS are reviewed periodically, and multiple revisions have occurred over the past 30 years. In general, the national AAQS have become more stringent with the passage of time and as more information and evidence become available concerning the detrimental effects of air pollution. Changes to the Hawaii AAQS over the past several years have tended to follow revisions to the national AAQS, making several of the Hawaii AAQS the same as the national AAQS.

4.0 REGIONAL AND LOCAL CLIMATOLOGY

Regional and local climatology significantly affects the air quality of a given location. Wind, temperature, atmospheric turbulence, mixing height and rainfall all influence air quality. Although the climate of Hawaii is relatively moderate throughout most of the state, significant differences in these parameters may occur from one location to another. Most differences in regional and local climates within the state are caused by the mountainous topography.

Hawaii lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high pressure cell to the north and east. On the island of Oahu, the Koolau and Waianae

Mountain Ranges are oriented almost perpendicular to the trade winds, which accounts for much of the variation in the local climatology of the island. The site of the proposed project is located in the leeward area of the Koolau Mountains.

Wind frequency data for Honolulu International Airport (HIA), which is located about 10 miles to the west of the project site, are given in Table 2. These data can be expected to be reasonably representative of the project area. Wind frequency for HIA show that the annual prevailing wind direction for this area of Oahu is east northeast. On an annual basis, 34.7 percent of the time the wind is from this direction, and more than 70 percent of the time the wind is in the northeast quadrant. Winds from the south are infrequent occurring only a few days during the year and mostly in winter in association with kona storms. Wind speeds average about 10 knots (12 mph) and mostly vary between about 5 and 15 knots (6 and 17 mph).

Air pollution emissions from motor vehicles, the formation of photochemical smog and smoke plume rise all depend in part on air temperature. Colder temperatures tend to result in higher emissions of contaminants from automobiles but lower concentrations of photochemical smog and ground-level concentrations of air pollution from elevated plumes. In Hawaii, the annual and daily variations of temperature depend to a large degree on elevation above sea level, distance inland and exposure to the trade winds. Average temperatures at locations near sea level generally are warmer than those at higher elevations. Areas exposed to the trade winds tend to have the least temperature variation, while inland and leeward areas often have the most. Based on more than 25 years of data collected at Honolulu

International Airport, average annual daily minimum and maximum temperatures in the project area are about 70°F and 84°F, respectively [1]. The extreme minimum temperature on record at the airport is 54°F, and the extreme maximum is 95°F.

Small scale, random motions in the atmosphere (turbulence) cause air pollutants to be dispersed as a function of distance or time from the point of emission. Turbulence is caused by both mechanical and thermal forces in the atmosphere. It is oftentimes measured and described in terms of Pasquill-Gifford stability class. Stability class 1 is the most turbulent and class 6 the least. Thus, air pollution dissipates the best during stability class 1 conditions and the worst when stability class 6 prevails. In the Waikiki area, stability class 4 or 5 is probably the highest stability class that occurs, developing during clear, calm nighttime or early morning hours when temperature inversions form due to radiational cooling. Stability classes 1 through 4 occur during the daytime, depending mainly on the amount of cloud cover and incoming solar radiation and the onset and extent of the sea breeze.

Mixing height is defined as the height above the surface through which relatively vigorous vertical mixing occurs. Low mixing heights can result in high ground-level air pollution concentrations because contaminants emitted from or near the surface can become trapped within the mixing layer. In Hawaii, minimum mixing heights tend to be high because of mechanical mixing caused by the trade winds and because of the temperature moderating effect of the surrounding ocean. Low mixing heights may sometimes occur, however, at inland locations and even at times along coastal areas early in the morning following a clear, cool, windless night.

Coastal areas also may experience low mixing levels during sea breeze conditions when cooler ocean air rushes in over warmer land. Mixing heights in Hawaii typically are above 3000 feet (1000 meters).

Rainfall can have a beneficial effect on the air quality of an area in that it helps to suppress fugitive dust emissions, and it also may "washout" gaseous contaminants that are water-soluble. Rainfall in Hawaii is highly variable depending on elevation and on location with respect to the trade wind. The Waikiki area is one of the drier areas on Oahu due to its leeward and near sea level location. Average annual rainfall measured at nearby Black Point amounts to about 21 inches [2]. Most of the rainfall usually occurs during the winter months. Monthly rainfall may vary from as little as a trace to more than 10 inches.

5.0 PRESENT AIR QUALITY

Present air quality in the project area is mostly affected by air pollutants from motor vehicles due to the urban situation. Table 3 presents an air pollutant emission summary for the island of Oahu for calendar year 1993. These are the most recent data available. The emission rates shown in the table pertain to manmade emissions only, i.e., emissions from natural sources are not included. As suggested in the table, much of the particulate emissions on Oahu originate from area sources, such as the mineral products industry and agriculture. Sulfur oxides are emitted almost exclusively by point sources, such as power plants and refineries. Nitrogen oxides emissions emanate predominantly from industrial point sources, although area sources (mostly motor vehicle traffic) also contribute a significant share. The

majority of carbon monoxide emissions occur from area sources (motor vehicle traffic), while hydrocarbons are emitted mainly from point sources. Based on previous emission inventories that have been reported for Oahu, emissions of particulate and nitrogen oxides may have increased during the last several years, while emissions of sulfur oxides, carbon monoxide and hydrocarbons probably have declined.

Natural sources of air pollution emissions that could affect the project area at times but cannot be quantified very accurately include the ocean (sea spray), plants (aero-allergens), wind-blown dust, and perhaps distant volcanoes on the island of Hawaii.

The State Department of Health operates a network of air quality monitoring stations at various locations on Oahu. Each station, however, typically does not monitor the full complement of air quality parameters. Table 4 shows annual summaries of air quality measurements that were made nearest to the project area for several of the regulated air pollutants for the period 2008 through 2012. These are the most recent data that are currently available.

During the 2008-2012 period, sulfur dioxide was monitored by the State Department of Health at an air quality station located at downtown Honolulu. Concentrations monitored were consistently low compared to the standards. Annual second-highest 3-hour concentrations (which are most relevant to the air quality standards) ranged from 0.008 to 0.021 parts per million (ppm), while the annual second-highest 24-hour concentrations ranged

from 0.002 to 0.005 ppm. Annual average concentrations were only about 0.001 ppm. There were no exceedances of the state/national 3-hour or 24-hour AAQS for sulfur dioxide during the 5-year period. It should be noted that the national AAQS for sulfur dioxide were revised during 2010, and only limited data pertaining to the revised standards have been reported to date.

Particulate matter less than 10 microns in diameter (PM-10) is also measured at the downtown Honolulu monitoring station. Annual second-highest 24-hour PM-10 concentrations ranged from 28 to 57 micrograms per cubic meter ($\mu g/m^3$) between 2008 and 2012. Average annual concentrations ranged from 12 to 14 $\mu g/m^3$. All values reported were within the state and national AAQS.

Carbon monoxide measurements were obtained at the downtown Honolulu monitoring station. The annual second-highest 1-hour concentrations ranged from 1.0 to 1.8 ppm. The annual second-highest 8-hour concentrations ranged from 0.7 to 1.0 ppm. No exceedances of the state or national 1-hour or 8-hour AAQS were reported.

Nitrogen dioxide is monitored by the Department of Health at the Kapolei monitoring station, which is about 16 miles west of the project area. Annual average concentrations of this pollutant ranged from 0.003 to 0.004 ppm, safely inside the state and national AAQS. A new 1-hour standard for nitrogen dioxide was implemented during 2010. Only limited data pertaining to this new standard have been reported to date.

The nearest available ozone measurements were obtained at Sand Island (about 3 miles west of the project area). The annual fourth-highest 8-hour concentrations (which are most relevant to the standards) for the period 2008 through 2012 ranged between 0.043 and 0.048 ppm, which is well inside the state and federal standards. The 8-hour standard for ozone did not exist prior to 2002. Prior to 2002, the now obsolete state 1-hour standard was typically exceeded several times each year.

Although not shown in the table, the nearest and most recent measurements of ambient lead concentrations that have been reported were made at the downtown Honolulu monitoring station between 1996 and 1997. Average quarterly concentrations were near or below the detection limit, and no exceedances of the state AAQS were recorded. Monitoring for this parameter was discontinued during 1997.

Based on the data and discussion presented above, it appears likely that the State of Hawaii AAQS for sulfur dioxide, nitrogen dioxide, particulate matter, ozone and lead are currently being met in the project area. While carbon monoxide measurements at the downtown Honolulu monitoring station suggest that concentrations are within the state and national standards, local “hot spots” may exist near traffic-congested intersections. The potential for this within the project area is examined later in this report.

6.0 SHORT-TERM IMPACTS OF PROJECT

Short-term direct and indirect impacts on air quality could potentially occur due to project construction. For a project of this nature, there are two potential types of air pollution emissions that could directly result in short-term air quality impacts during project construction: (1) fugitive dust from vehicle movement, soil excavation and demolition activities; and (2) exhaust emissions from on-site construction equipment. Indirectly, there also could be short-term impacts from slow-moving construction equipment traveling to and from the project site, from a temporary increase in local traffic caused by commuting construction workers, and from the disruption of normal traffic flow caused by roadway lane closures.

Fugitive dust emissions may arise from the grading and dirt-moving activities associated with demolition, site clearing and preparation work. The emission rate for fugitive dust emissions from construction activities is difficult to estimate accurately. This is because of its elusive nature of emission and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The EPA [3] has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity, moderate soil silt content (30%), and precipitation/evaporation (P/E) index of 50. Uncontrolled fugitive dust emissions at the project site could be somewhere near that level, depending on the amount of rainfall that occurs. In any case, State of Hawaii Air Pollution Control Regulations [4] prohibit visible emissions of fugitive dust from construction

activities at the property line. Thus, an effective dust control plan for the project construction phase is essential.

Adequate fugitive dust control can usually be accomplished by the establishment of a frequent watering program to keep bare-dirt surfaces in construction areas from becoming significant sources of dust. In dust-prone or dust-sensitive areas, other control measures such as limiting the area that can be disturbed at any given time, applying chemical soil stabilizers, mulching and/or using wind screens may be necessary. Control regulations further stipulate that open-bodied trucks be covered at all times when in motion if they are transporting materials that could be blown away. Haul trucks tracking dirt onto paved streets from unpaved areas is often a significant source of dust in construction areas. Some means to alleviate this problem, such as road cleaning or tire washing, may be appropriate. Paving of parking areas and/or establishment of landscaping as early in the construction schedule as possible can also lower the potential for fugitive dust emissions.

On-site mobile and stationary construction equipment also will emit air pollutants from engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the annual standard for nitrogen dioxide is not likely to be violated by short-term construction equipment emissions. Also, the new short-term (1-hour) standard for nitrogen dioxide is based on a three-year average; thus it is unlikely that relatively short-term construction emissions would exceed the standard. Carbon monoxide emissions from diesel

engines are low and should be relatively insignificant compared to vehicular emissions on nearby roadways.

Project construction activities could obstruct the normal flow of traffic for short periods of times such that overall vehicular emissions in the project area could temporarily increase. The only means to alleviate this problem will be to attempt to keep roadways open during peak traffic hours and to move heavy construction equipment and workers to and from construction areas during periods of low traffic volume. Thus, most potential short-term air quality impacts from project construction can be mitigated.

7.0 LONG-TERM IMPACTS OF PROJECT

After construction is completed, use of the proposed facilities may result in increased motor vehicle traffic in the project area, potentially causing long-term impacts on ambient air quality. Motor vehicles with gasoline-powered engines are significant sources of carbon monoxide. They also emit nitrogen oxides and other contaminates.

Federal air pollution control regulations require that new motor vehicles be equipped with emission control devices that reduce emissions significantly compared to a few years ago. In 1990, the President signed into law the Clean Air Act Amendments. This legislation required further emission reductions, which have been phased in since 1994. More recently, additional restrictions were signed into law during the Clinton administration, and these began to take effect during the next decade. The added restrictions on

emissions from new motor vehicles will lower average emissions each year as more and more older vehicles leave the state's roadways. It is estimated that carbon monoxide emissions, for example, will go down by an average of about 20 percent per vehicle during the next 10 years due to the replacement of older vehicles with newer models.

To evaluate the potential long-term ambient air quality impact of motor vehicle traffic using the proposed new roadway facilities, computerized emission and atmospheric dispersion models can be used to estimate ambient carbon monoxide concentrations along roadways within the project area. Carbon monoxide is selected for modeling because it is both the most stable and the most abundant of the pollutants generated by motor vehicles. Furthermore, carbon monoxide air pollution is generally considered to be a microscale problem that can be addressed locally to some extent, whereas nitrogen oxides air pollution most often is a regional issue that cannot be addressed by a single project.

For this project, three scenarios were selected for the carbon monoxide modeling study: (1) year 2013 with present conditions, (2) year 2017 without the project, and (3) year 2017 with the project. To begin the modeling study of the three scenarios, critical receptor areas in the vicinity of the project were identified for analysis. Generally speaking, roadway intersections are the primary concern because of traffic congestion and because of the increase in vehicular emissions associated with traffic queuing. For this study, the nine key intersections identified in the traffic study were also selected for air quality analysis. These included the following intersections:

- Kalakaua Avenue at Kaiulani Avenue
- Kaiulani Avenue at Koa Avenue
- Kaiulani Avenue at Prince Edward Street
- Kanekapolei Street at Kuhio Avenue
- Kaiulani Avenue at Kuhio Avenue
- Uluniu Avenue at Kuhio Avenue
- Uluniu Avenue at Prince Edward Street
- Uluniu Avenue at Koa Avenue
- Uluniu Avenue at Kalakaua Avenue.

The traffic impact report for the project [5] describes the existing and projected future traffic conditions and laneage configurations of the study intersections in detail. In performing the air quality impact analysis, it was assumed that all recommended traffic mitigation measures would be implemented.

The main objective of the modeling study was to estimate maximum 1-hour average carbon monoxide concentrations for each of the three scenarios studied. To evaluate the significance of the estimated concentrations, a comparison of the predicted values for each scenario can be made. Comparison of the estimated values to the national and state AAQS was also used to provide another measure of significance.

Maximum carbon monoxide concentrations typically coincide with peak traffic periods. The traffic impact assessment report evaluated morning and afternoon peak traffic periods. These same periods were evaluated in the air quality impact assessment.

Vehicular carbon monoxide emissions for each year studied were calculated using EPA's Motor Vehicle Emission Simulator (MOVES) computer model [6]. MOVES was configured for a project-level analysis specifically for Hawaii. Assumptions included an urban, unrestricted road type, default fuel supply and fuel formulation, default vehicle age distribution and ambient temperature of 68 F. MOVES emission factors were generated both for idling and for moving traffic.

After computing vehicular carbon monoxide emissions through the use of MOVES, these data were then input to an atmospheric dispersion model. EPA air quality modeling guidelines [7] currently recommend that the computer model CAL3QHC [8] be used to assess carbon monoxide concentrations at roadway intersections, or in areas where its use has previously been established, CALINE4 [9] may be used. Until a few years ago, CALINE4 was used extensively in Hawaii to assess air quality impacts at roadway intersections. In December 1997, the California Department of Transportation recommended that the intersection mode of CALINE4 no longer be used because it was thought the model had become outdated. Studies have shown that CALINE4 may tend to over-predict maximum concentrations in some situations. Therefore, CAL3QHC was used for the subject analysis.

CAL3QHC was developed for the U.S. EPA to simulate vehicular movement, vehicle queuing and atmospheric dispersion of vehicular emissions near roadway intersections. It is designed to predict 1-hour average pollutant concentrations near roadway

intersections based on input traffic and emission data, roadway/receptor geometry and meteorological conditions.

Input peak-hour traffic data were obtained from the traffic study cited previously. This included vehicle approach volumes, saturation capacity estimates, intersection laneage and signal timings. All emission factors that were input to CAL3QHC for free-flow traffic on roadways were obtained from MOVES based on assumed free-flow vehicle speeds corresponding to the posted or design speed limits.

Model roadways were set up to reflect roadway geometry, physical dimensions and operating characteristics. Concentrations predicted by air quality models generally are not considered valid within the roadway-mixing zone. The roadway-mixing zone is usually taken to include 3 meters on either side of the traveled portion of the roadway and the turbulent area within 10 meters of a cross street. Model receptor sites were thus located at the edges of the mixing zones near all intersections that were studied for all three scenarios. This acknowledges that pedestrian sidewalks already exist in these locations. All receptor heights were placed at 1.8 meters above ground to simulate levels within the normal human breathing zone.

Input meteorological conditions for this study were defined to provide "worst-case" results. One of the key meteorological inputs is atmospheric stability category. For these analyses, atmospheric stability category 5 was assumed for the morning cases, while atmospheric stability category 4 was assumed for the afternoon cases. These are the most conservative stability

categories that are generally used for estimating worst-case pollutant dispersion within urban areas for these periods. A surface roughness length of 100 cm and a mixing height of 1000 meters were used in all cases. Worst-case wind conditions were defined as a wind speed of 1 meter per second with a wind direction resulting in the highest predicted concentration. Concentration estimates were calculated at wind directions of every 5 degrees.

Existing background concentrations of carbon monoxide in the project vicinity are believed to be at low levels. Thus, background contributions of carbon monoxide from sources or roadways not directly considered in the analysis were accounted for by adding a background concentration of 1.0 ppm to all predicted concentrations for 2013. Although increased traffic is expected to occur within the project area within the next few years with or without the project, background carbon monoxide concentrations may not change significantly since individual emissions from motor vehicles are forecast to decrease with time. Hence, a background value of 1.0 ppm was assumed to persist for the future scenarios studied.

Predicted Worst-Case 1-Hour Concentrations

Table 5 summarizes the final results of the modeling study in the form of the estimated worst-case 1-hour morning and afternoon ambient carbon monoxide concentrations. These results can be compared directly to the state and the national AAQS. Estimated worst-case carbon monoxide concentrations are presented in the table for three scenarios: year 2013 with existing traffic, year 2017 without the project and year 2017 with the project. The

locations of these estimated worst-case 1-hour concentrations all occurred at or very near the indicated intersections.

As indicated in the table, the highest estimated 1-hour concentration within the project vicinity for the present (2013) case was 1.6 ppm. This was projected to occur during the afternoon peak traffic hour near the intersection of Kalakaua Avenue at Kaiulani Avenue. Concentrations at other locations and times studied were 1.5 ppm or lower. Predicted worst-case 1-hour concentrations at all locations studied for the 2013 scenario were well within both the national AAQS of 35 ppm and the state standard of 9 ppm.

In the year 2017 without the proposed project, the highest worst-case 1-hour concentration was predicted to continue to occur during both the morning and the afternoon at the intersection of Kalakaua Avenue and Kaiulani Avenue. A value of 1.5 ppm was predicted to occur at this location. This same value was also predicted to occur at the intersection of Kanekapolei Street at Kuhio Avenue and at the intersection of Uluniu Avenue at Kalakaua Avenue. Peak-hour worst-case values at the other locations and times studied for the 2017 without project scenario ranged between 1.1 and 1.4 ppm. Compared to the existing case, predicted concentrations for the year 2017 without the project remained mostly unchanged, and worst-case concentrations remained well within the state and national standards.

Predicted 1-hour worst-case concentrations for the 2017 with project scenario remained nearly unchanged or increased only slightly at the study intersections. Similar to the 2017 without project case, the maximum concentration was predicted to occur

during the afternoon at the intersection of Kalakaua Avenue at Kaiulani Avenue, increasing slightly compared to the without project scenario to a concentration of 1.7 ppm. Other concentrations ranged between 1.1 and 1.6 ppm. Worst-case concentrations at all locations studied remained well within the state and federal standards.

Predicted Worst-Case 8-Hour Concentrations

Worst-case 8-hour carbon monoxide concentrations were estimated by multiplying the worst-case 1-hour values by a persistence factor of 0.5. This accounts for two factors: (1) traffic volumes averaged over eight hours are lower than peak 1-hour values, and (2) meteorological conditions are more variable (and hence more favorable for dispersion) over an 8-hour period than they are for a single hour. Based on monitoring data, 1-hour to 8-hour persistence factors for most locations generally vary from 0.4 to 0.8 with 0.6 being the most typical. One study based on modeling [10] concluded that 1-hour to 8-hour persistence factors could typically be expected to range from 0.4 to 0.5. EPA guidelines [11] recommend using a value of 0.7 unless a locally derived persistence factor is available. Recent monitoring data for locations on Oahu reported by the Department of Health [12] suggest that this factor may range between about 0.4 and 0.7 depending on location and traffic variability. Considering the location of the project and the traffic pattern for the area, a 1-hour to 8-hour persistence factor of 0.5 will likely yield reasonable estimates of worst-case 8-hour concentrations.

The resulting estimated worst-case 8-hour concentrations are indicated in Table 6. For the 2013 scenario, the estimated worst-

case 8-hour carbon monoxide concentrations for the nine locations studied ranged from 0.6 to 0.8 ppm. The estimated worst-case concentrations for the existing case were well within both the state standard of 4.4 ppm and the national limit of 9 ppm.

For the year 2017 without project scenario, worst-case concentrations were unchanged compared to the existing case. All predicted concentrations were within the standards.

For the 2017 with project scenario, worst-case concentrations remained unchanged compared to the without project case, indicating insignificant project impact. All predicted 8-hour concentrations for this scenario were well within both the national and the state AAQS.

Conservativeness of Estimates

The results of this study reflect several assumptions that were made concerning both traffic movement and worst-case meteorological conditions. One such assumption concerning worst-case meteorological conditions is that a wind speed of 1 meter per second with a steady direction for 1 hour will occur. A steady wind of 1 meter per second blowing from a single direction for an hour is extremely unlikely and may occur only once a year or less. With wind speeds of 2 meters per second, for example, computed carbon monoxide concentrations would be only about half the values given above. The 8-hour estimates are also conservative in that it is unlikely that anyone would occupy the assumed receptor sites (within 3 m of the roadways) for a period of 8 hours.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The major potential short-term air quality impact of the project could occur from the emission of fugitive dust during construction. Uncontrolled fugitive dust emissions from construction activities could amount to about 1.2 tons per acre per month, depending on rainfall. To control dust, active work areas and any temporary unpaved work roads should be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. 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. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emissions that may occur as a result of trucks tracking dirt onto paved roadways in the project area. Establishment of landscaping early in the construction schedule will also help to control dust.

During construction phases, emissions from engine exhausts (primarily consisting of carbon monoxide and nitrogen oxides) will also occur both from on-site construction equipment and from vehicles used by construction workers and from trucks traveling to and from the project. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving equipment and personnel to the site during off-peak traffic hours.

After the proposed project is completed, any long-term impacts on air quality in the project area due to emissions from project-related motor vehicle traffic should be negligible. Worst-case concentrations of carbon monoxide should remain within both the state and the national ambient air quality standards. Implementing any air quality mitigation measures for long-term traffic-related impacts is unnecessary and unwarranted.

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10. "Persistence Factors for Mobile Source (Roadway) Carbon Monoxide Modeling", C. David Cooper, Journal of the Air & Waste Management Association, Volume 39, Number 5, May 1989.

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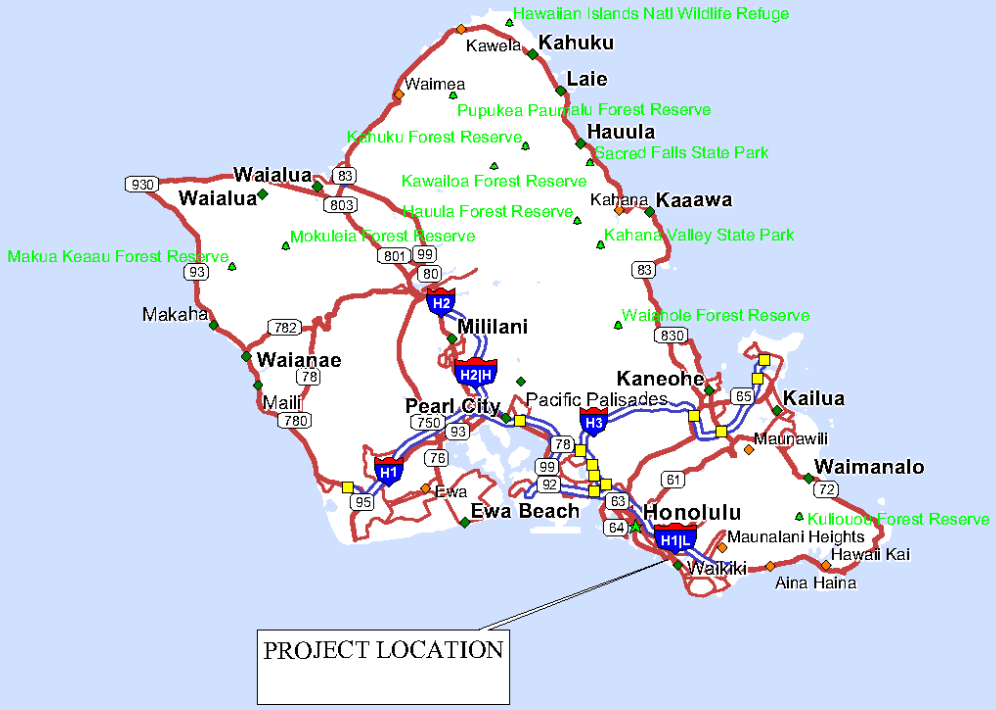
12. Annual Summaries, Hawaii Air Quality Data, 2008-2012, State of Hawaii Department of Health.

Figure 1 - Project Location



Mag 10.00
Wed Aug 11 09:02 2010
Scale 1:500,000 (at center)
10 Miles
10 KM

Table 1

SUMMARY OF STATE OF HAWAII AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Units	Averaging Time	Maximum Allowable Concentration		
			National Primary	National Secondary	State of Hawaii
Particulate Matter (<10 microns)	$\mu g/m^3$	Annual	-	-	50
		24 Hours	150[a]	150[a]	150[b]
Particulate Matter (<2.5 microns)	$\mu g/m^3$	Annual	15[c]	15[c]	-
		24 Hours	35[d]	35[d]	-
Sulfur Dioxide	ppm	Annual	-	-	0.03
		24 Hours	-	-	0.14[b]
		3 Hours	-	0.5[b]	0.5[b]
		1 Hour	0.075[e]	-	-
Nitrogen Dioxide	ppm	Annual	0.053	0.053	0.04
		1 Hour	0.100[f]	-	-
Carbon Monoxide	ppm	8 Hours	9[b]	-	4.4[b]
		1 Hour	35[b]	-	9[b]
Ozone	ppm	8 Hours	0.075[g]	0.075[g]	0.08[g]
Lead	$\mu g/m^3$	3 Months	0.15[h]	0.15[h]	-
		Quarter	1.5[i]	1.5[i]	1.5[i]
Hydrogen Sulfide	ppm	1 Hour	-	-	0.035[b]

[a] Not to be exceeded more than once per year on average over three years.

[b] Not to be exceeded more than once per year.

[c] Three-year average of the weighted annual arithmetic mean.

[d] 98th percentile value of the 24-hour concentrations averaged over three years.

[e] Three-year average of annual fourth-highest daily 1-hour maximum.

[f] 98th percentile value of the daily 1-hour maximum averaged over three years.

[g] Three-year average of annual fourth-highest daily 8-hour maximum.

[h] Rolling 3-month average.

[i] Quarterly average.

Table 2

ANNUAL WIND FREQUENCY FOR HONOLULU INTERNATIONAL AIRPORT (%)

Wind Direction	Wind Speed (knots)									Total
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	>40	
N	0.5	2.5	1.3	0.5	0.0	0.0	0.0	0.0	0.0	4.8
NNE	0.3	1.2	1.6	1.5	0.2	0.0	0.0	0.0	0.0	4.7
NE	0.3	2.1	6.1	11.0	3.2	0.3	0.0	0.0	0.0	23.0
ENE	0.2	2.5	10.9	16.6	4.1	0.3	0.0	0.0	0.0	34.7
E	0.1	1.0	2.5	2.8	0.5	0.0	0.0	0.0	0.0	7.0
ESE	0.0	0.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0	1.1
SE	0.0	0.3	0.8	1.0	0.1	0.0	0.0	0.0	0.0	2.2
SSE	0.1	0.4	1.2	0.7	0.1	0.0	0.0	0.0	0.0	2.4
S	0.1	0.5	1.4	0.6	0.1	0.0	0.0	0.0	0.0	2.7
SSW	0.0	0.3	0.8	0.3	0.0	0.0	0.0	0.0	0.0	1.5
SW	0.0	0.2	0.8	0.4	0.0	0.0	0.0	0.0	0.0	1.5
WSW	0.0	0.3	0.5	0.4	0.0	0.0	0.0	0.0	0.0	1.2
W	0.1	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1
WNW	0.2	1.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	2.0
NW	0.4	2.3	0.8	0.1	0.0	0.0	0.0	0.0	0.0	3.8
NNW	0.5	2.3	0.8	0.2	0.0	0.0	0.0	0.0	0.0	3.8
Calm	2.5									2.5
Total	5.4	18.3	30.6	36.5	8.5	0.7	0.0	0.0	0.0	100.0

Source: Climatography of the United States No. 90 (1965-1974), Airport Climatological Summary, Honolulu International Airport, Honolulu, Hawaii, U.S. Department of Commerce, National Climatic Center, Asheville, NC, August 1978.

Table 3

AIR POLLUTION EMISSIONS INVENTORY FOR ISLAND OF OAHU, 1993

Air Pollutant	Point Sources (tons/year)	Area Sources (tons/year)	Total (tons/year)
Particulate	25,891	49,374	75,265
Sulfur Oxides	39,230	nil	39,230
Nitrogen Oxides	92,436	31,141	123,577
Carbon Monoxide	28,757	121,802	150,559
Hydrocarbons	4,160	421	4,581

Source: Final Report, “Review, Revise and Update of the Hawaii Emissions Inventory Systems for the State of Hawaii”, prepared for Hawaii Department of Health by J.L. Shoemaker & Associates, Inc., 1996

Table 4

ANNUAL SUMMARIES OF AIR QUALITY MEASUREMENTS FOR MONITORING STATIONS NEAREST 133 KAIULANI CONDO-HOTEL DEVELOPMENT

Parameter / Location	2008	2009	2010	2011	2012
Sulfur Dioxide / Downtown Honolulu					
3-Hour Averaging Period:					
No. of Samples	2876	2858	2869	2757	2708
Highest Concentration (ppm)	0.011	0.023	0.010	0.012	0.026
2nd Highest Concentration (ppm)	0.011	0.021	0.010	0.008	0.021
No. of State AAQS Exceedances	0	0	0	0	0
24-Hour Averaging Period:					
No. of Samples	363	360	365	354	360
Highest Concentration (ppm)	0.004	0.005	0.004	0.005	0.009
2nd Highest Concentration (ppm)	0.004	0.004	0.003	0.002	0.005
No. of State AAQS Exceedances	0	0	0	0	0
Annual Average Concentration (ppm)	0.001	0.001	0.001	0.001	0.001
Particulate (PM-10) / Downtown Honolulu					
24-Hour Averaging Period:					
No. of Samples	343	351	365	364	355
Highest Concentration ($\mu g/m^3$)	33	34	63	50	32
2nd Highest Concentration ($\mu g/m^3$)	31	34	57	35	28
No. of State AAQS Exceedances	0	0	0	0	0
Annual Average Concentration ($\mu g/m^3$)	14	13	12	12	12
Carbon Monoxide / Downtown Honolulu					
1-Hour Averaging Period:					
No. of Samples	8732	8628	8699	8558	8508
Highest Concentration (ppm)	2.1	1.6	1.8	1.4	1.0
2nd Highest Concentration (ppm)	1.8	1.6	1.5	1.1	1.0
No. of State AAQS Exceedances	0	0	0	0	0
8-Hour Averaging Period:					
No. of Samples	8735	8627	8731	8629	8629
Highest Concentration (ppm)	1.0	0.9	0.8	0.8	0.7
2nd Highest Concentration (ppm)	1.0	0.9	0.8	0.8	0.7
No. of State AAQS Exceedances	0	0	0	0	0
Nitrogen Dioxide / Kapolei					
Annual Average Concentration (ppm)	0.004	0.004	0.003	0.003	0.003
Ozone / Sand Island					
8-Hour Averaging Period:					
No. of Samples	305	341	8730	8392	8094
Highest Concentration (ppm)	0.050	0.049	0.052	0.047	0.045
2nd Highest Concentration (ppm)	0.048	0.048	0.048	0.047	0.044
4th Highest Concentration (ppm)	0.043	0.048	0.047	0.046	0.044
No. of State AAQS Exceedances	0	0	0	0	0

Source: State of Hawaii Department of Health, “Annual Summaries, Hawaii Air Quality Data, 2008 - 2012”

Table 5

ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS ALONG ROADWAYS NEAR 133 KAIULANI CONDO-HOTEL DEVELOPMENT (parts per million)

Roadway Intersection	Year/Scenario					
	2013/Present		2017/Without Project		2017/With Project	
	AM	PM	AM	PM	AM	PM
Kalakaua Avenue at Kaiulani Avenue	1.5	1.6	1.5	1.5	1.5	1.7
Kaiulani Avenue at Koa Avenue	1.1	1.1	1.1	1.1	1.1	1.1
Kaiulani Avenue at Prince Edward Street	1.3	1.3	1.2	1.2	1.3	1.2
Kanekapolei Street at Kuhio Avenue	1.5	1.5	1.4	1.5	1.4	1.6
Kaiulani Avenue at Kuhio Avenue	1.3	1.3	1.3	1.4	1.3	1.4
Uluniu Avenue at Kuhio Avenue	1.4	1.4	1.4	1.4	1.4	1.4
Uluniu Avenue at Prince Edward Street	1.1	1.1	1.1	1.1	1.1	1.1
Uluniu Avenue at Koa Avenue	1.2	1.1	1.2	1.1	1.2	1.1
Uluniu Avenue at Kalakaua Avenue	1.5	1.5	1.5	1.5	1.5	1.5

Hawaii State AAQS: 9
National AAQS: 35

Table 6

ESTIMATED WORST-CASE 8-HOUR CARBON MONOXIDE CONCENTRATIONS ALONG ROADWAYS NEAR 133 KAIULANI CONDO-HOTEL DEVELOPMENT (parts per million)

Roadway Intersection	Year/Scenario		
	2013/Present	2017/Without Project	2017/With Project
Kalakaua Avenue at Kaiulani Avenue	0.8	0.8	0.8
Kaiulani Avenue at Koa Avenue	0.6	0.6	0.6
Kaiulani Avenue at Prince Edward Street	0.6	0.6	0.6
Kanekapolei Street at Kuhio Avenue	0.8	0.8	0.8
Kaiulani Avenue at Kuhio Avenue	0.7	0.7	0.7
Uluniu Avenue at Kuhio Avenue	0.7	0.7	0.7
Uluniu Avenue at Prince Edward Street	0.6	0.6	0.6
Uluniu Avenue at Koa Avenue	0.6	0.6	0.6
Uluniu Avenue at Kalakaua Avenue	0.8	0.8	0.8

Hawaii State AAQS: 4.4
National AAQS: 9

APPENDIX 4

TRAFFIC IMPACT REPORT

Traffic Impact Report

133 Kaiulani

Prepared for:
BSV KVSC, LLC

Prepared by:
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April 2015

TRAFFIC IMPACT REPORT

FOR THE

133 KAIULANI DEVELOPMENT

Prepared for:

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April 2015

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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 a proposed 133 Kaiulani development in Waikiki on the island of Oahu. The project entails the redevelopment of the existing King's Village Shopping Center to include condo/hotel and commercial uses.

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 conditions 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.

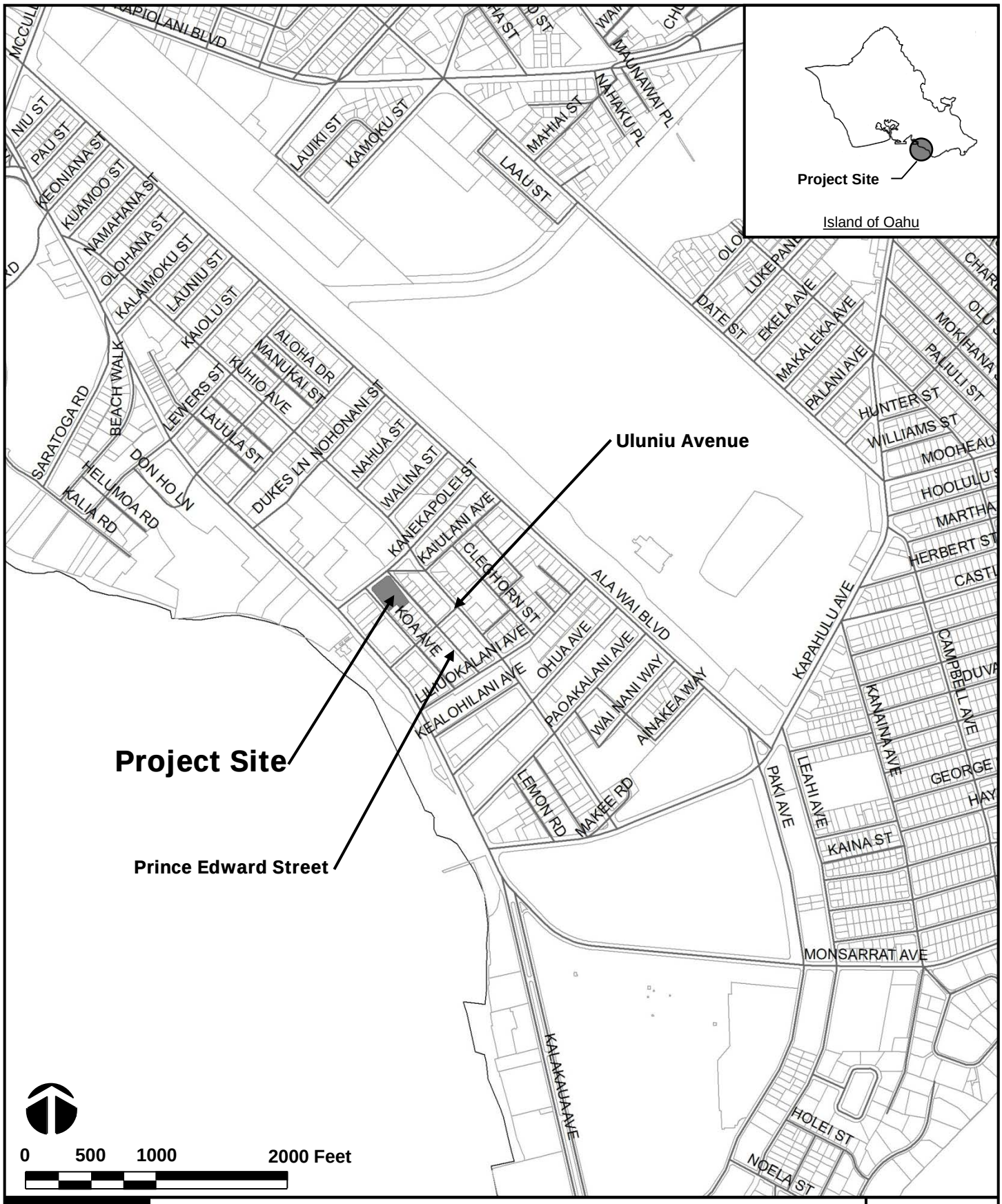
II. PROJECT DESCRIPTION

A. Location

The project site is located adjacent to Kaiulani Avenue in Waikiki on the island of Oahu (see Figure 1) and is bounded by Kaiulani Avenue to the west, Koa Avenue to the south, Prince Edward Street to the north, and other commercial uses to the east. The project site is further identified as Tax Map Keys (TMKs): 2-6-023: por. 029, 037, and 076. Access to the development will be provided off Prince Edward Street and Koa Avenue.

B. Project Characteristics

The project site for the proposed 133 Kaiulani development currently houses King's Village Shopping Center which includes approximately 38,764 square feet of commercial/retail space. The proposed project entails the replacement of the existing



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LOCATION MAP AND VICINITY MAP

FIGURE 1

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shopping center with a new multi-use development that includes the following:

- 275 condo/hotel units
- Approximately 8,500 square feet of commercial/retail uses
- On-site parking
- Amenities such as recreational and storage areas

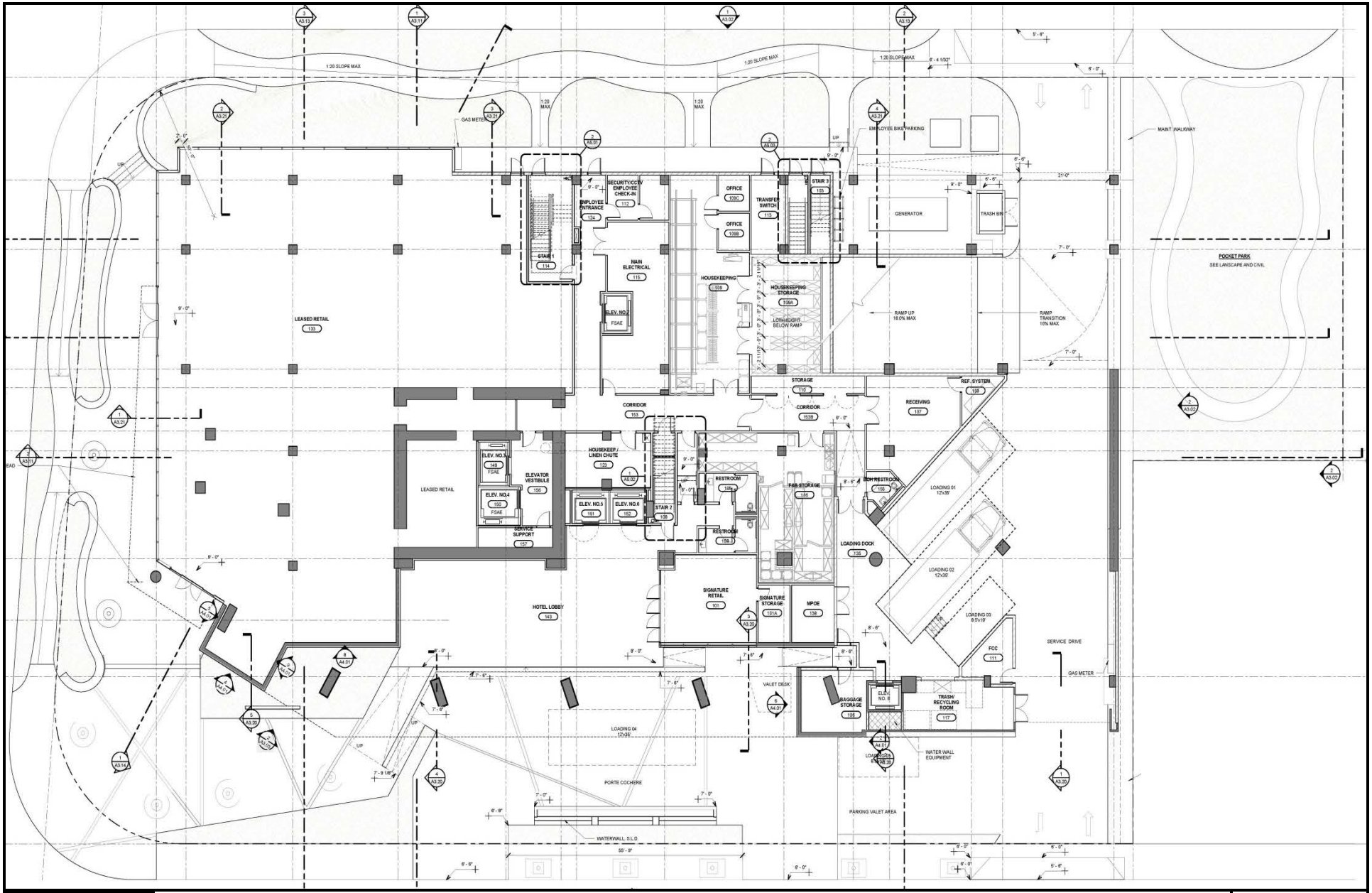
The proposed development is expected to be completed and occupied by the Year 2017 with primary access provided via a new driveway off Prince Edward Street. Secondary access will be provided via a new driveway off Koa Avenue. Figure 2 shows the proposed project site plan.

III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

The proposed project site is located adjacent to Kaiulani Avenue in Waikiki. Kaiulani Avenue originates at Kalakaua Avenue as a two-lane, one-way (northbound) roadway that transitions into a four-lane, two-way roadway at Koa Avenue until Prince Edward Street. At the intersection with Prince Edward Street and Kanekapolei Street, Kaiulani Avenue transitions back to a one-way (northbound) roadway with two lanes between Prince Edward Street and Kuhio Avenue (see Figure 3). Southwest of the project site, Kaiulani Avenue intersects Kalakaua Avenue. Kalakaua Avenue is a predominantly four-lane, one-way (eastbound) roadway generally oriented in the east-west direction that with Ala Wai Boulevard forms a couplet system that provides access through Waikiki. At the signalized intersection with Kaiulani Avenue, the Kalakaua Avenue approach has an exclusive left-turn lane and three through lanes.

North of the intersection with Kalakaua Avenue, Kaiulani Avenue intersects Koa Avenue. At this unsignalized intersection, both approaches of Kaiulani Avenue have two lanes that serve all traffic movements. The east leg of the intersection is comprised of Koa Avenue which is a one-lane, one-way (eastbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. The west leg of the intersection is comprised of the entrance to the existing porte cochere for the Princess Kaiulani Hotel.



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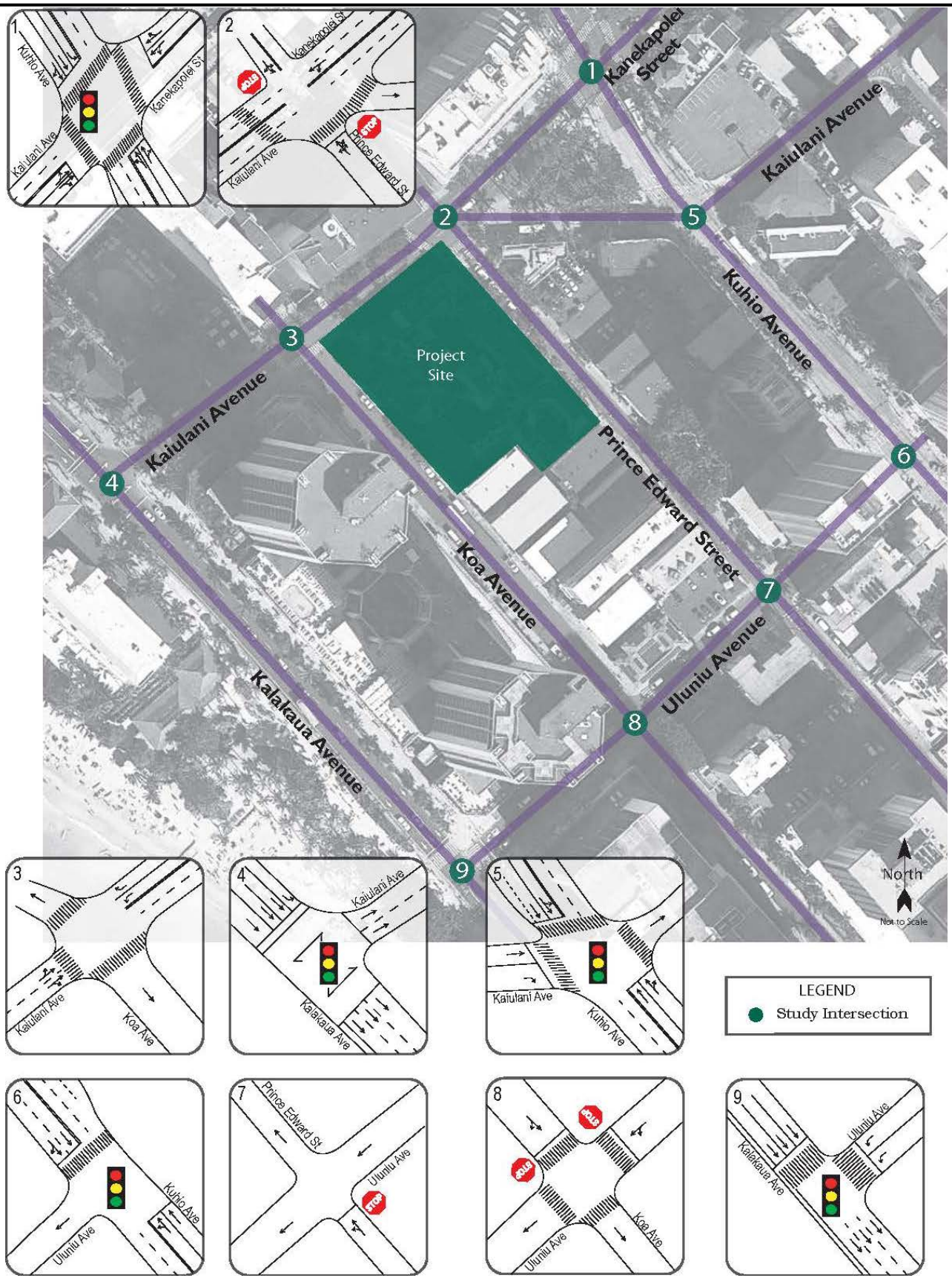
PROJECT SITE PLAN

FIGURE 2



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EXISTING LANE CONFIGURATIONS

FIGURE 3

Further north, Kaiulani Avenue intersects Kanekapolei Street and Prince Edward Street. At this unsignalized intersection, the northbound approach of Kaiulani Avenue has two lanes that serve all traffic movements. The southbound approach of the intersection is comprised of Kanekapolei Street which serves as a connector roadway between this intersection and Ala Wai Boulevard. At the intersection with Prince Edward Street and Kaiulani Avenue, the Kanekapolei Street approach has two southbound lanes that serve all traffic movements. The eastbound approach of the intersection is comprised of the existing driveways for the Princess Kaiulani Hotel and the adjacent Ohana East Hotel. The driveway for the Princess Kaiulani Hotel is a two-lane, two-way driveway that leads to the parking structure while the driveway for the Ohana East Hotel is a one-lane, one-way (exiting) driveway. The westbound approach of the intersection is comprised of Prince Edward Street which is a one-lane, one-way (westbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. At the intersection with Kaiulani Avenue and Kanekapolei Street, the Prince Edward Street approach has one stop-controlled lane that serves left-turn and right-turn traffic movements.

North of the intersection with Kaiulani Avenue and Prince Edward Street, Kanekapolei Street intersects Kuhio Avenue. At the signalized intersection with Kuhio Avenue, the northbound approach of Kanekapolei Street has two lanes that serve left-turn and through traffic movements while the southbound approach has two lanes that serve all traffic movements. Kuhio Avenue is a predominantly four-lane, two-way roadway that also serves as an access roadway through Waikiki. At the intersection with Kanekapolei Street, the eastbound approach of Kuhio Avenue has an exclusive left-turn lane, one through lane, and a shared through and right-turn lane while the westbound approach has two lanes that serve all traffic movements.

East of the intersection with Kanekapolei Street, Kuhio Avenue intersects Kaiulani Avenue. At this signalized intersection, the eastbound approach of Kuhio Avenue has two lanes that serve left-turn and through traffic movements while the westbound approach has two lanes that serve through and right-turn traffic

movements. The Kaiulani Avenue approach of the intersection has one through lane and an exclusive right-turn lane.

Further east, Kuhio Avenue intersects Uluniu Avenue. At this signalized T-intersection, the eastbound approach of Kuhio Avenue has two lanes that serve through and right-turn traffic movements while the westbound approach has two lanes that serve left-turn and through traffic movements. Uluniu Avenue is a predominantly one-lane, one-way (southbound) roadway that serves as a connector roadway between Kuhio Avenue and Kalakaua Avenue.

South of the intersection with Kuhio Avenue, Uluniu Avenue intersects Prince Edward Street and Koa Avenue. At the unsignalized intersection with Prince Edward Street, the Uluniu Avenue approach has one lane that serves through and right-turn traffic movements while the Prince Edward Street approach has one stop-controlled lane that serves left-turn and through traffic movements. At the unsignalized intersection with Koa Avenue, the Uluniu Avenue approach has one stop-controlled lane that serves left-turn and through traffic movements while the Koa Avenue approach has one stop-controlled lane that serves through and right-turn traffic movements.

Further south, Uluniu Avenue intersects Kalakaua Avenue. At this signalized T-intersection, the Uluniu Avenue approach has two left-turn lanes. The Kalakaua Avenue approach of the intersection has three through lanes.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted on September 24, 2013 and October 2-3, 2013 and consisted of manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Kaiulani Avenue and Kalakaua Avenue
- Kaiulani Avenue and Koa Avenue
- Kaiulani Avenue, Kanekapolei Street, and Prince Edward Street

- Kanekapolei Street and Kuhio Avenue
- Kaiulani Avenue and Kuhio Avenue
- Uluniu Avenue and Kuhio Avenue
- Uluniu Avenue and Prince Edward Street
- Uluniu Avenue and Koa Avenue
- Uluniu Avenue and Kalakaua Avenue

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. 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.

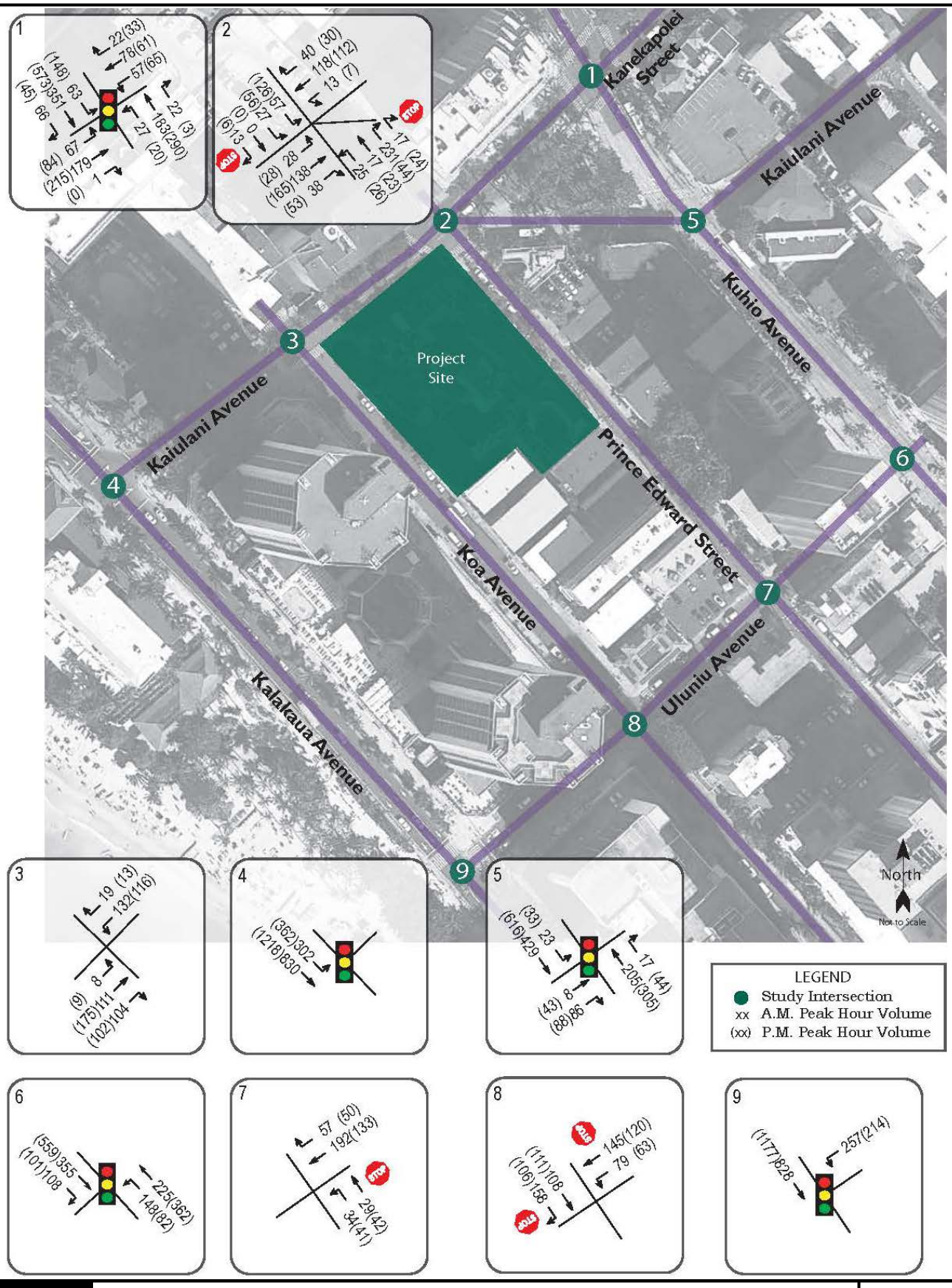
LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

"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. The LOS definitions are included in Appendix B.

2. Existing Peak Hour Traffic

a. General

Figure 4 shows the existing AM and PM peak period traffic volumes and operating conditions. The AM peak hour of traffic generally occurs between 7:30 AM and 8:30 AM. The PM peak hour of traffic general occurs between the hours of 4:45 PM and 5:45 PM. The analysis is based on these peak hour time periods for each



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EXISTING PEAK HOURS OF TRAFFIC

FIGURE 4

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intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. Kaiulani Avenue and Kalakaua Avenue

At the intersection with Kaiulani Avenue, Kalakaua Avenue carries 1,132 vehicles eastbound during the AM peak period and 1,580 vehicles during the PM peak period. The Kalakaua Avenue approach operates at LOS "A" during both peak periods. An all-way pedestrian crossing is provided at this intersection. 990 pedestrians were observed crossing at this intersection during the AM peak period and 2,142 pedestrians were observed during the PM peak period.

c. Kaiulani Avenue and Koa Avenue

At the intersection with Koa Avenue, Kaiulani Avenue carries 151 vehicles southbound and 223 vehicles northbound during the AM peak period. During the PM peak period, the overall traffic volume is higher with Kaiulani Avenue carrying 129 vehicles southbound and 286 vehicles traveling northbound. Both approaches of Kaiulani Avenue operate at LOS "A" during both peak periods.

Pedestrian crossings are provided across the south, east, and west legs of the intersection. During the AM peak period, 313 pedestrians were observed crossing Kaiulani Avenue on the south side of the intersection, 273 pedestrians were observed crossing Koa Avenue on the east side of the intersection, and 203 pedestrians were observed crossing the driveway on the west side of the intersection. During the PM peak period, 362 pedestrians were observed crossing Kaiulani Avenue on the south side of the intersection, 677 pedestrians were observed crossing Koa Avenue on the east side of the intersection, and 362 pedestrians were observed crossing the driveway on the west side of the intersection.

d. Kaiulani Avenue, Kanekapolei Street, and Prince Edward Street

At the intersection with Prince Edward Street, Kaiulani Avenue carries 204 vehicles northbound while Kanekapolei Street carries 171 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is higher with Kaiulani Avenue carrying 246 vehicles northbound while Kanekapolei Street has 159 vehicles traveling southbound. The northbound approach of Kaiulani Avenue operates at LOS "A" during both peak periods.

The Prince Edward Street approach carries 290 vehicles westbound while the driveway approach carries 97 vehicles eastbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Prince Edward Street approach carrying 117 vehicles westbound while the driveway approach carries 188 vehicles eastbound during the PM peak period. The westbound approach of Prince Edward Street operates at LOS "B" during both peak periods while the driveway approach operates at LOS "C" during both peak periods.

Pedestrian crossings are provided across the south and east legs of the intersection. During the AM peak period, 146 pedestrians were observed crossing Kaiulani Avenue on the south side of the intersection and 231 pedestrians were observed crossing Prince Edward Street on the east side of the intersection. During the PM peak period, 166 pedestrians were observed crossing Kaiulani Avenue on the south side of the intersection, and 386 pedestrians were observed crossing Prince Edward Street on the east side of the intersection.

e. Kanekapolei Street and Kuhio Avenue

At the intersection with Kuhio Avenue, Kanekapolei Street carries 247 vehicles northbound and 157 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is higher with Kanekapolei Street carrying 299 vehicles

northbound while 159 vehicles travel southbound. Both approaches of Kanekapolei Street operate at LOS "B" and LOS "C" during the AM and PM peak periods, respectively.

The Kuhio Avenue approaches of the intersection carry 480 vehicles eastbound and 232 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 766 vehicles traveling eastbound and 313 vehicles traveling westbound. The eastbound approach of Kuhio Avenue operates at LOS "B" during both peak periods while the westbound approach operates at LOS "A" during both peak periods.

Pedestrian crossings are provided across all approaches of the intersection. During the AM peak period, 279 pedestrians and 288 pedestrians were observed crossing Kanekapolei Street on the north and south sides of the intersection, respectively, while 134 pedestrians and 179 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively. During the PM peak period, 509 pedestrians and 446 pedestrians were observed crossing Kanekapolei Street on the north and south sides of the intersection, respectively, while 351 pedestrians and 364 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively.

f. Kaiulani Avenue and Kuhio Avenue

At the intersection with Kuhio Avenue, the Kaiulani Avenue approach carries 94 vehicles northbound during the AM peak period and 131 vehicles northbound during the PM peak period. The Kaiulani Avenue approach operates at LOS "B" and LOS "C" during the AM and PM peak periods, respectively.

The Kuhio Avenue approaches of the intersection carry 452 vehicles eastbound and 222 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 649 vehicles eastbound and 349 vehicles traveling westbound. The

eastbound approach of Kuhio Avenue operates at LOS "A" during both peak periods while the westbound approach operates at LOS "B" during both peak periods.

Pedestrian crossings are provided across the north, south, and west legs of the intersection. During the AM peak period, 184 pedestrians and 126 pedestrians were observed crossing Kaiulani Avenue on the north and south sides of the intersection, respectively while 90 pedestrians were observed crossing Kuhio Avenue on the west side of the intersection. During the PM peak period, 249 pedestrians and 409 pedestrians were observed crossing Kaiulani Avenue on the north and south sides of the intersection, respectively, while 154 pedestrians were observed crossing Kuhio Avenue on the west side of the intersection.

g. Uluniu Avenue and Kuhio Avenue

At the intersection with Uluniu Avenue, Kuhio Avenue carries 463 vehicles eastbound and 373 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 660 vehicles traveling eastbound and 444 vehicles traveling westbound. The eastbound approach of Kuhio Avenue operates at LOS "B" during both peak periods while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

Pedestrian crossings are provided across the south and west legs of the intersection. During the AM peak period, 145 pedestrians were observed crossing Uluniu Avenue on the south side of the intersection and 95 pedestrians were observed crossing Kuhio Avenue on the west side of the intersection. During the PM peak period, 332 pedestrians were observed crossing Uluniu Avenue on the south side of the intersection and 162 pedestrians were observed crossing Kuhio Avenue on the west side of the intersection.

h. Uluniu Avenue and Prince Edward Street

At the intersection with Prince Edward Street, the Uluniu Avenue approach of the intersection carries 249 vehicles southbound during the AM peak period and 183 vehicles southbound during the PM peak period.

The Prince Edward Street approach carries 63 vehicles westbound during the AM peak period and 83 vehicles westbound during the PM peak period. The westbound approach of Prince Edward Street operates at LOS "B" during both peak periods.

i. Uluniu Avenue and Koa Avenue

At the intersection with Koa Avenue, the Uluniu Avenue approach of the intersection carries 224 vehicles southbound during the AM peak period and 183 vehicles southbound during the PM peak period. The Uluniu Avenue approach operates at LOS "A" during both peak periods.

The Koa Avenue approach carries 266 vehicles eastbound during the AM peak period and 217 vehicles eastbound during the PM peak period. The Koa Avenue approach operates at LOS "A" during both peak periods.

Pedestrian crossings are provided across all approaches of the intersection. During the AM peak hour, 122 pedestrians and 157 pedestrians were observed crossing Uluniu Avenue on the north and south sides of the intersection, respectively, while 176 pedestrians and 222 pedestrians were observed crossing Koa Avenue on the east and west sides of the intersection, respectively. During the PM peak hour, 150 pedestrians and 192 pedestrians were observed crossing Uluniu Avenue on the north and south sides of the intersection, respectively, while 147 pedestrians and 358 pedestrians were observed crossing Koa Avenue on the east and west sides of the intersection, respectively.

j. Uluniu Avenue and Kalakaua Avenue

At the intersection with Kalakaua Avenue, the Uluniu Avenue approach of the intersection carries 257 vehicles southbound during the AM peak period and 214 vehicles southbound during the PM peak period. The Uluniu Avenue approach operates at LOS "C" during both peak periods.

The Kalakaua Avenue approach carries 828 vehicles during the AM peak period and 1,177 vehicles during the PM peak period. The Kalakaua Avenue approach operates at LOS "A" during both peak periods.

Pedestrian crossings are provided across the north and west legs of the intersection. During the AM peak period, 709 pedestrians were observed crossing Uluniu Avenue on the north side of the intersection and 828 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection. During the PM peak period, 1396 pedestrians were observed crossing Uluniu Avenue on the north side of the intersection and 770 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection.

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, 9th Edition," 2012. The ITE trip generation rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per hotel room or 1,000 square feet of development. Since the proposed development is located in a neighborhood with limited parking, high volumes of pedestrian traffic, and a high density of attractive destinations, guests and customers destined for the project site may elect to walk rather than drive. As such, for the purpose of this report, a portion of the

existing and projected trips were assumed to be pedestrian rather than vehicular trips. Table 1 summarizes the project site trip generation characteristics of the existing uses on the project site and Table 2 summarizes the adjusted project site trip generation characteristics of the proposed project.

Table 1: Existing Peak Hour Trip Generation (Adjusted)

COMMERCIAL/RETAIL (SPECIALTY RETAIL CENTER) INDEPENDENT VARIABLE: 1,000 sf of development = 38.764		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	0
	EXIT	0
	TOTAL	0
PM PEAK	ENTER	37
	EXIT	47
	TOTAL	84

Table 2: Projected Peak Hour Trip Generation (Adjusted)

CONDO/HOTEL (HOTEL) INDEPENDENT VARIABLE: # of rooms = 275		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	69
	EXIT	48
	TOTAL	117
PM PEAK	ENTER	67
	EXIT	65
	TOTAL	132
COMMERCIAL/RETAIL (SPECIALTY RETAIL CENTER) INDEPENDENT VARIABLE: 1,000 sf of development = 8.5		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	0
	EXIT	0
	TOTAL	0
PM PEAK	ENTER	8
	EXIT	10
	TOTAL	18

Table 2: Projected Peak Hour Trip Generation (Adjusted) (Cont'd)

NET DIFFERENCE FROM EXISTING CONDITIONS		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	69
	EXIT	48
	TOTAL	117
PM PEAK	ENTER	38
	EXIT	28
	TOTAL	66

2. Trip Distribution

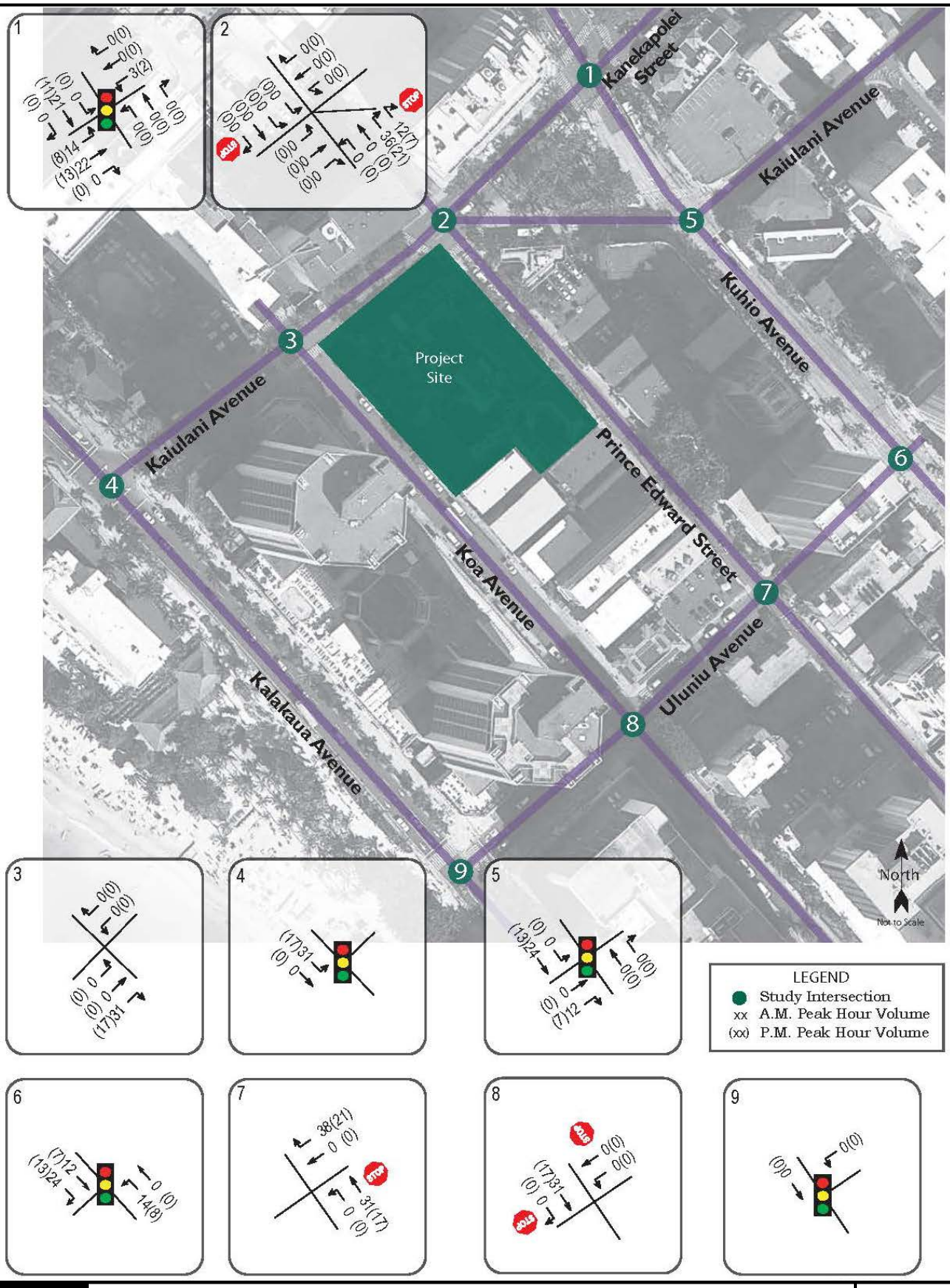
Figure 5 shows the distribution of new site-generated traffic during the AM and PM peak periods. Primary access to the proposed project will be provided via new driveways off Prince Edward Street with secondary access provided via a new driveway off Koa Avenue. For the purpose of this report, all new-site generated trips were conservatively assumed to use the driveways off Prince Edward Street. Site-generated trips were distributed based upon their assumed origin/destination, relative convenience of the available routes, and existing distribution of traffic at the study intersections.

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 project vicinity. However, for the purpose of this report, an average annual growth rate of 2.0% per year was conservatively assumed along Kalakaua Avenue and Kuhio Avenue to account for ambient growth in traffic. As such, using 2013 as the Base Year, a growth rate of 1.08 was applied to the existing through traffic demands along Kalakaua Avenue and Kuhio Avenue to achieve the projected Year 2017 traffic demands.

C. Other Considerations

There are two other planned developments in the vicinity of the proposed 133 Kaiulani Project. The first project is the redevelopment of the existing Princess Kaiulani Hotel located across Kaiulani Avenue from the project site. The second



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DISTRIBUTION OF SITE-GENERATED VEHICLES

FIGURE 5

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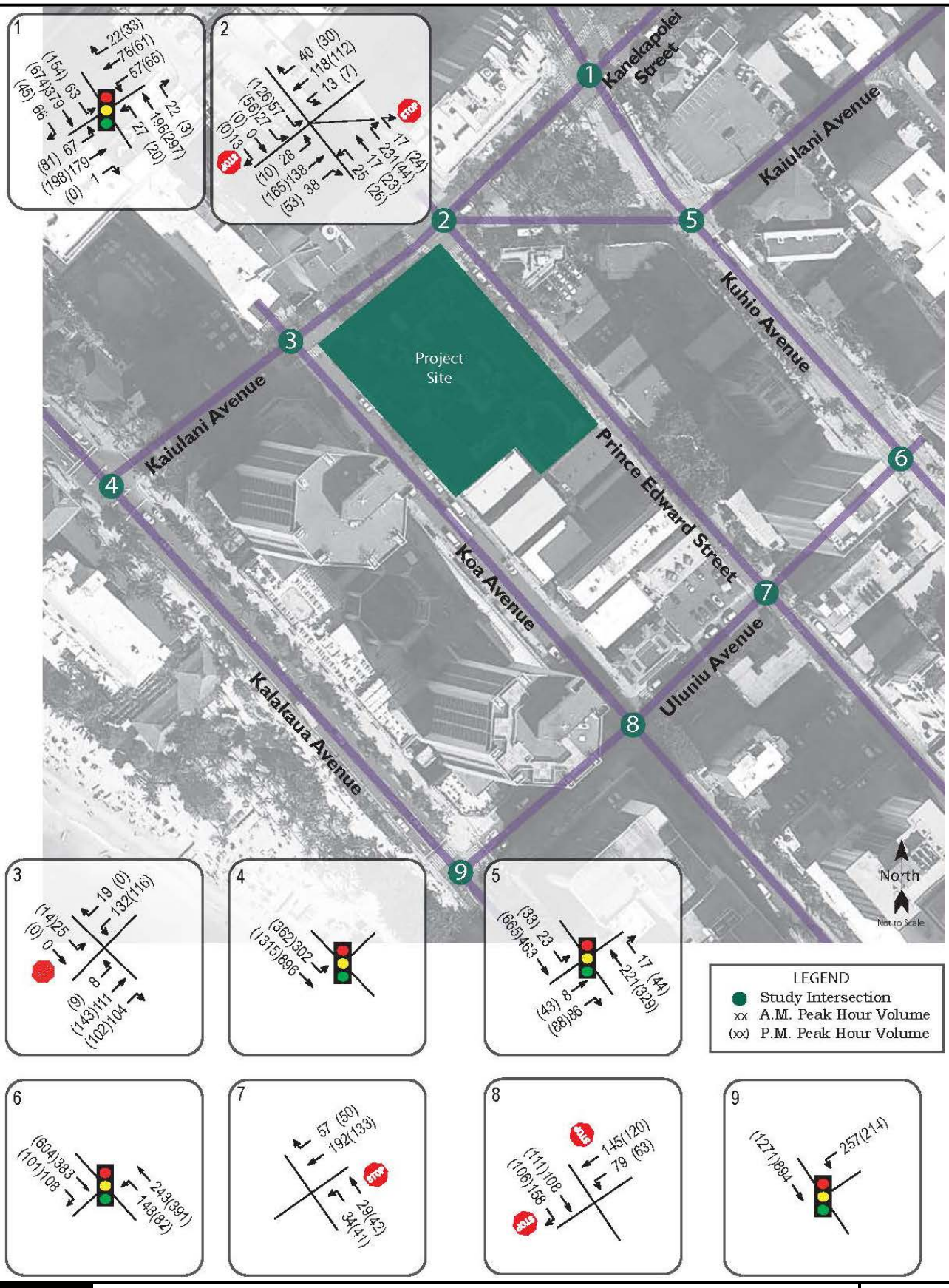
project is the redevelopment of the International Market Place located less than a block west of Kaiulani Avenue. Both projects are expected to be completed by the Year 2017. As such, the trips associated with the proposed redevelopments were incorporated into without project conditions based upon the Traffic Impact Reports prepared for both projects.

D. Total Traffic Volumes Without Project

The projected Year 2017 AM and PM peak period traffic volumes and operating conditions without the proposed 133 Kaiulani development are shown in Figure 6, and summarized in Table 3. The existing levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

Table 3: Existing and Projected Year 2017 (Without Project) LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Exist	Year 2017 w/out Proj	Exist	Year 2017 w/out Proj
Kalakaua Ave/ Kaiulani Ave	Eastbound	A	A	A	A
Kaiulani Ave/ Koa Ave	Eastbound	-	B	-	B
	Northbound	A	A	A	A
	Southbound	A	A	A	A
Kaiulani Ave/ Kanekapolei St/ Prince Edward St	Eastbound	C	C	C	C
	Westbound	B	B	B	B
	Northbound	A	A	A	A
Kanekapolei St/ Kuhio Ave	Eastbound	B	B	B	B
	Westbound	A	A	A	A
	Northbound	B	B	C	C
	Southbound	B	B	C	C
Kaiulani Ave/ Kuhio Ave	Eastbound	A	A	A	A
	Westbound	B	B	B	B
	Northbound	B	B	C	C
Uluniu Ave/ Kuhio Ave	Eastbound	B	B	B	B
	Westbound	B	B	A	A



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YEAR 2017 PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 6

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Table 3: Existing and Projected Year 2017 (Without Project) LOS Traffic Operating Conditions (Cont'd)

Intersection	Approach	AM		PM	
		Exist	Year 2017 w/out Proj	Exist	Year 2017 w/out Proj
Uluniu Ave/ Prince Edward St	Westbound	B	B	B	B
Uluniu Ave/ Koa Ave	Eastbound	A	A	A	A
	Southbound	A	A	A	A
Uluniu Ave/ Kalakaua Ave	Eastbound	A	A	A	A
	Southbound	C	C	C	C

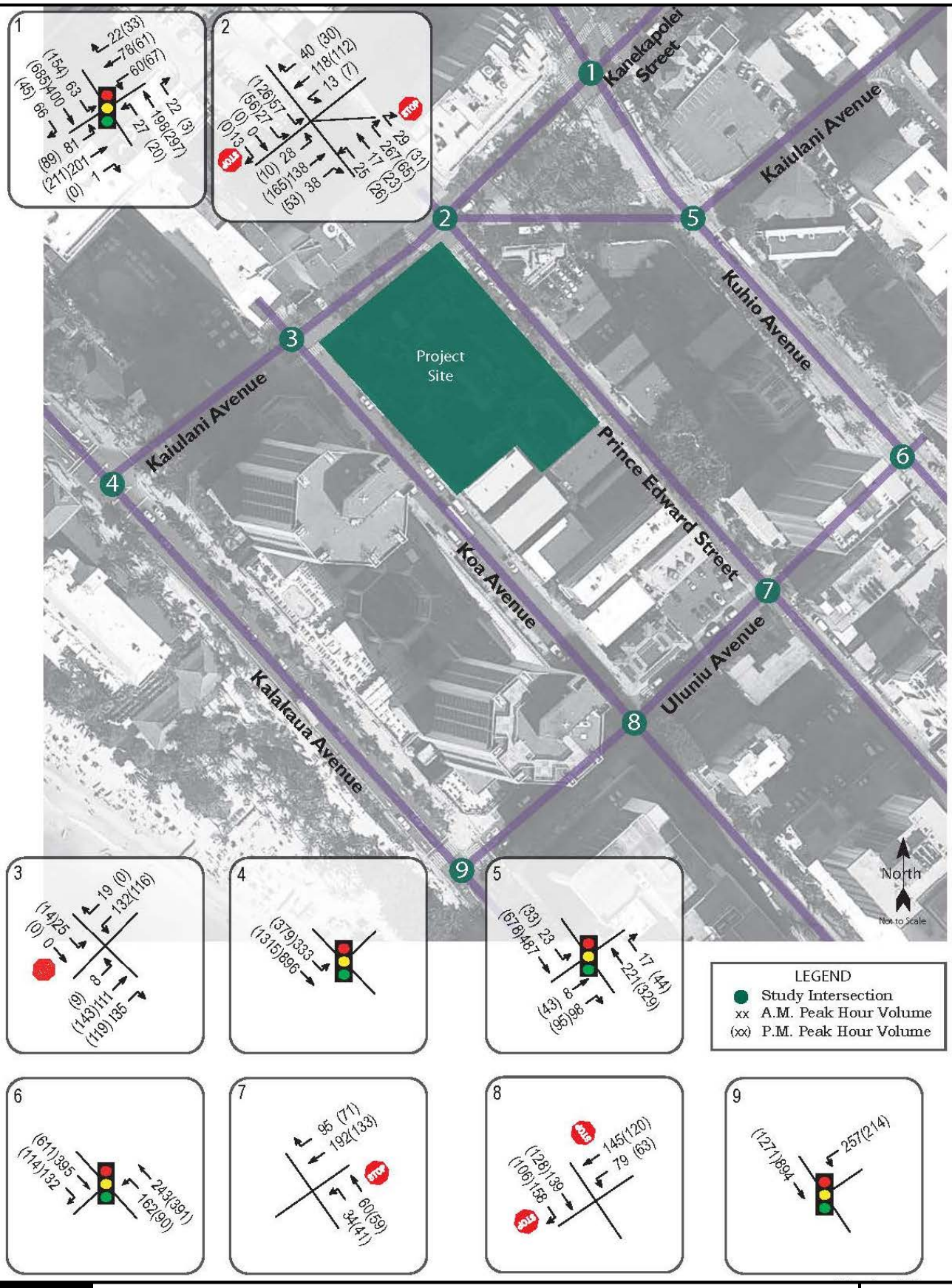
Traffic operations under Year 2017 without project conditions are expected to remain similar to existing conditions. The approaches of the study intersections along Kaiulani Avenue are expected to continue operating at levels of service similar to existing conditions despite the anticipated increases in traffic due to ambient growth and the completion of other developments in the project vicinity.

E. Total Traffic Volumes With Project

Figure 7 shows the Year 2017 cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the proposed 133 Kaiulani development. The cumulative volumes consist of site- generated traffic superimposed over Year 2017 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2017 cumulative AM and PM peak hour traffic conditions with the 133 Kaiulani development are summarized in Table 4. The existing and projected Year 2017 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.



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YEAR 2017 PEAK HOUR OF TRAFFIC
WITH PROJECT

FIGURE
7

Table 4: Existing and Projected Year 2017 (Without and With Project)
LOS Traffic Operating Conditions

Intersection	Approach	AM			PM		
		Exist	Year 2017		Exist	Year 2017	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Ave/ Kaiulani Ave	Eastbound	A	A	A	A	A	A
Kaiulani Ave/ Koa Ave	Eastbound	-	B	B	-	B	B
	Northbound	A	A	A	A	A	A
	Southbound	A	A	A	A	A	A
Kaiulani Ave/ Kanekapolei St/ Prince Edward St	Eastbound	C	C	C	C	C	C
	Westbound	B	B	B	B	B	B
	Northbound	A	A	A	A	A	A
Kanekapolei St/ Kuhio Ave	Eastbound	B	B	B	B	B	B
	Westbound	A	A	A	A	A	A
	Northbound	B	B	B	C	C	C
	Southbound	B	B	B	C	C	C
Kaiulani Ave/ Kuhio Ave	Eastbound	A	A	A	A	A	A
	Westbound	B	B	B	B	B	B
	Northbound	B	B	B	C	C	C
Uluniu Ave/ Kuhio Ave	Eastbound	B	B	B	B	B	B
	Westbound	B	B	B	A	A	A
Uluniu Ave/ Prince Edward St	Westbound	B	B	B	B	B	B
Uluniu Ave/ Koa Ave	Eastbound	A	A	A	A	A	A
	Southbound	A	A	B	A	A	A
Uluniu Ave/ Kalakaua Ave	Eastbound	A	A	A	A	A	A
	Southbound	C	C	C	C	C	C

Traffic operations in the vicinity of the 133 Kaiulani development are expected to remain similar to existing and Year 2017 without project conditions despite the addition of new site-generated traffic to the surrounding roadways. Along Kaiulani Avenue and Kanekapolei Street, the approaches of the study intersections are expected to continue operating at LOS "B" or better during both peak periods with the exception of the intersection of Kaiulani Avenue with Kanekapolei Street and Prince Edward Street and the

intersections of those roadways with Kuhio Avenue. The intersection of Kaiulani Avenue with Kanekapolei Street and Prince Edward Street is expected to continue operating at LOS "C" or better during both peak periods while the intersections of Kuhio Avenue with Kaiulani Avenue and Kanekapolei Street are expected to continue operating at LOS "B" or better during the AM peak period and LOS "C" or better during the PM peak period. Along Uluniu Avenue, the approaches of the study intersections are expected to continue operating at LOS "B" or better during both peak periods with the exception of the intersection with Kalakaua Avenue which is expected to continue operating at LOS "C" or better during both peak periods.

VI. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design.

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveways. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.

2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.

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 public roadways.

4. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.

5. If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadways.

VII. CONCLUSION

The proposed 133 Kaiulani development entails the replacement of the existing King's Village Shopping Center with a new multi-use development that will include condo/hotel units, commercial/retail uses, and on-site parking. Traffic operations in the vicinity of the proposed development are expected to remain similar to existing and without project conditions. As such, with the implementation of the aforementioned

recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0652, TU-0651
Weather:Clear

File Name : KalKai AM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kalakaua Avenue Westbound					Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	29	29	0	0	0	41	41	0	44	64	0	13	121	191
06:15 AM	0	0	0	27	27	0	0	0	29	29	0	55	79	0	35	169	225
06:30 AM	0	0	0	38	38	0	0	0	34	34	0	46	98	0	46	190	262
06:45 AM	0	0	0	50	50	0	0	0	46	46	0	55	109	0	63	227	323
Total	0	0	0	144	144	0	0	0	150	150	0	200	350	0	157	707	1001
07:00 AM	0	0	0	67	67	0	0	0	49	49	0	56	140	0	47	243	359
07:15 AM	0	0	0	64	64	0	0	0	49	49	0	50	158	0	55	263	376
07:30 AM	0	0	0	65	65	0	0	0	51	51	0	83	224	0	76	383	499
07:45 AM	0	0	0	83	83	0	0	0	73	73	0	66	224	0	72	362	518
Total	0	0	0	279	279	0	0	0	222	222	0	255	746	0	250	1251	1752
08:00 AM	0	0	0	92	92	0	0	0	61	61	0	81	223	0	50	354	507
08:15 AM	0	0	0	116	116	0	0	0	75	75	0	72	159	0	79	310	501
08:30 AM	0	0	0	118	118	0	0	0	60	60	0	68	184	0	62	314	492
08:45 AM	0	0	0	167	167	0	0	0	67	67	0	75	198	0	104	377	611
Total	0	0	0	493	493	0	0	0	263	263	0	296	764	0	295	1355	2111
Grand Total	0	0	0	916	916	0	0	0	635	635	0	751	1860	0	702	3313	4864
Apprch %	0	0	0	100		0	0	0	100			22.7	56.1	0	21.2		
Total %	0	0	0	18.8	18.8	0	0	0	13.1	13.1	0	15.4	38.2	0	14.4	68.1	

	Kaiulani Avenue Southbound				Kalakaua Avenue Westbound				Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	0	0	0	0	0	0	0	0	**83**	**224**	0	**307**	**307**
07:45 AM	0	0	0	0	0	0	0	0	0	66	224	0	290	290
08:00 AM	0	0	0	0	0	0	0	0	0	81	223	0	304	304
08:15 AM	0	0	0	0	0	0	0	0	0	72	159	0	231	231
Total Volume	0	0	0	0	0	0	0	0	0	302	830	0	1132	1132
% App. Total	0	0	0		0	0	0			26.7	73.3	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.910	.926	.000	.922	.922

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:
Counter:
Weather:

File Name : KalKai AM - Diagonal X-Walk AM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue - Diagonal Crossing Between Northwest & Southeast Southbound					Westbound	Kaiulani Avenue - Diagonal Crossing Between Northeast & Southwest Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:00 AM	0	0	0	9	9	0	0	0	0	17	17	0	26
06:15 AM	0	0	0	5	5	0	0	0	0	18	18	0	23
06:30 AM	0	0	0	7	7	0	0	0	0	4	4	0	11
06:45 AM	0	0	0	15	15	0	0	0	0	22	22	0	37
Total	0	0	0	36	36	0	0	0	0	61	61	0	97
07:00 AM	0	0	0	6	6	0	0	0	0	15	15	0	21
07:15 AM	0	0	0	3	3	0	0	0	0	8	8	0	11
07:30 AM	0	0	0	2	2	0	0	0	0	25	25	0	27
07:45 AM	0	0	0	14	14	0	0	0	0	15	15	0	29
Total	0	0	0	25	25	0	0	0	0	63	63	0	88
08:00 AM	0	0	0	14	14	0	0	0	0	18	18	0	32
08:15 AM	0	0	0	26	26	0	0	0	0	42	42	0	68
08:30 AM	0	0	0	11	11	0	0	0	0	16	16	0	27
08:45 AM	0	0	0	3	3	0	0	0	0	18	18	0	21
Total	0	0	0	54	54	0	0	0	0	94	94	0	148
Grand Total	0	0	0	115	115	0	0	0	0	218	218	0	333
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	34.5	34.5	0	0	0	0	65.5	65.5	0	

	Kaiulani Avenue - Diagonal Crossing Between Northwest & Southeast Southbound				Westbound	Kaiulani Avenue - Diagonal Crossing Between Northeast & Southwest Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 06:00 AM											
06:00 AM	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0652, TU-0651
Weather:Clear

File Name : KalKai PM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kalakaua Avenue Westbound					Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	254	254	0	0	0	116	116	0	95	232	0	152	479	849
03:15 PM	0	0	0	184	184	0	0	0	109	109	0	97	255	0	152	504	797
03:30 PM	0	0	0	173	173	0	0	0	121	121	0	95	248	3	103	449	743
03:45 PM	0	0	0	158	158	0	0	0	99	99	0	91	282	0	106	479	736
Total	0	0	0	769	769	0	0	0	445	445	0	378	1017	3	513	1911	3125
04:00 PM	0	0	0	186	186	0	0	0	111	111	0	88	268	0	115	471	768
04:15 PM	0	0	0	155	155	0	0	0	114	114	0	97	300	0	217	614	883
04:30 PM	0	0	0	176	176	0	0	0	117	117	0	80	288	0	171	539	832
04:45 PM	0	0	0	199	199	0	0	0	122	122	0	83	290	0	129	502	823
Total	0	0	0	716	716	0	0	0	464	464	0	348	1146	0	632	2126	3306
05:00 PM	0	0	0	237	237	0	0	0	101	101	0	97	320	0	118	535	873
05:15 PM	0	0	0	250	250	0	0	0	129	129	0	91	321	0	118	530	909
05:30 PM	0	0	0	201	201	0	0	0	123	123	0	91	287	0	146	524	848
05:45 PM	0	0	0	208	208	0	0	0	110	110	0	83	272	0	171	526	844
Total	0	0	0	896	896	0	0	0	463	463	0	362	1200	0	553	2115	3474
Grand Total	0	0	0	2381	2381	0	0	0	1372	1372	0	1088	3363	3	1698	6152	9905
Apprch %	0	0	0	100		0	0	0	100			17.7	54.7	0	27.6		
Total %	0	0	0	24	24	0	0	0	13.9	13.9	0	11	34	0	17.1	62.1	

	Kaiulani Avenue Southbound				Kalakaua Avenue Westbound				Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:45 PM														
04:45 PM	0	0	0	0	0	0	0	0	0	83	290	0	373	373
05:00 PM	0	0	0	0	0	0	0	0	0	97	320	0	417	417
05:15 PM	0	0	0	0	0	0	0	0	0	91	321	0	412	412
05:30 PM	0	0	0	0	0	0	0	0	0	91	287	0	378	378
Total Volume	0	0	0	0	0	0	0	0	0	362	1218	0	1580	1580
% App. Total	0	0	0		0	0	0			22.9	77.1	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.933	.949	.000	.947	.947

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0651, TU-0652
Weather:Clear

File Name : KalKai PM - Diagonal X-Walk PM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue - Diuagonal Crossing Between Northwest & Southeast Curbs Southbound					Westbound	Kaiulani Avenue - Diuagonal Crossing Between Northeast & Southwest Curbs Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	0	60	60	0	0	0	0	24	24	0	84
03:15 PM	0	0	0	29	29	0	0	0	0	5	5	0	34
03:30 PM	0	0	0	48	48	0	0	0	0	39	39	0	87
03:45 PM	0	0	0	20	20	0	0	0	0	44	44	0	64
Total	0	0	0	157	157	0	0	0	0	112	112	0	269
04:00 PM	0	0	0	60	60	0	0	0	0	30	30	0	90
04:15 PM	0	0	0	87	87	0	0	0	0	16	16	0	103
04:30 PM	0	0	0	70	70	0	0	0	0	37	37	0	107
04:45 PM	0	0	0	49	49	0	0	0	0	51	51	0	100
Total	0	0	0	266	266	0	0	0	0	134	134	0	400
05:00 PM	0	0	0	34	34	0	0	0	0	22	22	0	56
05:15 PM	0	0	0	52	52	0	0	0	0	23	23	0	75
05:30 PM	0	0	0	27	27	0	0	0	0	29	29	0	56
05:45 PM	0	0	0	32	32	0	0	0	0	10	10	0	42
Total	0	0	0	145	145	0	0	0	0	84	84	0	229
Grand Total	0	0	0	568	568	0	0	0	0	330	330	0	898
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	63.3	63.3	0	0	0	0	36.7	36.7	0	

	Kaiulani Avenue - Diuagonal Crossing Between Northwest & Southeast Curbs Southbound				Westbound	Kaiulani Avenue - Diuagonal Crossing Between Northeast & Southwest Curbs Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:00 PM											
03:00 PM	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:PA, LH
Counter:TU-0653, D4-3890
Weather:Clear

File Name : KaiKoa AM
Site Code : 00000002
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Koa Avenue Westbound					Kaiulani Avenue Northbound					Princess Kaiulani Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	13	0	3	0	16	0	0	0	50	50	2	21	12	58	93	5	0	0	15	20	179
06:15 AM	18	0	3	0	21	0	0	0	48	48	1	39	16	49	105	4	0	0	25	29	203
06:30 AM	13	0	3	0	16	0	0	0	30	30	2	16	6	30	54	3	0	0	63	66	166
06:45 AM	16	1	2	0	19	0	0	0	18	18	2	26	18	59	105	1	0	0	53	54	196
Total	60	1	11	0	72	0	0	0	146	146	7	102	52	196	357	13	0	0	156	169	744
07:00 AM	11	0	4	0	15	0	0	0	26	26	2	21	28	69	120	3	0	0	51	54	215
07:15 AM	20	0	3	0	23	0	0	0	48	48	2	21	16	36	75	3	0	0	45	48	194
07:30 AM	38	0	3	0	41	0	0	0	52	52	1	28	28	97	154	7	0	0	64	71	318
07:45 AM	37	0	4	0	41	0	0	0	79	79	0	24	22	87	133	2	0	0	59	61	314
Total	106	0	14	0	120	0	0	0	205	205	5	94	94	289	482	15	0	0	219	234	1041
08:00 AM	26	0	10	0	36	0	0	0	100	100	0	26	31	74	131	7	0	0	43	50	317
08:15 AM	31	0	2	0	33	0	0	0	42	42	7	33	23	55	118	9	0	0	37	46	239
08:30 AM	25	0	6	0	31	0	0	0	61	61	2	29	17	71	119	6	0	0	44	50	261
08:45 AM	30	0	3	0	33	0	0	0	62	62	3	28	23	82	136	1	0	0	71	72	303
Total	112	0	21	0	133	0	0	0	265	265	12	116	94	282	504	23	0	0	195	218	1120
Grand Total	278	1	46	0	325	0	0	0	616	616	24	312	240	767	1343	51	0	0	570	621	2905
Apprch %	85.5	0.3	14.2	0		0	0	0	100		1.8	23.2	17.9	57.1		8.2	0	0	91.8		
Total %	9.6	0	1.6	0	11.2	0	0	0	21.2	21.2	0.8	10.7	8.3	26.4	46.2	1.8	0	0	19.6	21.4	

	Kaiulani Avenue Southbound				Koa Avenue Westbound				Kaiulani Avenue Northbound				Princess Kaiulani Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**38**	0	3	**41**	0	0	0	0	1	28	28	57	7	0	0	7	**105**
07:45 AM	37	0	4	41	0	0	0	0	0	24	22	46	2	0	0	2	89
08:00 AM	26	0	**10**	36	0	0	0	0	0	26	**31**	57	7	0	0	7	100
08:15 AM	31	0	2	33	0	0	0	0	**7**	**33**	23	**63**	**9**	0	0	**9**	105
Total Volume	132	0	19	151	0	0	0	0	8	111	104	223	25	0	0	25	399
% App. Total	87.4	0	12.6		0	0	0		3.6	49.8	46.6		100	0	0		
PHF	.868	.000	.475	.921	.000	.000	.000	.000	.286	.841	.839	.885	.694	.000	.000	.694	.950

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:PA, LH
Counter:TU-0653, D4-3890
Weather:Clear

File Name : KaiKoa PM
Site Code : 00000002
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Koa Avenue Westbound					Kaiulani Avenue Northbound					Princess Kaiulani Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	37	0	7	0	44	0	0	0	124	124	2	30	12	70	114	8	0	0	82	90	372
03:15 PM	31	0	3	0	34	0	0	0	112	112	2	32	17	79	130	8	0	0	77	85	361
03:30 PM	28	0	4	0	32	0	0	0	157	157	3	45	36	85	169	6	0	0	86	92	450
03:45 PM	35	0	4	0	39	0	0	0	142	142	1	37	24	79	141	3	0	0	91	94	416
Total	131	0	18	0	149	0	0	0	535	535	8	144	89	313	554	25	0	0	336	361	1599
04:00 PM	33	0	1	0	34	0	0	0	193	193	1	42	22	100	165	5	0	0	86	91	483
04:15 PM	20	0	4	0	24	0	0	0	185	185	4	51	20	98	173	9	0	0	99	108	490
04:30 PM	28	0	2	0	30	0	0	0	177	177	2	51	17	105	175	4	0	0	139	143	525
04:45 PM	22	0	1	0	23	0	0	0	159	159	3	36	10	78	127	1	0	0	83	84	393
Total	103	0	8	0	111	0	0	0	714	714	10	180	69	381	640	19	0	0	407	426	1891
05:00 PM	29	0	1	0	30	0	0	0	166	166	4	56	14	80	154	13	0	0	113	126	476
05:15 PM	33	0	1	0	34	0	0	0	135	135	3	36	17	81	137	2	0	0	143	145	451
05:30 PM	21	0	2	0	23	0	0	0	201	201	6	48	26	86	166	1	0	0	121	122	512
05:45 PM	26	0	2	0	28	0	0	0	190	190	1	59	21	100	181	1	0	0	112	113	512
Total	109	0	6	0	115	0	0	0	692	692	14	199	78	347	638	17	0	0	489	506	1951
Grand Total	343	0	32	0	375	0	0	0	1941	1941	32	523	236	1041	1832	61	0	0	1232	1293	5441
Apprch %	91.5	0	8.5	0		0	0	0	100		1.7	28.5	12.9	56.8		4.7	0	0	95.3		
Total %	6.3	0	0.6	0	6.9	0	0	0	35.7	35.7	0.6	9.6	4.3	19.1	33.7	1.1	0	0	22.6	23.8	

	Kaiulani Avenue Southbound				Koa Avenue Westbound				Kaiulani Avenue Northbound				Princess Kaiulani Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	28	0	**4**	32	0	0	0	0	3	45	**36**	**84**	6	0	0	6	**122**
03:45 PM	**35**	0	4	**39**	0	0	0	0	1	37	24	62	3	0	0	3	104
04:00 PM	33	0	1	34	0	0	0	0	1	42	22	65	5	0	0	5	104
04:15 PM	20	0	4	24	0	0	0	0	**4**	**51**	20	75	**9**	0	0	**9**	108
Total Volume	116	0	13	129	0	0	0	0	9	175	102	286	23	0	0	23	438
% App. Total	89.9	0	10.1		0	0	0		3.1	61.2	35.7		100	0	0		
PHF	.829	.000	.813	.827	.000	.000	.000	.000	.563	.858	.708	.851	.639	.000	.000	.639	.898

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-1
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound					Prince Edward Street Westbound					Kaiulani Avenue Left = Left Turn Into Princes Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound					Princess Kaiulani Garage Driveway Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	9	8	0	17	2	0	30	30	62	10	14	6	22	52	8	1	0	0	9	140
06:15 AM	0	21	13	0	34	1	0	28	28	57	9	25	5	16	55	8	1	0	0	9	155
06:30 AM	4	17	15	0	36	1	0	45	45	91	18	13	3	27	61	4	0	0	0	4	192
06:45 AM	0	18	10	0	28	3	0	69	69	141	12	21	5	37	75	5	0	3	0	8	252
Total	4	65	46	0	115	7	0	172	172	351	49	73	19	102	243	25	2	3	0	30	739
07:00 AM	0	11	5	0	16	2	1	46	46	95	12	17	3	26	58	23	1	1	0	25	194
07:15 AM	3	10	6	0	19	5	0	47	47	99	13	11	5	29	58	6	4	2	0	12	188
07:30 AM	1	30	5	0	36	10	0	53	53	116	5	33	5	54	97	8	1	3	0	12	261
07:45 AM	2	31	11	0	44	8	0	67	67	142	2	28	9	27	66	8	1	1	0	10	262
Total	6	82	27	0	115	25	1	213	213	452	32	89	22	136	279	45	7	7	0	59	905
08:00 AM	2	23	12	0	37	6	3	60	60	129	12	32	10	16	70	8	0	2	0	10	246
08:15 AM	2	35	10	0	47	6	0	57	57	120	4	38	11	21	74	14	2	3	0	19	260
08:30 AM	7	29	7	0	43	5	0	47	47	99	10	40	8	26	84	8	0	3	0	11	237
08:45 AM	3	16	8	0	27	8	0	70	70	148	7	32	5	45	89	6	0	2	0	8	272
Total	14	103	37	0	154	25	3	234	234	496	33	142	34	108	317	36	2	10	0	48	1015
Grand Total	24	250	110	0	384	57	4	619	619	1299	114	304	75	346	839	106	11	20	0	137	2659
Apprch %	6.2	65.1	28.6	0		4.4	0.3	47.7	47.7		13.6	36.2	8.9	41.2		77.4	8	14.6	0		
Total %	0.9	9.4	4.1	0	14.4	2.1	0.2	23.3	23.3	48.9	4.3	11.4	2.8	13	31.6	4	0.4	0.8	0	5.2	

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound				Prince Edward Street Westbound				Kaiulani Avenue Left = Left Turn Into Princes Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound				Princess Kaiulani Garage Driveway Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	31	11	44	**8**	0	**67**	**75**	2	28	9	39	8	1	1	10	168
08:00 AM	2	23	**12**	37	6	**3**	60	69	**12**	32	10	54	8	0	2	10	170
08:15 AM	2	**35**	10	**47**	6	0	57	63	4	38	**11**	53	**14**	**2**	**3**	**19**	**182**
08:30 AM	7	29	7	43	5	0	47	52	10	**40**	8	**58**	8	0	3	11	164
Total Volume	13	118	40	171	25	3	231	259	28	138	38	204	38	3	9	50	684
% App. Total	7.6	69	23.4		9.7	1.2	89.2		13.7	67.6	18.6		76	6	18		
PHF	.464	.843	.833	.910	.781	.250	.862	.863	.583	.863	.864	.879	.679	.375	.750	.658	.940

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-2
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound					Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru to Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
06:15 AM	0	0	0	1	0	1	0	1	0	1	0	2	3
06:30 AM	0	0	0	3	0	3	0	3	0	0	0	3	6
06:45 AM	0	0	0	4	0	4	0	2	0	0	0	2	6
Total	0	0	0	8	0	8	0	6	0	2	0	8	16
07:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	2
07:15 AM	0	0	0	4	0	4	0	4	1	2	0	7	11
07:30 AM	0	0	0	1	0	1	0	2	1	0	0	3	4
07:45 AM	0	0	0	2	0	2	0	4	5	0	0	9	11
Total	0	0	0	8	0	8	0	10	7	3	0	20	28
08:00 AM	0	0	0	6	0	6	0	1	2	1	0	4	10
08:15 AM	0	0	0	5	0	5	0	4	2	1	0	7	12
08:30 AM	0	0	0	4	0	4	0	8	0	2	0	10	14
08:45 AM	0	0	0	5	0	5	0	3	1	1	0	5	10
Total	0	0	0	20	0	20	0	16	5	5	0	26	46
Grand Total	0	0	0	36	0	36	0	32	12	10	0	54	90
Apprch %		0	0	100	0			59.3	22.2	18.5	0		
Total %	0	0	0	40	0	40	0	35.6	13.3	11.1	0	60	

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound				Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru to Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	0	0	2	2	0	4	**5**	0	9	11
08:00 AM	0	0	0	**6**	**6**	0	1	2	1	4	10
08:15 AM	0	0	0	5	5	0	4	2	1	7	12
08:30 AM	0	0	0	4	4	0	**8**	0	**2**	**10**	**14**
Total Volume	0	0	0	17	17	0	17	9	4	30	47
% App. Total		0	0	100			56.7	30	13.3		
PHF	.000	.000	.000	.708	.708	.000	.531	.450	.500	.750	.839

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-3
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound					Northbound	Ohana East Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	4	0	0	4	0	2	3	0	0	5	9
07:15 AM	0	0	4	0	0	4	0	0	3	0	0	3	7
07:30 AM	0	0	4	0	0	4	0	0	3	0	0	3	7
07:45 AM	0	0	2	0	0	2	0	0	6	0	0	6	8
Total	0	0	14	0	0	14	0	2	15	0	0	17	31
08:00 AM	0	0	2	0	0	2	0	0	6	0	0	6	8
08:15 AM	0	0	1	0	0	1	0	0	4	0	0	4	5
08:30 AM	0	0	1	0	0	1	0	1	6	0	0	7	8
08:45 AM	0	0	1	0	0	1	0	0	5	0	0	5	6
Total	0	0	5	0	0	5	0	1	21	0	0	22	27
Grand Total	0	0	19	0	0	19	0	3	36	0	0	39	58
Apprch %		0	100	0	0			7.7	92.3	0	0		
Total %	0	0	32.8	0	0	32.8	0	5.2	62.1	0	0	67.2	

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound				Northbound	Ohana East Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:00 AM											
07:00 AM	0	0	**4**	0	4	0	**2**	3	0	5	**9**
07:15 AM	0	0	4	0	4	0	0	3	0	3	7
07:30 AM	0	0	4	0	4	0	0	3	0	3	7
07:45 AM	0	0	2	0	2	0	0	**6**	0	**6**	8
Total Volume	0	0	14	0	14	0	2	15	0	17	31
% App. Total		0	100	0			11.8	88.2	0		
PHF	.000	.000	.875	.000	.875	.000	.250	.625	.000	.708	.861

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-1
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound					Prince Edward Street Westbound					Kaiulani Avenue Left = Left Turn Into Princess Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound					Princess Kaiulani Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	3	31	5	0	39	7	2	10	100	119	13	43	13	18	87	32	12	2	0	46	291
03:15 PM	2	25	7	0	34	7	1	9	99	116	11	40	12	48	111	24	8	0	0	32	293
03:30 PM	1	26	10	0	37	8	0	13	98	119	2	46	14	48	110	18	5	0	0	23	289
03:45 PM	1	30	8	0	39	4	1	12	89	106	2	36	14	52	104	16	2	2	0	20	269
Total	7	112	30	0	149	26	4	44	386	460	28	165	53	166	412	90	27	4	0	121	1142
04:00 PM	0	23	8	0	31	5	0	14	115	134	6	47	13	66	132	14	4	0	0	18	315
04:15 PM	2	17	7	0	26	6	1	18	134	159	4	40	23	54	121	12	3	1	0	16	322
04:30 PM	3	22	7	0	32	4	1	13	106	124	7	44	17	85	153	14	4	0	0	18	327
04:45 PM	1	20	0	0	21	4	1	14	117	136	4	38	20	89	151	5	2	0	0	7	315
Total	6	82	22	0	110	19	3	59	472	553	21	169	73	294	557	45	13	1	0	59	1279
05:00 PM	4	25	4	0	33	1	0	15	97	113	9	50	12	74	145	10	5	2	0	17	308
05:15 PM	0	30	6	0	36	6	1	7	145	159	9	41	13	47	110	20	1	2	0	23	328
05:30 PM	0	20	7	0	27	5	0	9	135	149	8	39	13	84	144	8	2	1	0	11	331
05:45 PM	3	17	2	0	22	8	0	14	147	169	5	32	23	66	126	7	1	0	0	8	325
Total	7	92	19	0	118	20	1	45	524	590	31	162	61	271	525	45	9	5	0	59	1292
Grand Total	20	286	71	0	377	65	8	148	1382	1603	80	496	187	731	1494	180	49	10	0	239	3713
Apprch %	5.3	75.9	18.8	0		4.1	0.5	9.2	86.2		5.4	33.2	12.5	48.9		75.3	20.5	4.2	0		
Total %	0.5	7.7	1.9	0	10.2	1.8	0.2	4	37.2	43.2	2.2	13.4	5	19.7	40.2	4.8	1.3	0.3	0	6.4	

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound				Prince Edward Street Westbound				Kaiulani Avenue Left = Left Turn Into Princess Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound				Princess Kaiulani Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	3	31	5	39	7	2	10	19	13	43	13	69	32	12	2	46	173
03:15 PM	2	25	7	34	7	1	9	17	11	40	12	63	24	8	0	32	146
03:30 PM	1	26	10	37	8	0	13	21	2	46	14	62	18	5	0	23	143
03:45 PM	1	30	8	39	4	1	12	17	2	36	14	52	16	2	2	20	128
Total Volume	7	112	30	149	26	4	44	74	28	165	53	246	90	27	4	121	590
% App. Total	4.7	75.2	20.1		35.1	5.4	59.5		11.4	67.1	21.5		74.4	22.3	3.3		
PHF	.583	.903	.750	.955	.813	.500	.846	.881	.538	.897	.946	.891	.703	.563	.500	.658	.853

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-2
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound					Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	1	0	1	0	8	4	1	0	13	14
03:15 PM	0	0	0	9	0	9	0	5	1	0	0	6	15
03:30 PM	0	0	0	6	0	6	0	6	3	0	0	9	15
03:45 PM	0	0	0	3	0	3	0	2	3	0	0	5	8
Total	0	0	0	19	0	19	0	21	11	1	0	33	52
04:00 PM	0	0	0	6	0	6	0	11	3	2	0	16	22
04:15 PM	0	0	0	1	0	1	0	8	1	1	0	10	11
04:30 PM	0	0	0	4	0	4	0	3	3	0	0	6	10
04:45 PM	0	0	0	3	0	3	0	3	3	0	0	6	9
Total	0	0	0	14	0	14	0	25	10	3	0	38	52
05:00 PM	0	0	0	5	0	5	0	7	3	0	0	10	15
05:15 PM	0	0	0	6	0	6	0	6	4	0	0	10	16
05:30 PM	0	0	0	5	0	5	0	4	1	1	0	6	11
05:45 PM	0	0	0	2	0	2	0	6	3	3	0	12	14
Total	0	0	0	18	0	18	0	23	11	4	0	38	56
Grand Total	0	0	0	51	0	51	0	69	32	8	0	109	160
Apprch %		0	0	100	0			63.3	29.4	7.3	0		
Total %	0	0	0	31.9	0	31.9	0	43.1	20	5	0	68.1	

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound				Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:15 PM											
03:15 PM	0	0	0	**9**	**9**	0	**5**	**1**	0	6	15
03:30 PM	0	0	0	6	6	0	6	**3**	0	9	15
03:45 PM	0	0	0	3	3	0	2	3	0	5	8
04:00 PM	0	0	0	6	6	0	**11**	3	2	**16**	**22**
Total Volume	0	0	0	24	24	0	24	10	2	36	60
% App. Total		0	0	100			66.7	27.8	5.6		
PHF	.000	.000	.000	.667	.667	.000	.545	.833	.250	.563	.682

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-3
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound					Northbound	Ohana East Parking Garage Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	2	0	0	2	0	4	2	0	0	6	8
03:15 PM	0	0	3	0	0	3	0	0	3	0	0	3	6
03:30 PM	0	0	1	0	0	1	0	0	1	0	0	1	2
03:45 PM	0	0	2	0	0	2	0	1	2	0	0	3	5
Total	0	0	8	0	0	8	0	5	8	0	0	13	21
04:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	1
04:15 PM	0	0	2	0	0	2	0	0	2	0	0	2	4
04:30 PM	0	0	7	0	0	7	0	2	7	0	0	9	16
04:45 PM	0	0	6	0	0	6	0	0	6	0	0	6	12
Total	0	0	15	0	0	15	0	3	15	0	0	18	33
05:00 PM	0	0	4	0	0	4	0	5	4	0	0	9	13
05:15 PM	0	0	2	0	0	2	0	5	2	0	0	7	9
05:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	2
05:45 PM	0	0	6	0	0	6	0	3	6	0	0	9	15
Total	0	0	12	0	0	12	0	15	12	0	0	27	39
Grand Total	0	0	35	0	0	35	0	23	35	0	0	58	93
Apprch %		0	100	0	0			39.7	60.3	0	0		
Total %	0	0	37.6	0	0	37.6	0	24.7	37.6	0	0	62.4	

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound				Northbound	Ohana East Parking Garage Thru = Thru To Kaiulani Avenue Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:30 PM											
04:30 PM	0	0	7	0	7	0	2	7	0	9	16
04:45 PM	0	0	6	0	6	0	0	6	0	6	12
05:00 PM	0	0	4	0	4	0	5	4	0	9	13
05:15 PM	0	0	2	0	2	0	5	2	0	7	9
Total Volume	0	0	19	0	19	0	12	19	0	31	50
% App. Total		0	100	0			38.7	61.3	0		
PHF	.000	.000	.679	.000	.679	.000	.600	.679	.000	.861	.781

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC, MA
Counter:D4-5675, D4-5676
Weather:Clear

File Name : KanKuh AM
Site Code : 00000004
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Southbound					Kuhio Avenue Westbound					Kanekapolei Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	12	13	4	17	46	1	26	8	17	52	4	18	0	15	37	6	40	4	8	58	193
06:15 AM	3	23	7	24	57	3	20	2	29	54	14	28	0	23	65	7	34	11	13	65	241
06:30 AM	9	18	2	29	58	4	31	4	22	61	9	23	0	30	62	8	41	14	13	76	257
06:45 AM	10	15	2	40	67	5	29	4	51	89	9	29	1	51	90	10	68	11	30	119	365
Total	34	69	15	110	228	13	106	18	119	256	36	98	1	119	254	31	183	40	64	318	1056
07:00 AM	14	8	5	42	69	3	27	3	44	77	4	44	0	47	95	17	62	4	42	125	366
07:15 AM	19	9	6	48	82	2	29	1	36	68	5	29	0	59	93	11	83	9	38	141	384
07:30 AM	20	24	4	56	104	4	49	3	40	96	13	33	0	71	117	12	101	12	25	150	467
07:45 AM	17	22	7	59	105	11	46	3	42	102	14	34	0	55	103	20	138	14	45	217	527
Total	70	63	22	205	360	20	151	10	162	343	36	140	0	232	408	60	384	39	150	633	1744
08:00 AM	10	21	4	68	103	4	42	9	28	83	13	47	1	63	124	14	58	18	41	131	441
08:15 AM	20	20	9	76	125	8	50	2	36	96	23	42	0	87	152	14	68	17	43	142	515
08:30 AM	10	15	2	76	103	4	45	8	28	85	17	56	0	83	156	15	87	17	50	169	513
08:45 AM	6	14	7	76	103	11	41	4	29	85	16	38	0	104	158	23	82	13	60	178	524
Total	46	70	22	296	434	27	178	23	121	349	69	183	1	337	590	66	295	65	194	620	1993
Grand Total	150	202	59	611	1022	60	435	51	402	948	141	421	2	688	1252	157	862	144	408	1571	4793
Apprch %	14.7	19.8	5.8	59.8		6.3	45.9	5.4	42.4		11.3	33.6	0.2	55		10	54.9	9.2	26		
Total %	3.1	4.2	1.2	12.7	21.3	1.3	9.1	1.1	8.4	19.8	2.9	8.8	0	14.4	26.1	3.3	18	3	8.5	32.8	

	Kanekapolei Street Southbound				Kuhio Avenue Westbound				Kanekapolei Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	17	**22**	7	46	**11**	46	3	**60**	14	34	0	48	**20**	**138**	14	**172**	**326**
08:00 AM	10	21	4	35	4	42	**9**	55	13	47	**1**	61	14	58	**18**	90	241
08:15 AM	**20**	20	**9**	**49**	8	**50**	2	60	**23**	42	0	65	14	68	17	99	273
08:30 AM	10	15	2	27	4	45	8	57	17	**56**	0	**73**	15	87	17	119	276
Total Volume	57	78	22	157	27	183	22	232	67	179	1	247	63	351	66	480	1116
% App. Total	36.3	49.7	14		11.6	78.9	9.5		27.1	72.5	0.4		13.1	73.1	13.8		
PHF	.713	.886	.611	.801	.614	.915	.611	.967	.728	.799	.250	.846	.788	.636	.917	.698	.856

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC, CL
Counter:D4-5676, D4-5675
Weather:Clear

File Name : KanKuh PM
Site Code : 00000004
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Southbound					Kuhio Avenue Westbound					Kanekapolei Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	13	16	1	92	122	5	55	2	50	112	24	73	0	67	164	24	96	18	89	227	625
03:15 PM	13	17	3	106	139	7	67	4	63	141	13	69	1	124	207	26	110	14	83	233	720
03:30 PM	12	22	14	101	149	4	67	1	44	116	18	68	0	91	177	28	108	14	63	213	655
03:45 PM	14	21	6	90	131	6	55	5	45	111	11	59	1	106	177	33	126	16	55	230	649
Total	52	76	24	389	541	22	244	12	202	480	66	269	2	388	725	111	440	62	290	903	2649
04:00 PM	13	11	11	133	168	9	60	6	73	148	20	72	7	97	196	37	123	16	83	259	771
04:15 PM	23	10	12	111	156	7	49	2	76	134	22	64	0	118	204	28	126	15	83	252	746
04:30 PM	15	16	8	97	136	7	56	1	50	114	12	61	0	125	198	36	151	12	81	280	728
04:45 PM	18	8	11	130	167	3	66	0	77	146	21	37	0	92	150	36	144	11	86	277	740
Total	69	45	42	471	627	26	231	9	276	542	75	234	7	432	748	137	544	54	333	1068	2985
05:00 PM	17	17	4	133	171	6	84	2	62	154	27	61	0	88	176	40	137	7	87	271	772
05:15 PM	15	20	10	149	194	4	84	0	162	250	24	56	0	141	221	36	141	15	110	302	967
05:30 PM	18	7	4	114	143	8	47	17	74	146	10	48	2	120	180	26	124	14	101	265	734
05:45 PM	16	8	8	142	174	6	67	4	104	181	20	44	0	97	161	27	127	7	80	241	757
Total	66	52	26	538	682	24	282	23	402	731	81	209	2	446	738	129	529	43	378	1079	3230
Grand Total	187	173	92	1398	1850	72	757	44	880	1753	222	712	11	1266	2211	377	1513	159	1001	3050	8864
Apprch %	10.1	9.4	5	75.6		4.1	43.2	2.5	50.2		10	32.2	0.5	57.3		12.4	49.6	5.2	32.8		
Total %	2.1	2	1	15.8	20.9	0.8	8.5	0.5	9.9	19.8	2.5	8	0.1	14.3	24.9	4.3	17.1	1.8	11.3	34.4	

	Kanekapolei Street Southbound				Kuhio Avenue Westbound				Kanekapolei Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	16	8	39	7	56	1	64	12	61	0	73	36	151	12	199	375
04:45 PM	18	8	11	37	3	66	0	69	21	37	0	58	36	144	11	191	355
05:00 PM	17	17	4	38	6	84	2	92	27	61	0	88	40	137	7	184	402
05:15 PM	15	20	10	45	4	84	0	88	24	56	0	80	36	141	15	192	405
Total Volume	65	61	33	159	20	290	3	313	84	215	0	299	148	573	45	766	1537
% App. Total	40.9	38.4	20.8		6.4	92.7	1		28.1	71.9	0		19.3	74.8	5.9		
PHF	.903	.763	.750	.883	.714	.863	.375	.851	.778	.881	.000	.849	.925	.949	.750	.962	.949

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, GC
Counter:D4-5675, TU-0654
Weather:Clear

File Name : KuhKai AM
Site Code : 00000005
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kuhio Avenue Westbound					Kaiulani Avenue Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	2	2	0	28	7	0	35	0	0	5	16	21	2	41	0	5	48	106
06:15 AM	0	0	0	7	7	0	19	5	0	24	0	3	1	11	15	3	36	0	3	42	88
06:30 AM	0	0	0	20	20	0	26	5	0	31	0	1	8	22	31	4	58	0	14	76	158
06:45 AM	0	0	0	21	21	0	36	6	0	42	0	1	11	35	47	5	67	0	16	88	198
Total	0	0	0	50	50	0	109	23	0	132	0	5	25	84	114	14	202	0	38	254	550
07:00 AM	0	0	0	24	24	0	38	10	0	48	0	1	8	44	53	4	77	0	27	108	233
07:15 AM	0	0	0	30	30	0	33	1	0	34	0	3	11	37	51	2	94	0	18	114	229
07:30 AM	0	0	0	37	37	0	42	4	0	46	0	5	21	45	71	7	115	0	19	141	295
07:45 AM	0	0	0	52	52	0	51	5	0	56	0	1	21	37	59	6	135	0	18	159	326
Total	0	0	0	143	143	0	164	20	0	184	0	10	61	163	234	19	421	0	82	522	1083
08:00 AM	0	0	0	40	40	0	49	5	0	54	0	0	23	57	80	7	94	0	25	126	300
08:15 AM	0	0	0	55	55	0	63	3	0	66	0	2	21	33	56	3	85	0	28	116	293
08:30 AM	0	0	0	49	49	0	52	10	0	62	0	7	14	64	85	2	90	0	19	111	307
08:45 AM	0	0	0	65	65	0	58	8	0	66	0	4	17	58	79	4	111	0	26	141	351
Total	0	0	0	209	209	0	222	26	0	248	0	13	75	212	300	16	380	0	98	494	1251
Grand Total	0	0	0	402	402	0	495	69	0	564	0	28	161	459	648	49	1003	0	218	1270	2884
Apprch %	0	0	0	100		0	87.8	12.2	0		0	4.3	24.8	70.8		3.9	79	0	17.2		
Total %	0	0	0	13.9	13.9	0	17.2	2.4	0	19.6	0	1	5.6	15.9	22.5	1.7	34.8	0	7.6	44	

	Kaiulani Avenue Southbound				Kuhio Avenue Westbound				Kaiulani Avenue Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	42	4	46	0	**5**	21	**26**	**7**	115	0	122	194
07:45 AM	0	0	0	0	0	51	**5**	56	0	1	21	22	6	**135**	0	**141**	**219**
08:00 AM	0	0	0	0	0	49	5	54	0	0	**23**	23	7	94	0	101	178
08:15 AM	0	0	0	0	0	**63**	3	**66**	0	2	21	23	3	85	0	88	177
Total Volume	0	0	0	0	0	205	17	222	0	8	86	94	23	429	0	452	768
% App. Total	0	0	0		0	92.3	7.7		0	8.5	91.5		5.1	94.9	0		
PHF	.000	.000	.000	.000	.000	.813	.850	.841	.000	.400	.935	.904	.821	.794	.000	.801	.877

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, GC
Counter:TU-0654, D4-5675
Weather:Clear

File Name : KuhKai PM
Site Code : 00000005
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kuhio Avenue Westbound					Kaiulani Avenue Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	40	40	0	63	11	0	74	0	7	20	71	98	4	102	0	24	130	342
03:15 PM	0	0	0	43	43	0	74	5	0	79	0	12	22	91	125	7	142	0	27	176	423
03:30 PM	0	0	0	54	54	0	84	11	0	95	0	8	14	65	87	10	117	0	36	163	399
03:45 PM	0	0	0	53	53	0	78	5	0	83	0	2	19	75	96	12	127	0	41	180	412
Total	0	0	0	190	190	0	299	32	0	331	0	29	75	302	406	33	488	0	128	649	1576
04:00 PM	0	0	0	62	62	0	68	8	0	76	0	8	21	87	116	8	126	0	23	157	411
04:15 PM	0	0	0	62	62	0	66	9	0	75	0	8	19	87	114	10	159	0	30	199	450
04:30 PM	0	0	0	67	67	0	62	8	0	70	0	13	13	75	101	12	146	0	26	184	422
04:45 PM	0	0	0	49	49	0	76	11	0	87	0	11	22	85	118	8	139	0	42	189	443
Total	0	0	0	240	240	0	272	36	0	308	0	40	75	334	449	38	570	0	121	729	1726
05:00 PM	0	0	0	75	75	0	79	8	0	87	0	12	29	77	118	9	154	0	20	183	463
05:15 PM	0	0	0	62	62	0	66	10	0	76	0	14	19	144	177	10	151	0	36	197	512
05:30 PM	0	0	0	63	63	0	84	15	0	99	0	6	18	103	127	6	172	0	56	234	523
05:45 PM	0	0	0	101	101	0	79	12	0	91	0	9	17	117	143	7	138	0	95	240	575
Total	0	0	0	301	301	0	308	45	0	353	0	41	83	441	565	32	615	0	207	854	2073
Grand Total	0	0	0	731	731	0	879	113	0	992	0	110	233	1077	1420	103	1673	0	456	2232	5375
Apprch %	0	0	0	100		0	88.6	11.4	0		0	7.7	16.4	75.8		4.6	75	0	20.4		
Total %	0	0	0	13.6	13.6	0	16.4	2.1	0	18.5	0	2	4.3	20	26.4	1.9	31.1	0	8.5	41.5	

	Kaiulani Avenue Southbound				Kuhio Avenue Westbound				Kaiulani Avenue Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	76	11	87	0	11	22	33	8	139	0	147	267
05:00 PM	0	0	0	0	0	79	8	87	0	12	29	41	9	154	0	163	291
05:15 PM	0	0	0	0	0	66	10	76	0	14	19	33	10	151	0	161	270
05:30 PM	0	0	0	0	0	84	15	99	0	6	18	24	6	172	0	178	301
Total Volume	0	0	0	0	0	305	44	349	0	43	88	131	33	616	0	649	1129
% App. Total	0	0	0		0	87.4	12.6		0	32.8	67.2		5.1	94.9	0		
PHF	.000	.000	.000	.000	.000	.908	.733	.881	.000	.768	.759	.799	.825	.895	.000	.912	.938

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, PA
Counter:D4-3890, D4-3889
Weather:Clear

File Name : KuhUlu AM
Site Code : 00000004
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Kuhio Avenue Westbound					Uluniu Avenue Northbound					Kuhio Avenue Left = Left Turn Into Waikiki Park Heights Hotel Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	24	32	0	0	56	0	0	0	7	7	0	36	7	16	59	122
06:15 AM	0	29	27	0	0	56	0	0	0	9	9	0	31	4	7	42	107
06:30 AM	0	24	29	0	0	53	0	0	0	17	17	0	57	11	13	81	151
06:45 AM	0	37	43	0	0	80	0	0	0	18	18	0	58	9	12	79	177
Total	0	114	131	0	0	245	0	0	0	51	51	0	182	31	48	261	557
07:00 AM	0	25	43	0	0	68	0	0	0	28	28	0	71	14	24	109	205
07:15 AM	0	25	36	0	0	61	0	0	0	54	54	2	80	18	17	117	232
07:30 AM	0	32	42	0	0	74	0	0	0	34	34	0	104	26	30	160	268
07:45 AM	0	42	57	0	0	99	0	0	0	33	33	0	120	24	27	171	303
Total	0	124	178	0	0	302	0	0	0	149	149	2	375	82	98	557	1008
08:00 AM	0	37	58	0	0	95	0	0	0	43	43	1	68	28	12	109	247
08:15 AM	0	37	68	0	0	105	0	0	0	35	35	1	63	30	26	120	260
08:30 AM	0	26	58	0	0	84	0	0	0	46	46	0	73	27	33	133	263
08:45 AM	0	31	69	0	0	100	0	0	0	40	40	0	88	28	13	129	269
Total	0	131	253	0	0	384	0	0	0	164	164	2	292	113	84	491	1039
Grand Total	0	369	562	0	0	931	0	0	0	364	364	4	849	226	230	1309	2604
Apprch %		39.6	60.4	0	0		0	0	0	100		0.3	64.9	17.3	17.6		
Total %	0	14.2	21.6	0	0	35.8	0	0	0	14	14	0.2	32.6	8.7	8.8	50.3	

	Southbound	Kuhio Avenue Westbound				Uluniu Avenue Northbound				Kuhio Avenue Left = Left Turn Into Waikiki Park Heights Hotel Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	32	42	0	74	0	0	0	0	0	104	26	130	204
07:45 AM	0	**42**	57	0	99	0	0	0	0	0	**120**	24	**144**	**243**
08:00 AM	0	37	58	0	95	0	0	0	0	**1**	68	28	97	192
08:15 AM	0	37	**68**	0	**105**	0	0	0	0	1	63	**30**	94	199
Total Volume	0	148	225	0	373	0	0	0	0	2	355	108	465	838
% App. Total		39.7	60.3	0		0	0	0		0.4	76.3	23.2		
PHF	.000	.881	.827	.000	.888	.000	.000	.000	.000	.500	.740	.900	.807	.862

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, PA
Counter:D4-3889, D4-3890
Weather:Clear

File Name : KuhUlu PM
Site Code : 00000004
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Kuhio Avenue Westbound					Uluniu Avenue Northbound					Kuhio Avenue Left = Left Turn Into Waikiki Park Heights Hotel Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	23	72	0	0	95	0	0	0	74	74	0	108	26	30	164	333
03:15 PM	0	16	81	0	0	97	0	0	0	47	47	1	128	20	45	194	338
03:30 PM	0	28	92	0	0	120	0	0	0	41	41	1	104	21	32	158	319
03:45 PM	0	29	89	0	0	118	0	0	0	65	65	1	109	21	22	153	336
Total	0	96	334	0	0	430	0	0	0	227	227	3	449	88	129	669	1326
04:00 PM	0	24	75	0	0	99	0	0	0	55	55	1	118	21	41	181	335
04:15 PM	0	25	72	0	0	97	0	0	0	70	70	1	157	12	47	217	384
04:30 PM	0	27	64	0	0	91	0	0	0	71	71	0	134	13	19	166	328
04:45 PM	0	26	91	0	0	117	0	0	0	68	68	0	121	32	36	189	374
Total	0	102	302	0	0	404	0	0	0	264	264	2	530	78	143	753	1421
05:00 PM	0	13	92	0	0	105	0	0	0	77	77	0	155	21	45	221	403
05:15 PM	0	19	70	0	0	89	0	0	0	102	102	0	147	19	26	192	383
05:30 PM	0	24	109	0	0	133	0	0	0	85	85	0	136	29	55	220	438
05:45 PM	0	12	86	0	0	98	0	0	0	96	96	0	119	19	48	186	380
Total	0	68	357	0	0	425	0	0	0	360	360	0	557	88	174	819	1604
Grand Total	0	266	993	0	0	1259	0	0	0	851	851	5	1536	254	446	2241	4351
Apprch %		21.1	78.9	0	0		0	0	0	100		0.2	68.5	11.3	19.9		
Total %	0	6.1	22.8	0	0	28.9	0	0	0	19.6	19.6	0.1	35.3	5.8	10.3	51.5	

	Southbound	Kuhio Avenue Westbound				Uluniu Avenue Northbound				Kuhio Avenue Left = Left Turn Into Waikiki Park Heights Hotel Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:45 PM														
04:45 PM	0	**26**	91	0	117	0	0	0	0	0	121	**32**	153	270
05:00 PM	0	13	92	0	105	0	0	0	0	0	**155**	21	**176**	281
05:15 PM	0	19	70	0	89	0	0	0	0	0	147	19	166	255
05:30 PM	0	24	**109**	0	**133**	0	0	0	0	0	136	29	165	**298**
Total Volume	0	82	362	0	444	0	0	0	0	0	559	101	660	1104
% App. Total		18.5	81.5	0		0	0	0		0	84.7	15.3		
PHF	.000	.788	.830	.000	.835	.000	.000	.000	.000	.000	.902	.789	.938	.926

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:CY
Counter:T-1839
Weather:Clear

File Name : UluPri AM
Site Code : 00000003
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Prince Edward Street Westbound					Uluniu Avenue Northbound					Prince Edward Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	26	5	1	32	2	5	0	6	13	0	0	0	3	3	0	0	0	22	22	70
06:15 AM	0	32	2	2	36	5	4	0	8	17	0	0	0	2	2	0	0	0	8	8	63
06:30 AM	0	29	8	1	38	2	3	0	9	14	0	0	0	3	3	0	0	0	18	18	73
06:45 AM	0	32	11	2	45	3	8	0	4	15	0	0	0	4	4	0	0	0	23	23	87
Total	0	119	26	6	151	12	20	0	27	59	0	0	0	12	12	0	0	0	71	71	293
07:00 AM	0	37	8	1	46	6	9	0	8	23	0	0	0	1	1	0	0	0	24	24	94
07:15 AM	0	35	7	1	43	8	9	0	16	33	0	0	0	3	3	0	0	0	23	23	102
07:30 AM	0	42	15	5	62	7	6	0	9	22	0	0	0	5	5	0	0	0	43	43	132
07:45 AM	0	49	10	3	62	4	3	0	14	21	0	0	0	9	9	0	0	0	39	39	131
Total	0	163	40	10	213	25	27	0	47	99	0	0	0	18	18	0	0	0	129	129	459
08:00 AM	0	61	11	5	77	6	2	0	14	22	0	0	0	3	3	0	0	0	35	35	137
08:15 AM	0	52	15	5	72	9	10	0	15	34	0	0	0	10	10	0	0	0	60	60	176
08:30 AM	0	36	17	3	56	12	9	0	14	35	0	0	0	4	4	0	0	0	37	37	132
08:45 AM	0	43	14	8	65	7	8	0	21	36	0	0	0	12	12	0	0	0	49	49	162
Total	0	192	57	21	270	34	29	0	64	127	0	0	0	29	29	0	0	0	181	181	607
Grand Total	0	474	123	37	634	71	76	0	138	285	0	0	0	59	59	0	0	0	381	381	1359
Apprch %	0	74.8	19.4	5.8		24.9	26.7	0	48.4		0	0	0	100		0	0	0	100		
Total %	0	34.9	9.1	2.7	46.7	5.2	5.6	0	10.2	21	0	0	0	4.3	4.3	0	0	0	28	28	

	Uluniu Avenue Southbound				Prince Edward Street Westbound				Uluniu Avenue Northbound				Prince Edward Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	**61**	11	**72**	6	2	0	8	0	0	0	0	0	0	0	0	80
08:15 AM	0	52	15	67	9	**10**	0	19	0	0	0	0	0	0	0	0	**86**
08:30 AM	0	36	**17**	53	**12**	9	0	**21**	0	0	0	0	0	0	0	0	74
08:45 AM	0	43	14	57	7	8	0	15	0	0	0	0	0	0	0	0	72
Total Volume	0	192	57	249	34	29	0	63	0	0	0	**0**	**0**	**0**	0	0	312
% App. Total	0	77.1	22.9		54	46	0		0	0	0		0	0	0		
PHF	.000	.787	.838	.865	.708	.725	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.907

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:CY
Counter:T-1839
Weather:Clear

File Name : UluPri PM
Site Code : 00000003
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Prince Edward Street Westbound					Uluniu Avenue Northbound					Prince Edward Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	39	11	4	54	9	14	0	14	37	0	0	0	3	3	0	0	0	62	62	156
03:15 PM	0	26	9	7	42	6	6	0	17	29	0	0	0	4	4	0	0	0	67	67	142
03:30 PM	0	38	11	12	61	7	5	0	18	30	0	0	0	9	9	0	0	0	59	59	159
03:45 PM	0	41	8	11	60	5	12	0	10	27	0	0	0	3	3	0	0	0	54	54	144
Total	0	144	39	34	217	27	37	0	59	123	0	0	0	19	19	0	0	0	242	242	601
04:00 PM	0	38	7	9	54	13	8	0	21	42	0	0	0	9	9	0	0	0	74	74	179
04:15 PM	0	30	9	1	40	9	7	0	16	32	0	0	0	8	8	0	0	0	71	71	151
04:30 PM	0	31	7	16	54	12	13	0	19	44	0	0	0	17	17	0	0	0	53	53	168
04:45 PM	0	42	12	10	64	15	11	0	13	39	0	0	0	8	8	0	0	0	39	39	150
Total	0	141	35	36	212	49	39	0	69	157	0	0	0	42	42	0	0	0	237	237	648
05:00 PM	0	22	15	8	45	5	9	0	10	24	0	0	0	2	2	0	0	0	98	98	169
05:15 PM	0	28	12	8	48	10	9	0	10	29	0	0	0	5	5	0	0	0	70	70	152
05:30 PM	0	41	11	11	63	11	13	0	7	31	0	0	0	3	3	0	0	0	78	78	175
05:45 PM	0	21	12	8	41	7	14	0	49	70	0	0	0	11	11	0	0	0	45	45	167
Total	0	112	50	35	197	33	45	0	76	154	0	0	0	21	21	0	0	0	291	291	663
Grand Total	0	397	124	105	626	109	121	0	204	434	0	0	0	82	82	0	0	0	770	770	1912
Apprch %	0	63.4	19.8	16.8		25.1	27.9	0	47		0	0	0	100		0	0	0	100		
Total %	0	20.8	6.5	5.5	32.7	5.7	6.3	0	10.7	22.7	0	0	0	4.3	4.3	0	0	0	40.3	40.3	

	Uluniu Avenue Southbound				Prince Edward Street Westbound				Uluniu Avenue Northbound				Prince Edward Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**42**	12	**54**	**15**	11	0	**26**	0	0	0	0	0	0	0	0	**80**
05:00 PM	0	22	**15**	37	5	9	0	14	0	0	0	0	0	0	0	0	51
05:15 PM	0	28	12	40	10	9	0	19	0	0	0	0	0	0	0	0	59
05:30 PM	0	41	11	52	11	**13**	0	24	0	0	0	0	0	0	0	0	76
Total Volume	0	133	50	183	41	42	0	83	0	0	0	0	0	0	0	0	266
% App. Total	0	72.7	27.3		49.4	50.6	0		0	0	0		0	0	0		
PHF	.000	.792	.833	.847	.683	.808	.000	.798	.000	.000	.000	.000	.000	.000	.000	.000	.831

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MA
Counter:T-1841
Weather:Clear

File Name : KoaUlu AM
Site Code : 00000002
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Koa Avenue Westbound					Uluniu Avenue Northbound					Koa Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	9	18	0	2	29	0	0	0	12	12	0	0	0	10	10	0	7	15	22	44	95
06:15 AM	24	16	0	7	47	0	0	0	16	16	0	0	0	25	25	0	14	16	15	45	133
06:30 AM	17	15	0	24	56	0	0	0	20	20	0	0	0	17	17	0	24	9	32	65	158
06:45 AM	12	24	0	19	55	0	0	0	21	21	0	0	0	20	20	0	18	7	50	75	171
Total	62	73	0	52	187	0	0	0	69	69	0	0	0	72	72	0	63	47	119	229	557
07:00 AM	20	20	0	17	57	0	0	0	10	10	0	0	0	24	24	0	27	18	56	101	192
07:15 AM	13	35	0	23	71	0	0	0	27	27	0	0	0	36	36	0	16	15	44	75	209
07:30 AM	19	32	0	39	90	0	0	0	29	29	0	0	0	47	47	0	18	30	60	108	274
07:45 AM	21	35	0	22	78	0	0	0	26	26	0	0	0	31	31	0	19	36	56	111	246
Total	73	122	0	101	296	0	0	0	92	92	0	0	0	138	138	0	80	99	216	395	921
08:00 AM	19	45	0	31	95	0	0	0	35	35	0	0	0	56	56	0	24	34	61	119	305
08:15 AM	27	35	0	33	95	0	0	0	56	56	0	0	0	30	30	0	19	53	62	134	315
08:30 AM	18	28	0	24	70	0	0	0	37	37	0	0	0	42	42	0	39	33	55	127	276
08:45 AM	15	37	0	34	86	0	0	0	48	48	0	0	0	29	29	0	26	38	44	108	271
Total	79	145	0	122	346	0	0	0	176	176	0	0	0	157	157	0	108	158	222	488	1167
Grand Total	214	340	0	275	829	0	0	0	337	337	0	0	0	367	367	0	251	304	557	1112	2645
Apprch %	25.8	41	0	33.2		0	0	0	100		0	0	0	100		0	22.6	27.3	50.1		
Total %	8.1	12.9	0	10.4	31.3	0	0	0	12.7	12.7	0	0	0	13.9	13.9	0	9.5	11.5	21.1	42	

	Uluniu Avenue Southbound				Koa Avenue Westbound				Uluniu Avenue Northbound				Koa Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	19	**45**	0	**64**	0	0	0	0	0	0	0	0	0	24	34	58	122
08:15 AM	**27**	35	0	62	0	0	0	0	0	0	0	0	0	19	**53**	**72**	**134**
08:30 AM	18	28	0	46	0	0	0	0	0	0	0	0	0	**39**	33	72	118
08:45 AM	15	37	0	52	0	0	0	0	0	0	0	0	0	26	38	64	116
Total Volume	79	145	0	224	0	0	0	0	0	0	0	0	0	108	158	266	490
% App. Total	35.3	64.7	0		0	0	0		0	0	0		0	40.6	59.4		
PHF	.731	.806	.000	.875	.000	.000	.000	.000	.000	.000	.000	.000	.000	.692	.745	.924	.914

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY
Counter:D4-3890
Weather:Clear

File Name : KoaUlu PM
Site Code : 00000002
Start Date : 9/24/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Street Southbound					Koa Street Westbound					Uluniu Street Northbound					Koa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	13	31	0	41	85	0	0	0	51	51	5	0	0	55	60	0	33	22	75	130	326
03:15 PM	11	32	0	23	66	0	0	0	53	53	0	0	0	59	59	0	24	21	65	110	288
03:30 PM	10	27	0	32	69	0	0	0	42	42	0	0	0	39	39	0	20	25	70	115	265
03:45 PM	18	37	0	34	89	0	0	0	35	35	0	0	0	42	42	0	23	29	81	133	299
Total	52	127	0	130	309	0	0	0	181	181	5	0	0	195	200	0	100	97	291	488	1178
04:00 PM	20	30	0	24	74	0	0	0	30	30	0	0	0	63	63	0	37	26	110	173	340
04:15 PM	16	24	0	27	67	0	0	0	43	43	0	0	0	47	47	0	28	23	70	121	278
04:30 PM	9	29	0	49	87	0	0	0	39	39	0	0	0	40	40	0	23	28	97	148	314
04:45 PM	10	25	0	65	100	0	0	0	64	64	0	0	0	57	57	0	24	14	89	127	348
Total	55	108	0	165	328	0	0	0	176	176	0	0	0	207	207	0	112	91	366	569	1280
05:00 PM	17	19	0	32	68	0	0	0	49	49	0	0	0	52	52	0	25	26	77	128	297
05:15 PM	11	29	0	49	89	0	0	0	40	40	0	0	0	54	54	0	29	18	81	128	311
05:30 PM	13	22	0	36	71	0	0	0	58	58	0	0	0	45	45	0	15	27	102	144	318
05:45 PM	8	25	0	49	82	0	0	0	42	42	0	0	0	53	53	0	24	19	99	142	319
Total	49	95	0	166	310	0	0	0	189	189	0	0	0	204	204	0	93	90	359	542	1245
Grand Total	156	330	0	461	947	0	0	0	546	546	5	0	0	606	611	0	305	278	1016	1599	3703
Apprch %	16.5	34.8	0	48.7		0	0	0	100		0.8	0	0	99.2		0	19.1	17.4	63.5		
Total %	4.2	8.9	0	12.4	25.6	0	0	0	14.7	14.7	0.1	0	0	16.4	16.5	0	8.2	7.5	27.4	43.2	

	Uluniu Street Southbound				Koa Street Westbound				Uluniu Street Northbound				Koa Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	18	**37**	0	**55**	0	0	0	0	0	0	0	0	0	23	**29**	52	107
04:00 PM	**20**	30	0	50	0	0	0	0	0	0	0	0	0	**37**	26	**63**	**113**
04:15 PM	16	24	0	40	0	0	0	0	0	0	0	0	0	28	23	51	91
04:30 PM	9	29	0	38	0	0	0	0	0	0	0	0	0	23	28	51	89
Total Volume	63	120	0	183	0	0	0	0	0	0	0	0	0	111	106	217	400
% App. Total	34.4	65.6	0		0	0	0		0	0	0		0	51.2	48.8		
PHF	.788	.811	.000	.832	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750	.914	.861	.885

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:CL, GL
Counter:TU-0650, TU-0652
Weather:Clear

File Name : KalUlu AM
Site Code : 00000001
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	22	0	0	36	58	0	0	0	79	0	34	113	171
06:15 AM	30	0	0	44	74	0	0	0	78	0	42	120	194
06:30 AM	20	0	0	61	81	0	0	0	95	0	46	141	222
06:45 AM	24	0	0	81	105	0	0	0	124	0	63	187	292
Total	96	0	0	222	318	0	0	0	376	0	185	561	879
07:00 AM	35	0	0	103	138	0	0	0	145	0	55	200	338
07:15 AM	41	0	0	100	141	0	0	0	176	0	72	248	389
07:30 AM	59	0	0	131	190	0	0	0	235	0	71	306	496
07:45 AM	64	0	0	158	222	0	0	0	217	0	79	296	518
Total	199	0	0	492	691	0	0	0	773	0	277	1050	1741
08:00 AM	65	0	0	164	229	0	0	0	208	0	85	293	522
08:15 AM	69	0	0	256	325	0	0	0	168	0	131	299	624
08:30 AM	68	0	0	232	300	0	0	0	166	0	113	279	579
08:45 AM	73	0	0	231	304	0	0	0	0	0	0	0	304
Total	275	0	0	883	1158	0	0	0	542	0	329	871	2029
Grand Total	570	0	0	1597	2167	0	0	0	1691	0	791	2482	4649
Apprch %	26.3	0	0	73.7				0	68.1	0	31.9		
Total %	12.3	0	0	34.4	46.6	0	0	0	36.4	0	17	53.4	

	Uluniu Avenue Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:30 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	59	0	0	59	0	0	0	**235**	0	**235**	**294**
07:45 AM	**64**	0	0	**64**	0	0	0	217	0	217	281
08:00 AM	65	0	0	65	0	0	0	208	0	208	273
08:15 AM	69	0	0	69	0	0	0	168	0	168	237
Total Volume	257	0	0	257	0	0	0	828	0	828	1085
% App. Total	100	0	0				0	100	0		
PHF	.931	.000	.000	.931	.000	.000	.000	.881	.000	.881	.923

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, PA
Counter:D4-5677, D4-5675
Weather:Clear

File Name : KalUlu PM
Site Code : 00000001
Start Date : 9/24/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	41	0	0	354	395	0	0	0	219	0	169	388	783
03:15 PM	55	0	0	314	369	0	0	0	262	0	141	403	772
03:30 PM	59	0	0	271	330	0	0	0	243	0	174	417	747
03:45 PM	66	0	0	346	412	0	0	0	277	0	185	462	874
Total	221	0	0	1285	1506	0	0	0	1001	0	669	1670	3176
04:00 PM	65	0	0	330	395	0	0	0	266	0	183	449	844
04:15 PM	54	0	0	325	379	0	0	0	322	0	203	525	904
04:30 PM	64	0	0	310	374	0	0	0	259	0	168	427	801
04:45 PM	57	0	0	313	370	0	0	0	260	0	235	495	865
Total	240	0	0	1278	1518	0	0	0	1107	0	789	1896	3414
05:00 PM	47	0	0	368	415	0	0	0	298	0	172	470	885
05:15 PM	55	0	0	339	394	0	0	0	329	0	195	524	918
05:30 PM	55	0	0	376	431	0	0	0	290	0	168	458	889
05:45 PM	43	0	0	361	404	0	0	0	258	0	247	505	909
Total	200	0	0	1444	1644	0	0	0	1175	0	782	1957	3601
Grand Total	661	0	0	4007	4668	0	0	0	3283	0	2240	5523	10191
Apprch %	14.2	0	0	85.8				0	59.4	0	40.6		
Total %	6.5	0	0	39.3	45.8	0	0	0	32.2	0	22	54.2	

	Uluniu Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	**57**	0	0	**57**	0	0	0	260	0	260	317
05:00 PM	47	0	0	47	0	0	0	298	0	298	345
05:15 PM	55	0	0	55	0	0	0	**329**	0	**329**	**384**
05:30 PM	55	0	0	55	0	0	0	290	0	290	345
Total Volume	214	0	0	214	0	0	0	1177	0	1177	1391
% App. Total	100	0	0				0	100	0		
PHF	.939	.000	.000	.939	.000	.000	.000	.894	.000	.894	.906

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

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	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤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.

"Highway Capacity Manual," Transportation Research Board, 2000.

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.

"Highway Capacity Manual," Transportation Research Board, 2000.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) criteria are given in Table 1. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. If the degree of saturation is greater than about 0.9, average control delay is significantly affected by the length of the analysis period.

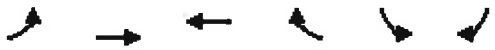
Table 1: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

"Highway Capacity Manual," Transportation Research Board, 2000.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK PERIOD TRAFFIC ANALYSIS



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	302	830	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	328	902	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	328	902	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		0.18				
v/s Ratio Perm	c0.19					
v/c Ratio	0.27	0.26				
Uniform Delay, d1	6.8	6.8				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.6	0.2				
Delay (s)	7.4	7.0				
Level of Service	A	A				
Approach Delay (s)		7.1	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	362	1218	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	381	1282	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	381	1282	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		c0.25				
v/s Ratio Perm	0.22					
v/c Ratio	0.32	0.37				
Uniform Delay, d1	7.1	7.4				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.7	0.3				
Delay (s)	7.8	7.7				
Level of Service	A	A				
Approach Delay (s)		7.8	0.0		0.0	
Approach LOS		A	A		A	

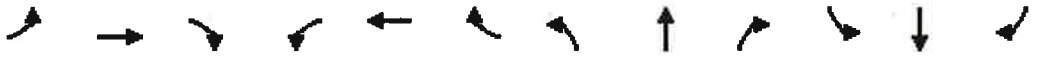
Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	8	111	104	132	0	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	0	0	0	8	117	109	139	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			477	
pX, platoon unblocked												
vC, conflicting volume	353	521	0	466	486	113	20			226		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353	521	0	466	486	113	20			226		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	99			90		
cM capacity (veh/h)	529	409	1084	440	428	918	1595			1339		

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	67	168	139	20
Volume Left	8	0	139	0
Volume Right	0	109	0	20
cSH	1595	1700	1339	1700
Volume to Capacity	0.01	0.10	0.10	0.01
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	1.0	0.0	8.0	0.0
Lane LOS	A		A	
Approach Delay (s)	0.3		7.0	
Approach LOS				

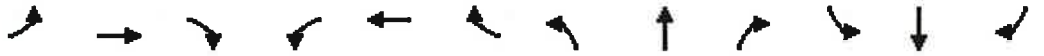
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	20.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	9	175	102	116	0	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	0	0	10	194	113	129	0	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			478	
pX, platoon unblocked												
vC, conflicting volume	375	586	0	529	543	154	14			308		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	375	586	0	529	543	154	14			308		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	99			90		
cM capacity (veh/h)	511	375	1084	397	397	865	1602			1250		

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	107	211	129	14
Volume Left	10	0	129	0
Volume Right	0	113	0	14
cSH	1602	1700	1250	1700
Volume to Capacity	0.01	0.12	0.10	0.01
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	0.7	0.0	8.2	0.0
Lane LOS	A		A	
Approach Delay (s)	0.2		7.4	
Approach LOS				

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	21.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	0	13	25	17	248	28	176	0	0	131	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	89	0	14	27	18	264	30	187	0	0	139	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								432			262	
pX, platoon unblocked												
vC, conflicting volume	587	407	91	330	429	94	182			187		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	587	407	91	330	429	94	182			187		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	73	100	99	96	97	73	98			100		
cM capacity (veh/h)	326	520	974	639	573	971	1391			1384		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	309	92	125	93	89
Volume Left	89	27	30	0	0	0
Volume Right	14	264	0	0	0	43
cSH	358	894	1391	1700	1700	1700
Volume to Capacity	0.29	0.34	0.02	0.07	0.05	0.05
Queue Length 95th (ft)	29	39	2	0	0	0
Control Delay (s)	19.1	11.1	2.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	19.1	11.1	1.1		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	46.9%	ICU Level of Service		A
Analysis Period (min)	15			

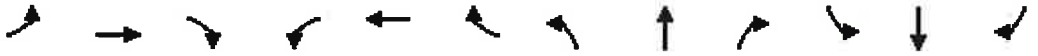
* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	0	6	26	23	68	28	218	0	0	119	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	214	0	7	31	27	80	33	256	0	0	140	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								428			267	
pX, platoon unblocked												
vC, conflicting volume	445	480	88	399	498	128	175			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	445	480	88	399	498	128	175			256		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	56	100	99	95	95	91	98			100		
cM capacity (veh/h)	487	472	978	586	533	932	1399			1305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	221	138	118	171	93	82
Volume Left	214	31	33	0	0	0
Volume Right	7	80	0	0	0	35
cSH	495	729	1399	1700	1700	1700
Volume to Capacity	0.45	0.19	0.02	0.10	0.05	0.05
Queue Length 95th (ft)	57	17	2	0	0	0
Control Delay (s)	18.0	11.1	2.3	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	18.0	11.1	0.9		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	38.2%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	351	66	27	183	22	67	179	1	57	78	22
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.98			0.99			1.00			0.98	
Flt Protected	0.95	1.00			0.99			0.99			0.98	
Satd. Flow (prot)	1770	3455			3468			3490			3402	
Flt Permitted	0.50	1.00			0.87			0.82			0.77	
Satd. Flow (perm)	935	3455			3034			2905			2674	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	73	408	77	31	213	26	78	208	1	66	91	26
RTOR Reduction (vph)	0	20	0	0	10	0	0	0	0	0	16	0
Lane Group Flow (vph)	73	466	0	0	260	0	0	287	0	0	167	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.0	40.0			30.0			30.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0			30.0			30.0	
Actuated g/C Ratio	0.50	0.50			0.38			0.38			0.38	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	519	1727			1137			1089			1002	
v/s Ratio Prot	0.01	c0.13										
v/s Ratio Perm	0.06				0.09			c0.10			0.06	
v/c Ratio	0.14	0.27			0.23			0.26			0.17	
Uniform Delay, d1	10.6	11.6			17.1			17.3			16.7	
Progression Factor	1.00	1.00			0.32			1.00			1.00	
Incremental Delay, d2	0.6	0.4			0.5			0.6			0.4	
Delay (s)	11.2	11.9			5.9			17.9			17.0	
Level of Service	B	B			A			B			B	
Approach Delay (s)		11.8			5.9			17.9			17.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Kanekapolei Street & Kuhio Avenue

11/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	573	45	20	290	3	84	215	0	65	61	33
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.99			1.00			1.00			0.97	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3501			3523			3490			3360	
Flt Permitted	0.49	1.00			0.90			0.81			0.74	
Satd. Flow (perm)	908	3501			3174			2876			2540	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	603	47	21	305	3	88	226	0	68	64	35
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	156	644	0	0	328	0	0	314	0	0	144	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	50.0	50.0			40.0			30.0			30.0	
Effective Green, g (s)	50.0	50.0			40.0			30.0			30.0	
Actuated g/C Ratio	0.56	0.56			0.44			0.33			0.33	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	552	1945			1410			958			846	
v/s Ratio Prot	0.02	c0.18										
v/s Ratio Perm	0.14				0.10			c0.11			0.06	
v/c Ratio	0.28	0.33			0.23			0.33			0.17	
Uniform Delay, d1	9.9	10.9			15.5			22.5			21.2	
Progression Factor	1.00	1.00			0.24			1.00			1.00	
Incremental Delay, d2	1.3	0.5			0.4			0.9			0.4	
Delay (s)	11.2	11.3			4.2			23.4			21.6	
Level of Service	B	B			A			C			C	
Approach Delay (s)		11.3			4.2			23.4			21.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	429	0	0	205	17	0	8	86	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.99			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3530			3499			1863	1583			
Flt Permitted		0.93			1.00			1.00	1.00			
Satd. Flow (perm)		3303			3499			1863	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	488	0	0	233	19	0	9	98	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	67	0	0	0
Lane Group Flow (vph)	0	514	0	0	245	0	0	9	31	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0			40.0			25.0	25.0			
Effective Green, g (s)		45.0			40.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.50			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1865			1749			582	494			
v/s Ratio Prot		c0.01			0.07			0.00				
v/s Ratio Perm		c0.15							c0.02			
v/c Ratio		0.28			0.14			0.02	0.06			
Uniform Delay, d1		9.1			10.8			19.0	19.3			
Progression Factor		0.56			1.39			1.00	1.00			
Incremental Delay, d2		0.4			0.2			0.0	0.2			
Delay (s)		5.5			15.1			19.0	19.5			
Level of Service		A			B			B	B			
Approach Delay (s)		5.5			15.1			19.5			0.0	
Approach LOS		A			B			B			A	

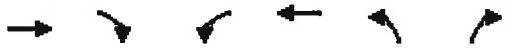
Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	616	0	0	305	44	0	43	88	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.98			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3530			3472			1863	1583			
Flt Permitted		0.92			1.00			1.00	1.00			
Satd. Flow (perm)		3257			3472			1863	1583			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	655	0	0	324	47	0	46	94	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	68	0	0	0
Lane Group Flow (vph)	0	690	0	0	358	0	0	46	26	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		55.0			50.0			25.0	25.0			
Effective Green, g (s)		55.0			50.0			25.0	25.0			
Actuated g/C Ratio		0.61			0.56			0.28	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1997			1928			517	439			
v/s Ratio Prot		c0.01			0.10			c0.02				
v/s Ratio Perm		c0.20							0.02			
v/c Ratio		0.35			0.19			0.09	0.06			
Uniform Delay, d1		8.6			9.9			24.1	23.9			
Progression Factor		0.44			1.47			1.00	1.00			
Incremental Delay, d2		0.5			0.2			0.3	0.3			
Delay (s)		4.2			14.7			24.4	24.1			
Level of Service		A			B			C	C			
Approach Delay (s)		4.2			14.7			24.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	355	108	148	225	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.96			1.00		
Flt Protected	1.00			0.98		
Satd. Flow (prot)	3415			3470		
Flt Permitted	1.00			0.63		
Satd. Flow (perm)	3415			2229		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	413	126	172	262	0	0
RTOR Reduction (vph)	36	0	0	0	0	0
Lane Group Flow (vph)	503	0	0	434	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	45.0			45.0		
Effective Green, g (s)	45.0			45.0		
Actuated g/C Ratio	0.56			0.56		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	1920			1253		
v/s Ratio Prot	0.15					
v/s Ratio Perm				c0.19		
v/c Ratio	0.26			0.35		
Uniform Delay, d1	9.0			9.5		
Progression Factor	1.91			1.00		
Incremental Delay, d2	0.3			0.8		
Delay (s)	17.5			10.3		
Level of Service	B			B		
Approach Delay (s)	17.5			10.3	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	559	101	82	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.98			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	3458			3507		
Flt Permitted	1.00			0.73		
Satd. Flow (perm)	3458			2576		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	601	109	88	389	0	0
RTOR Reduction (vph)	16	0	0	0	0	0
Lane Group Flow (vph)	694	0	0	477	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	55.0			55.0		
Effective Green, g (s)	55.0			55.0		
Actuated g/C Ratio	0.61			0.61		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	2113			1574		
v/s Ratio Prot	c0.20					
v/s Ratio Perm				0.19		
v/c Ratio	0.33			0.30		
Uniform Delay, d1	8.5			8.4		
Progression Factor	1.84			1.00		
Incremental Delay, d2	0.4			0.5		
Delay (s)	16.0			8.8		
Level of Service	B			A		
Approach Delay (s)	16.0			8.8	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	34	29	0	0	0	0	0	192	57
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	37	32	0	0	0	0	0	211	63
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											209	
pX, platoon unblocked												
vC, conflicting volume	258	242	242	242	274	0	274			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	258	242	242	242	274	0	274			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	95	100	100			100		
cM capacity (veh/h)	670	659	797	762	684	1085	1290			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	69	274
Volume Left	37	0
Volume Right	0	63
cSH	724	1700
Volume to Capacity	0.10	0.16
Queue Length 95th (ft)	8	0
Control Delay (s)	10.5	0.0
Lane LOS	B	
Approach Delay (s)	10.5	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	23.6%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	42	0	0	0	0	0	133	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	0	49	50	0	0	0	0	0	158	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											204	
pX, platoon unblocked												
vC, conflicting volume	213	188	188	188	218	0	218			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213	188	188	188	218	0	218			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	93	100	100			100		
cM capacity (veh/h)	704	707	854	815	724	1085	1352			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	99	218
Volume Left	49	0
Volume Right	0	60
cSH	766	1700
Volume to Capacity	0.13	0.13
Queue Length 95th (ft)	11	0
Control Delay (s)	10.4	0.0
Lane LOS	B	
Approach Delay (s)	10.4	0.0
Approach LOS	B	

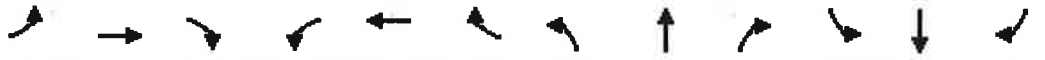
Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	108	158	0	0	0	0	0	0	79	145	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	119	174	0	0	0	0	0	0	87	159	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	292	246
Volume Left (vph)	0	87
Volume Right (vph)	174	0
Hadj (s)	-0.32	0.10
Departure Headway (s)	4.2	4.7
Degree Utilization, x	0.34	0.32
Capacity (veh/h)	814	737
Control Delay (s)	9.3	9.8
Approach Delay (s)	9.3	9.8
Approach LOS	A	A

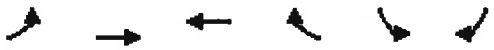
Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	34.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	111	106	0	0	0	0	0	0	63	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	125	119	0	0	0	0	0	0	71	135	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	244	206
Volume Left (vph)	0	71
Volume Right (vph)	119	0
Hadj (s)	-0.26	0.10
Departure Headway (s)	4.1	4.5
Degree Utilization, x	0.28	0.26
Capacity (veh/h)	835	757
Control Delay (s)	8.8	9.1
Approach Delay (s)	8.8	9.1
Approach LOS	A	A

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	28.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	828	0	0	257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	900	0	0	279	0
RTOR Reduction (vph)	0	0	0	0	216	0
Lane Group Flow (vph)	0	900	0	0	63	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.18			c0.02	
v/s Ratio Perm						
v/c Ratio		0.26			0.08	
Uniform Delay, d1		6.8			33.5	
Progression Factor		0.60			1.00	
Incremental Delay, d2		0.2			0.2	
Delay (s)		4.3			33.7	
Level of Service		A			C	
Approach Delay (s)		4.3	0.0		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	1177	0	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1293	0	0	233	0
RTOR Reduction (vph)	0	0	0	0	131	0
Lane Group Flow (vph)	0	1293	0	0	102	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.25			c0.03	
v/s Ratio Perm						
v/c Ratio		0.37			0.13	
Uniform Delay, d1		7.5			33.8	
Progression Factor		0.56			1.00	
Incremental Delay, d2		0.3			0.3	
Delay (s)		4.5			34.2	
Level of Service		A			C	
Approach Delay (s)		4.5	0.0		34.2	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2017 PEAK PERIOD TRAFFIC
ANALYSIS WITHOUT PROJECT

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	302	896	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	328	974	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	328	974	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		c0.19				
v/s Ratio Perm	0.19					
v/c Ratio	0.27	0.28				
Uniform Delay, d1	6.8	6.9				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.6	0.2				
Delay (s)	7.4	7.1				
Level of Service	A	A				
Approach Delay (s)		7.2	0.0		0.0	
Approach LOS		A	A		A	

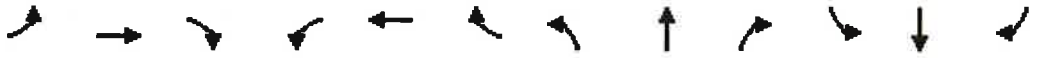
Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	362	1315	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	381	1384	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	381	1384	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		c0.27				
v/s Ratio Perm	0.22					
v/c Ratio	0.32	0.40				
Uniform Delay, d1	7.1	7.7				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.7	0.3				
Delay (s)	7.8	8.0				
Level of Service	A	A				
Approach Delay (s)		7.9	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	0	0	0	0	8	111	104	132	0	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	0	0	0	0	8	117	109	139	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			477	
pX, platoon unblocked												
vC, conflicting volume	353	521	0	466	486	113	20			226		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353	521	0	466	486	113	20			226		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	100	100	100	100	99			90		
cM capacity (veh/h)	586	409	1084	440	428	918	1595			1339		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	67	168	139	20
Volume Left	26	8	0	139	0
Volume Right	0	0	109	0	20
cSH	586	1595	1700	1339	1700
Volume to Capacity	0.04	0.01	0.10	0.10	0.01
Queue Length 95th (ft)	4	0	0	9	0
Control Delay (s)	11.4	1.0	0.0	8.0	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.4	0.3		7.0	
Approach LOS	B				

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	27.3%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	0	0	0	0	0	9	143	102	116	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	0	0	0	0	0	10	159	113	129	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			478	
pX, platoon unblocked												
vC, conflicting volume	357	550	0	493	493	136	0			272		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	357	550	0	493	493	136	0			272		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	100	100	100	99			90		
cM capacity (veh/h)	584	395	1084	422	425	888	1622			1288		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	16	89	193	129	0
Volume Left	16	10	0	129	0
Volume Right	0	0	113	0	0
cSH	584	1622	1700	1288	1700
Volume to Capacity	0.03	0.01	0.11	0.10	0.00
Queue Length 95th (ft)	2	0	0	8	0
Control Delay (s)	11.3	0.9	0.0	8.1	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.3	0.3		8.1	
Approach LOS	B				

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	27.2%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	0	13	25	17	248	28	176	0	0	131	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	89	0	14	27	18	264	30	187	0	0	139	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								432			262	
pX, platoon unblocked												
vC, conflicting volume	587	407	91	330	429	94	182			187		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	587	407	91	330	429	94	182			187		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	73	100	99	96	97	73	98			100		
cM capacity (veh/h)	326	520	974	639	573	971	1391			1384		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	309	92	125	93	89
Volume Left	89	27	30	0	0	0
Volume Right	14	264	0	0	0	43
cSH	358	894	1391	1700	1700	1700
Volume to Capacity	0.29	0.34	0.02	0.07	0.05	0.05
Queue Length 95th (ft)	29	39	2	0	0	0
Control Delay (s)	19.1	11.1	2.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	19.1	11.1	1.1		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.0			
Intersection Capacity Utilization	46.9%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	0	0	26	23	68	10	218	0	0	119	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	214	0	0	31	27	80	12	256	0	0	140	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								428			267	
pX, platoon unblocked												
vC, conflicting volume	403	438	88	350	455	128	175			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	403	438	88	350	455	128	175			256		
tC, single (s)	*6.5	6.5	6.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	59	100	100	95	95	91	99			100		
cM capacity (veh/h)	523	507	953	638	565	932	1399			1305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	214	138	97	171	93	82
Volume Left	214	31	12	0	0	0
Volume Right	0	80	0	0	0	35
cSH	523	758	1399	1700	1700	1700
Volume to Capacity	0.41	0.18	0.01	0.10	0.05	0.05
Queue Length 95th (ft)	49	17	1	0	0	0
Control Delay (s)	16.6	10.8	1.0	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	16.6	10.8	0.4		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	6.5			
Intersection Capacity Utilization	36.8%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	379	66	27	198	22	67	179	1	57	78	22
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.98			0.99			1.00			0.98	
Flt Protected	0.95	1.00			0.99			0.99			0.98	
Satd. Flow (prot)	1770	3460			3472			3490			3402	
Flt Permitted	0.49	1.00			0.87			0.82			0.77	
Satd. Flow (perm)	920	3460			3035			2905			2674	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	73	441	77	31	230	26	78	208	1	66	91	26
RTOR Reduction (vph)	0	18	0	0	9	0	0	0	0	0	16	0
Lane Group Flow (vph)	73	501	0	0	278	0	0	287	0	0	167	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.0	40.0			30.0			30.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0			30.0			30.0	
Actuated g/C Ratio	0.50	0.50			0.38			0.38			0.38	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	513	1730			1138			1089			1002	
v/s Ratio Prot	0.01	c0.14										
v/s Ratio Perm	0.06				0.09			c0.10			0.06	
v/c Ratio	0.14	0.29			0.24			0.26			0.17	
Uniform Delay, d1	10.6	11.7			17.2			17.3			16.7	
Progression Factor	1.00	1.00			0.31			1.00			1.00	
Incremental Delay, d2	0.6	0.4			0.5			0.6			0.4	
Delay (s)	11.2	12.1			5.9			17.9			17.0	
Level of Service	B	B			A			B			B	
Approach Delay (s)		12.0			5.9			17.9			17.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

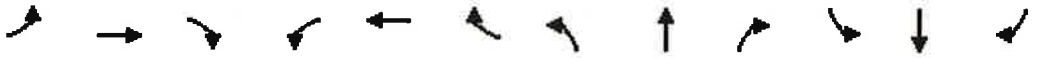
HCM Signalized Intersection Capacity Analysis
1: Kanekapolei Street & Kuhio Avenue

11/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	674	45	20	297	3	81	198	0	65	61	33
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.99			1.00			1.00			0.97	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3506			3524			3489			3360	
Flt Permitted	0.48	1.00			0.89			0.81			0.75	
Satd. Flow (perm)	898	3506			3148			2869			2561	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	709	47	21	313	3	85	208	0	68	64	35
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	162	751	0	0	336	0	0	293	0	0	144	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	50.0	50.0			40.0			30.0			30.0	
Effective Green, g (s)	50.0	50.0			40.0			30.0			30.0	
Actuated g/C Ratio	0.56	0.56			0.44			0.33			0.33	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	547	1947			1399			956			853	
v/s Ratio Prot	0.02	c0.21										
v/s Ratio Perm	0.15				0.11			c0.10			0.06	
v/c Ratio	0.30	0.39			0.24			0.31			0.17	
Uniform Delay, d1	10.0	11.3			15.6			22.3			21.2	
Progression Factor	1.00	1.00			0.22			1.00			1.00	
Incremental Delay, d2	1.4	0.6			0.4			0.8			0.4	
Delay (s)	11.4	11.9			3.9			23.1			21.6	
Level of Service	B	B			A			C			C	
Approach Delay (s)		11.8			3.9			23.1			21.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	463	0	0	221	17	0	8	86	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.99			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3502			1863	1583			
Flt Permitted		0.93			1.00			1.00	1.00			
Satd. Flow (perm)		3304			3502			1863	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	526	0	0	251	19	0	9	98	0	0	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	67	0	0	0
Lane Group Flow (vph)	0	552	0	0	263	0	0	9	31	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0			40.0			25.0	25.0			
Effective Green, g (s)		45.0			40.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.50			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1865			1751			582	494			
v/s Ratio Prot		c0.01			0.08			0.00				
v/s Ratio Perm		c0.16							c0.02			
v/c Ratio		0.30			0.15			0.02	0.06			
Uniform Delay, d1		9.2			10.8			19.0	19.3			
Progression Factor		0.54			1.37			1.00	1.00			
Incremental Delay, d2		0.4			0.2			0.0	0.2			
Delay (s)		5.3			15.0			19.0	19.5			
Level of Service		A			B			B	B			
Approach Delay (s)		5.3			15.0			19.5			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	665	0	0	329	44	0	43	88	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.98			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3476			1863	1583			
Flt Permitted		0.92			1.00			1.00	1.00			
Satd. Flow (perm)		3259			3476			1863	1583			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	707	0	0	350	47	0	46	94	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	68	0	0	0
Lane Group Flow (vph)	0	742	0	0	385	0	0	46	26	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		55.0			50.0			25.0	25.0			
Effective Green, g (s)		55.0			50.0			25.0	25.0			
Actuated g/C Ratio		0.61			0.56			0.28	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1999			1931			517	439			
v/s Ratio Prot		c0.01			0.11			c0.02				
v/s Ratio Perm		c0.22							0.02			
v/c Ratio		0.37			0.20			0.09	0.06			
Uniform Delay, d1		8.8			10.0			24.1	23.9			
Progression Factor		0.39			1.44			1.00	1.00			
Incremental Delay, d2		0.5			0.2			0.3	0.3			
Delay (s)		3.9			14.6			24.4	24.1			
Level of Service		A			B			C	C			
Approach Delay (s)		3.9			14.6			24.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	383	108	148	243	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.97			1.00		
Flt Protected	1.00			0.98		
Satd. Flow (prot)	3422			3474		
Flt Permitted	1.00			0.62		
Satd. Flow (perm)	3422			2210		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	445	126	172	283	0	0
RTOR Reduction (vph)	32	0	0	0	0	0
Lane Group Flow (vph)	539	0	0	455	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	45.0			45.0		
Effective Green, g (s)	45.0			45.0		
Actuated g/C Ratio	0.56			0.56		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	1924			1243		
v/s Ratio Prot	0.16					
v/s Ratio Perm				c0.21		
v/c Ratio	0.28			0.37		
Uniform Delay, d1	9.1			9.6		
Progression Factor	1.92			1.00		
Incremental Delay, d2	0.4			0.8		
Delay (s)	17.8			10.5		
Level of Service	B			B		
Approach Delay (s)	17.8			10.5	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	604	101	82	391	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.98			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	3463			3509		
Flt Permitted	1.00			0.72		
Satd. Flow (perm)	3463			2564		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	649	109	88	420	0	0
RTOR Reduction (vph)	15	0	0	0	0	0
Lane Group Flow (vph)	743	0	0	508	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	55.0			55.0		
Effective Green, g (s)	55.0			55.0		
Actuated g/C Ratio	0.61			0.61		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	2116			1566		
v/s Ratio Prot	c0.21					
v/s Ratio Perm				0.20		
v/c Ratio	0.35			0.32		
Uniform Delay, d1	8.7			8.5		
Progression Factor	2.02			1.00		
Incremental Delay, d2	0.4			0.6		
Delay (s)	17.9			9.0		
Level of Service	B			A		
Approach Delay (s)	17.9			9.0	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	34	29	0	0	0	0	0	192	57
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	37	32	0	0	0	0	0	211	63
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											209	
pX, platoon unblocked												
vC, conflicting volume	258	242	242	242	274	0	274			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	258	242	242	242	274	0	274			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	95	100	100			100		
cM capacity (veh/h)	670	659	797	762	684	1085	1290			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	69	274
Volume Left	37	0
Volume Right	0	63
cSH	724	1700
Volume to Capacity	0.10	0.16
Queue Length 95th (ft)	8	0
Control Delay (s)	10.5	0.0
Lane LOS	B	
Approach Delay (s)	10.5	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	42	0	0	0	0	0	133	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	0	49	50	0	0	0	0	0	158	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											204	
pX, platoon unblocked												
vC, conflicting volume	213	188	188	188	218	0	218			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213	188	188	188	218	0	218			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	93	100	100			100		
cM capacity (veh/h)	704	707	854	815	724	1085	1352			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	99	218
Volume Left	49	0
Volume Right	0	60
cSH	766	1700
Volume to Capacity	0.13	0.13
Queue Length 95th (ft)	11	0
Control Delay (s)	10.4	0.0
Lane LOS	B	
Approach Delay (s)	10.4	0.0
Approach LOS	B	

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	21.2%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	108	158	0	0	0	0	0	0	79	145	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	119	174	0	0	0	0	0	0	87	159	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	292	246
Volume Left (vph)	0	87
Volume Right (vph)	174	0
Hadj (s)	-0.32	0.10
Departure Headway (s)	4.2	4.7
Degree Utilization, x	0.34	0.32
Capacity (veh/h)	814	737
Control Delay (s)	9.3	9.8
Approach Delay (s)	9.3	9.8
Approach LOS	A	A

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	34.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	111	106	0	0	0	0	0	0	63	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	125	119	0	0	0	0	0	0	71	135	0

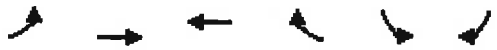
Direction, Lane #	EB 1	SB 1
Volume Total (vph)	244	206
Volume Left (vph)	0	71
Volume Right (vph)	119	0
Hadj (s)	-0.26	0.10
Departure Headway (s)	4.1	4.5
Degree Utilization, x	0.28	0.26
Capacity (veh/h)	835	757
Control Delay (s)	8.8	9.1
Approach Delay (s)	8.8	9.1
Approach LOS	A	A

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	28.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	894	0	0	257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	972	0	0	279	0
RTOR Reduction (vph)	0	0	0	0	216	0
Lane Group Flow (vph)	0	972	0	0	63	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.19			c0.02	
v/s Ratio Perm						
v/c Ratio		0.28			0.08	
Uniform Delay, d1		6.9			33.5	
Progression Factor		0.59			1.00	
Incremental Delay, d2		0.2			0.2	
Delay (s)		4.3			33.7	
Level of Service		A			C	
Approach Delay (s)		4.3	0.0		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



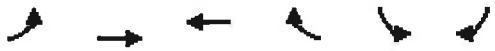
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	1271	0	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1397	0	0	233	0
RTOR Reduction (vph)	0	0	0	0	107	0
Lane Group Flow (vph)	0	1397	0	0	126	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.27			c0.04	
v/s Ratio Perm						
v/c Ratio		0.40			0.16	
Uniform Delay, d1		7.7			34.1	
Progression Factor		0.55			1.00	
Incremental Delay, d2		0.3			0.4	
Delay (s)		4.5			34.5	
Level of Service		A			C	
Approach Delay (s)		4.5	0.0		34.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2017 PEAK PERIOD TRAFFIC
ANALYSIS WITH PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	333	896	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	362	974	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	362	974	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		0.19				
v/s Ratio Perm	c0.20					
v/c Ratio	0.30	0.28				
Uniform Delay, d1	7.0	6.9				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.6	0.2				
Delay (s)	7.6	7.1				
Level of Service	A	A				
Approach Delay (s)		7.2	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	379	1315	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	1384	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	399	1384	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		c0.27				
v/s Ratio Perm	0.23					
v/c Ratio	0.33	0.40				
Uniform Delay, d1	7.2	7.7				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.7	0.3				
Delay (s)	7.9	8.0				
Level of Service	A	A				
Approach Delay (s)		8.0	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	0	0	0	0	8	111	135	132	0	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	0	0	0	0	8	117	142	139	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			477	
pX, platoon unblocked												
vC, conflicting volume	353	554	0	483	503	129	20			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353	554	0	483	503	129	20			259		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	99			89		
cM capacity (veh/h)	585	390	1084	427	417	896	1595			1303		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	67	201	139	20
Volume Left	26	8	0	139	0
Volume Right	0	0	142	0	20
cSH	585	1595	1700	1303	1700
Volume to Capacity	0.05	0.01	0.12	0.11	0.01
Queue Length 95th (ft)	4	0	0	9	0
Control Delay (s)	11.4	1.0	0.0	8.1	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.4	0.2		7.1	
Approach LOS	B				

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	28.3%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	0	0	0	0	0	9	143	119	116	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	0	0	0	0	0	10	159	132	129	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			478	
pX, platoon unblocked												
vC, conflicting volume	357	569	0	503	503	146	0			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	357	569	0	503	503	146	0			291		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	100	100	100	99			90		
cM capacity (veh/h)	584	384	1084	415	419	875	1622			1268		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	16	89	212	129	0
Volume Left	16	10	0	129	0
Volume Right	0	0	132	0	0
cSH	584	1622	1700	1268	1700
Volume to Capacity	0.03	0.01	0.12	0.10	0.00
Queue Length 95th (ft)	2	0	0	8	0
Control Delay (s)	11.3	0.9	0.0	8.2	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.3	0.3		8.2	
Approach LOS	B				

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A	
Analysis Period (min)	15			

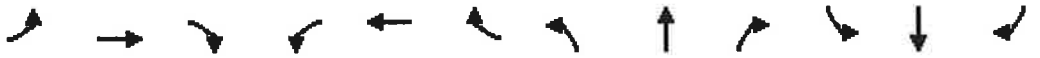
* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	0	13	25	17	296	28	176	0	0	131	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	89	0	14	27	18	315	30	187	0	0	139	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								432			262	
pX, platoon unblocked												
vC, conflicting volume	638	407	91	330	429	94	182			187		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	638	407	91	330	429	94	182			187		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	68	100	99	96	97	68	98			100		
cM capacity (veh/h)	282	520	974	639	573	971	1391			1384		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	360	92	125	93	89
Volume Left	89	27	30	0	0	0
Volume Right	14	315	0	0	0	43
cSH	312	905	1391	1700	1700	1700
Volume to Capacity	0.33	0.40	0.02	0.07	0.05	0.05
Queue Length 95th (ft)	35	48	2	0	0	0
Control Delay (s)	22.2	11.6	2.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	22.2	11.6	1.1		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	0	0	26	23	96	10	218	0	0	119	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	214	0	0	31	27	113	12	256	0	0	140	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								428			267	
pX, platoon unblocked												
vC, conflicting volume	436	438	88	350	455	128	175			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	436	438	88	350	455	128	175			256		
tC, single (s)	*6.5	6.5	6.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	100	100	95	95	88	99			100		
cM capacity (veh/h)	481	507	953	638	565	932	1399			1305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	214	171	97	171	93	82
Volume Left	214	31	12	0	0	0
Volume Right	0	113	0	0	0	35
cSH	481	786	1399	1700	1700	1700
Volume to Capacity	0.45	0.22	0.01	0.10	0.05	0.05
Queue Length 95th (ft)	56	21	1	0	0	0
Control Delay (s)	18.4	10.8	1.0	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	18.4	10.8	0.4		0.0	
Approach LOS	C	B				

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	400	66	27	198	22	81	201	1	60	78	22
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.98			0.99			1.00			0.98	
Flt Protected	0.95	1.00			0.99			0.99			0.98	
Satd. Flow (prot)	1770	3464			3472			3488			3402	
Flt Permitted	0.49	1.00			0.87			0.81			0.75	
Satd. Flow (perm)	920	3464			3025			2853			2607	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	73	465	77	31	230	26	94	234	1	70	91	26
RTOR Reduction (vph)	0	17	0	0	9	0	0	0	0	0	16	0
Lane Group Flow (vph)	73	526	0	0	278	0	0	329	0	0	171	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.0	40.0			30.0			30.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0			30.0			30.0	
Actuated g/C Ratio	0.50	0.50			0.38			0.38			0.38	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	513	1732			1134			1069			977	
v/s Ratio Prot	0.01	c0.15										
v/s Ratio Perm	0.06				0.09			c0.12			0.07	
v/c Ratio	0.14	0.30			0.24			0.31			0.17	
Uniform Delay, d1	10.6	11.8			17.2			17.7			16.7	
Progression Factor	1.00	1.00			0.31			1.00			1.00	
Incremental Delay, d2	0.6	0.5			0.5			0.7			0.4	
Delay (s)	11.2	12.2			5.9			18.4			17.1	
Level of Service	B	B			A			B			B	
Approach Delay (s)		12.1			5.9			18.4			17.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	685	45	20	297	3	89	211	0	67	61	33
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.99			1.00			1.00			0.97	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3507			3524			3487			3360	
Flt Permitted	0.48	1.00			0.89			0.80			0.73	
Satd. Flow (perm)	898	3507			3145			2841			2519	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	721	47	21	313	3	94	222	0	71	64	35
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	162	763	0	0	336	0	0	316	0	0	147	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	50.0	50.0			40.0			30.0			30.0	
Effective Green, g (s)	50.0	50.0			40.0			30.0			30.0	
Actuated g/C Ratio	0.56	0.56			0.44			0.33			0.33	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	547	1948			1397			947			839	
v/s Ratio Prot	0.02	c0.22										
v/s Ratio Perm	0.15				0.11			c0.11			0.06	
v/c Ratio	0.30	0.39			0.24			0.33			0.17	
Uniform Delay, d1	10.0	11.4			15.6			22.5			21.2	
Progression Factor	1.00	1.00			0.22			1.00			1.00	
Incremental Delay, d2	1.4	0.6			0.4			0.9			0.5	
Delay (s)	11.4	12.0			3.9			23.5			21.7	
Level of Service	B	B			A			C			C	
Approach Delay (s)		11.8			3.9			23.5			21.7	
Approach LOS		B			A			C			C	

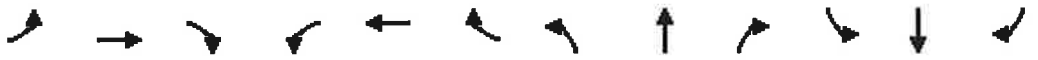
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	487	0	0	221	17	0	8	98	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.99			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3502			1863	1583			
Flt Permitted		0.93			1.00			1.00	1.00			
Satd. Flow (perm)		3308			3502			1863	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	553	0	0	251	19	0	9	111	0	0	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	76	0	0	0
Lane Group Flow (vph)	0	579	0	0	263	0	0	9	35	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0			40.0			25.0	25.0			
Effective Green, g (s)		45.0			40.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.50			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1867			1751			582	494			
v/s Ratio Prot		c0.01			0.08			0.00				
v/s Ratio Perm		c0.16							c0.02			
v/c Ratio		0.31			0.15			0.02	0.07			
Uniform Delay, d1		9.3			10.8			19.0	19.3			
Progression Factor		0.53			1.35			1.00	1.00			
Incremental Delay, d2		0.4			0.2			0.0	0.3			
Delay (s)		5.3			14.8			19.0	19.6			
Level of Service		A			B			B	B			
Approach Delay (s)		5.3			14.8			19.6			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	678	0	0	329	44	0	43	95	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.98			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3476			1863	1583			
Flt Permitted		0.92			1.00			1.00	1.00			
Satd. Flow (perm)		3261			3476			1863	1583			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	721	0	0	350	47	0	46	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	73	0	0	0
Lane Group Flow (vph)	0	756	0	0	385	0	0	46	28	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		55.0			50.0			25.0	25.0			
Effective Green, g (s)		55.0			50.0			25.0	25.0			
Actuated g/C Ratio		0.61			0.56			0.28	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		2000			1931			517	439			
v/s Ratio Prot		c0.01			0.11			c0.02				
v/s Ratio Perm		c0.22							0.02			
v/c Ratio		0.38			0.20			0.09	0.06			
Uniform Delay, d1		8.8			10.0			24.1	23.9			
Progression Factor		0.39			1.43			1.00	1.00			
Incremental Delay, d2		0.5			0.2			0.3	0.3			
Delay (s)		4.0			14.5			24.4	24.2			
Level of Service		A			B			C	C			
Approach Delay (s)		4.0			14.5			24.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	395	132	162	243	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.96			1.00		
Flt Protected	1.00			0.98		
Satd. Flow (prot)	3406			3470		
Flt Permitted	1.00			0.61		
Satd. Flow (perm)	3406			2144		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	459	153	188	283	0	0
RTOR Reduction (vph)	41	0	0	0	0	0
Lane Group Flow (vph)	571	0	0	471	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	45.0			45.0		
Effective Green, g (s)	45.0			45.0		
Actuated g/C Ratio	0.56			0.56		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	1915			1206		
v/s Ratio Prot	0.17					
v/s Ratio Perm				c0.22		
v/c Ratio	0.30			0.39		
Uniform Delay, d1	9.2			9.8		
Progression Factor	1.94			1.00		
Incremental Delay, d2	0.4			1.0		
Delay (s)	18.2			10.8		
Level of Service	B			B		
Approach Delay (s)	18.2			10.8	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	611	114	90	391	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.98			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	3455			3506		
Flt Permitted	1.00			0.70		
Satd. Flow (perm)	3455			2487		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	657	123	97	420	0	0
RTOR Reduction (vph)	17	0	0	0	0	0
Lane Group Flow (vph)	763	0	0	517	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	55.0			55.0		
Effective Green, g (s)	55.0			55.0		
Actuated g/C Ratio	0.61			0.61		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	2111			1519		
v/s Ratio Prot	c0.22					
v/s Ratio Perm				0.21		
v/c Ratio	0.36			0.34		
Uniform Delay, d1	8.7			8.6		
Progression Factor	2.02			1.00		
Incremental Delay, d2	0.5			0.6		
Delay (s)	18.1			9.2		
Level of Service	B			A		
Approach Delay (s)	18.1			9.2	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	34	60	0	0	0	0	0	192	95
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	37	66	0	0	0	0	0	211	104
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											209	
pX, platoon unblocked												
vC, conflicting volume	296	263	263	263	315	0	315			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296	263	263	263	315	0	315			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	90	100	100			100		
cM capacity (veh/h)	606	642	775	743	656	1085	1245			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	103	315
Volume Left	37	0
Volume Right	0	104
cSH	685	1700
Volume to Capacity	0.15	0.19
Queue Length 95th (ft)	13	0
Control Delay (s)	11.2	0.0
Lane LOS	B	
Approach Delay (s)	11.2	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	59	0	0	0	0	0	133	71
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	0	49	70	0	0	0	0	0	158	85
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											204	
pX, platoon unblocked												
vC, conflicting volume	236	201	201	201	243	0	243			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	236	201	201	201	243	0	243			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	90	100	100			100		
cM capacity (veh/h)	664	695	840	802	706	1085	1323			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	119	243
Volume Left	49	0
Volume Right	0	85
cSH	742	1700
Volume to Capacity	0.16	0.14
Queue Length 95th (ft)	14	0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	139	158	0	0	0	0	0	0	79	145	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	153	174	0	0	0	0	0	0	87	159	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	326	246
Volume Left (vph)	0	87
Volume Right (vph)	174	0
Hadj (s)	-0.29	0.10
Departure Headway (s)	4.2	4.8
Degree Utilization, x	0.38	0.32
Capacity (veh/h)	808	720
Control Delay (s)	9.9	10.0
Approach Delay (s)	9.9	10.0
Approach LOS	A	B

Intersection Summary				
Delay	9.9			
Level of Service	A			
Intersection Capacity Utilization	35.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	128	106	0	0	0	0	0	0	63	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	144	119	0	0	0	0	0	0	71	135	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	263	206
Volume Left (vph)	0	71
Volume Right (vph)	119	0
Hadj (s)	-0.24	0.10
Departure Headway (s)	4.2	4.6
Degree Utilization, x	0.30	0.26
Capacity (veh/h)	822	748
Control Delay (s)	9.0	9.2
Approach Delay (s)	9.0	9.2
Approach LOS	A	A

Intersection Summary				
Delay	9.1			
Level of Service	A			
Intersection Capacity Utilization	29.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↑	
Volume (vph)	0	894	0	0	257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	972	0	0	279	0
RTOR Reduction (vph)	0	0	0	0	216	0
Lane Group Flow (vph)	0	972	0	0	63	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.19			c0.02	
v/s Ratio Perm						
v/c Ratio		0.28			0.08	
Uniform Delay, d1		6.9			33.5	
Progression Factor		0.59			1.00	
Incremental Delay, d2		0.2			0.2	
Delay (s)		4.3			33.7	
Level of Service		A			C	
Approach Delay (s)		4.3	0.0		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	1271	0	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1397	0	0	233	0
RTOR Reduction (vph)	0	0	0	0	107	0
Lane Group Flow (vph)	0	1397	0	0	126	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.27			c0.04	
v/s Ratio Perm						
v/c Ratio		0.40			0.16	
Uniform Delay, d1		7.7			34.1	
Progression Factor		0.55			1.00	
Incremental Delay, d2		0.3			0.4	
Delay (s)		4.5			34.5	
Level of Service		A			C	
Approach Delay (s)		4.5	0.0		34.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 5

TRAFFIC ASSESSMENT REPORT – KAIULANI AVENUE TWO-WAY CONVERSION

Traffic Assessment Report

Kaiulani Avenue Two-Way Conversion

Prepared for:
BSV KVSC, LLC

Prepared by:
Wilson Okamoto Corporation

August 2014

TRAFFIC ASSESSMENT REPORT

FOR THE

PROPOSED KAIULANI AVENUE

TWO-WAY CONVERSION

Prepared for:

BSC KVSC, LLC
1288 Ala Moana Boulevard, Suite 288
Honolulu, HI 96814

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref #8356-01

August 2014

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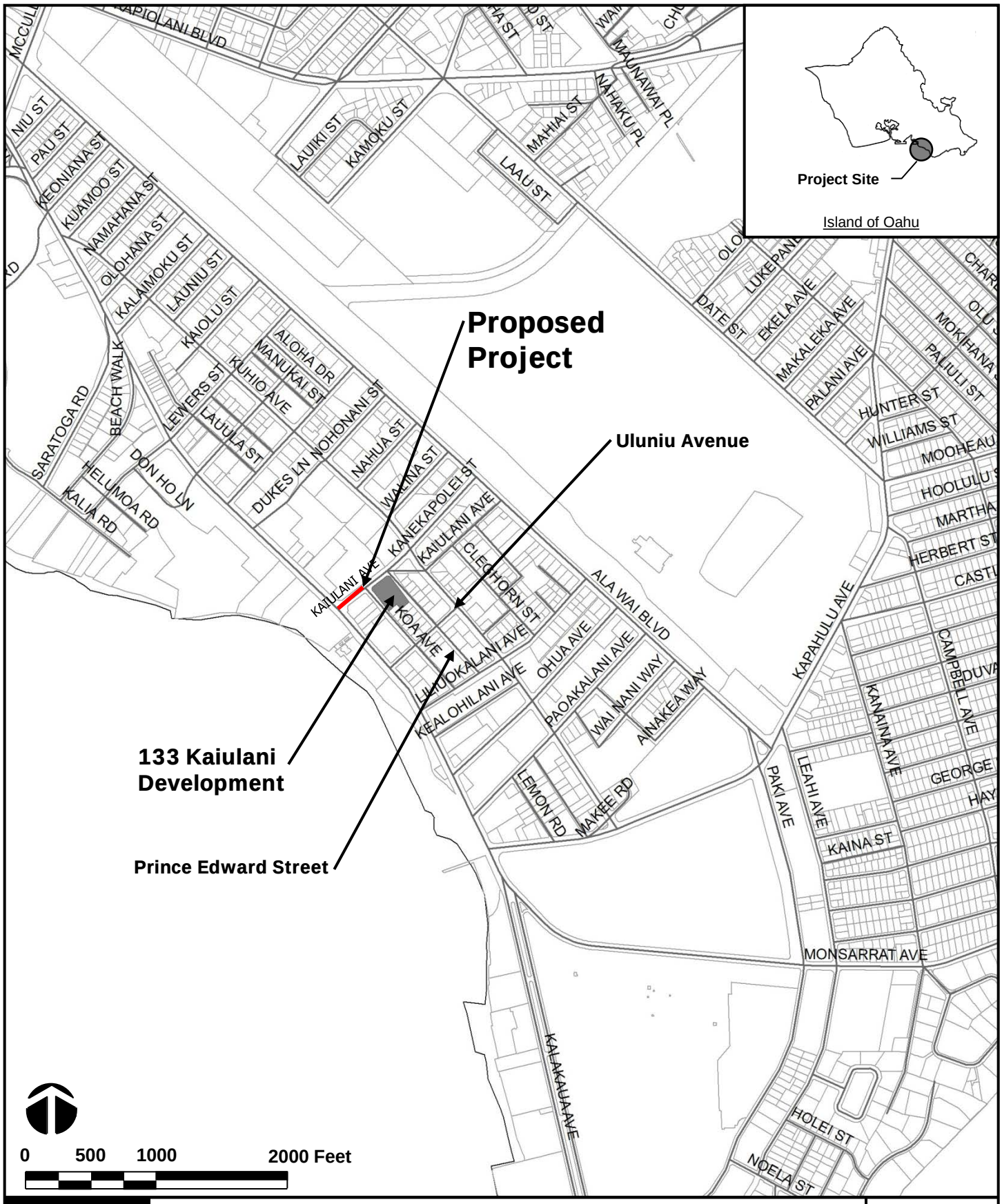
I. INTRODUCTION

The purpose of this study is to assess traffic conditions with the proposed conversion of a portion of Kaiulani Avenue from one-way (northbound) to two-way traffic flow. The section of Kaiulani Avenue under consideration is near the proposed 133 Kaiulani development in Waikiki on the island of Oahu. This report presents the findings and conclusions of the traffic study, the scope of which includes:

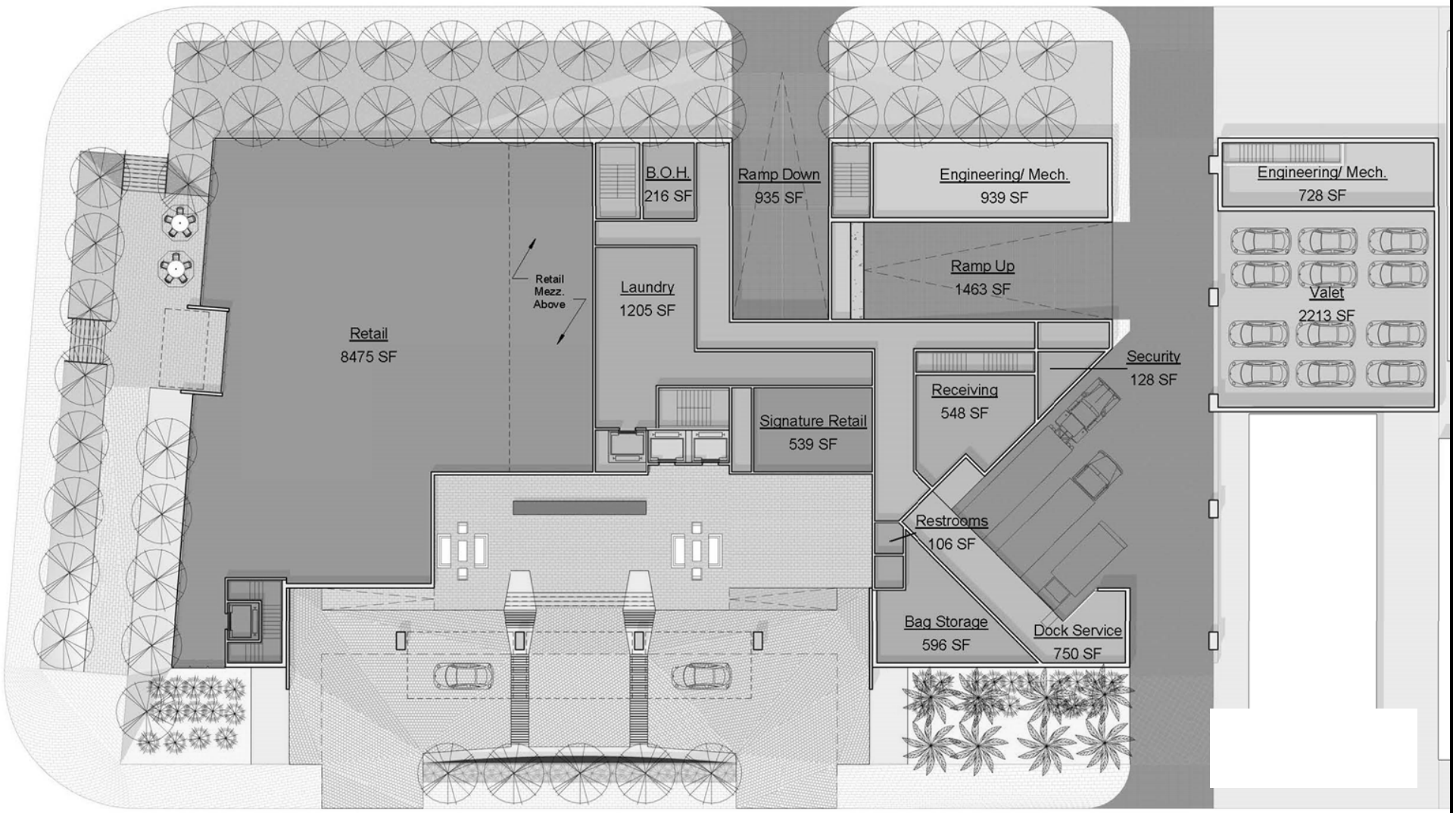
1. Description of the proposed project.
2. Evaluation of baseline roadway and traffic operations in the vicinity.
3. Analysis and development of trip reassignment in the vicinity with the proposed project.
4. Analysis of future roadway and traffic conditions with the proposed project.
5. Recommendations of improvements, if appropriate, that would alleviate the traffic conditions resulting from the proposed project.

II. PROJECT DESCRIPTION

The section of Kaiulani Avenue under consideration for conversion to a two-way roadway is located near the proposed 133 Kaiulani development in Waikiki (see Figure 1) between Kalakaua Avenue and Koa Avenue. The proposed 133 Kaiulani development is expected to include residential and commercial uses with access provided via driveways off Koa Avenue and Prince Edward Street (see Figure 2 for the project site plan). The proposed project entails the conversion of the one lane along the west side of Kaiulani from one-way (northbound) to provide two-way traffic flow between Kalakaua Avenue and Koa Avenue. At the intersection of Kaiulani Avenue with Kalakaua Avenue, Kaiulani Avenue approach is expected to be modified to accommodate the reduction in northbound lanes and inclusion of a southbound lane. At the intersection with Koa Avenue, the existing lane use on the eastbound and westbound approaches of the intersections are expected to be modified to allow the new southbound turning movement while the lane use on the other approaches are expected to be modified to accommodate the reduction in northbound lanes and inclusion of a southbound lane.



WILSON OKAMOTO CORPORATION	KAIULANI AVENUE TWO-WAY CONVERSION	FIGURE 1
	LOCATION MAP AND VICINITY MAP	



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KAIULANI AVENUE TWO-WAY CONVERSION

PROJECT SITE PLAN

FIGURE 2

III. BASELINE TRAFFIC CONDITIONS

A. Area Roadway System

The section of Kaiulani Avenue under consideration for conversion to a two-way roadway is located between Kalakaua Avenue and Koa Avenue. Between Kalakaua Avenue and Koa Avenue, Kaiulani Avenue is a two-lane, one-way (northbound) roadway. At Koa Avenue, Kaiulani Avenue transitions to a four-lane, two-way roadway to Prince Edward Street and Kanekapolei Street where the roadway transitions back to a one-way (northbound) roadway with two lanes between Prince Edward Street and Kuhio Avenue. Kalakaua Avenue is a predominantly four-lane, one-way (eastbound) roadway generally oriented in the east-west direction that with Ala Wai Boulevard forms a couplet system that provides access through Waikiki. At the signalized intersection with Kaiulani Avenue, the Kalakaua Avenue approach has an exclusive left-turn lane and three through lanes.

North of the intersection with Kalakaua Avenue, Kaiulani Avenue intersects Koa Avenue. At this unsignalized intersection, both approaches of Kaiulani Avenue have two lanes that serve all traffic movements. The east leg of the intersection is comprised of Koa Avenue which is a one-lane, one-way (eastbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. The west leg of the intersection is comprised of the entrance to the existing porte cochere for the Princess Kaiulani Hotel. It should be noted that in conjunction with a proposed redevelopment project at the Princess Kaiulani Hotel, the eastbound approach of the intersection is expected to be modified to a two-way approach with one lane that serves left-turn and through traffic movements.

Further north, Kaiulani Avenue intersects Kanekapolei Street and Prince Edward Street. At this unsignalized intersection, the northbound approach of Kaiulani Avenue has two lanes that serve all traffic movements. The southbound approach of the intersection is comprised of Kanekapolei Street which serves as a connector roadway between this intersection and Ala Wai Boulevard. At the intersection with Prince Edward Street and Kaiulani Avenue, the Kanekapolei Street approach has two southbound lanes that serve all traffic movements. The eastbound approach of the intersection is comprised of the existing driveways for the Princess

Kaiulani Hotel and the adjacent Ohana East Hotel. The driveway for the Princess Kaiulani Hotel is a two-lane, two-way driveway that leads to the parking structure while the driveway for the Ohana East Hotel is a one-lane, one-way (exiting) driveway. The westbound approach of the intersection is comprised of Prince Edward Street which is a one-lane, one-way (westbound) roadway that serves as a connector roadway between Kaiulani Avenue and Liliuokalani Avenue. At the intersection with Kaiulani Avenue and Kanekapolei Street, the Prince Edward Street approach has one stop-controlled lane that serves left-turn and right-turn traffic movements.

East of the intersection with Kanekapolei Street, Kuhio Avenue intersects Kaiulani Avenue. At this signalized intersection, the eastbound approach of Kuhio Avenue has two lanes that serve left-turn and through traffic movements while the westbound approach has two lanes that serve through and right-turn traffic movements. The Kaiulani Avenue approach of the intersection has one through lane and an exclusive right-turn lane.

Further east, Kuhio Avenue intersects Uluniu Avenue. At this signalized T-intersection, the eastbound approach of Kuhio Avenue has two lanes that serve through and right-turn traffic movements while the westbound approach has two lanes that serve left-turn and through traffic movements. Uluniu Avenue is a predominantly one-lane, one-way (southbound) roadway that serves as a connector roadway between Kuhio Avenue and Kalakaua Avenue.

South of the intersection with Kuhio Avenue, Uluniu Avenue intersects Prince Edward Street and Koa Avenue. At the unsignalized intersection with Prince Edward Street, the Uluniu Avenue approach has one lane that serves through and right-turn traffic movements while the Prince Edward Street approach has one stop-controlled lane that serves left-turn and through traffic movements. At the unsignalized intersection with Koa Avenue, the Uluniu Avenue approach has one stop-controlled lane that serves left-turn and through traffic movements while the Koa Avenue approach has one stop-controlled lane that serves through and right-turn traffic movements.

Further south, Uluniu Avenue intersects Kalakaua Avenue. At this signalized T-intersection, the Uluniu Avenue approach has two left-turn lanes. The Kalakaua Avenue approach of the intersection has three through lanes.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted in September October 2013 and consisted of manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Kalakaua Avenue and Kaiulani Avenue
- Kaiulani Avenue and Koa Avenue
- Kaiulani Avenue, Kanekapolei Street, and Prince Edward Street
- Kuhio Avenue and Kanekapolei Street
- Kaiulani Avenue and Kuhio Avenue
- Uluniu Avenue and Kuhio Avenue
- Uluniu Avenue and Prince Edward Street
- Koa Avenue and Uluniu Avenue
- Kalakaua Avenue and Uluniu Avenue

Appendix A includes the 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. 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. The LOS definitions are included in Appendix B.

2. Baseline Peak Hour Traffic

a. General

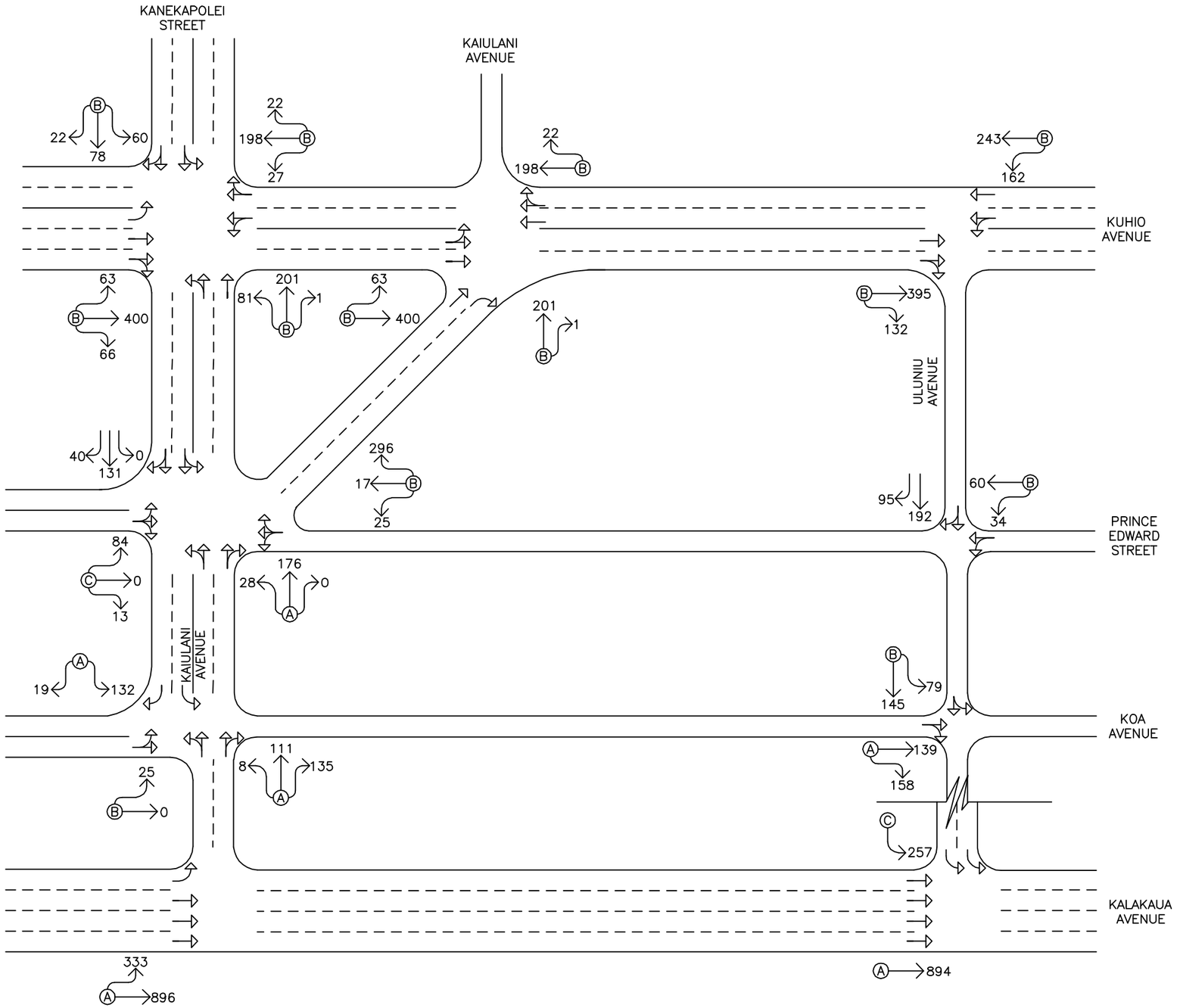
Figures 3 and 4 show the baseline Year 2017 AM and PM peak hour traffic volumes and conditions. These traffic conditions are based on the projected conditions included in the "Traffic Impact Report for the 133 Kaiulani Development" dated May 2014. The AM peak hour of traffic generally occurs between the hours of 7:30 AM and 8:30 AM. The PM peak hour of traffic generally occurs between the hours of 4:45 PM and 5:45 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. Kalakaua Avenue and Kaiulani Avenue

At the intersection with Kaiulani Avenue, Kalakaua Avenue is anticipated to carry 1,229 vehicles eastbound during the AM peak period and 1,694 vehicles eastbound during the PM peak period. The eastbound approach of Kalakaua Avenue is expected to operate at LOS "A" during both peak periods.

c. Kaiulani Avenue and Koa Avenue

At the intersection with Koa Avenue, Kaiulani Avenue is anticipated to carry 254 vehicles northbound and 151 vehicles southbound during the AM peak period. During the PM peak period, Kaiulani Avenue is expected to carry fewer vehicles with 271 vehicles heading northbound and 116 vehicles traveling in the southbound

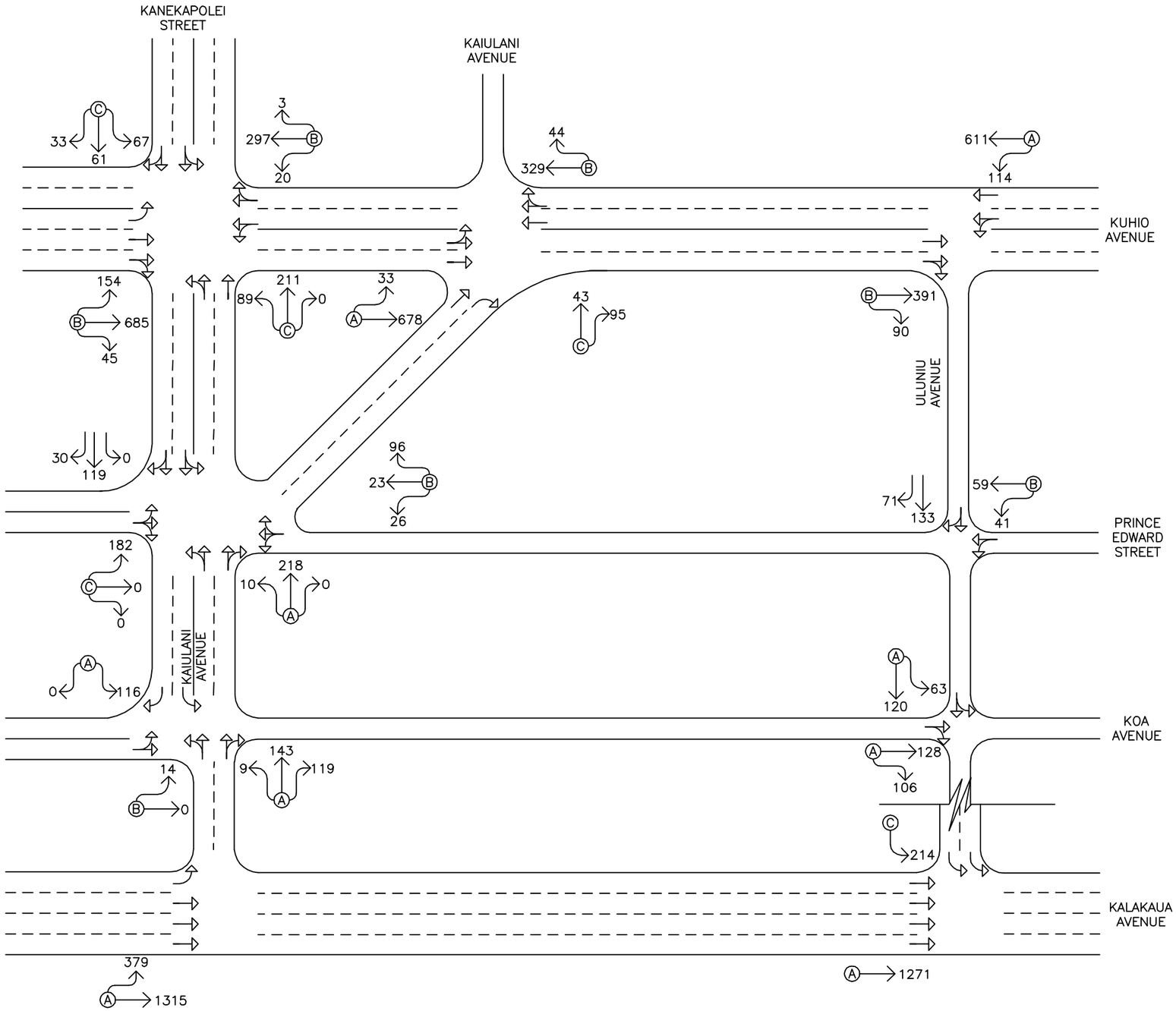


WILSON OKAMOTO CORPORATION

KAIULANI AVENUE TWO-WAY CONVERSION

BASELINE AM PEAK HOUR OF TRAFFIC

FIGURE 3



KAIULANI AVENUE TWO-WAY CONVERSION

BASELINE PM PEAK HOUR OF TRAFFIC

FIGURE 4

WILSON OKAMOTO CORPORATION

direction. The Kaiulani Avenue approaches are expected to operate at LOS "A" during both peak periods.

The eastbound approach of Koa Avenue is anticipated to carry 25 vehicles during the AM peak period and 14 vehicles during the PM peak period. This approach is expected to operate at LOS "B" during both peak periods.

d. Kaiulani Avenue, Kanekapolei Street, and Prince Edward Street

At the intersection with Prince Edward Street, Kaiulani Avenue is anticipated to carry 204 vehicles northbound while Kanekapolei Street is anticipated to carry 171 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is expected to be higher with 228 vehicles traveling northbound and 149 vehicles traveling southbound. The northbound approach is expected to operate at LOS "A" during both peak periods.

The Prince Edward Street approaches of the intersection are anticipated to carry 97 vehicles eastbound and 338 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is expected to be higher with 182 vehicles traveling eastbound and 145 vehicles traveling westbound. The eastbound approach of Prince Edward Street is expected to operate at LOS "C" during both peak periods, while the westbound approach is expected to operate at LOS "B" during both peak periods.

e. Kuhio Avenue and Kanekapolei Street

At the intersection with Kanekapolei Street, Kuhio Avenue is anticipated to carry 529 vehicles eastbound and 247 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are expected to be higher with 884 vehicles traveling eastbound and 320 vehicles traveling westbound. Both approaches of Kuhio Avenue are expected to operate at LOS "B" during both peak periods.

The Kanekapolei Street approaches are anticipated to carry 283 vehicles northbound and 160 vehicles southbound during the AM peak period. During the PM peak period, traffic volumes are expected to be higher with 300 vehicles traveling northbound and 161 vehicles traveling southbound. Both approaches are expected to operate at LOS "B" and LOS "C" during the AM and PM peak periods, respectively.

f. Kaiulani Avenue and Kuhio Avenue

At the intersection with Kuhio Avenue, the Kaiulani Avenue approach is anticipated to carry 94 vehicles northbound during the AM peak period and 133 vehicles northbound during the PM peak period. The Kaiulani Avenue approach is expected to operate at LOS "B" and LOS "C" during the AM and PM peak periods, respectively.

The Kuhio Avenue approaches of the intersection are anticipated to carry 510 vehicles eastbound and 238 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are expected to be higher with 711 vehicles eastbound and 373 vehicles traveling westbound. The eastbound approach of Kuhio Avenue is expected to operate at LOS "A" during both peak periods while the westbound approach is expected to operate at LOS "B" during both peak periods.

g. Uluniu Avenue and Kuhio Avenue

At the intersection with Uluniu Avenue, Kuhio Avenue is anticipated to carry 527 vehicles eastbound and 405 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are expected to be higher with 725 vehicles traveling eastbound and 481 vehicles traveling westbound. The eastbound approach of Kuhio Avenue is expected to operate at LOS "B" during both peak periods while the westbound approach is expected to operate at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

h. Uluniu Avenue and Prince Edward Street

At the intersection with Prince Edward Street, Uluniu Avenue is anticipated to carry 287 vehicles and 204 vehicles southbound during the AM and PM peak periods, respectively.

The Prince Edward Street westbound approach of the intersection is anticipated to carry 94 vehicles and 100 vehicles during the AM and PM peak periods, respectively. The Prince Edward Street approach is expected to operate at LOS "B" during both peak periods.

i. Koa Avenue and Uluniu Avenue

At the intersection with Uluniu Avenue, Koa Avenue is anticipated to carry 297 vehicles and 234 vehicles eastbound during the AM and PM peak periods, respectively. The Koa Avenue eastbound approach is expected to operate at LOS "A" during both peak periods.

The Uluniu Avenue southbound approach is anticipated to carry 224 vehicles and 183 vehicles during the AM and PM peak periods, respectively. This approach is expected to operate at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

j. Kalakaua Avenue and Uluniu Avenue

At the intersection with Uluniu Avenue, the Kalakaua Avenue eastbound approach is anticipated to carry 894 vehicles and 1,271 vehicles during the AM and PM peak periods, respectively. This approach is expected to operate at LOS "A" during both peak periods.

The Uluniu Avenue southbound approach of the intersection is anticipated to carry 257 vehicles and 214 vehicles during the AM and PM peak periods, respectively. This approach is expected to operate at LOS "C" during both peak periods.

IV. PROJECTED TRAFFIC CONDITIONS

A. Trip Reassignment

Figure 5 shows the redistribution of traffic as a result of the proposed conversion during the AM and PM peak periods. The reassignment of trips in the

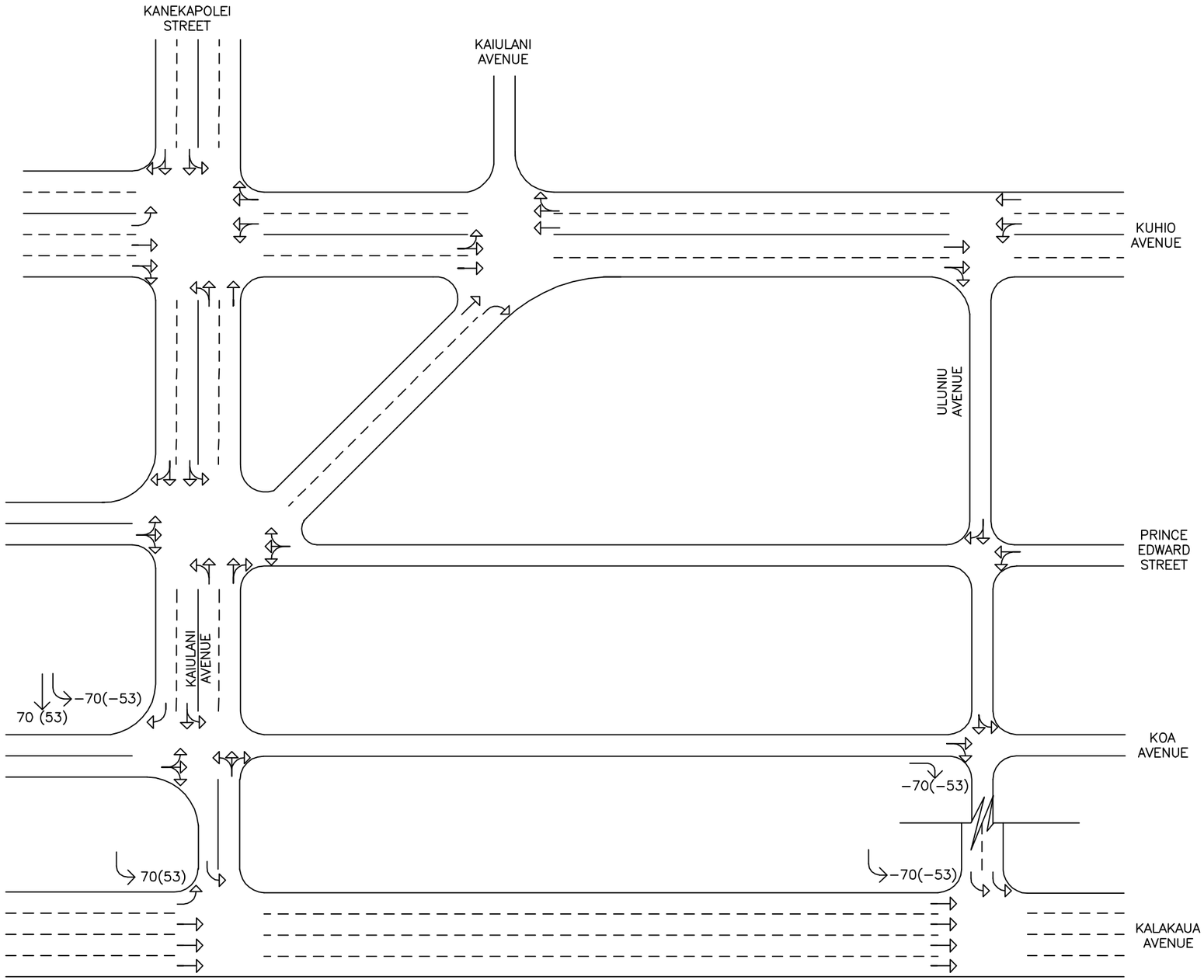
vicinity of the proposed conversion was based on the relative convenience of available routes, as well as, the assumed trip origins/designations. Currently, vehicles along Kaiulani Avenue cannot directly access Kalakaua Avenue. As such, vehicles along Kaiulani Avenue turn left onto Koa Avenue and then right onto Uluniu Avenue to access Kalakaua Avenue instead. With the proposed project, a portion of the left-turning vehicles along Kaiulani Avenue are assumed to travel through the intersection with Koa Avenue and turn directly onto Kalakaua Avenue instead.

B. Total Traffic Volumes With Project

The projected AM and PM peak period traffic volumes and operating conditions with the proposed conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue are shown in Figures 6 and 7, and summarized in Table 1. The traffic signal phasing and timing at the intersection of Kaiulani Avenue with Kalakaua Avenue is assumed to be modified to accommodate the new southbound traffic flow. The baseline levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

Table 1: Baseline and Projected With Project LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Base-line	w/ Proj	Base-line	w/ Proj
Kalakaua Ave/ Kaiulani Ave	Eastbound	A	C	A	C
	Southbound	-	C	-	C
Kaiulani Ave/ Koa Ave	Eastbound	B	B	B	B
	Northbound	A	A	A	A
	Southbound	A	A	A	A
Kaiulani Ave/ Prince Edward St/ Kanekapolei St	Eastbound	C	C	C	C
	Westbound	B	B	B	B
	Northbound	A	A	A	A
Kanekapolei St/ Kuhio Ave	Eastbound	B	B	B	B
	Westbound	B	B	B	B
	Northbound	B	B	C	C
	Southbound	B	B	C	C



LEGEND

XX AM TRAFFIC MOVEMENT VOLUME (VPH)

(XX) PM TRAFFIC MOVEMENT VOLUME (VPH)

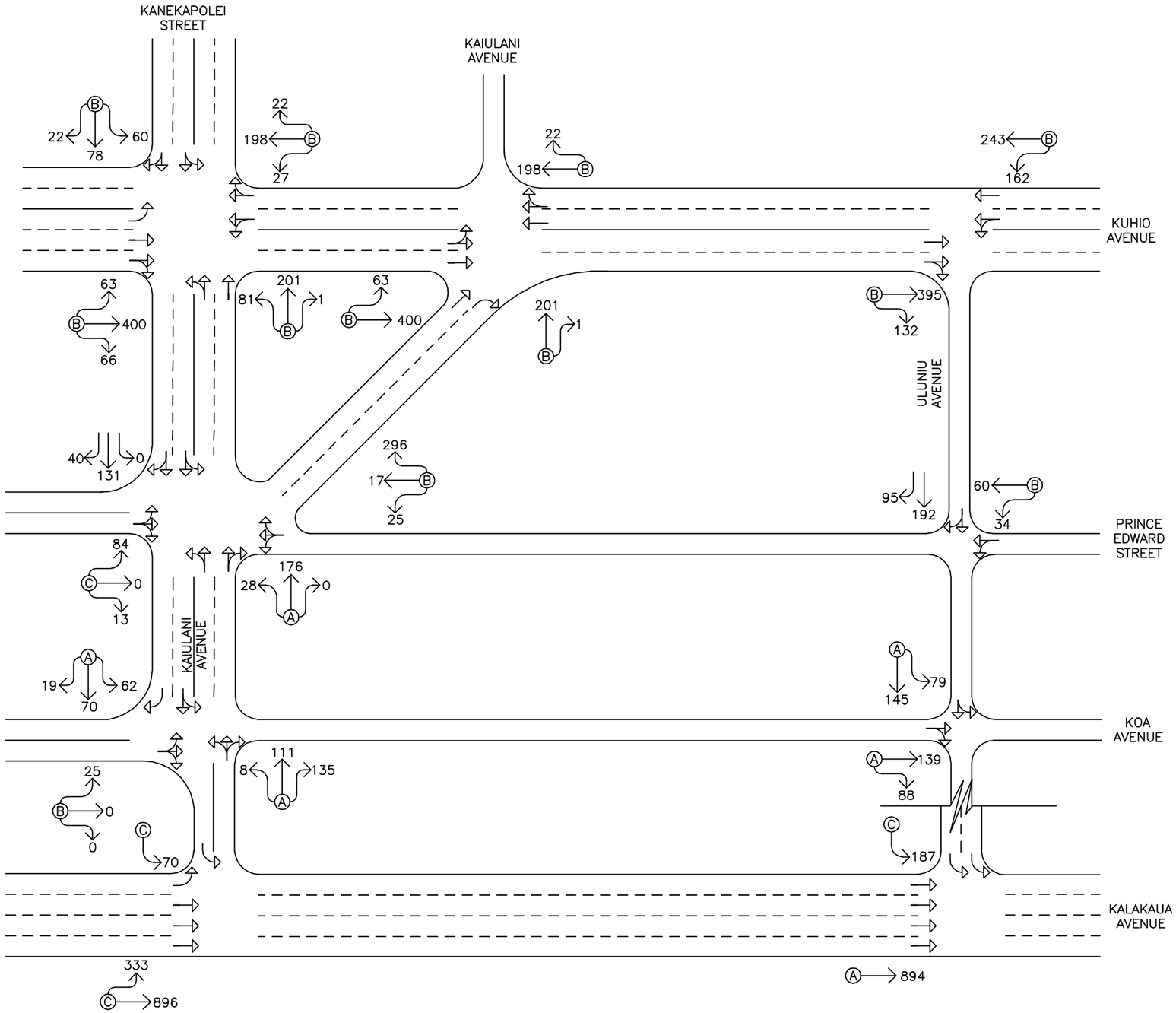
LANE USAGE

WILSON OKAMOTO CORPORATION

KAIULANI AVENUE TWO-WAY CONVERSION

TRIP REASSIGNMENT - PEAK HOURS OF TRAFFIC WITH PROJECT

FIGURE 5

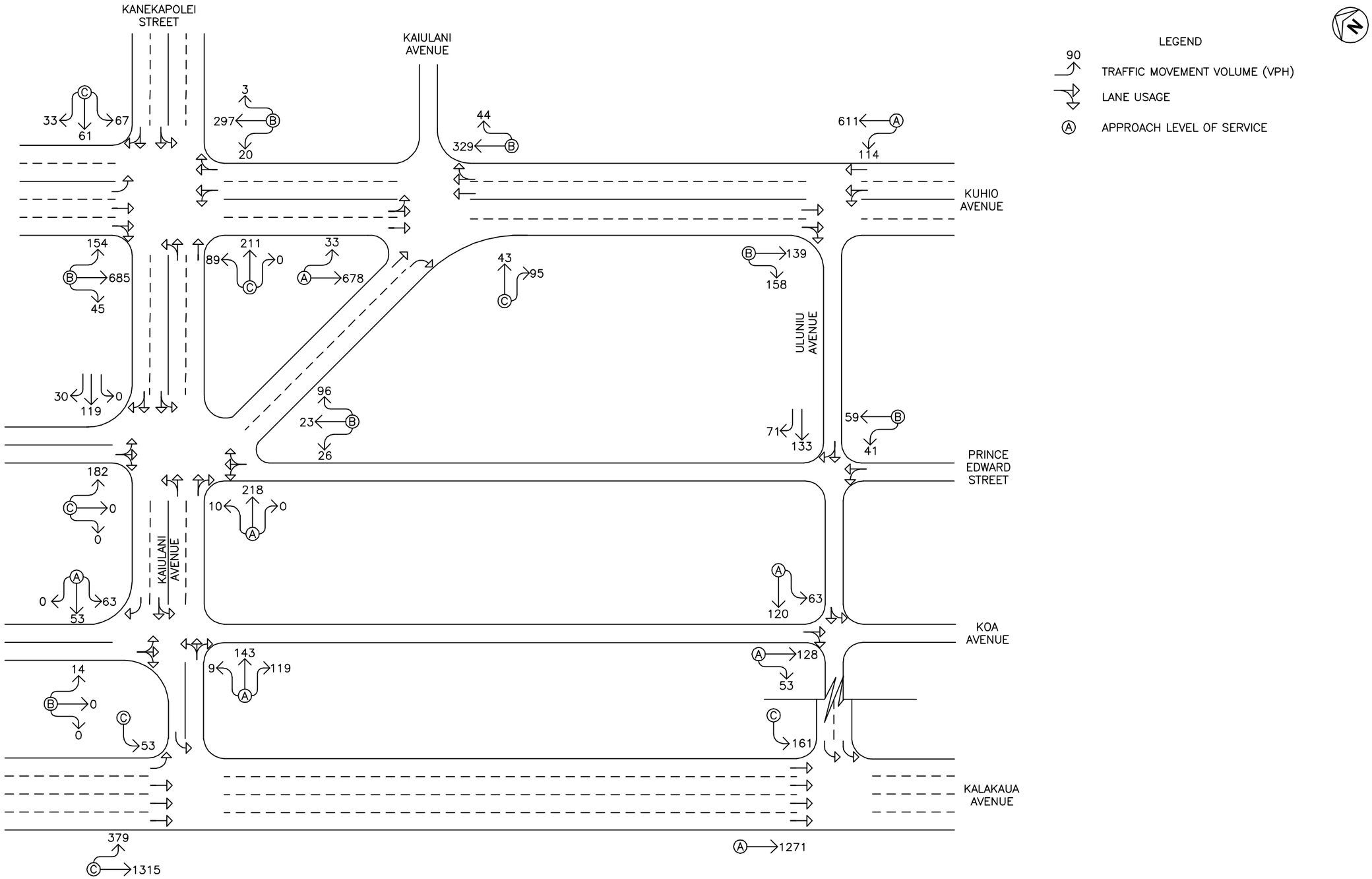


WILSON OKAMOTO CORPORATION

KAIULANI AVENUE TWO-WAY CONVERSION

PROJECTED YEAR 2017 AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 6



KAIULANI AVENUE TWO-WAY CONVERSION

PROJECTED YEAR 2017 PM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 7

WILSON OKAMOTO CORPORATION

Table 1: Baseline and Projected With Project LOS Traffic Operating Conditions (Cont'd)

Intersection	Approach	AM		PM	
		Base-line	w/ Proj	Base-line	w/ Proj
Kaiulani Ave/ Kuhio Avenue	Eastbound	A	A	A	A
	Westbound	B	B	B	B
	Northbound	B	B	C	C
Uluniu Ave/ Kuhio Avenue	Eastbound	B	B	B	B
	Westbound	B	B	A	A
Uluniu Ave/ Prince Edward St	Westbound	B	B	B	B
Uluniu Ave/ Koa Ave	Eastbound	A	A	A	A
	Southbound	B	A	A	A
Uluniu Ave/ Kalakaua Ave`	Eastbound	A	A	A	A
	Southbound	C	C	C	C

Traffic operations with the conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway between Kalakaua Avenue and Koa Avenue are generally expected to remain similar to existing conditions. With the exception of the intersection of Kalakaua Avenue with Kaiulani Avenue, the approaches of the study intersections along Kaiulani Avenue and Uluniu Avenue are expected to continue operating at levels of service similar to baseline conditions. At the intersection with Kaiulani Avenue, the Kalakaua Avenue approach is expected to deteriorate slightly from LOS "A" to LOS "C" due to the anticipated modifications to the traffic signal phasing and timing at the intersection to accommodate the new southbound traffic flow. The southbound approach of Kaiulani Avenue is expected to operate at LOS "C" during the both peak periods at this intersection. Although traffic conditions with the proposed conversion are expected to remain similar to without project conditions, the provision of alternate routes is expected to improve connectivity and circulation in the immediate vicinity through the addition of a new mauka-makai connections rather than increased regional connectivity. The new connection is also expected to relieve traffic demands along the parallel mauka-makai routes.

V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the design of the two-way conversion of Kaiulani Avenue.

1. Modify the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kalakaua Avenue.

2. Modify the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications. In addition, modify the traffic signal phasing and timing as necessary.

VI. CONCLUSION

The proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. The proposed project entails the conversion of Kaiulani Avenue between Kalakaua Avenue and Koa Avenue. With the implementation of the aforementioned recommendations, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0652, TU-0651
Weather:Clear

File Name : KalKai AM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kalakaua Avenue Westbound					Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	29	29	0	0	0	41	41	0	44	64	0	13	121	191
06:15 AM	0	0	0	27	27	0	0	0	29	29	0	55	79	0	35	169	225
06:30 AM	0	0	0	38	38	0	0	0	34	34	0	46	98	0	46	190	262
06:45 AM	0	0	0	50	50	0	0	0	46	46	0	55	109	0	63	227	323
Total	0	0	0	144	144	0	0	0	150	150	0	200	350	0	157	707	1001
07:00 AM	0	0	0	67	67	0	0	0	49	49	0	56	140	0	47	243	359
07:15 AM	0	0	0	64	64	0	0	0	49	49	0	50	158	0	55	263	376
07:30 AM	0	0	0	65	65	0	0	0	51	51	0	83	224	0	76	383	499
07:45 AM	0	0	0	83	83	0	0	0	73	73	0	66	224	0	72	362	518
Total	0	0	0	279	279	0	0	0	222	222	0	255	746	0	250	1251	1752
08:00 AM	0	0	0	92	92	0	0	0	61	61	0	81	223	0	50	354	507
08:15 AM	0	0	0	116	116	0	0	0	75	75	0	72	159	0	79	310	501
08:30 AM	0	0	0	118	118	0	0	0	60	60	0	68	184	0	62	314	492
08:45 AM	0	0	0	167	167	0	0	0	67	67	0	75	198	0	104	377	611
Total	0	0	0	493	493	0	0	0	263	263	0	296	764	0	295	1355	2111
Grand Total	0	0	0	916	916	0	0	0	635	635	0	751	1860	0	702	3313	4864
Apprch %	0	0	0	100		0	0	0	100			22.7	56.1	0	21.2		
Total %	0	0	0	18.8	18.8	0	0	0	13.1	13.1	0	15.4	38.2	0	14.4	68.1	

	Kaiulani Avenue Southbound				Kalakaua Avenue Westbound				Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	0	0	0	0	0	0	0	0	**83**	**224**	0	**307**	**307**
07:45 AM	0	0	0	0	0	0	0	0	0	66	224	0	290	290
08:00 AM	0	0	0	0	0	0	0	0	0	81	223	0	304	304
08:15 AM	0	0	0	0	0	0	0	0	0	72	159	0	231	231
Total Volume	0	0	0	0	0	0	0	0	0	302	830	0	1132	1132
% App. Total	0	0	0		0	0	0			26.7	73.3	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.910	.926	.000	.922	.922

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:
Counter:
Weather:

File Name : KalKai AM - Diagonal X-Walk AM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue - Diagonal Crossing Between Northwest & Southeast Southbound					Westbound	Kaiulani Avenue - Diagonal Crossing Between Northeast & Southwest Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:00 AM	0	0	0	9	9	0	0	0	0	17	17	0	26
06:15 AM	0	0	0	5	5	0	0	0	0	18	18	0	23
06:30 AM	0	0	0	7	7	0	0	0	0	4	4	0	11
06:45 AM	0	0	0	15	15	0	0	0	0	22	22	0	37
Total	0	0	0	36	36	0	0	0	0	61	61	0	97
07:00 AM	0	0	0	6	6	0	0	0	0	15	15	0	21
07:15 AM	0	0	0	3	3	0	0	0	0	8	8	0	11
07:30 AM	0	0	0	2	2	0	0	0	0	25	25	0	27
07:45 AM	0	0	0	14	14	0	0	0	0	15	15	0	29
Total	0	0	0	25	25	0	0	0	0	63	63	0	88
08:00 AM	0	0	0	14	14	0	0	0	0	18	18	0	32
08:15 AM	0	0	0	26	26	0	0	0	0	42	42	0	68
08:30 AM	0	0	0	11	11	0	0	0	0	16	16	0	27
08:45 AM	0	0	0	3	3	0	0	0	0	18	18	0	21
Total	0	0	0	54	54	0	0	0	0	94	94	0	148
Grand Total	0	0	0	115	115	0	0	0	0	218	218	0	333
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	34.5	34.5	0	0	0	0	65.5	65.5	0	

	Kaiulani Avenue - Diagonal Crossing Between Northwest & Southeast Southbound				Westbound	Kaiulani Avenue - Diagonal Crossing Between Northeast & Southwest Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 06:00 AM											
06:00 AM	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0652, TU-0651
Weather:Clear

File Name : KalKai PM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Kalakaua Avenue Westbound					Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	254	254	0	0	0	116	116	0	95	232	0	152	479	849
03:15 PM	0	0	0	184	184	0	0	0	109	109	0	97	255	0	152	504	797
03:30 PM	0	0	0	173	173	0	0	0	121	121	0	95	248	3	103	449	743
03:45 PM	0	0	0	158	158	0	0	0	99	99	0	91	282	0	106	479	736
Total	0	0	0	769	769	0	0	0	445	445	0	378	1017	3	513	1911	3125
04:00 PM	0	0	0	186	186	0	0	0	111	111	0	88	268	0	115	471	768
04:15 PM	0	0	0	155	155	0	0	0	114	114	0	97	300	0	217	614	883
04:30 PM	0	0	0	176	176	0	0	0	117	117	0	80	288	0	171	539	832
04:45 PM	0	0	0	199	199	0	0	0	122	122	0	83	290	0	129	502	823
Total	0	0	0	716	716	0	0	0	464	464	0	348	1146	0	632	2126	3306
05:00 PM	0	0	0	237	237	0	0	0	101	101	0	97	320	0	118	535	873
05:15 PM	0	0	0	250	250	0	0	0	129	129	0	91	321	0	118	530	909
05:30 PM	0	0	0	201	201	0	0	0	123	123	0	91	287	0	146	524	848
05:45 PM	0	0	0	208	208	0	0	0	110	110	0	83	272	0	171	526	844
Total	0	0	0	896	896	0	0	0	463	463	0	362	1200	0	553	2115	3474
Grand Total	0	0	0	2381	2381	0	0	0	1372	1372	0	1088	3363	3	1698	6152	9905
Apprch %	0	0	0	100		0	0	0	100			17.7	54.7	0	27.6		
Total %	0	0	0	24	24	0	0	0	13.9	13.9	0	11	34	0	17.1	62.1	

	Kaiulani Avenue Southbound				Kalakaua Avenue Westbound				Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:45 PM														
04:45 PM	0	0	0	0	0	0	0	0	0	83	290	0	373	373
05:00 PM	0	0	0	0	0	0	0	0	0	**97**	320	0	**417**	**417**
05:15 PM	0	0	0	0	0	0	0	0	0	91	**321**	0	412	412
05:30 PM	0	0	0	0	0	0	0	0	0	91	287	0	378	378
Total Volume	0	0	0	0	0	0	0	0	0	362	1218	0	1580	1580
% App. Total	0	0	0		0	0	0			22.9	77.1	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.933	.949	.000	.947	.947

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL, MM
Counter:TU-0651, TU-0652
Weather:Clear

File Name : KalKai PM - Diagonal X-Walk PM
Site Code : 00000001
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue - Diuagonal Crossing Between Northwest & Southeast Curbs Southbound					Westbound	Kaiulani Avenue - Diuagonal Crossing Between Northeast & Southwest Curbs Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	0	60	60	0	0	0	0	24	24	0	84
03:15 PM	0	0	0	29	29	0	0	0	0	5	5	0	34
03:30 PM	0	0	0	48	48	0	0	0	0	39	39	0	87
03:45 PM	0	0	0	20	20	0	0	0	0	44	44	0	64
Total	0	0	0	157	157	0	0	0	0	112	112	0	269
04:00 PM	0	0	0	60	60	0	0	0	0	30	30	0	90
04:15 PM	0	0	0	87	87	0	0	0	0	16	16	0	103
04:30 PM	0	0	0	70	70	0	0	0	0	37	37	0	107
04:45 PM	0	0	0	49	49	0	0	0	0	51	51	0	100
Total	0	0	0	266	266	0	0	0	0	134	134	0	400
05:00 PM	0	0	0	34	34	0	0	0	0	22	22	0	56
05:15 PM	0	0	0	52	52	0	0	0	0	23	23	0	75
05:30 PM	0	0	0	27	27	0	0	0	0	29	29	0	56
05:45 PM	0	0	0	32	32	0	0	0	0	10	10	0	42
Total	0	0	0	145	145	0	0	0	0	84	84	0	229
Grand Total	0	0	0	568	568	0	0	0	0	330	330	0	898
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	63.3	63.3	0	0	0	0	36.7	36.7	0	

	Kaiulani Avenue - Diuagonal Crossing Between Northwest & Southeast Curbs Southbound				Westbound	Kaiulani Avenue - Diuagonal Crossing Between Northeast & Southwest Curbs Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:00 PM											
03:00 PM	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:PA, LH
Counter:TU-0653, D4-3890
Weather:Clear

File Name : KaiKoa AM
Site Code : 00000002
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Koa Avenue Westbound					Kaiulani Avenue Northbound					Princess Kaiulani Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	13	0	3	0	16	0	0	0	50	50	2	21	12	58	93	5	0	0	15	20	179
06:15 AM	18	0	3	0	21	0	0	0	48	48	1	39	16	49	105	4	0	0	25	29	203
06:30 AM	13	0	3	0	16	0	0	0	30	30	2	16	6	30	54	3	0	0	63	66	166
06:45 AM	16	1	2	0	19	0	0	0	18	18	2	26	18	59	105	1	0	0	53	54	196
Total	60	1	11	0	72	0	0	0	146	146	7	102	52	196	357	13	0	0	156	169	744
07:00 AM	11	0	4	0	15	0	0	0	26	26	2	21	28	69	120	3	0	0	51	54	215
07:15 AM	20	0	3	0	23	0	0	0	48	48	2	21	16	36	75	3	0	0	45	48	194
07:30 AM	38	0	3	0	41	0	0	0	52	52	1	28	28	97	154	7	0	0	64	71	318
07:45 AM	37	0	4	0	41	0	0	0	79	79	0	24	22	87	133	2	0	0	59	61	314
Total	106	0	14	0	120	0	0	0	205	205	5	94	94	289	482	15	0	0	219	234	1041
08:00 AM	26	0	10	0	36	0	0	0	100	100	0	26	31	74	131	7	0	0	43	50	317
08:15 AM	31	0	2	0	33	0	0	0	42	42	7	33	23	55	118	9	0	0	37	46	239
08:30 AM	25	0	6	0	31	0	0	0	61	61	2	29	17	71	119	6	0	0	44	50	261
08:45 AM	30	0	3	0	33	0	0	0	62	62	3	28	23	82	136	1	0	0	71	72	303
Total	112	0	21	0	133	0	0	0	265	265	12	116	94	282	504	23	0	0	195	218	1120
Grand Total	278	1	46	0	325	0	0	0	616	616	24	312	240	767	1343	51	0	0	570	621	2905
Apprch %	85.5	0.3	14.2	0		0	0	0	100		1.8	23.2	17.9	57.1		8.2	0	0	91.8		
Total %	9.6	0	1.6	0	11.2	0	0	0	21.2	21.2	0.8	10.7	8.3	26.4	46.2	1.8	0	0	19.6	21.4	

	Kaiulani Avenue Southbound				Koa Avenue Westbound				Kaiulani Avenue Northbound				Princess Kaiulani Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**38**	0	3	**41**	0	0	0	0	1	28	28	57	7	0	0	7	**105**
07:45 AM	37	0	4	41	0	0	0	0	0	24	22	46	2	0	0	2	89
08:00 AM	26	0	**10**	36	0	0	0	0	0	26	**31**	57	7	0	0	7	100
08:15 AM	31	0	2	33	0	0	0	0	**7**	**33**	23	**63**	**9**	0	0	**9**	105
Total Volume	132	0	19	151	0	0	0	0	8	111	104	223	25	0	0	25	399
% App. Total	87.4	0	12.6		0	0	0		3.6	49.8	46.6		100	0	0		
PHF	.868	.000	.475	.921	.000	.000	.000	.000	.286	.841	.839	.885	.694	.000	.000	.694	.950

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:PA, LH
Counter:TU-0653, D4-3890
Weather:Clear

File Name : KaiKoa PM
Site Code : 00000002
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kaiulani Avenue Southbound					Koa Avenue Westbound					Kaiulani Avenue Northbound					Princess Kaiulani Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	37	0	7	0	44	0	0	0	124	124	2	30	12	70	114	8	0	0	82	90	372
03:15 PM	31	0	3	0	34	0	0	0	112	112	2	32	17	79	130	8	0	0	77	85	361
03:30 PM	28	0	4	0	32	0	0	0	157	157	3	45	36	85	169	6	0	0	86	92	450
03:45 PM	35	0	4	0	39	0	0	0	142	142	1	37	24	79	141	3	0	0	91	94	416
Total	131	0	18	0	149	0	0	0	535	535	8	144	89	313	554	25	0	0	336	361	1599
04:00 PM	33	0	1	0	34	0	0	0	193	193	1	42	22	100	165	5	0	0	86	91	483
04:15 PM	20	0	4	0	24	0	0	0	185	185	4	51	20	98	173	9	0	0	99	108	490
04:30 PM	28	0	2	0	30	0	0	0	177	177	2	51	17	105	175	4	0	0	139	143	525
04:45 PM	22	0	1	0	23	0	0	0	159	159	3	36	10	78	127	1	0	0	83	84	393
Total	103	0	8	0	111	0	0	0	714	714	10	180	69	381	640	19	0	0	407	426	1891
05:00 PM	29	0	1	0	30	0	0	0	166	166	4	56	14	80	154	13	0	0	113	126	476
05:15 PM	33	0	1	0	34	0	0	0	135	135	3	36	17	81	137	2	0	0	143	145	451
05:30 PM	21	0	2	0	23	0	0	0	201	201	6	48	26	86	166	1	0	0	121	122	512
05:45 PM	26	0	2	0	28	0	0	0	190	190	1	59	21	100	181	1	0	0	112	113	512
Total	109	0	6	0	115	0	0	0	692	692	14	199	78	347	638	17	0	0	489	506	1951
Grand Total	343	0	32	0	375	0	0	0	1941	1941	32	523	236	1041	1832	61	0	0	1232	1293	5441
Apprch %	91.5	0	8.5	0		0	0	0	100		1.7	28.5	12.9	56.8		4.7	0	0	95.3		
Total %	6.3	0	0.6	0	6.9	0	0	0	35.7	35.7	0.6	9.6	4.3	19.1	33.7	1.1	0	0	22.6	23.8	

	Kaiulani Avenue Southbound				Koa Avenue Westbound				Kaiulani Avenue Northbound				Princess Kaiulani Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	28	0	**4**	32	0	0	0	0	3	45	**36**	**84**	6	0	0	6	**122**
03:45 PM	**35**	0	4	**39**	0	0	0	0	1	37	24	62	3	0	0	3	104
04:00 PM	33	0	1	34	0	0	0	0	1	42	22	65	5	0	0	5	104
04:15 PM	20	0	4	24	0	0	0	0	**4**	**51**	20	75	**9**	0	0	**9**	108
Total Volume	116	0	13	129	0	0	0	0	9	175	102	286	23	0	0	23	438
% App. Total	89.9	0	10.1		0	0	0		3.1	61.2	35.7		100	0	0		
PHF	.829	.000	.813	.827	.000	.000	.000	.000	.563	.858	.708	.851	.639	.000	.000	.639	.898

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-1
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound					Prince Edward Street Westbound					Kaiulani Avenue Left = Left Turn Into Princes Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound					Princess Kaiulani Garage Driveway Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	9	8	0	17	2	0	30	30	62	10	14	6	22	52	8	1	0	0	9	140
06:15 AM	0	21	13	0	34	1	0	28	28	57	9	25	5	16	55	8	1	0	0	9	155
06:30 AM	4	17	15	0	36	1	0	45	45	91	18	13	3	27	61	4	0	0	0	4	192
06:45 AM	0	18	10	0	28	3	0	69	69	141	12	21	5	37	75	5	0	3	0	8	252
Total	4	65	46	0	115	7	0	172	172	351	49	73	19	102	243	25	2	3	0	30	739
07:00 AM	0	11	5	0	16	2	1	46	46	95	12	17	3	26	58	23	1	1	0	25	194
07:15 AM	3	10	6	0	19	5	0	47	47	99	13	11	5	29	58	6	4	2	0	12	188
07:30 AM	1	30	5	0	36	10	0	53	53	116	5	33	5	54	97	8	1	3	0	12	261
07:45 AM	2	31	11	0	44	8	0	67	67	142	2	28	9	27	66	8	1	1	0	10	262
Total	6	82	27	0	115	25	1	213	213	452	32	89	22	136	279	45	7	7	0	59	905
08:00 AM	2	23	12	0	37	6	3	60	60	129	12	32	10	16	70	8	0	2	0	10	246
08:15 AM	2	35	10	0	47	6	0	57	57	120	4	38	11	21	74	14	2	3	0	19	260
08:30 AM	7	29	7	0	43	5	0	47	47	99	10	40	8	26	84	8	0	3	0	11	237
08:45 AM	3	16	8	0	27	8	0	70	70	148	7	32	5	45	89	6	0	2	0	8	272
Total	14	103	37	0	154	25	3	234	234	496	33	142	34	108	317	36	2	10	0	48	1015
Grand Total	24	250	110	0	384	57	4	619	619	1299	114	304	75	346	839	106	11	20	0	137	2659
Apprch %	6.2	65.1	28.6	0		4.4	0.3	47.7	47.7		13.6	36.2	8.9	41.2		77.4	8	14.6	0		
Total %	0.9	9.4	4.1	0	14.4	2.1	0.2	23.3	23.3	48.9	4.3	11.4	2.8	13	31.6	4	0.4	0.8	0	5.2	

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound				Prince Edward Street Westbound				Kaiulani Avenue Left = Left Turn Into Princes Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound				Princess Kaiulani Garage Driveway Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	31	11	44	8	0	67	**75**	2	28	9	39	8	1	1	10	168
08:00 AM	2	23	**12**	37	6	3	60	69	12	32	10	54	8	0	2	10	170
08:15 AM	2	**35**	10	**47**	6	0	57	63	4	38	11	53	**14**	**2**	**3**	**19**	**182**
08:30 AM	**7**	29	7	43	5	0	47	52	10	**40**	8	**58**	8	0	3	11	164
Total Volume	13	118	40	171	25	3	231	259	28	138	38	204	38	3	9	50	684
% App. Total	7.6	69	23.4		9.7	1.2	89.2		13.7	67.6	18.6		76	6	18		
PHF	.464	.843	.833	.910	.781	.250	.862	.863	.583	.863	.864	.879	.679	.375	.750	.658	.940

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-2
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound					Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru to Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
06:15 AM	0	0	0	1	0	1	0	1	0	1	0	2	3
06:30 AM	0	0	0	3	0	3	0	3	0	0	0	3	6
06:45 AM	0	0	0	4	0	4	0	2	0	0	0	2	6
Total	0	0	0	8	0	8	0	6	0	2	0	8	16
07:00 AM	0	0	0	1	0	1	0	0	0	1	0	1	2
07:15 AM	0	0	0	4	0	4	0	4	1	2	0	7	11
07:30 AM	0	0	0	1	0	1	0	2	1	0	0	3	4
07:45 AM	0	0	0	2	0	2	0	4	5	0	0	9	11
Total	0	0	0	8	0	8	0	10	7	3	0	20	28
08:00 AM	0	0	0	6	0	6	0	1	2	1	0	4	10
08:15 AM	0	0	0	5	0	5	0	4	2	1	0	7	12
08:30 AM	0	0	0	4	0	4	0	8	0	2	0	10	14
08:45 AM	0	0	0	5	0	5	0	3	1	1	0	5	10
Total	0	0	0	20	0	20	0	16	5	5	0	26	46
Grand Total	0	0	0	36	0	36	0	32	12	10	0	54	90
Apprch %		0	0	100	0			59.3	22.2	18.5	0		
Total %	0	0	0	40	0	40	0	35.6	13.3	11.1	0	60	

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound				Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru to Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	0	0	2	2	0	4	5	0	9	11
08:00 AM	0	0	0	6	6	0	1	2	1	4	10
08:15 AM	0	0	0	5	5	0	4	2	1	7	12
08:30 AM	0	0	0	4	4	0	8	0	2	10	14
Total Volume	0	0	0	17	17	0	17	9	4	30	47
% App. Total		0	0	100			56.7	30	13.3		
PHF	.000	.000	.000	.708	.708	.000	.531	.450	.500	.750	.839

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan AM-3
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound					Northbound	Ohana East Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound						
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	4	0	0	4	0	2	3	0	0	5	9
07:15 AM	0	0	4	0	0	4	0	0	3	0	0	3	7
07:30 AM	0	0	4	0	0	4	0	0	3	0	0	3	7
07:45 AM	0	0	2	0	0	2	0	0	6	0	0	6	8
Total	0	0	14	0	0	14	0	2	15	0	0	17	31
08:00 AM	0	0	2	0	0	2	0	0	6	0	0	6	8
08:15 AM	0	0	1	0	0	1	0	0	4	0	0	4	5
08:30 AM	0	0	1	0	0	1	0	1	6	0	0	7	8
08:45 AM	0	0	1	0	0	1	0	0	5	0	0	5	6
Total	0	0	5	0	0	5	0	1	21	0	0	22	27
Grand Total	0	0	19	0	0	19	0	3	36	0	0	39	58
Apprch %		0	100	0	0			7.7	92.3	0	0		
Total %	0	0	32.8	0	0	32.8	0	5.2	62.1	0	0	67.2	

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound				Northbound	Ohana East Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:00 AM											
07:00 AM	0	0	4	0	4	0	2	3	0	5	9
07:15 AM	0	0	4	0	4	0	0	3	0	3	7
07:30 AM	0	0	4	0	4	0	0	3	0	3	7
07:45 AM	0	0	2	0	2	0	0	6	0	6	8
Total Volume	0	0	14	0	14	0	2	15	0	17	31
% App. Total		0	100	0			11.8	88.2	0		
PHF	.000	.000	.875	.000	.875	.000	.250	.625	.000	.708	.861

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-1
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound					Prince Edward Street Westbound					Kaiulani Avenue Left = Left Turn Into Princess Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound					Princess Kaiulani Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	3	31	5	0	39	7	2	10	100	119	13	43	13	18	87	32	12	2	0	46	291
03:15 PM	2	25	7	0	34	7	1	9	99	116	11	40	12	48	111	24	8	0	0	32	293
03:30 PM	1	26	10	0	37	8	0	13	98	119	2	46	14	48	110	18	5	0	0	23	289
03:45 PM	1	30	8	0	39	4	1	12	89	106	2	36	14	52	104	16	2	2	0	20	269
Total	7	112	30	0	149	26	4	44	386	460	28	165	53	166	412	90	27	4	0	121	1142
04:00 PM	0	23	8	0	31	5	0	14	115	134	6	47	13	66	132	14	4	0	0	18	315
04:15 PM	2	17	7	0	26	6	1	18	134	159	4	40	23	54	121	12	3	1	0	16	322
04:30 PM	3	22	7	0	32	4	1	13	106	124	7	44	17	85	153	14	4	0	0	18	327
04:45 PM	1	20	0	0	21	4	1	14	117	136	4	38	20	89	151	5	2	0	0	7	315
Total	6	82	22	0	110	19	3	59	472	553	21	169	73	294	557	45	13	1	0	59	1279
05:00 PM	4	25	4	0	33	1	0	15	97	113	9	50	12	74	145	10	5	2	0	17	308
05:15 PM	0	30	6	0	36	6	1	7	145	159	9	41	13	47	110	20	1	2	0	23	328
05:30 PM	0	20	7	0	27	5	0	9	135	149	8	39	13	84	144	8	2	1	0	11	331
05:45 PM	3	17	2	0	22	8	0	14	147	169	5	32	23	66	126	7	1	0	0	8	325
Total	7	92	19	0	118	20	1	45	524	590	31	162	61	271	525	45	9	5	0	59	1292
Grand Total	20	286	71	0	377	65	8	148	1382	1603	80	496	187	731	1494	180	49	10	0	239	3713
Apprch %	5.3	75.9	18.8	0		4.1	0.5	9.2	86.2		5.4	33.2	12.5	48.9		75.3	20.5	4.2	0		
Total %	0.5	7.7	1.9	0	10.2	1.8	0.2	4	37.2	43.2	2.2	13.4	5	19.7	40.2	4.8	1.3	0.3	0	6.4	

	Kanekapolei Street Left = Left Turn Into Kaiulani Avenue, Right = Right Into Princess Kaiulani Parking Garage Southbound				Prince Edward Street Westbound				Kaiulani Avenue Left = Left Turn Into Princess Kaiulani Garage, Right = Right Turn Into Kaiulani Avenue Northbound				Princess Kaiulani Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**3**	**31**	5	**39**	7	**2**	10	19	**13**	43	13	**69**	**32**	**12**	**2**	**46**	**173**
03:15 PM	2	25	7	34	7	1	9	17	11	40	12	63	24	8	0	32	146
03:30 PM	1	26	**10**	37	**8**	0	**13**	**21**	2	**46**	**14**	62	18	5	0	23	143
03:45 PM	1	30	8	39	4	1	12	17	2	36	14	52	16	2	2	20	128
Total Volume	7	112	30	149	26	4	44	74	28	165	53	246	90	27	4	121	590
% App. Total	4.7	75.2	20.1		35.1	5.4	59.5		11.4	67.1	21.5		74.4	22.3	3.3		
PHF	.583	.903	.750	.955	.813	.500	.846	.881	.538	.897	.946	.891	.703	.563	.500	.658	.853

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-2
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound					Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	1	0	1	0	8	4	1	0	13	14
03:15 PM	0	0	0	9	0	9	0	5	1	0	0	6	15
03:30 PM	0	0	0	6	0	6	0	6	3	0	0	9	15
03:45 PM	0	0	0	3	0	3	0	2	3	0	0	5	8
Total	0	0	0	19	0	19	0	21	11	1	0	33	52
04:00 PM	0	0	0	6	0	6	0	11	3	2	0	16	22
04:15 PM	0	0	0	1	0	1	0	8	1	1	0	10	11
04:30 PM	0	0	0	4	0	4	0	3	3	0	0	6	10
04:45 PM	0	0	0	3	0	3	0	3	3	0	0	6	9
Total	0	0	0	14	0	14	0	25	10	3	0	38	52
05:00 PM	0	0	0	5	0	5	0	7	3	0	0	10	15
05:15 PM	0	0	0	6	0	6	0	6	4	0	0	10	16
05:30 PM	0	0	0	5	0	5	0	4	1	1	0	6	11
05:45 PM	0	0	0	2	0	2	0	6	3	3	0	12	14
Total	0	0	0	18	0	18	0	23	11	4	0	38	56
Grand Total	0	0	0	51	0	51	0	69	32	8	0	109	160
Apprch %		0	0	100	0			63.3	29.4	7.3	0		
Total %	0	0	0	31.9	0	31.9	0	43.1	20	5	0	68.1	

	Southbound	Prince Edward Street Right = Right Turn Into Kaiulani Avenue Westbound				Northbound	Miramar Parking Garage Left = Left Turn Into Kanekapolei Street, Thru = Thru To Kaiulani Avenue, Right = Right Turn Into Kaiulani Avenue Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:15 PM											
03:15 PM	0	0	0	**9**	**9**	0	5	**1**	0	**6**	15
03:30 PM	0	0	0	6	6	0	6	**3**	0	**9**	15
03:45 PM	0	0	0	3	3	0	2	3	0	**5**	8
04:00 PM	0	0	0	6	6	0	**11**	3	**2**	**16**	**22**
Total Volume	0	0	0	24	24	0	24	10	2	36	60
% App. Total		0	0	100			66.7	27.8	5.6		
PHF	.000	.000	.000	.667	.667	.000	.545	.833	.250	.563	.682

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5673, D4-5674
Weather:Clear

File Name : KaiPriKan PM-3
Site Code : 00000003
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound					Northbound	Ohana East Parking Garage Thru = Thru To Kaiulani Avenue Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	2	0	0	2	0	4	2	0	0	6	8
03:15 PM	0	0	3	0	0	3	0	0	3	0	0	3	6
03:30 PM	0	0	1	0	0	1	0	0	1	0	0	1	2
03:45 PM	0	0	2	0	0	2	0	1	2	0	0	3	5
Total	0	0	8	0	0	8	0	5	8	0	0	13	21
04:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	1
04:15 PM	0	0	2	0	0	2	0	0	2	0	0	2	4
04:30 PM	0	0	7	0	0	7	0	2	7	0	0	9	16
04:45 PM	0	0	6	0	0	6	0	0	6	0	0	6	12
Total	0	0	15	0	0	15	0	3	15	0	0	18	33
05:00 PM	0	0	4	0	0	4	0	5	4	0	0	9	13
05:15 PM	0	0	2	0	0	2	0	5	2	0	0	7	9
05:30 PM	0	0	0	0	0	0	0	2	0	0	0	2	2
05:45 PM	0	0	6	0	0	6	0	3	6	0	0	9	15
Total	0	0	12	0	0	12	0	15	12	0	0	27	39
Grand Total	0	0	35	0	0	35	0	23	35	0	0	58	93
Apprch %		0	100	0	0			39.7	60.3	0	0		
Total %	0	0	37.6	0	0	37.6	0	24.7	37.6	0	0	62.4	

	Southbound	Prince Edward Street Thru = Thru To Ohana East Parking Garage Westbound				Northbound	Ohana East Parking Garage Thru = Thru To Kaiulani Avenue Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:30 PM											
04:30 PM	0	0	**7**	0	7	0	2	**7**	0	**9**	**16**
04:45 PM	0	0	6	0	6	0	0	6	0	6	12
05:00 PM	0	0	4	0	4	0	**5**	4	0	9	13
05:15 PM	0	0	2	0	2	0	5	2	0	7	9
Total Volume	0	0	19	0	19	0	12	19	0	31	50
% App. Total		0	100	0			38.7	61.3	0		
PHF	.000	.000	.679	.000	.679	.000	.600	.679	.000	.861	.781

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC, MA
Counter:D4-5675, D4-5676
Weather:Clear

File Name : KanKuh AM
Site Code : 00000004
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Southbound					Kuhio Avenue Westbound					Kanekapolei Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	12	13	4	17	46	1	26	8	17	52	4	18	0	15	37	6	40	4	8	58	193
06:15 AM	3	23	7	24	57	3	20	2	29	54	14	28	0	23	65	7	34	11	13	65	241
06:30 AM	9	18	2	29	58	4	31	4	22	61	9	23	0	30	62	8	41	14	13	76	257
06:45 AM	10	15	2	40	67	5	29	4	51	89	9	29	1	51	90	10	68	11	30	119	365
Total	34	69	15	110	228	13	106	18	119	256	36	98	1	119	254	31	183	40	64	318	1056
07:00 AM	14	8	5	42	69	3	27	3	44	77	4	44	0	47	95	17	62	4	42	125	366
07:15 AM	19	9	6	48	82	2	29	1	36	68	5	29	0	59	93	11	83	9	38	141	384
07:30 AM	20	24	4	56	104	4	49	3	40	96	13	33	0	71	117	12	101	12	25	150	467
07:45 AM	17	22	7	59	105	11	46	3	42	102	14	34	0	55	103	20	138	14	45	217	527
Total	70	63	22	205	360	20	151	10	162	343	36	140	0	232	408	60	384	39	150	633	1744
08:00 AM	10	21	4	68	103	4	42	9	28	83	13	47	1	63	124	14	58	18	41	131	441
08:15 AM	20	20	9	76	125	8	50	2	36	96	23	42	0	87	152	14	68	17	43	142	515
08:30 AM	10	15	2	76	103	4	45	8	28	85	17	56	0	83	156	15	87	17	50	169	513
08:45 AM	6	14	7	76	103	11	41	4	29	85	16	38	0	104	158	23	82	13	60	178	524
Total	46	70	22	296	434	27	178	23	121	349	69	183	1	337	590	66	295	65	194	620	1993
Grand Total	150	202	59	611	1022	60	435	51	402	948	141	421	2	688	1252	157	862	144	408	1571	4793
Apprch %	14.7	19.8	5.8	59.8		6.3	45.9	5.4	42.4		11.3	33.6	0.2	55		10	54.9	9.2	26		
Total %	3.1	4.2	1.2	12.7	21.3	1.3	9.1	1.1	8.4	19.8	2.9	8.8	0	14.4	26.1	3.3	18	3	8.5	32.8	

	Kanekapolei Street Southbound				Kuhio Avenue Westbound				Kanekapolei Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	17	**22**	7	46	**11**	46	3	**60**	14	34	0	48	**20**	**138**	14	**172**	**326**
08:00 AM	10	21	4	35	4	42	**9**	55	13	47	**1**	61	14	58	**18**	90	241
08:15 AM	**20**	20	**9**	**49**	8	**50**	2	60	**23**	42	0	65	14	68	17	99	273
08:30 AM	10	15	2	27	4	45	8	57	17	**56**	0	**73**	15	87	17	119	276
Total Volume	57	78	22	157	27	183	22	232	67	179	1	247	63	351	66	480	1116
% App. Total	36.3	49.7	14		11.6	78.9	9.5		27.1	72.5	0.4		13.1	73.1	13.8		
PHF	.713	.886	.611	.801	.614	.915	.611	.967	.728	.799	.250	.846	.788	.636	.917	.698	.856

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC, CL
Counter:D4-5676, D4-5675
Weather:Clear

File Name : KanKuh PM
Site Code : 00000004
Start Date : 10/2/2013
Page No : 1

Groups Printed- Unshifted

	Kanekapolei Street Southbound					Kuhio Avenue Westbound					Kanekapolei Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	13	16	1	92	122	5	55	2	50	112	24	73	0	67	164	24	96	18	89	227	625
03:15 PM	13	17	3	106	139	7	67	4	63	141	13	69	1	124	207	26	110	14	83	233	720
03:30 PM	12	22	14	101	149	4	67	1	44	116	18	68	0	91	177	28	108	14	63	213	655
03:45 PM	14	21	6	90	131	6	55	5	45	111	11	59	1	106	177	33	126	16	55	230	649
Total	52	76	24	389	541	22	244	12	202	480	66	269	2	388	725	111	440	62	290	903	2649
04:00 PM	13	11	11	133	168	9	60	6	73	148	20	72	7	97	196	37	123	16	83	259	771
04:15 PM	23	10	12	111	156	7	49	2	76	134	22	64	0	118	204	28	126	15	83	252	746
04:30 PM	15	16	8	97	136	7	56	1	50	114	12	61	0	125	198	36	151	12	81	280	728
04:45 PM	18	8	11	130	167	3	66	0	77	146	21	37	0	92	150	36	144	11	86	277	740
Total	69	45	42	471	627	26	231	9	276	542	75	234	7	432	748	137	544	54	333	1068	2985
05:00 PM	17	17	4	133	171	6	84	2	62	154	27	61	0	88	176	40	137	7	87	271	772
05:15 PM	15	20	10	149	194	4	84	0	162	250	24	56	0	141	221	36	141	15	110	302	967
05:30 PM	18	7	4	114	143	8	47	17	74	146	10	48	2	120	180	26	124	14	101	265	734
05:45 PM	16	8	8	142	174	6	67	4	104	181	20	44	0	97	161	27	127	7	80	241	757
Total	66	52	26	538	682	24	282	23	402	731	81	209	2	446	738	129	529	43	378	1079	3230
Grand Total	187	173	92	1398	1850	72	757	44	880	1753	222	712	11	1266	2211	377	1513	159	1001	3050	8864
Apprch %	10.1	9.4	5	75.6		4.1	43.2	2.5	50.2		10	32.2	0.5	57.3		12.4	49.6	5.2	32.8		
Total %	2.1	2	1	15.8	20.9	0.8	8.5	0.5	9.9	19.8	2.5	8	0.1	14.3	24.9	4.3	17.1	1.8	11.3	34.4	

	Kanekapolei Street Southbound				Kuhio Avenue Westbound				Kanekapolei Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	16	8	39	7	56	1	64	12	**61**	0	73	36	**151**	12	**199**	375
04:45 PM	**18**	8	**11**	37	3	66	0	69	21	37	0	58	36	**144**	11	191	355
05:00 PM	17	17	4	38	6	**84**	**2**	**92**	**27**	61	0	**88**	**40**	137	7	184	402
05:15 PM	15	**20**	10	**45**	4	84	0	88	24	56	0	80	36	141	**15**	192	**405**
Total Volume	65	61	33	159	20	290	3	313	84	215	0	299	148	573	45	766	1537
% App. Total	40.9	38.4	20.8		6.4	92.7	1		28.1	71.9	0		19.3	74.8	5.9		
PHF	.903	.763	.750	.883	.714	.863	.375	.851	.778	.881	.000	.849	.925	.949	.750	.962	.949

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:CY
Counter:T-1839
Weather:Clear

File Name : UluPri AM
Site Code : 00000003
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Prince Edward Street Westbound					Uluniu Avenue Northbound					Prince Edward Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	26	5	1	32	2	5	0	6	13	0	0	0	3	3	0	0	0	22	22	70
06:15 AM	0	32	2	2	36	5	4	0	8	17	0	0	0	2	2	0	0	0	8	8	63
06:30 AM	0	29	8	1	38	2	3	0	9	14	0	0	0	3	3	0	0	0	18	18	73
06:45 AM	0	32	11	2	45	3	8	0	4	15	0	0	0	4	4	0	0	0	23	23	87
Total	0	119	26	6	151	12	20	0	27	59	0	0	0	12	12	0	0	0	71	71	293
07:00 AM	0	37	8	1	46	6	9	0	8	23	0	0	0	1	1	0	0	0	24	24	94
07:15 AM	0	35	7	1	43	8	9	0	16	33	0	0	0	3	3	0	0	0	23	23	102
07:30 AM	0	42	15	5	62	7	6	0	9	22	0	0	0	5	5	0	0	0	43	43	132
07:45 AM	0	49	10	3	62	4	3	0	14	21	0	0	0	9	9	0	0	0	39	39	131
Total	0	163	40	10	213	25	27	0	47	99	0	0	0	18	18	0	0	0	129	129	459
08:00 AM	0	61	11	5	77	6	2	0	14	22	0	0	0	3	3	0	0	0	35	35	137
08:15 AM	0	52	15	5	72	9	10	0	15	34	0	0	0	10	10	0	0	0	60	60	176
08:30 AM	0	36	17	3	56	12	9	0	14	35	0	0	0	4	4	0	0	0	37	37	132
08:45 AM	0	43	14	8	65	7	8	0	21	36	0	0	0	12	12	0	0	0	49	49	162
Total	0	192	57	21	270	34	29	0	64	127	0	0	0	29	29	0	0	0	181	181	607
Grand Total	0	474	123	37	634	71	76	0	138	285	0	0	0	59	59	0	0	0	381	381	1359
Apprch %	0	74.8	19.4	5.8		24.9	26.7	0	48.4		0	0	0	100		0	0	0	100		
Total %	0	34.9	9.1	2.7	46.7	5.2	5.6	0	10.2	21	0	0	0	4.3	4.3	0	0	0	28	28	

	Uluniu Avenue Southbound				Prince Edward Street Westbound				Uluniu Avenue Northbound				Prince Edward Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	**61**	11	**72**	6	2	0	8	0	0	0	0	0	0	0	0	80
08:15 AM	0	52	15	67	9	**10**	0	19	0	0	0	0	0	0	0	0	**86**
08:30 AM	0	36	**17**	53	**12**	9	0	**21**	0	0	0	0	0	0	0	0	74
08:45 AM	0	43	14	57	7	8	0	15	0	0	0	0	0	0	0	0	72
Total Volume	0	192	57	249	34	29	0	63	0	0	0	0	0	0	0	0	312
% App. Total	0	77.1	22.9		54	46	0		0	0	0		0	0	0		
PHF	.000	.787	.838	.865	.708	.725	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.907

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:CY
Counter:T-1839
Weather:Clear

File Name : UluPri PM
Site Code : 00000003
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Prince Edward Street Westbound					Uluniu Avenue Northbound					Prince Edward Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	39	11	4	54	9	14	0	14	37	0	0	0	3	3	0	0	0	62	62	156
03:15 PM	0	26	9	7	42	6	6	0	17	29	0	0	0	4	4	0	0	0	67	67	142
03:30 PM	0	38	11	12	61	7	5	0	18	30	0	0	0	9	9	0	0	0	59	59	159
03:45 PM	0	41	8	11	60	5	12	0	10	27	0	0	0	3	3	0	0	0	54	54	144
Total	0	144	39	34	217	27	37	0	59	123	0	0	0	19	19	0	0	0	242	242	601
04:00 PM	0	38	7	9	54	13	8	0	21	42	0	0	0	9	9	0	0	0	74	74	179
04:15 PM	0	30	9	1	40	9	7	0	16	32	0	0	0	8	8	0	0	0	71	71	151
04:30 PM	0	31	7	16	54	12	13	0	19	44	0	0	0	17	17	0	0	0	53	53	168
04:45 PM	0	42	12	10	64	15	11	0	13	39	0	0	0	8	8	0	0	0	39	39	150
Total	0	141	35	36	212	49	39	0	69	157	0	0	0	42	42	0	0	0	237	237	648
05:00 PM	0	22	15	8	45	5	9	0	10	24	0	0	0	2	2	0	0	0	98	98	169
05:15 PM	0	28	12	8	48	10	9	0	10	29	0	0	0	5	5	0	0	0	70	70	152
05:30 PM	0	41	11	11	63	11	13	0	7	31	0	0	0	3	3	0	0	0	78	78	175
05:45 PM	0	21	12	8	41	7	14	0	49	70	0	0	0	11	11	0	0	0	45	45	167
Total	0	112	50	35	197	33	45	0	76	154	0	0	0	21	21	0	0	0	291	291	663
Grand Total	0	397	124	105	626	109	121	0	204	434	0	0	0	82	82	0	0	0	770	770	1912
Apprch %	0	63.4	19.8	16.8		25.1	27.9	0	47		0	0	0	100		0	0	0	100		
Total %	0	20.8	6.5	5.5	32.7	5.7	6.3	0	10.7	22.7	0	0	0	4.3	4.3	0	0	0	40.3	40.3	

	Uluniu Avenue Southbound				Prince Edward Street Westbound				Uluniu Avenue Northbound				Prince Edward Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**42**	12	**54**	**15**	11	0	**26**	0	0	0	0	0	0	0	0	**80**
05:00 PM	0	22	**15**	37	5	9	0	14	0	0	0	0	0	0	0	0	51
05:15 PM	0	28	12	40	10	9	0	19	0	0	0	0	0	0	0	0	59
05:30 PM	0	41	11	52	11	**13**	0	24	0	0	0	0	0	0	0	0	76
Total Volume	0	133	50	183	41	42	0	83	0	0	0	0	0	0	0	0	266
% App. Total	0	72.7	27.3		49.4	50.6	0		0	0	0		0	0	0		
PHF	.000	.792	.833	.847	.683	.808	.000	.798	.000	.000	.000	.000	.000	.000	.000	.000	.831

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MA
Counter:T-1841
Weather:Clear

File Name : KoaUlu AM
Site Code : 00000002
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Koa Avenue Westbound					Uluniu Avenue Northbound					Koa Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	9	18	0	2	29	0	0	0	12	12	0	0	0	10	10	0	7	15	22	44	95
06:15 AM	24	16	0	7	47	0	0	0	16	16	0	0	0	25	25	0	14	16	15	45	133
06:30 AM	17	15	0	24	56	0	0	0	20	20	0	0	0	17	17	0	24	9	32	65	158
06:45 AM	12	24	0	19	55	0	0	0	21	21	0	0	0	20	20	0	18	7	50	75	171
Total	62	73	0	52	187	0	0	0	69	69	0	0	0	72	72	0	63	47	119	229	557
07:00 AM	20	20	0	17	57	0	0	0	10	10	0	0	0	24	24	0	27	18	56	101	192
07:15 AM	13	35	0	23	71	0	0	0	27	27	0	0	0	36	36	0	16	15	44	75	209
07:30 AM	19	32	0	39	90	0	0	0	29	29	0	0	0	47	47	0	18	30	60	108	274
07:45 AM	21	35	0	22	78	0	0	0	26	26	0	0	0	31	31	0	19	36	56	111	246
Total	73	122	0	101	296	0	0	0	92	92	0	0	0	138	138	0	80	99	216	395	921
08:00 AM	19	45	0	31	95	0	0	0	35	35	0	0	0	56	56	0	24	34	61	119	305
08:15 AM	27	35	0	33	95	0	0	0	56	56	0	0	0	30	30	0	19	53	62	134	315
08:30 AM	18	28	0	24	70	0	0	0	37	37	0	0	0	42	42	0	39	33	55	127	276
08:45 AM	15	37	0	34	86	0	0	0	48	48	0	0	0	29	29	0	26	38	44	108	271
Total	79	145	0	122	346	0	0	0	176	176	0	0	0	157	157	0	108	158	222	488	1167
Grand Total	214	340	0	275	829	0	0	0	337	337	0	0	0	367	367	0	251	304	557	1112	2645
Apprch %	25.8	41	0	33.2		0	0	0	100		0	0	0	100		0	22.6	27.3	50.1		
Total %	8.1	12.9	0	10.4	31.3	0	0	0	12.7	12.7	0	0	0	13.9	13.9	0	9.5	11.5	21.1	42	

	Uluniu Avenue Southbound				Koa Avenue Westbound				Uluniu Avenue Northbound				Koa Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	19	**45**	0	**64**	0	0	0	0	0	0	0	0	0	24	34	58	122
08:15 AM	**27**	35	0	62	0	0	0	0	0	0	0	0	0	19	**53**	**72**	**134**
08:30 AM	18	28	0	46	0	0	0	0	0	0	0	0	0	**39**	33	72	118
08:45 AM	15	37	0	52	0	0	0	0	0	0	0	0	0	26	38	64	116
Total Volume	79	145	0	224	0	0	0	0	0	0	0	0	0	108	158	266	490
% App. Total	35.3	64.7	0		0	0	0		0	0	0		0	40.6	59.4		
PHF	.731	.806	.000	.875	.000	.000	.000	.000	.000	.000	.000	.000	.000	.692	.745	.924	.914

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Counter:D4-3890
Weather:Clear

File Name : KoaUlu PM
Site Code : 00000002
Start Date : 9/24/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Street Southbound					Koa Street Westbound					Uluniu Street Northbound					Koa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	13	31	0	41	85	0	0	0	51	51	5	0	0	55	60	0	33	22	75	130	326
03:15 PM	11	32	0	23	66	0	0	0	53	53	0	0	0	59	59	0	24	21	65	110	288
03:30 PM	10	27	0	32	69	0	0	0	42	42	0	0	0	39	39	0	20	25	70	115	265
03:45 PM	18	37	0	34	89	0	0	0	35	35	0	0	0	42	42	0	23	29	81	133	299
Total	52	127	0	130	309	0	0	0	181	181	5	0	0	195	200	0	100	97	291	488	1178
04:00 PM	20	30	0	24	74	0	0	0	30	30	0	0	0	63	63	0	37	26	110	173	340
04:15 PM	16	24	0	27	67	0	0	0	43	43	0	0	0	47	47	0	28	23	70	121	278
04:30 PM	9	29	0	49	87	0	0	0	39	39	0	0	0	40	40	0	23	28	97	148	314
04:45 PM	10	25	0	65	100	0	0	0	64	64	0	0	0	57	57	0	24	14	89	127	348
Total	55	108	0	165	328	0	0	0	176	176	0	0	0	207	207	0	112	91	366	569	1280
05:00 PM	17	19	0	32	68	0	0	0	49	49	0	0	0	52	52	0	25	26	77	128	297
05:15 PM	11	29	0	49	89	0	0	0	40	40	0	0	0	54	54	0	29	18	81	128	311
05:30 PM	13	22	0	36	71	0	0	0	58	58	0	0	0	45	45	0	15	27	102	144	318
05:45 PM	8	25	0	49	82	0	0	0	42	42	0	0	0	53	53	0	24	19	99	142	319
Total	49	95	0	166	310	0	0	0	189	189	0	0	0	204	204	0	93	90	359	542	1245
Grand Total	156	330	0	461	947	0	0	0	546	546	5	0	0	606	611	0	305	278	1016	1599	3703
Apprch %	16.5	34.8	0	48.7		0	0	0	100		0.8	0	0	99.2		0	19.1	17.4	63.5		
Total %	4.2	8.9	0	12.4	25.6	0	0	0	14.7	14.7	0.1	0	0	16.4	16.5	0	8.2	7.5	27.4	43.2	

	Uluniu Street Southbound				Koa Street Westbound				Uluniu Street Northbound				Koa Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	18	**37**	0	**55**	0	0	0	0	0	0	0	0	0	23	**29**	52	107
04:00 PM	**20**	30	0	50	0	0	0	0	0	0	0	0	0	**37**	26	**63**	113
04:15 PM	16	24	0	40	0	0	0	0	0	0	0	0	0	28	23	51	91
04:30 PM	9	29	0	38	0	0	0	0	0	0	0	0	0	23	28	51	89
Total Volume	63	120	0	183	0	0	0	0	0	0	0	0	0	111	106	217	400
% App. Total	34.4	65.6	0		0	0	0		0	0	0		0	51.2	48.8		
PHF	.788	.811	.000	.832	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750	.914	.861	.885

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Weather:Clear

File Name : KalUlu AM
Site Code : 00000001
Start Date : 10/3/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Avenue Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	22	0	0	36	58	0	0	0	79	0	34	113	171
06:15 AM	30	0	0	44	74	0	0	0	78	0	42	120	194
06:30 AM	20	0	0	61	81	0	0	0	95	0	46	141	222
06:45 AM	24	0	0	81	105	0	0	0	124	0	63	187	292
Total	96	0	0	222	318	0	0	0	376	0	185	561	879
07:00 AM	35	0	0	103	138	0	0	0	145	0	55	200	338
07:15 AM	41	0	0	100	141	0	0	0	176	0	72	248	389
07:30 AM	59	0	0	131	190	0	0	0	235	0	71	306	496
07:45 AM	64	0	0	158	222	0	0	0	217	0	79	296	518
Total	199	0	0	492	691	0	0	0	773	0	277	1050	1741
08:00 AM	65	0	0	164	229	0	0	0	208	0	85	293	522
08:15 AM	69	0	0	256	325	0	0	0	168	0	131	299	624
08:30 AM	68	0	0	232	300	0	0	0	166	0	113	279	579
08:45 AM	73	0	0	231	304	0	0	0	0	0	0	0	304
Total	275	0	0	883	1158	0	0	0	542	0	329	871	2029
Grand Total	570	0	0	1597	2167	0	0	0	1691	0	791	2482	4649
Apprch %	26.3	0	0	73.7				0	68.1	0	31.9		
Total %	12.3	0	0	34.4	46.6	0	0	0	36.4	0	17	53.4	

	Uluniu Avenue Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:30 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	59	0	0	59	0	0	0	**235**	0	**235**	**294**
07:45 AM	64	0	0	64	0	0	0	217	0	217	281
08:00 AM	65	0	0	65	0	0	0	208	0	208	273
08:15 AM	**69**	0	0	**69**	0	0	0	168	0	168	237
Total Volume	257	0	0	257	0	0	0	828	0	828	1085
% App. Total	100	0	0				0	100	0		
PHF	.931	.000	.000	.931	.000	.000	.000	.881	.000	.881	.923

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

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Counter:D4-5677, D4-5675
Weather:Clear

File Name : KalUlu PM
Site Code : 00000001
Start Date : 9/24/2013
Page No : 1

Groups Printed- Unshifted

	Uluniu Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	41	0	0	354	395	0	0	0	219	0	169	388	783
03:15 PM	55	0	0	314	369	0	0	0	262	0	141	403	772
03:30 PM	59	0	0	271	330	0	0	0	243	0	174	417	747
03:45 PM	66	0	0	346	412	0	0	0	277	0	185	462	874
Total	221	0	0	1285	1506	0	0	0	1001	0	669	1670	3176
04:00 PM	65	0	0	330	395	0	0	0	266	0	183	449	844
04:15 PM	54	0	0	325	379	0	0	0	322	0	203	525	904
04:30 PM	64	0	0	310	374	0	0	0	259	0	168	427	801
04:45 PM	57	0	0	313	370	0	0	0	260	0	235	495	865
Total	240	0	0	1278	1518	0	0	0	1107	0	789	1896	3414
05:00 PM	47	0	0	368	415	0	0	0	298	0	172	470	885
05:15 PM	55	0	0	339	394	0	0	0	329	0	195	524	918
05:30 PM	55	0	0	376	431	0	0	0	290	0	168	458	889
05:45 PM	43	0	0	361	404	0	0	0	258	0	247	505	909
Total	200	0	0	1444	1644	0	0	0	1175	0	782	1957	3601
Grand Total	661	0	0	4007	4668	0	0	0	3283	0	2240	5523	10191
Apprch %	14.2	0	0	85.8				0	59.4	0	40.6		
Total %	6.5	0	0	39.3	45.8	0	0	0	32.2	0	22	54.2	

	Uluniu Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	**57**	0	0	**57**	0	0	0	260	0	260	317
05:00 PM	47	0	0	47	0	0	0	298	0	298	345
05:15 PM	55	0	0	55	0	0	0	**329**	0	**329**	**384**
05:30 PM	55	0	0	55	0	0	0	290	0	290	345
Total Volume	214	0	0	214	0	0	0	1177	0	1177	1391
% App. Total	100	0	0				0	100	0		
PHF	.939	.000	.000	.939	.000	.000	.000	.894	.000	.894	.906

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) criteria are given in Table 1. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. If the degree of saturation is greater than about 0.9, average control delay is significantly affected by the length of the analysis period.

Table 1: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

"Highway Capacity Manual," Transportation Research Board, 2000.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control and volume–to-capacity .ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

Table 1: Level-of-Service Criteria for Signalized Intersections

Level of Service	LOS by Volume-to-Capacity Ratio
A	≤10
B	>10 – 20
C	>20 – 35
D	>35 - 55.0
E	>55.0 - 80.0
F	>80.0

Level of Service A describes operation with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

Level of Service C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

"Highway Capacity Manual," Transportation Research Board, 2000.

Level of Service E describes operation with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F describes operation with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. The level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

"Highway Capacity Manual," Transportation Research Board, 2000.

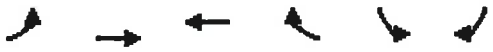
APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
BASELINE PEAK PERIOD TRAFFIC ANALYSIS

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	333	896	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	362	974	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	362	974	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		0.19				
v/s Ratio Perm	c0.20					
v/c Ratio	0.30	0.28				
Uniform Delay, d1	7.0	6.9				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.6	0.2				
Delay (s)	7.6	7.1				
Level of Service	A	A				
Approach Delay (s)		7.2	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	379	1315	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.91				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1770	5085				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1770	5085				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	1384	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	399	1384	0	0	0	0
Turn Type	Perm	NA				
Protected Phases		4				
Permitted Phases	4					
Actuated Green, G (s)	75.0	75.0				
Effective Green, g (s)	75.0	75.0				
Actuated g/C Ratio	0.68	0.68				
Clearance Time (s)	5.0	5.0				
Lane Grp Cap (vph)	1206	3467				
v/s Ratio Prot		c0.27				
v/s Ratio Perm	0.23					
v/c Ratio	0.33	0.40				
Uniform Delay, d1	7.2	7.7				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.7	0.3				
Delay (s)	7.9	8.0				
Level of Service	A	A				
Approach Delay (s)		8.0	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	0	0	0	0	8	111	135	132	0	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	0	0	0	0	8	117	142	139	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			477	
pX, platoon unblocked												
vC, conflicting volume	353	554	0	483	503	129	20			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353	554	0	483	503	129	20			259		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	99			89		
cM capacity (veh/h)	585	390	1084	427	417	896	1595			1303		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	67	201	139	20
Volume Left	26	8	0	139	0
Volume Right	0	0	142	0	20
cSH	585	1595	1700	1303	1700
Volume to Capacity	0.05	0.01	0.12	0.11	0.01
Queue Length 95th (ft)	4	0	0	9	0
Control Delay (s)	11.4	1.0	0.0	8.1	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.4	0.2		7.1	
Approach LOS	B				

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	28.3%	ICU Level of Service		A
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	0	0	0	0	0	9	143	119	116	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	0	0	0	0	0	10	159	132	129	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			478	
pX, platoon unblocked												
vC, conflicting volume	357	569	0	503	503	146	0			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	357	569	0	503	503	146	0			291		
tC, single (s)	*6.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	100	100	100	99			90		
cM capacity (veh/h)	584	384	1084	415	419	875	1622			1268		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	16	89	212	129	0
Volume Left	16	10	0	129	0
Volume Right	0	0	132	0	0
cSH	584	1622	1700	1268	1700
Volume to Capacity	0.03	0.01	0.12	0.10	0.00
Queue Length 95th (ft)	2	0	0	8	0
Control Delay (s)	11.3	0.9	0.0	8.2	0.0
Lane LOS	B	A		A	
Approach Delay (s)	11.3	0.3		8.2	
Approach LOS	B				

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	0	13	25	17	296	28	176	0	0	131	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	89	0	14	27	18	315	30	187	0	0	139	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								432			262	
pX, platoon unblocked												
vC, conflicting volume	638	407	91	330	429	94	182			187		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	638	407	91	330	429	94	182			187		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	68	100	99	96	97	68	98			100		
cM capacity (veh/h)	282	520	974	639	573	971	1391			1384		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	360	92	125	93	89
Volume Left	89	27	30	0	0	0
Volume Right	14	315	0	0	0	43
cSH	312	905	1391	1700	1700	1700
Volume to Capacity	0.33	0.40	0.02	0.07	0.05	0.05
Queue Length 95th (ft)	35	48	2	0	0	0
Control Delay (s)	22.2	11.6	2.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	22.2	11.6	1.1		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	0	0	26	23	96	10	218	0	0	119	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	214	0	0	31	27	113	12	256	0	0	140	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								428			267	
pX, platoon unblocked												
vC, conflicting volume	436	438	88	350	455	128	175			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	436	438	88	350	455	128	175			256		
tC, single (s)	*6.5	6.5	6.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	100	100	95	95	88	99			100		
cM capacity (veh/h)	481	507	953	638	565	932	1399			1305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	214	171	97	171	93	82
Volume Left	214	31	12	0	0	0
Volume Right	0	113	0	0	0	35
cSH	481	786	1399	1700	1700	1700
Volume to Capacity	0.45	0.22	0.01	0.10	0.05	0.05
Queue Length 95th (ft)	56	21	1	0	0	0
Control Delay (s)	18.4	10.8	1.0	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	18.4	10.8	0.4		0.0	
Approach LOS	C	B				

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	36.8%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	400	66	27	198	22	81	201	1	60	78	22
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.98			0.99			1.00			0.98	
Flt Protected	0.95	1.00			0.99			0.99			0.98	
Satd. Flow (prot)	1770	3464			3472			3488			3402	
Flt Permitted	0.49	1.00			0.87			0.81			0.75	
Satd. Flow (perm)	920	3464			3025			2853			2607	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	73	465	77	31	230	26	94	234	1	70	91	26
RTOR Reduction (vph)	0	17	0	0	9	0	0	0	0	0	16	0
Lane Group Flow (vph)	73	526	0	0	278	0	0	329	0	0	171	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.0	40.0			30.0			30.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0			30.0			30.0	
Actuated g/C Ratio	0.50	0.50			0.38			0.38			0.38	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	513	1732			1134			1069			977	
v/s Ratio Prot	0.01	c0.15										
v/s Ratio Perm	0.06				0.09			c0.12			0.07	
v/c Ratio	0.14	0.30			0.24			0.31			0.17	
Uniform Delay, d1	10.6	11.8			17.2			17.7			16.7	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.6	0.5			0.5			0.7			0.4	
Delay (s)	11.2	12.2			17.7			18.4			17.1	
Level of Service	B	B			B			B			B	
Approach Delay (s)		12.1			17.7			18.4			17.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Kanekapolei Street & Kuhio Avenue

8/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	685	45	20	297	3	89	211	0	67	61	33
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.99			1.00			1.00			0.97	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3507			3524			3487			3360	
Flt Permitted	0.48	1.00			0.89			0.80			0.73	
Satd. Flow (perm)	898	3507			3145			2841			2519	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	721	47	21	313	3	94	222	0	71	64	35
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	162	763	0	0	336	0	0	316	0	0	147	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	50.0	50.0			40.0			30.0			30.0	
Effective Green, g (s)	50.0	50.0			40.0			30.0			30.0	
Actuated g/C Ratio	0.56	0.56			0.44			0.33			0.33	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	547	1948			1397			947			839	
v/s Ratio Prot	0.02	c0.22										
v/s Ratio Perm	0.15				0.11			c0.11			0.06	
v/c Ratio	0.30	0.39			0.24			0.33			0.17	
Uniform Delay, d1	10.0	11.4			15.6			22.5			21.2	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	1.4	0.6			0.4			0.9			0.5	
Delay (s)	11.4	12.0			16.0			23.5			21.7	
Level of Service	B	B			B			C			C	
Approach Delay (s)		11.8			16.0			23.5			21.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: Kaiulani Avenue & Kuhio Avenue

8/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	487	0	0	221	17	0	8	98	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.99			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3502			1863	1583			
Flt Permitted		0.93			1.00			1.00	1.00			
Satd. Flow (perm)		3308			3502			1863	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	553	0	0	251	19	0	9	111	0	0	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	76	0	0	0
Lane Group Flow (vph)	0	579	0	0	263	0	0	9	35	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0			40.0			25.0	25.0			
Effective Green, g (s)		45.0			40.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.50			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1867			1751			582	494			
v/s Ratio Prot		c0.01			0.08			0.00				
v/s Ratio Perm		c0.16							c0.02			
v/c Ratio		0.31			0.15			0.02	0.07			
Uniform Delay, d1		9.3			10.8			19.0	19.3			
Progression Factor		0.53			1.35			1.00	1.00			
Incremental Delay, d2		0.4			0.2			0.0	0.3			
Delay (s)		5.3			14.8			19.0	19.6			
Level of Service		A			B			B	B			
Approach Delay (s)		5.3			14.8			19.6			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	678	0	0	329	44	0	43	95	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.98			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3476			1863	1583			
Flt Permitted		0.92			1.00			1.00	1.00			
Satd. Flow (perm)		3261			3476			1863	1583			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	721	0	0	350	47	0	46	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	73	0	0	0
Lane Group Flow (vph)	0	756	0	0	385	0	0	46	28	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		55.0			50.0			25.0	25.0			
Effective Green, g (s)		55.0			50.0			25.0	25.0			
Actuated g/C Ratio		0.61			0.56			0.28	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		2000			1931			517	439			
v/s Ratio Prot		c0.01			0.11			c0.02				
v/s Ratio Perm		c0.22							0.02			
v/c Ratio		0.38			0.20			0.09	0.06			
Uniform Delay, d1		8.8			10.0			24.1	23.9			
Progression Factor		0.39			1.43			1.00	1.00			
Incremental Delay, d2		0.5			0.2			0.3	0.3			
Delay (s)		4.0			14.5			24.4	24.2			
Level of Service		A			B			C	C			
Approach Delay (s)		4.0			14.5			24.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	395	132	162	243	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.96			1.00		
Flt Protected	1.00			0.98		
Satd. Flow (prot)	3406			3470		
Flt Permitted	1.00			0.61		
Satd. Flow (perm)	3406			2144		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	459	153	188	283	0	0
RTOR Reduction (vph)	41	0	0	0	0	0
Lane Group Flow (vph)	571	0	0	471	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	45.0			45.0		
Effective Green, g (s)	45.0			45.0		
Actuated g/C Ratio	0.56			0.56		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	1915			1206		
v/s Ratio Prot	0.17					
v/s Ratio Perm				c0.22		
v/c Ratio	0.30			0.39		
Uniform Delay, d1	9.2			9.8		
Progression Factor	1.94			1.00		
Incremental Delay, d2	0.4			1.0		
Delay (s)	18.2			10.8		
Level of Service	B			B		
Approach Delay (s)	18.2			10.8	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	611	114	90	391	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.98			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	3455			3506		
Flt Permitted	1.00			0.70		
Satd. Flow (perm)	3455			2487		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	657	123	97	420	0	0
RTOR Reduction (vph)	17	0	0	0	0	0
Lane Group Flow (vph)	763	0	0	517	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	55.0			55.0		
Effective Green, g (s)	55.0			55.0		
Actuated g/C Ratio	0.61			0.61		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	2111			1519		
v/s Ratio Prot	c0.22					
v/s Ratio Perm				0.21		
v/c Ratio	0.36			0.34		
Uniform Delay, d1	8.7			8.6		
Progression Factor	2.02			1.00		
Incremental Delay, d2	0.5			0.6		
Delay (s)	18.1			9.2		
Level of Service	B			A		
Approach Delay (s)	18.1			9.2	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	34	60	0	0	0	0	0	192	95
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	37	66	0	0	0	0	0	211	104
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	296	263	263	263	315	0	315			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296	263	263	263	315	0	315			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	90	100	100			100		
cM capacity (veh/h)	606	642	775	743	656	1085	1245			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	103	315
Volume Left	37	0
Volume Right	0	104
cSH	685	1700
Volume to Capacity	0.15	0.19
Queue Length 95th (ft)	13	0
Control Delay (s)	11.2	0.0
Lane LOS	B	
Approach Delay (s)	11.2	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	59	0	0	0	0	0	133	71
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	0	49	70	0	0	0	0	0	158	85
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	236	201	201	201	243	0	243			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	236	201	201	201	243	0	243			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	90	100	100			100		
cM capacity (veh/h)	664	695	840	802	706	1085	1323			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	119	243
Volume Left	49	0
Volume Right	0	85
cSH	742	1700
Volume to Capacity	0.16	0.14
Queue Length 95th (ft)	14	0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

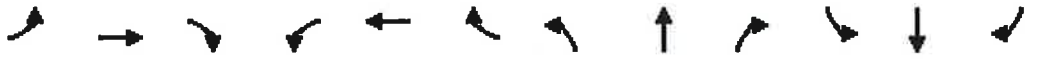
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	139	158	0	0	0	0	0	0	79	145	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	153	174	0	0	0	0	0	0	87	159	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	326	246
Volume Left (vph)	0	87
Volume Right (vph)	174	0
Hadj (s)	-0.29	0.10
Departure Headway (s)	4.2	4.8
Degree Utilization, x	0.38	0.32
Capacity (veh/h)	808	720
Control Delay (s)	9.9	10.0
Approach Delay (s)	9.9	10.0
Approach LOS	A	B

Intersection Summary			
Delay	9.9		
Level of Service	A		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	128	106	0	0	0	0	0	0	63	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	144	119	0	0	0	0	0	0	71	135	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	263	206
Volume Left (vph)	0	71
Volume Right (vph)	119	0
Hadj (s)	-0.24	0.10
Departure Headway (s)	4.2	4.6
Degree Utilization, x	0.30	0.26
Capacity (veh/h)	822	748
Control Delay (s)	9.0	9.2
Approach Delay (s)	9.0	9.2
Approach LOS	A	A

Intersection Summary				
Delay	9.1			
Level of Service	A			
Intersection Capacity Utilization	29.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	894	0	0	257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	972	0	0	279	0
RTOR Reduction (vph)	0	0	0	0	216	0
Lane Group Flow (vph)	0	972	0	0	63	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.19			c0.02	
v/s Ratio Perm						
v/c Ratio		0.28			0.08	
Uniform Delay, d1		6.9			33.5	
Progression Factor		0.59			1.00	
Incremental Delay, d2		0.2			0.2	
Delay (s)		4.3			33.7	
Level of Service		A			C	
Approach Delay (s)		4.3	0.0		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

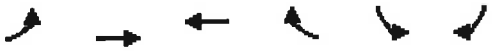
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	1271	0	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1397	0	0	233	0
RTOR Reduction (vph)	0	0	0	0	107	0
Lane Group Flow (vph)	0	1397	0	0	126	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.27			c0.04	
v/s Ratio Perm						
v/c Ratio		0.40			0.16	
Uniform Delay, d1		7.7			34.1	
Progression Factor		0.55			1.00	
Incremental Delay, d2		0.3			0.4	
Delay (s)		4.5			34.5	
Level of Service		A			C	
Approach Delay (s)		4.5	0.0		34.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED PEAK PERIOD TRAFFIC
ANALYSIS WITH PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	333	896	0	0	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	0.91			1.00	
Frt	1.00	1.00			1.00	
Flt Protected	0.95	1.00			0.95	
Satd. Flow (prot)	1770	5085			1770	
Flt Permitted	0.95	1.00			0.95	
Satd. Flow (perm)	1770	5085			1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	362	974	0	0	76	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	362	974	0	0	76	0
Turn Type	Perm	NA			Prot	
Protected Phases		2			4	
Permitted Phases	2					
Actuated Green, G (s)	40.0	40.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0	
Actuated g/C Ratio	0.36	0.36			0.27	
Clearance Time (s)	5.0	5.0			5.0	
Lane Grp Cap (vph)	643	1849			482	
v/s Ratio Prot		0.19			c0.04	
v/s Ratio Perm	c0.20					
v/c Ratio	0.56	0.53			0.16	
Uniform Delay, d1	28.0	27.6			30.4	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	3.5	1.1			0.7	
Delay (s)	31.5	28.6			31.1	
Level of Service	C	C			C	
Approach Delay (s)		29.4	0.0		31.1	
Approach LOS		C	A		C	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	379	1315	0	0	53	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	
Lane Util. Factor	1.00	0.91			1.00	
Frt	1.00	1.00			1.00	
Flt Protected	0.95	1.00			0.95	
Satd. Flow (prot)	1770	5085			1770	
Flt Permitted	0.95	1.00			0.95	
Satd. Flow (perm)	1770	5085			1770	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	1384	0	0	56	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	399	1384	0	0	56	0
Turn Type	Perm	NA			Prot	
Protected Phases		2			4	
Permitted Phases	2					
Actuated Green, G (s)	40.0	40.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0	
Actuated g/C Ratio	0.36	0.36			0.27	
Clearance Time (s)	5.0	5.0			5.0	
Lane Grp Cap (vph)	643	1849			482	
v/s Ratio Prot		c0.27			c0.03	
v/s Ratio Perm	0.23					
v/c Ratio	0.62	0.75			0.12	
Uniform Delay, d1	28.8	30.6			30.0	
Progression Factor	1.00	1.00			1.00	
Incremental Delay, d2	4.5	2.8			0.5	
Delay (s)	33.2	33.4			30.5	
Level of Service	C	C			C	
Approach Delay (s)		33.4	0.0		30.5	
Approach LOS		C	A		C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	0	0	0	0	8	111	135	62	70	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	26	0	0	0	0	0	8	117	142	65	74	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			477	
pX, platoon unblocked												
vC, conflicting volume	419	490	84	409	429	188	94			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	419	490	84	409	429	188	94			259		
tC, single (s)	*6.5	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	99			95		
cM capacity (veh/h)	561	452	976	530	490	854	1501			1306		

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	26	267	65	94
Volume Left	26	8	65	0
Volume Right	0	142	0	20
cSH	561	1501	1306	1700
Volume to Capacity	0.05	0.01	0.05	0.06
Queue Length 95th (ft)	4	0	4	0
Control Delay (s)	11.7	0.3	7.9	0.0
Lane LOS	B	A	A	
Approach Delay (s)	11.7	0.3	3.2	
Approach LOS	B			

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	0	0	0	0	0	9	143	119	63	53	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	0	0	0	0	0	10	159	132	70	59	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								217			478	
pX, platoon unblocked												
vC, conflicting volume	444	510	59	444	444	225	59			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	444	510	59	444	444	225	59			291		
tC, single (s)	*6.5	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	100	100	100	99			94		
cM capacity (veh/h)	539	438	1007	500	477	814	1545			1271		

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	16	301	70	59
Volume Left	16	10	70	0
Volume Right	0	132	0	0
cSH	539	1545	1271	1700
Volume to Capacity	0.03	0.01	0.06	0.03
Queue Length 95th (ft)	2	0	4	0
Control Delay (s)	11.9	0.3	8.0	0.0
Lane LOS	B	A	A	
Approach Delay (s)	11.9	0.3	4.3	
Approach LOS	B			

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	0	13	25	17	296	28	176	0	0	131	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	89	0	14	27	18	315	30	187	0	0	139	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								432			262	
pX, platoon unblocked												
vC, conflicting volume	638	407	91	330	429	94	182			187		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	638	407	91	330	429	94	182			187		
tC, single (s)	*6.5	6.5	*5.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	68	100	99	96	97	68	98			100		
cM capacity (veh/h)	282	520	974	639	573	971	1391			1384		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	360	92	125	93	89
Volume Left	89	27	30	0	0	0
Volume Right	14	315	0	0	0	43
cSH	312	905	1391	1700	1700	1700
Volume to Capacity	0.33	0.40	0.02	0.07	0.05	0.05
Queue Length 95th (ft)	35	48	2	0	0	0
Control Delay (s)	22.2	11.6	2.6	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	22.2	11.6	1.1		0.0	
Approach LOS	C	B				

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	0	0	26	23	96	10	218	0	0	119	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	214	0	0	31	27	113	12	256	0	0	140	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								428			267	
pX, platoon unblocked												
vC, conflicting volume	436	438	88	350	455	128	175			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	436	438	88	350	455	128	175			256		
tC, single (s)	*6.5	6.5	6.9	*6.5	*5.5	*5.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	100	100	95	95	88	99			100		
cM capacity (veh/h)	481	507	953	638	565	932	1399			1305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	214	171	97	171	93	82
Volume Left	214	31	12	0	0	0
Volume Right	0	113	0	0	0	35
cSH	481	786	1399	1700	1700	1700
Volume to Capacity	0.45	0.22	0.01	0.10	0.05	0.05
Queue Length 95th (ft)	56	21	1	0	0	0
Control Delay (s)	18.4	10.8	1.0	0.0	0.0	0.0
Lane LOS	C	B	A			
Approach Delay (s)	18.4	10.8	0.4		0.0	
Approach LOS	C	B				

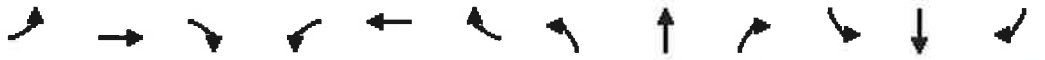
Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	36.8%	ICU Level of Service	A	
Analysis Period (min)	15			

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	400	66	27	198	22	81	201	1	60	78	22
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.98			0.99			1.00			0.98	
Flt Protected	0.95	1.00			0.99			0.99			0.98	
Satd. Flow (prot)	1770	3464			3472			3488			3402	
Flt Permitted	0.49	1.00			0.87			0.81			0.75	
Satd. Flow (perm)	920	3464			3025			2853			2607	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	73	465	77	31	230	26	94	234	1	70	91	26
RTOR Reduction (vph)	0	17	0	0	9	0	0	0	0	0	16	0
Lane Group Flow (vph)	73	526	0	0	278	0	0	329	0	0	171	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.0	40.0			30.0			30.0			30.0	
Effective Green, g (s)	40.0	40.0			30.0			30.0			30.0	
Actuated g/C Ratio	0.50	0.50			0.38			0.38			0.38	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	513	1732			1134			1069			977	
v/s Ratio Prot	0.01	c0.15										
v/s Ratio Perm	0.06				0.09			c0.12			0.07	
v/c Ratio	0.14	0.30			0.24			0.31			0.17	
Uniform Delay, d1	10.6	11.8			17.2			17.7			16.7	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.6	0.5			0.5			0.7			0.4	
Delay (s)	11.2	12.2			17.7			18.4			17.1	
Level of Service	B	B			B			B			B	
Approach Delay (s)		12.1			17.7			18.4			17.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	685	45	20	297	3	89	211	0	67	61	33
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			5.0			5.0	
Lane Util. Factor	1.00	0.95			0.95			0.95			0.95	
Frt	1.00	0.99			1.00			1.00			0.97	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3507			3524			3487			3360	
Flt Permitted	0.48	1.00			0.89			0.80			0.73	
Satd. Flow (perm)	898	3507			3145			2841			2519	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	721	47	21	313	3	94	222	0	71	64	35
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	23	0
Lane Group Flow (vph)	162	763	0	0	336	0	0	316	0	0	147	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	50.0	50.0			40.0			30.0			30.0	
Effective Green, g (s)	50.0	50.0			40.0			30.0			30.0	
Actuated g/C Ratio	0.56	0.56			0.44			0.33			0.33	
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)	547	1948			1397			947			839	
v/s Ratio Prot	0.02	c0.22										
v/s Ratio Perm	0.15				0.11			c0.11			0.06	
v/c Ratio	0.30	0.39			0.24			0.33			0.17	
Uniform Delay, d1	10.0	11.4			15.6			22.5			21.2	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	1.4	0.6			0.4			0.9			0.5	
Delay (s)	11.4	12.0			16.0			23.5			21.7	
Level of Service	B	B			B			C			C	
Approach Delay (s)		11.8			16.0			23.5			21.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	487	0	0	221	17	0	8	98	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.99			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3502			1863	1583			
Flt Permitted		0.93			1.00			1.00	1.00			
Satd. Flow (perm)		3308			3502			1863	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	553	0	0	251	19	0	9	111	0	0	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	76	0	0	0
Lane Group Flow (vph)	0	579	0	0	263	0	0	9	35	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0			40.0			25.0	25.0			
Effective Green, g (s)		45.0			40.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.50			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		1867			1751			582	494			
v/s Ratio Prot		c0.01			0.08			0.00				
v/s Ratio Perm		c0.16							c0.02			
v/c Ratio		0.31			0.15			0.02	0.07			
Uniform Delay, d1		9.3			10.8			19.0	19.3			
Progression Factor		0.53			1.35			1.00	1.00			
Incremental Delay, d2		0.4			0.2			0.0	0.3			
Delay (s)		5.3			14.8			19.0	19.6			
Level of Service		A			B			B	B			
Approach Delay (s)		5.3			14.8			19.6			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	678	0	0	329	44	0	43	95	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	5.0			
Lane Util. Factor		0.95			0.95			1.00	1.00			
Frt		1.00			0.98			1.00	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		3531			3476			1863	1583			
Flt Permitted		0.92			1.00			1.00	1.00			
Satd. Flow (perm)		3261			3476			1863	1583			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	721	0	0	350	47	0	46	101	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	73	0	0	0
Lane Group Flow (vph)	0	756	0	0	385	0	0	46	28	0	0	0
Turn Type	pm+pt	NA			NA			NA	Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4								2			
Actuated Green, G (s)		55.0			50.0			25.0	25.0			
Effective Green, g (s)		55.0			50.0			25.0	25.0			
Actuated g/C Ratio		0.61			0.56			0.28	0.28			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		2000			1931			517	439			
v/s Ratio Prot		c0.01			0.11			c0.02				
v/s Ratio Perm		c0.22							0.02			
v/c Ratio		0.38			0.20			0.09	0.06			
Uniform Delay, d1		8.8			10.0			24.1	23.9			
Progression Factor		0.39			1.43			1.00	1.00			
Incremental Delay, d2		0.5			0.2			0.3	0.3			
Delay (s)		4.0			14.5			24.4	24.2			
Level of Service		A			B			C	C			
Approach Delay (s)		4.0			14.5			24.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	395	132	162	243	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.96			1.00		
Flt Protected	1.00			0.98		
Satd. Flow (prot)	3406			3470		
Flt Permitted	1.00			0.61		
Satd. Flow (perm)	3406			2144		
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	459	153	188	283	0	0
RTOR Reduction (vph)	41	0	0	0	0	0
Lane Group Flow (vph)	571	0	0	471	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	45.0			45.0		
Effective Green, g (s)	45.0			45.0		
Actuated g/C Ratio	0.56			0.56		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	1915			1206		
v/s Ratio Prot	0.17					
v/s Ratio Perm				c0.22		
v/c Ratio	0.30			0.39		
Uniform Delay, d1	9.2			9.8		
Progression Factor	1.94			1.00		
Incremental Delay, d2	0.4			1.0		
Delay (s)	18.2			10.8		
Level of Service	B			B		
Approach Delay (s)	18.2			10.8	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	611	114	90	391	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		
Lane Util. Factor	0.95			0.95		
Frt	0.98			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	3455			3506		
Flt Permitted	1.00			0.70		
Satd. Flow (perm)	3455			2487		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	657	123	97	420	0	0
RTOR Reduction (vph)	17	0	0	0	0	0
Lane Group Flow (vph)	763	0	0	517	0	0
Turn Type	NA		Perm	NA		
Protected Phases	4			8		
Permitted Phases			8			
Actuated Green, G (s)	55.0			55.0		
Effective Green, g (s)	55.0			55.0		
Actuated g/C Ratio	0.61			0.61		
Clearance Time (s)	5.0			5.0		
Lane Grp Cap (vph)	2111			1519		
v/s Ratio Prot	c0.22					
v/s Ratio Perm				0.21		
v/c Ratio	0.36			0.34		
Uniform Delay, d1	8.7			8.6		
Progression Factor	2.02			1.00		
Incremental Delay, d2	0.5			0.6		
Delay (s)	18.1			9.2		
Level of Service	B			A		
Approach Delay (s)	18.1			9.2	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	34	60	0	0	0	0	0	192	95
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	37	66	0	0	0	0	0	211	104
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	296	263	263	263	315	0	315			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296	263	263	263	315	0	315			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	90	100	100			100		
cM capacity (veh/h)	606	642	775	743	656	1085	1245			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	103	315
Volume Left	37	0
Volume Right	0	104
cSH	685	1700
Volume to Capacity	0.15	0.19
Queue Length 95th (ft)	13	0
Control Delay (s)	11.2	0.0
Lane LOS	B	
Approach Delay (s)	11.2	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	59	0	0	0	0	0	133	71
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	0	49	70	0	0	0	0	0	158	85
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	236	201	201	201	243	0	243			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	236	201	201	201	243	0	243			0		
tC, single (s)	7.1	6.5	6.2	*6.1	*5.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	90	100	100			100		
cM capacity (veh/h)	664	695	840	802	706	1085	1323			1623		

Direction, Lane #	WB 1	SB 1
Volume Total	119	243
Volume Left	49	0
Volume Right	0	85
cSH	742	1700
Volume to Capacity	0.16	0.14
Queue Length 95th (ft)	14	0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	139	88	0	0	0	0	0	0	79	145	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	153	97	0	0	0	0	0	0	87	159	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	249	246
Volume Left (vph)	0	87
Volume Right (vph)	97	0
Hadj (s)	-0.20	0.10
Departure Headway (s)	4.3	4.6
Degree Utilization, x	0.30	0.31
Capacity (veh/h)	791	753
Control Delay (s)	9.1	9.7
Approach Delay (s)	9.1	9.7
Approach LOS	A	A

Intersection Summary			
Delay	9.4		
Level of Service	A		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	128	53	0	0	0	0	0	0	63	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	144	60	0	0	0	0	0	0	71	135	0

Direction, Lane #	EB 1	SB 1
Volume Total (vph)	203	206
Volume Left (vph)	0	71
Volume Right (vph)	60	0
Hadj (s)	-0.14	0.10
Departure Headway (s)	4.3	4.5
Degree Utilization, x	0.24	0.26
Capacity (veh/h)	804	774
Control Delay (s)	8.6	9.0
Approach Delay (s)	8.6	9.0
Approach LOS	A	A

Intersection Summary				
Delay	8.8			
Level of Service	A			
Intersection Capacity Utilization	26.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	894	0	0	187	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	972	0	0	203	0
RTOR Reduction (vph)	0	0	0	0	157	0
Lane Group Flow (vph)	0	972	0	0	46	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.19			c0.01	
v/s Ratio Perm						
v/c Ratio		0.28			0.06	
Uniform Delay, d1		6.9			33.3	
Progression Factor		0.69			1.00	
Incremental Delay, d2		0.2			0.1	
Delay (s)		5.0			33.4	
Level of Service		A			C	
Approach Delay (s)		5.0	0.0		33.4	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑			↰↰	
Volume (vph)	0	1271	0	0	161	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.91			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		5085			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		5085			3433	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1397	0	0	175	0
RTOR Reduction (vph)	0	0	0	0	107	0
Lane Group Flow (vph)	0	1397	0	0	68	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		75.0			25.0	
Effective Green, g (s)		75.0			25.0	
Actuated g/C Ratio		0.68			0.23	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3467			780	
v/s Ratio Prot		c0.27			c0.02	
v/s Ratio Perm						
v/c Ratio		0.40			0.09	
Uniform Delay, d1		7.7			33.5	
Progression Factor		0.59			1.00	
Incremental Delay, d2		0.3			0.2	
Delay (s)		4.9			33.7	
Level of Service		A			C	
Approach Delay (s)		4.9	0.0		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 6

ARCHEOLOGICAL INVENTORY SURVEY PLAN

Revised
Archaeological Inventory Survey for the 133 Kaʻiulani Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Oʻahu TMK: [1] 2-6-023:029, 037, and 076

Prepared for

The Kobayashi Group

Prepared by

Douglas Inglis, B.A.,

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and

Matt McDermott, M.A.

Cultural Surveys Hawaiʻi, Inc.
Kailua, Hawaiʻi
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October 2014

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Management Summary

Reference	Archaeological Inventory Survey Report for the 133 Ka‘iulani Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu TMK: [1] 2-6-023:029, 037, and 076 (Inglis et al. 2014)
Date	October 2014
Project Number (s)	Cultural Surveys Hawai‘i (CSH) Job Code: WAIKIKI 119
Investigation Permit Number	The fieldwork portion of this project was carried out under archaeological permit numbers 13-06 and 14-04 , issued to CSH by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) § 13-282.
Project Location	Located in the central/Diamond Head portion of Waikīkī, a block inland from Kalākaua Avenue, the project area is bounded by Prince Edward Street to the north, Koa Avenue to the south, and Ka’iulani Avenue to the west. This area is depicted on the 1998 Honolulu USGS 7.5-minute topographic quadrangle.
Land Jurisdiction	Private, BSC KVSC, LLC, City and County of Honolulu (City)
Funding	Private, BSC KVSC, LLC
Agencies	SHPD, City
Project Description and Related Ground Disturbance	The 133 Ka‘iulani Project consists of three parcels that include the King’s Village Shopping Center, Prince Edward Apartments, and the Hale Waikiki Apartments. The project involves the redevelopment of the subject properties into a new high-rise condo hotel. Ground disturbance associated with the project construction will include demolition and removal of the existing King’s Village Shopping Center buildings, the 2413 Prince Edward Apartment building, and the Hale Waikiki Apartment building; construction of a new 34-story condominium tower. Ground disturbance will include excavations for general construction (e.g. borings, foundations, structural pilings, etc.), utility installation or relocation, roadway and parking areas, and landscaping. Additionally, the project includes the installation of approximately 400 linear feet of new sewer line within City-owned streets. The sewer line will extend from the project area’s north corner, across the intersection of Ka‘iulani Avenue and Prince Edward Street, continuing northeast along Ka‘iulani Avenue to the intersection with Kūhiō Avenue, and continue northwest along Kūhiō Avenue to connect to the existing sewer infrastructure between Walina Street and Kanekapolei Street. An additional sewer line section in the Kūhiō Avenue and Lewers Street intersection will be replaced.
Project Acreage	Approximately 1.05 acres, including approximately 400 linear feet of sewer line installation in adjacent City-owned streets.
Area of Potential Effect (APE)	For the purposes of this archaeological inventory survey (AIS), the project’s APE for archaeological historic properties is defined as the

	entire approximately 1.05-acre project area. The surrounding built environment is urban (paved streets and low rise and high-rise buildings) and the proposed project construction is unlikely to impose additional auditory, visual, or other environmental impacts to any surrounding potential archaeological historic properties outside the project area footprint. Accordingly, although no specific studies were done to evaluate this APE definition, an AIS APE beyond the actual project area footprint does not seem warranted based on the surrounding built environment.
Historic Preservation Regulatory Context	The project is subject to Hawai‘i State environmental and historic preservation review legislation (Hawai‘i Revised Statutes [HRS] § 343 and HRS § 6E-42/Hawai‘i Administrative Rules [HAR] § 13-284). To support the project’s environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014). The project’s AIS was prepared in accordance with the AIS requirements outlined in HAR § 13-284-5(c) and HAR § 13-276.
Fieldwork Effort	The fieldwork component of this AIS was conducted between December 2013 to February 2014 by CSH archaeologists: Scott Belluomini, B.A., Kelley Burke, M.Sc., Amanda Eggers, B.A., Nathaniel Garcia, B.A., Kimi Matsushima, B.S., Veronica Morriss, M.A., Laura Ortiz, M.A., Andrew Soltz, B.S., and Andrea Kay, M.Sc. (project supervisor), under the general supervision of Matt McDermott, M.A. (principal investigator). The fieldwork required approximately 22.25 person-days (178 hours) to complete.
Number of Historic Properties Identified	Two
Historic Property Significance	1. SIHP # 50-80-14-7598 is a heavily disturbed subsurface cultural deposit containing charcoal, fire-altered rock, butchered faunal material, and a small amount of marine midden. Because of the impacted nature of the potential historic property, SIHP # -7598 has only basic integrity of location and materials. SIHP # -7598 is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history) pursuant to HAR § 13-284-6. 2. SIHP # 50-80-14-7599 consists of a previously identified, isolated human vertebra fragment. SIHP # -7599 is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history), and “e” (historic property has cultural significance to an ethic group, including, but not limited to, religious structures, burials, and traditional cultural properties), pursuant to HAR § 13-284-6.
Effect	CSH’s project specific effect recommendation is “effect, with agreed

Recommendation	upon mitigation commitments." The mitigation measures described below will help alleviate the project's impact on SIHP # 50-80-14-7598 and SIHP # 50-80-14-7599 and assist with the proper identification, documentation, and treatment of any additional archaeological historic properties encountered during project construction.
Mitigation Recommendation	An isolated human skeletal fragment (SIHP # 50-80-14-7599) was identified during an AIS investigation and is therefore defined as a "previously identified" burial under Hawaii state burial law (HAR §13-300-2). It is a requirement of Hawai‘i state burial law that the treatment of the previously identified burial site within the project area be addressed in a project-specific burial treatment plan prepared for the consideration of the O‘ahu Island Burial Council (OIBC) (HAR §13-300-33). The burial treatment plan will incorporate appropriate input from SHPD, the recognized lineal/cultural descendants, and the OIBC. In order to mitigate the potential impact to SIHP # 50-80-14-7598 (a culturally enriched A-horizon), or any as yet unidentified archaeological cultural resources within the project area, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits. A program of on-site archaeological monitoring is recommended for all subsurface project construction activities below 18 inches within the project area. The approximately 400 linear feet of new sewer line installation within adjacent City-owned streets associated with the project will be included within the project's archaeological monitoring program.

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Section 1 Introduction

1.1 Project Background

At the request of BSC KVSC, LLC, Cultural Surveys Hawai‘i Inc. (CSH) prepared this archaeological inventory survey report for the 133 Ka‘iulani Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu (TMK: [1] 2-6-023:029, 037, and 076). The project area is located in the central/Diamond Head portion of Waikīkī, a block inland from Kalākaua Avenue. The project area is bounded by Prince Edward Street to the north, Koa Avenue to the south, and Ka‘iulani Avenue to the west, and is depicted on the 1998 U.S. Geological Survey (USGS) 7.5-minute Honolulu quadrangle topographic map, 2009 Tax Map Key (TMK), and on an aerial photograph (see Figure 1, Figure 2, and Figure 3).

BSC KVSC LLC owns and is redeveloping the King’s Village Shopping Center and two adjacent apartment buildings in Waikiki. BSC KVSC LLC is funding the project. The proposed project for the 133 Ka‘iulani Project and consists of three parcels that include the King’s Village Shopping Center (TMK: [1] 2-6-023:029), 2413 Prince Edward Apartments (TMK: [1] 2-6-023:037), and the Hale Waikiki Apartments (TMK: [1] 2-6-023:076). The project area comprises approximately 1.05-acres (4,249.2 sq. meters; 45,622 sq. feet).

The proposed project involves the redevelopment of the subject properties into a new, 34-story high-rise condo hotel. Hotel amenities will consist of a restaurant and bar, swimming pools, event space, fitness center, and spa. The first floor is to include retail shops and the hotel lobby. Parking is planned for the next five floors. The redevelopment of the project area will include demolition and removal of the existing King’s Village Shopping Center buildings, the 2413 Prince Edward Apartment building, and the Hale Waikiki Apartment building; construction of a new condominium tower and new parking garage. Ground disturbance may include but is not limited to excavations for general construction (e.g. borings, foundation, structural pilings, etc.), utility installation or relocation, roadway and parking areas, and landscaping.

Additionally, the project includes the installation of approximately 400 linear feet of new sewer line within City-owned streets. The sewer line will extend from the project area’s north corner, across the intersection of Ka‘iulani Avenue and Prince Edward Street, continuing northeast along Ka‘iulani Avenue to the intersection with Kūhiō Avenue, and continue northwest along Kūhiō Avenue to connect to the existing sewer infrastructure in Kūhiō Avenue between Walina Street and Kanekapolei Street (Figure 4). An additional sewer line section in the Kūhiō Avenue and Lewers Street intersection will be replaced.

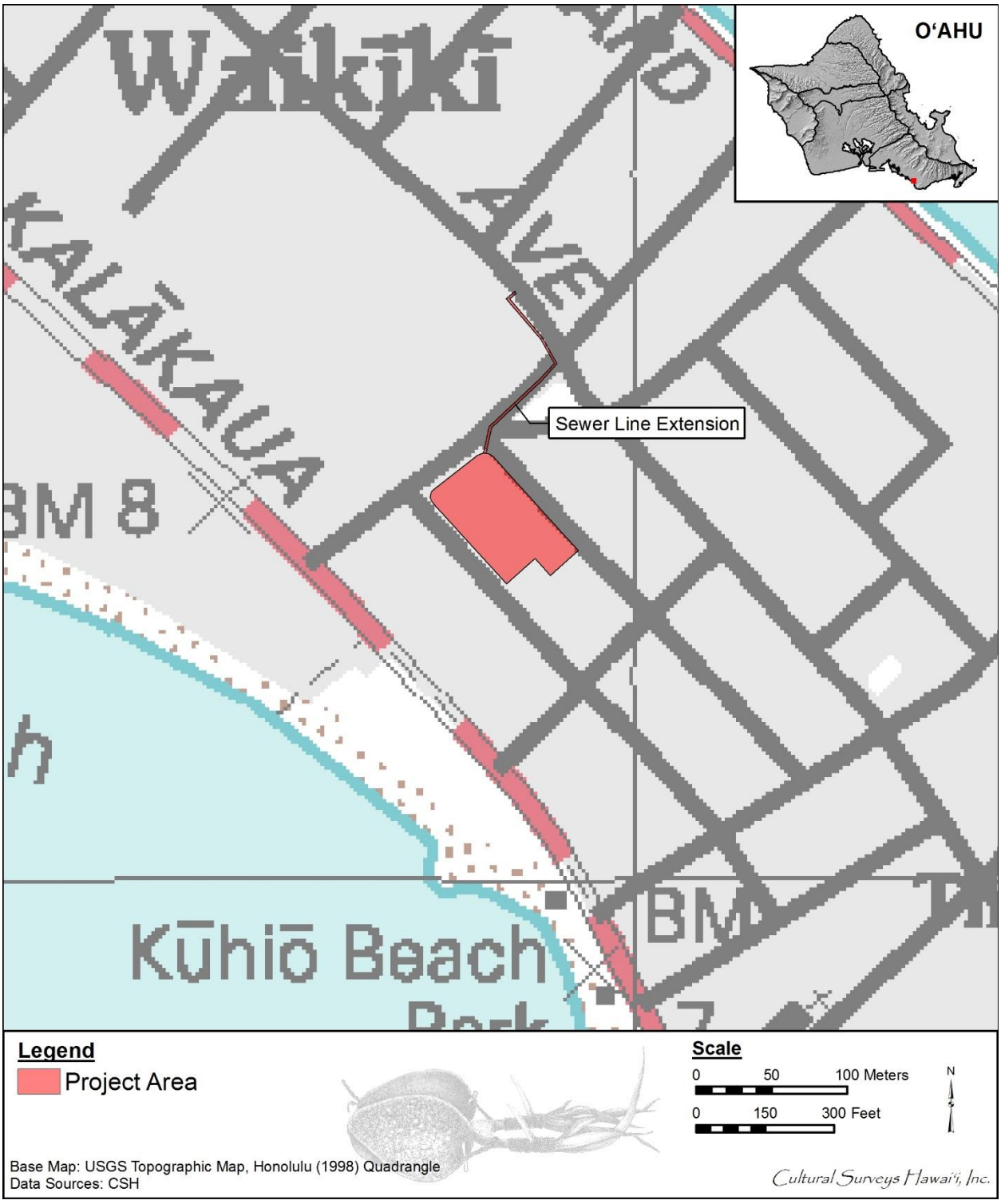

Figure 1. 1998 U.S. Geological Survey 7.5-minute series topographic map of the Honolulu quadrangle showing the location of the project area within Waikīkī

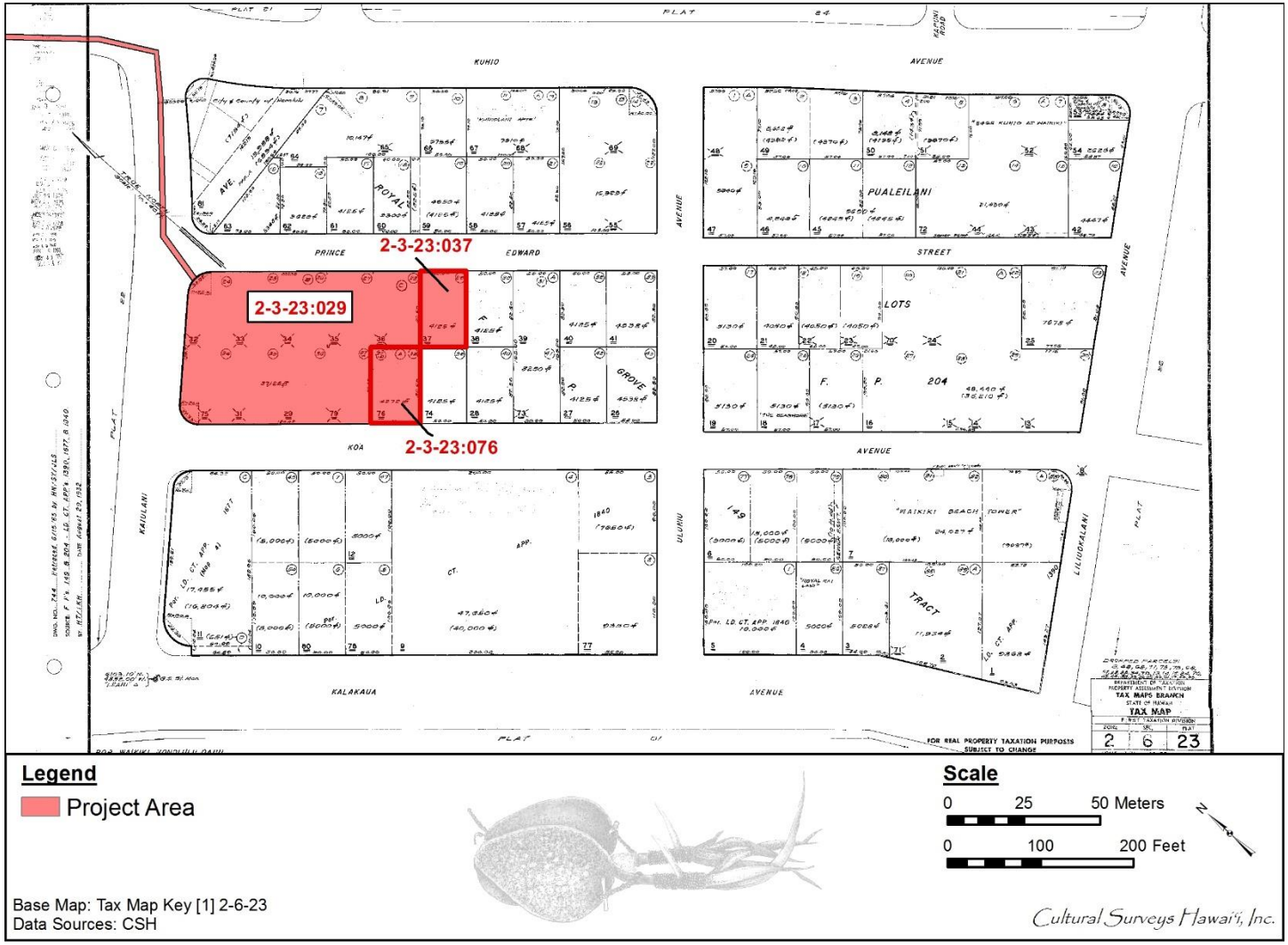

Figure 2. 2009 Tax Map Key (TMK) 2-6-023 showing the location of the project area

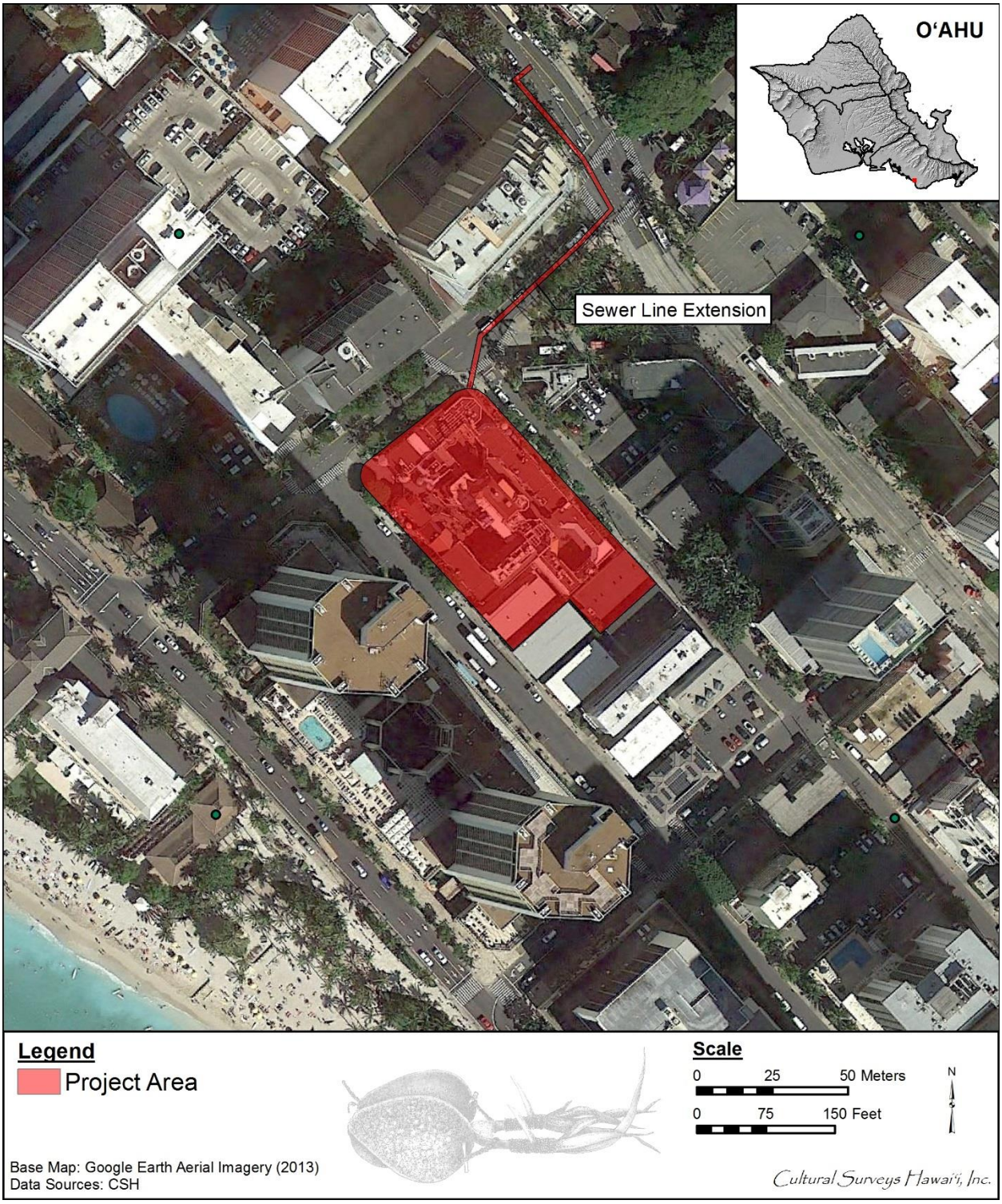

Figure 3. Aerial photograph showing the project area (Google Earth Aerial Imagery 2013)

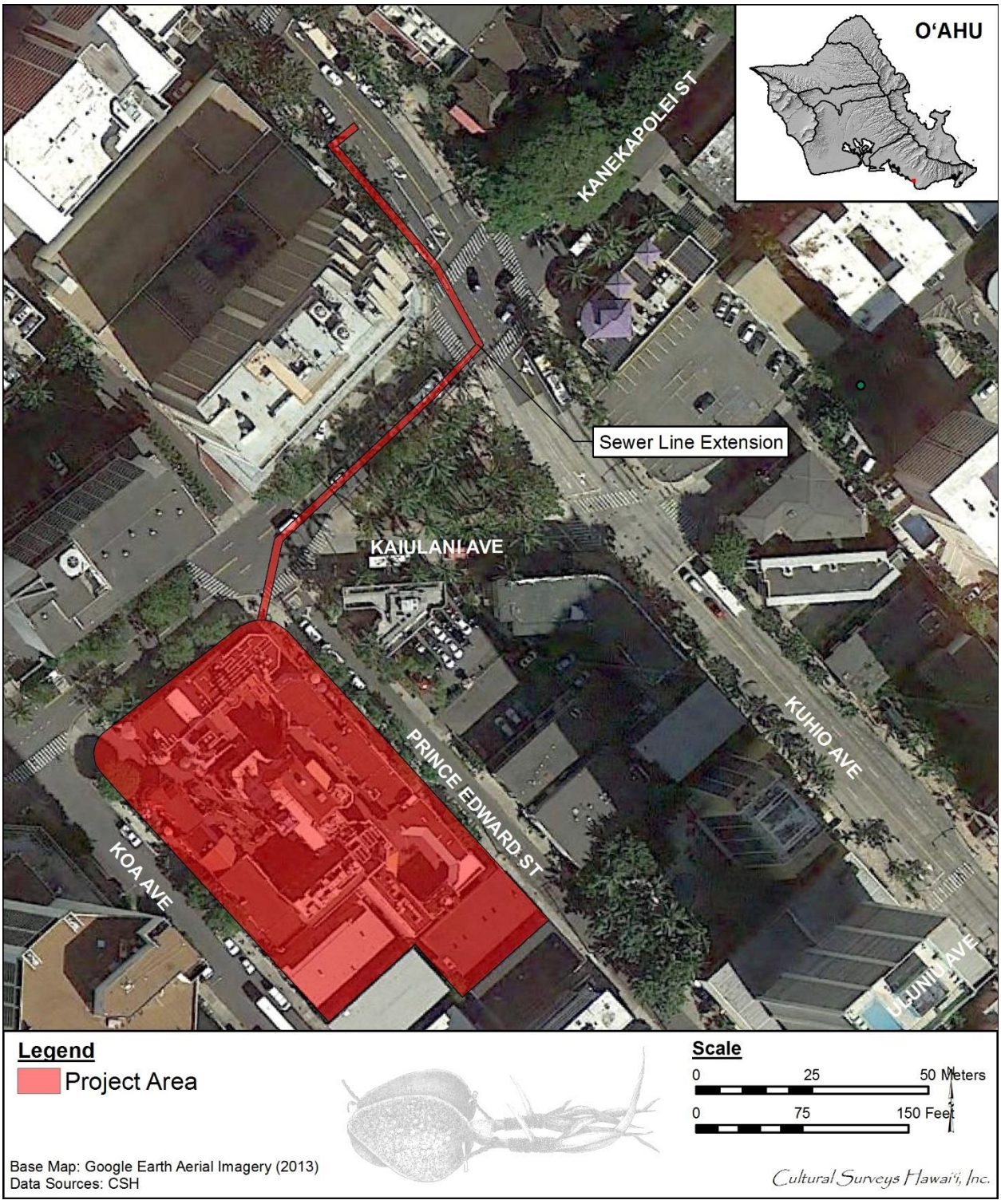

Figure 4. Aerial photograph showing the project area and the sewer line extension

1.2 Historic Preservation Regulatory Context

The project area is privately owned and is subject to Hawai‘i State environmental and historic preservation review legislation (Hawai‘i Revised Statutes [HRS] § 343 and § HRS 6E-42/Hawai‘i Administrative Rules [HAR] § 13-284). To support the project’s environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014). The project’s AIS was prepared in accordance with the AIS requirements outlined in HAR § 13-284-5(c) and HAR § 13-276.

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is situated on the level, low-lying coastal area of Waikīkī, and is approximately 2 m (meters), or 6 ft. (feet) above mean sea level (AMSL). The water table is typically observed between 1.3 m and 2.0 m below the current land surface. The average rainfall in this coastal area of Waikīkī is between 20-30 inches per year, with temperatures ranging from 60 to 85 degrees Fahrenheit (Armstrong 1973:56).

Although the area has been altered by construction, the natural soil deposit is Jaucas sand (JaC), calcareous soils developed in wind and water deposited sand from coral and seashells (Figure 5). The slope range of this soil is 0 to 15 percent, but in most places, the slope does not exceed 7 percent. The soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. In many places, the surface layer is dark brown as a result of accumulation of organic matter and alluvium (A-horizon). The soil is neutral to moderately alkaline throughout the profile (Foote et al. 1972). Generally, vegetation in the Waikīkī area today includes mainly introduced exotics, such as Banyan, MacArthur Palm, Brassaia, Cocoanut, Plumeria, Money, Alexander Palm, Manila Palm, Date Palm, Fern, Monkeypod, Tulip Wood, Opiuma trees, and a variety of grasses.

1.3.2 Built Environment

The project area is located near the center of Waikīkī and is surrounded by modern urban development including high-rise condominiums, apartments and hotels, streets, sidewalks, and utility infrastructure. The project area includes the King’s Village Shopping Center, the Prince Edward apartment building and Hale Waikiki apartment and commercial complex (see Figure 6 through Figure 8). The project area is bounded by Prince Edward Street to the northeast, Koa Street to the southwest, residential properties to the southeast, and Ka‘iulani Avenue to the northwest. The Waikīkī area has been heavily developed and urbanized since the early twentieth century. The King’s Village portion (approximately 81%) of the project area is located above an underground parking garage (see Figure 9 and Figure 10).

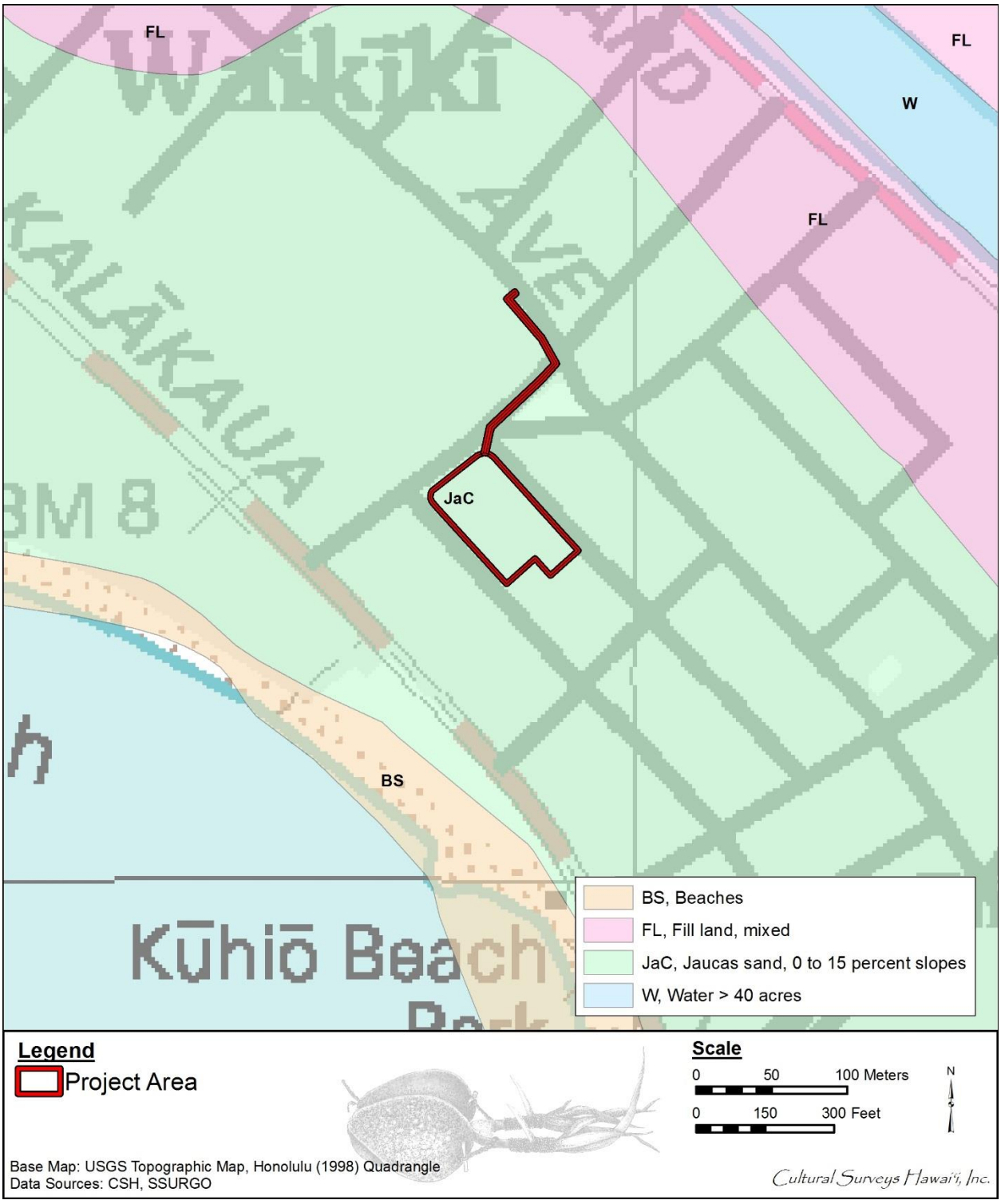

Figure 5. Overlay of Soil Survey of the State of Hawai‘i (Foot et al. 1972), indicating sediment types within and surrounding the project area (Google Earth 2013, USDA Soils Survey Geographic Database [SSURGO] 2001)

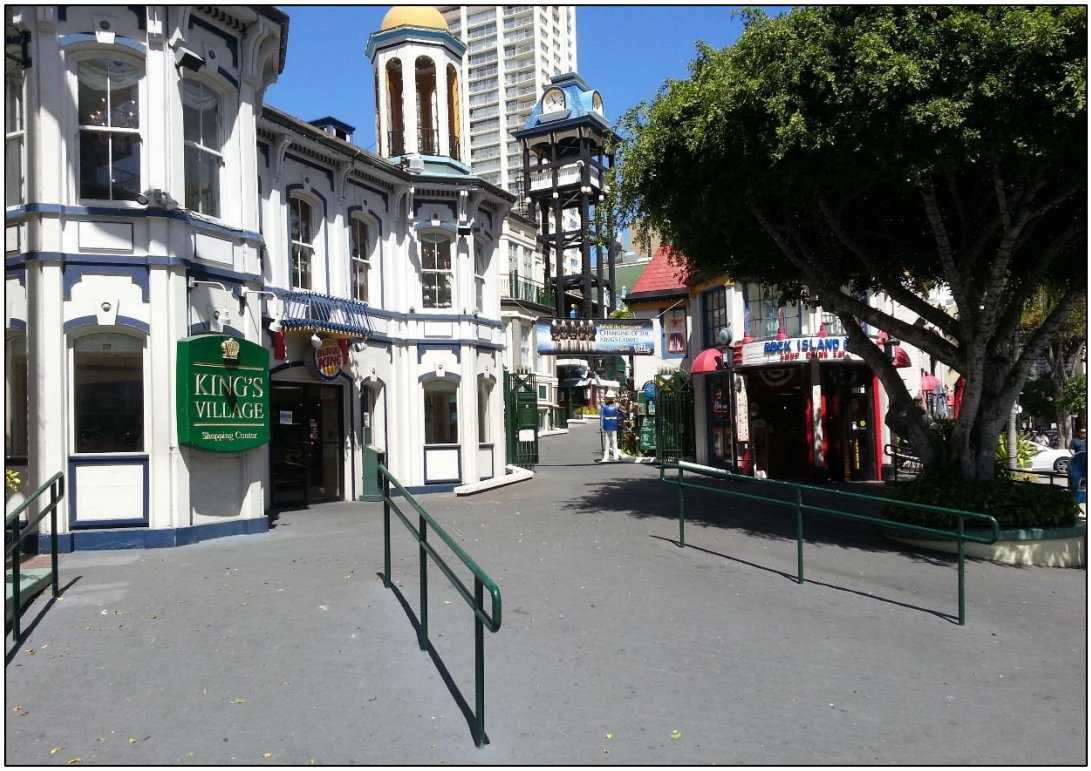

Figure 6. View inside the King’s Village Shopping Center, view to the east

Figure 7. View of the Prince Edward Apartments, view to the southwest

Figure 8. View of the Hale Waikiki apartments, view to the east

Figure 9. Entrance to the underground parking garage for King’s Village Shopping Center, view to the east

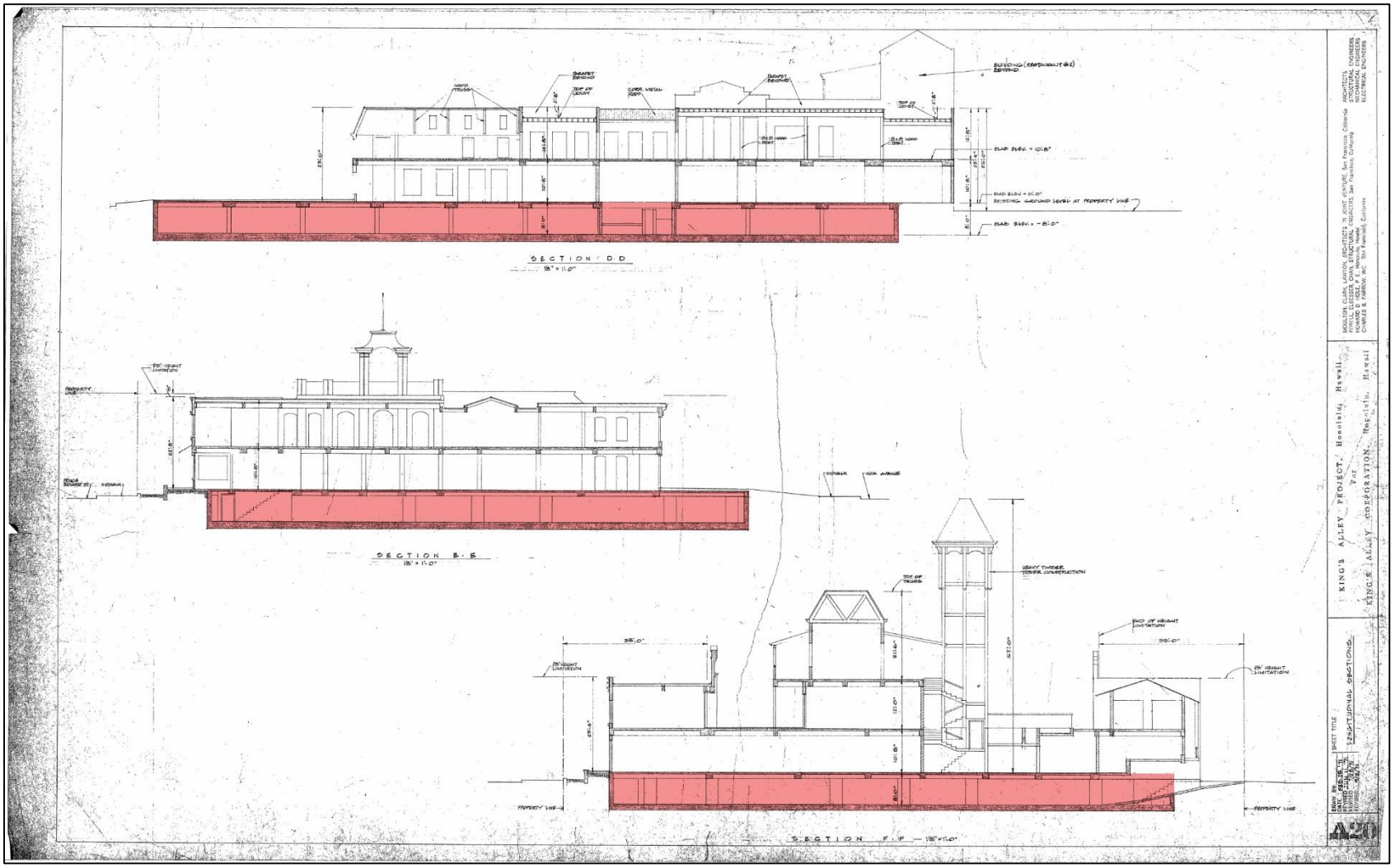

Figure 10. 1971 drawing of the current King’s Village structure and the underground parking garage (highlighted in red). The plan notes the garage extends eight feet below the ground surface (provided by client, originally designed by Moulton, Clark, Lawton Architects for the King’s Alley Corporation)

Section 2 Methods

2.1 Field Methods

The fieldwork component for this archaeological inventory survey was completed under SHPD/DLNR permit No. 13-06, issued per HAR § 13-13-282. The fieldwork component was conducted intermittently from December 2013 to February 2014 by CSH archaeologists: Scott Belluomini, B.A., Kelley Burke, M.Sc., Amanda Eggers, B.A., Nathaniel Garcia, B.A., Kimi Matsushima, B.S., Veronica Morriss, M.A., Laura Ortiz, M.A., Andrew Soltz, B.S., and Andrea Kay, M.Sc. (project supervisor), under the general supervision of Matt McDermott, M.A. (principal investigator). The fieldwork required approximately 22.25 person-days (178 hours) to complete.

2.1.1 Pedestrian Inspection

Prior to subsurface excavation a 100% pedestrian inspection of the project area was undertaken for the purpose of identification and documentation of surface historic properties. Due to modern urban development of the area, no surface historic properties were identified.

2.1.2 Subsurface Testing

The subsurface testing strategy integrated considerations of the project area's archaeological potential as well as the need to attain sufficient representative coverage within the entire project area. As is the case with many urban project areas, testing areas were limited by accessibility, space, and safety issues, subsurface obstacles (e.g. utilities, concrete slabs, etc.), and existing fixtures (e.g. stairwells, light posts, etc.). Approximately 81% of the project area is located above the underground parking garage that encompasses the entire King's Village parcel. Excavations within the parking garage would yield little to no archaeological deposits; therefore, test excavation locations were confined to other areas of the project area.

Subsurface testing consisted of sixteen test trenches within the accessible areas in the project area. The test excavations averaged 3.04 m by 0.60 m. CSH initially proposed a testing strategy of nine trenches, which represented a 2% sample of the portion of the project area not impacted by the underground parking garage. This initial testing strategy was approved by project proponents, SHPD, and previously recognized Waikīkī cultural descendants during consultation meetings on November 19th and 20th, 2013 (see Section 5). During AIS excavation, archaeologists identified culturally enriched buried sand A-horizon (designated SIHP # 50-80-14-7598) and found an isolated human vertebra fragment in fill (SIHP # -7599). Following consultation with SHPD and cultural descendants on January 14th, 2014, CSH excavated an additional three trenches (T-10 through T-13). Following subsequent consultation on February 7th, 2014, CSH excavated a further three trenches (T-14 through T-16). The 16 trenches had a combined excavation footprint of approximately 27.16 square meters (292.3 sq. ft.). Subsurface testing excavated 0.64% of the King's Village project area (4234 sq. m, not including the sewer line extension), and 3.37% of the area that had not been previously impacted by the subterranean parking garage.

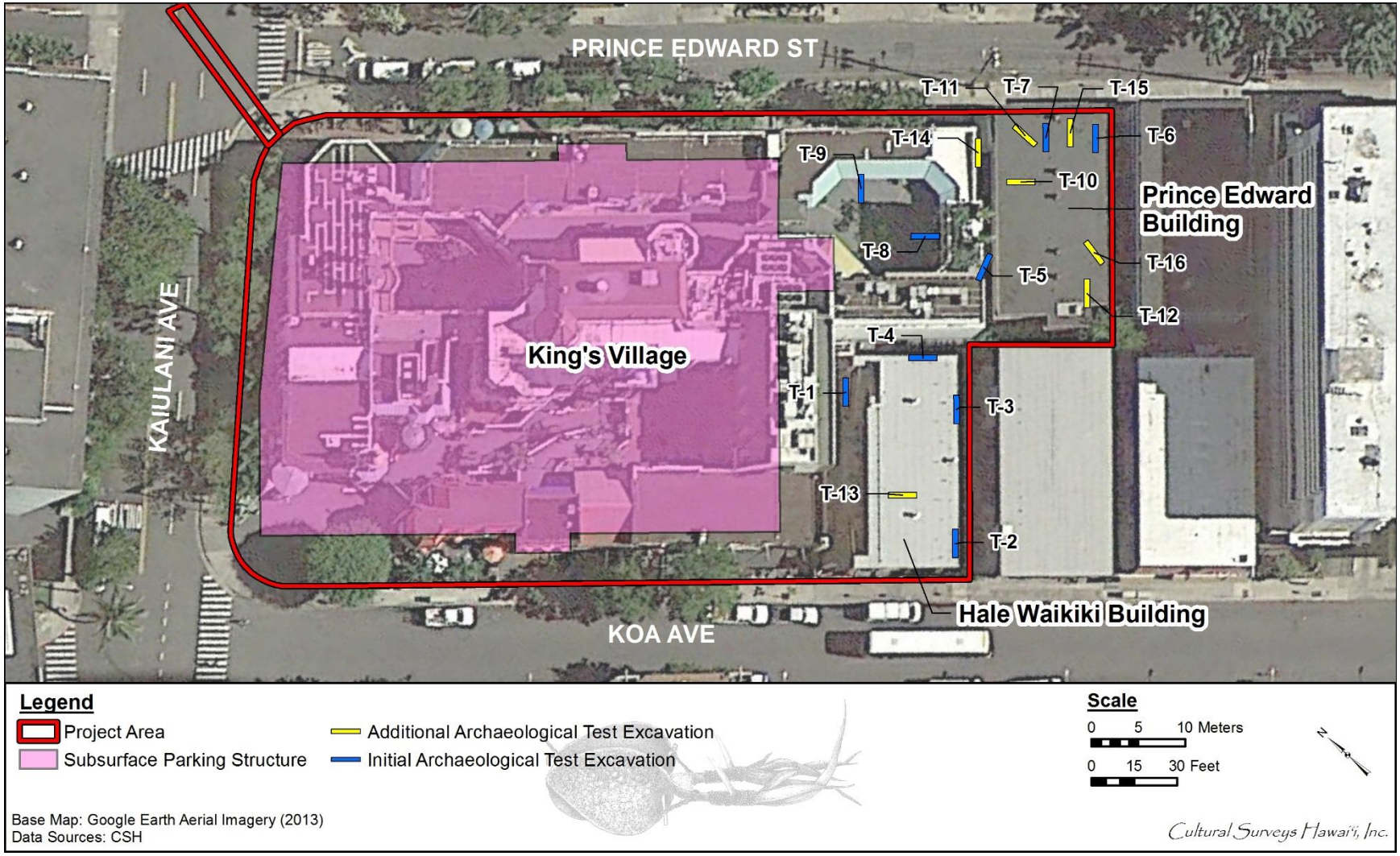

Figure 11. 2013 Google Earth imagery showing the location of King’s Village Shopping Center subsurface parking structure as well as the planned and additional AIS test trenches (Base Map: Google Earth Imagery)

The stratigraphy in each trench was drawn and photographed. The sediments for each of the trenches were described using USDA soil description observations/terminology. Sediment descriptions included Munsell color, texture, consistence, structure, plasticity, cementation, origin of sediments, descriptions of any inclusions such as cultural material and/or roots and rootlets, lower boundary distinctiveness and topography, and other general observations. Where archaeological and/or cultural features were exposed, these features were carefully represented on the trench profile. Feature documentation included profiles and/or plan views, collected samples, stratigraphic descriptions, and photographs. The location of each of the trenches, and significant features were recorded using a Trimble Pro XH mapping grade GPS unit with real-time differential correction.

The collection of historic artifacts focused on obtaining a representative sample of artifacts observed during excavation. Historic structural remnants were documented in the field but not necessarily collected. Non-datable and duplicate artifacts were not collected for laboratory analysis but were documented in the field with written descriptions, counts, or quantification estimates, and photographs with scales, including sufficient close-ups to allow for further future study based on the photographic images.

2.1.3 Excavation Methods

Trench excavation methods for the nine test trenches within the project area consisted of saw cutting of the asphalt or concrete surface and removal by mini-excavator of the overlying fill deposits. Mechanized excavation continued through both the overlying fill layers and any non-sand natural deposits found beneath the fill layers. Mechanized excavation shifted to shovel skimming when cultural deposits (e.g. features) were encountered. Massive modern trash deposits were not hand excavated. All excavations proceeded to depths just below the water table or to bedrock unless safety concerns prohibited otherwise.

Natural sand deposits are more likely to contain human skeletal remains and burials and for this archaeological inventory survey, natural sand deposits encountered beneath overlying fill layers were excavated by hand. This hand excavation of natural sand deposits was performed to identify potential burial deposits prior to sand excavation with the mini-excavator. The sand was carefully scraped off in thin layers in order to minimize any possible burial disturbance. During hand excavation through sand deposits, the mini-excavator was used to assist with the removal of already hand- excavated sediments from the trench. For example, if the archaeologists threw the hand-excavated sand into one corner of the trench, the mini-excavator was used to remove this already excavated sand from the trench. In cases where the trench was unstable, the mini-excavator bucket used to continue excavation once the hand excavation through the sand deposit was completed.

When a single human bone fragment was encountered during subsurface testing, SHPD was immediately notified. All human skeletal remains or potential human skeletal remains encountered during the AIS fieldwork were handled in compliance with HRS § 6E-43 and HAR § 13-300 and in consultation with the SHPD/DLNR.

2.1.4 Sampling Methods

Sampling of subsurface cultural layers and/or “A-horizons” was carried out to characterize the cultural content of these layers. Sampling was conducted for both the matrix within individual

stratigraphic layers and the matrix within discrete pit features. These samples were collected from either a trench sidewall or from a plan view exposure. 5-gallon samples of features were collected unless the feature or layer was too small to fill a 5-gallon bucket. The sediment was screened through 1/8-inch screen mesh and all cultural materials was collected, bagged by provenience, and taken to the CSH laboratory. During the collection of cultural materials from the screen, careful attention will be made to distinguish between water-rounded, bleached, natural marine, sedimentary shell, and the unbleached, un-rounded, often relatively freshly-broken shell derived from human activity. When additional documentation of a particular sediment was desired, bulk sediment samples of 1 to 5 liters were collected from the cleaned sidewall of the trench for further analysis in the laboratory. All sediment sample collection locations will be recorded on trench profiles and the sediment samples will be labeled with provenience information.

2.2 Laboratory Methods

Following the completion of fieldwork, all collected materials were analyzed using current standard archaeological laboratory techniques. Analyzed materials were tabulated into chart form and a master catalogue is presented within this report. The results of the historic artifact analysis will be used to better characterize the age, function, and potentially the cultural affiliation of the associated archaeological deposits and/or features.

Historic materials collected in the field were returned to the CSH laboratory, washed, examined, and, as appropriate, photographed. Historic artifacts will be identified using standard reference materials and resources available on the internet (e.g., Elliott and Gould 1988; Fike 1987; Kovel 1986; Lehner 1988; Lindsey 2010; Lockhart 2004-2010; Millar 1988; Toulouse 1971; Whitten 2009; and Zumwalt 1980).

Traditional Hawaiian materials collected from the identified subsurface cultural layers were sorted, identified, measured, quantified, and photographed as appropriate. Traditional Hawaiian artifacts were identified, and forms and functions determined using standard reference material (e.g., Barrera and Kirch 1973; Brigham 1974; Buck 2003; and Emory et al. 1968).

2.3 Document Review

Background research included a review of previous archaeological studies on file at the SHPD/DLNR office library; review of historic documents at the Hamilton Library at the University of Hawai‘i at Mānoa, the Hawai‘i State Archives, the Hawai‘i Public Library, and the Archives of the Bishop Museum; and study of historic maps and photographs at the CSH library. Information on Land Commission Awards (LCAs) was accessed through the Waihona ‘Aina database (www.waihona.com), as well as a selection from the CSH library references. This research provided the environmental, cultural, historical, and archaeological background for the project area. The information collected was used to formulate a predictive model regarding the expected types and locations of historic properties that may be located in the project area.

2.4 Cultural Consultation

Pursuant to the AIS consultation requirements outlined in HAR § 13-284-5(e) and HAR § 13-276-5(g), CSH worked with the project proponents and Dawn Chang of Ku‘iwalu to integrate cultural consultation with potentially knowledgeable Native Hawaiian groups and individuals

and SHPD throughout the project's AIS investigation. This consultation effort, carried out from November 2013 to March 2014, included public presentations and discussion before the O‘ahu Island Burial Council, meetings with previously recognized cultural descendants to burials found in the Waikīkī area, and meetings with the SHPD Archaeology Branch and Culture and History Branch staff. A summary and the results of this consultation effort are in Section 5 of this report. Additionally, to support the project's environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014).

2.5 Cultural Monitoring During AIS Fieldwork

At the request of the group of previously recognized cultural descendants to burials in Waikīkī that participated in the AIS cultural consultation effort, a program of cultural monitoring was carried out during the AIS fieldwork. ‘Ōiwi Cultural Resources, a private cultural monitoring firm, provided the cultural monitoring, working closely with and observing the archaeologists carrying out the AIS fieldwork. The authors would like to thank the ‘Ōiwi Cultural Resources staff members for their help and input during the AIS investigation. They provided valuable assistance and observations and undertook the respectful handling, and assisted with the temporary protection of the single human bone fragment that was uncovered during the fieldwork.

Section 3 Background Research

3.1 Traditional and Historical Background

The project area is located in the *‘ili* (land division) of Uluniu and Kapuni within the *ahupua‘a* (larger land division) of Waikīkī, O‘ahu. The *‘ili* of Uluniu and Kapuni abutted the *‘ili* of Kaluaoku on the northwest along the ‘Āpuakēhau Stream, Auaukai on the northeast and Hamohamo on the south east and southwest (Figure 13).

Uluniu translates as “coconut grove,” (Pukui and Elbert 1986:370; Pukui et al. 1974:215) and Kapuni translates as “the surrounding” (Pukui et al. 1974:90). ‘Āpuakēhau, literally “basket [of] dew,” was the former stream and northern boundary of the *‘ili*, which had its outlet at the present Royal Hawaiian Hotel. It was “probably named for a rain” (Pukui et al. 1974:13).

The marshland of Waikīkī was watered from streams in the Makiki, Mānoa, and Pālolo Valleys and from springs in Mānoa (Punahou and Kānewai). The name Waikīkī, which means “spouting water” according to Pukui et al. (1974:223), was well adapted to the character of the swampy land of ancient Waikīkī, where water from the upland valleys would gush forth from underground. Before the construction of the Ala Wai Canal, the Mānoa and Pālolo Streams did not merge until deep within Waikīkī. As they entered the flat Waikīkī Plain, the names of the streams changed. The Mānoa Stream became the Kālia and the Pālolo Stream became the Pāhoa. They joined near Hamohamo (now an area *mauka* of the Kapahulu Library) and then divided into three new streams, Kuekaunahi, ‘Āpuakēhau, and Pi‘inaio (Figure 12). The Kuekaunahi Stream once emptied into the sea at Hamohamo (near the intersection of ‘Ōhua and Kalākaua Avenues). The ‘Āpuakēhau, also called the Muliwai o Kawehewehe, or “the stream that opens the way” (Kanahele 1995:7) on some maps, emptied in the ocean at Helumoa and Kaluaokau. The Pi‘inaio entered the sea at Kālia as a wide delta. The land between these three streams was called Waikolu, meaning “three waters” (Kanahele 1995:7-8).

3.1.1 Pre-Contact to Early 1800s

In approximately A.D. 1310 (a time estimate based on an average length of generational intervals in chiefly genealogies), Māweke partitioned O‘ahu into three districts: the Kona region, the ‘Ewa, Wai‘anae, and Waialua region, and the windward Ko‘olau region. Then, in approximately A.D. 1490, the *‘aha ali‘i* (council of chiefs) chose Mā‘ilikūkahi, an *ali‘i kapu* (sacred chief) who was born at the sacred site of Kūkaniloko in the uplands of Waialua to be the new *ali‘i nui* (paramount chief) of O‘ahu. After his paramountship was installed at the *heiau* (temple) of Kapukapuākea in central Waialua, Mā‘ilikūkahi instituted an explicit land division and administration structure: O‘ahu was divided into six *moku*—Kona, ‘Ewa, Wai‘anae, Waialua, Ko‘olauloa, and Ko‘olaupoko—that were further divided into 86 *ahupua‘a* and smaller territorial units, such as *‘ili* (subdivisions of *ahupua‘a*) (Kirch 2010:84–90). Upon his ascent to *ali‘i nui*, Mā‘ilikūkahi shifted his residence from Waialua to Waikīkī. Ma‘ilikūkahi was known as a kind chief greatly loved by his subjects who enjoyed prosperity and peace under his reign (Kamakau 1964:223). Ma‘ilikūkahi won the respect and loyalty of his people “because of his exceedingly great concern for the prosperity of the kingdom” (Kamakau 1991:55).

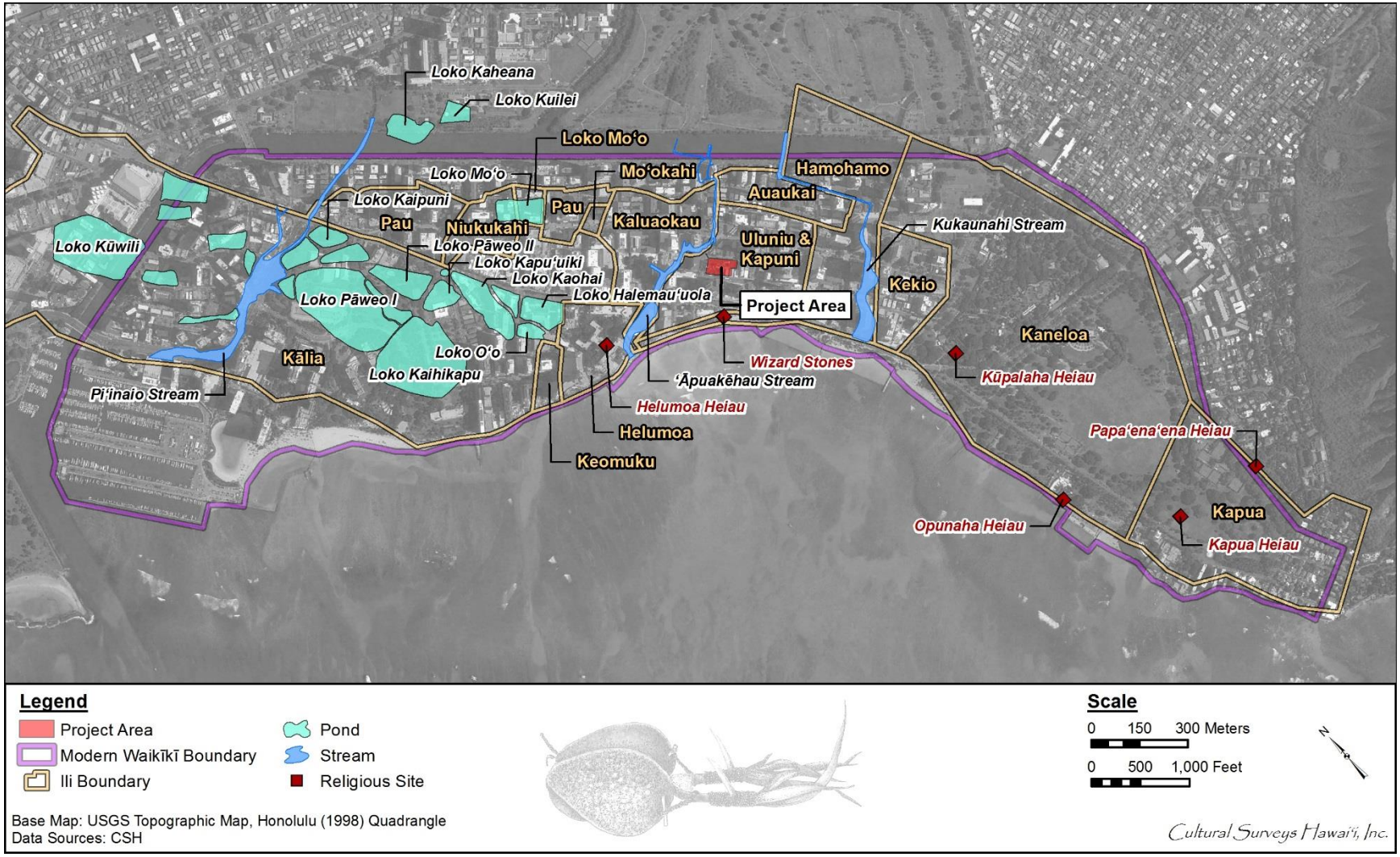

Figure 12. Map of Waikīkī, showing significant place names, including *‘ili* boundaries, fish ponds, and Kuekaunahi, ‘Āpuakēhau, and Pi‘inaio streams.

Figure 13. Map of the project area vicinity showing the *‘ili* boundaries and the former ‘Āpuakēhau Stream.

Kanahele (1995:134) notes continuity in the royal residences: “The royal residences were generally located in the same areas that all of Waikīkī’s ancient chiefs had located their residences for hundreds of years.” Kanahele (1995:134-1345) goes on to explain, “Three features were common to royal locations in Waikīkī. They were situated (1) near the beach, (2) next to a stream or *‘auwai* (canal), and (3) among a grove of cocoanut or *kou* trees.”

Hibbard and Franzen (1986:2) noted:

> When old Hawaiians refer to O‘ahu they recall, ‘ke one ‘ai ali‘i o Kākuhihewa,’ or the chief-consuming sands of Kakuhihewa. Kakuhihewa was a famous ali‘i (chief) who ruled O‘ahu during the late 1500s. He lived at Ulukou, Waikiki on the spot now occupied by the Moana Hotel. His reign was marked by great prosperity during which all the invading chiefs from other islands were defeated. The sands at Ulukou were known as chief-eating sands because of the strength of this great chief. Kakuhihewa’s Waikiki came to epitomize the golden era of aboriginal Hawaiian history and is mentioned frequently in traditional Hawaiian chants as well as contemporary song. Five generations before Kakuhihewa’s birth, circa 1450, Ma‘ilikukahi first established Waikiki as the government center for the island of O‘ahu. From this time until 1809, when Kamehameha I moved his court to Honolulu, Waikiki was the seat of power for O‘ahu. Originally Waikiki encompassed a larger area than the section we are familiar with today.

The preeminence of Waikīkī continued into the eighteenth century, betokened by Kamehameha’s decision to reside there upon winning control of O‘ahu by defeating the island’s chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī, himself a member of the *ali‘i* (chiefly class), described the king’s Waikīkī residence:

> Kamehameha’s houses were at Puaaliilii, makai of the old road [now Kalākaua Avenue], and extended as far as the west side of the sands of ‘Apuakehau [Stream]. Within it was Helumoa where Ka‘ahumanu mā [Ka‘ahumanu’s people] went to while away the time. The king built a stone house there, enclosed by a fence . . . [‘Ī‘ī 1959:17]

‘Ī‘ī further noted the “place had long been a residence of chiefs. It is said that it had been Kekuapoi’s home, through her husband Kahahana, since the time of Kahekili” (‘Ī‘ī 1959:17). Kamehameha lived here from 1795 to 1809. Puaaliilii has two meanings—*pua ali‘il‘i‘i* means “flower of the exalted royalty.” With the *‘okina* (glottal stop) in a different position, the name *pua‘a li‘ili‘i* means “little pig.” Since the pig was a sacred animal, both meanings may be correct since both could refer to a royal residence (Acson 1983:19).

There are many references to royal residences in this portion of Waikīkī. ‘Āpuakēhau Stream is one of the two branches of the united Mānoa-Pālolo Stream which once flowed past taro patches and fishponds. The mouth of the stream once emptied out into the ocean at the present location of the east side of the Outrigger Hotel and the west side of the (Sheraton) Moana Hotel. Land on the west side of the stream was known as Kahaloa, “the long place,” and on the east, Ulukou, “the kou tree grove.” The stream carved a small channel in the seabed where it emptied out in the ocean, creating a special surf, called the “Cornucopia,” due to the shape of the breaking waves (Clark 1977:55).

The village of Waikīkī, once known as ‘Āpuakēhau, was probably centered around the mouth of ‘Āpuakēhau Stream. Located near the mouth of the stream was a *heiau,* Helumoa Heiau, also known as ‘Āpuakēhau Heiau, and an athletic field known as Kahuamokomoko, meaning a “sports field for boxing.” According to Thrum, portions the Royal Hawaiian Hotel are built on the former site of Helumoa Heiau. Thrum described Helumoa Heiau as “Heiau pookanaka, the place of sacrifice of Kauhi-a-Kama, the defeated moi [*mō‘ī*] of Maui, in his raid on Oahu about 1610, in the reign of Kaihikapu” (Thrum 1906:44).

Po‘okanaka Heiau, as mentioned by Thrum above, are ceremoniously used as sacrificial *heiau* to include human sacrifices (Stokes 1991:24). This sacrificial *heiau* was where Ka‘opulupulu—the last O‘ahu-born Kahuna Nui of O‘ahu—was laid after being slain in Wai‘anae by Kahahana (or Kahāhana). Eventually, Kahahana himself was also sacrificed at Helumoa Heiau by Kahekili’s invading army from Maui (Thrum 1906:57).

Hawaiian authors in the nineteenth and twentieth centuries have emphasized that victims for sacrifice were “criminals,” “wrongdoers,” or “individuals who had broken *tabu*, or rendered themselves obnoxious to the chiefs” (Kanahele 1995:116). Another major category of human sacrifice victims were the “*kauwā*.” Pukui (Pukui and Elbert 1986:134) translates *kauwā* as “Untouchable, outcast, pariah: a caste which lived apart and was drawn on for sacrificial victims.”

Four Waikīkī *heiau* are documented as having been associated with human sacrifice. Available historic documentation indicates the closest *heiau* to the present project is Helumoa Heiau, which is not well documented in the literature. We know of no maps showing the location of Helumoa Heiau. Regarding Helumoa Heiau, Thomas Thrum (1927:34) noted: “This temple was long ago demolished, not a stone being left to mark the site, which was doubtlessly near, if not *the* [italics in original] actual spot now graced by the new Royal Hawaiian Hotel.”

The invasion of the island of O‘ahu by the Maui ruling chief, Kahekili Circa 1783 is documented by Samuel M. Kamakau (1964). The account makes reference to fighting at “Kawehewehe,” which is understood as the name of the beach on the ‘Ewa side of the Royal Hawaiian Hotel (adjacent to Helumoa).

Fornander’s (1919:289) account of “The Story of Kahahana” relates that Maui chief Kahekili’s army was encamped at ‘Āpuakēhau, where they were organizing and preparing to march inland. The O‘ahu forces first attacked “the Maui troops collected at the *heiau*”, and “a fight commenced to which Hawaiian legends record no parallel” (Fornander 1919:289). A reconstruction of Kamakau’s account of Kahekili’s attack (Figure 14) definitely suggests battle casualties in Waikīkī although most of these likely occurred west of the present project area. Intense fighting and mortality are indicated in the immediate vicinity of the Royal Hawaiian and Sheraton Waikīkī resorts.

Chiefly residences and *heiau*, however, were only two elements of a complex of features that characterized Waikīkī through pre-Contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system——an impressive feat of engineering, the

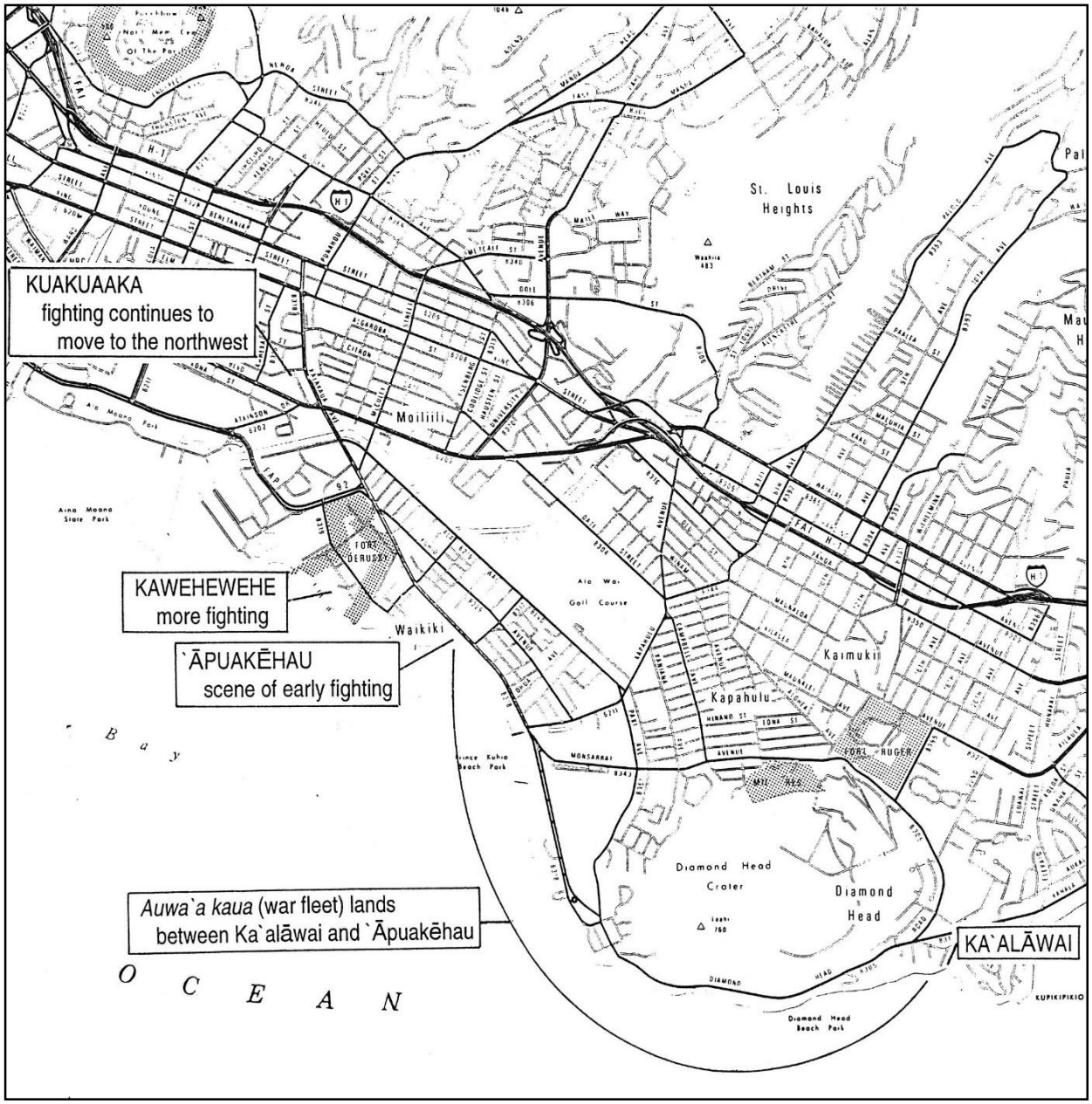

Figure 14. Reconstruction of Kahekili’s invasion of O‘ahu circa 1783

design of which is traditionally attributed to the chief Kalamakua—took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua‘a*. Water was also available from springs in nearby Mō‘ili‘ili and Punahou. Closer to the Waikīkī shoreline, cocoanut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance.

Captain George Vancouver, arriving at “Whyteete” in 1792, captured something of this profusion in his journals:

> On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.
>
> [Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.
>
> This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.
>
> [We] found the plain in a high state of cultivation, mostly under immediate crops of taro; and abounding with a variety of wild fowl, chiefly of the duck kind . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence. [Vancouver 1798:161-164]

Further details of the exuberant life that must have characterized Hawaiian land use that included the *ahupua‘a* of Waikīkī are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the

> cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of Draecena without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with waterfowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. [Menzies 1920:23-24]

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O‘ahu was soon to change—disrupted by the same Euro-American contact that produced the first documentation (including the records cited above) of that traditional life. The *ahupua‘a* of Honolulu—with the only sheltered harbor on O‘ahu—became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood that had developed. By 1828, the missionary Levi Chamberlain (1957:26), describing a journey into Waikīkī, would note:

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. [Chamberlain 1957:26]

The depopulation of Waikīkī was not simply a result of the attractions of Honolulu—where, by the 1820s, the population was estimated at 6,000 to 7,000—but also of the European diseases that had devastating effects upon the Hawaiians.

3.1.2 Mid-Nineteenth Century and the Māhele

The Organic Acts of 1845 and 1846 initiated the process of the Māhele (the division of Hawaiian lands), which introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali‘i* (royalty) received their land titles. Subsequently in the Māhele, Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. LCA records document awardees continued to maintain fishponds and irrigated and dry land agricultural plots, though on a greatly reduced scale. The current project area is within a single large LCA (104 FL:5) with a number of smaller LCAs nearby (1506, 2006:3, 2079:1, 2082, and 2084:3). The LCAs within the vicinity (i.e. not more than 50 m) of the project area are summarized in Table 1.

Table 1. Land Commission Awards in Project Vicinity

LCA #	Claimant	*‘Ili* Name	Location	Comments
104FL:5	Mataio Kekūanao‘a	Kapuni, Uluniu, Kaukahoku, Kuhimana, Alewa, Kunawai, Kuwili, Kālia, Piinaio, Kamanolepo	Within and extending beyond the project area	House site in a coconut grove, 2 *lo‘i*, 5 fishponds, and 1 *muliwai* in Piinaio
1506	Waikīkī, Wahine	Ulukou, Hohe	Southwest of the project area	A house lot in Ulukou, Waikīkī; a small *kula* and 1 *lo‘i* in Hohe, Waikīkī
2006	Male	Kalokoeli, Kamoomuku	West of the project area	Five *lo‘i* and house lot on beach
2079	Kauhola	Makiki, Mokahi, Hohe, Kawaiaala, Kaluahole, Kālia	North of the project area across the ‘Āpuakēhau	13 *lo‘i*, one line of *kalo* in Hone, *kula* lands in Kaluahole
2082	Kuene (John Needles)	Kālia, Kamo‘okahi	Southwest of the project area	*Lo‘i* and irrigation ditch in Kamo‘okahi and house lot in Kālia
2084	Keohokahina	Kalokoeli, Kamo‘okahi, Ulukou	Northwest of the project area	*Lo‘i* and portion of irrigation ditch and fishpond in Kalokoeli, two *lo‘i* and fishpond in Kamo‘okahi, house lot and *kula* in Ulukou

Mataio Kekūanao‘a (c. 1791-1868), the awardee of LCA 104FL:5, was the husband of Kīna‘u (hence a son-in-law of Kamehameha the Great), and father of Alexander Liholiho Kamehameha (Kamehameha IV), Lot Kamehameha (Kamehameha V) and Victoria Kamāmalu. He served as governor of O‘ahu and was allotted extensive lands in the Māhele of 1848, including 3 *‘ili* on O‘ahu. His Waikīkī lands included 31 acres at Kapuni and 102 acres at Uluniu. He held a coastal area surrounding LCA 6324 to Kameheu on all sides and land to the east at the future original Surfrider Hotel location. It appears Kekūanao‘a’s Waikīkī home was located to the east of the current project area.

For LCA 1506, two *‘āpana* (lots) were awarded to Waikīkī, Wahine; one *lo‘i* (irrigated taro patches) and a *kula* (land for pasture or dry land agriculture) in the *‘ili* of Hohe and a house lot in the *‘ili* of Ulukou. The house lot was described as:

> *Mauka* is Government land
> Waialae is Opupahoa [east]
> *Makai,* sea
> Honolulu [west] is Keawe.

For LCA 2006, three *‘āpana* were awarded to Male (two in the vicinity of the project area and one in Kalia). *‘Āpana* 1: 1 *lo‘i* and *‘auwai* (irrigated ditch) in the *‘ili* of Kalokoeli; *‘Āpana* 2: 1 *lo‘i* and fishpond in the *‘ili* of Kalokoeli; and *‘Apana* 3: House lot and *kula ‘aina* (land for pasture or dry land agriculture) in the *‘ili* of Kalia.

For 2079:1, six *‘āpana* (lots) were awarded to Kauhola; 9 *lo‘i* in the *‘ili* of Makiki, Mokahi, Hohe, Kawaiaala, Kaluahole, and Kalia; an *‘auwai* (ditch) and one house lot are mentioned. The 1881 Bishop map indicates a house lot existed in the parcel (Figure 15).

For LCA 2082, two ‘*āpana* (lots) were awarded to Kuene; four *lo‘i* in the ‘*ili* of Kālia and a house lot in the *‘ili* of Kamookahi. The house lot was described as:

> *Mauka*, Kaluahinenui
> Waialae [east]and *makai*, Keohokālole
> Honolulu [west], Kanaina

For LCA 2084, three ‘*āpana* (lots) were awarded to Keohokahina; two *lo‘i* in the ‘*ili* of Kalokoeli and a house lot in the *‘ili* of Ulukou. A house is shown within this LCA on the 1881 Bishop map (see Figure 15).The house lot was described as:

> *Mauka* and to the east of my lot is an unused place,
> *Makai* is Male,
> Towards Honolulu [west] is a stream

3.1.3 Mid to Late 1800s

As the nineteenth century progressed, Waikīkī was becoming a popular site among foreigners —mostly American—who had settled on O‘ahu. An 1865 article in the *Pacific Commercial Advertiser* mentioned a small community that had developed along the beach. The area

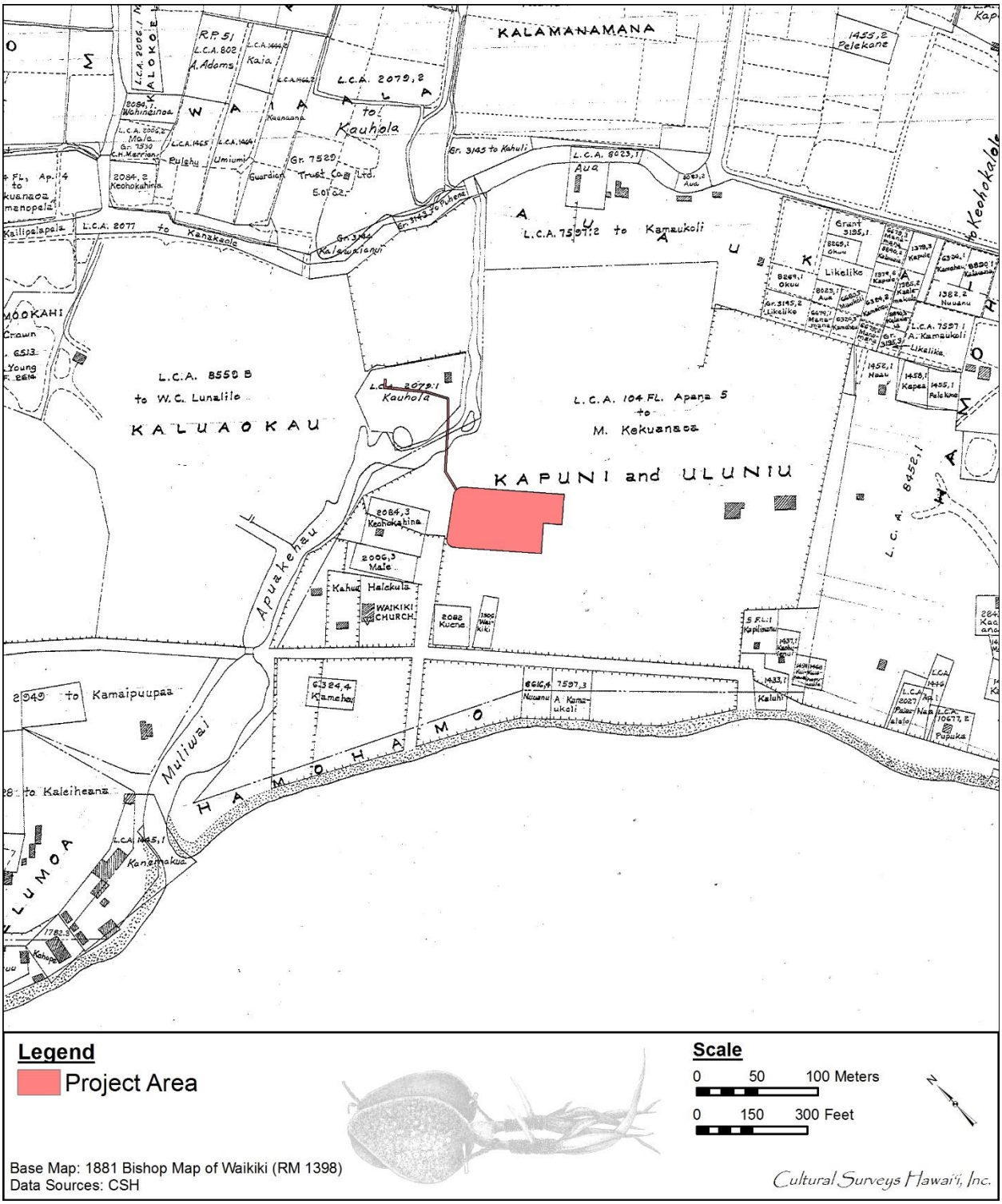

Figure 15. Portion of the 1881 Hawaiian Government Survey map (portion) of Waikiki, by S. E. Bishop (Hawai‘i Land Survey Division, Registered Map No. 1398)

continued to be popular with the *ali‘i* and several notables had residences there. A visitor to O‘ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

Other developments during the second half of the nineteenth century, a prelude of changes that would dramatically alter the landscape of Waikīkī during the twentieth century, include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalākaua Avenue), the building of a tram line between the two areas, and the opening of Kapi‘olani Park in 1877. Traditional land-uses in Waikīkī were abandoned or modified. By the end of the nineteenth century, most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States.

As the sugar industry throughout the Hawaiian Kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was $3 a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands’ availability throughout the islands in the late 1800s reflected the declining demand for taro as the Native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the Islands also accelerated, a domestic market opened.

> The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.
>
> In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai‘i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product. [Coulter and Chun 1937:130]

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12 percent of the total 4,659 acres planted in rice on O‘ahu. Most of the former taro lo‘i converted to rice fields were *mauka* of the present Ala Wai Boulevard.

An 1893 map shows the project area in an uncultivated area surrounded by swampland, probably still used to grow taro, with rice fields *mauka* of the property (Figure 16). Early surveyors only mapped what they considered substantial “permanent” structures, but did not map grass houses or “beach cottages.” Although no houses are shown in the project area on this map, this does not mean that there was not a cottage elsewhere on the property.

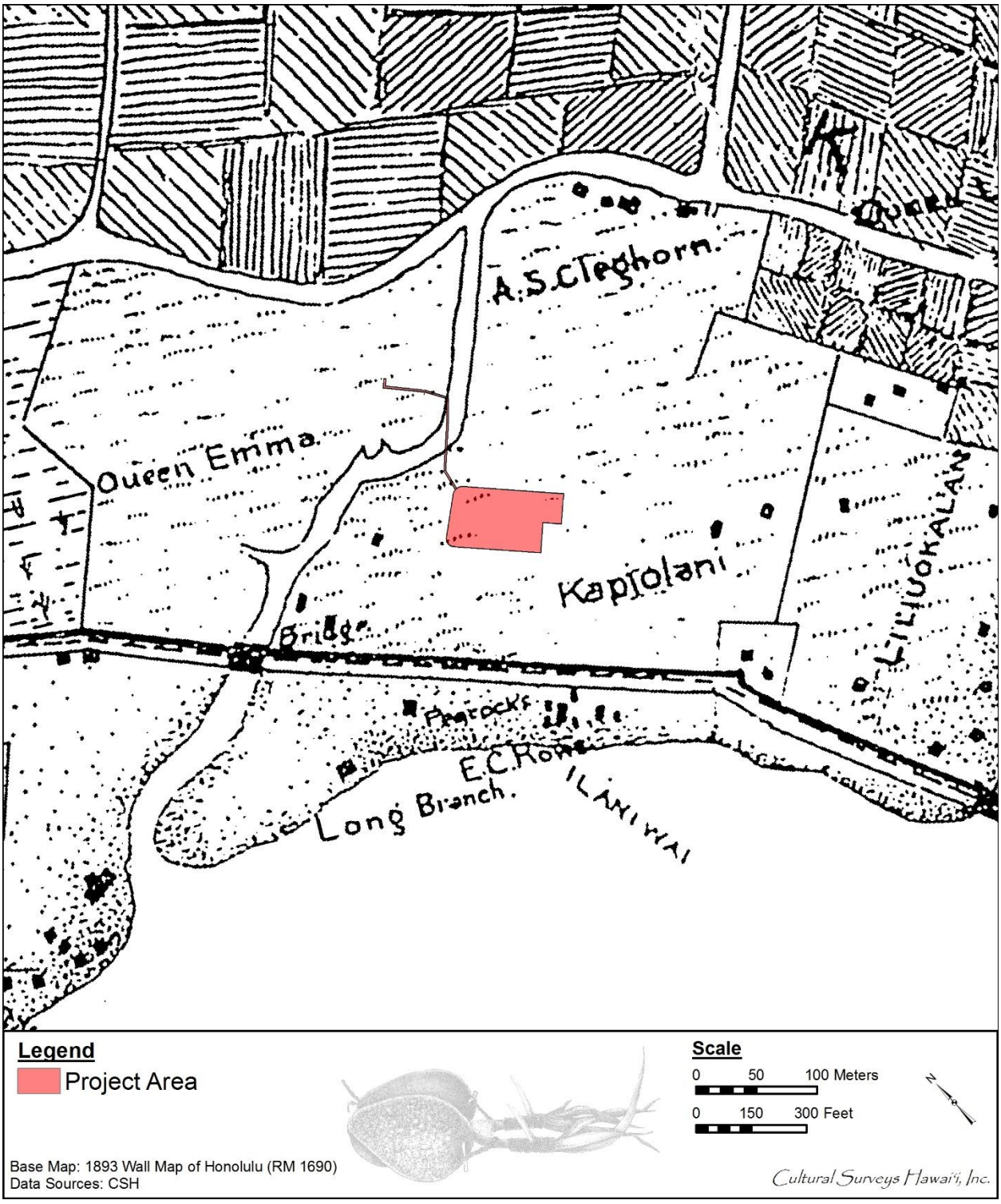

Figure 16. Portion of 1893 map of Honolulu by W.E. Wall showing the project area located in open, undeveloped lands south of the Cleghorn estate (‘Āinahau) and east of ‘Āpuakēhau Stream (Hawai‘i Land Survey Division, Registered Map No. 1690)

3.1.3.1 ‘Āinahau and Princess Ka‘iulani

Historic maps identify the present project area as adjacent to a portion of ‘Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Princess Miriam Likelike (1851-1887), and their daughter Princess Ka‘iulani (1875-1899) – all significant personages in the history of Hawai‘i. This estate began when Princess Likelike and her husband purchased six acres of land in the *‘ili* of ‘Au‘aukai from Ma‘aua and Koihala in 1872. Additional land came to the property in 1875, when 3.9 acres were gifted to Princess Ka‘iulani at her christening by her aunt and godmother Ruth Ke‘elikōlani, who inherited the land from her father, Mataio Kekūanaō‘a. Princess Ruth gave an additional 1.3 acres to Ka‘iulani later, creating a total estate of 12 acres (Kanahele 1995: 133-134, 137). The estate was called ‘Āinahau (*hau* tree land), named for the many hau trees that grew along ‘Āpuakēhau Stream (Pukui et al. 1974:7).

The property in 1872 had several native grass huts, which Cleghorn removed, and replaced with a neo-Hawaiian-style bungalow (Figure 17). He later built a new, large two-story Victorian style house (Figure 18), designed by the famous Honolulu architect, Clinton B. Ripley.

> Cleghorn not only beautified Waikīkī through his work at Kapi‘olani Park [he had been instrumental in the park’s creation and design], but also at his estate, ‘Āinahau, which he had purchased in 1872 for $300. Inheriting a love of horticulture from his father, Cleghorn lavishly landscaped this parcel, making it “the most beautiful private estate in the Hawaiian Islands” [Hibbard and Franzen 1986: 12].

The structures indicated within LCA 7597 ‘Āpana 2 on the 1881 map (see Figure 15) would appear to be buildings constructed by Cleghorn on the ‘Āinahau grounds. Among these buildings, the large structure indicated in the northern portion of the estate is likely the bungalow that was the Cleghorn family’s first residence on the estate. Subsequently, in the 1890s, Cleghorn constructed, immediately adjacent to the bungalow, a large Victorian-style house. A visitor in the 1890s noted:

> The new house was a white frame structure, of two stories, with wings at either end – the favourite form of Honolulu architecture – with a wide verandah extending across the front. The shrubbery had been cut away for several yards in every direction to allow the free circulation of the air, and just beyond the main entrance stood the one incomparable banyan tree, which the owner presently informed me was the handsomest thing he had [in Stassen-McLaughlin 1986: 127]

The current project area appears to be adjacent to (southeast of) the westernmost-most corner of the ‘Āinahau estate, which, based on historic maps contained no structures and was likely the location of the access drive from Kalākaua Avenue (

Figure 19 and Figure 20). In his book on the Princess Ka‘iulani Hotel, Cohen notes:

> The site for the hotel [Princess Ka‘iulani] fronts the old Waikiki Road, now Waikiki’s main thoroughfare, Kalakaua Avenue. The hotel’s Porte Cochere on Ka‘iulani Avenue is at the approximate southern entrance driveway to Ainahau. The rest of the original estate lies to the north fronting Ala Wai Boulevard. The entrance to the hotel’s parking lot marks the approximate spot of the trellised arch

> entrance to the beautiful Ainahau garden, where Governor Cleghorn, assembled flora from throughout the islands and abroad. The princess' private driveway entered from Waikiki through that arch and wound gracefully through rows of stately palms to the white house set deep within the grounds [Cohen 1997:48-49].

When Princess Likelike died in February of 1887, her daughter, Princess Ka‘iulani, was named heir apparent to the throne. By all accounts, Princess Ka‘iulani was a beautiful and charming young woman who spent much time wandering the estate grounds (Figure 21 and Figure 22). In his book, *Waikiki Yesteryear*, Grant notes:

> …the Governor [Cleghorn] designed Japanese gardens, verdant walkways, and fern-lined roads at Ainahau…and several of the little Princess' favorite bird, the beautiful peacock, strolled about the lawns, perching in the trees and piercing the air with their shrill cry [Grant 1996: 24].

Robert Louis Stevenson visited the estate in 1889 when Princess Ka‘iulani was 13 years old.

> [He] was so impressed with the young girl that he spent many afternoons with her, sitting under the great banyan tree, telling her stories. When he learned she was going to go to school in Scotland, he wrote her a little poem in her red-plush album to keep her company on her travels. [Grant 1996: 24]

After her return to ‘Āinahau from Scotland, the Princess' health began to fail and in 1899 she passed away at just 24 years of age. According to Grant (1996: 24):

> The night she died, her beloved peacocks screeched wildly. Since her favorite flower had been the Chinese jasmine, Hawaiians called the flower "pikake", or peacock, in honor of the Princess.

Cleghorn himself continued to reside at ‘Āinahau until his death in 1910. After his death, the house was used as a hotel and then as a rental property until 1921, when it was claimed by a fire.

> One August night in 1921, W.T. Aldrich, the "movie picture man," was having dinner when his wife yelled "Fire!" He ran to the room where the gas heater stood and saw flames. Neighbors tried to help by beating them out with cloths. A fire truck was summoned from Kaimukī, but the pin holding together the steering gear fell out and the truck crashed into a fence. By the time help arrived, the building could not be saved and the Cleghorn house burned to the ground. [Stassen-McLaughlin 1986:182]

Figure 17. Photo of Cleghorn bungalow, ca. 1878, with Annie Cleghorn (left) and Princess Ka‘iulani (right) on the lawn (Hawai‘i State Archives, reproduced in Kanahele 1995)

Figure 18. Cleghorn’s Victorian-style-house at ‘Āinahau (late nineteenth century); photo from Kanahele 1995

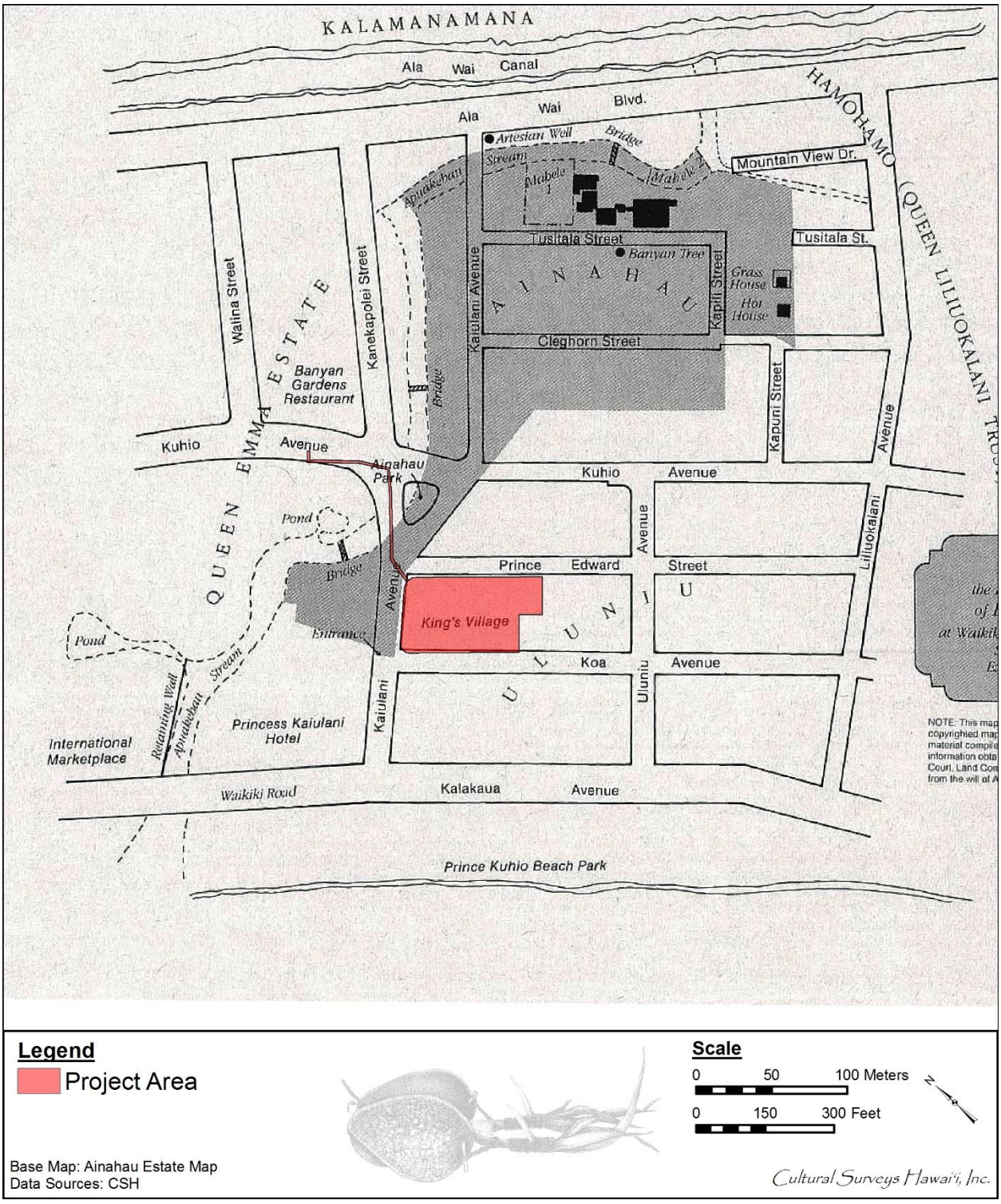

Figure 19. The ‘Āinahau Estate (shaded gray area) superimposed over a modern map of Waikīkī; showing the project area just outside the southernmost portion of the estate and east of ‘Āpuakēhau Stream (drawing created and reproduced in Stassen-McLaughlin 1986:124)

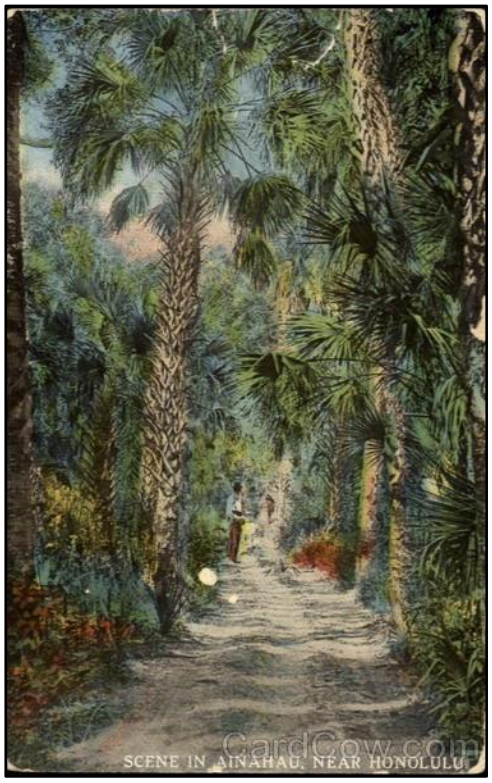

Figure 20. The road to ‘Āinahau as depicted on a postcard (HSS n.d.)

Figure 21. Princess Ka‘iulani circa 1896 (from Grant 1996: 24)

Figure 22. Photo circa 1895 of Princess Ka‘iulani feeding her pet peacocks near the front steps of the ‘Āinahau mansion (from Grant 1996: 24)

3.1.4 Early Twentieth Century

During the first decade of the twentieth century, the U.S. War Department acquired more than 70 acres in the Kālia portion of Waikīkī for the establishment of a military reservation called Fort DeRussy, named in honor of Brig. Gen. R.E. DeRussy of the Army Corps of Engineers.

> On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post . . .
>
> Between 1909 and 1911, the engineers were primarily occupied with mapping the island of O‘ahu. At DeRussy other activities also had to be attended to - especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground. [Hibbard and Franzen 1986:79]

A 1910-1917 U.S. Engineers map shows the project area in the taro area, with rice fields *mauka* and marked by earthen berms (Figure 23). On this map, several structures are visible near the shoreline and near ‘Āpuakēhau Stream but none within the project area. The vicinity of the project area is labeled the “Royal Grove Tract” on a 1917 Bishop Museum Government Survey Map (Figure 24), this tract was purchased and opened up for development by Percy Martin Pond in 1914 or 1915 (Siddall 1917:214; Hibbard and Franzen 1986:106).

> In Waikīkī, between 1913 and 1921, the large *kama‘āina* landholdings virtually disappeared. With the subdivision of Queen Lili‘uokalani’s property, Hamohamo, in December 1913, the former haunts of royalty began to yield to the real estate market’s demand for moderately priced house lots. In February 1915 the trend continued, when Prince Kalaniana‘ole sold a six-acre portion of King Kalākaua and Queen Kapi‘olani’s Waikīkī estate to Percy Pond for $32,500. Pond, who had previously been involved in the development of the Beach Walk Tract, immediately converted these grounds into the Royal Grove Subdivision, complete with coconut-tree-lined streets, concrete sidewalks, and both gas and water lines. Priced between $925 and $1,500, with one third cash down and the balance, plus 7% interest, due in three years, the ninety 5,000 square foot lots moved briskly.
>
> The success of the Royal Grove Tract encouraged further subdivision activity. [Hibbard and Franzen 1986:106]

Within a few years, a 1919 U.S. War Department map (Figure 25) shows a grid of streets and many structures in the vicinity.

In the 1920s, the Waikīkī landscape (Figure 26) would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The *muliwai* or lagoonal backwater of ‘Āpuakēhau Stream that reached the sea between the present Royal Hawaiian and Moana Hotels was filled in between 1919 and 1927. The filling in of ‘Āpuakēhau Stream and the excavating of the Ala Wai Canal were elements of a plan to urbanize Waikīkī and the surrounding districts:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō‘ili‘ili, and McCully districts, as well as lower Makiki and Mānoa. The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block. [Johnson 1991:311]

During the course of the Ala Wai Canal's construction, the banana patches and ponds between the canal and the *mauka* side of Kalākaua Avenue were filled and the present grid of streets was laid out (see Figure 25). These newly created land tracts spurred a rush to development in the 1930s. A 1928 *Honolulu Star-Bulletin* article extolled the area's progress:

> The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.
>
> These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. [Newton 1938:10]

The writer speculated that the "future of Waikīkī is assured." The 1933 U.S. Army War Department fire control map (Honolulu quadrangle) shows the increasing urbanization of the area (Figure 27).

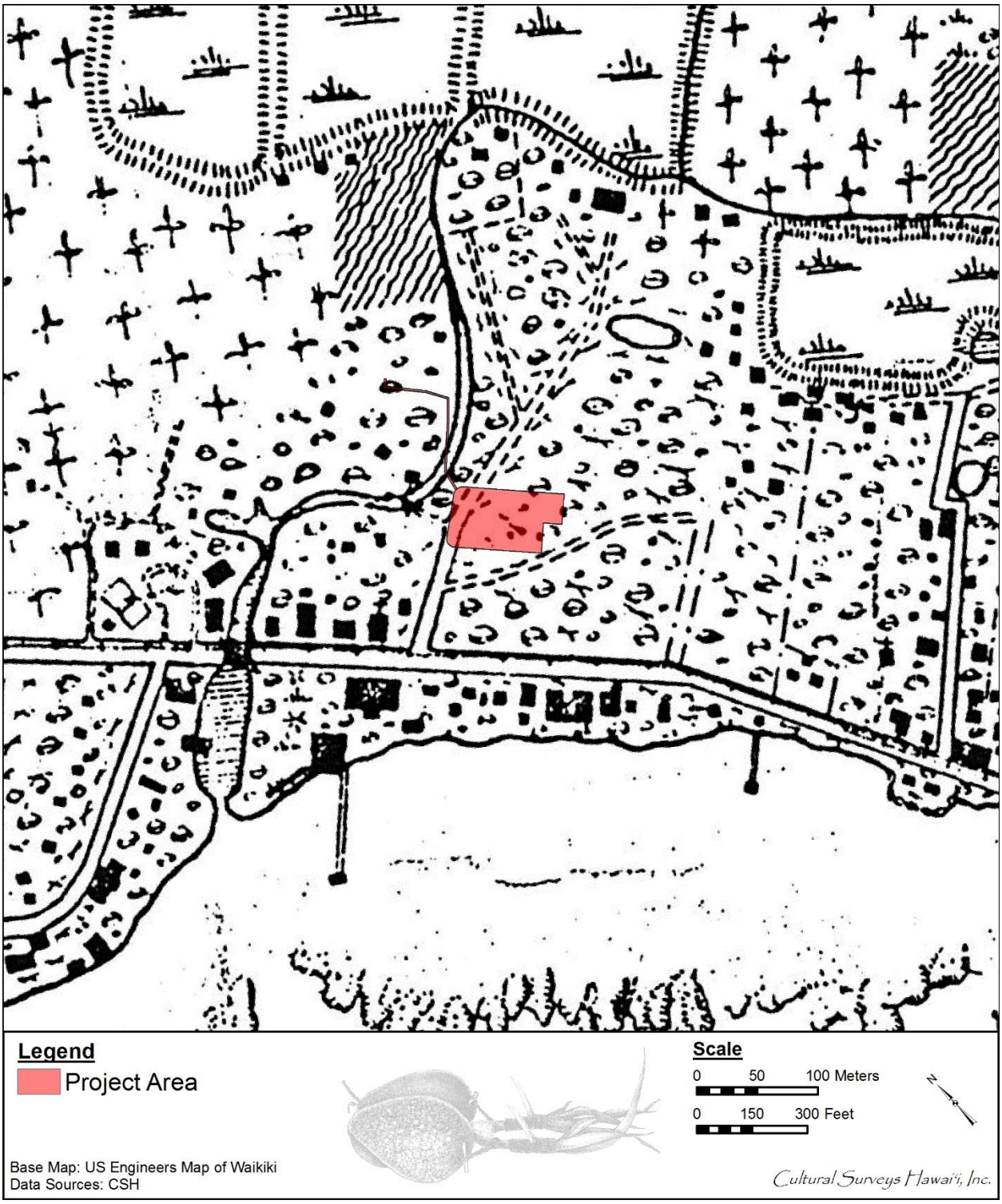

Figure 23. Portion of a 1910-1917 U.S. Engineers map with the project area shown amongst possible *lo‘i* area or wetland area with rice fields to the northeast

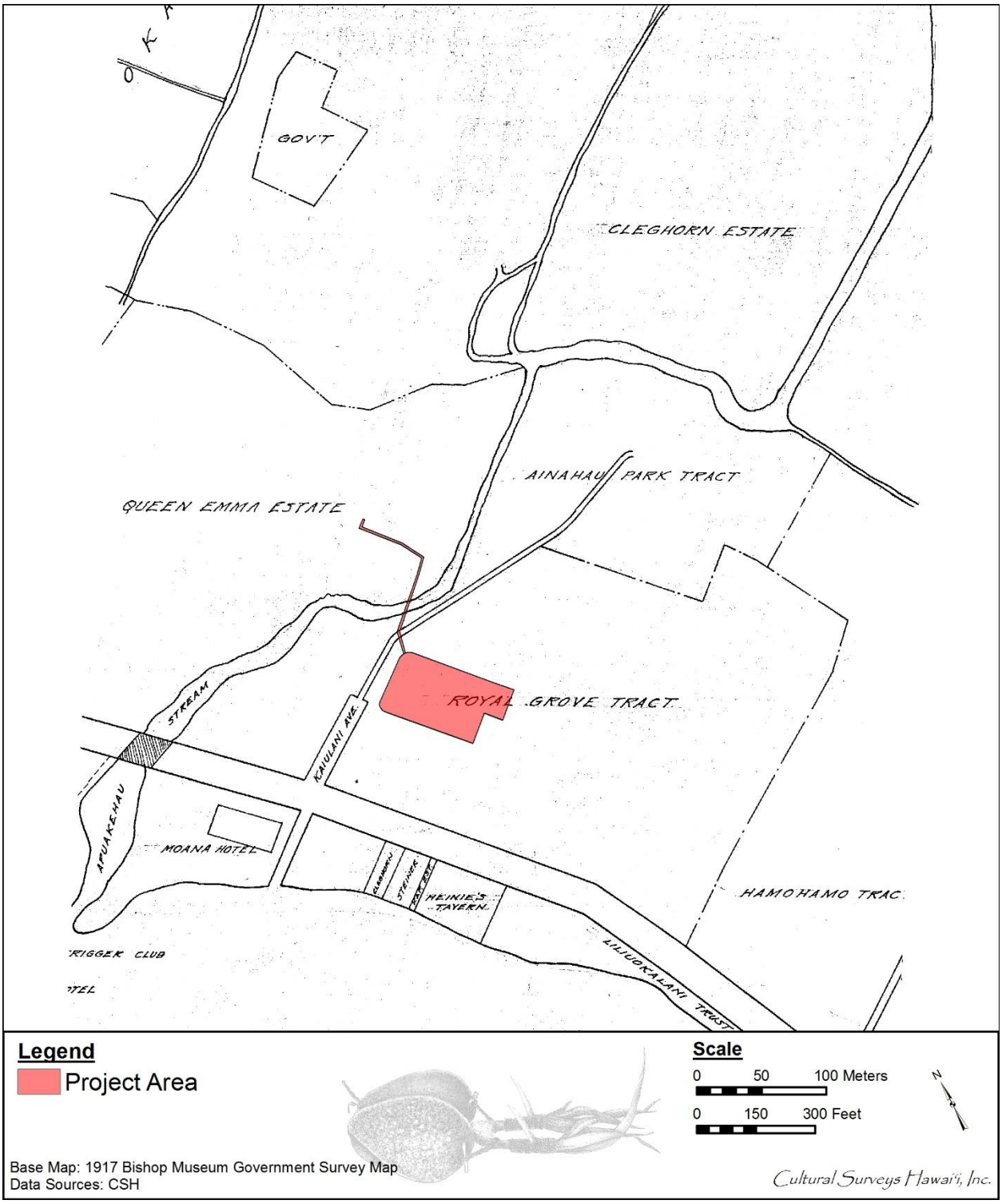

Figure 24. Portion of a 1917 Bishop Museum Government Survey Map showing the project area, the names of various tracts of land and nearby landmarks

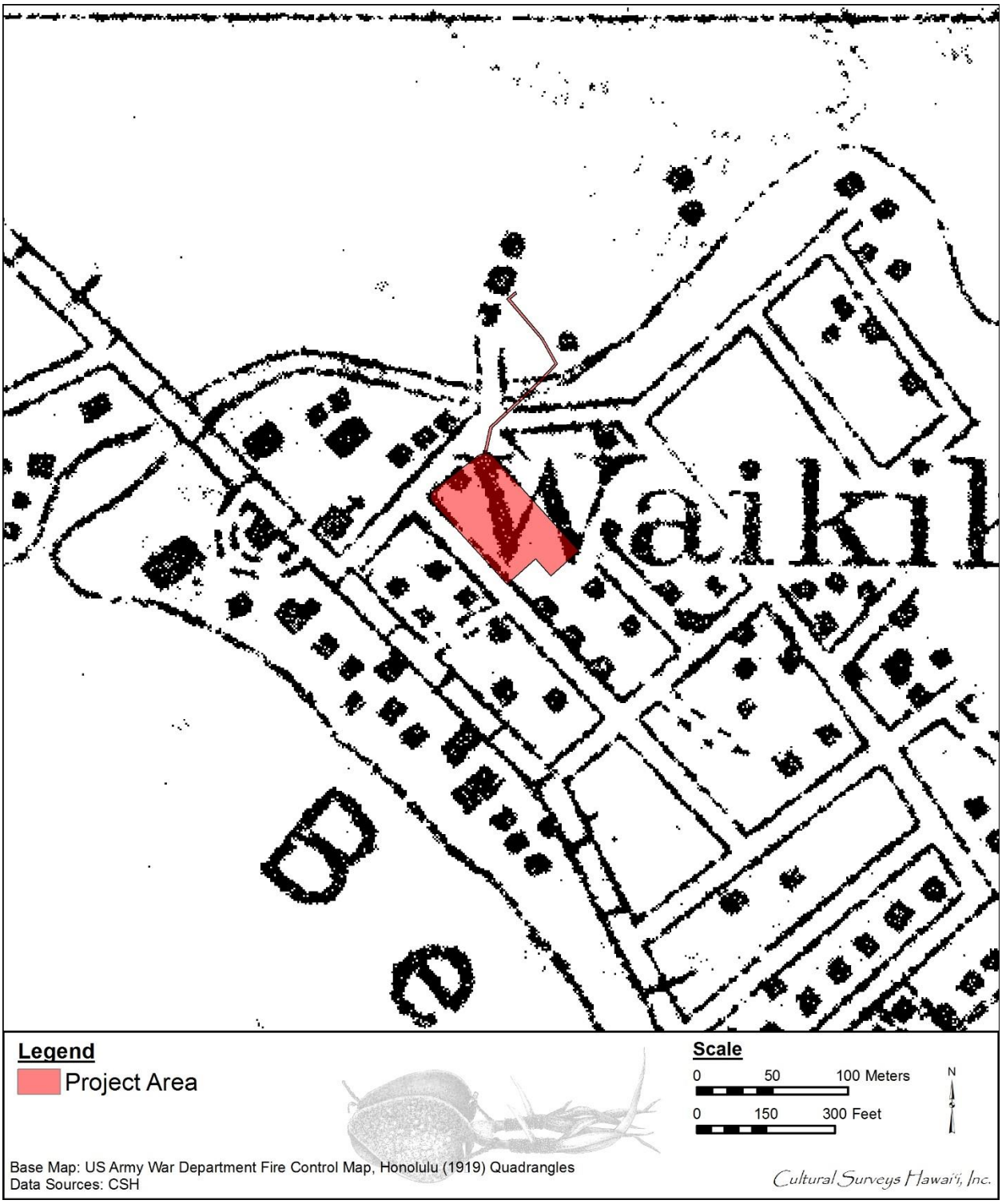

Figure 25. Portion of a 1919 U.S. Army War Department fire control map (Honolulu quadrangle) with project area location, showing growth of streets and housing

Figure 26. 1920 Photograph of the Waikīkī Plain before the construction of the Ala Wai Canal. The land around the project area (right side of photo) is more developed than the areas to the left (photograph reprinted in Grant 1996:63)

Figure 27. 1933 U.S. Army War Department fire control map (Honolulu quadrangle) showing the project area amongst increasingly urbanized setting.

3.1.5 1940s to the Present

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put plans to develop Waikīkī as a tourist destination on hold. Until the war's end in 1945, the tourist trade was non-existent ". . . since the Navy controlled travel to and from Hawai‘i and did not allow pleasure trips" (Brown 1989:141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

> It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]

Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the *Honolulu Advertiser* of July 16, 1945 decried "honky-tonks" that had sprung up in Waikīkī during the course of the war, and asked: "Can anyone look at present-day Kalākaua Ave. – lined with makeshift curio shops, noisy 'recreation' centers, eyesores that pass under the name of lunchrooms and miscellany of 'joints' – and hope that Waikīkī can stage a comeback [as a tourist destination]?"

By the mid-1950s, there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi‘olani Park. The Waikīkī population was not limited to transient tourists, but also included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings. However, by the late 1950s, a row of retail shops had been constructed along Kalākaua Avenue. Many of the older, smaller structures visible on the 1943 U.S. War Department map may have been replaced by larger and newer structures before 1959 (see Figure 28 and Figure 29). The King's Village was established in 1972 and is visible in a 1978 aerial photograph (see Figure 30). Hibbard and Franzen (1986:168) used this as an example of the "Fantasyscapes" created by architects and developers in Waikīkī:

> Areas such as King's Village, the shopping complex located at Ka‘iulani and Koa Avenues […] stretch the fabric of reality to its outer limits and transport fantasy to the borders of absurdity. This is especially true of King's Village, a shopping complex outlandishly costumed in a pseudo-Victorian guise and plopped down incongruously in the middle of an urban sidewalk.

In modern times (based on the 2000 census), the resident population of Waikīkī is about 19,729 people, 2.3% of the population of the island of O‘ahu as a whole. Every day 72,000 visitors pay for a room in one of Waikīkī's 921 apartments, hotel, or vacation units or spend money in one of the many shops, restaurants, or other attractions. The 2000 census provided evidence for Waikīkī's importance to the economy of the Hawaiian Islands, stating that "Directly and indirectly, the small, one square mile of Waikīkī can be associated with supporting 11% of all civilian jobs in the state and 12% of state and local tax revenues (http://www.hawaii.gov/dbedt/info/economic/data_reports/e-reports/econ_Waikīkī.pdf; downloaded 5-4-07)."

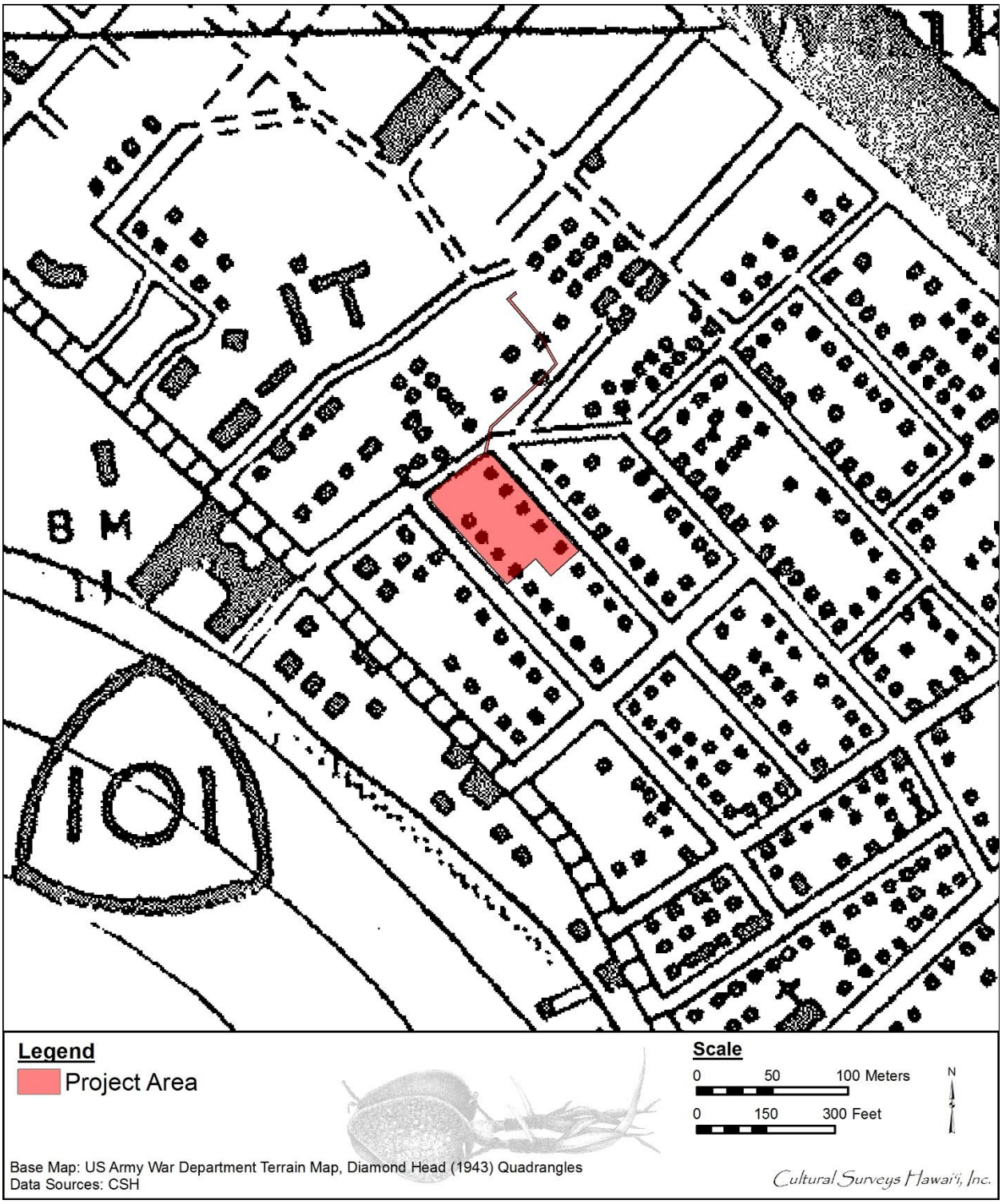

Figure 28. Portion of a 1943 U.S Army War Department terrain map (Diamond Head quadrangle) showing the project area

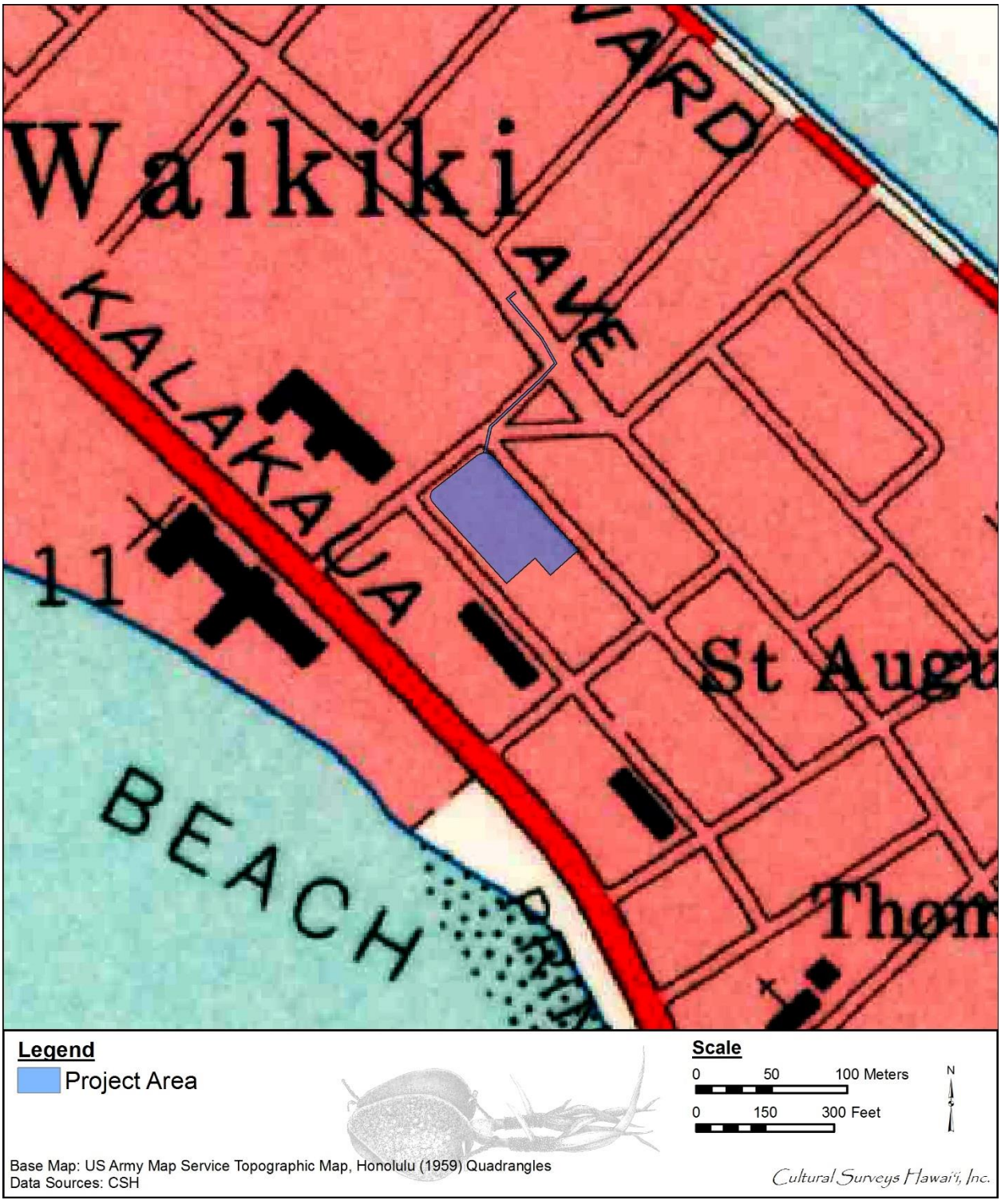

Figure 29. Portion of a 1959 U.S. Army Map Service topographic map (Honolulu quadrangle) showing the project area. Note that newer structures have been added since the 1933 and 1943 maps

Figure 30. 1978 U.S. Geological Survey aerial photograph depicting the project area and showing the recently constructed King’s Village.

3.2 Previous Archaeological Research

The Waikīkī Ahupua‘a, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources that supported a large population. In the nineteenth century and early twentieth century, after a period of depopulation, Waikīkī was inhabited by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system that had been converted from taro to rice. Farming continued up until the 1920s when the construction of the Ala Wai Canal drained the remaining ponds and irrigated fields.

Numerous remnants of both the pre-Contact and historical occupation of lowland Waikīkī have been discovered within the modern Waikīkī district (*makai* of the Ala Wai Canal). Most of these discoveries have occurred in connection with construction activities related to urban development or infrastructural improvements, and have been documented in archaeological reports. Due to the large volume of reports concerned with the area, this section discusses only those studies within the 400 m zone surrounding the current project area. A list of these projects conducted in the Waikīkī area is summarized in Table 2 and depicted on Figure 31. Historic properties and burial sites within the vicinity of the project area are depicted on Figure 32 A list of Waikīkī burial finds held in the osteological collections of the Bishop Museum is presented in Table 3.

Table 2. Previous Archaeological Investigations within 400 m of Project Area

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
Griffin 1987	Burial recovery	Along Kalākaua Ave. near corner of Ka‘iulani St.	Bones removed and bagged by construction crew, burial found in *makai* wall of gas pipe excavation; designated SIHP # -3745
Chiogioji and Hammatt 1991	Assessment	2 parcels, TMK: (1) 2-6-024:065-068 and 080-083, TMK: (1) 2-6-024:034-040 and 042-045	Formerly a corner of the ‘Āinahau estate; remainder of parcels, former ‘*auwai*, *kalo* and rice fields; test excavations and specific sampling strategy recommended
Kennedy 1991	Monitoring	TMK: (1) 2-6-022:014 IMAX theatre location	Pollen and sediment samples from ponded sediments were collected; three ^{14}C dates and pollen sequence were inverted
Simons et al. 1991	Interim field study, data recovery, monitoring	Moana Hotel Area	24 burials identified within Moana Hotel (SIHP # -9901) area; preliminary osteological analysis indicates pre-Contact type; pre- and post-Contact artifacts collected; burials designated part of SIHP # -1974

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
McDermott et al. 1996	Inventory survey	Two lots by Lili‘uokalani Avenue and Cleghorn Street, TMK: (1) 2-2-24: 34-40, 42-45,80-82	Buried remnants of *‘auwai* and *lo‘i* sediments (SIHP # -5459); encountered in situ flexed burial (SIHP # -5460); radiocarbon dates likely *lo‘i* sediments suggest pre-Contact age
Beardsley and Kaschko 1997	Monitoring and data recovery	Pacific Beach Hotel Office Annex	Subsurface cultural layer with traditional Hawaiian cultural deposits and 2 human burials; also reported 3 ^{14}C dates; SIHP # -4224 includes the subsurface cultural layer and associated burials and a separate historic trash pit
Perzinski et al. 2000	Burial mitigation	Kalākaua Ave. between Ka’iulani & Monsarrat Avenues	44 sets of human remains (SIHP #s -5856, -5857, -5858, -5859, -5860, -5861, and -5862); 37 disinterred, 7 left in place; believed to be Native Hawaiian, interred prior to 1820
Cleghorn 2001a and 2001b	Burial mitigation	Ohua Avenue and Kalākaua Avenue	Encountered two in situ, and two previously disturbed, fragmented human remains (SIHP # -5861) during excavations for a Burger King and adjoining ABC store.
Elmore and Kennedy 2001	Inadvertent finds	Royal Hawaiian Hotel, TMK: (1) 2-6-02:005	Single inadvertent find (SIHP # 50-80-14-5937); in situ, extended burial disturbed during excavation for a conduit line
Winieski and Hammatt 2001	Monitoring	Kalākaua Avenue from the Waikīkī Aquarium to Ohua Avenue, Ohua Avenue to Kuhio Avenue	Documented discontinuous A-horizon (SIHP # -5883) near Waikīkī Bandstand to the intersection of Kalākaua and Monsarrat Avenue. A partial, previously disturbed human burial (SIHP # -5797) was encountered at the intersection of Ohua and Kuhio Avenue. Historic dog burial and probable *imu* pit were also documented
Winieski et al. 2001	Monitoring	Kalākaua Avenue from Ka‘iulani Avenue to Kapahulu Avenue	Encountered 10 human burials, two in situ and eight previously disturbed; likely pre-Contact; associated with SIHP #s -5858, -5862, and -5863. Also documented portion of a historic seawall (SIHP # -5948) and a discontinuous subsurface cultural layer (SIHP # -5940)

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
Bush et al. 2002	Monitoring	Kalākaua Avenue, between Ala Moana Blvd. and Kapahulu Ave.	Encountered four human burials, likely of pre-Contact age (associated with SIHP #s -5856, -5860, and 5864). Also documented entire pig within an *imu* pit (estimated ca. A.D. 1641-1671), gleyed sediments associated with former ponds, and three historic trash pits; not assigned to SIHP
Mann and Hammatt 2002	Monitoring	Lili‘uokalani Avenue and Uluniu Avenue	Encountered four previously disturbed remains and one in situ burial comprising six individuals (Finds 1–5); three of the finds not designated SIHP, in situ burial designated component of SIHP # -6369, and one disturbed burial consisting of two individuals designated component of SIHP # -5859. Also documented two historic trash pits, SIHP #s -6372 and -6398
Winieski et al. 2002	Monitoring	Kalākaua Ave. between Ka‘iulani and Monsarrat Avenues	Documented 44 human burials (SIHP #s -5856, -5857, -5858, -5859, -5860, -5861, and -5862), 37 disinterred and seven left in place. Also documented subsurface cultural layer (SIHP # -5940) containing traditional Hawaiian artifacts, midden, fire pits, & charcoal; observed fragment of light gauge rail, remnant of Honolulu Transit trolley system (SIHP # -5942); and low energy alluvial sediments associated with the now channelized *muliwai* Kuekaunahi (SIHP # -5943)
Bush et al. 2003	Monitoring	International Marketplace	No historic properties identified
Kailihiwa and Cleghorn 2003	Monitoring	Lau‘ula Street, Royal Avenue between Kalākaua and Kūhiō Avenue, and Waikoulu Way between Royal Hawaiian Avenue	No historic properties identified
Tome and Dega 2003	Monitoring	Waikīkī Marriot, TMK: (1) 2-6-26:003	No historic properties identified but did encounter one fragment of possible human osseous remains from modern trash and imported fill layer.

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
Chiogioji et al. 2004	Inventory survey	Tusitala Vista Elderly Apartment	Encountered previously disturbed, disarticulated remains (SIHP # -6705); also documented subsurface cultural layer associated with the former ‘Āinahau estate (SIHP # -6682), remnants of an ‘*auwai* source from ‘Āpuakēhau Stream (SIHP # -6706), and remnant agricultural stone wall (SIHP # -6707)
Chiogioji and Hammatt 2004a	Assessment	Royal Hawaiian Shopping Center, TMK: (1) 2-6-02:18	No historic properties identified
Chiogioji and Hammatt 2004b	Literature review	International Market Place, TMK: (1) 2-6-22: 36, 37, and 43	Literature review, no finds
Esh and Hammatt 2004	Monitoring	Ala Wai Boulevard Improvements between McCully Street and Kapahulu Avenue	No historic properties identified
Havel and Spear 2004	Monitoring	ABC Store No. 21, TMK: (1) 2-6-021:101	No historic properties identified
Bush and Hammatt 2005	Monitoring	Uluniu Avenue	No historic properties identified
O’Leary, et al. 2005	Inventory survey	1-Acre Parcel, 2284 Kalākaua Avenue (former Waikīkī 3 Theater); TMK (1) 2-6-22:009	Encountered one in situ burial (SIHP # -6703)
Esh and Hammatt 2006	Monitoring	Kūhiō Avenue, Ka‘iulani to Kapahulu	No historic properties identified
Groza et al. 2007	Literature review and field inspection	Waikīkī Marriot, TMK: (1) 2-6-026:009	No historic properties identified within the project area

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
Hammatt and Shideler 2007	Monitoring	A Grease Interceptor at the Sheraton Moana Surfrider Hotel	No historic properties identified; thick fill was noted
Pammer and Hammatt 2007	Monitoring	Perry's Smorgy Restaurant TMK: (1) 2-6-021:114	No historic properties identified
Tulchin J. and Hammatt 2007	Data recovery	Tusitala Vista Elderly Apartments, TMK: (1) 2-6-024: 070, 071, & 089	Presents palynological and radiocarbon analysis tracing paleo-environmental change and man-made alterations of the landscape at SIHP # 50-80-09-6707
Hazlett, Chiogioji, Borthwick, and Hammatt 2008	Monitoring	Royal Hawaiian Shopping Center Parcel, TMK: (1) 2-6-002:018	No historic properties identified
Hazlett, Esh, and Hammatt 2008	Monitoring	2284 Kalākaua Avenue, TMK: (1) 2-6-22:009	No historic properties identified
Runyon, O'Hare, Shideler, and Hammatt 2008	Assessment	Improvements to the Royal Hawaiian and Sheraton Hotels TMK: (1) 2-6-002, 005, 006	Two isolated human skeletal remains and cultural materials were found within disturbed sand, and several small possible features were identified. Remains were reinterred in designated burial area in project area; no SIHP were assigned
Thurman and Hammatt 2008	Monitoring	For Geotechnical Testing at the Royal Hawaiian and Sheraton Waikiki Hotels TMK: (1) 2-6-002:005, 006 & 026	No historic properties identified
Kahahane and Cleghorn 2009	Monitoring	Nohonani Street, Nāhua Street, Walina Street, and Lili‘uokalani Avenue	No historic properties identified

Reference	Type of Investigation	General Location	Results/Findings SIHP # 50-80-14-
Thurman et al. 2009	Inventory survey	Diamond Head Tower Redevelopment Project TMK: (1) 2-6-001:012 por.	Documented a historic trash pit (SIHP # -7069) dating to the late 19th through early 20th century and an intact cultural layer (SIHP # -7068) radiocarbon dated to AD 1801 to AD 1939. An isolated human tarsal phalange was encountered (no SIHP assigned).
Runyon, Shideler, and Hammatt 2010	Monitoring	Moana Surfrider Hotel Wedding Chapel, portion TMK: (1) 2-6-001:012	No historic properties identified
Runyon, Yucha, Shideler, and Hammatt 2010	Inventory survey	Princess Ka‘iulani Redevelopment Project	3 sites: SIHP # -7065, former Kawaiaha‘o Waikīkī Branch Church and Cemetery parcel, SIHP # -7066, cultural layer, and SIHP #-7067, an extended in situ burial
Hammatt et al. 2012	Inventory survey	International Market Place, Waikiki Town Center, and Miramar Hotel	Identified three historic properties, a subsurface cultural layer (SIHP # -7307), burials with an associated activity area (SIHP # -7308), remnants of early hotel infrastructure and a bottle cache and trash deposit (SIHP # -7309)
Yucha et al. 2013	Inventory survey	St. Augustine-by-the-Sea Church in Waikīkī	Documented a subsurface cultural layer (SIHP # -7135) with a human interment complex (SIHP # -7136). SIHP # -7135 contained cultural material and disarticulated human remains in one excavation. Within SIHP # -7136 two, in situ burials were identified (SIHP # -7136 Features A and B).

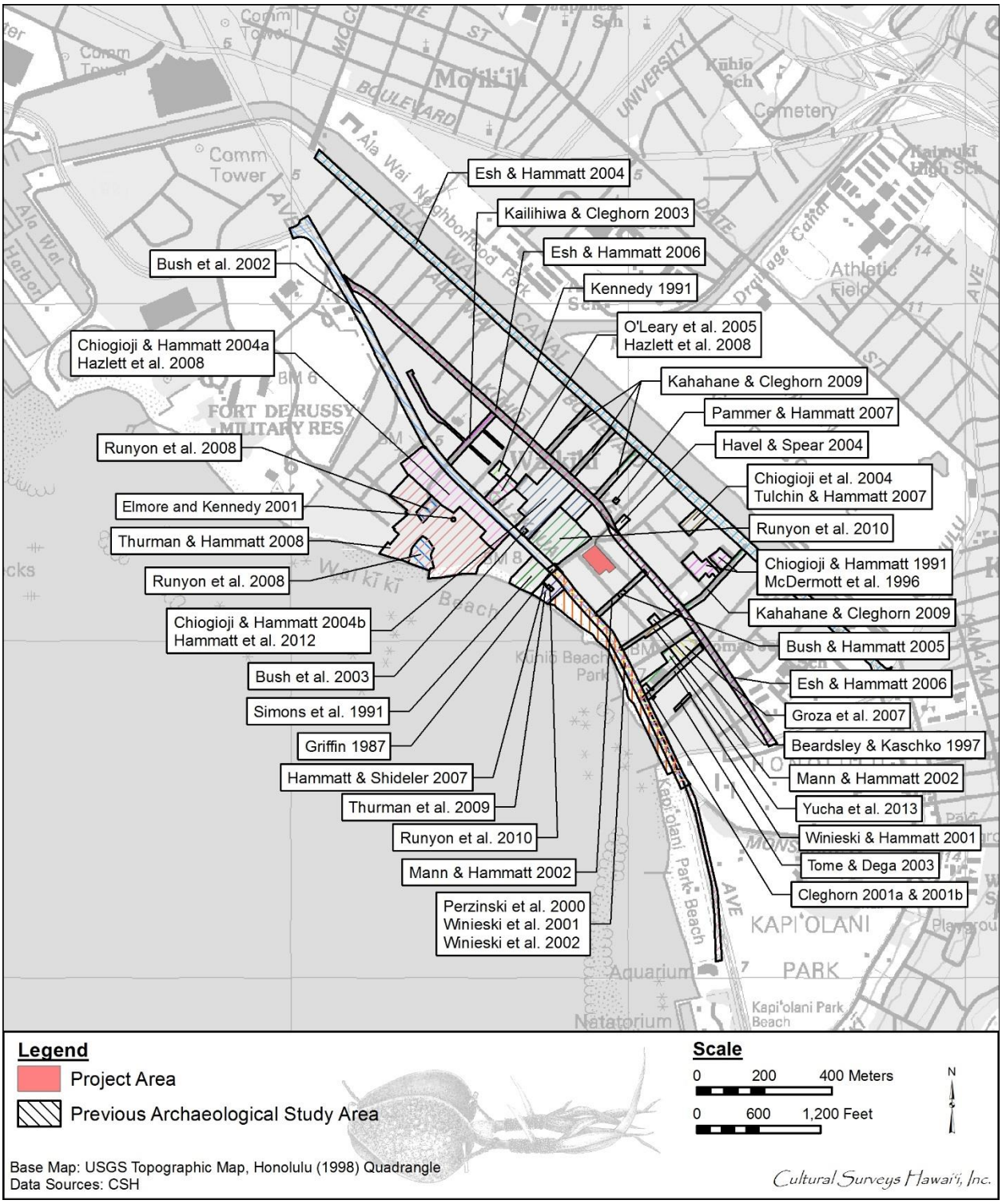

Figure 31. 1998 Honolulu USGS 7.5-minute series topographic map of the Honolulu quadrangle showing the location of previous archaeological investigations within the project area and immediate vicinity

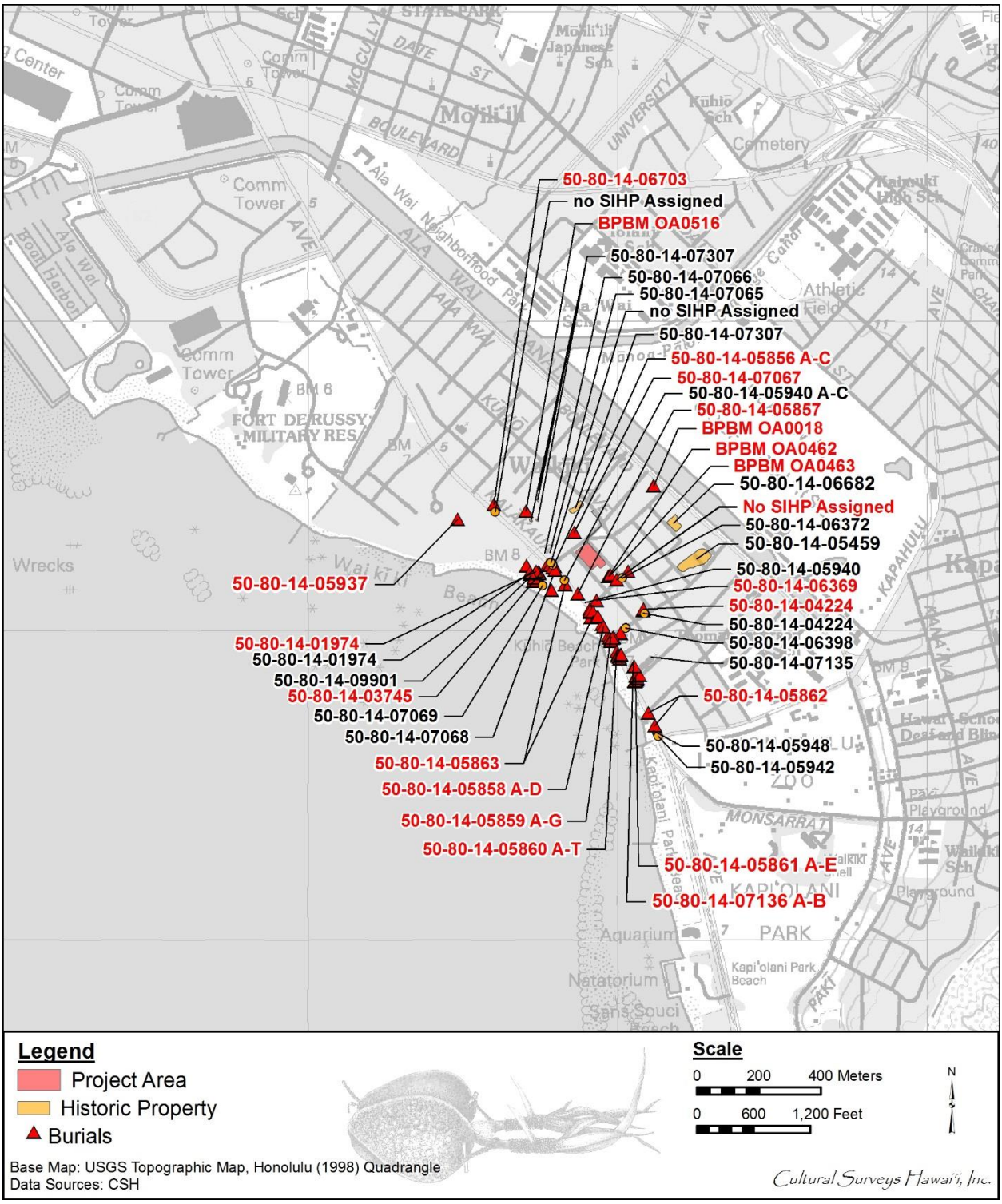

Figure 32. Portion of a 1998 Honolulu USGS 7.5-minute series topographic map of the Honolulu quadrangle showing the location of historic properties and burials within the project area and immediate vicinity

Table 3. References to Burial Finds in Waikīkī within 400 m of the current project area. Adapted from the Bishop Museum NAGPRA Inventory (Federal Register January 28, 1998, Volume 63, Number 18)

Date	Account	Source
1923	…one individual from the ʻĀinahau district, Waikīkī…	FR* page 2; BPBM records indicate this was ID No OA0018 "found by Hawaiian Dredging Company by dredge Kewalo"
1964	Two accessions from 2431 Prince Edward Street	BPBM records indicate this was ID No OA0462 & OA0463 from *ʻEwa* side of lot *makai* of Prince Edward Street
1967	…one individual from Waikīkī…	FR* page 11; BPBM records indicate this was ID No OA0516 from the "Tahiti by Six" at the International Market Place

FR* = Federal Register January 28, 1998 (Volume 63, Number 18)

3.2.1 NAGPRA and Bishop Museum Records

Early records of human remains encountered in the Waikīkī Ahupuaʻa within 400 m from the project area comes from the Bernice Pauahi Bishop Museum (BPBM) Native American Graves Protection and Repatriation Act (NAGPRA) Inventory. The majority of these finds were collected and donated to the BPBM for cataloging and long term curation. The remains donated to the BPBM were typically assigned an identification number separate from an associated state SIHP (if applicable).

In 1923 human remains consisting of a single individual (ID No. OA0018) were donated to the BPBM. The remains were collected from the ʻĀinahau district and donated by Hawaiian Dredging Company. The remains may have been encountered during dredging of the Kewalo area (Federal Register January 28, 1998, Volume 63, Number 18).

In 1964 human remains of possibly two individuals (ID No. OA0462 and OA0463) were recovered by Hirano Contractors at 2431 Prince Edward Street in Waikīkī. The remains were donated to the BPBM by Lloyd J. Soehren (Federal Register January 28, 1998, Volume 63, Number 18).

In 1967 human remains representing a single individual (ID No OA0516) were collected from the International Market Place in Waikīkī. The remains were recovered where the "Tahiti by Six" restaurant was being constructed. A single shell was associated with the remains. The remains were donated to the BPBM by Lloyd J. Soehren (Federal Register January 28, 1998, Volume 63, Number 18).

3.2.2 Griffin 1987

Although no formal report was produced, in 1987 a human burial was discovered and removed at the intersection of Kalākaua Avenue and Kaʻiulani Street. The remains were encountered during excavations for a gas pipe fronting the Moana Hotel on the *makai* side of Kalākaua Avenue. Griffin and Albert Ah Nee, representing the Medical Officer's office, found the remains already removed from a pit within "a matrix of dark gray, silty sand," presumably

the buried A-horizon (Griffin 1987:1). The remains were designated SIHP # 50-80-14-3745 and given to Mr. Albert Ah Nee.

3.2.3 Chiogioji and Hammatt 1991

Chiogioji and Hammatt (1991) conducted an archaeological assessment of two parcels (TMK [1] 2-6-024:065-068 and 080-083, and TMK [1] 2-6-024:034-040 and 042-045). The project area was within the former ʻĀinahau estate and that the area was comprised of *ʻauwai*, taro, and rice fields. Subsurface testing along with specific sampling strategy were recommended.

3.2.4 Kennedy 1991

In October 1991, Archaeological Consultants of Hawaii Inc. (ACH) monitored subsurface excavations for the proposed IMAX Theater Construction Project in Waikīkī. Potential pre-Contact lagoon deposits were collected and analyzed. The study included radiocarbon and pollen analysis which showed that the area was disturbed and not considered significant (Kennedy 1991).

3.2.5 Simons et al. 1991

In 1991 Bishop Museum archaeologists conducted archaeological monitoring and data recovery work for the Moana Hotel Historical Rehabilitation Project. The archaeologists largely monitored activities within the basement and Banyan Court of the Moana Hotel, SIHP # 50-80-14-9901. A total of 24 burials were recovered during project excavations, most of which were considered pre-Contact. Pre and post-Contact artifacts and were features were described. The burials were designated components of SIHP # 50-80-14-1974 (Simons et al. 1991). The recovered remains were reinterred within the project area.

3.2.6 McDermott et al. 1996

In 1996, Cultural Surveys Hawai‘i (CSH) conducted an archaeological inventory survey of two parcels (TMK [1] 2-2-024:034-040, 042-045, 065-068, and 080-082) at Lili‘uokalani Avenue and Tusitala Street. McDermott et al. (1996) documented the buried remnants of an *ʻauwai* and *loʻi* sediments (SIHP # 50-80-14-5459) and an in situ flexed burial (SIHP # 50-80-14-5460). SIHP # -5460 was left in place. Both traditional Hawaiian and historic artifacts were also found within the project area.

3.2.7 Beardskey and Kaschko 1997

In 1985, J. Stephen Athens, Archaeological Consultant (now IARII.) conducted archaeological monitoring and subsequent data recovery for the Pacific Beach Hotel Office Annex. A total of seven features and two human burials, one in situ and one possibly in situ, were documented within the project area associated with a late pre-Contact subsurface cultural layer (Beardsley and Kaschko 1997). A separate historic trash pit was also documented within the project area. The subsurface cultural layer and associated features and burials, and the historic trash pit were designated as components of SIHP # 50-80-14-4224. The two burials were disinterred and turned over to SHPD for reburial (Beardsley and Kaschko 1997).

3.2.8 Perzinski et al. 2000

Between November 10, 1999 and June 1, 2000, CSH monitored the installation of a 16-inch water main along Kalākaua Avenue from Kaʻiulani Avenue to Monsarrat Avenue and for lateral

tie-ins at Lili'uokalani, Kealohalani, ‘Ōhua and Paoakalani Avenues. 44 human burials (SIHP #s 50-80-14-5856 to -5862) and associated cultural deposits were encountered during excavation. Thirty-seven of the burials were disinterred and seven burials were left in place. All of the burials were associated with calcareous beach sand deposits. Although no historic artifacts were found in association with the burials, Traditional Hawaiian practices were observed. These practices included interment with small coral cobbles and water-rounded basalt stones above the burial (Burial 4), chicken *laulau* placed on the chest (Burial 36), and evidence of head shaping (Burial 30), (Perzinski et al. 2000:137).

3.2.9 Cleghorn 2001a and 2001b

On May 2nd and June 14th, 2001, two in situ (Burials 1 and 4) and two previously disturbed human burials (Burials 2 and 3) were encountered at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of ‘Ōhua Street and Kalākaua Avenue and due to their proximity to five burials encountered during the Kalākaua 16-inch Water Main Installation Project (Winieski et al. 2002), they were included with SIHP # 50-80-14-5861. Burials 1–3 were recovered and reinterred, and Burial 4 was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer also was observed which contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments also were encountered within fill deposits.

3.2.10 Elmore and Kennedy 2001

In April 2001, Archaeological Consultants of the Pacific, Inc. (ACP) documented human remains were inadvertently encountered at the Royal Hawaiian Hotel (TMK [1] 2-6-02:005 por.). The remains were disturbed during excavation for a conduit line. The remains, and three shell buttons were recovered from back dirt piles via screening. The remains originated from an in situ, extended burial consisting of one individual (SIHP # 50-80-14-5937). The in situ portion of the burial also had a shell button and drill dog tooth associated with it. The burial was considered to be of post-Contact origin. The recovered remains were reinterred with the in situ portion. ACP monitored the remainder of excavations within the vicinity of SIHP # -5937 (Elmore and Kennedy 2001).

3.2.11 Winieski and Hammatt 2001

From September 1997 to September 1998, archaeological monitoring was conducted along Kalākaua Avenue for the Public Baths Waste Water Pumping Station and Force Main Replacement project in Waikīkī. Monitoring was conducted from the Waikīkī Aquarium along Kalākaua Avenue to Ohua Avenue and along Ohua Avenue to Kuhio Avenue. A buried A-horizon (SIHP # 50-80-14-5883) was documented along Kalākaua Avenue near the Waikīkī Bandstand area. The A-horizon contained a probable fire pit or *imu* feature. The previously disturbed, partial remains of a human burial (SIHP # 50-80-14-5797) were encountered near the intersection of Ohua Avenue and Kuhio Avenue. The human remains were given to the SHPD Burials Program for curation. An in situ historic dog burial with a metal collar was also observed (Winieski and Hammatt 2001).

3.2.12 Winieski et al. 2001

From January 2000 to October 2000, 10 human burials (SIHP #s 50-80-14-5858, -5862, and -5863) were encountered during archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project. Two of the burials were in situ within a natural sand layer while the remaining eight were previously disturbed and encountered in fill or disturbed sand. Four of the burials were left in place while six were disinterred and reburied within a shrine on the corner of Kapahulu and Kalākaua Avenue. A discontinuous, buried cultural layer (SIHP # 50-80-14-5940) and a portion of a historic seawall (SIHP # 50-80-14-5948) were also documented (Winieski et al. 2001).

3.2.13 Bush et al. 2002

Between July 1999 and October 2000, CSH completed archaeological monitoring for Phase II of the Waikīkī Anti-Crime Street Lighting Improvement Project along Kalākaua Avenue from Ala Moana Boulevard to Kapahulu Avenue (Bush et al. 2002). During archaeological monitoring four human burials were encountered. The first burial was encountered on Kalākaua Avenue, just before Dukes Lane and assigned to SIHP # 50-80-14-5864. The burial was left in place and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka‘iulani Avenue. Previously, Perzinski et al. (2000) described 44 burials encountered during archaeological monitoring for the water mains project, two of which (SIHP # 50-80-14-5856 Features A and B) were recovered in the immediate area as the second burial Bush et al. (2002) encountered. Due to its close proximity to SIHP # -5856 Features A and B, the second burial documented by Bush et al. (2002) was designated SIHP # -5856 Feature C. The third and fourth burials encountered by Bush et al. (2002) were recovered at the intersection of Kalākaua Avenue and Kealohilani, near a concentration of burials previously described by Perzinski et al. (2000). Perzinski et al. (2000) designated the concentration of burials as components of SIHP # 50-80-14-5860 (Features A–T). Consequently, Bush et al. (2002) designated the third and fourth burials he documented as SIHP # -5860 Features U and V. SIHP # -5864 was left in place, while SIHP #5856 Feature C and SIHP # -5860 Features U and V were reinterred in a shrine on the corner of Kapahulu and Kalākaua Avenue. In addition to the burials, in the central and southern portions of the project area, archaeologists documented intermittent wetland sediments associated with Waikīkī fishponds and *muliwai* (stream), several historic to modern era trash pits, and one *imu* (fire-pit) with an in situ pig skeleton. Wetland sediments were documented between Ala Moana Boulevard and Kuamo‘o Street and believed to be associated with the Loko Kaipuni complex. One historic to modern trash pit was identified at the intersection of Ala Moana Boulevard and Kalākaua Avenue. The wetland sediments and historic trash pits were not designated sites.

3.2.14 Winieski et al. 2002

In their 2002 report, Winieski et al. describe the results of monitoring for the installation of a 16-inch water main along Kalākaua Avenue from Ka‘iulani Avenue to Monsarrat Avenue. A total of 44 human burials were encountered, 37 of which were disinterred (see Perzinski et al. 2000, above). Eleven of the burials were fully flexed, seven were semi-flexed, two were extended and the rest indeterminate. While sex could not be determined for most of the burials, three males and one female were identified. Burial pits were visible for 6 of the flexed burials, two of the semi-flexed burials, both extended burials, and four of the indeterminately positioned

burials. Five were found in fill (Winieski et al. 2002:193). Winieski et al. (2002) documented a discontinuous buried cultural layer (SIHP # 50-80-14-5940) along Kalākaua Avenue between Ka'iulani Avenue to Kealohilani Avenue. The buried cultural layer had been heavily impacted by prior construction activities. The layer consisted of a culturally enriched sand A-horizon with dark charcoal staining that contained traditional Hawaiian artifacts, midden, hearths, fire pits, and charcoal. Two concentration of cultural material were identified and designated as features. SIHP # - 5940 Feature A was located at the intersection of Ka'iulani and Kalākaua Avenues, and contained an octopus lure sinker, urchin file, bone pick, and marine shell midden, as well as fish, bird, and mammal bone. Radiocarbon analysis of charcoal from Feature A yielded a calibrated date of AD 1555 +/- 115 (1440-1670), (Winieski et al. 2002:201). SIHP # - 5940 Feature B, at the intersection of Kealohilani and Kalākaua Avenues, was a pit feature congaing a basalt adz fragment, polished flake, two drilled shell ornaments, eleven basalt water-rounded manuports, marine midden and mammal bone (Winieski et al. 2002:194-195). During the course of monitoring, archaeologists also documented a fragment of light gauge rail (SIHP # 50-80-14-5942) and alluvial sediments associated with the *muliwai* Kukaunahi (SIHP # 50-80-14-5943).

3.2.15 Mann and Hammatt 2002

In 2001 and 2002, CSH performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili‘uokalani Avenue During the course of monitoring, five burials finds, consisting of six individuals, were recorded within the project area (Mann and Hammatt 2002). Four burial finds were recorded on Uluniu Avenue, with three of these inadvertent finds found in fill sediment. Due to the nature of the three burial finds in fill, and in consultation with Dr. Sarah Collins of SHPD, it was concluded that no SIHP number(s) be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned SIHP # 50-80-14-6369. The fifth burial was encountered Lili‘uokalani Avenue in fill material and consisted of two individuals. Winieski et al. (2002) found three burials in the immediate vicinity during a previous project and assigned the burials to SIHP # 50-80-14-5859 (Features E–G). Consequently, the two newly-identified burials documented by Mann and Hammatt (2002) were designated SIHP # -5859 Feature H. The burials were reinterred with other remains in a shrine on the corner of Kapahulu and Kalākaua Avenue. In addition to the burials, two historic trash pits (SIHP #s 50-80-14-6372 and -6398) were also documented.

3.2.16 Bush et al. 2003

Between October 7, 2002 and October 8, 2002, CSH conducted archaeological monitoring for the installation of a sign at the International Marketplace in Waikīkī. Excavations included two auger holes and the only cultural material observed consisted of modern trash. No historic properties were observed (Bush et al. 2003).

3.2.17 Kailihiwa and Cleghorn 2003

In 2003, Pacific Legacy, Inc., under contract to the Honolulu Board of Water Supply, conducted archaeological monitoring services for the Waikīkī Water System Improvements Project (Kailihiwa and Cleghorn 2003). No archaeological sites or features were recorded in the area and no human remains were encountered.

3.2.18 Tome and Dega 2003

In May of 2003, Scientific Consultant Services, Inc. (SCS), conducted archaeological monitoring at the Waikīkī Marriot Hotel in Waikīkī (TMK: [1] 2-6-26:003). During monitoring, imported fill material dominated the stratigraphy with only a small pocket of natural sediment in one excavation. Although no historic properties were observed, a single fragment from possible human osseous material was encountered (Tome and Dega 2003).

3.2.19 Chiogioji and Hammatt 2004a

In 2004, an archaeological assessment was performed for the Royal Hawaiian Shopping Center (TMK [1] 2-6-02:018) in Waikīkī. Background and archival research indicated that numerous burials have been encountered in the vicinity along Kalākaua Avenue and on the grounds of the Royal Hawaiian Hotel. Additionally, intact subsurface pre-Contact and historic cultural deposits may be present. No historic properties were documented but an archaeological monitoring plan was recommended for excavation below modern fill layers within the project area (Chiogioji and Hammatt 2004a).

3.2.20 Chiogioji and Hammatt 2004b

In 2004, an archaeological literature review was conducted for the International Market Place in Waikīkī (TMK [1] 2-6-22:036-037, and 043). Background and archival research indicated there was potential for subsurface cultural deposits of both pre-Contact and historic material. Although no historic properties were identified, the authors recommended that subsurface testing part of an archaeological inventory survey be carried out prior to any ground disturbance activities in the International Market Place (Chiogioji and Hammatt 2004b).

3.2.21 Chiogioji et al. 2004

In October 2004, CSH conducted an archaeological inventory survey for the Tusitala Vista Elderly Apartments in Waikīkī (TMK [1] 2-6-24:070-071). The inventory survey identified four historic properties, including a buried A-horizon associated with the former ‘Āinahau estate (SIHP # 50-80-14-6682), a remnant ‘auwai from the ‘Āpuakēhau Stream (SIHP # 50-80-14-6706), a remnant agricultural stone wall (SIHP # 50-80-14-6707), and one burial (SIHP # 50-80-14-6705). The burial encountered was previously disturbed, disarticulated remains of a single individual. The burial was recovered and subsequently reinterred in the same location. Archaeological monitoring was recommended for future subsurface work in the vicinity of SIHP # -6705 and data recovery was recommended for SIHP # -6707 (Chiogioji et al. 2004).

3.2.22 Esh and Hammatt 2004

In December 2004, CSH completed an archaeological monitoring report for Ala Wai Boulevard Improvements. A single cow skeleton was encountered at the intersection of Ala Wai Boulevard and Seaside Avenue. The skeleton was redeposited and no other archaeological remains were encountered (Esh and Hammatt 2004).

3.2.23 Havel and Spear 2004

Between October 2003 and April 2004, SCS conducted archaeological monitoring for the ABC Store No. 21 Kane Kapolei Construction Project in Waikīkī (TMK [1] 2-6-21:101). No cultural deposits were observed during the monitoring (Havel and Spear 2004).

3.2.24 Bush and Hammatt 2005

On February 11, 2005, CSH performed archaeological monitoring at 125 Uluniu Avenue between Prince Edward Street and Koa Avenue (TMK [1] 2-6-23:019). Archaeological monitoring was completed in a single day and encountered no historic properties (Bush and Hammatt 2005).

3.2.25 O'Leary et al. 2005

In 2005, CSH conducted an AIS of a 1-acre parcel at 2284 Kalākaua Avenue, the site of the former Waikīkī 3 Theater (TMK [1] 2-6-22:009). An in situ, flexed burial (SIHP # 50-80-14-6703) was encountered during subsurface testing in the southeastern corner of the project close to Kalākaua Avenue and Dukes Lane. The burial was found at approximately 150 cmbs within organically stained (very dark grey to black) wetland agricultural soils present throughout the project area (O'Leary et al. 2005).

3.2.26 Esh and Hammatt 2006

In 2006, CSH conducted archaeological monitoring on Kūhiō Avenue. No cultural material or human remains were encountered during monitoring, although an in situ dog burial was uncovered in the natural sand layer at the Kanekapolei Street and Kūhiō Avenue intersection. No cultural material was associated with the dog remains (Esh and Hammatt 2006).

3.2.27 Groza et al. 2007

In 2007, CSH conducted a literature review and field inspection for the Waikīkī Marriot Project (TMK [1] 2-6-26:009). The project area was a 1-acre parcel between Kalākaua Avenue and Kuhio Avenue, and ‘Ōhua Avenue. No historic properties were documented within the project area (Groza et al. 2007).

3.2.28 Hammatt and Shideler 2007

In 2007, CSH conducted archaeological monitoring for the installation of a grease interceptor at the Sheraton Moana Surfrider Hotel. A disturbed sand layer containing historic material was documented nearly to the water table. Below the disturbed sand was natural, undisturbed Jaucas sand. No historic properties were identified (Hammatt and Shideler 2007).

3.2.29 Pammer and Hammatt 2007

In 2007, CSH conducted archaeological monitoring for the installation of a grease interceptor at Perry's Smorgy Restaurant (TMK [1] 2-6-21:014). No historic properties were identified (Pammer and Hammatt 2007).

3.2.30 Tulchin and Hammatt 2007

In 2007, CSH performed data recovery for a remnant portion of an agricultural stone wall (SIHP # 50-80-14-6707) previously documented by Chiogioji et al. (2004). SIHP # -6707 was observed in the northeastern portion of the project area, and extending beyond the northwest and southeast boundaries. SIHP # -6707 is believed to be a remnant *lo‘i* wall part of the extensive Waikīkī network of irrigated taro fields. Palynological analysis of sediments from SIHP # -6707 confirmed the presence of taro suggesting lo‘i sediments. Radiocarbon dating of the upper *lo‘i* sediments provided a date range of AD 1380 to AD 1450. Lower *lo‘i* sediments at the

transitional zone to underlying sandy silt (at the very base of SIHP # -6707) radiocarbon dating returned a date range of AD 1120 to AD 1270 (Tulchin and Hammatt 2007). Tulchin and Hammatt (2007) concluded that initial settlement of Waikīkī occurred from AD 1120 to AD 1270 and that the inhabitants subsequently reshaped the landscape for agricultural purposes until around AD 1380 to AD 1450.

3.2.31 Hazlett, Chiogioji, Borthwick, and Hammatt 2008

In 2008, CSH conducted archaeological monitoring of re-development of the former Waikiki 3 Theater parcel (TMK [1] 2-6-02:009). No historic properties were identified (Hazlett, Chiogioji, Borthwick, and Hammatt 2008).

3.2.32 Hazlett, Esh and Hammatt 2008

In 2008, CSH conducted archaeological monitoring for redevelopment of the Waikiki Shopping Center. No historic properties were identified (Hazlett, Esh and Hammatt 2008).

3.2.33 Runyon et al. 2008

In 2008, CSH conducted a study relating to re-development of the Royal Hawaiian Hotel and Sheraton Waikīkī Resort. Isolated, disarticulated human skeletal elements (no site number assigned) were recovered from disturbed sand contexts. The remains were reinterred in a designated burial facility on the east side of the Sheraton Waikiki Hotel. Pre- and post-Contact artifacts were collected from a disturbed context and included worked bone and shell, a fishhook head fragment, a coral file, and various artifacts dating from the mid to late 1800s. No sites were designated and the study was termed an "Assessment" (Runyon et al. 2008).

3.2.34 Thurman and Hammatt 2008

In January 2008, CSH conducted a geotechnical testing at the Royal Hawaiian and Sheraton Waikīkī Hotels in Waikīkī (TMK: [1] 2-6-002:005, 006 and 026). The area of effect was the sum of the diameters of five geotechnical test pit borings, equaling less than 1 square foot of ground surface. No historic properties were identified during the testing (Thurman and Hammatt 2008).

3.2.35 Kahahane and Cleghorn 2009

In 2009, Pacific Legacy, Inc. conducted archaeological monitoring for the Waikīkī Water System Improvements project along Nohonani Street, Nāhua Street, Walina Street, and Lili‘uokalani Avenue. No historic properties were encountered and the only cultural material observed were glass and ceramic fragments, and a single fork (Kahahane and Cleghorn 2009).

3.2.36 Thurman et al. 2009

In 2009, CSH conducted an archaeological inventory survey for proposed redevelopment of the Diamond Head Tower of the Moana Hotel (TMK [1] 2-6-01:012). One isolated human tarsal phalange was discovered on the *makai* side of the Diamond Head Tower. The human remain was found within a disturbed sand stratum and were reburied in the same location (no SIHP assigned). Two sites were identified during the inventory survey, including a trash pit (SIHP # 50-80-14-7069) containing bottles and ceramics dating from the late 1800s to early 1900s, and an intact cultural layer (SIHP # 50-80-14-7068). SIHP # -7068 contained fire affected rock and charcoal deposits and was radiocarbon dated to AD 1801 to AD 1939. The cultural layer was documented between the hotel and the *makai* side of Kalākaua Avenue (Thurman et al. 2009).

3.2.37 Runyon, Shideler, and Hammatt 2010

Between August 2010 and December 2010, CSH conducted archaeological monitoring for the Moana Surfrider Hotel Wedding Chapel in Waikīkī (TMK [1] 2-6-001:012). No historic properties were encountered (Runyon, Shideler, and Hammatt 2010).

3.2.38 Runyon, Yucha, Shideler, and Hammatt 2010

In 2009, CSH conducted fieldwork for an archaeological inventory survey for the proposed Princess Ka‘iulani Redevelopment project in Waikīkī (TMK [1] 2-6-022:001 and 041). The inventory survey identified three historic properties, including the former Kawaiaha‘o Waikīkī Branch Church and Cemetery parcel (SIHP # 50-80-14-7065), a buried cultural layer (SIHP # 50-80-14-7066), and an in situ burial (SIHP # 50-80-14-7067) (Runyon, Yucha, Shideler, and Hammatt 2010).

3.2.39 Hammatt et al. 2012

In 2012, CSH conducted an inventory survey for the International Market Place Redevelopment Project (Hammatt et al. 2012). The survey identified three historic properties, including a subsurface cultural layer (SIHP # 50-80-14-7307), burials with an associated activity area (SIHP # 50-80-14-7308), and remnants of hotel infrastructure along with a bottle cache and trash deposit (SIHP # 50-80-14-7309). The subsurface cultural layer contained ten features (SIHP # -7307 Features A–J) and was dated to circa AD 1400. SIHP # -7308 consists of four burials (Features A–D) and an activity area for artifact manufacturing (Feature E). The burials consist of a previously disturbed in situ burial, a partially disturbed in situ burial, and two previously disturbed secondary burials possibly from one individual. SIHP # -7309 consists of historic deposits and remnant infrastructure related to the historic Moana Hotel. SIHP # -7309 included part of a horseshoe driveway (Feature A), bottle cache (Feature B), and trash pit (Feature C).

3.2.40 Yucha et al. 2013

Between 2010 and 2011 CSH conducted an inventory survey for the St. Augustine-by-the-Sea Church Master Plan project. The survey identified two historic properties which included a subsurface cultural layer (SIHP # 50-80-14-7135) and a human interment complex (SIHP # 50-80-14-7136). SIHP # -7135 represents a cultural activity layer that includes SIHP # -7136 Features A and B, and disarticulated human remains. SIHP # -7136 includes two in situ, post-Contact burials (Features A and B). The disarticulated human remains from SIHP # -7135 were recovered and temporarily curated at the St. Augustine-by-the-Sea Church, and the in situ burials were left in place (Yucha et al. 2013).

3.3 Background Summary and Predictive Model

Historical background research included study of archival sources, LCAs and historic maps, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-Contact and historic coastal land use patterns in the coastal area of Waikīkī.

The *ahupua‘a* of Waikīkī in the centuries before the arrival of Europeans was an intensely used locale with abundant natural and cultivated resources - including an expansive system of

irrigated taro fields - supporting a large population that included the highest-ranking *ali‘i*. In the nineteenth century, after a period of depopulation, the coastal and lowland areas of Waikīkī were reanimated by the Hawaiian *ali‘i,* the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro to rice. This farming continued into the first decades of the twentieth century until the Waikīkī reclamation project and the newly-constructed Ala Wai Canal drained the remaining ponds and irrigated fields.

The current project area is located in center of the modern Waikīkī downtown district. During the traditional Hawaiian period, this area contained a complex of *lo‘i* (taro) and banana agricultural fields. Land Commission Award documents from the mid-nineteenth century record continuing Native Hawaiian habitation, and taro cultivation in parcels adjacent to the present project area. Late nineteenth and early twentieth century historic maps and photographs indicate that the area remained predominantly agricultural with large agricultural fields *mauka* of the project area. To the west of the project area, the *‘ili* of Kaluaokau was the home of the high *ali‘i* and members of the Hawaiian monarchy. To the northeast of the project area was the former Cleghorn estate (‘Āinahau), home to Princess Ka‘iulani. The dredging of the Ala Wai Canal lead to the in-filling of the area’s banana and taro patches and the late 1920s through 1950s saw rapid development of Waikīkī into an urban setting. The King’s Village Shops was constructed in 1972 in the current project area.

3.3.1 Human Burials

Previous and on-going archaeological reports have documented human burials of pre- and post-Contact age throughout the Waikīkī area. Numerous burials are present in the area surrounding the current project area, particularly further makai. Within Waikīkī, in situ burials and burial clusters are primarily found in the sandy deposits just above the water table and beneath historic fill layers. It is more likely that, in situ burials will be encountered if undisturbed, Jaucas sand deposits are present. Previously disturbed burials may be encountered in sand deposits that have been impacted by ground disturbance (i.e. construction activities, utility installations, etc.). Additionally, scattered and fragmented remains have been documented within overlying fill layers, indicating that the absence of natural sand deposits does not preclude the possibility of encountering human remains.

Several burials have been encountered in close proximity to the current project area. At least 13 burials were documented within a 100 m radius of the project area. Two individuals were recovered by contractors in 1964 (ID No. OA0462 and OA0463). Mann and Hammatt (2002) encountered five burials (SIHP # 50-80-14-6369) during monitoring. Bush et al. (2002) encountered four burials during monitoring with one (SIHP # -5856 Feature C) being near the project area. Runyon et al. (2010) documented an in situ burial (SIHP # -7067) during an inventory survey. During monitoring along Kalākaua Avenue, Winieski et al. (2002) documented a total of 44 human burials of which at least three are near the project area (SIHP #s -5856, -5857).

Results of previous archaeological studies conducted in the vicinity of the current project area indicate that human burials are present in the surrounding areas. Although the studies focused primarily on the neighboring streets and parcels, human burials have been documented within 50 m of the King’s Village Shops area. The soil designation within the project area is considered to

be Jaucas sand deposits (see Figure 5). Undisturbed sand deposits generally have a higher likelihood of containing human burials.

3.3.2 Non-burial Subsurface Cultural Deposits

Archaeological studies within Waikīkī and the vicinity of the study area have recorded the presence of subsurface cultural deposits. Studies have documented both pre-Contact and post-Contact deposits, including buried, culturally-enriched sand A-horizons, agricultural sediments, trash deposits, and structural remnants. In some areas these deposits have remained intact and undisturbed, while others are disturbed or are present as discontinuous remnants.

The current project area is situated within the former low-lying lands just east of ‘Āpuakēhau Stream. The surrounding landscape was dominated by agricultural fields and marshy terrain. LCA records indicate many plots contained *lo‘i* patches, *loko*, and other agricultural features. Traditional Hawaiian habitation of these areas continued until the late nineteenth century. Following the construction of the Ala Wai Canal in the early twentieth century, the subsequent filling of Waikīkī’s marshes and fishponds lead to the beginning of the area’s urbanization.

Previous studies have documented cultural deposits around the project area. Bush et al. (2002) and Mann and Hammatt (2002) encountered historic trash pits (no SIHP and SIHP #s 50-80-14-6372). Winieski et al. (2002) documented a pre- to post-Contact fire pit (SIHP # 50-80-14-5940 Feature C) and a pre-Contact cultural layer (SIHP # 50-80-14-5940) along Kalākaua Avenue near the project area.

Results of previous studies suggest that non-burial subsurface cultural deposits may be present within the project area. The area’s previous landscape indicates that features related to ponds (e.g. pond banks and berms), and agricultural features (e.g. *lo‘i* and *‘auwai*) may be present. Culturally-enriched buried A-horizons containing pre-Contact and traditional Hawaiian features may also be encountered. Cultural layers containing post-Contact and historic features may also be expected, and may include trash pits, bottle caches, and previous building foundations.

Section 4 Results of Fieldwork

4.1 Pedestrian Inspection

A 100% pedestrian inspection of the project area was performed prior to any subsurface excavations and no surface historic properties were identified. The fieldwork effort focused on subsurface excavations to investigate the presence of any subsurface cultural deposits within the project area.

4.2 Test Excavations

Sixteen trenches were distributed throughout the project area to document potential subsurface cultural deposits and stratigraphy (Figure 33 and Figure 34). A stratigraphic profile was drawn for each backhoe trench. In general, the observed and documented stratigraphy consisted of various fill deposits overlying and truncating the natural sediment. These observations agree with the USDA soil data for the project area and its vicinity (Foote et al. 1972). All excavations were backfilled after the completion of stratigraphic documentation.

4.3 Stratigraphic Summary

The stratigraphy patterns observed during subsurface testing indicate that the project area was subjected intensive land reclamation during the twentieth century. Two historic properties were identified within the project area. SIHP # -7598 was a disturbed culturally enriched A-horizon with 12 associated features (Figure 34). SIHP # -7599 was a single human vertebra in fill. Within the project area, the stratigraphy consisted of either concrete or ceramic tile surface overlying multiple imported fill deposits which were overlying naturally-deposited Jaucas sand atop marine deposited sand.

Although the area has been altered by construction, the primary natural soil deposit within the project area is Jaucas sand (JaC), (see Figure 5). The Jaucas series consists of deep, well-drained calcareous soils developing in wind and water deposited sand formed from coral and seashells (Foote et al. 1972). The Jaucas sand deposits observed within the project area exhibited the gradation of material and color consistent with C-horizon layers within the Jaucas series. As the scope of work for this AIS does not include soil formation analysis, the micro-banding within this layer was not recorded. Throughout the project area, Jaucas sand was observed overlying marine-deposited coarse sand which was light gray to greenish gray in color and contained a large amount of shell and fish bone. These deposits received a separate stratum designation (III or IV) from the overlying Jaucas sand (II or III).

The dark brown natural A-horizon developing atop the Jaucas sand deposits is the result of the accumulation of organic matter and alluvium. The A-horizon is considered to be component of the Jaucas series. Throughout this report, however, the observed A-horizon deposits are designated as separate strata (II) from the Jaucas sand (III) because their formation process and integrity were impacted by cultural activity.

Fill deposits truncated the remnants of a culturally enriched A-horizon (SIHP # -7598) in Trenches 11, 12, 13, 14, and 15. The cultural layer contained charcoal, fire-altered rock, butchered faunal material, and a small amount of marine midden and a total of 12 pits of

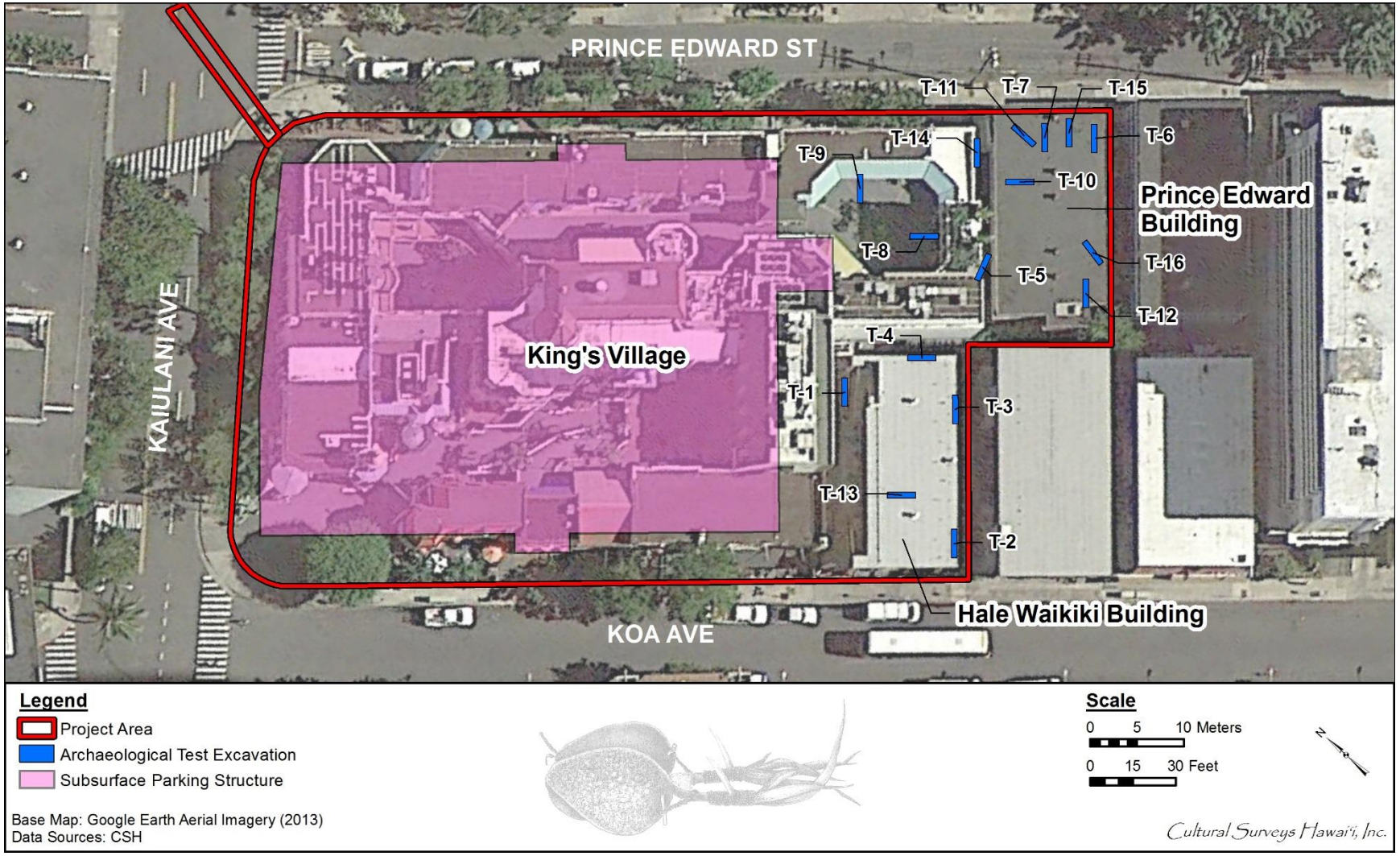

Figure 33. Google Earth imagery showing the location of the Kings Village Shopping Center, the Prince Edward Building, the Hale Waikiki Building, and the AIS test trenches (Base Map: Google Earth Imagery)

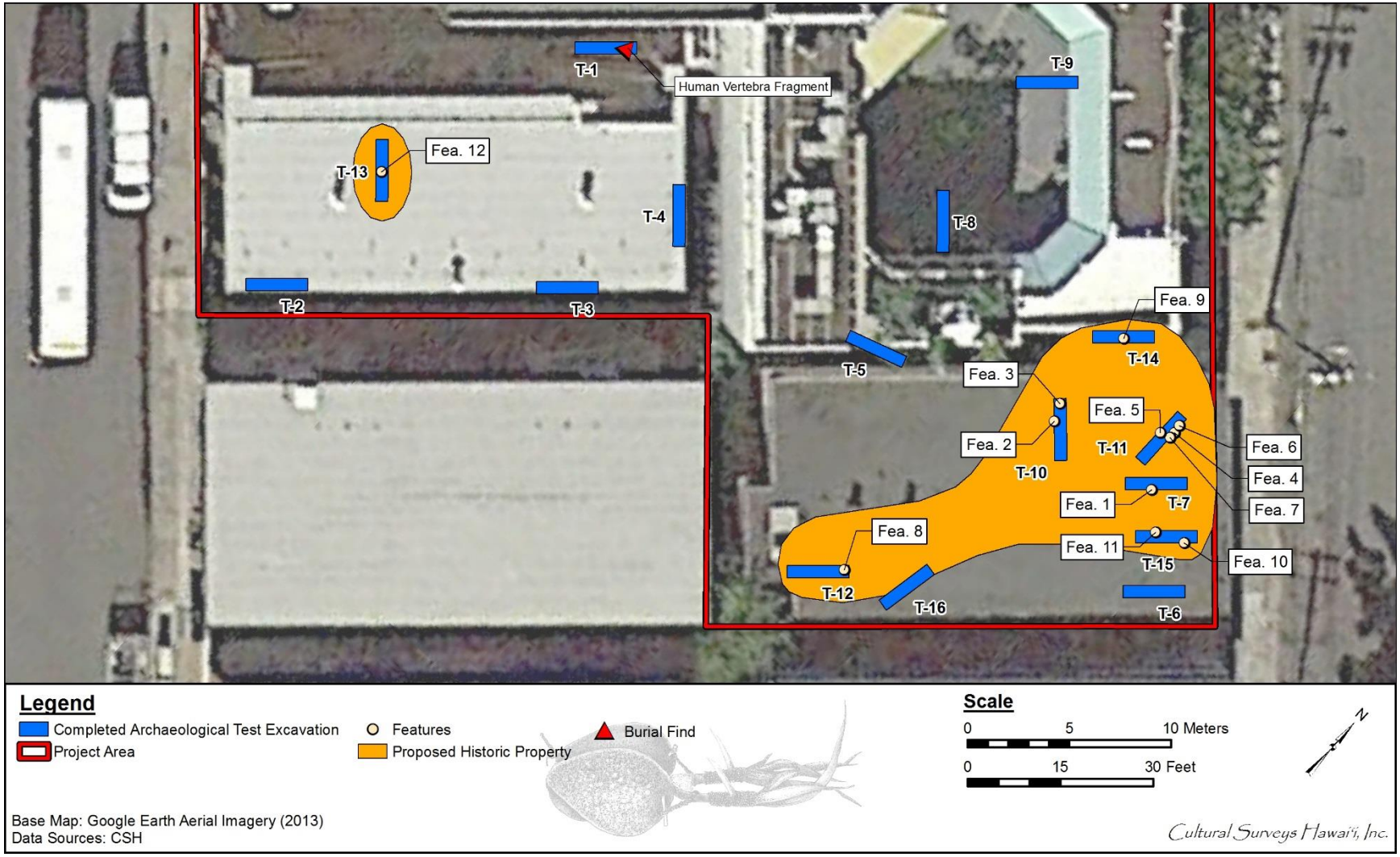

Figure 34. Google Earth imagery showing the location of the AIS test trenches, the human vertebra burial (SIHP # - 7599), and the culturally enriched A-horizon deposits and associated features (SIHP # -7598) (Base Map: Google Earth Imagery)

indeterminate function (SIHP # -7598 Features 1-12). Most of the cultural deposits were concentrated in the southeast corner of the project area. Trench 13 was the only trench with a remnant culturally enriched A-horizon in the western section. Trenches 13 and 15 contained thicker, more intact deposits. The cultural layers in Trenches 11, 12 and 14 were heavily impacted by construction and grading events, and only a few centimeters remained. Material from the former culturally enriched A-horizon was redeposited as part of a fill event in Trenches 7, 10, 12, and 13. These fill deposits clearly truncated features in Trenches 7, 10, and 12 (SIHP # -7598 Features 1, 2, 3, and 8).

Fill deposits either truncated or overlaid natural Jaucas sand deposits in Trenches 1. 3, 5, 7, 9, 10 and 16. The boundary between these layers was generally linear and clear to abrupt, indicative of grading. Trenches 4, 6, and 8 had a deep layer of sand fill/disturbed sand overlying marine sand deposits. The disturbed sand deposits could be identified by the presence of small crushed coral fragments, metal fragments, and plant matter that had not significantly decomposed. The presence of the deeper deposits of sand fill/disturbed sand in Trenches 4 and 8 might be explained by the former presence of a depression in the middle of the project area that was filled when the area was leveled. Trenches 2, 3, 6, 7, 8, 10, 11, 12, 14, 15, and 16 had been heavily disturbed during prior construction events, including foundation excavations and utility installation. These subsurface disturbance events are likely related to the development of King’s Village Shopping Center and the adjacent apartment buildings during the mid to late-twentieth century.

A human vertebra fragment (SIHP # -7599) was identified in a fill deposit (Stratum Ib) within Trench 1. The vertebra fragment was not in original context, and was not part of an intact burial. It could not be convincingly attributed to SIHP # - 7598, the culturally enriched A-horizon encountered in the southeast corner of the project area. The age, cultural affiliation, and date of redeposition of the vertebra could not be determined. It was reinterred in Trench 1.Trench 2 contained fill mixed with burnt trash (Stratum Ic). Although the associated artifacts could not be tightly dated, the burnt trash layer in Trench 2 likely represents material from the early part of the twentieth century, which corresponds to the period of open air trash burning in Honolulu.

4.3.1 Trench 1 (SIHP # -7599)

Length:	3.0 m
Width:	0.60 m
Maximum Depth:	1.65 m
Orientation:	46°/226° TN

Trench 1 was positioned along the northwest side of the Hale Waikiki building, adjacent to the rear stairway, in the southeastern portion of the project area (Figure 35). The stratigraphy of Trench 1 consisted of ceramic tiles and concrete (Stratum Ia), overlying imported fill material (Stratum Ib), overlying natural Jaucas sand deposits (Stratum II) (Figure 36, Figure 37, and Table 4).

Stratum Ib (20-83 cmbs) consisted of imported sandy clay loam fill containing cultural material, including bottle glass, a turquoise glass bead, nails, wire, plastic, ceramic fragments, bricks, concrete fragments, cut faunal bone, as well as a few basalt cobbles, and waterworn pebbles (Acc. #s 1–13 and 81; Table 5). The presence of the plastic hanger (Acc. #s 5) and plastic tube (Acc. # 6) indicate a post 1940s deposition date. The faunal material recovered from Stratum Ib included juvenile *Canis lupus familiaris* (1 burned distal femur epiphysis, 2 rib fragments, 1 long bone fragments with postmortem fractures, and vertebrae fragments with epiphyses that mend; a *Gallus gallus* long bone fragment (0.5 g); and *Sus scrofa* (1 g) and *Bos taurus* long bone fragments cut with a metal blade consistent with blades used in commercial butcher shop.

During hand excavation of the Jaucas sand (Stratum II), a vertebra fragment identified as probable-human was dislodged from within the overlying fill (Stratum Ib). Following the discovery, all adjacent fill material and Jaucas sand were screened through a 1/8-inch screen. No additional human or probable-human remains were identified. The vertebra fragment was reinterred (30-60 cmbs) in the northeast end of Trench 1 prior to closing the trench (Figure 38). Trench 1 was reopened Thursday 27 March 2014. Dr. Michael Pietrusewsky confirmed that the bone was an adult human vertebral fragment preserving an articulating facet and adjoining transverse process, and was most likely from the cervical (neck) region. The fragment was then reinterred in the same place, 30-60 cmbs in the northeast end of Trench 1. The inadvertent burial find was designated as SIHP # 50-80-14-7599.

After consultation with SHPD and onsite cultural monitors, hand excavation proceeded until the sidewalls began slumping; undermining the concrete slab and began compromising the safety of the crew. Shoring could not be installed due to the unstable sidewalls having already undercut the concrete slab. Excavation then continued with the backhoe to 165 cmbs. Excavation was terminated due to sediment instability before the water table was encountered.

Figure 35. Trench 1 general overview, view to the west

Figure 36. Trench 1 northwest sidewall, view to the north

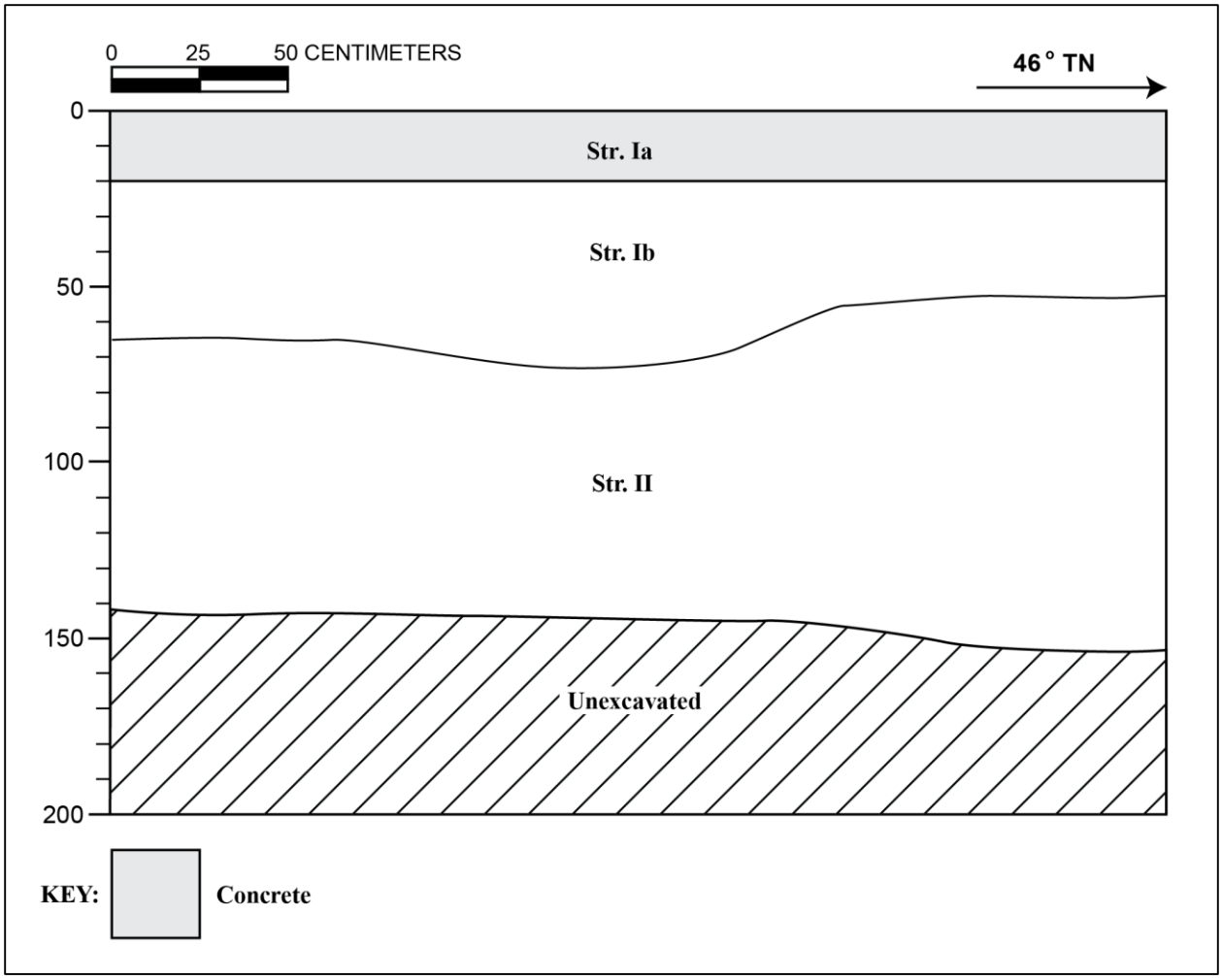

Figure 37. Trench 1 profile of northwest sidewall

Table 4. Trench 1 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-20	Concrete and ceramic tiles
Ib	20-83	Fill; 10YR 3/2, very dark grayish brown; mottles 10YR 7/4; sandy clay loam; weak, fine, granular structure; moist, loose consistency; slightly plastic; mixed origin; clear, smooth lower boundary; no roots observed; contained brick, plastic, nails, two waterworn pebbles, cut faunal bone, and a human vertebra fragment (SIHP # -7599); imported fill
II	63-165	Natural; 10YR 8/2, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; Jaucas sand

Table 5. Artifacts collected from Trench 1

Acc. No.	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
1	Ib	20-83	1	Fired Clay	Red brick, 3 ¾ in wide x 2 ¼ inch thick; post 1918 (Meide 1994:25)
2	Ib	20-83	1	Terracotta	Terracotta roofing tile
3	Ib	20-83	1	Ceramic	Japanese blue-patterned tea cup, rim to body fragment
4	Ib	20-83	1	Concrete	Concrete fragment
5	Ib	20-83	1	Plastic	Pink children’s clothing hanger hook (polyethylene plastic mass production post 1940; Spude 2007)
6	Ib	20-83	1	Plastic	Plastic lotion squeeze tube (polyethylene plastic mass production post 1940)
7	Ib	20-83	1	Glass	Aqua blue glass bottle rim fragment, double ring finish
8	Ib	20-83	1	Refined Earthenware	Refined earthenware fragment with brown glaze
9	Ib	20-83	1	Vesicular Basalt	Water worn basalt cobble
10	Ib	20-83	1	Iron	Iron nail
11	Ib	20-83	1	Glass	Broken black glass rim fragment with flared ring finish
12	Ib	20-83	1	Refined Earthenware	White refined earthenware tile fragment
13	Ib	20-83	1	Plastic	Piece of “Fritos Corn Chips” plastic wrapper (Fritos invented in 1932 by C. E. Doolin; merged with H.W. Lay & Co. in 1961; FritoLay 2014)
81	Ib	20-83	1	Glass	Turquoise glass bead

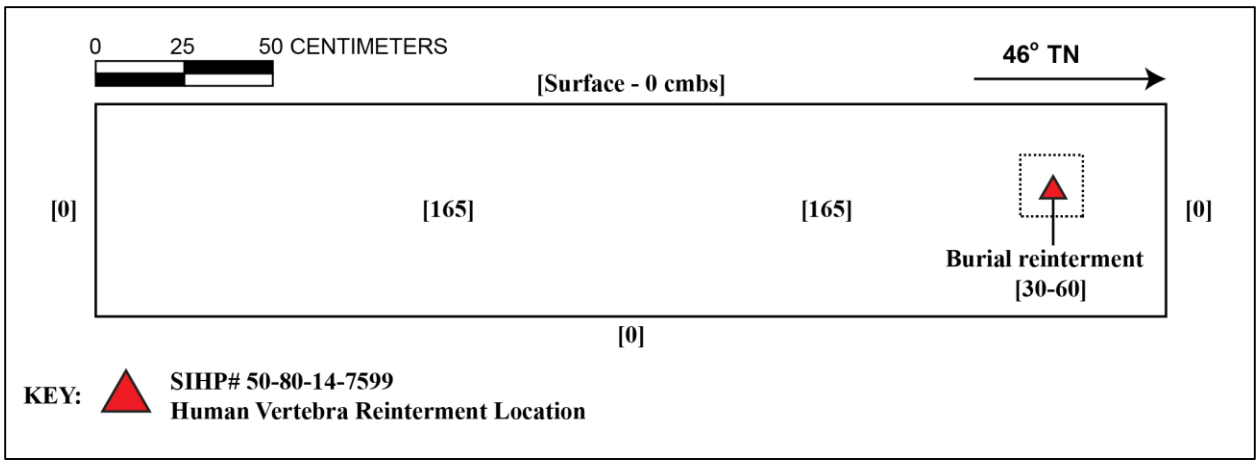

Figure 38. Trench 1, showing the reinterment location of the human vertebra, SIHP # -7599

4.3.2 Trench 2

Length:	3.0 m
Width:	0.50 m
Maximum Depth:	1.75 m
Orientation:	63°/243° TN

Trench 2 was positioned along the south-east side of the Hale Waikiki building, adjacent to the sidewalk, in the western portion of the project area (Figure 39). The stratigraphy of Trench 2 consisted of concrete tiles (Stratum Ia) overlying imported fill (Stratum Ib), overlying a fill layer containing burnt trash (Stratum Ic), overlying disturbed sand (Id), overlying natural Jaucas sand (Stratum II) and marine sand (Stratum III) (Figure 40, Figure 41, and Table 6).

Trench 2 was heavily disturbed by construction activity. Two metal utility pipes were encountered in Stratum Ib directly below the concrete tiles. The utilities were left in place and the excavation shifted to the east (Figure 42).

Stratum Ic (27-85 cmbs) consisted of sandy loam fill containing burnt trash that had been repurposed as fill. Recovered artifacts (Acc. #s 14–22 and 28; Table 7) included nails, broken glass, slag, porcelain, terracotta, fire-affected rock (461.1 g), and bone. No narrowly dateable artifacts were recovered. The presence of clear broken glass (Acc. #s 14, 15, and 17) generally produced sometime after the last decades of nineteenth century and a clear glass machine-blown bottle fragment (Acc. # 22) produced after 1903 suggest an initial discard period dating later after the turn of the twentieth century. However, the underlying strata of disturbed sand (Stratum Id) contained a clear glass window fragment (Acc. # 23) produced after 1915, which suggests an initial discard period dating later than the second decade of the twentieth century. Faunal remains consisted of calcined and butchered *Bos taurus* fragments (109.2 g), including long bone fragments cut with a metal blade consistent with blades used in commercial butcher shop. Some fractures in the bones were caused by a hand-held metal implement/blade (kerf was present on multiple shaft fragments) indicative of traditional Hawaiian techniques. Cranial fragments also sustained fracturing caused by fire. The appearance of the assemblage of burnt artifacts was consistent with prolonged, open air burning. Although they could not be tightly dated, the burnt rubbish in Stratum Ic likely represents material from the early part of the twentieth century, which corresponds to the period of open air trash burning in Honolulu.

Stratum Id (56-87 cmbs) consisted of sand disturbed by construction events. The upper boundary was truncated by Stratum Ic. The sand layer (Stratum Id) contained historic debris, including glass and ceramic artifacts (Acc. #s 23–25; Table 7) as well as faunal bones. The faunal remains collected from Stratum Id consisted of a *Bos taurus* rib fragment (58.8 g), a *Sus scrofa* proximal metacarpus fragment (7.6 g), and unidentified medium mammal (non-human) irregular bone fragments (0.7 g). A clear glass window fragment (Acc. # 23) produced after 1915 (based on thickness) suggests that the sand layer was disturbed sometime later than the second decade of the twentieth century. Stratum Id was probably disturbed by the fill event associated with Stratum Ic. It is possible that the bone and historic artifacts were integrated during this event.

Stratum II was Jaucas sand. Rusted metal fragments were collected from Stratum II (Acc. # 29; see Table 7). Hand excavation proceeded until the sidewalls became too unstable. Some of the slumped sidewall material was screened (mix of Ic, Id and II) and yielded oxidized nails and glass fragments (Acc. #s 26–27; see Table 7). Shoring could not be installed due to the presence of angled utilities in the sidewall. The backhoe excavation continued through greenish-gray marine sand deposits down to the water table at 170 cm.

Figure 39. Trench 2 general overview, view to the northeast

Table 6. Trench 2 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-5	Concrete tiles
Ib	5-47	Fill; 10YR 3/2, very dark grayish brown; mottles 10YR 5/3, many, fine; loamy medium sand; weak, fine, granular structure; moist, loose consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; no roots observed; contained metal fragments; imported fill
Ic	27-85	Fill; 10YR 2/1, black; loamy sand, mottles 10YR 3/2; weak, fine, granular structure; moist, loose consistency; slightly plastic; mixed origin; abrupt, wavy lower boundary; no roots observed; contained nails, broken glass, faunal bone, FCR, and slag; burned trash layer
Id	56-87	Fill; 10YR 5/4, yellowish brown; loamy sand; weak, fine, granular structure; moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; contained cut faunal bone; disturbed sand
II	85-123	Natural; 10YR 7/4, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; clear, smooth lower boundary; no roots observed; Jaucas sand
III	123-175	Natural; 10Y 6/1, greenish gray; medium sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; marine sand

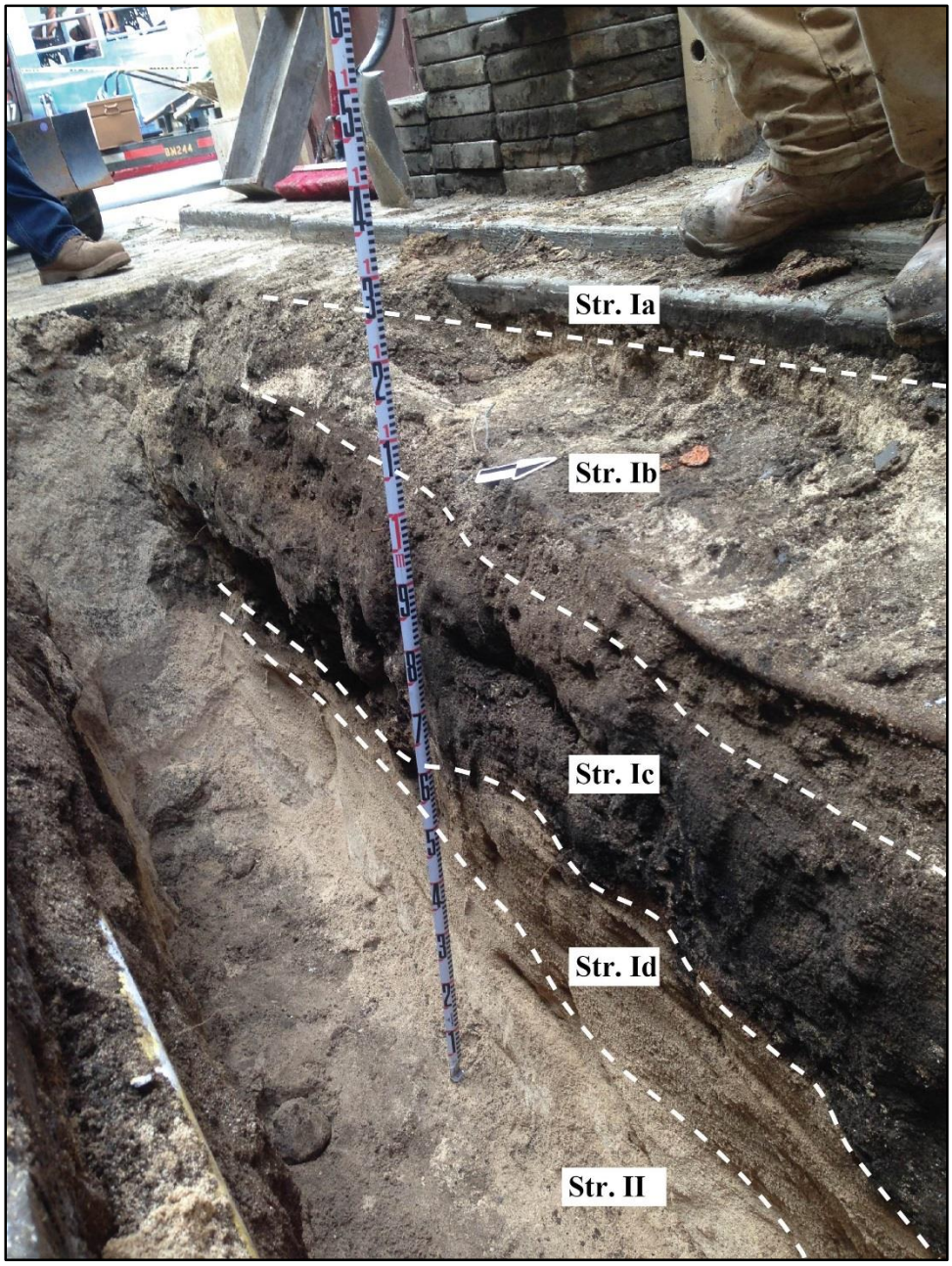

Figure 40. Trench 2 northwest sidewall, view to the north

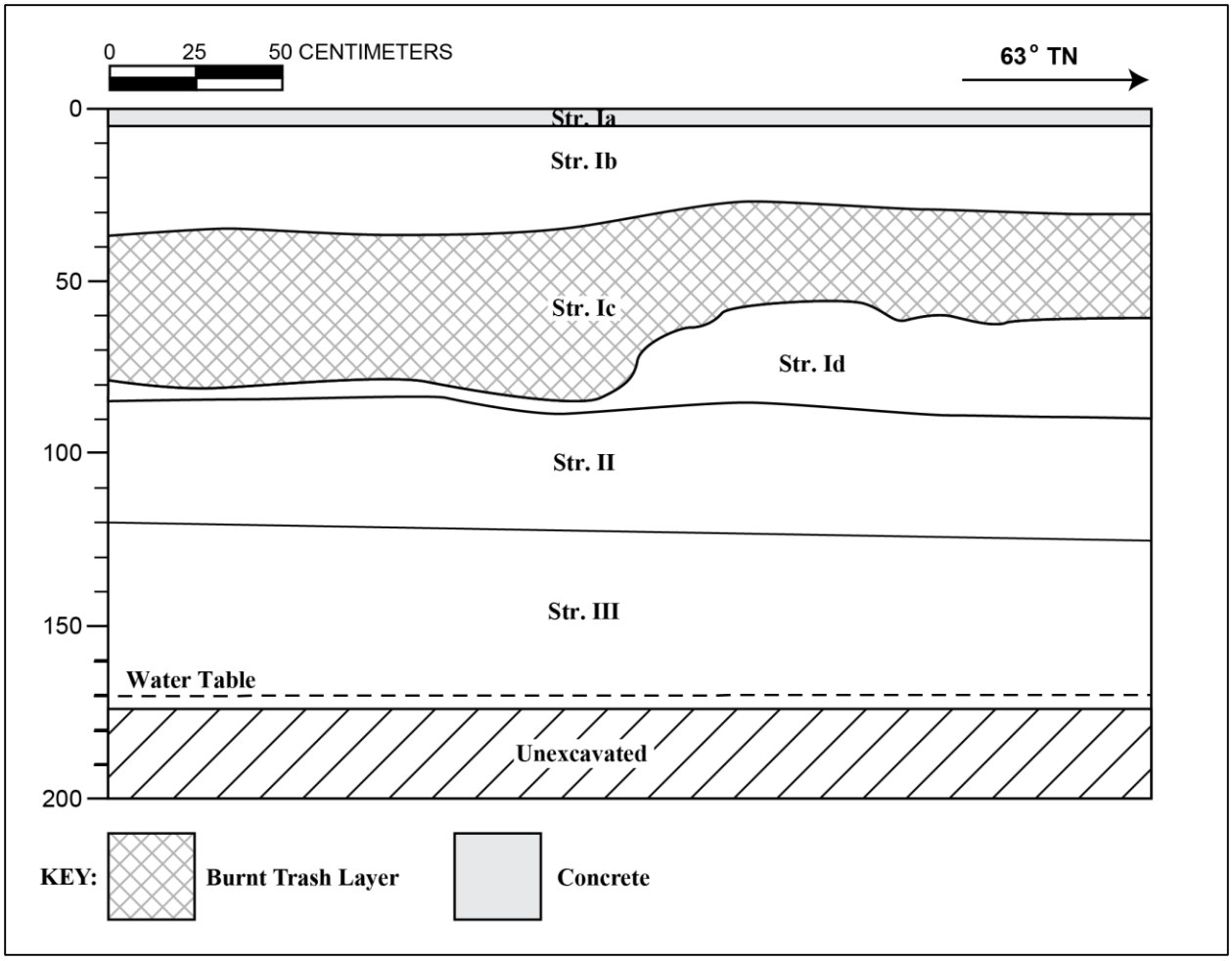

Figure 41. Trench 2 profile of northwest sidewall

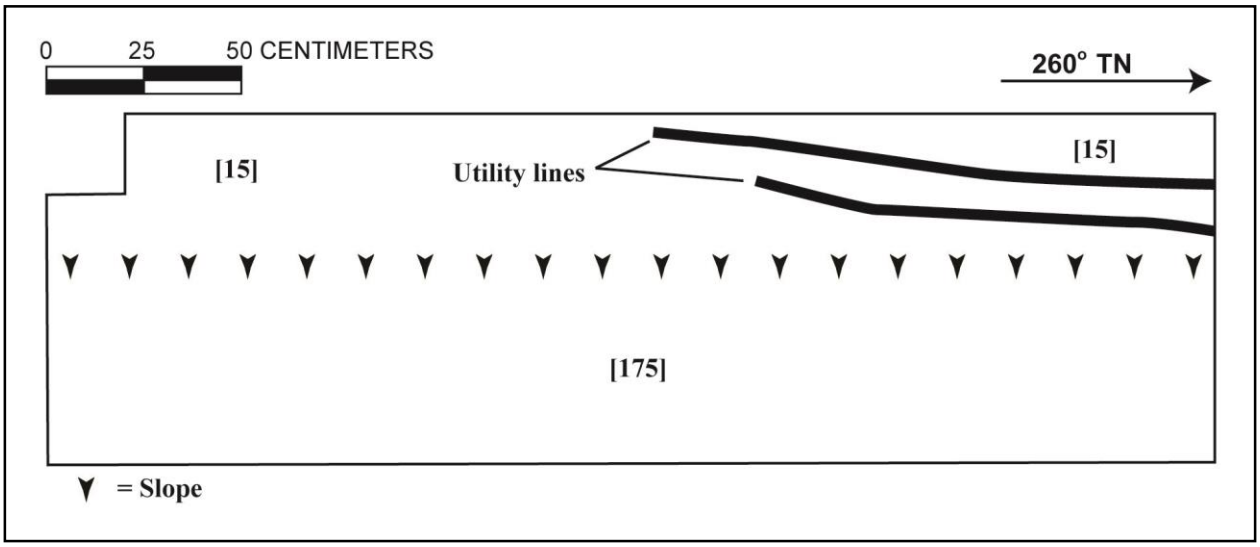

Figure 42. Trench 2 plan view map

Table 7. Artifacts collected from Trench 2

Acc. No.	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
14	Ic	27-85	1	Glass	Base of broken clear glass bottle; two-piece cup-mold (post 1870 for clear glass)
15	Ic	27-85	1	Glass	Broken clear glass bottle, from lip to Body; two-piece cup mold; tooled prescription finish; medicine/perfume bottle (post 1880s-1920s for tooled finish)
16	Ic	27-85	1	Iron	Iron wire nail (post-1894; Hurst and Allen 1992 in Lebo 1997:112)
17	Ic	27-85	1	Glass	Clear bottle glass body fragment (colorless glass; post 1870; BLM/SHA 2014)
18	Ic	27-85	1	Glass	Aqua bottle glass body fragment
19	Ic	27-85	1	Terracotta	Water worn/smoothed terracotta fragment
20	Ic	27-85	1	Iron	Iron wire nail (post-1894)
21	Ic	27-85	1	Metal	Metal Tube
22	Ic	27-85	1	Glass	Clear glass bottle fragment, shoulder to body; machine-blown, (ABM) crown finish; post-1903
23	Id	56-87	1	Glass	Clear window glass fragment, 0.3 cm thick (post-1915 based on glass thickness; Weiland 2009:35)
24	Id	56-87	1	Porcelain	Porcelain plate fragment; white; no decoration
25	Id	56-87	1	Terracotta	Terracotta flower pot fragment
26	Id-II	~70 (slump)	5	Iron	Iron wire nail (post-1894)
27	Id-II	~70 (slump)	1	Glass	Clear bottle glass body fragment
28	Ic	27-85	3	Basalt	Fire-affected rock; 461.1 g
29	II	85-123		Metal	Rusted metal fragments; 28.3 g

4.3.3 Trench 3

Length:	3.05 m
Width:	0.60 m
Maximum Depth:	1.00 m
Orientation:	61°/241° TN

Trench 3 was positioned along the south-east side of the Hale Waikiki building, adjacent to the laundry machines (Figure 43). The trench was entirely hand excavated because the excavator could not fit between the buildings. The stratigraphy of Trench 3 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), overlying Jaucas sand (Stratum II) (Figure 44, Figure 45, and Table 8).

Stratum Ib (22-90 cmbs) consisted of loamy sand fill associated with the installation of a metal utility pipe in the western sidewall. Stratum Ib contained several cut faunal bones, a nail, and fragment of porcelain (Acc. # 30) and a porcelain fragment with pink and gold trim flower overglaze design (possibly Chinese Four Flowers design, dating from the nineteenth to mid-twentieth century) (Acc. # 31; Table 8). The faunal remains consisted *Bos taurus* long bone and rib fragments (51.4 g) that had been butchered with a metal blade, and *Sus scrofa* femur, humerus, ulna, talus, and scapula (56.9 g) that also had been butchered with a metal blade. Other butchered medium mammal fragments (13.8 g) were too degraded to be speciated but were determined to be non-human.

Hand excavation of the Jaucas sand (Stratum II) proceeded until the sidewalls became too unstable. The trench sidewalls collapsed at 100 cmbs before shoring could be installed, so the water table was not reached. No cultural material was observed in Stratum II during excavation or hand screening.

Figure 43. Trench 3 general overview, view to the southeast

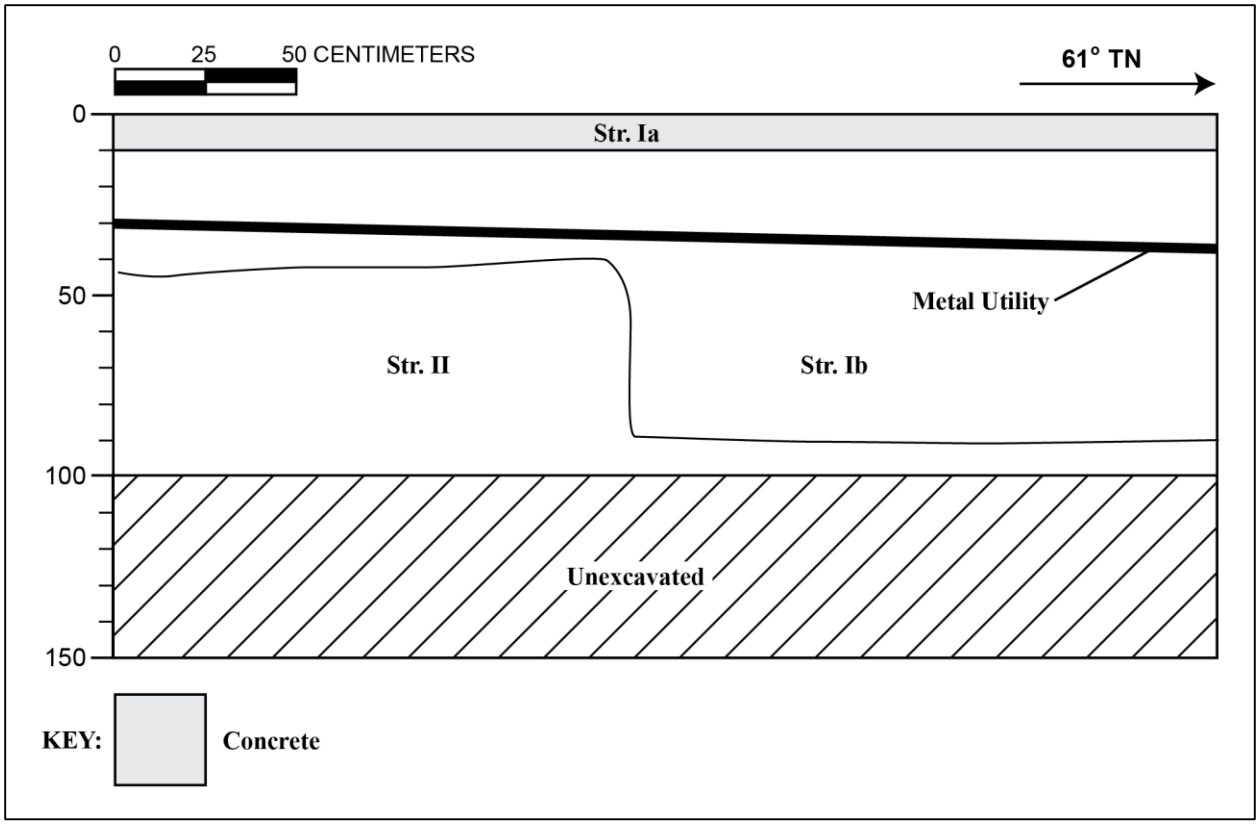

Figure 44. Trench 3 profile of western sidewall

Table 8. Trench 3 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-22	Concrete
Ib	22-90	Fill; 10YR 3/3, dark brown; loamy fine sand; weak, very fine, granular structure; moist, loose consistency; non-plastic; mixed origin; abrupt, irregular lower boundary; few, fine roots; contained cut faunal bone, one nail, and one ceramic shard; imported fill associated with utility
II	40-100	Natural; 10YR 8/3, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; Jaucas sand

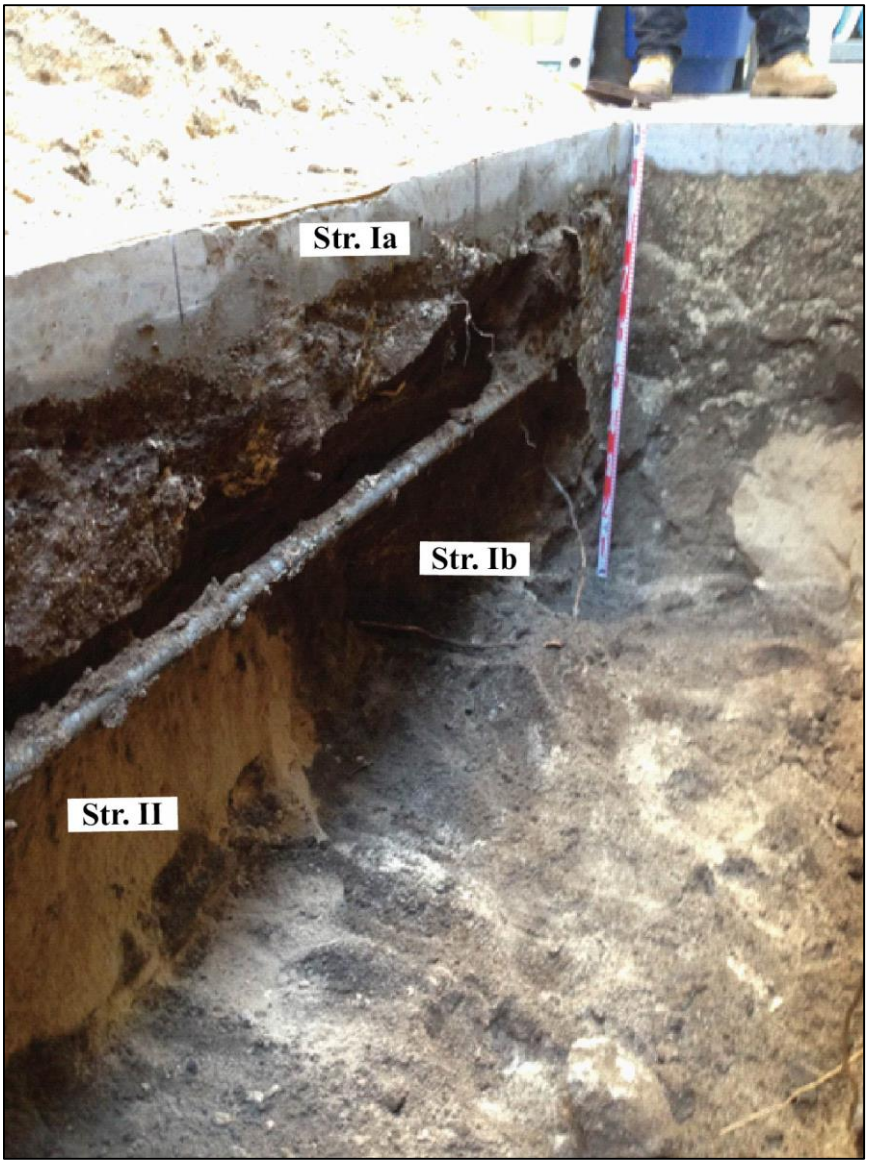

Figure 45. Trench 3 western sidewall after collapse, view to the north

4.3.4 Trench 4

Length:	3.05 m
Width:	0.60 m
Maximum Depth:	2.00 m
Orientation:	111°/291° TN

Trench 4 was positioned along the northeast side of the Hale Waikiki building just beyond the roof overhang (Figure 46). The stratigraphy of Trench 4 consisted of concrete (Stratum Ia), overlying gravel base course (Stratum Ib), overlying crushed coral fills (Stratum Ic), overlying potentially imported sand fill (Stratum Id), atop marine sand (Stratum II) (Figure 47, Table 9, and Figure 48). The water table was reached at a depth of 190 cmbs.

Stratum Id (60-155 cmbs) consisted of very pale brown gravelly medium sand. The sand layer was heavily mottled and striated, and had a loose, gravelly consistency that was different than the Jaucas sand deposits seen elsewhere. It contained small pieces of crushed coral, rusted metal fragments, and several palm fronds that had not extensively decomposed. The appearance and contents of the sand indicated that it was not naturally-deposited, and was likely a locally procured fill deposit. The fill deposit in Trench 4 was deeper than most in the project, except for Trench 8, where fill continued to 148 cmbs. Both trenches were the northeast corner of project area. These two deposits may indicate the presence of a depression or low lying area that was leveled during construction events.

Excavation of the potential sand fill (Stratum Id) continued by hand until the walls became too unstable to continue. The backhoe excavated the center of the trench down through the deposit of natural marine sand (Stratum II) to the water table, encountered at 190 cmbs. Excavation terminated at 200 cmbs.

Figure 46. Trench 4 general overview, view to the northwest

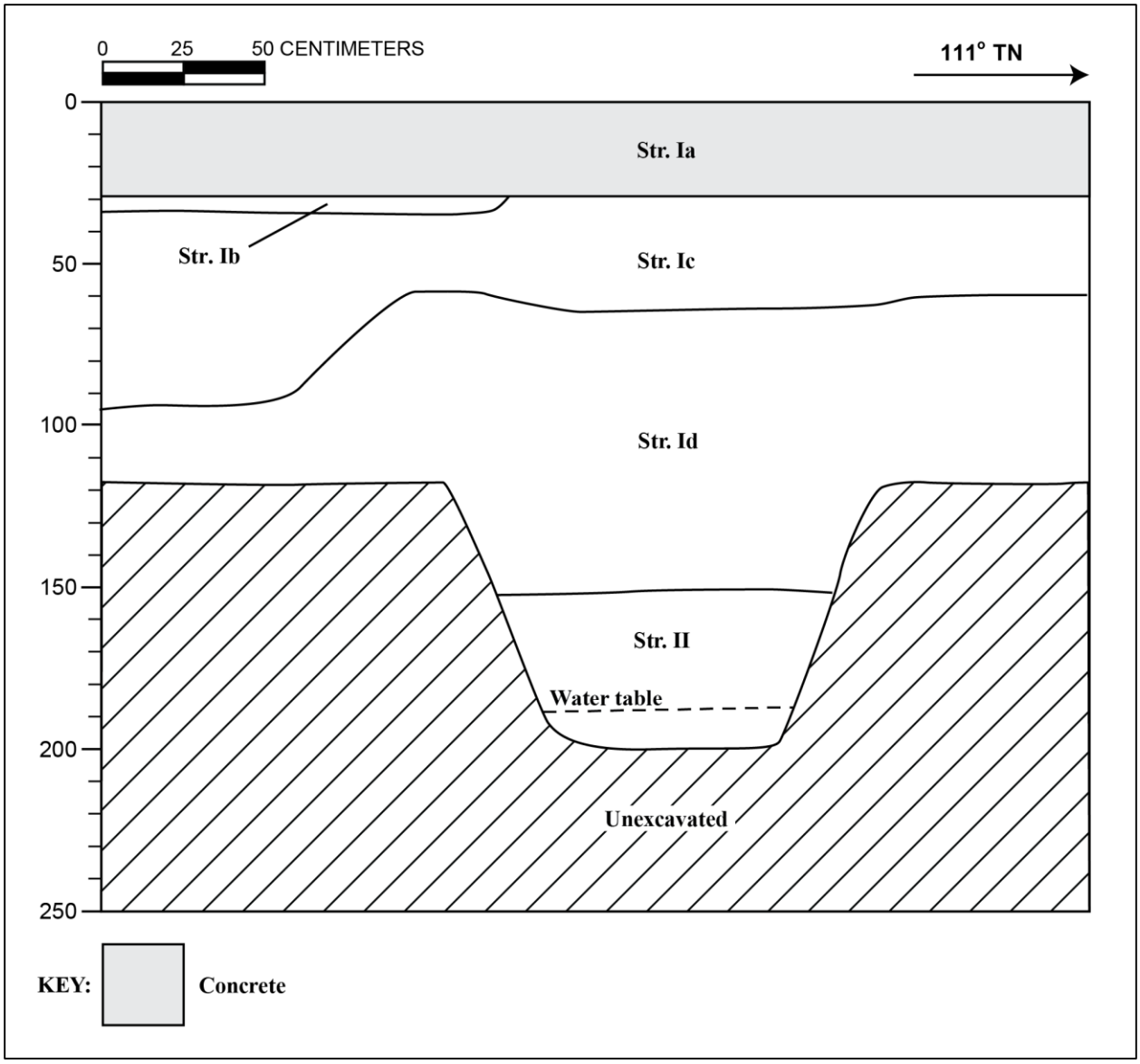

Figure 47. Trench 4 profile of northern sidewall

Table 9. Trench 4 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-30	Concrete
Ib	30-35	Fill; 10YR 3/3, dark brown; gravelly clay loam; weak, fine, crumb structure; moist, friable consistency; slightly plastic; mixed origin; abrupt, smooth lower boundary; no roots observed; imported fill base course
Ic	30-93	Fill; 10YR 3/2, very dark grayish brown; gravelly clay loam; moderate, fine, crumb structure; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, wavy lower boundary; few, fine roots; imported fill with crushed coral fragments
Id	60-155	Fill; 10YR 8/2, very pale brown; gravelly medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; clear, smooth lower boundary; no roots observed; contained rusted metal fragments; imported fill with small pieces of crushed coral
II	152-200	Natural; 10Y 6/1, greenish gray; medium sand; structureless, single-grain; wet, non-sticky consistency; marine origin; lower boundary not visible; no roots observed; marine sand

Figure 48. Trench 4 northern sidewall, view to northwest

4.3.5 Trench 5

Length:	3.04 m
Width:	0.65 m
Maximum Depth:	1.90 m
Orientation:	270°/90° TN

Trench 5 was positioned between the Prince Edward apartment building and the outer wall of the King’s Village loading dock area (Figure 49). The stratigraphy of Trench 5 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), overlying Jaucas sand (Stratum II), overlying marine sand (Stratum III), (Figure 50, Figure 51, and Table 10).

Stratum Ib consisted of imported loamy sand fill. A plastic planting pot was found in the layer. A metal utility pipe and a concrete fragment were identified at the base of Stratum Ib. It is likely that stratum Ib is associated with the installation of the concrete and utility pipe. Excavation continued by hand through the underlying Jaucas sand (Stratum II). Once the walls began to become unstable, shoring was installed and hand excavation continued down to the water table through marine sand (Stratum III). The water table was reached at a depth of 185 cmbs and excavation terminated at 190 cmbs. No cultural material was identified during the hand excavation and screening of the Jaucas sand (Stratum II).

Figure 49. Trench 5 general overview, view to the east

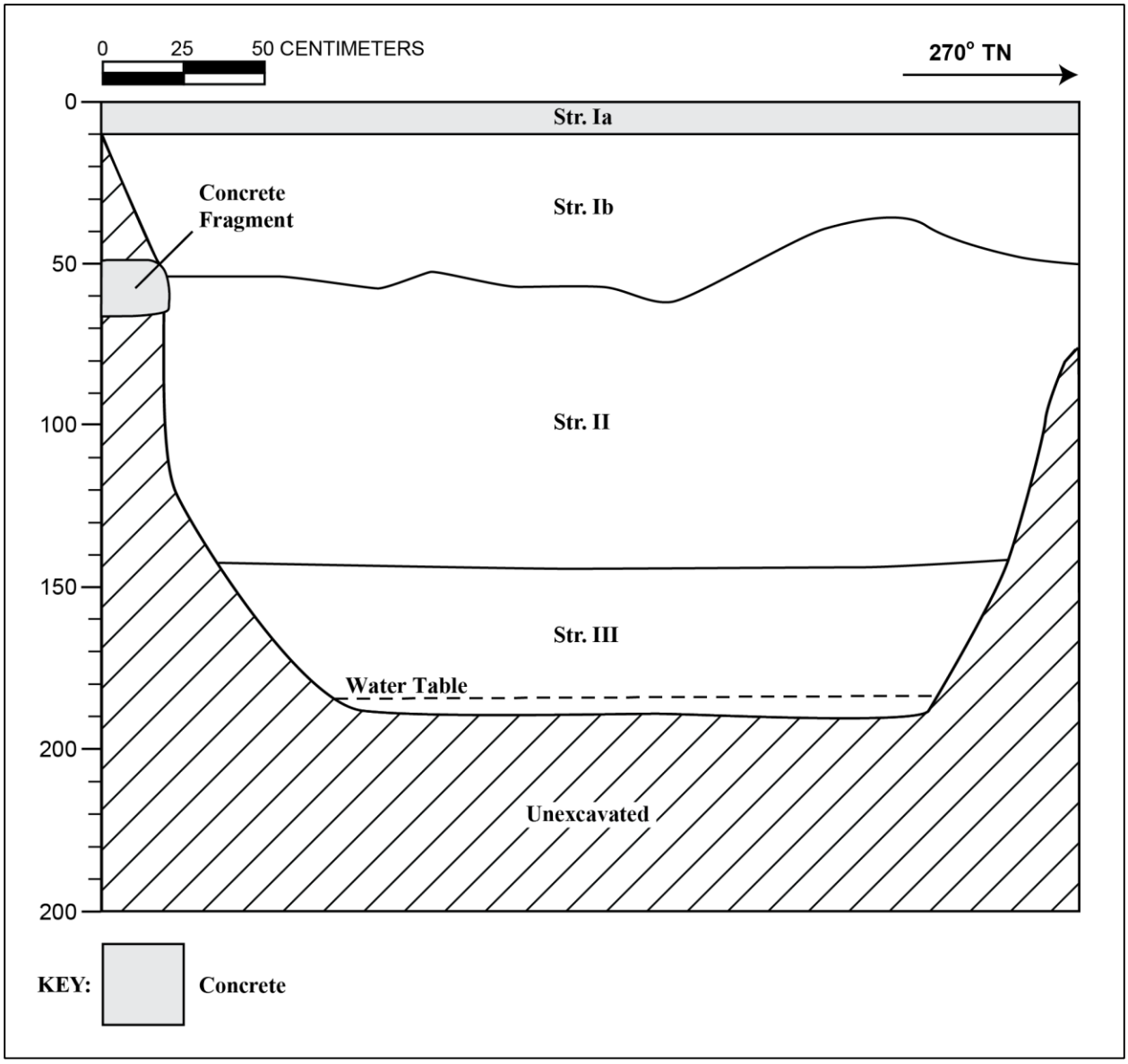

Figure 50. Trench 5 profile of eastern sidewall

Table 10. Trench 5 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Ib	10-63	Fill; 10YR 4/3, brown; mottles, 10 YR 8/3; gravelly loamy medium sand; weak, fine, granular structure; moist, loose consistency; non-plastic; mixed origin; abrupt, wavy lower boundary; common, medium roots; contained a plastic planting pot; imported fill
II	36-145	Natural; 10YR 8/3, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; clear, smooth lower boundary; no roots observed; Jaucas sand
III	145-190	Natural; 5GY 7/1, light greenish gray; coarse sand; structureless, single-grain; wet, non-sticky consistency; marine origin; lower boundary not visible; no roots observed; marine sand

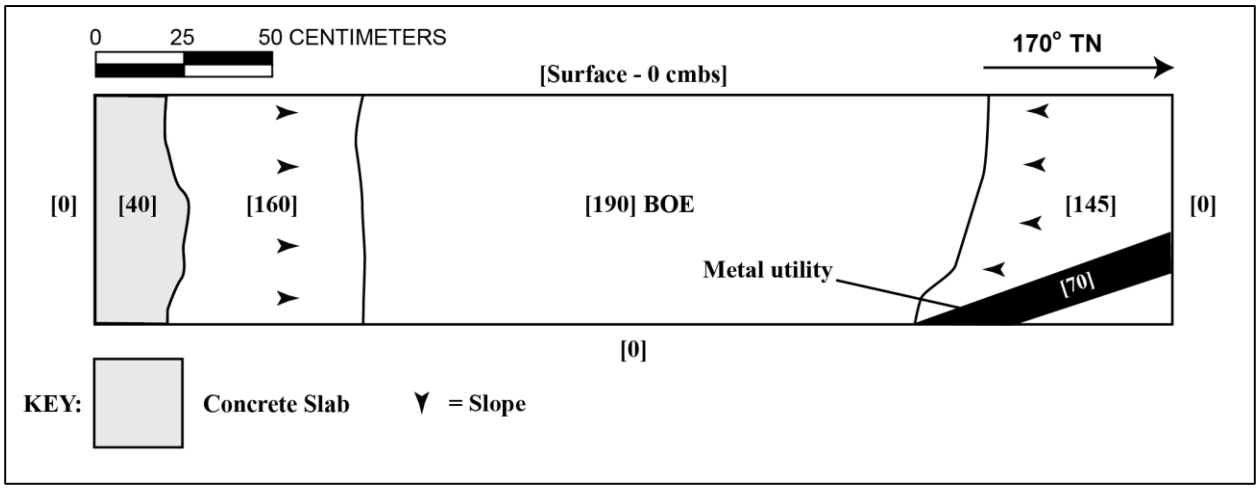

Figure 51. Trench 5 plan view map

Figure 52. Trench 5 eastern sidewall, view to the southeast

Figure 53. Trench 5 BOE showing water table; view to the northeast

4.3.6 Trench 6

Length:	3.04 m
Width:	0.61 m
Maximum Depth:	2.00 m
Orientation:	45°/225° TN

Trench 6 was positioned in a parking stall fronting the Prince Edward apartment building in the eastern corner of the project area (Figure 54), near Trenches 7 and 15. The stratigraphy of Trench 6 consisted of concrete (Stratum Ia), overlying loamy sand fill that potentially contained redeposited A-horizon material (Stratum Ib), overlying mottled sand fill (Stratum Ic), overlying marine sand (Stratum II) (Figure 55, Figure 56, and Table 11).

Stratum Ib (9-147 cmbs) consisted of dark brown loamy sand with pale brown sand lenses (likely associated with Stratum Ic). The layer contained numerous historic artifacts (Acc. #s 32–41; Table 12), metal pipe fragments, and faunal remains. Ceramic artifacts included two earthenware fragments (Acc. #s 32 and 33) and a round Chinese green-glazed ginger jar (Acc. # 41). Glass fragments (Acc. #s 34-39) included rim and neck from a bottle (post 1903) with an ABM wide mouth finish (Acc. # 35), the base of a medicine bottle (Acc. # 38), and a two-piece cup mold bottle (Acc. # 39) produced between the 1880 and the 1920s. An intact Pacific Soda Works bottle with makers mark (Acc. # 40) was similar to one shown in Elliot & Gould (1988:188; # 257) which was dated to ca. 1916. A butchered *Sus scrofa* rib fragment (3.9 g) was also recovered from the fill. The material content was consistent with an early twentieth century deposition event. A large pit containing Stratum Ib fill is located at the northeast end of the trench. The boundary between Stratum Ib and the underlying sand (Stratum Ic) was irregular.

Stratum Ib may contain redeposited A-horizon material. The presence of historic artifacts and faunal bone, along with appearance and texture of Stratum Ib, is consistent with the redeposited A-horizon material found in nearby Trench 7, as well as Trench 10 and Trench 12. However, no midden or pockets of charcoal were encountered in Stratum Ib. Additionally, the redeposited A-horizon layers in Trenches 7, 10 and 12 were associated with clearly defined grading events, and all found overlying intact A-horizon of Jaucas sand. In Trench 6, Stratum Ib overlies heavily impacted sand fill (Stratum Ic); while the boundary is clear, there is not a clear grading line. A pit containing layered sand and fill was observed in the sidewall of Trench 15. This pit was associated with an excavation event that occurred between Trench 15 and 6. It is possible that the pit in Stratum Ib is associated with this excavation event.

Stratum Ic (34-185 cmbs) consisted of very pale brown fine sand. The sand layer was heavily mottled and striated (with Stratum Ib inclusion), and had a loose consistency that was different than the Jaucas sand deposits seen nearby. It contained small pieces of crushed coral and rusted metal fragments. The appearance and contents of the sand indicated that it was not naturally-deposited. It was likely either a locally procured fill deposit or a heavily disturbed natural layer. The disturbance may be associated with the large pit at the northeast end of the trench.

Shoring was installed at a depth of 1.0 m and the trench was hand excavated down to the water table in the central and northern end of the trench. The sidewall collapsed soon after and the backhoe was used to excavate the southern end of the trench through the marine sand deposits (Stratum II) down to the water table (Figure 57). The water table was reached at a depth of 190 cmbs.

Figure 54. Trench 6 general overview, view to the northeast

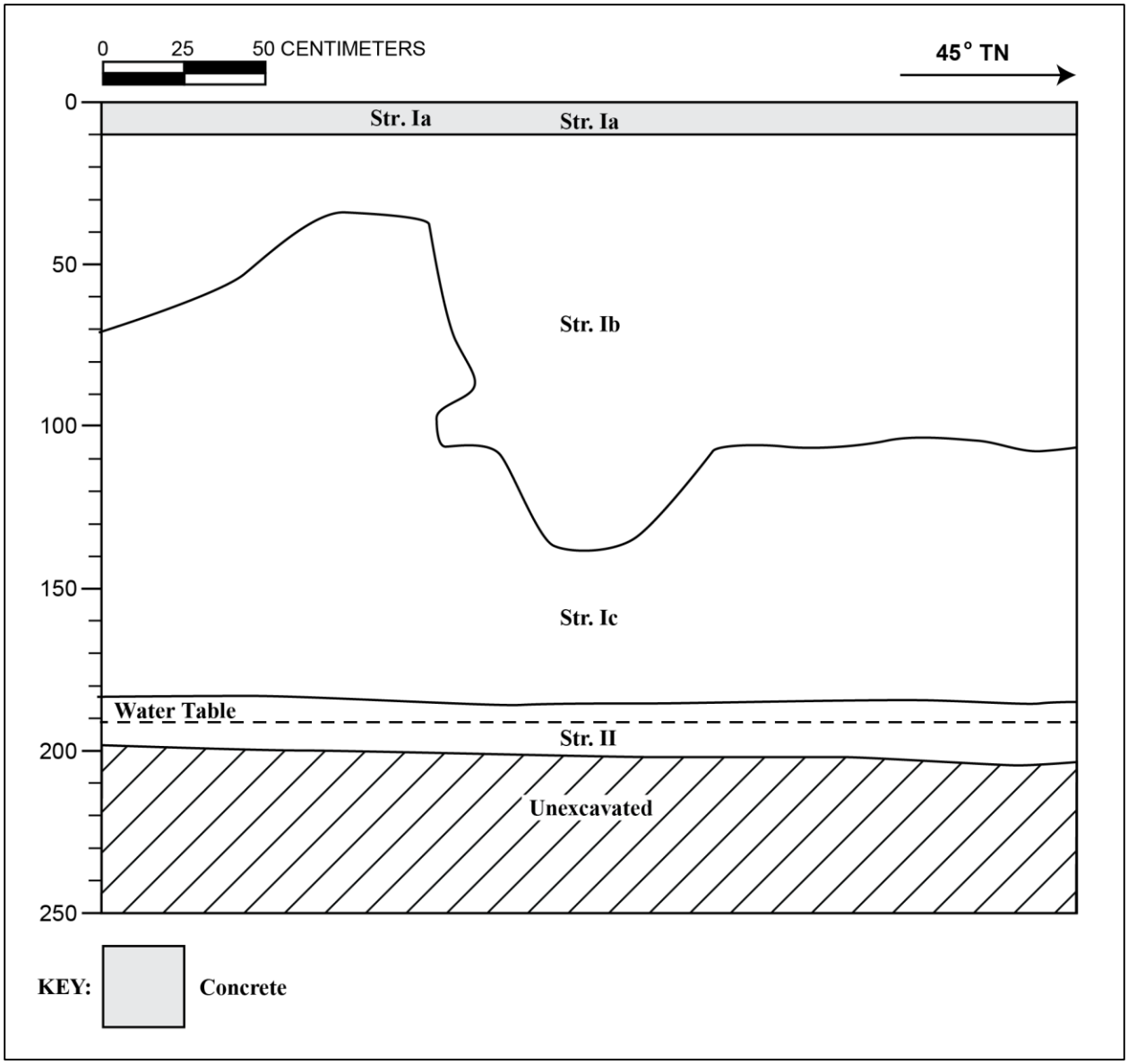

Figure 55. Trench 6 profile of northwest sidewall

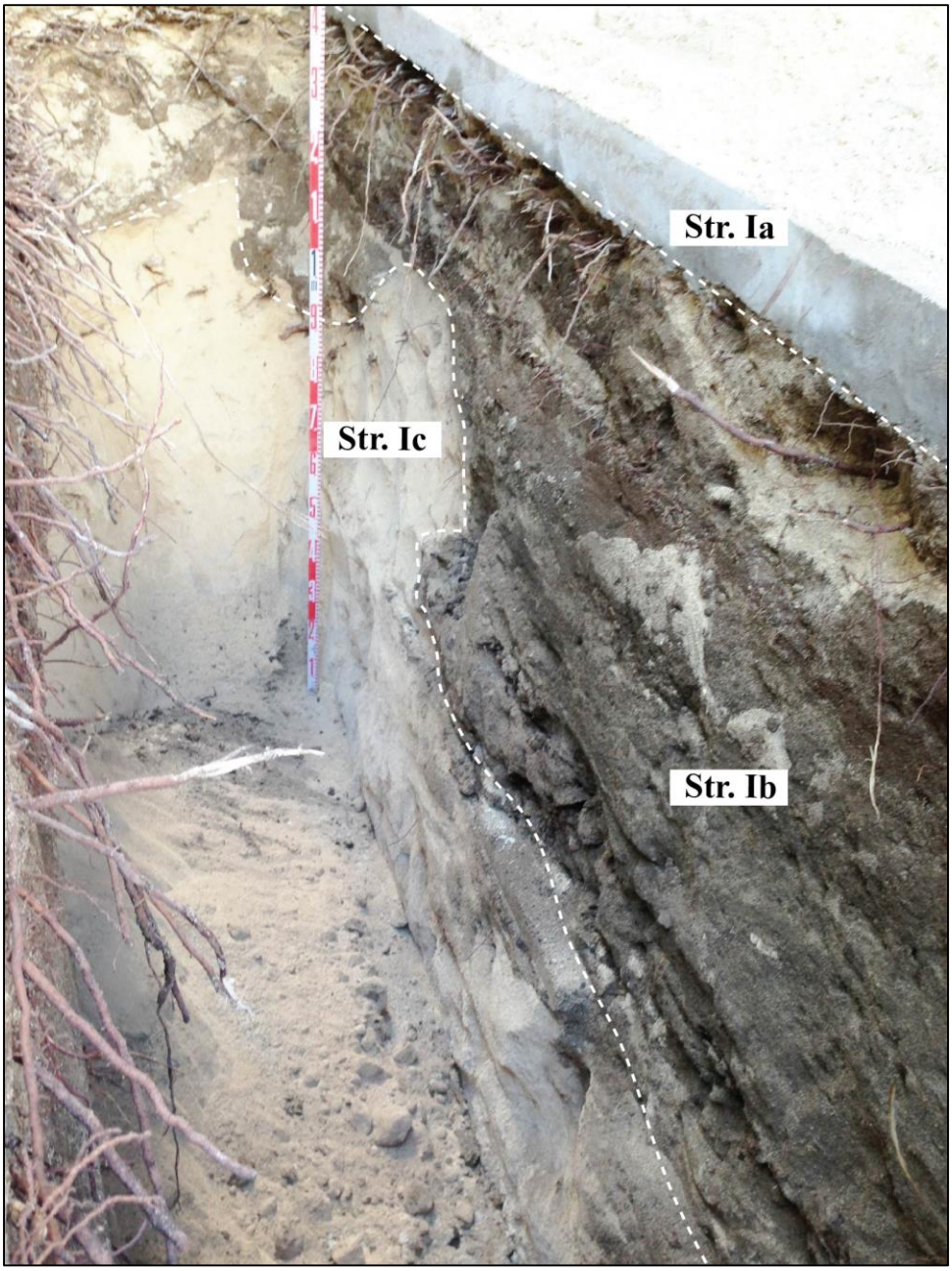

Figure 56. Trench 6 northwest sidewall, view to the north

Table 11. Trench 6 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-9	Concrete
Ib	9-147	Fill; 10YR 3/3, dark brown; loamy fine sand; weak, fine, granular structure; moist, loose consistency; slightly plastic; mixed origin; abrupt, irregular lower boundary; many, medium roots; contained glass bottles, bottle glass, metal pipes, metal fragments, ceramic sherds, and faunal bone; fill
Ic	34-185	Fill; 10YR 8/3, very pale brown; mottles, 10 YR 3/3; fine sand; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, fine roots; contained iron fragments and crushed coral; imported fill
II	185-200	Natural; 5GY 7/1, light greenish gray; coarse sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; marine sand

Table 12. Artifacts collected from Trench 6

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
32	T-6	Ib	90-147	1	Refined Earthenware	White refined earthenware fragment
33	T-6	Ib	90-147	1	Refined Earthenware	Yellow refined earthenware fragment
34	T-6	Ib	90-147	1	Glass	Clear glass fragment, base; probably a drinking glass
35	T-6	Ib	90-147	1	Glass	Clear glass fragment, rim and neck; ABM wide-mouth finish (post 1903)
36	T-6	Ib	90-147	1	Glass	Clear pressed glass fragment, base; probably a drinking glass
37	T-6	Ib	90-147	1	Glass	Clear glass fragment, rim; possibly drinking glass
38	T-6	Ib	90-147	1	Glass	Clear glass bottle, rectangular base, 2 piece cup mold; medicine bottle
39	T-6	Ib	90-147	1	Glass	Clear glass bottle two-piece cup mold, round bottle with tooled crown finish (1880-1920s)
40	T-6	Ib	90-147	1	Glass	Green-aqua complete glass bottle, embossed on body vertically: “PACIFIC/ SODA WORKS CO. LTD./ HONOLULU T.H.”, Base: “P”, round base, mold-blown, two-piece cup mold, tooled crown finish Similar bottle shown in Elliot & Gould 1988:188; # 257, dated ca. 1916
41	T-6	Ib	90-147	1	Chinese Green Glazed Stoneware	Round Chinese green-glazed ginger jar

Figure 57. Trench 6 showing portion of BOE (water table) as well as partial collapse of southeast sidewall; view to the southeast

4.3.7 Trench 7 (SIHP # -7598)

Length:	3.03 m
Width:	0.60 m
Maximum Depth:	2.00 m
Orientation:	230°/50° TN

Trench 7 was positioned in the center covered parking stall in front of the Prince Edward apartment building (Figure 58). The stratigraphy of Trench 7 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), overlying a former A-horizon redeposited as fill (Stratum Ic), overlying Jaucas sand (Stratum II), overlying marine sand (Stratum III) (Figure 59 through Figure 61, and Table 13).

Trench 7 was heavily disturbed by previous construction events. Two metal utility pipes were located at the upper boundary of Stratum Ib. Two 33 cm thick slabs of asphalt extended into the trench from the northwest sidewall (Figure 60). Several basalt boulders were also identified at the base of Stratum Ib in the central and southern portions of the trench.

Stratum Ic (40-59 cmbs) was a fill layer containing redeposited A-horizon material. The boundary between Stratum Ic and the underlying Jaucas sand (Stratum II) was linear and abrupt. The appearance suggested that the former land surface was removed during grading. Faunal bones collected from Stratum Ic consisted of medium mammal cranial fragments cf. *Canis lupus familiaris* (3 g), a *Rattus norvegicus* femur (0.1 g), a Scaridae *Scarus* sp. pharyngeal grinding plate (1 g), and one fish vertebra fragment (0.1 g).

SIHP #-7598 Feature 1 was a pit feature observed in the floor and southeast wall of Trench 7. It was 25 cm in diameter, and 20 cm deep (55-75 cmbs). The upper portion of the feature was truncated by the overlying redeposited A-horizon fill (Stratum Ic). The feature intruded into the underlying Jaucas sand, and appears to have originated from a former A-horizon that has since been entirely removed (Figure 62). A bulk sample collected from Feature 1 contained charcoal particulates, and a *Canis lupus familiaris* rib neck (1 g). While, the presence of *Canis lupus* in both the redeposited A-horizon (Stratum Ic) and Feature 1 could indicate that they are associated, its presence is more likely due to disturbance. A clear boundary was visible between Stratum Ic and Feature 1. The function of SIHP #-7598 Feature 1 remains indeterminate.

Shoring could not be installed due to the position of the asphalt slabs in Stratum Ib, however, a hand excavated probe proceeded through the marine sand deposits (Stratum III) down to the water table at 190 cmbs. Due to safety concerns, the rest of the water table was exposed in sections using the excavator.

Figure 58. Trench 7 general overview, view to the southwest

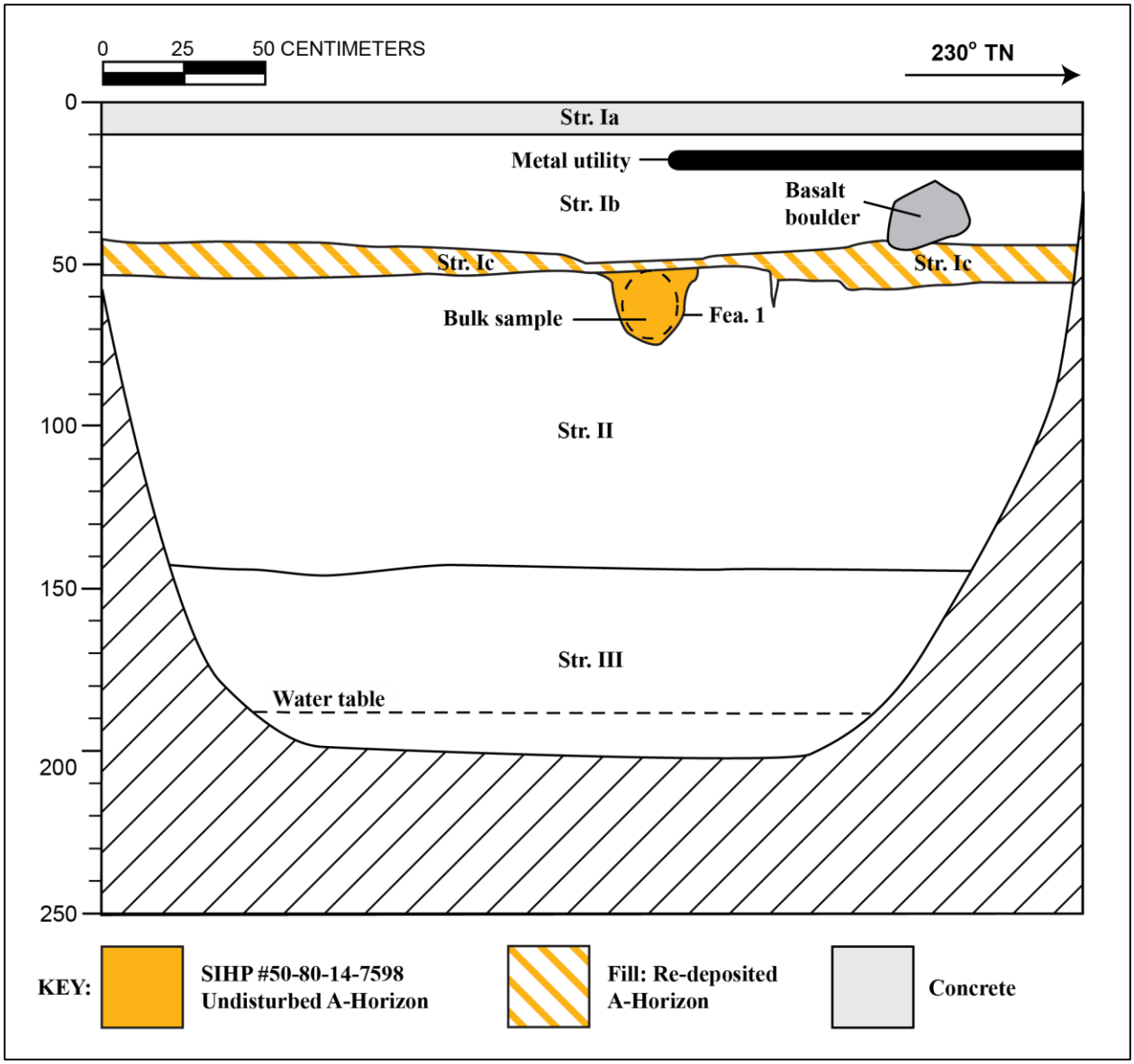

Figure 59. Trench 7 profile of southeast sidewall

Table 13. Trench 7 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Ib	10-45	Fill; 10YR 5/3, brown; mottles, 10 YR 8/3 common, fine; gravelly loamy fine sand; weak, fine, granular structure; moist, loose consistency; non- plastic; mixed origin; clear, smooth lower boundary; common, fine roots; contained asphalt slabs and utility pipes; imported fill
Ic	40-58	Fill; 10YR 3/3, dark brown; loamy fine sand; weak, fine, granular structure; moist, loose consistency; non-plastic; terrigenous origin; abrupt, broken lower boundary; few, fine roots; contained a few faunal bones; reworked and/or redeposited A-horizon
Feature 1	55-75	Pit; 10YR 5/3, brown; loamy fine sand; weak, structureless, single-grain, loose consistency; non-plastic; terrigenous origin; clear, irregular lower boundary; no roots observed; contained faunal bone; pit of indeterminate function associated with SIHP # -7598
II	45-146	Natural; 10YR 8/3, very pale brown; fine sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; clear, smooth lower boundary; no roots observed; Jaucas sand
III	145-200	Natural; 5GY 7/1, light greenish gray; medium sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; marine sand

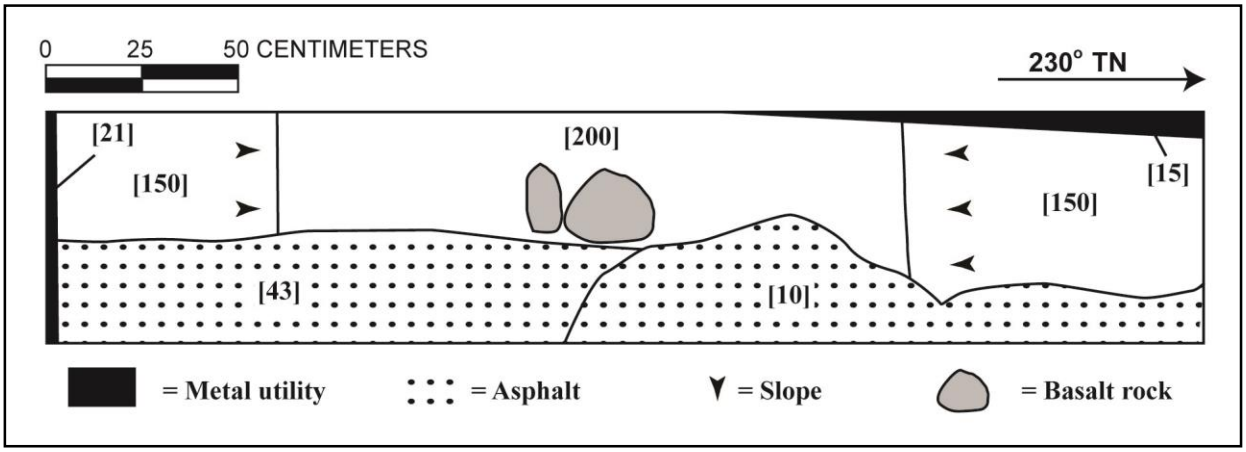

Figure 60. Trench 7 plan view

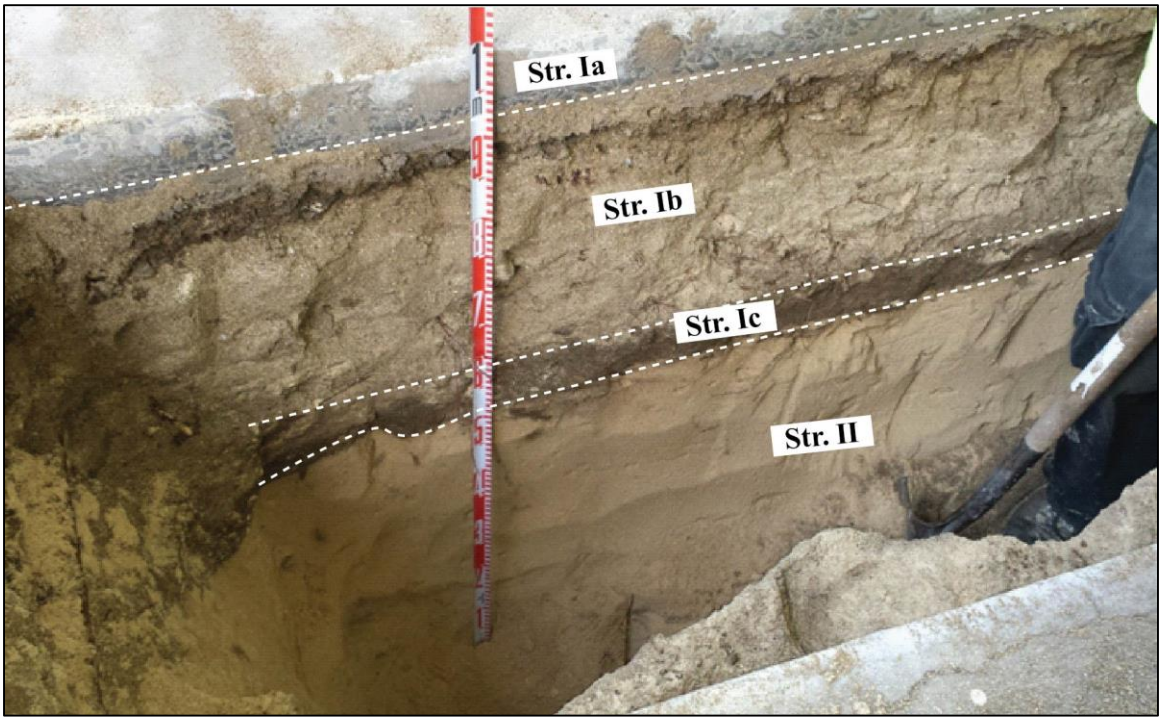

Figure 61. Trench 7 eastern sidewall, view to the east

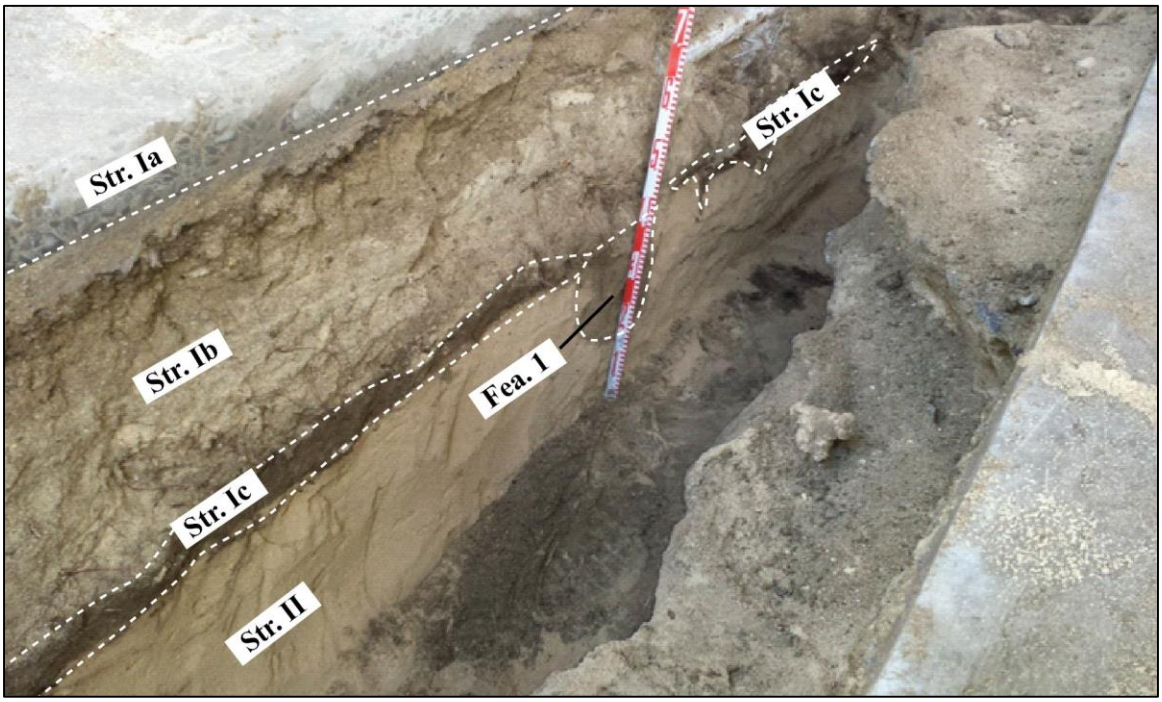

Figure 62. Trench 7 eastern sidewall showing Feature 1, view to the east

Figure 63. Trench 7 showing portion of BOE (water table visible); view to the west

4.3.8 Trench 8

Length:	3.04 m
Width:	0.60 m
Maximum Depth:	1.65 m
Orientation:	129°/309° TN

Trench 8 was positioned within the King's Village loading dock facility along Prince Edward Street (Figure 64). The surface of this trench was slightly below street level due to the lower grade of the loading dock area. The stratigraphy of Trench 8 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), overlying Jaucas sand (Stratum II), overlying coarse grey marine sand (Stratum III) (Figure 65, Figure 66, and Table 14).

Trench 8 was disturbed by previous construction events. A metal sewer pipe was encountered within Stratum Ib in the southern end of the trench at 22 cmbs (Figure 67). Stratum Ib (20-148 cmbs) consisted of gravelly loamy sand fill. The fill layer truncated both underlying layers of Jaucas sand (Stratum II) and marine sand (Stratum III). Several basalt and coral boulders were located at the lower boundary of Stratum Ib (Figure 68). They extended into the upper boundary of Stratum II. Stratum Ib contained a waterworn manuport, a *Canis lupus familiaris* left proximal ulna fragment and a basalt primary reduction flake (Acc. # 42; Table 15), as well as wire pieces. The fill deposit in Trench 8 was deeper than most in the project, except for Trench 4, where fill continued to 155 cmbs. Both trenches were in the northeast corner of project area. These two deposits may indicate the presence of a depression or low lying area that was leveled during construction events.

Stratum II consisted of Jaucas sand overlying marine sand (Stratum III). Samples of both deposits were screened in the field. They contained no cultural material. The water table was encountered at a depth of 150 cmbs (Figure 69) and excavation continued to 165 cmbs.

Figure 64. Trench 8 general overview, view to the northwest

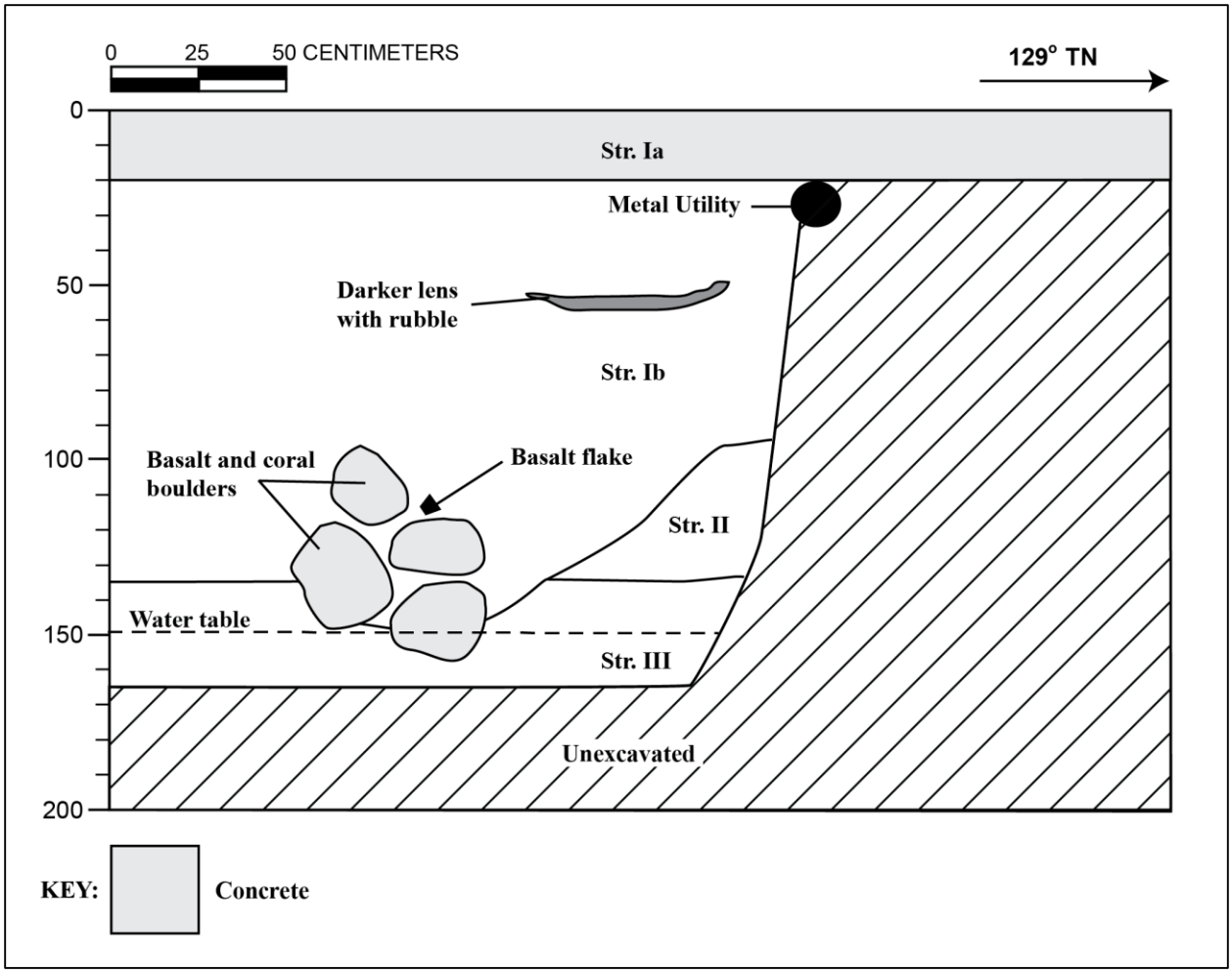

Figure 65. Trench 8 profile of northeast sidewall

Table 14. Trench 8 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-20	Concrete
Ib	20-148	Fill; 10YR 4/1, dark gray; gravelly loamy sand; weak, fine, granular structure; moist, loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; no roots observed; contained waterworn cobble, faunal bone, and wire; imported fill with basalt and coral boulders at the base
II	95-135	Natural; 10YR 6/3, pale brown; medium sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; mixed origin; clear, broken/discontinuous lower boundary; no roots observed; Jaucas sand
III	135-165	Natural; 10YR 7/2, light gray; coarse sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; marine sand

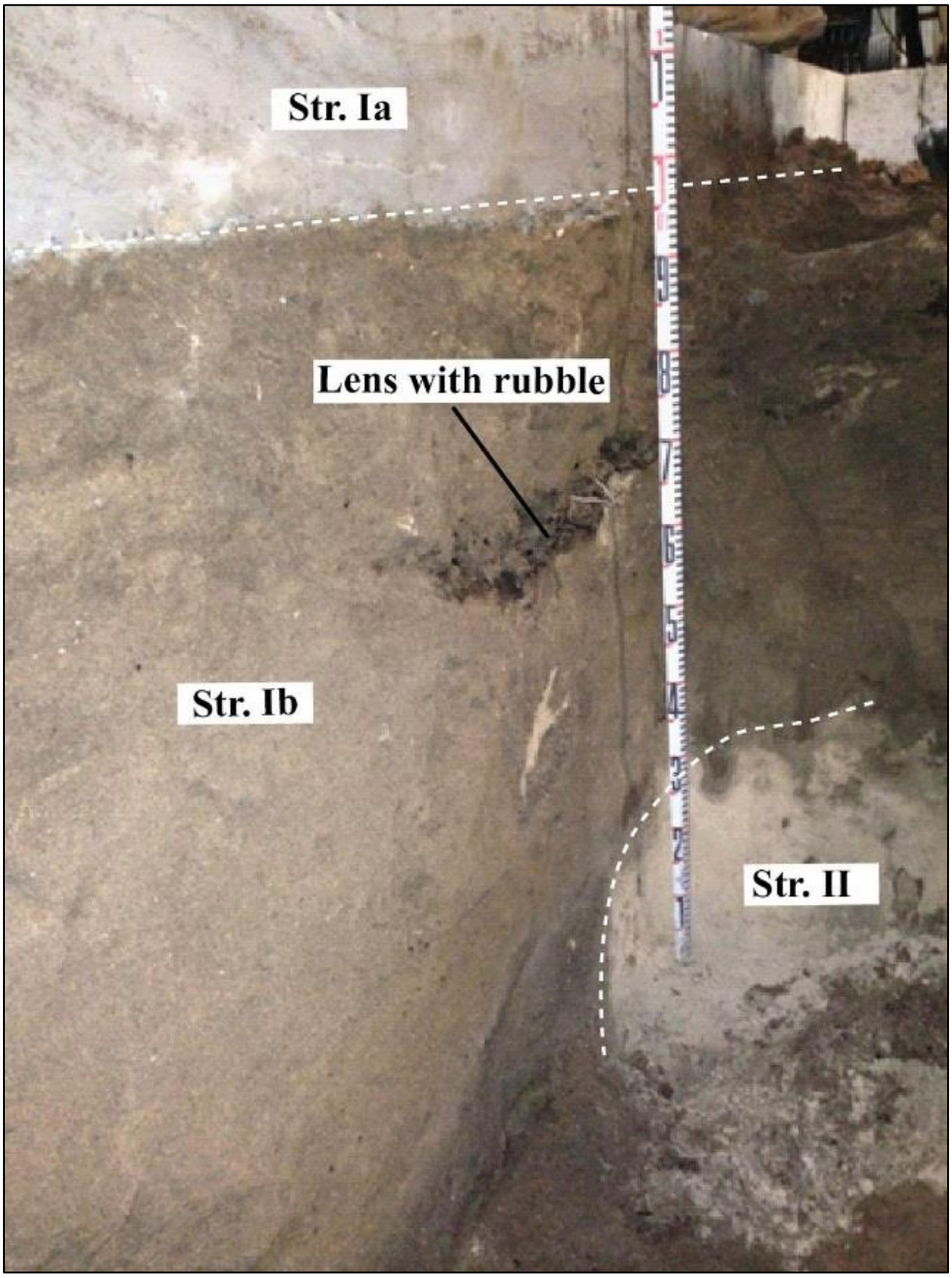

Figure 66. Trench 8 eastern sidewall, view to the southeast

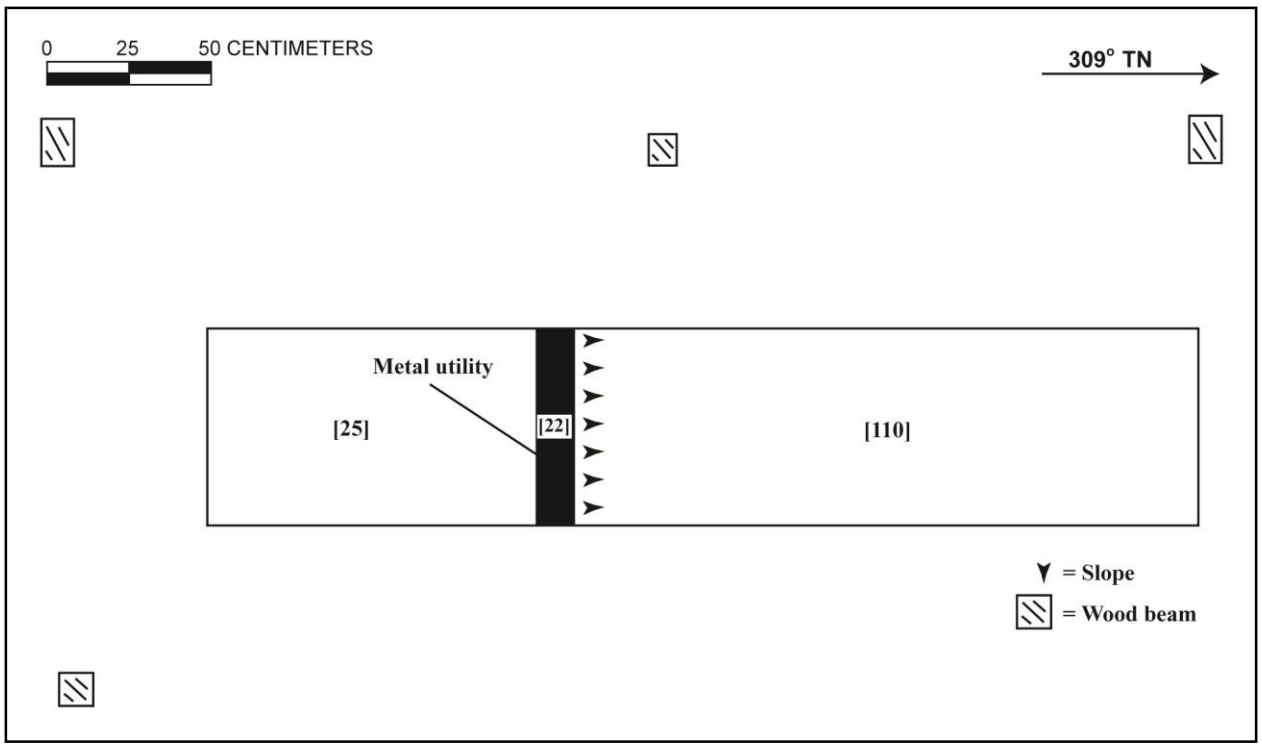

Figure 67. Trench 8 plan view

Table 15. Artifact collected from Trench 8

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
42	T-8	Ib	110-114	1	Basalt	Basalt Secondary flake

Figure 68. Coral and basalt boulders from the lower boundary of Stratum Ib in Trench 8

Figure 69. Trench 8 after initial probe to the water table, indentation from removed coral boulders visible in northeast sidewall; view to the east

4.3.9 Trench 9

Length:	3.00 m
Width:	0.61 m
Maximum Depth:	1.95 m
Orientation:	75°/255° TN

Trench 9 was positioned within the King's Village loading dock facility along Prince Edward Street (Figure 70). The surface of this trench was slightly below street level due to the lower grade of the loading dock area. The stratigraphy of Trench 9 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), overlying an Aeolian sand deposit (Stratum II), overlying marine sand (Stratum III) (Figure 71, Figure 72, and Table 16).

Stratum Ib (20-40 cmbs) was a thin layer of fill underlying the concrete slab. Stratum Ib truncated the upper boundary of Stratum II. Stratum II (25-120 cmbs) consisted of homogenous medium sand that did not show the soil development of Jaucas series. The stratum was interpreted as an Aeolian sand deposit (dune). A sample of Stratum II was screened in the field, but no cultural material was identified. Stratum III consisted of marine deposited sand. A sample was screened in the field, and contained a small amount of unidentified fish bone (0.2 g).

The walls of Trench 9 became unstable at 100 cmbs. Shoring was installed and the remainder of the trench was hand excavated to the water table which was encountered at 150 cmbs. A test pit was excavated to 195 cmbs in the central portion of the trench. The coral shelf was not encountered.

Figure 70. Trench 9 general overview, view to the east

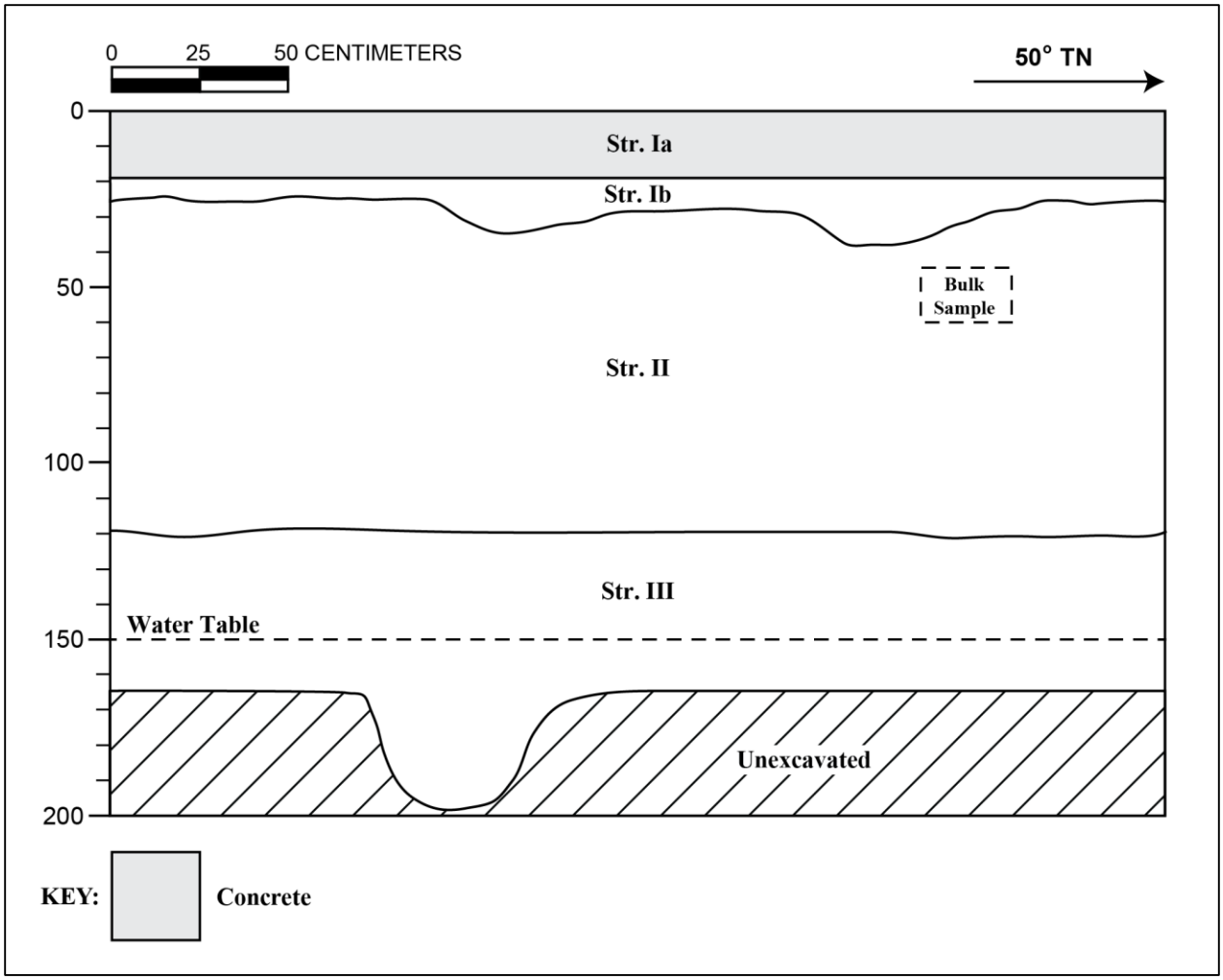

Figure 71. Trench 9 profile of northern sidewall

Table 16. Trench 9 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-20	Concrete
Ib	20-40	Fill; 10YR 3/2, very dark grayish brown; sandy loam; weak, fine, crumb structure; dry, weakly coherent consistency; non-plastic; mixed origin; clear, wavy lower boundary; no roots observed; imported fill
II	25-120	Natural; 10YR 7/4, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; no roots observed; Aeolian sand deposit
III	120-195	Natural; 10YR 7/2, light gray; coarse sand; structureless, single-grain; wet, non-sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; contained fish bone; marine sand

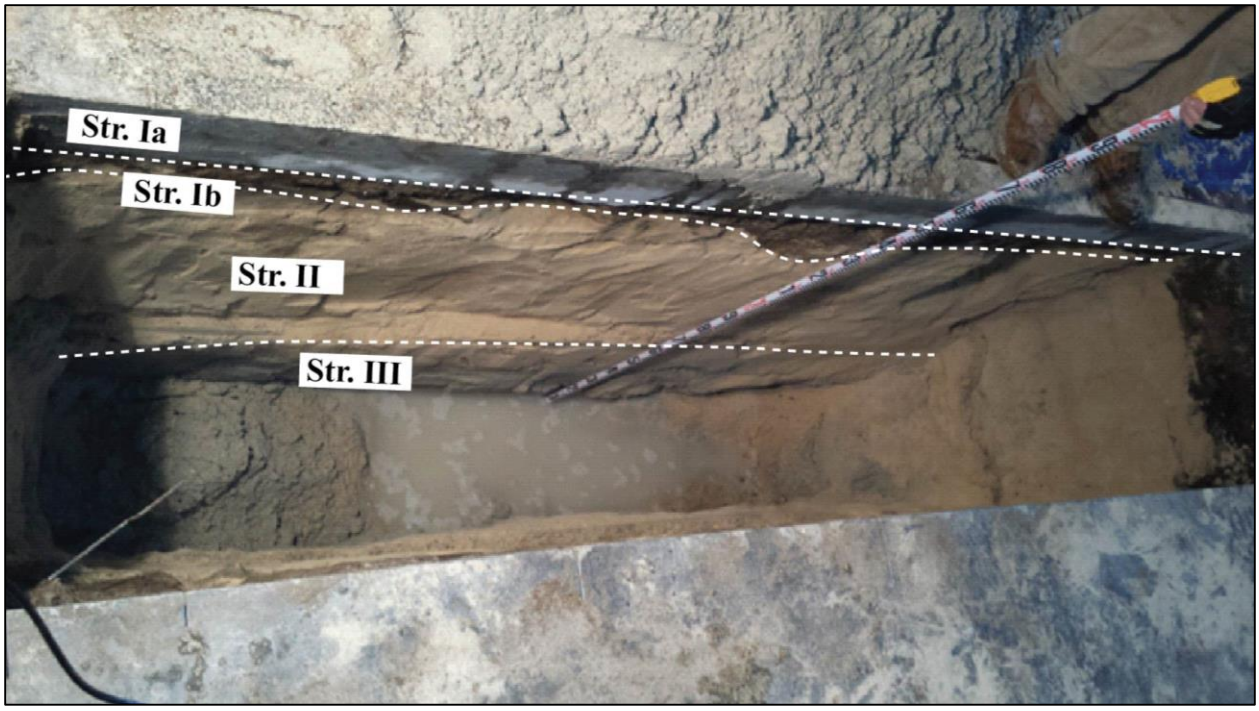

Figure 72. Trench 9 northern sidewall, view to the north

4.3.10 Trench 10 (SIHP # -7598)

Length:	3.06 m
Width:	0.63 m
Maximum Depth:	1.93 mbs
Orientation:	322/142° TN

Trench 10 was positioned inside the laundry room of the Prince Edward apartment building (Figure 73). The stratigraphy of Trench 10 consisted of cement (Stratum Ia), overlying construction grade base course (Stratum Ib), overlying imported fill (Stratum Ic), overlying fill containing redeposited A-horizon material (Stratum Id), overlying natural layers consisting of Jaucas sand (Stratum II), atop marine sand (Stratum III) (Figure 74, Figure 75, Figure 76, and Table 17).

Stratum Ic (16-65 cmbs) was a disturbed layer of sandy fill that contained historic debris, glass, charcoal, nails and faunal bones. Excavation revealed two metal utility pipes at the southeast end of the trench within Stratum Ic. The presence of utility lines and historic debris indicate that Stratum Ic may be related to the construction of the current apartment complex and the installation of modern utilities. The pit associated with the utility lines truncates both the underlying redeposited A-horizon fill (Stratum Id) and the underlying Jaucas sand (Stratum II). Stratum Ic contained shell midden comprised of *Nerita picea* (3.4 g), *Periglypta reticulata* (1.3 g), *Strombus* sp. (0.4 g), *Turbo sandwicensis* (3.8 g), and *Echinometra mathaei* (0.1 g). The shell midden material may represent a contribution from the truncated portion of Stratum Id. Stratum Ic also contained historic debris, including rusted nails and glass fragments (Acc. #s 43–47; Table 18).

Stratum Id (40-60 cmbs) was a fill layer containing redeposited A-horizon material. The boundary between Stratum Ic and the underlying Jaucas sand (Stratum II) was linear and abrupt. The appearance suggested that the former land surface was removed during grading. Stratum Id contained, historic debris, charcoal, water rounded and fire affected rocks, and both shell and vertebrate midden material. The vertebrate faunal remains consisted of *Sus scrofa* metatarsus fragments (7.7 g) and tooth fragments (0.5 g). Midden consisted of *Cellana sandwicensis* (13.7 g), *Ctena bella* (1.2 g), *Conus* sp. (2.2 g), *Nerita picea* (1.7 g), *Pinctada radiata* (0.3 g), *Echinometra mathaei* (0.2 g), *Echinothrix diadema* (0.2 g), and Echinoidea mouth parts/tests (2.9 g). Historic artifacts included two types of iron nails, two mother-of-pearl two-hole buttons, and two clear glass fragments (Acc. #s 48-51; see Table 18). Archaeologists recovered one traditional Hawaiian artifact from Stratum Id, a modified Labridae tooth which had been incised around the base (Acc. # 52; see Table 18)

Two pit features (SIHP # -7598, Feature 2 and 3) were identified in Trench 10. Both pits were remnants of a former culturally enriched A-horizon that was removed during grading and construction activities. Other than these two features, there were no intact portions of the A-horizon layer.

Figure 73. Trench 10 general overview, view to the southeast

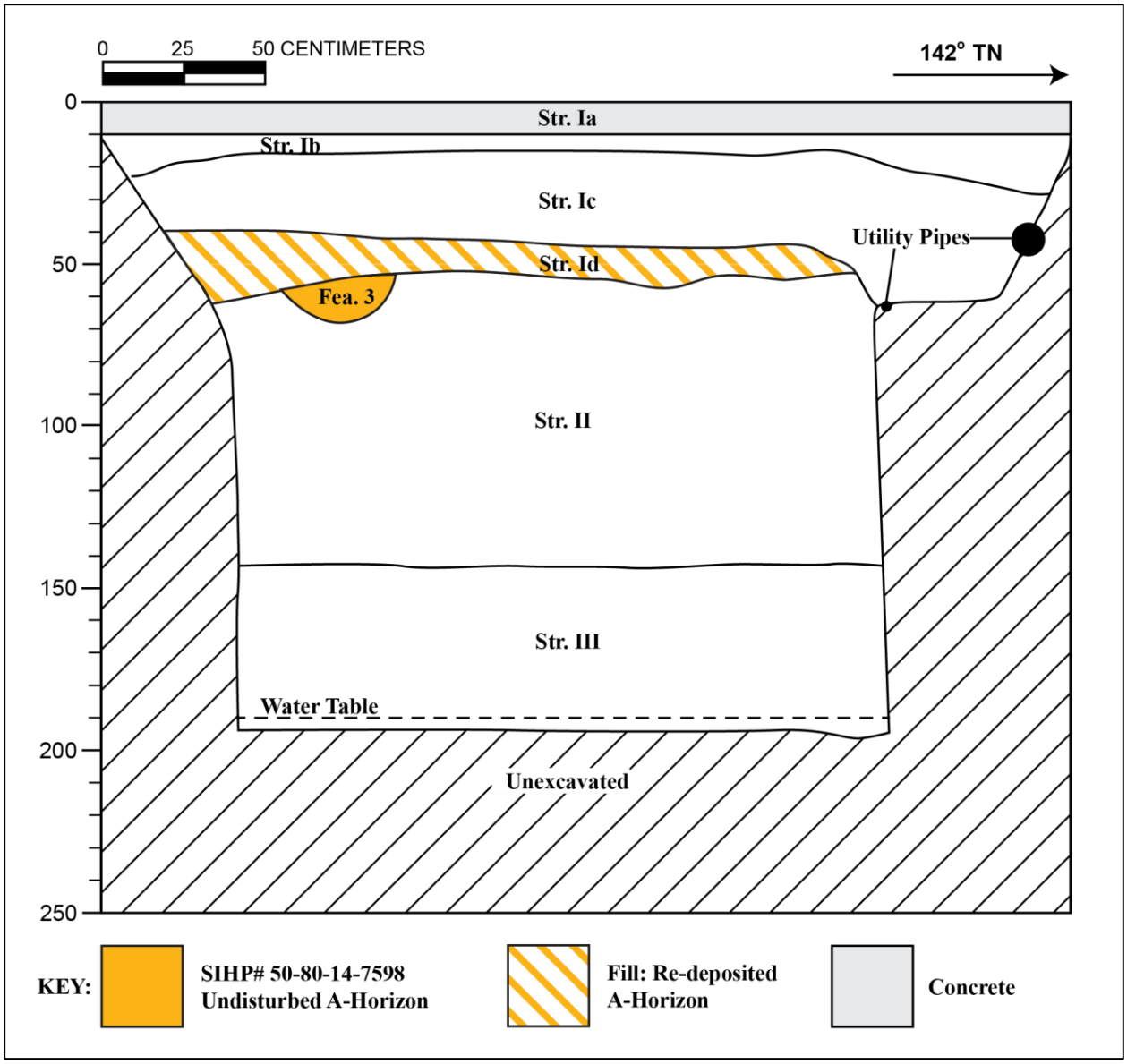

Figure 74. Trench 10 profile of northeast sidewall

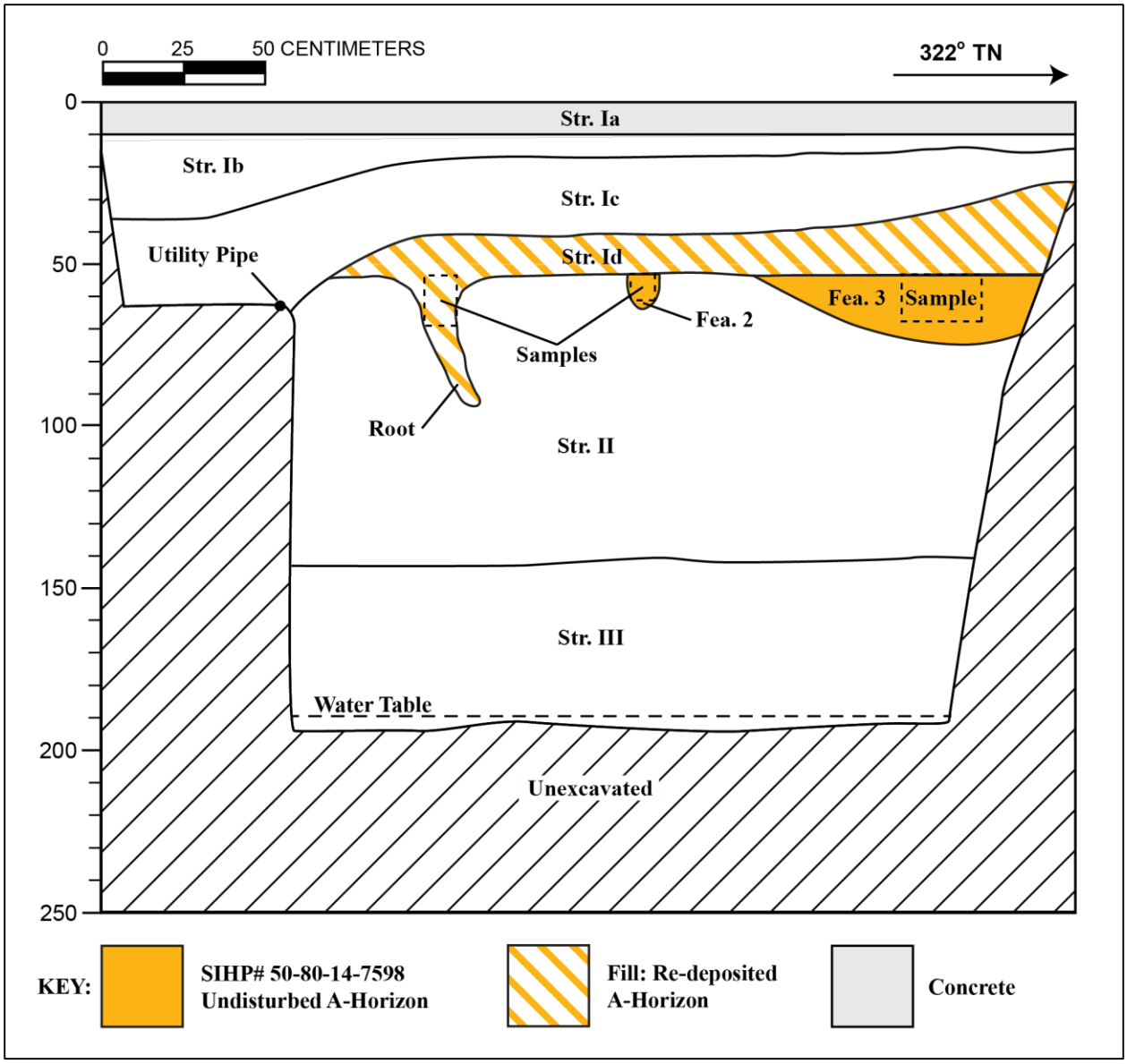

Figure 75. Trench 10 profile of southwest sidewall

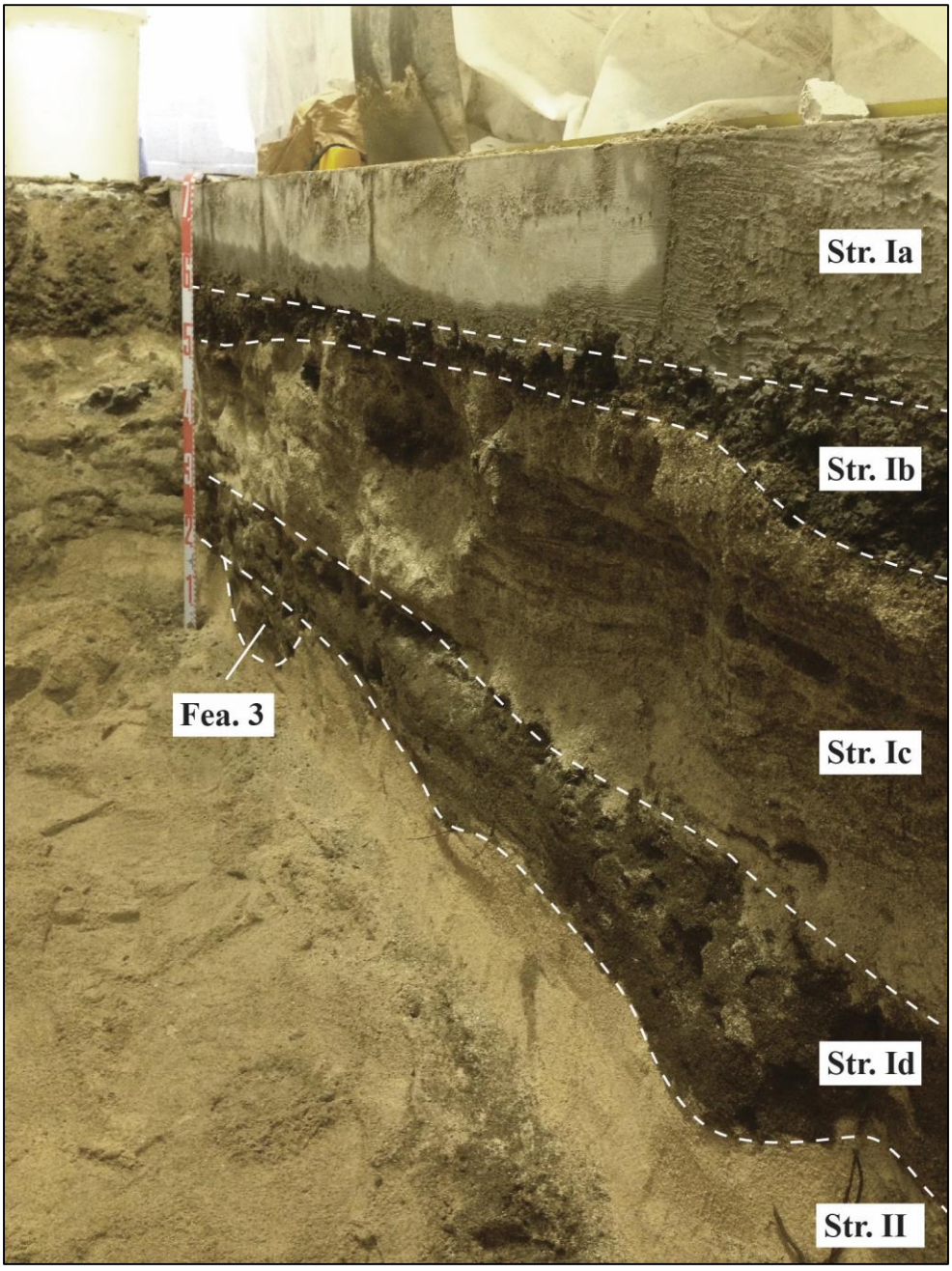

Figure 76. Trench 10 showing stratigraphy and the other side of SIHP # –7598 Feature 3; view to the north

Table 17. Trench 10 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Ib	10-35	Fill; 7.5YR 2.5/2, very dark brown; Extremely cobbly/gravelly loam; structureless, single-grain; moist loose consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; no roots observed; construction grade base course
Ic	16-65	Fill; 10YR 6/3, pale brown; fine-medium grained sand; structureless, single-grain; moist loose consistency; non-plastic; mixed origin; very abrupt smooth lower boundary; few coarse roots; disturbed sandy fill containing historic debris: glass, charcoal, nails and faunal bones
Id	40-60	Fill; 10YR 3/3, dark brown; sandy loam; structureless single-grain; moist very friable consistency; non-plastic; terrigenous origin; clear irregular lower boundary; few fine to medium roots; redeposited A-horizon containing faunal bone, shells, nails, charcoal and buttons;
Feature 2	55-65	Pit feature; 10YR 3/3, dark brown; sandy loam; structureless single-grain; moist very friable consistency; non-plastic; terrigenous origin; clear irregular lower boundary; few fine to medium roots; remnant of a culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing no cultural material; possibly natural
Feature 3	55-78	Pit feature; 10YR 3/3, dark brown; sandy loam; structureless single-grain; moist very friable consistency; non-plastic; terrigenous origin; clear irregular lower boundary; few fine to medium roots; remnant of a culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing a small amount of mammal bone and marine shell midden.
II	53-143	Natural; 10YR 7/6, yellow; fine to medium grained sand; structureless, single-grain; moist loose consistency; non-plastic; marine origin; diffuse smooth lower boundary, no roots observed, Jaucas sand
III	143-193 (BOE)	Natural; 10Y 8/1, light greenish gray; medium to coarse sand; structureless single-grain; wet non-sticky consistency; non-plastic; marine origin; lower boundary not visible, no roots observed; Marine sand

Table 18. Artifacts collected from Trench 10

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
43	T-10	Ic	10-40	4	Metal	Iron nails – too corroded to type
44	T-10	Ic	10-40	3	Metal	Iron wire nail (post-1894)
45	T-10	Ic	10-40	2	Metal	Iron hinge (?) and other fragment
46	T-10	Ic	10-40	1	Glass	Amber bottle glass body fragment
47	T-10	Ic	10-40	1	Glass	clear glass fragment
48	T-10	Id	40-76	5	Metal	Iron nails/brads– too corroded to type
49	T-10	Id	40-76	4	Metal	Iron wire nail (post-1894)
50	T-10	Id	40-76	2	Shell	Mother-of-pearl button, two hole, thickness uneven (0.5-1.0 cm)
51	T-10	Id	40-76	2	Glass	Flat clear glass fragments
52	T-10	Id	40-76	1	Fish tooth	Worked Labridae tooth

Two pit features (SIHP # -7598, Feature 2 and 3) were identified in Trench 10. Both pits were remnants of a former culturally enriched A-horizon that was removed during grading and construction activities. Other than these two features, there were no intact portions of the A-horizon layer.

SIHP #-7598 Feature 2 was a small pit feature observed in the floor and southeast wall of Trench 10. It was 10 cm in diameter, and 10 cm deep (55-65 cmbs). The upper portion of the feature was clearly truncated by the overlying redeposited A-horizon fill (Stratum Id, Figure 77). The feature intruded into the underlying Jaucas sand, and appeared to have originated from a former A-horizon that has since been entirely removed. A bulk sample of Feature 2 was collected from the southwest sidewall and screened through ¼ in screen. The feature fill contained no cultural material. Its appearance and small size suggest that the majority of the feature was removed during grading. As the feature contained no cultural material, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 2 remains indeterminate. It remains possible that it was the product of natural processes (e.g. plants, animals, erosion).

SIHP #-7598 Feature 3 was a large basin shaped feature observed extending into southeast, southwest, and northwest sidewalls of Trench 10. It was more than 165 cm long, and 23 cm deep (55-78 cmbs) and continued across the trench. The upper portion of the feature was truncated by the overlying redeposited A-horizon fill. The feature intruded into the underlying Jaucas sand, and appeared to have originated from a former A-horizon that has since been entirely removed. The feature fill contained unidentified Mammalia (non-human) fragments (0.4 g), *Ctena bella* (0.1 g), *Pinctada maragaritifera* (0.2 g), *Turbo sandwicensis* (1.5 g), and *Echinometra mathaei* (0.1 g). The function of SIHP # -7598 Feature 3 remains indeterminate.

The subsequent natural layers consisted of Jaucas sand (Stratum II, 53-143 cmbs) overlying marine sand (Stratum III, 143-193 cmbs). No cultural material was observed in either layer. Excavation continued to the water table, which was encountered at 190 cmbs.

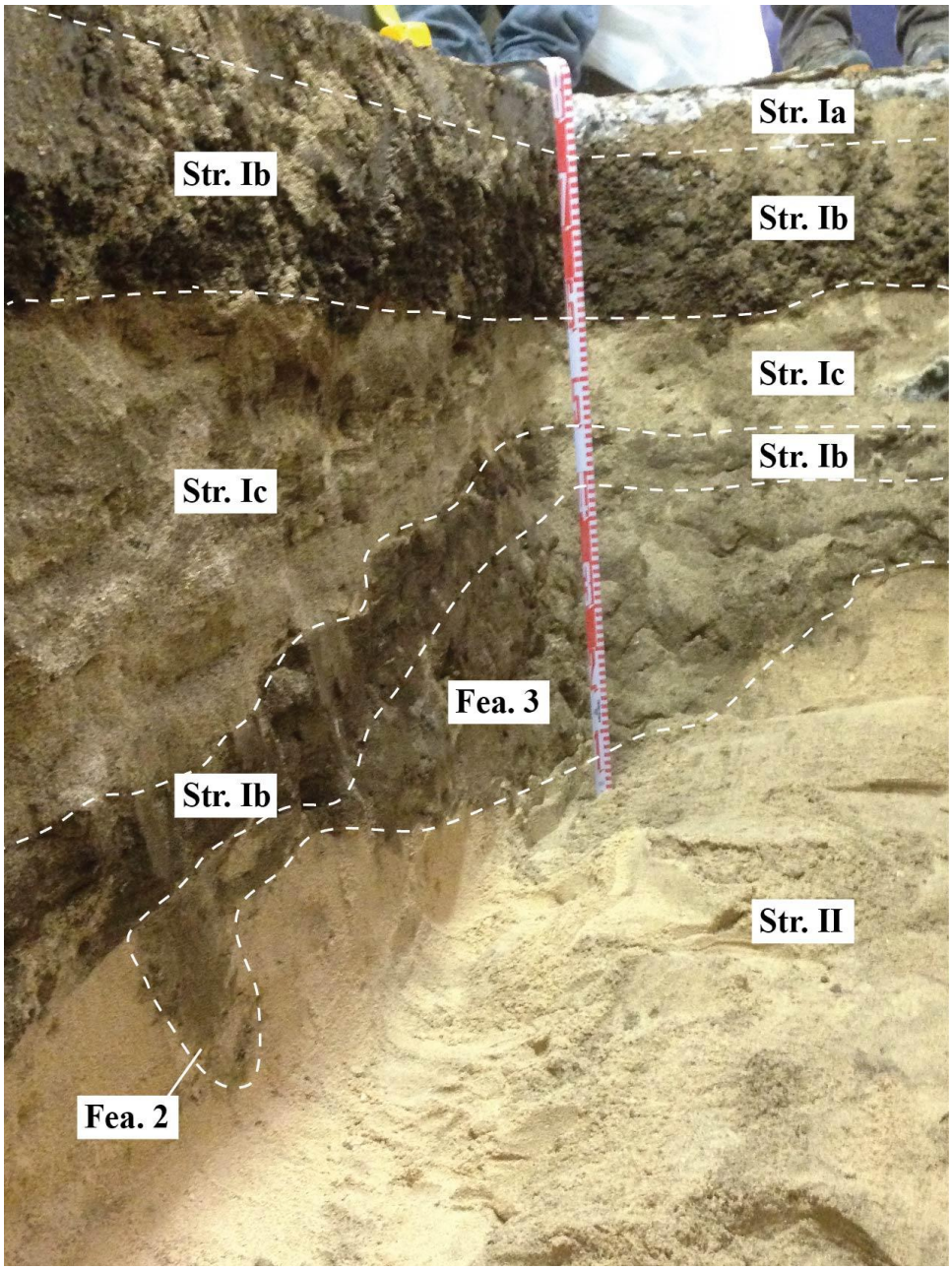

Figure 77. Photograph of the southeast and southwest walls of Trench 10, showing Stratum Ic truncating SIHP # -7598 Feature 2 (*left*) and Feature 3 (*center*).

4.3.11 Trench 11 (SIHP # -7598)

Length:	3.1 m
Width:	0.6 m
Maximum Depth:	1.96 mbs
Orientation:	350/170° TN

Trench 11 was positioned approximately 0.5 m away from Trench 7 within the carport on Prince Edward Street (Figure 78). It was positioned at angle due to the location of utilities. The stratigraphy of Trench 11 consisted of concrete (Stratum Ia), overlying imported gravelly loamy sand fill (Stratum Ib), overlying sandy clay loam fill (Stratum Ic), overlying a culturally enriched loamy sand A-horizon (Stratum II, SIHP # -7598), overlying Jaucas sand (Stratum III), overlying marine sand (Stratum IV), (Figure 79 through Figure 82, and Table 19). Four pit features (SIHP # -7598, Feature 4 through 7) were identified in the trench.

Stratum Ib (10-75 cmbs) consisted of gravelly imported fill. It was associated with construction pits in the south and north ends of the trench that truncated Strata II and III. Archaeologists collected iron wire nails (post-1894) from Stratum Ib (Acc. # 53; Table 20), as well as *Canis lupus familiaris* fragments (1.3 g) and 10 small fragments of unidentifiable bone. These fragments ranged in size from a quarter to smaller than a dime, and included both long-bone fragments and cancellous bone fragments. They could not be determined to be either definitively human or definitively non-human. These were reinterred (25-30 cmbs) prior to closing the trench. A layer of sandy clay loam (Stratum Ic) truncated Stratum II on the west side of the trench. A pit associated with this layer was visible in the west sidewall (Figure 80). It continued through Stratum II and was intrusive into Stratum III. It is likely associated with construction activities.

Stratum II (30-55 cmbs) was a culturally enriched A-horizon (SIHP # -7598) that developed atop Jaucas sand (Stratum III). The upper boundary was clearly truncated by Strata Ib and Ic. The A-horizon in Trench 11 was notably less disturbed than in adjacent Trench 7, where the A-horizon had been completely removed and only the pit feature (Feature 1 of SIHP # -7598) remained. Extensive root staining was visible in the layer. Portions of Stratum II in the east wall were very dark. This area of staining may be associated with SIHP #-7598 Feature 4, a large, stepped pit (Figure 81).

Stratum II contained dense concentrations of charcoal and cultural material, including fragmented faunal bones, shells, and metal fragments. The faunal remains consisted of *Sus scrofa* phalanges, metatarsus fragments and a molar fragment (47.9 g). Archaeologists collected bulk samples for screening in the field and in the lab. A small amount of shell midden was recovered, consisting of *Brachidontes crebristriatus* (0.1 g), *Ctena bella* (0.1 g), *Tellina palatam* (2.3 g), *Turbo sandwicensis* (0.3 g), and *Echinometra mathaei* (0.1 g). Stratum II is associated with large area of charcoal staining visible in the east sidewall that extended to 100 cmbs (Figure 79 and Figure 81). Two 3 l. bulk samples were collected from this area and screened. They contained

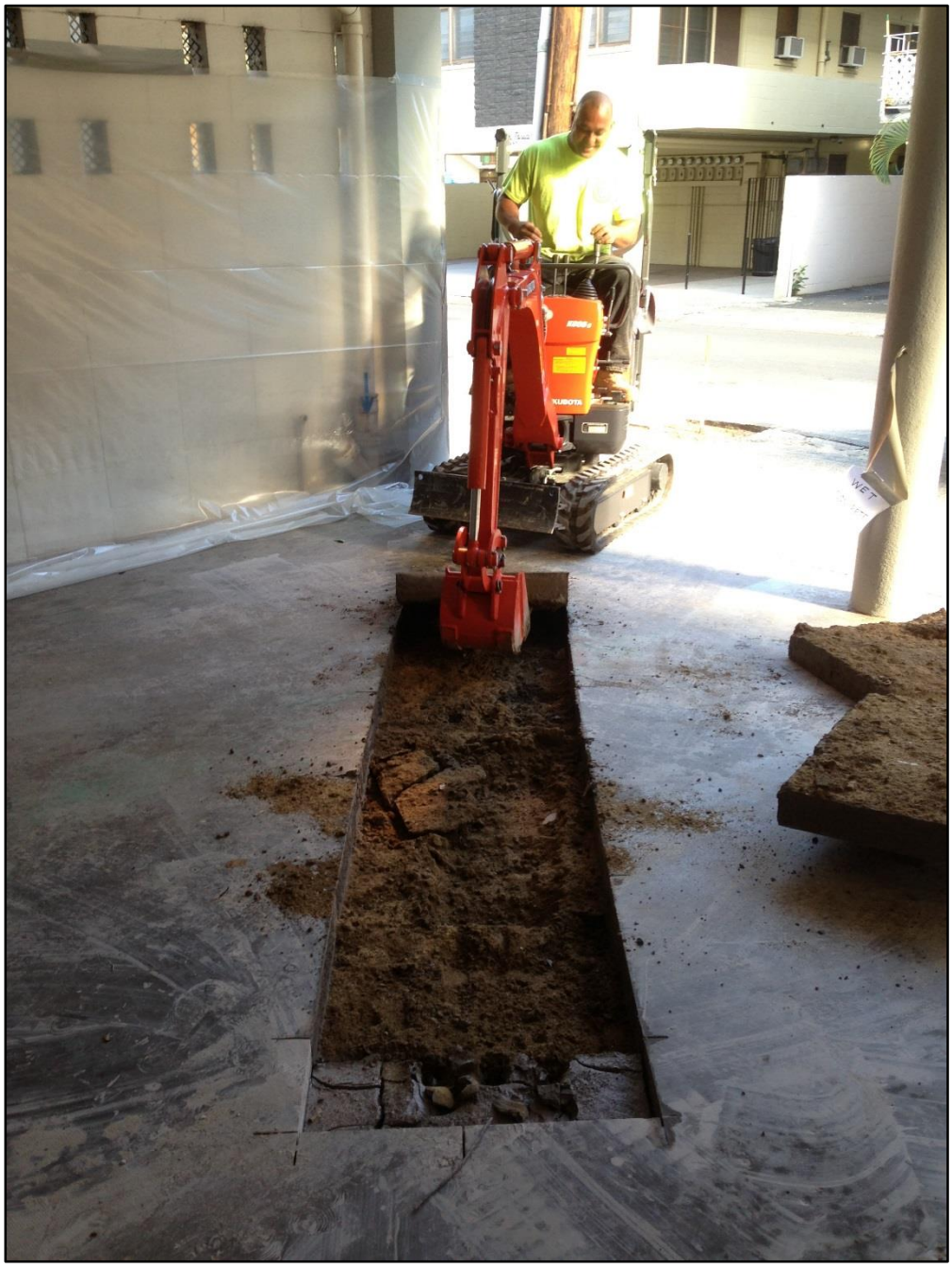

Figure 78. Trench 11 general overview, view to the north

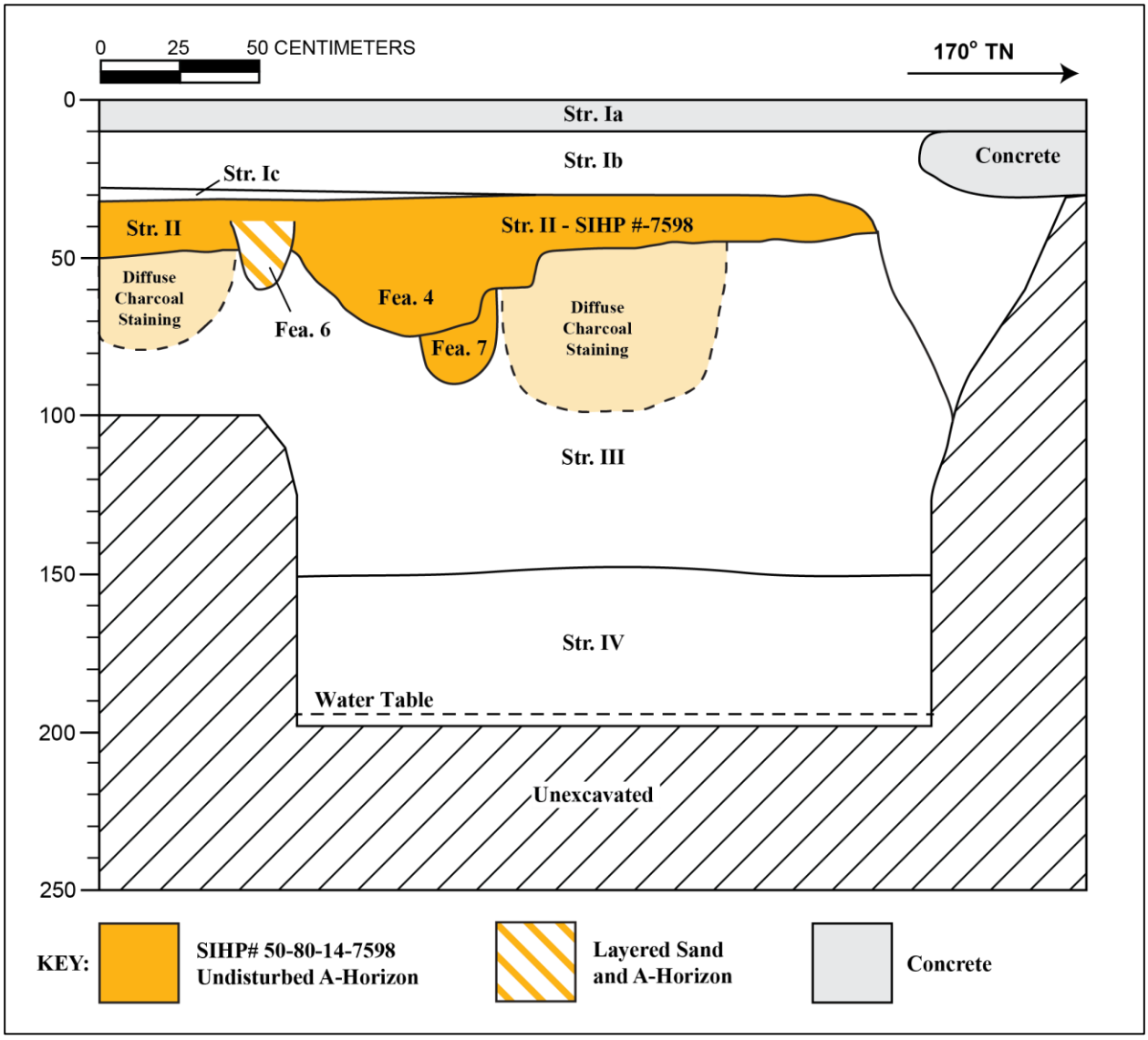

Figure 79. Trench 11 profile of east sidewall

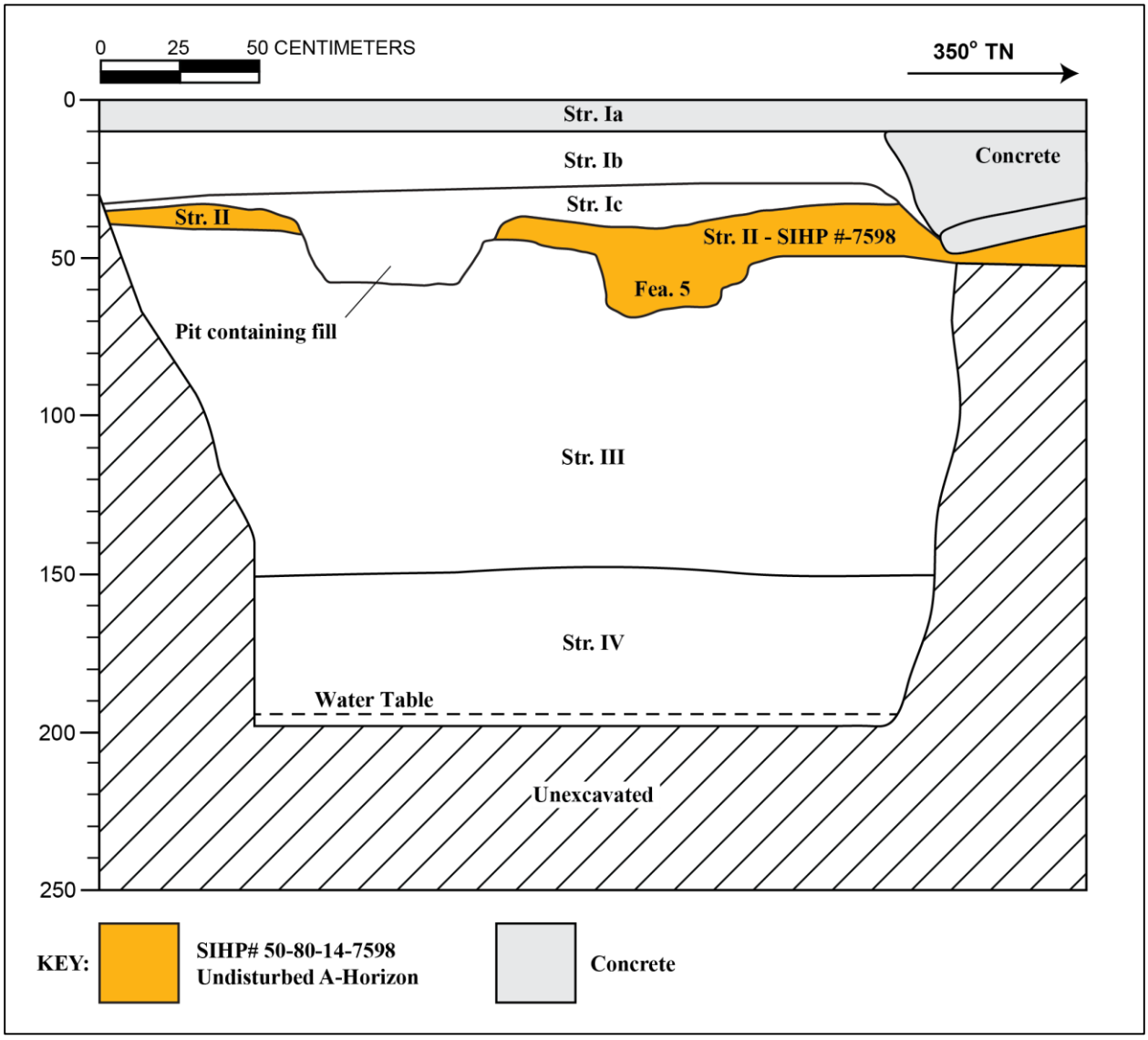

Figure 80. Trench 11 profile of west sidewall

Table 19. Trench 11 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Ib	10-75	Fill; 2.5Y 6/4, light yellowish brown; gravelly loamy medium sand; structureless, single-grain; moist loose consistency; non-plastic; mixed origin; clear smooth lower boundary; no roots observed; imported gravelly loamy sand fill contained glass, metal and shells
Ic	27-60	Fill; 10YR 2/2, V. dark brown; sandy loamy clay; weak medium coarse crumb structure; moist friable consistency; slightly plastic; mixed origin; clear smooth lower boundary; no roots observed; fill
II (SIHP # -7598)	30-50	Natural A-horizon; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt smooth lower boundary; common medium roots, root staining present; culturally enriched A-horizon (SIHP # -7598) containing faunal bones (likely pig), midden and metal fragment; Features 4 and 5 originate within this stratum
Feature 4	50-75	Pit feature; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt irregular boundary; common medium roots; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); large, stepped pit of indeterminate function containing lots of charcoal
Feature 5	50-68	Pit feature; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt irregular boundary; common medium roots; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing charcoal and marine shell midden;
Feature 6	40-95	Pit feature; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt irregular boundary; common medium roots; upper portion of feature fill () consisted of banded sand and Stratum II material; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing charcoal and marine shell midden;
Feature 7	60-90	Pit feature; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt irregular boundary; common medium roots; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing charcoal and marine shell midden;
Charcoal Staining	48-100	Charcoal staining; 10YR 6/4 yellowish brown; fine loamy sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; clear irregular boundary; common medium roots; contained charcoal and marine shell midden; Area of diffuse charcoal staining associated with Stratum II (SIHP # -7598) and Feature 4
III	37-150	Natural; 2.5Y 7/3, pale yellow; fine medium sand; structureless single-grain; moist loose consistency; non-plastic; marine origin; clear smooth lower boundary; common medium roots, extensive root staining present; Jaucas sand containing faunal bone (likely pig),
IV	150-196 (BOE)	Natural; 10YR 7/2, light gray; sand; structureless single grain; wet slightly sticky consistency; slightly plastic; marine origin; lower boundary not visible; no roots observed; Marine sand, water table at 1.95 mbs

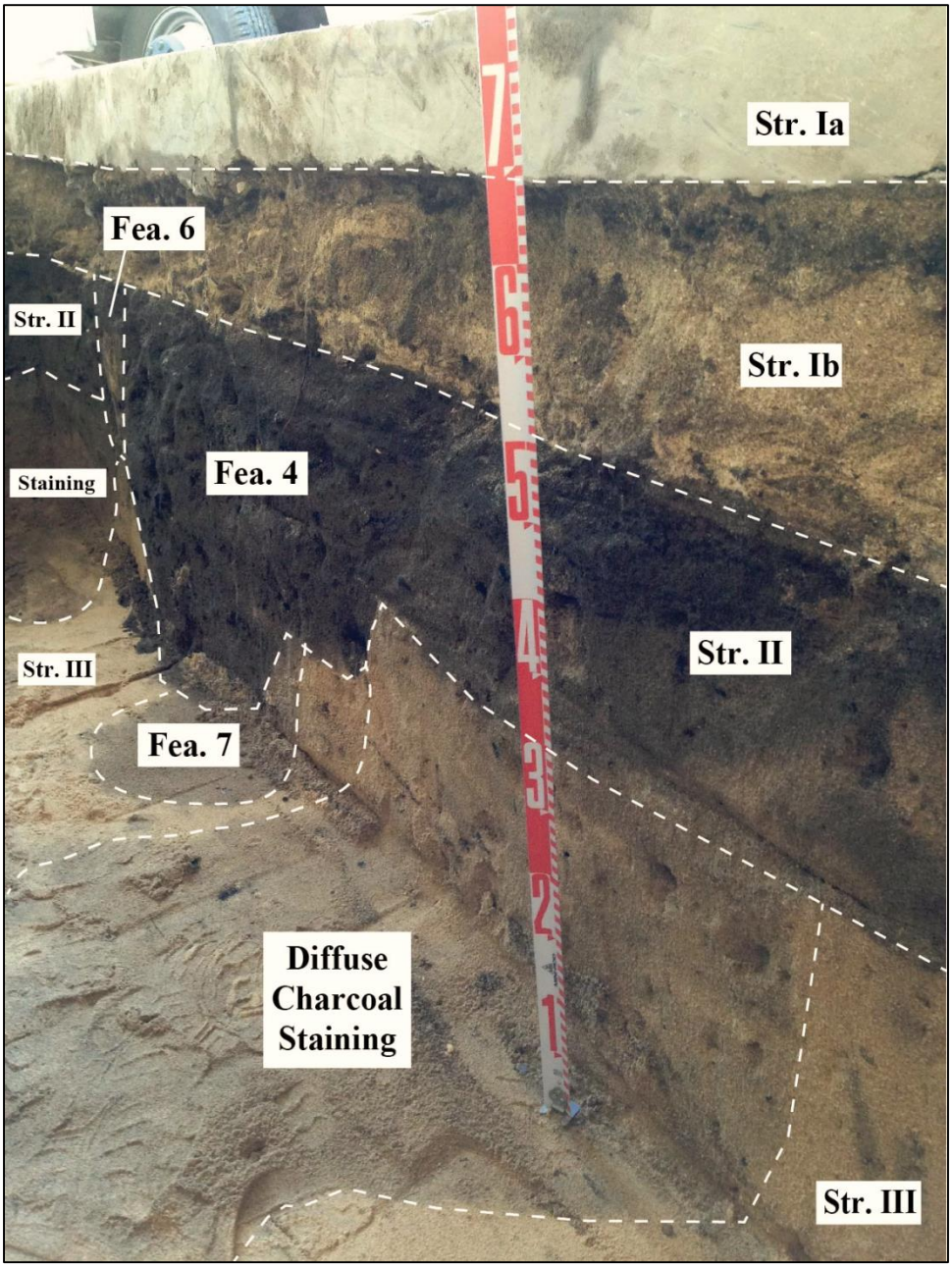

Figure 81. Trench 11 east sidewall, showing stratigraphy and the diffuse charcoal staining associated with Stratum II (SIHP # - 7598) and Features 4, 6 and 7; view to the northeast

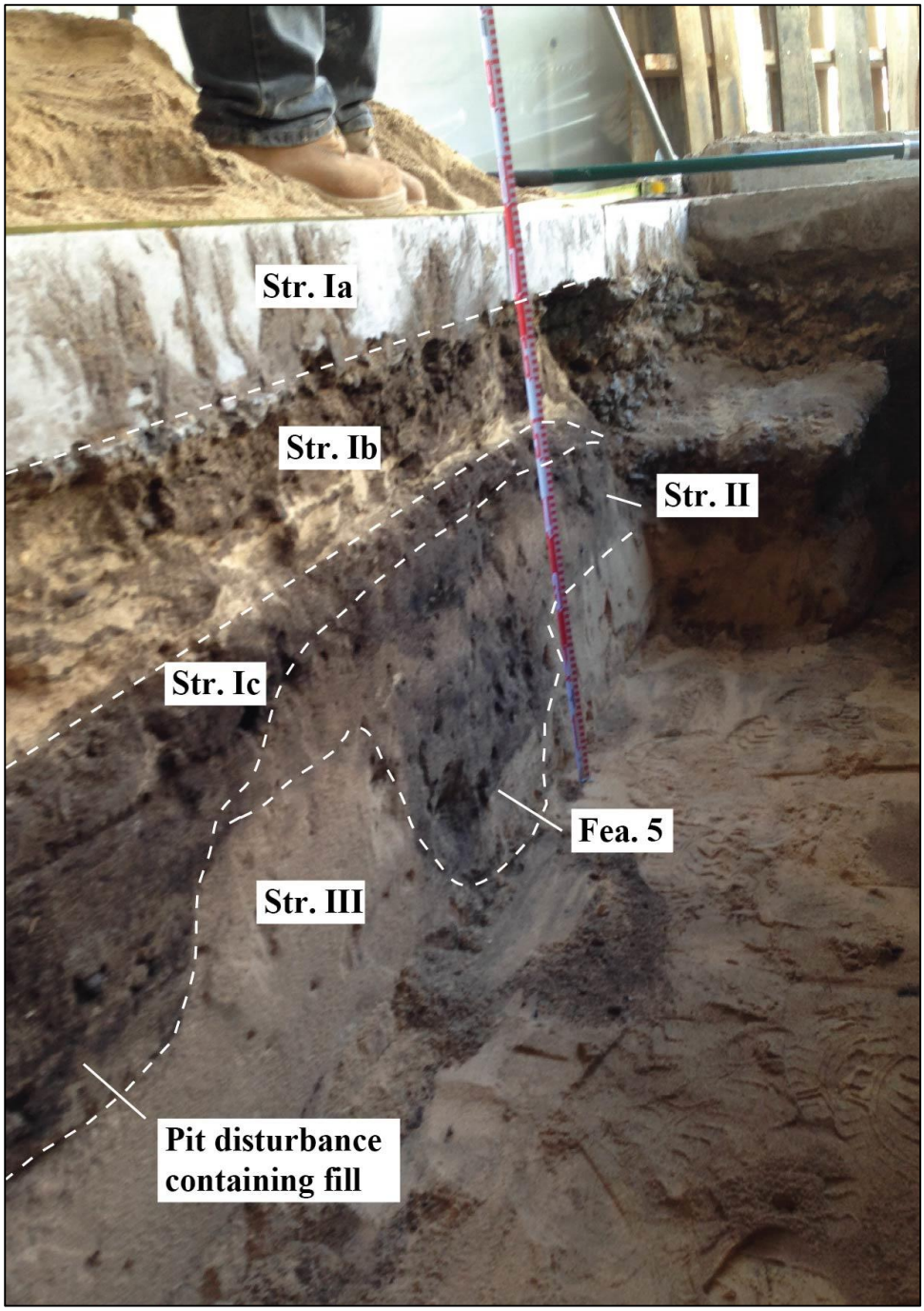

Figure 82. Trench 11 west sidewall, showing stratigraphy, a pit disturbance, the truncated A-horizon (Stratum II, SIHP # - 7598) and Feature 5; view to the north

Table 20. Artifacts collected from Trench 11

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
53	T-11	Ib	10-26	6	Metal	Iron wire nails (post-1894)

midden material consisting of Osteichthyes (fish) (0.1 g), *Strombus* sp. (0.5 g) and *Tellina palatam* (1.3 g). *Cypraea* sp. (0.6 g), *Turbo sandwicensis* (0.3 g), *Echinometra mathaei* (0.1 g), and burned *Crustacea* (0.1 g).

SIHP # -7598 Feature 4 was a large irregular pit feature observed in the floor and east sidewall of Trench 11 (Figure 79, Figure 81, Figure 83, and Figure 84). It was 85 cm long and 25 cm deep (from 50-75 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand. The feature fill was very dark and contained lots of charcoal flecking and staining, but contained no midden material. The southern edge had a stepped appearance. The feature is also associated with the large area of charcoal staining visible in the east sidewall. A 3 l. bulk sample of the feature was screened. No cultural material was identified. The large amount of charcoal and intense staining indicates that Feature 4 was likely associated with a burn event. However, there was no conclusive evidence for its use, so the function of SIHP # -7598 Feature 4 remains indeterminate.

SIHP # -7598 Feature 5 was a large irregular pit feature observed in the floor and west sidewall of Trench 11 (Figure 80, Figure 82, Figure 83, and Figure 84). It was 60 cm long and 18 cm deep (from 50-68 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand. The feature fill was dark and contained charcoal flecking and staining. A 3 l. bulk sample of the feature was screened. It contained a very small amount of marine shell midden, consisting of *Tellina palatam* (1.5 g) and *Turbo sandwicensis* (1.6 g). As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 5 remains indeterminate.

SIHP # -7598 Feature 6 was a deep pit feature observed in the floor and east sidewall of Trench 11 (Figure 79, Figure 81, Figure 83, and Figure 84). It was 28 cm in diameter and 55 cm deep (from 40-95 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand. The upper portion of the feature fill consisted of banded, layered sand (Stratum III) and A-horizon material (Stratum II). A 2.5 l. bulk sample of the feature was screened. It contained a very small amount of midden, consisting of Osteichthyes (0.5 g), *Isognomon californnicum* (0.4 g) and *Turbo sandwicensis* (0.7 g). As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 5 remains indeterminate.

SIHP # -7598 Feature 7 was a pit feature observed in the floor and east sidewall of Trench 11 (Figure 79, Figure 81, and Figure 83). It was 20 cm long and 30 cm deep (from 60-90 cmbs).

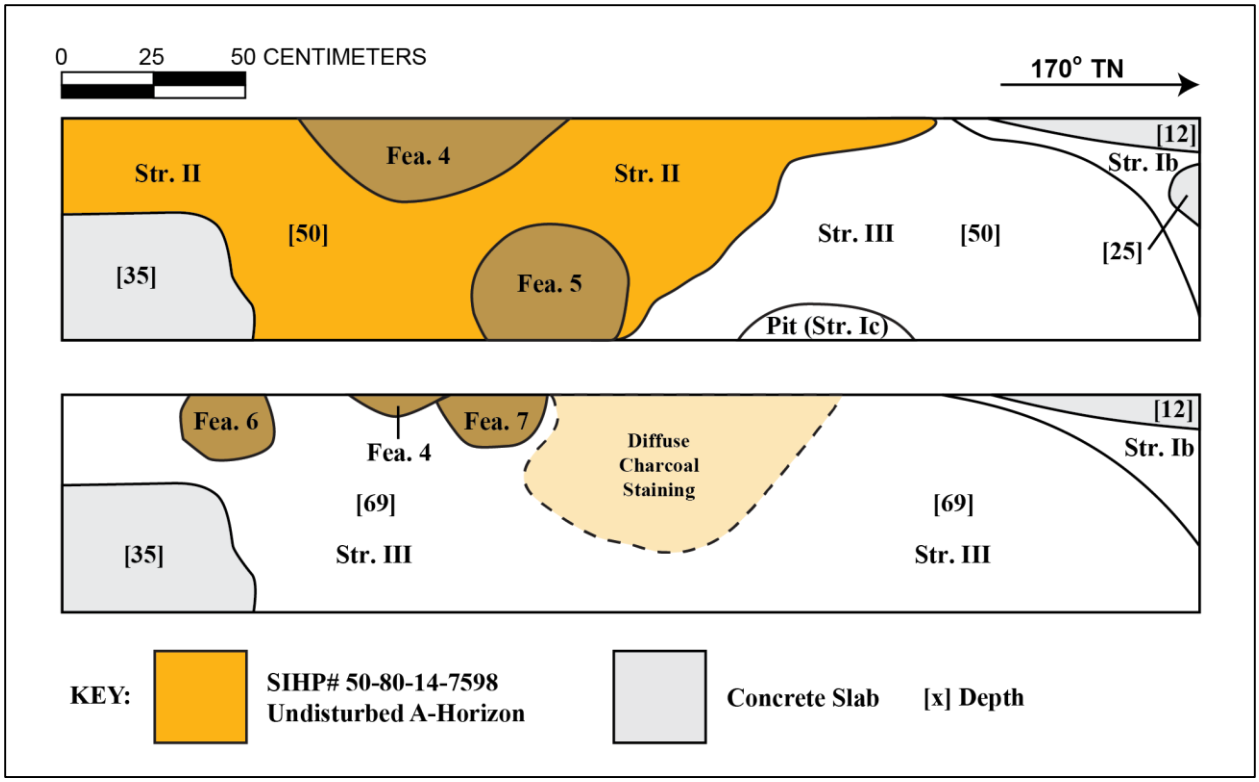

Figure 83. Trench 11 plan views

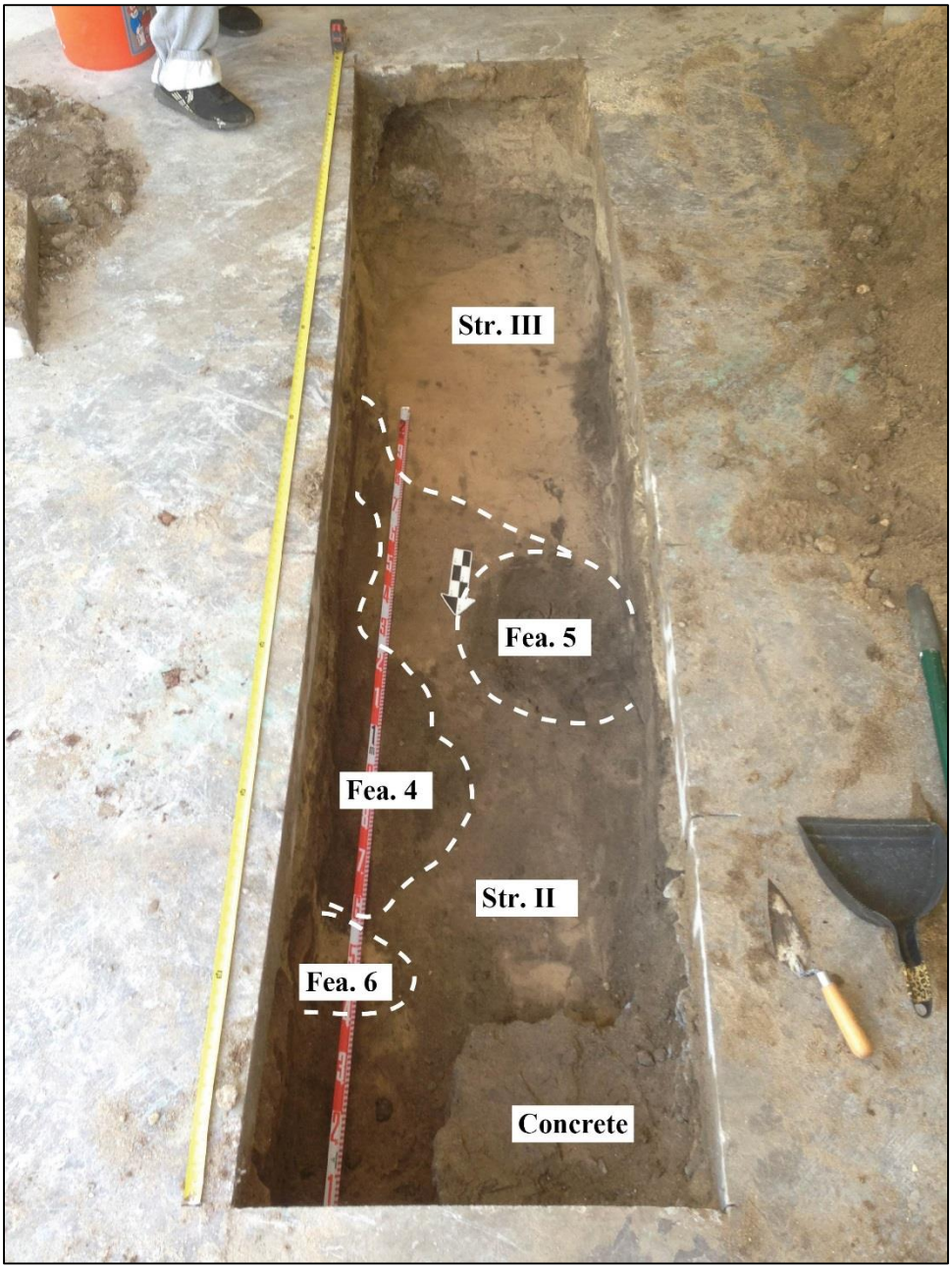

Figure 84. Photograph showing the floor of Trench 11, the culturally enriched A-horizon (Stratum II) and SIHP # -7598 Feature 4, 5, and 6.

The upper portion of the feature was truncated by Feature 4, but it likely originated in the former A-horizon (stratum II). The feature intruded into the underlying Jaucas sand. The feature fill was dark, but did not contain the same level of charcoal flecking as observed in Feature 4 and the adjacent areas of extensive staining. A 3 l. bulk sample of the feature was screened. It contained a very small amount of midden, consisting of Osteichthyes (0.5 g), *Tellina palatam* (1.3 g) and *Strombus* sp. (0.5 g). The sides and shape of Feature 7 were well defined; however, it is possible that Feature 7 represented charcoal staining that had leeched downward from Feature 4. As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 7 remains indeterminate.

Hand excavation continued through the Jaucas sand (Stratum III) and underlying marine sand (Stratum IV). Extensive root staining and charcoal staining were observed throughout Stratum III. Faunal remains were recovered from Stratum III as well, consisting of *Sus scrofa* bone fragments (9.5 g) recovered from just beneath the cultural layer (45-50 cmbs). Excavation continued to the water table which was encountered within Stratum IV at 1.95 mbs (Figure 85).

Figure 85. Trench 11 showing portion of BOE, water table visible; view to the west

4.3.12 Trench 12 (SIHP # -7598)

Length:	3.06 m
Width:	0.62 m
Maximum Depth:	1.9 mbs
Orientation:	232/52° TN

Trench 12 was located on the lanai of the *makai* apartment in the Prince Edward apartment building, in the southernmost corner of the project area (Figure 86) near Trench 16. Excavation of Trench 12 revealed a buried natural land surface (A-horizon) containing cultural midden material and one pit feature (Stratum II; SIHP # -7598 Feature 8). The stratigraphy of Trench 12 consisted of a concrete slab (Stratum Ia), overlying imported fill and construction debris (Stratum Ib), which was intrusive into a layer of redeposited A-horizon material (Stratum Ic). The redeposited A-horizon material (Stratum Ic) truncated an intact culturally enriched A-horizon (Stratum II) which was overlying three natural layers consisting of medium grained Jaucas sand (Stratum III), medium grained marine sand (Stratum IV), and coarse grained marine sand (Stratum V) (Figure 87 through Figure 91, and Table 21).

Stratum Ib (10-73 cmbs) was a layer of mixed brown loamy sand fill containing construction debris (concrete, nails, wire, cinder block, etc.). Stratum Ib also contained a very small amount faunal material including *Chelonia mydas* (0.1 g), and several small fragments of unidentifiable bone, including one 2 inch long-bone fragment. Stratum Ib was intrusive into Stratum Ic and Stratum III. Several pits (Figure 88 and Figure 89) were associated with this layer. Historic to modern period artifacts were found within these pits, including a rusty wire nail (Acc. # 55; Table 22). Bulk samples from these pits contained faunal material, including unidentified (non-human) mammal bone (0.4 g), *Canis lupus familiaris* (0.1 g), *Sus scrofa* (0.4 g), and dime size fragments of unidentifiable bone, as well as marine midden material, including Osteichthyes Scaridae (*uhu*, 0.1 g), other Osteichthyes (fish) (0.2 g), *Brachidontes crebristriatus* (0.4 g), *Turbo sandwicensis* (0.3 g), *Isognomon californnicum* (0.1 g), *Nerita picea* (0.3 g), *Echinometra mathaei* (0.2 g) and Echinoidea mouth parts/tests (0.5 g). The presence of this midden material and visible sand lenses within Stratum Ib suggests mixing with the underlying layers of redeposited A-horizon (Stratum Ic), intact A-horizon (Stratum II), and sand (Stratum III). Their appearance, association with construction debris, and modern material content indicate that these pits were probably the products of modern construction and landscaping activity.

Stratum Ic (23-69 cmbs) was a fill layer containing redeposited A-horizon material. There was an abrupt, linear boundary between Stratum Ic and the underlying intact A-horizon (Stratum II, SIHP # -7598) and Jaucas sand (Stratum III), (Figure 87 through Figure 90). The appearance of the boundary suggests that the former land surface was removed during grading, leaving only a small, deep portion intact (Stratum II, SIHP # -7598 Feature 8). Stratum Ic contained historic debris, faunal bone, and midden material. Historic artifacts included rusted nails (Acc. # 54) and a small white polyethylene (post-1940s) fragment (Acc. # 82; Table 22). Faunal bone from Stratum Ic consisted of a *Canis lupus familiaris* phalanx and vertebrae fragments (7.6 g), as well several dime to quarter size medium mammal bone fragments. The invertebrate midden from Stratum Ic consisted of *Brachidontes crebristriatus* (0.1 g), *Periglypta*

Figure 86. Trench 12 general overview, excavation in progress; view to the west

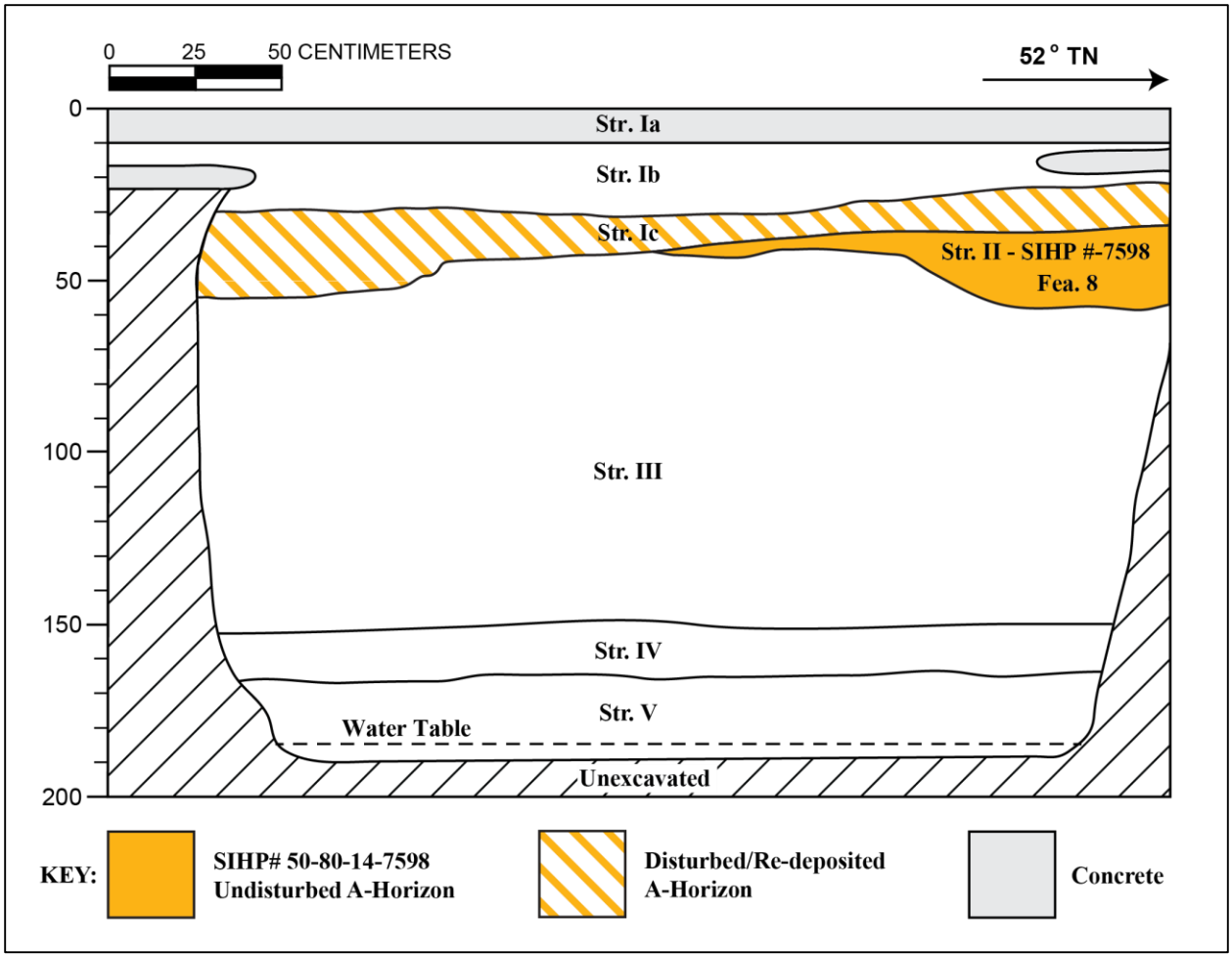

Figure 87. Trench 12 profile of northwest sidewall

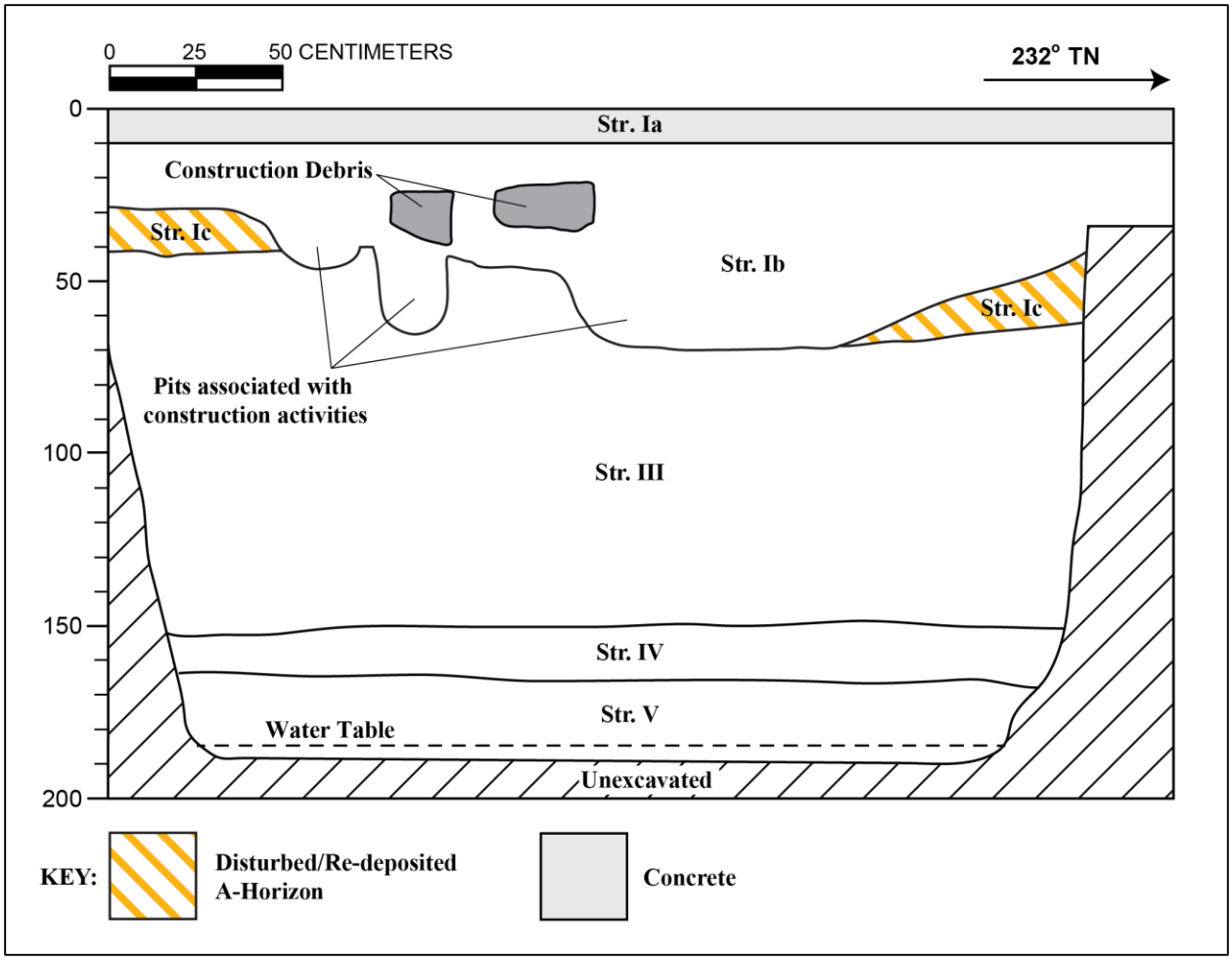

Figure 88. Trench
12 profile of southeast sidewall

Table 21. Trench 12 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Ib	10-73	Fill; 10YR 3/3, dark brown with many very fine 10YR 8/3 mottles; gravelly loamy medium sand; weak very fine granular structure; moist loose consistency; non-plastic; mixed origin; abrupt smooth lower boundary; few fine roots; fill deposit contained construction debris (concrete, metal wire, cinder block) and possible turtle bone
Ic	23-69	Fill; 10YR 3/3, dark brown; loamy medium sand; weak very fine granular structure; moist loose consistency; non-plastic; mixed origin; abrupt broken/discontinuous lower boundary; few fine to medium roots; redeposited A-horizon material containing faunal bone, midden, charcoal, indeterminate bone, nails, plastic and ceramic;
II	36-60	Natural A-horizon; 10YR 3/2, very dark grayish brown ; loamy medium sand; weak very fine granular structure; moist loose consistency; non-plastic; mixed origin; clear irregular lower boundary; few fine to medium roots; culturally enriched A-horizon (SIHP # -7598)
Feature 8	44-60	Pit feature; 10YR 3/1, very dark gray; loamy medium sand; weak very fine granular structure; moist loose consistency; non-plastic; mixed origin; abrupt irregular lower boundary; few fine to medium roots; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing a very small amount of marine shell midden
III	40-150	Natural; 2.5YR 8/4, pale yellow; medium sand; structureless single grain; moist loose consistency; non-plastic; marine origin; clear smooth lower boundary; few medium roots; Jaucas sand
IV	150-168	Natural; 10Y 8/1, light greenish gray; medium sand, structureless single-grain; moist loose consistency; non-plastic, marine origin, clear wavy boundary, no roots observed; marine sand
V	163-BOE (190)	Natural; 2.5Y 7/2, light gray; coarse sand; structureless single-grain; wet non-sticky consistency; non-plastic, marine origin; lower boundary not visible; no roots observed; very coarse with many shell fragments, water table at 185

Table 22. Artifacts collected from Trench 12

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
54	T-12	Ic	23-69	3	Metal	Iron nails – too corroded to type
55	T-12	Ib	40-65	1	Metal	Iron wire nail (post-1894)
82	T-12	Ic	40-47	1	Plastic	White polyethylene fragment (post-1940s)

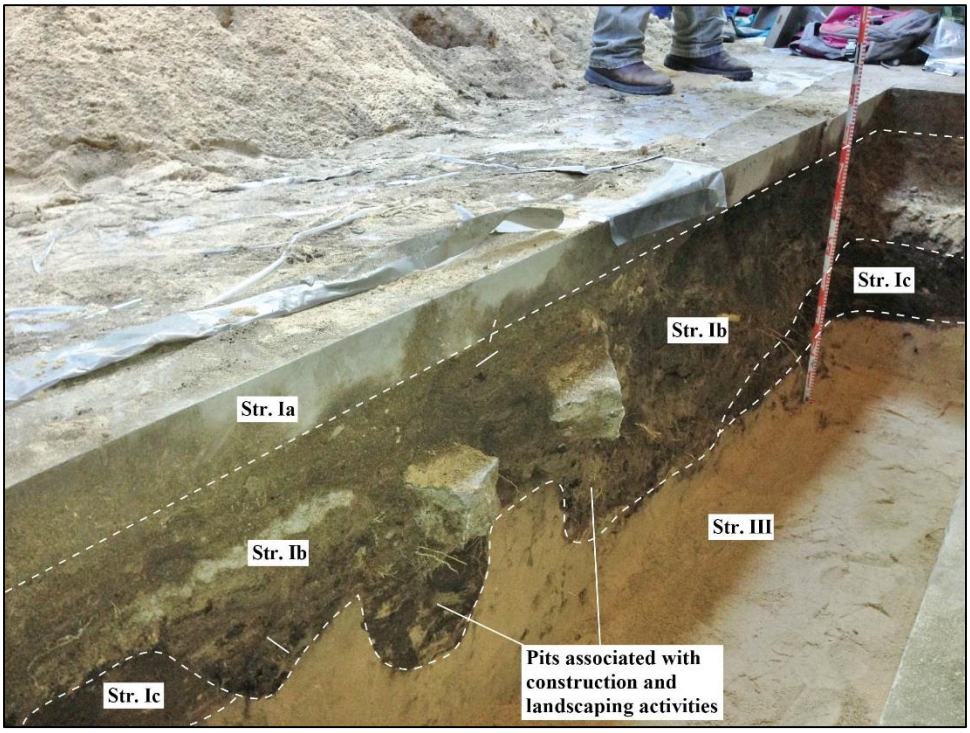

Figure 89. Trench 12 southeast wall showing stratigraphy, prior to installation of shoring; view to the south

Figure 90. Trench 12 northwest profile, showing stratigraphy, shoring, prior to installation of shoring; view to the northwest

reticulata (2 g), *Pinctada radiata* (0.1 g), *Trochus intexus* (0.5 g), *Turbo sandwicensis* (4.2 g), *Echinometra mathaei* (0.1 g), and *Echinothrix diadema* (0.1 g). The unidentifiable bone fragments from Stratum Ib and Stratum Ic could not be determined to be either human or non-human; these were reinterred (23-30 cmbs) prior to closing the trench.

Stratum II (36-50 cmbs) was a culturally enriched A-horizon (SIHP # -7598) that developed atop Jaucas sand (Stratum III). The upper boundary was clearly truncated by Strata Ib and Ic (Figure 87 and Figure 90). The A-horizon remnant was likely an area of deeper deposits left behind after grading activities. It is associated with SIHP # -7598 Feature 8, a large basin shaped feature observed in the floor and northwest sidewall of Trench 12 (Figure 91). It was at least 70 cm long, 50 cm wide and 16 cm deep (from 44-60 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand (Stratum III). A 3 l. bulk sample of the feature was screened. It contained a very small amount of midden, consisting of Osteichthyes (0.1 g) and *Conus* sp. (1.5 g). As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 8 remains indeterminate.

No cultural material was observed in Strata III (40-150 cmbs), IV (150-168 cmbs), or V (163-190 cmbs). The water table was encountered at 185 cmbs, and the BOE was at 190 cmbs.

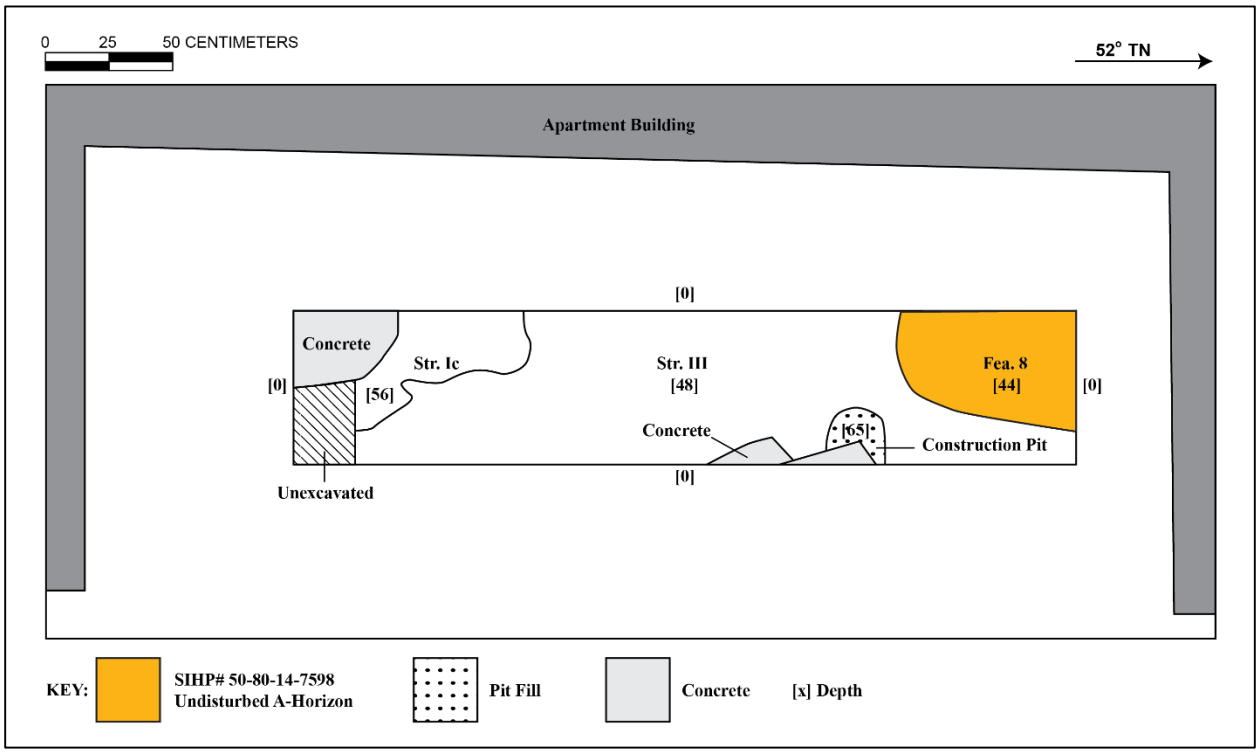

Figure 91. Trench 12 plan view

4.3.13 Trench 13 (SIHP # -7598)

Length:	3.04 m
Width:	0.61 m
Maximum Depth:	1.95 mbs
Orientation:	328/148° TN

Trench 13 was located inside the retail space fronting Koa Ave in the Hale Waikiki building, along the rear wall (Figure 92). The stratigraphy of Trench 13 consisted of concrete (Stratum Ia), overlying a gravel base course (Stratum Ib), overlying imported fill containing historic material (Stratum Ic), overlying clay loam fill mixed with reworked and/or redeposited A-horizon material (Stratum Id), overlying a natural A-horizon (Stratum II, SIHP # -7598), overlying Jaucas sand (Stratum III), overlying grey marine sand (Stratum IV) (Figure 93, Figure 94, and Table 23).

Stratum Ic (12-85 cmbs) consisted of very dark grayish brown loamy sand containing abundant historic materials (Acc. # 56–80; Table 24). Glass artifacts (Acc. #s 56-64) included a complete brown medicine bottle with a maker’s mark and tooled lip produced after 1880 (Acc. # 56), machine blown bottle fragments produced after 1903 (Acc. # 57 and 63), fragments from a mold-blown dark olive spirits bottle produced before 1920 (Acc. # 59), and numerous clear glass shards. Ceramic fragments (Acc. # 70 – 80) included a Kaolin pipe stem (Acc. # 72), a stoneware bottle fragment with brown salt glaze produced before the 1920s (Acc. # 73), rim and body fragments from Japanese porcelain vessel dating from the mid-nineteenth to early twentieth century (Acc. # 79), as well as variety of porcelain and whiteware shards. The narrowly dateable artifacts were mostly produced during the first two decades of the twentieth century. Stratum Ic also contained faunal bone consisting of *Canis lupus familiaris* lumbar vertebra fragments and a juvenile femur missing its epiphyses (6.1 g) as well as butchered *Bos* taurus rib fragments (57.3 g) cut with a metal blade. Stratum Ic appeared to be associated with the installation of a concrete building foundation that was located at the northwest end of the trench. Stratum Ic truncated Strata Id, II and III. Stratum Id (35-53 cmbs) consisted of charcoal stained clay loam containing charcoal, wire, ceramic fragments, and inclusions of the Stratum Ic material. The charcoal content suggests Stratum Id may have been mixed with A-horizon material.

Stratum II (45-74 cmbs) was a natural A-horizon (SIHP # -7598) that developed atop Jaucas sand (Stratum III). The upper boundary was truncated by Strata Id, though the deposit was thick compared to the A-horizon deposits seen in Trenches 10, 14 and 15. The lower boundary was clear, but showed signs of diffusion into Stratum III. It did not show the scalloping associated with intensive land use. Archaeologists screened 95 l. of material from Stratum II in the field. Twelve very small unidentifiable bone fragments (from 0.5 to 2.3 cm long), were collected from the Stratum II screened material. These could not be determined to be either human or non-human, and were reinterred at the same depth (40-60 cmbs) prior to closing the trench. In addition to the field screened material, a bulk sample was taken for analysis in the lab. No cultural material was identified during lab analysis of the bulk sample.

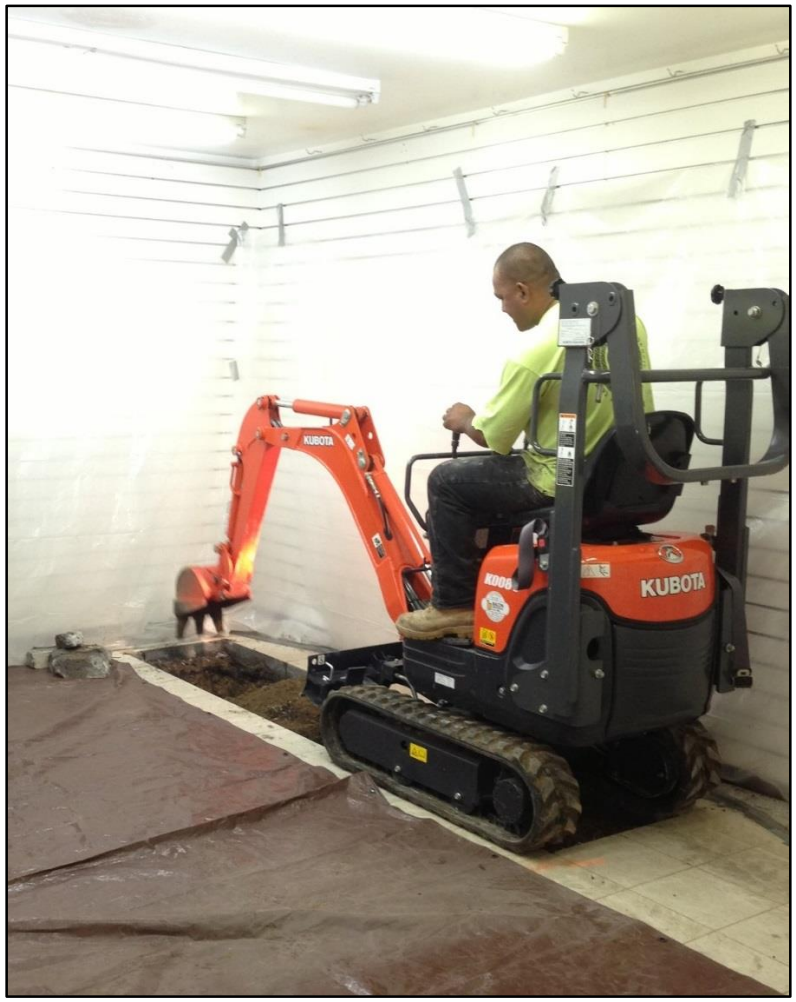

Figure 92. Trench 13 general location; view to the north

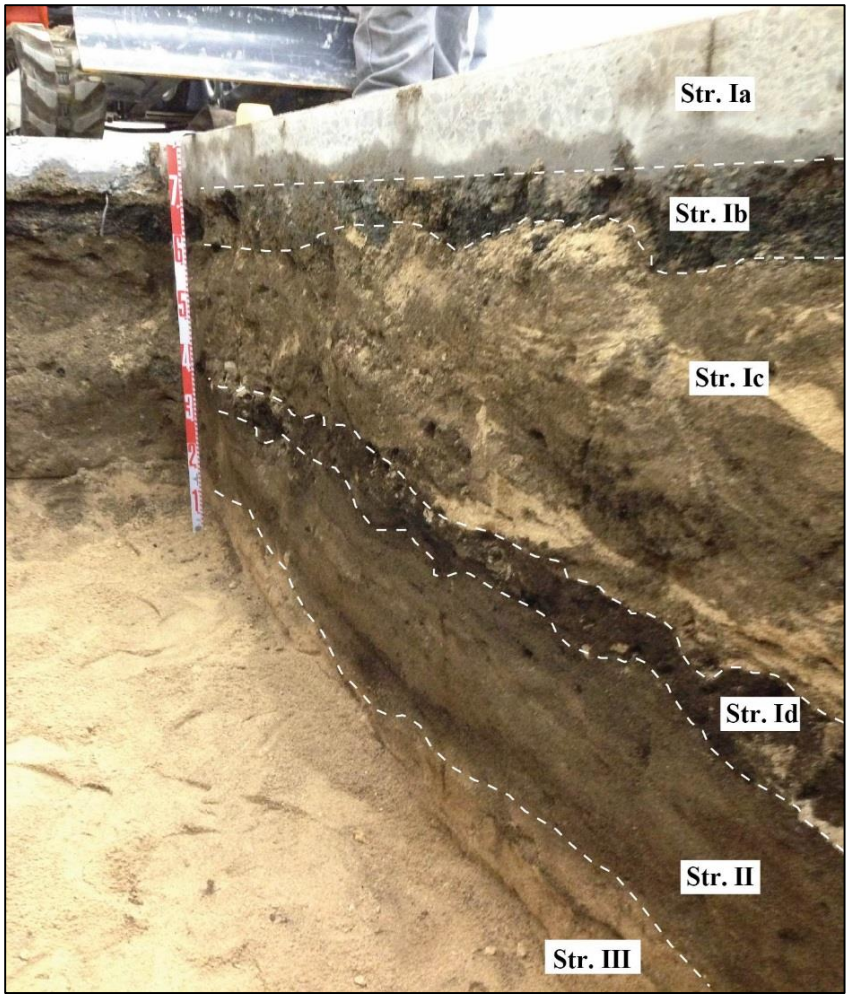

Figure 93. Southwest wall of Trench 13, showing stratigraphy, prior to installation of shoring; view to the south

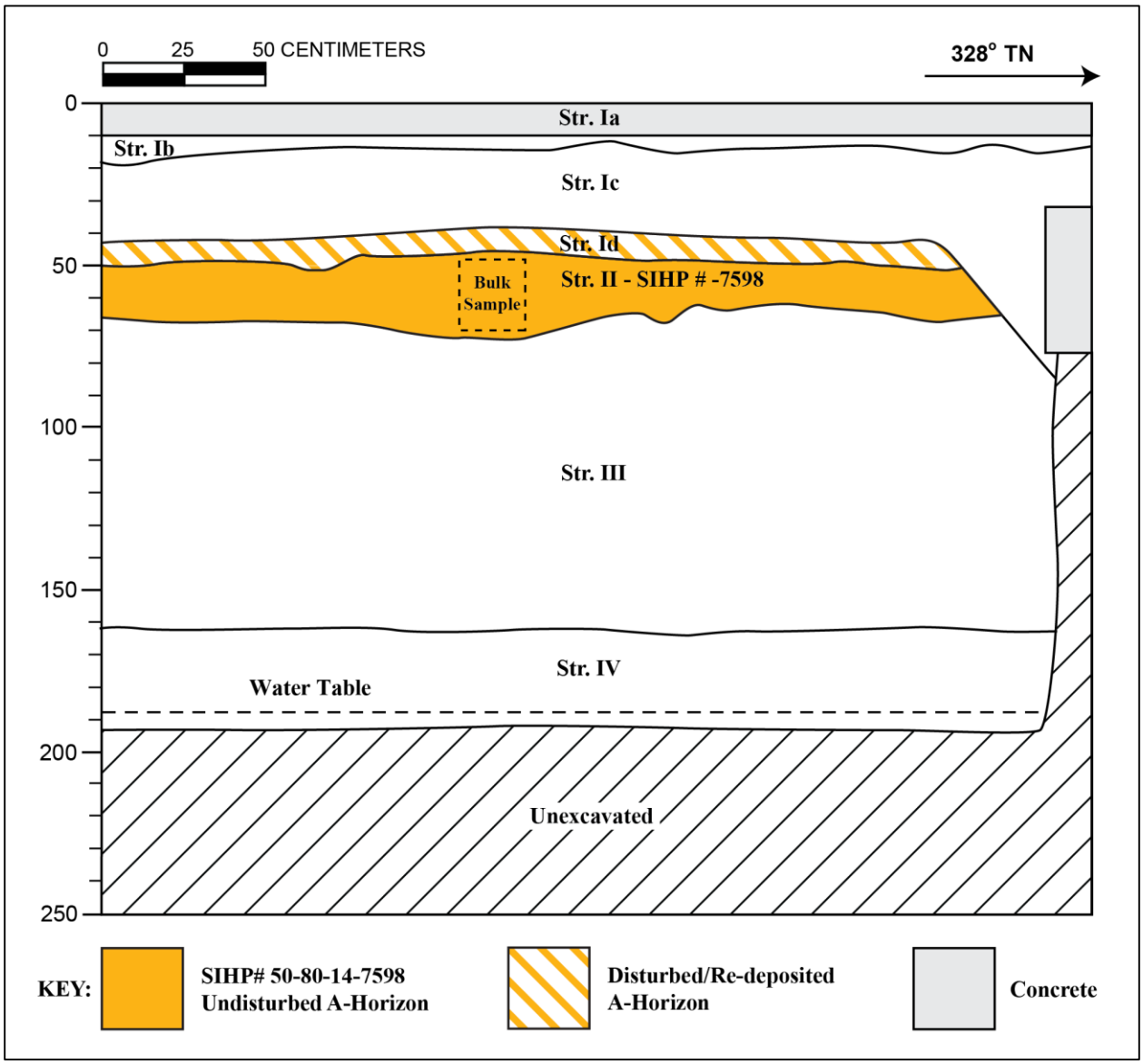

Figure 94. Trench 13 southwest wall profile

Table 23. Trench 13 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete/linoleum tile surface
Ib	10-18	Fill; 10YR 2/1, black; very gravelly medium coarse loamy sand; structureless single-grain; moist loose consistency; non-plastic; terrigenous origin; very abrupt smooth lower boundary; no roots observed; construction grade base course
Ic	12-85	Fill; 2.5Y 3/2, very dark grayish brown; fine – medium loamy sand; weak fine crumb structure; moist loose consistency; non-plastic; mixed origin; diffuse smooth lower boundary; no roots observed; imported loamy sand fill contained cultural material including wires, porcelain, milk glass, bottles, pipe, metal, hammer part, faunal, brick, porcelain fuse, and hand-painted porcelain, redeposited burnt trash layer.
Id	35-53	Fill; 7.5YR 2.5/2, very dark brown; clay loam; moderate fine crumb structure; moist very friable consistency; non-plastic; mixed origin; abrupt smooth lower boundary; no roots observed; redeposited A-horizon containing metal wire, charcoal, ceramic fragments and nails
II	45-74	Natural A-horizon; 10YR 4/3, brown; fine to medium loamy sand; weak fine crumb structure; moist loose consistency; non-plastic; mixed origin; clear smooth lower boundary; no roots observed; Natural A-horizon (SIHP # -7598) containing faunal remains and charcoal flecking
Feature 12	72-89	Pit feature; 10YR 4/3, brown; fine to medium loamy sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt smooth lower boundary; no roots observed; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); small pit of indeterminate function containing charcoal flecking
III	63-162	Natural; 2.5YR 7/4, pale yellow; medium sand; structureless single-grain; moist loose consistency; non-plastic; marine origin; diffuse smooth lower boundary; no roots observed; Jaucas sand
IV	162-195 (BOE)	Natural; 10YR 6/1, gray; medium sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; no lower boundary visible; no roots observed; Marine sand

Table 24. Artifacts collected from Trench 13

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Material Type	Comments
56	T-13	Ic	18-75	1	Glass	Complete brown glass medicine bottle, square base, two-piece cup mold, tooled prescription finish, “WYETH / 201” on base (post 1880 for tooled lip)
57	T-13	Ic	18-75	1	Glass	Amber bottle fragment, neck to lip, machine-blown, ABM crown finish and crimped metal cap (post-1903)
58	T-13	Ic	18-75	1	Glass	Clear bottle fragment, base and body, round base, two-piece cup mold (post 1870 for clear glass)
59	T-13	Ic	18-75	2	Glass	Dark olive bottle base and body and 1 body fragment, round base, mold-blown, no side seams, “C” embossed on base (pre-1920 for mold-blown bottles); possibly spirits bottle
60	T-13	Ic	18-75	5	Glass	Clear bottle glass body fragments (post-1870)
61	T-13	Ic	18-75	1	Glass	Clear pressed glass body fragment with incised lines; possible drinking glass
62	T-13	Ic	18-75	2	Glass	Clear bottle base to body fragments (pieces mend), round base; no side seams evident (post-1870); possible shot glass
63	T-13	Ic	18-75	1	Glass	Clear bottle base fragment, round base, Owens suction scar; machine blown (post-1903)
64	T-13	Ic	18-75	3	Glass	Milk glass fragments, one painted yellow on one side
65	T-13	Ic	18-75	2	Metal	Iron nails – too corroded to determine type
66	T-13	Ic	18-75	1	Composite	Ceramic fuse
67	T-13	Ic	18-75	1	Organic	Fabric item, possible handle
68	T-13	Ic	18-75	1	Organic	Kukui nut endocarp
69	T-13	Ic	18-75	1	Fired clay	Brick fragment
70	T-13	Ic	18-75	1	Ceramic	Earthenware flower pot rim to base fragment
71	T-13	Ic	18-75	3	Unknown	Unknown material, possibly mortar
72	T-13	Ic	18-75	1	Ceramic	Kaolin pipe stem, with incised: “CAPORAL / FRANCE”. Caporal was a strong, low-cost type of tobacco grown in France (mentioned in Manson 1891:6)
73	T-13	Ic	18-75	1	Ceramic	Stoneware bottle fragment, base to body, round base; brown salt glaze (pre-1920s; Lebo 1997:G-11; Lockhart 2010:98)
74	T-13	Ic	18-75	1	Ceramic	Refined earthenware (whiteware) plate fragment base to body; no decoration
75	T-13	Ic	18-75	1	Ceramic	Hollowware, porcelain rim to body fragment; no decoration
76	T-13	Ic	18-75	1	Ceramic	Tableware, porcelain rim to body fragment, scalloped rim, no decoration
77	T-13	Ic	18-75	1	Ceramic	Tableware, flat fragment, refined earthenware (whiteware) base fragment; partial stamp
78	T-13	Ic	18-75	3	Ceramic	Porcelain fragments from same vessel, painted red with gold leaves on one side, red swirls on other side, wavy rim; possibly Chinese
79	T-13	Ic	18-75	3	Ceramic	Hollowware, porcelain, rim (2) and body fragments (1); painted underglaze floral pattern (bamboo leaves) on exterior; probably Japanese (mid-19th to early 20th century)
80	T-13	Ic	18-75	1	Ceramic	Refined earthenware (whiteware) tableware body fragment; no decoration

SIHP # -7598 Feature 12 was a small pit feature observed in the floor of Trench 13 (Figure 95). It was at least 12 cm in diameter and 17 cm deep (from 72-89 cmbs). The feature originated from the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand (Stratum III). A bulk sample was taken from the bottom of this feature (83-89 cmbs) for later analysis in the lab, but contained no midden or other cultural material aside from charcoal flecking and staining. As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 12 remains indeterminate.

Stratum III consisted of Jaucas sand overlying marine sand (Stratum IV). Bulk samples were collected and screened. No cultural material was observed in Strata III (63-165 cmbs) or IV (165-195 cmbs). Shoring was installed after the trench was approximately 70 cm deep. The lowermost extent of Strata III and IV was excavated in three sections due to the collapsing sand. The southeast end was excavated to the water table first (Figure 96), then the center portion, and lastly the northwest end. The sidewalls at the northwest end collapsed before excavation could reach the water table. The water table was encountered at 190 cmbs and excavation terminated at 195 cmbs. The coral shelf was not reached.

Figure 95. Trench 13 Feature 12

Figure 96. Trench 13 at water table (BOE); view to the south

4.3.14 Trench 14 (SIHP # -7598)

Length:	3.0 m
Width:	0.6 m
Maximum Depth:	1.92 mbs
Orientation:	56/236° TN

Trench 14 was positioned near the stairs on the north side of the Prince Edward apartment building. The stratigraphy of Trench 14 consisted of concrete (Stratum Ia), overlying imported fill (Stratum Ib), truncating a disturbed natural A-horizon (Stratum II, SIHP # -7598), overlying Jaucas sand (Stratum III), grey marine sand (Stratum IV), and coarse marine sand with lots of shells (Stratum V), (Figure 97, Figure 98, and Table 25).

Trench 14 was heavily disturbed by previous construction events. A concrete footing extends halfway across the trench. The footing underlies Stratum Ib and truncates Stratum II (A-horizon). A utility pipe bisects the trench along its long axis. The associated pit (Pit 2) originates beneath Stratum Ib and cuts through Strata II and III (Figure 97 and Figure 98). The pit fill consisted of mottled, mixed loamy sand and contained *Bos taurus* bone fragments (29.5 g) that had been butchered with a metal blade. Another utility pit (Pit 1) originates beneath the concrete slab (Stratum Ia) and cuts through Stratum Ib into Pit 2.

Stratum II (30-45 cmbs) was a culturally enriched A-horizon (SIHP # -7598) that developed atop Jaucas sand (Stratum III). The upper boundary was clearly truncated by Strata Ib. Stratum II was discontinuous and heavily impacted. Only a few centimeters of the original undulating A-horizon remained (Figure 97). Stratum II contained a *Sus scrofa* maxillary fragment (1.7 g) and no midden. One feature (SIHP # -7598 Feature 9) originated in Stratum II.

SIHP # -7598 Feature 9 was an irregular basin shaped feature observed in the floor of Trench 14 (Figure 99). It was at least 35 cm long, 20 cm wide and 29 cm deep (from 38-67 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand (Stratum III). A 3 l. bulk sample of the feature was screened. It contained a piece of fire affected rock, faunal bone consisting of *Canis lupus familiaris* fragments (2.1 g), *Sus scrofa* fragments (1 g), and Scaridae (*uhu*, 0.3 g) and a small amount of marine shell midden. As the feature fill was not significantly different than Stratum II, and the form of the feature was very irregular and did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 9 remains indeterminate. It remains possible that it was the product of natural processes (e.g. plants, animals, erosion).

The remnants of the natural A-horizon (Stratum II) and underlying sand (Strata III-V) were excavated by hand. When the sand deposits became unstable, shoring was installed, and hand excavation resumed. The water table was encountered at 1.90 mbs (Figure 100). Excavation continued to 1.92 mbs in the center of the trench, after which the walls became unstable. The coral shelf was not encountered.

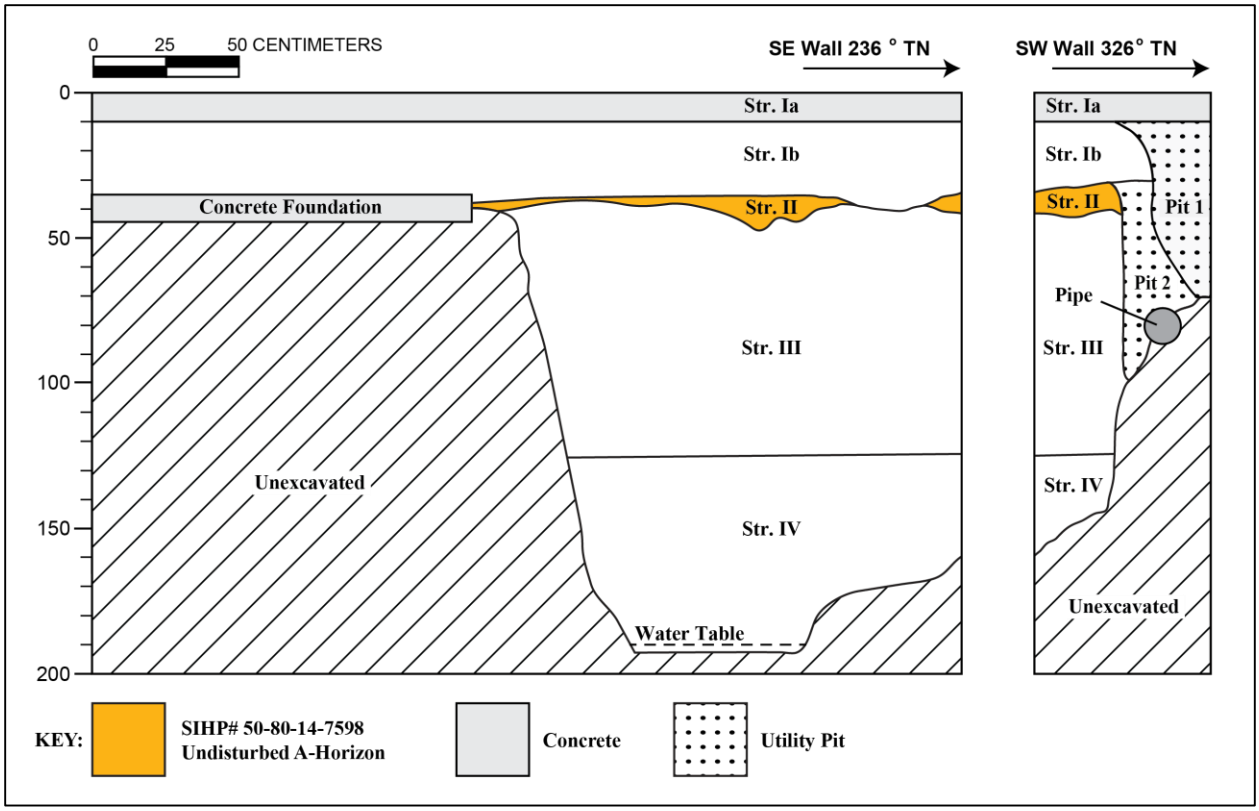

Figure 97. Trench 14 southeast sidewall and southwest sidewall profiles

Table 25. Trench 14 Stratigraphy Table

Stratum	Depth (cmbs)	Description
Ia	0-10	Concrete
Utility Pit Fill	10-80	Fill; 10YR 5/4, yellowish brown; medium loamy sand; weak fine crumb structure; moist very friable consistency; non-plastic; mixed origin; diffuse, broken/discontinuous lower boundary; common fine to medium roots observed; contained saw cut faunal bone; utility pit fill associated with pipe installation
Ib	10-38	Fill; 10YR 3/3, dark brown; slightly gravelly fine sandy loam; weak fine crumb structure; moist very friable consistency; non-plastic; terrigenous origin; diffuse, broken/discontinuous lower boundary; few fine to medium roots observed; imported fill
II	30-45	Natural A-horizon; 10YR 5/3, brown; fine loamy sand; weak fine crumb structure; moist very friable consistency; non-plastic; mixed origin; diffuse, broken/discontinuous lower boundary; no roots observed; contained plastic, glass, fire affected rock, and marine shell midden; disturbed/truncated buried A-horizon (SIHP # -7598)
Feature 9	38-67	Pit feature; 10YR 4/4, dark yellowish brown; medium loamy sand; weak fine crumb structure; moist very friable consistency; non-plastic; mixed origin; abrupt smooth lower boundary; few coarse roots observed; contained shell midden and fire affected rock; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function
III	38-140	Natural; 10YR 8/4, very pale brown; medium sand; structureless single-grain; moist loose consistency; non-plastic; marine origin; abrupt smooth lower boundary; no roots observed; Jaucas sand
IV	140-170	Natural; 10YR 8/1, light greenish gray; medium sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; diffuse smooth lower boundary; no roots observed; Marine sand
V	170-192 (BOE)	Natural; 10YR 8/2, very pale brown; coarse sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; Marine coarse sand with shells

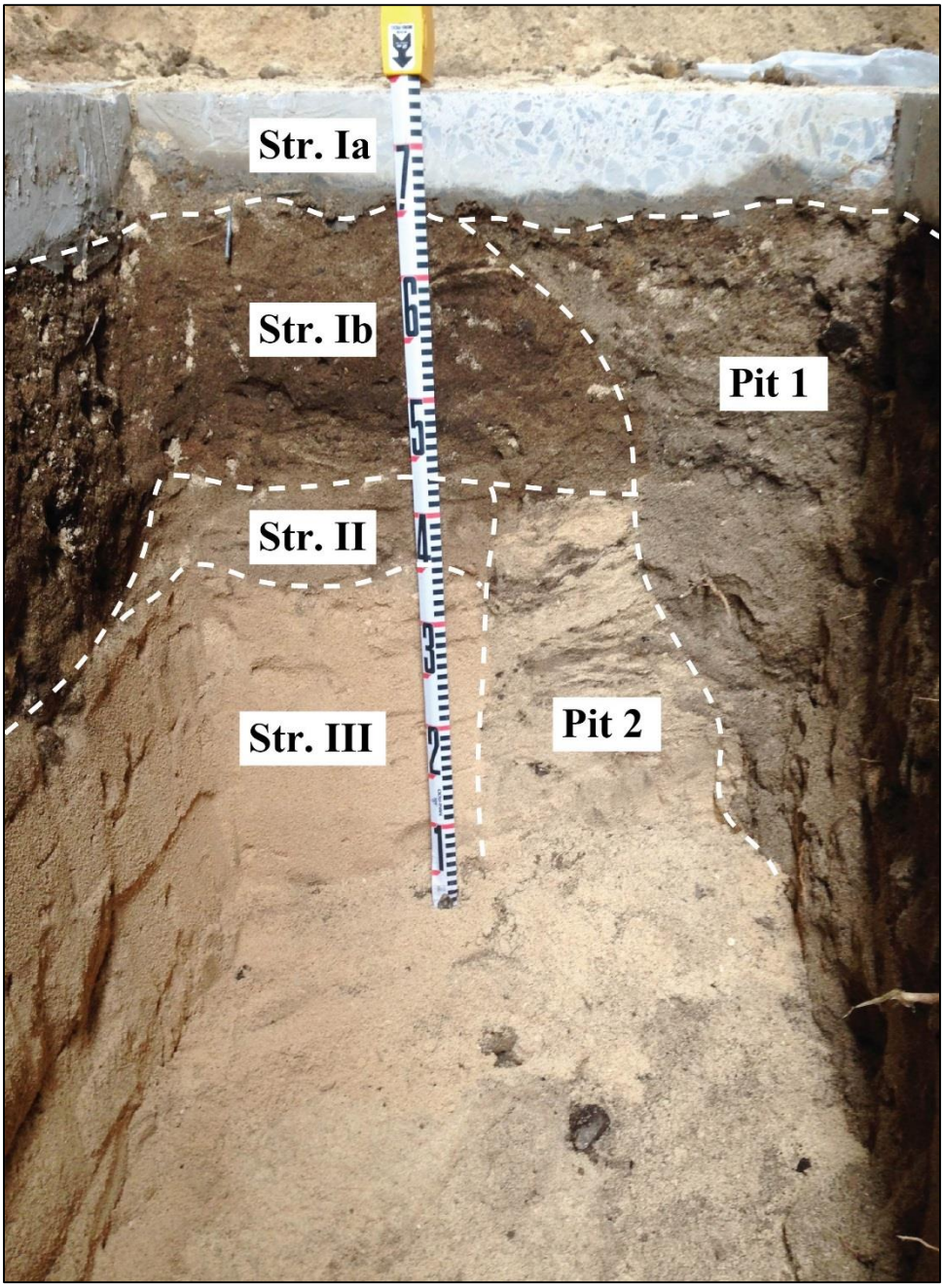

Figure 98. Southwest wall of Trench 14, showing stratigraphy, including the remnant A-horizon (Stratum II) and two pit features; view to the southwest

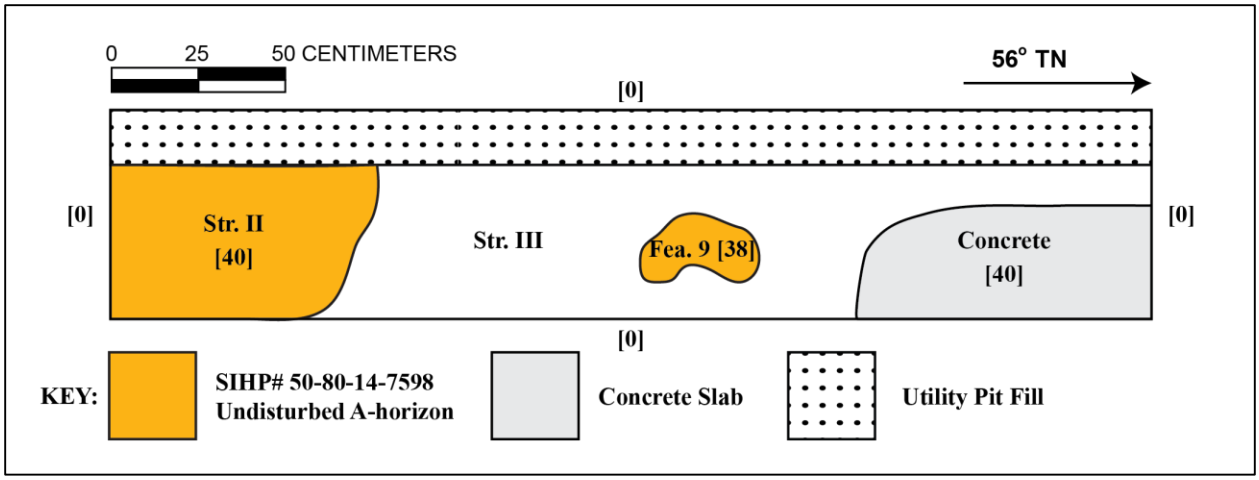

Figure 99. Plan view map of Trench 14, showing the location of SIHP # -7598 Feature 9

Figure 100. Trench 14 at the water table (BOE); view to the south

4.3.15 Trench 15 (SIHP # -7598)

Length:	3.1 m
Width:	0.6 m
Maximum Depth:	2.00 mbs
Orientation:	50/230° TN

Trench 15 was positioned in the center covered parking stall in front of the Prince Edward apartment building near Trenches 6, 7, and 11. The stratigraphy of Trench 15 consisted of concrete (Stratum Ia) and associated base course (Stratum Ib), overlying imported fill (Stratum Ic and Id), that truncated a disturbed natural A-horizon (Stratum II, SIHP # -7598), overlying Jaucas sand (Stratum III), a thin layer of grey marine sand (Stratum IV), and coarse marine sand (Stratum V), (Figure 101, Figure 102, and Table 26).

Trench 15 was disturbed by previous construction events. A 15 cm thick concrete jacket (50-65 cmbs) was encountered in the northeastern end of the trench (Figure 103 and Figure 104). The associated construction pit intruded into Stratum III (Jaucas sand). The construction pit originated from Stratum Ic, a layer of imported loamy sand fill.

A pit of layered fill was encountered within the southeast sidewall of Stratum III (Figure 101, Figure 102, and Figure 105). It indicates the presence of a previously excavated pit adjacent to the east end of the trench. The belled edge of this pit was subsequently truncated by Trench 15 during the current AIS. The pit extended from 70 to 130 cmbs, and was at least 100 cm wide. Archaeologists treated the pit as if it was a possible burial. A 26-liter sample of the pit fill was screened on site. It contained fire-affected rock and a small marine shell midden, consistent with the content of the surrounding A-horizon. The cultural contents and banded layers of sand indicate that the pit fill probably included mixed material from Stratum II (A-horizon), Stratum III (Jaucas sand), as well as imported fill. This matched the layered appearance of Stratum Id. Archaeologists excavated into the face of the pit, undermining the edge of the trench. No human remains were encountered. The presence of mixed backfill, absence of human remains, and layered nature of the fill indicates that the pit is probably associated with previous excavations for footings or utilities. Trench 15 is near Trench 6. The excavation event that created the pit feature in Trench 15 would have occurred between the two trenches. A large pit with fill is visible in the corresponding sidewall of Trench 6, originating from a layer of fill (Stratum Ib). It is possible that these two pits are related to the same excavation event. The pit is not a feature of SIHP # -7598.

Stratum II (36-55 cmbs) was a culturally enriched A-horizon (SIHP # -7598) that developed atop Jaucas sand (Stratum III). The upper boundary was clearly truncated by Strata Id. Only a few centimeters of the original undulating A-horizon remained. Stratum II contained dense charcoal lens (visible in Figure 101 and Figure 102), but no midden. Two features (SIHP # -7598 Features 10 and 11) originated in Stratum II.

SIHP # -7598 Feature 10 was a basin shaped feature observed in the floor of Trench 15 and extending into the southeast sidewall (Figure 101 through Figure 104). It was at least 35 cm long, 20 cm wide and 18 cm deep (from 45-63 cmbs). The feature originated from within the former

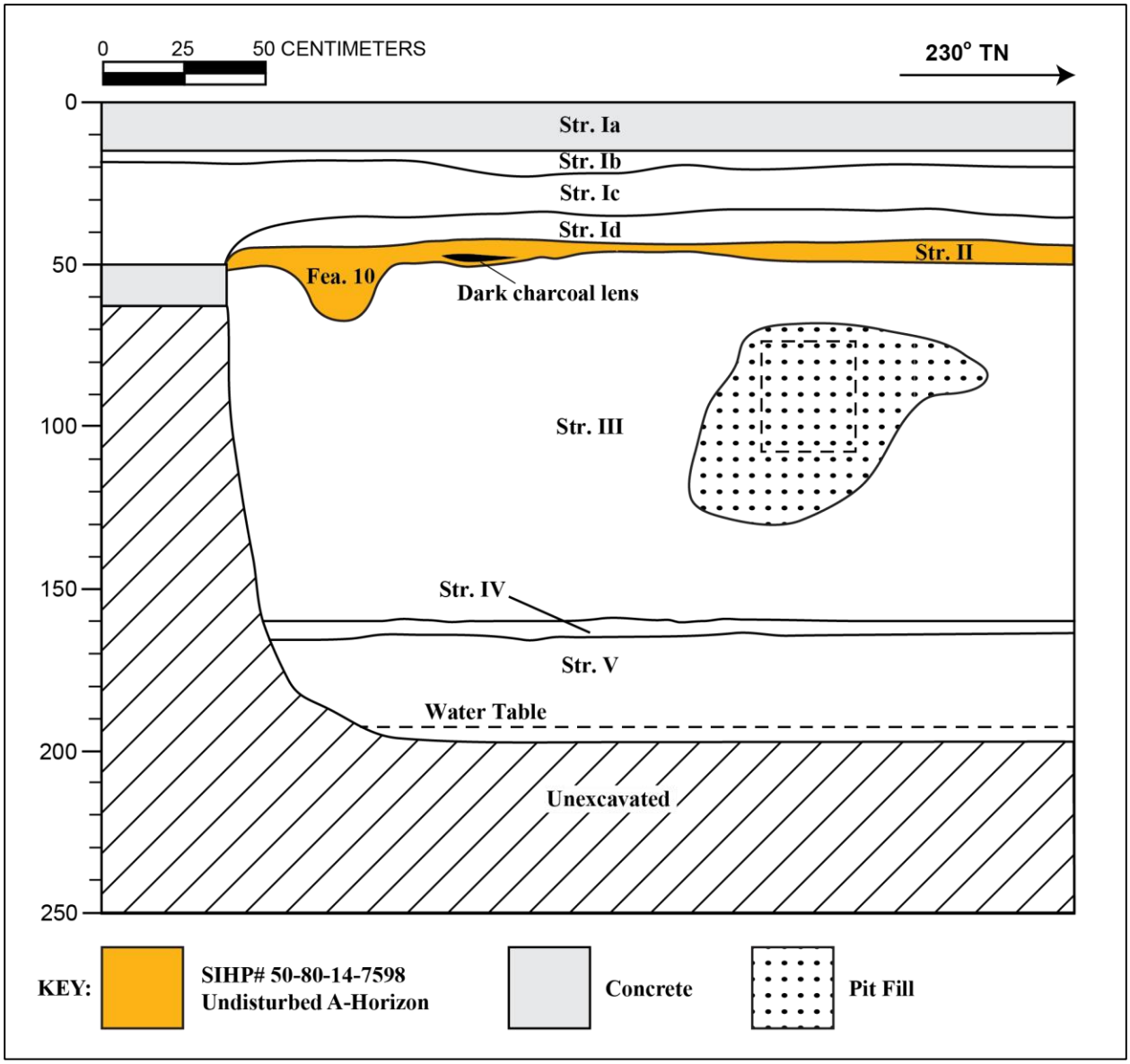

Figure 101. Trench 15 southeast sidewall profile

Table 26. Trench 15 Stratigraphy Table

Stratum	Depth (cmbs)	Description
Ia	0-15	Concrete
Ib	15-25	Fill; 10YR 3/2, very dark grayish brown; extremely gravelly sandy loam; structureless, single-grain; moist, extremely firm consistency; non-plastic; mixed origin; clear, wavy lower boundary; no roots observed; gravel base course
Ic	20-50	Fill; 10YR 6/6, brownish yellow; medium loamy sand; structureless, single-grain; moist, moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; no roots observed; imported fill
Id	30-45	Fill; 10YR 3/3, dark brown; sandy loam; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; clear, wavy lower boundary; no roots observed; incorporates bands of lighter material; imported fill
II	36-55	Natural A-horizon; 10YR 4/2, dark grayish brown; medium sand; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; diffuse, broken/discontinuous lower boundary; no roots observed; contained a charcoal lens; disturbed/truncated buried A-horizon, SIHP # -7598
Feature 10	45-63	Pit feature; 10YR 5/3, brown; medium loamy sand; medium sand; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; clear smooth lower boundary; no roots observed; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing charcoal flecking/staining
Feature 11	50-90	Pit feature; 10YR 4/2, dark grayish brown; medium sand; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; diffuse, smooth lower boundary; no roots observed; associated with Stratum II, the culturally enriched A-horizon (SIHP # -7598); pit of indeterminate function containing fire affected rock, faunal bone and charcoal flecking/staining
Pit Disturbance	70-130	Pit feature; 10YR 4/2, dark grayish brown; medium loamy sand; medium sand; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; clear smooth lower boundary; many medium roots observed; incorporates bands of lighter material; contained fire affected rock, midden and charcoal flecking/staining; utility pit
III	50-163	Natural; 10YR 8/4, very pale brown; medium sand; structureless single-grain; moist loose consistency; non-plastic; marine origin; abrupt smooth lower boundary; no roots observed; Jaucas sand
IV	163-168	Natural; 10YR 8/1, light greenish gray; medium sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; diffuse smooth lower boundary; no roots observed; marine sand
V	168-200 (BOE)	Natural; 10YR 8/2, very pale brown; very coarse sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; marine coarse sand

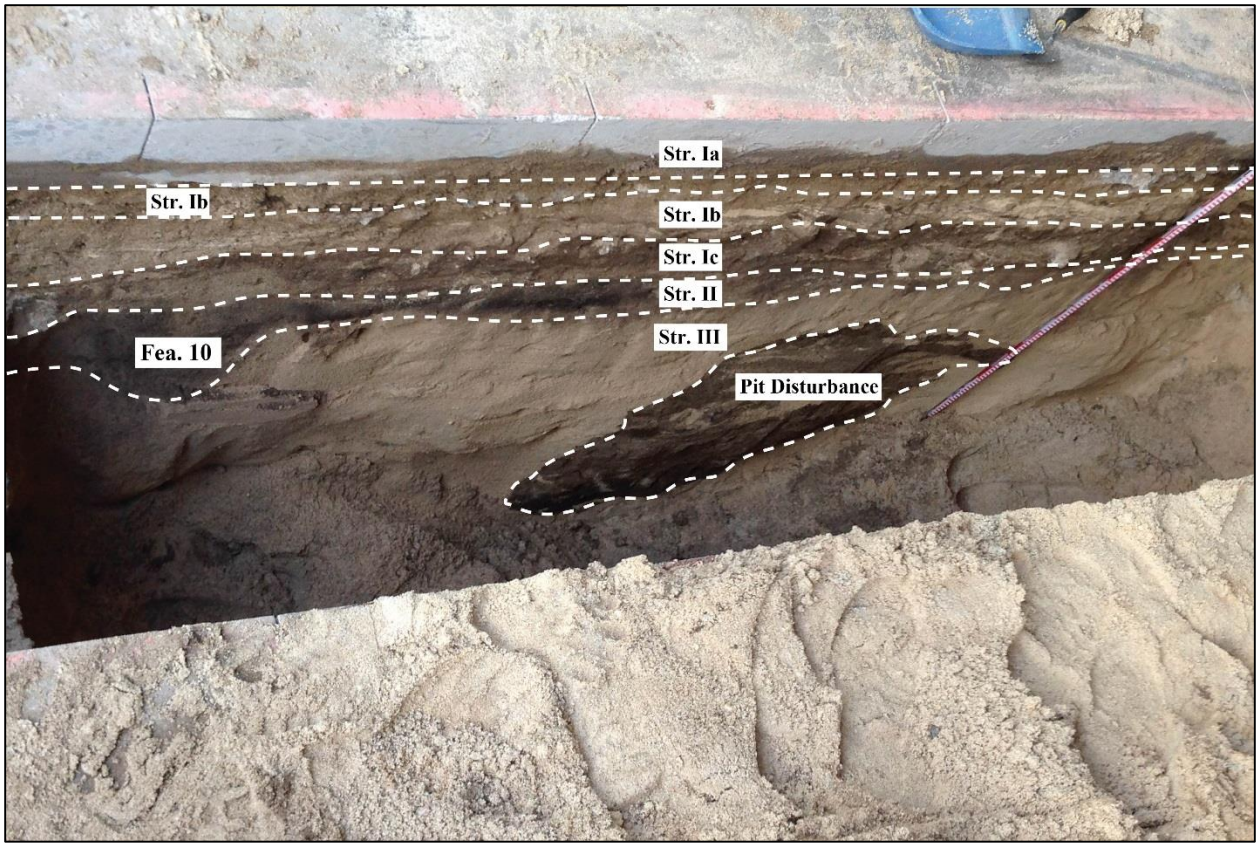

Figure 102. Southeast sidewall of Trench 15, showing stratigraphy, SIHP # -7598 prior to installation of shoring; view to the east

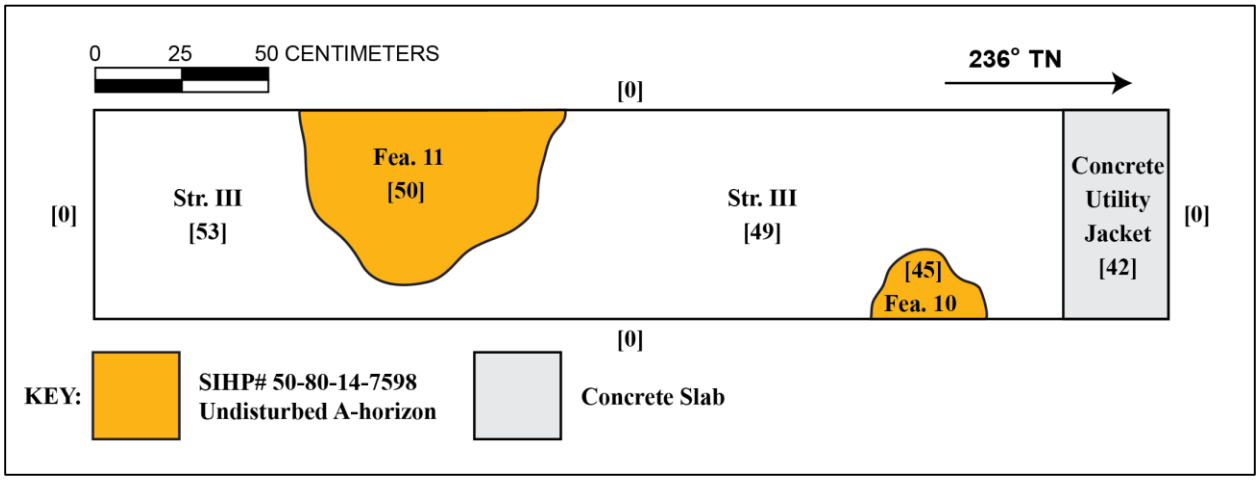

Figure 103. Plan view map of Trench 15, showing SIHP # -7598 Features 10 and 11

Figure 104. Overview of Trench 15, showing SIHP # -7598 Features 10 and 11; view to north

Figure 105. East sidewall of Trench 15, showing the intrusive pit; view to the northeast

Figure 106. Overview of the south end of Trench 15, showing excavation to the water table (BOE)

A-horizon (Stratum II) and intruded into the underlying Jaucas sand (Stratum III). A 3 l. bulk sample of the feature was screened. It contained charcoal flecking, but no faunal or marine shell midden. As the feature fill was not significantly different than Stratum II, and the form of the feature did not provide any conclusive information about its use, the function of SIHP # -7598 Feature 10 remains indeterminate.

SIHP # -7598 Feature 11 was a large basin shaped feature observed in the floor of Trench 15 and extending into the west sidewall (Figure 102 through Figure 104). It was at least 75 cm long, 50 cm wide and 40 cm deep (from 50-90 cmbs). The feature originated from within the former A-horizon (Stratum II) and intruded into the underlying Jaucas sand (Stratum III). A 5 l. bulk sample of the feature was screened. It contained charcoal flecking, fire affected rock and a small amount of faunal bone consisting of *Canis lupus familiaris* fragments (1.9 g) and *Sus scrofa* fragments (7 g), but did not contain marine shell midden. The function of SIHP # -7598 Feature 11 remains indeterminate.

The remnants of the natural A-horizon (Stratum II) and underlying sand (Strata III-V) were hand excavated. When the sand deposits became unstable, shoring was installed, and hand excavation resumed. The water table was encountered at 1.98 mbs (Figure 106). Excavation continued to 2.00 mbs in the southwest end of the trench, after which the sidewalls became unstable. The coral shelf was not encountered.

4.3.16 Trench 16

Length:	3.0 m
Width:	0.6 m
Maximum Depth:	1.90 mbs
Orientation:	14/194° TN

Trench 16 was positioned on the middle lanai along the *makai* side of the Prince Edward apartment building near Trench 12. The stratigraphy of Trench 16 consisted of concrete (Stratum Ia), overlying mixed fill (Stratum Ib), that truncated a very disturbed natural A-horizon (Stratum II), overlying Jaucas sand (Stratum III), grey marine sand (Stratum IV), and coarse marine sand with lots of shells (Stratum V), (Figure 107, Figure 108, and Table 27).

Trench 16 was heavily disturbed by previous construction events. A concrete footing extended halfway across the trench. A concrete utility jacket was encountered in the southern end of the trench, along with two utility pipes running diagonally across the trench. The jacket and pipes may be associated with the presence of a septic system. Trench 16 was also heavily disturbed by monkeypod tree roots, which were most prevalent in Stratum Ib and II, but continued into Stratum III. Root trails are visible in the profile and profile photograph of the east sidewall of Trench 16 (Figure 107 and Figure 108). Stratum Ib (5-45 cmbs) consisted of imported loam sand fill containing modern material. It is likely landscaping fill. Stratum Ib clearly truncated Stratum II, the underlying A-horizon.

Stratum II (28-50 cmbs) was the remnant of an A-horizon that developed atop Jaucas sand (Stratum III). The upper boundary was truncated by Stratum Ib, and only a few centimeters of the original undulating A-horizon remained. Bulk samples from Stratum II contained nails, glass, fire affected rock, and a small amount of faunal bone consisting of two *Canis lupus familiaris* rib fragments, a phalanx and unidentified fragments (3.7 g). The stratum was so heavily disturbed by root action and construction activities that it no longer retained any archaeological integrity. It should not be considered a component of SIHP # -7598.

The remnants of the natural A-horizon (Stratum II) and underlying sand (Strata II-V) were hand excavated. When the sand deposits became unstable, shoring was installed, and hand excavation resumed. The water table was encountered at 1.88 mbs (Figure 109). Excavation continued to 1.90 mbs in the central section of the trench. The coral shelf was not encountered.

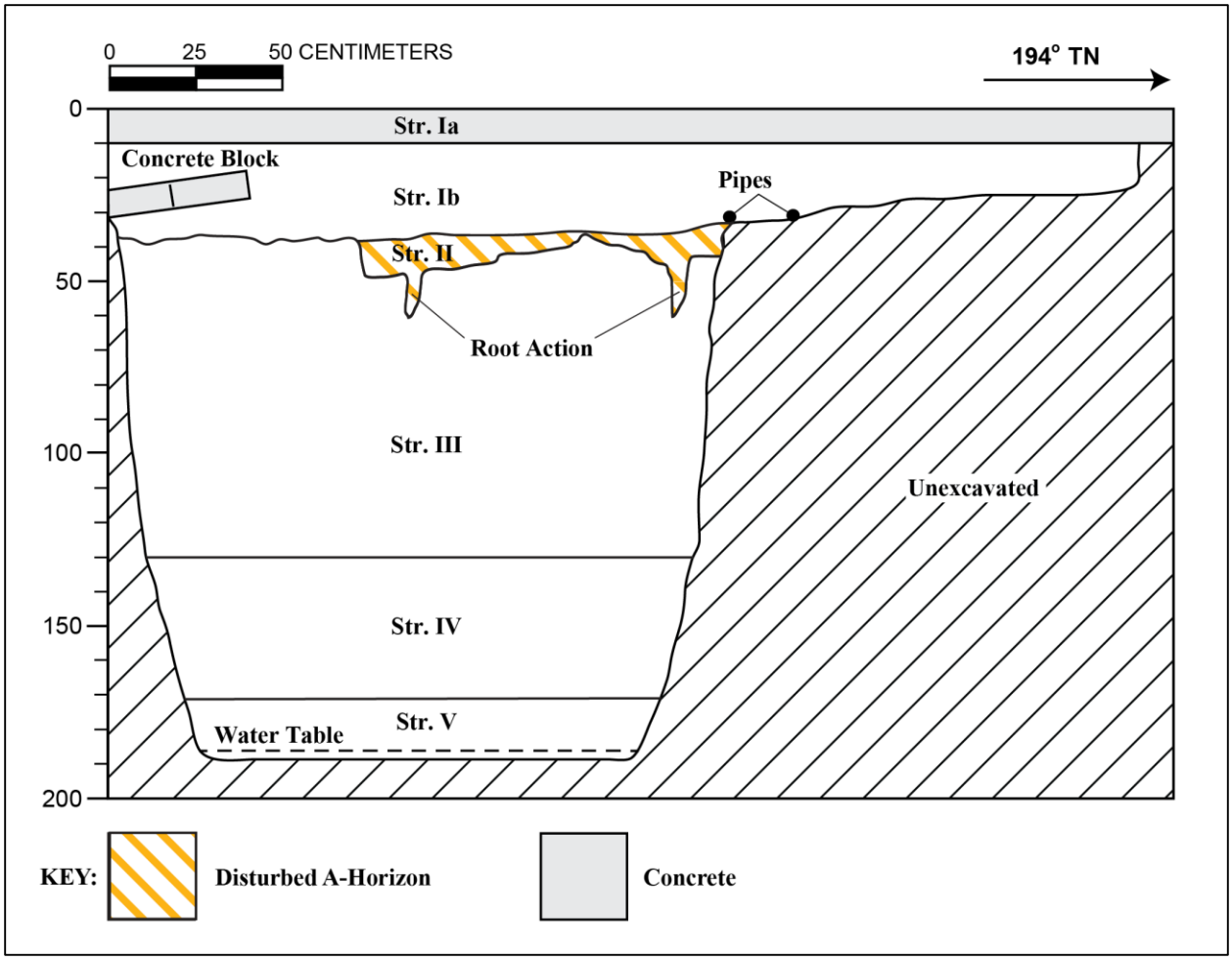

Figure 107. Trench 16 profile of east sidewall

Table 27. Trench 16 Stratigraphy Table

Stratum	Depth (cmbs)	Description
Ia	0-11	Concrete
Ib	5-45	Fill; 10YR 3/3, dark brown; medium loamy sand; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; abrupt, wavy lower boundary; many medium to coarse roots observed; contained modern material; landscaping fill
II	28-50	Disturbed Natural A-horizon; 10YR 4/3, brown; medium loamy sand; structureless, single-grain; moist, moist loose consistency; non-plastic; mixed origin; clear, wavy/broken/discontinuous lower boundary; common medium roots observed; heavily disturbed by root action; pit contained nails, glass, fire affected rock, and *Canis lupus familiaris* remains; disturbed/truncated buried A-horizon, SIHP # -7598
III	31-132	Natural; 10YR 8/4, very pale brown; medium sand; structureless single-grain; moist loose consistency; non-plastic; marine origin; abrupt smooth lower boundary; few fine to medium roots observed; Jaucas sand
IV	132-172	Natural; 10YR 7/1, light greenish gray; medium sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; diffuse smooth lower boundary; no roots observed; natural marine sand
V	172-190 (BOE)	Natural; 2.5YR 8/2, pale yellow; very coarse sand; structureless single grain; wet slightly sticky consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; natural marine coarse sand with shells

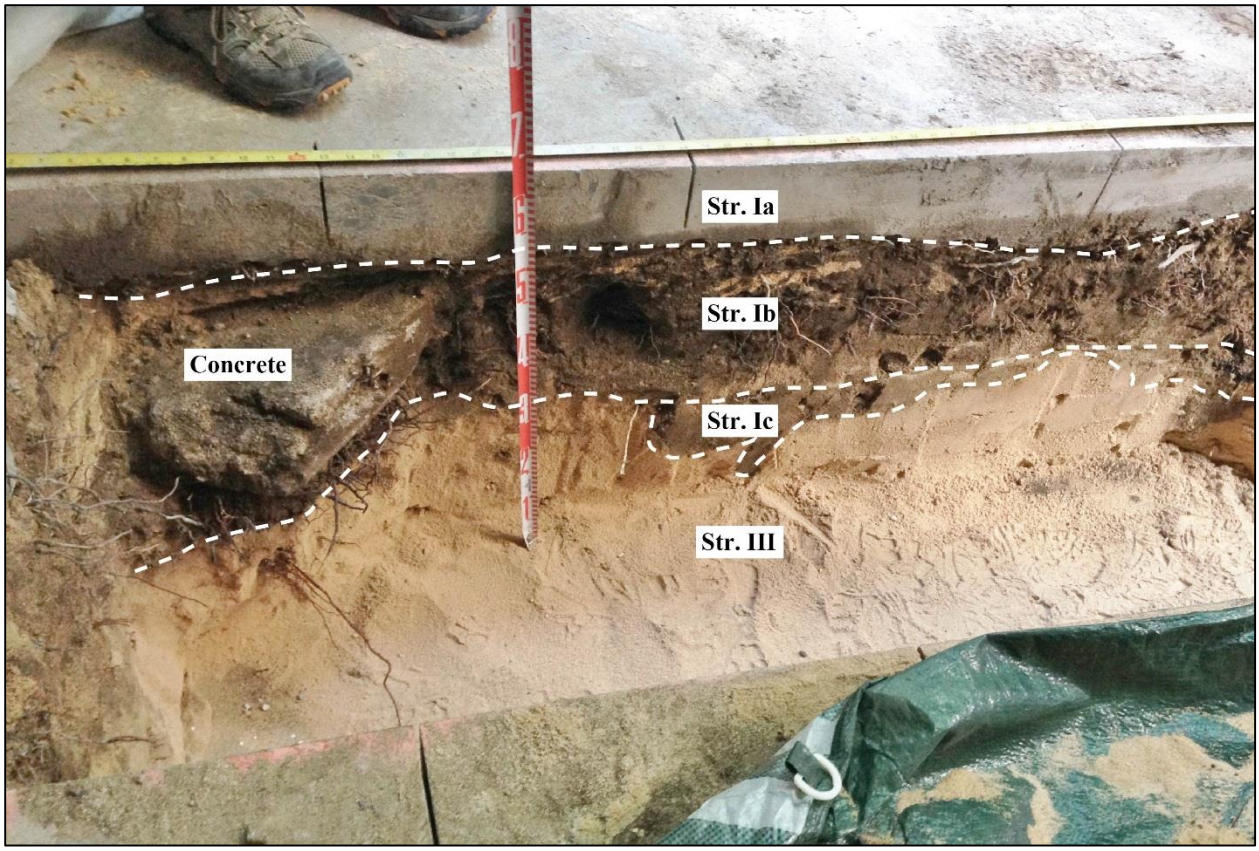

Figure 108. East sidewall of Trench 15, showing stratigraphy and the extensive root network within Strata Ib and Ic; view to east

Figure 109. Overview of the north end of Trench 16, showing excavation to the water table (BOE)

Section 5 Cultural Consultation

CSH worked with the project proponents and Dawn Chang of Ku‘iwalu to integrate cultural consultation with potentially knowledgeable Native Hawaiian groups and individuals and SHPD throughout the project’s AIS investigation. This consultation effort, carried out from November 2013 through March 2014, included public presentations and discussion before the O‘ahu Island Burial Council, meetings with previously recognized cultural descendants to burials found in the Waikīkī area, and meetings with the SHPD Archaeology Branch and Culture and History Branch staff.

This consultation effort afforded these different concerned parties the opportunity to provide input on the AIS testing strategy, and, as a result of this consultation, the number of AIS test excavations was increased twice in response to consulting party concerns. The consultation effort also fostered discussion regarding how faunal and human bone was distinguished in the field during AIS investigations. The consultation effort led to the project’s cultural monitoring program during AIS fieldwork. Additionally, the consultation effort provided a means to review and come to consensus regarding this AIS report’s project effect and mitigation recommendations. CSH would like to thank all the agencies and individuals that participated in this consultation effort.

Additionally, to support the project’s environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014). The results of public outreach undertaking for the CIA investigation are summarized below.

5.1 Consultation Meetings and OIBC Presentations

November 19, 2013 King’s Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm, at the Kobayashi Group offices

Attendees:

Cultural Descendants: Kala Keli‘inoi, JR Keoneakapu Williams, Kekaimalino Kaopio, Ipo Paia, Ka‘anohi Kaleikini, Mana Caceres

Project Proponents: Kathy Inouye, Elton Wong, Russell Kaupu

O‘ahu Island Burial Council Kona Representative: Hinaleimoana Wong-Kalu

CSH: Matt McDermott

Ku‘iwalu: Dawn Chang

Discussion:

- The project proponents provided an overview of the project and the existing conditions of the project area. This included discussion of the approximately 80 percent of the project area that is within the footprint of the large sub-surface parking garage. It also included a discussion of the approximately 400 linear feet of sewer line that would be installed in adjacent City-owned streets as part of the project.

- CSH provided a PowerPoint presentation that covered the cultural and historical background for the project area, as well as the results of prior archaeological work that has been done in the vicinity. This was summarized as a predicative model of what was likely to be found in the project area.
- Based on the predictive model, CSH went over the proposed AIS testing strategy—with nine test excavations (Trenches 1 through 9) proposed. These test excavations were all located outside the boundaries of the large subsurface parking garage that covers roughly 80 percent of the project area. This subsurface parking garage was clearly dug to below the water table so it is highly unlikely that intact archaeological deposits are located in the subsurface parking garage footprint. The cultural descendants agreed with the proposal to of focus the AIS effort outside the subsurface parking garage.
- The cultural descendants approved the AIS testing strategy.
- The cultural descendants asked that the AIS fieldwork be conducted under a cultural monitoring program, which the project proponents agreed to.
- The schedule for the AIS testing was given.

November 20, 2013 King's Village SHPD on-site visit 8:00 to 8:30 am, at the project area

Attendees:

Cultural Descendants: JR Keoneakapu Williams, Kekaimalino Kaopio

SHPD: Susan Lebo (Lead O‘ahu Island Archaeologist)

CSH: Matt McDermott

Discussion:

- Speaking to a hardcopy printout of the PowerPoint presentation used at the November 19, 2013 cultural descendant meeting, CSH provided SHPD with the same background information regarding the project description, the project area, and the project area's cultural, historical, and archaeological background.
- With SHPD, the interior of the project area's large subsurface parking garage was inspected and it was confirmed that approximately 80 percent of the project area had been previously dug to below the water table during the installation of this parking garage.
- SHPD approved the proposed nine test excavations for the AIS sampling strategy (Trenches 1 through 9)
- SHPD expressed concern about the project's approximately 400 linear feet of sewer line—whether or not it was feasible or appropriate to conduct AIS testing along this sewer line alignment. SHPD indicated that this matter should be discussed with the cultural descendants.

December 5, 2013 King's Village SHPD meeting 2:30 to 3:30 pm, at SHPD Offices in Kapolei

Attendees:

SHPD: Susan Lebo (Lead O‘ahu Island Archaeologist)

CSH: Matt McDermott

Discussion:

- CSH provided an update to SHPD regarding the timing of the AIS fieldwork

December 11, 2013 OIBC Presentation and Discussion

- The project proponents provided an overview of the project and the existing conditions of the project area.
- CSH spoke to a PowerPoint presentation, going over the cultural and historical background for the project area, as well as the results of prior archaeological work that has been done in the vicinity. This was summarized as a predicative model of what was likely to be found in the project area.
- Based on the predictive model, CSH went over the proposed AIS testing strategy—with nine test excavations (Trenches 1 through 9) proposed.
- The OIBC members were appreciative of the project update and asked that they continue to be kept informed as the AIS fieldwork was completed and the AIS report was underway.

January 14, 2014 King's Village SHPD Meeting 2:30 to 3:30 pm, at Kalanimoku Building

Attendees:

Cultural Descendants: Ka‘anohi Kaleikini

SHPD: Susan Lebo (Lead O‘ahu Island Archaeologist)

CSH: Matt McDermott

Discussion:

- CSH provided an overview of the AIS results of Trenches 1 through 9, including the likely human vertebra found in Trench 1 and the disturbed culturally enriched sand A horizon that was found beneath the Prince Edward apartments.
- After discussion, it was agreed that there would be additional AIS test excavations, which became Trenches 10 through 13.

January 30, 2014 King's Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm, at the Kobayashi Group offices

Attendees:

Cultural Descendants: Kala Keli‘inoi, Ka‘anohi Kaleikini, JR Keoneakapu Williams, Kekaimalino Kaopio, Mana Caceres, Makoa Caceres

Project Proponents: Kathy Inouye, Russell Kaupu

CSH: Matt McDermott,

Ku‘iwalu: Dawn Chang)

Discussion:

- CSH provided an overview of the AIS results of Trenches 1 through 13, including the likely human vertebra found in Trench 1 and the disturbed culturally enriched sand A horizon that was found beneath the Prince Edward apartments.
- After discussion, it was agreed that there would be additional AIS test excavations, the exact number and placement would be worked out in consultation with SHPD.

February 7, 2014 King's Village SHPD meeting 2:00 to 3:00 pm at SHPD offices in Kapolei

Attendees:

Cultural Descendants: Ka‘anohi Kaleikini

SHPD: Susan Lebo (Lead O‘ahu Island Archaeologist), Kawika Farm (SHPD Culture and Historic Branch)

CSH: Matt McDermott

Discussion:

- CSH provided an overview of the AIS results of Trenches 1 through 13, including the likely human vertebra found in Trench 1 and the disturbed culturally-enriched sand A horizon that was found beneath the Prince Edward apartments. CSH also summarized the comments of the cultural descendants at the January 30th 2014 cultural descendant meeting.
- CSH summarized how the distinction between faunal and human bone was made during the AIS fieldwork.
- There was discussion about whether or not disarticulated, fragmented human remains found during an AIS should be treated as a burial site under Hawai‘i State burial law (HAR § 13-300).
- Kawika Farm indicated that the direction he has been given from SHPD's Culture and History Branch Chief and SHPD's Attorney General's Office advisors was that all human remains found during AIS were to be considered burial sites under Hawai‘i burial law, and that unless there was evidence to the contrary, SHPD ethnicity determinations for these burial sites should be Native Hawaiian.
- After discussion, it was agreed that there would be additional AIS test excavations, which became Trenches 14 through 16.

March 11, 1014 King's Village Previously Recognized Waikīkī Cultural Descendant meeting 5:30 to 7:30 pm at the Kobayashi Group offices

Attendees:

Cultural Descendants: Kala Keli‘inoi, Ka‘anohi Kaleikini, Mana Caceres, Aliikaua

Project Proponents: Kathy Inouye, Elton Wong, Russell Kaupu

O‘ahu Island Burial Council Kona Representative: Hinaleimoana Wong-Kalu,

CSH: Matt McDermott,

Ku‘iwalu: Dawn Chang

Discussion:

- CSH provided an overview of the AIS results of Trenches 1 through 16.
- The cultural descendants expressed their satisfaction with the AIS testing effort.
- The cultural descendants approved the AIS mitigation recommendations consisting of an archaeological monitoring program during construction and a burial treatment plan for the vertebra fragment found in Trench 1. It was explained that based on SHPD guidance, this vertebra fragment would be considered a Native Hawaiian burial site.
- The cultural descendants did not want to see the project's sewer line subject to AIS investigation. They would prefer that the sewer line be part of the project's archaeological monitoring program. They understood that under a monitoring program any human skeletal remains found in the sewer line would be inadvertent finds and not previously identified and they accepted this. They thought it would be more appropriate to deal quickly with treatment decisions for any human remains in the sewer line as inadvertent finds than to drag out the decision as previously identified remains through the burial treatment plan process.

March 12, 2014 OIBC Presentation and Discussion

- CSH provided an overview of the AIS results of Trenches 1 through 16.
- CSH provide an overview of the AIS reports mitigation recommendations: burial treatment plan and archaeological monitoring program.
- The project proponents gave an update on project design and schedule.
- The OIBC said they appreciated the update and that they looked forward to the burial treatment plan.

5.2 Project Cultural Impact Assessment

To support the project's environmental assessment prepared under HRS § 343, CSH prepared a cultural impact assessment (CIA) (Ishihara et al. 2014). As part of the CIA, CSH contacted Hawaiian organizations, agencies, and community members as well as cultural descendants of Waikīkī in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to a total of 78 individuals or groups; seven responded, and two of these *kama‘āina* and/or *kūpuna* (elder) met with CSH for a more in-depth interview. This community consultation resulted in the following observations of the project area and its immediate vicinity (Ishihara et al. 2014:102-103):

1. Mr. Edward Halealoha Ayau of *Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei* recalled conducting a reinterment on Prince Edward Street. The project is bound on the *mauka* (towards the mountain) side by Prince Edward Street.
2. Mrs. Winona (Nona) Kamai and her daughter Dwynn shared their memories of Waikīkī and the project area. King’s Alley, the former name for King’s Village, was once a place of employment for Dwynn. She recalled cultural demonstrations such as lei making, coconut frond weaving, and hula performances by *kumu hula* (hula teacher) Aloha Dalire and her *hālau* (group).
3. 1n 1972, Bishop Museum opened the Heritage Theater at King’s Alley. According to Dwynn, an exhibit pertaining to the Hawaiian Monarchy in Waikīkī was on display. Double-decker buses provided transportation between Bishop Museum in Kalihi, the Falls of Cylde ship at Aloha Tower, and the Heritage Theater in Waikīkī. The theater was open for many years before downsizing to a bookstore and gift shop.
4. The cultural landscape of Waikīkī extends beyond the modern division of Waikīkī Kai. Mr. Becket indicated the locations of two culturally significant sites. SIHP # 50-80-14-5463 is located in Wa‘ahila Valley on the lower slope of Wa‘ahila Ridge. Although # -5463 is designated as a house site, the Committee for the Preservation of Cultural Sites and Properties, under the O‘ahu Council of Hawaiian Civic Clubs, has determined it is likely a *heiau*. The other site is located at Kamanele Park in Mānoa Valley and the Committee similarly has determined that it is likely a pre-Contact *heiau*.
5. La Pietra Hawai‘i School for Girls was built over a *po‘okanaka* (sacrificial) class *heiau*, Papa‘ena‘ena. Although the *heiau* is completely demolished, Mr. Becket recalled having a conversation with the late Marion Kelly, anthropologist and activist, during the 1980s-1990s regarding possible remnants of the lower portion of Papa‘ena‘ena Heiau below the school. CSH and Mr. Becket investigated a portion of Kapi‘olani Park below La Pietra. The outcome was deemed inconclusive.
6. Diamond Head Lighthouse was the former site of the Pahu-a-Maui Heiau. The lighthouse is now owned and operated by the Coast Guard. Mr. Becket recalled seeing a photo of a dry stacked wall with the Diamond Head Lighthouse built on it. The former location of the dry stacked wall is possibly the current site of a caretaker’s home or administrative building for the Coast Guard.
7. The land of Waikīkī Kai was comprised of a vast agricultural system including *lo‘i* and fishponds. The great-great-great grandfather of Mr. Clarence Medeiros Jr. was conveyed LCA 1268 via Nakai. The 1.60-acre parcel consisted of *lo‘i* (irrigated terrace). Mr. Medeiros’ maternal great-great grandfather, Zen Man Sing, arrived to Hawai‘i from China in 1888. Shortly after his arrival he worked in Waikīkī with relatives planting rice and taro.

Section 6 Results of Laboratory Analysis

6.1 Artifact Analysis

6.1.1 Traditional Hawaiian Artifacts

Two traditional Hawaiian artifacts were identified. Their form and function were determined using standard reference material (e.g., Barrera and Kirch 1973; Brigham 1974; Buck 2003; and Emory et al. 1968). One worked Labridae tooth (Acc. # 52; Table 28; Figure 110) was identified in Trench 10 between 0.40 and 0.76 mbs within a previously disturbed A-Horizon (Stratum Id) enriched with both pre-and post-Contact vertebrate material. It is possible that the worked labridae tooth might have been used for tattooing. The root of the tooth was notched by a sharp hand-tool beneath the enamel near where the root of the tooth would attach into the socket of the alveolar bone. One basalt core (Acc. # 42; Figure 111) was identified in Trench 8 at a depth of 1.10-1.14 mbs within an imported fill deposit (Stratum Id). No traditional Hawaiian artifacts were found within the culturally enriched A-horizon (SIHP # –7598).

6.1.2 Historic Artifacts

A large quantity of historic artifacts were encountered in fill layers throughout the project area (Table 28). To help characterize the fill events, archaeologists collected a sample of these artifacts, including bottles, broken glass, porcelain fragments, stoneware fragments, earthenware fragments, wire, nails, and plastic. The assemblage of artifacts from the site is not statistically representative. Archaeologists selectively collected all items with maker’s marks and other distinctive features that would help in dating and identification (rim, base, and neck fragments, pieces with mold marks, decorated sherds, etc.). Archaeologists selected a small sample of items that were either multiduplicates (body glass fragments, pottery fragments, nails, etc.) or provided limited data about the production and deposition timeframes. Therefore, the assemblage of artifacts does not provide statistical information about the ratio, quantity, or distribution of items within the fill layers. The objective of sampling was to help date the deposition event.

Historic artifacts were identified using standard reference materials and resources available on the internet (e.g., Elliott and Gould 1988; Fike 1987; Kovel 1986; Lehner 1988; Lindsey 2010; Lockhart 2004-2010; Millar 1988; Toulouse 1971; Whitten 2009; and Zumwalt 1980). All descriptive terms for glass bottles and all date ranges for manufacturing techniques were follow the “Historic Glass Bottle Identification & Information Website” (referenced as BLM/SHA 2013) produced by the Bureau of Land Management and the Society for Historic Archaeology (unless otherwise noted).

The glass assemblage collected from the project area consists of 28 accessions including four complete/nearly complete bottles, 32 bottle glass fragments, and 1 window glass fragment. The ceramic assemblage consists of 22 accessions comprised of 26 items. It includes fragments of porcelain (11), stoneware (1), earthenware (8), and terracotta (3) as well as a pipe stem (Acc. #72) and ceramic fuse (Acc. # 66). The assemblage of metal artifacts consisted of 15 accessions comprised of 40 items, mostly wire nails (post 1894). The assemblage of plastic artifacts included 4 accessions. A piece of fabric (Acc. # 67) and a Kukui nut endocarp (Acc. # 67) were also recovered. Most of the items can be dated to only a general period. Several of these item

Table 28. Artifact Catalog

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
1	T-1	Ib	20-83	1	11.7		9.4	6.8		Building material	Red brick, 3 ¾ in wide x 2 ¼ inch thick; post 1918 (Meide 1994:25)
2	T-1	Ib	20-83	1	14.3		12.2	0.8		Ceramic, Terracotta	Terracotta roofing tile
3	T-1	Ib	20-83	1				0.3	7	Ceramic, porcelain	Japanese blue-patterned tea cup, rim to body fragment
4	T-1	Ib	20-83	1						Building material	Concrete fragment
5	T-1	Ib	20-83	1				0.2	4.8	Plastic	Pink children’s’ clothing hanger hook (polyethylene plastic mass production post 1940; Spude 2007)
6	T-1	Ib	20-83	1	8.1		2.4			Plastic	Plastic lotion squeeze tube (polyethylene plastic mass production post 1940)
7	T-1	Ib	20-83	1					2.2 (rim)	Glass	Aqua blue glass bottle rim fragment, double ring finish
8	T-1	Ib	20-83	1				0.7		Ceramic, earthenware	Refined earthenware fragment with brown glaze
9	T-1	Ib	20-83	1	2.9	2.5	2			Vesicular Basalt	Water worn basalt
10	T-1	Ib	20-83	1	7.1		0.6			Metal	Iron nail
11	T-1	Ib	20-83	1						Glass	Broken black glass rim fragment with flared ring finish
12	T-1	Ib	20-83	1	8.5		1.7	0.7		Ceramic, earthenware	White refined earthenware tile fragment
13	T-1	Ib	20-83	1						Plastic	Piece of "Fritos Corn Chips" plastic wrapper (Fritos invented in 1932 by C. E. Doolin; merged with H.W. Lay & Co. in 1961; FritoLay 2014)

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
14	T-2	Ic	56-87	1					7 (base)	Glass	Base of broken clear glass bottle; two-piece cup-mold (post 1870 for clear glass)
15	T-2	Ic	56-87	1					2 (rim)	Glass	Broken clear glass bottle, from lip to Body; two-piece cup mold; tooled prescription finish; medicine/perfume bottle (post 1880s-1920s for tooled finish)
16	T-2	Ic	56-87	1	9.1		0.2			Metal	Iron wire nail (post-1894; Hurst and Allen 1992 in Lebo 1997:112)
17	T-2	Ic	56-87	1						Glass	Clear bottle glass body fragment (colorless glass; post 1870; BLM/SHA 2014)
18	T-2	Ic	56-87	1						Glass	Aqua bottle glass body fragment
19	T-2	Ic	56-87	1	3.9		3	0.5		Ceramic, Terracotta	Water worn/smoothed terracotta fragment
20	T-2	Ic	56-87	1	13.2		0.6			Metal	Iron wire nail (post-1894)
21	T-2	Ic	56-87	1	13.4		0.4	2.2		Metal	Metal Tube
22	T-2	Ic	56-87	1						Glass	Clear glass bottle fragment, shoulder to body; machine-blown, (ABM) crown finish; post-1903
23	T-2	Id	27-85	1				0.3		Glass	Clear window glass fragment, 0.3 cm thick (post-1915 based on glass thickness; Weiland 2009:35)
24	T-2	Id	27-85	1				0.5		Ceramic, porcelain	Porcelain plate fragment; white; no decoration
25	T-2	Id	27-85	1				0.7	10 (base)	Ceramic, Terracotta	Terracotta flower pot fragment
26	T-2	Id-II	~70 (slump)	5	2.3-7.2					Metal	Iron wire nail (post-1894)
27	T-2	Id-II	~70 (slump)	1				0.3		Glass	Clear bottle glass body fragment

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
28	T-2	Ic	56-87	3	3.0-7.1		2.1-7.0	2.0-3.2		Basalt	Fire-affected rock; 461.1 g
29	T-2	II	85-123							Metal	Rusted metal fragments; 28.3 g
30	T-3	Ib	22-90	1						Metal	Iron wire nail
31	T-3	Ib	22-90	1				0.2		Ceramic, porcelain	Porcelain fragment with pink and gold trim flower overglaze design; possibly Chinese Four Flowers (19th to mid-20th century)
32	T-6	Ib	90-147	1						Ceramic, earthenware	White refined earthenware fragment
33	T-6	Ib	90-147	1						Ceramic, earthenware	Yellow refined earthenware fragment
34	T-6	Ib	90-147	1					6.4 (base)	Glass	Clear glass fragment, base; probably a drinking glass
35	T-6	Ib	90-147	1					6 (rim	Glass	Clear glass fragment, rim and neck; ABM wide-mouth finish (post 1903)
36	T-6	Ib	90-147	1					7 (base)	Glass	Clear pressed glass fragment, base; probably a drinking glass
37	T-6	Ib	90-147	1					7 (rim)	Glass	Clear glass fragment, rim; possibly drinking glass
38	T-6	Ib	90-147	1		10.4	4.2	3.1		Glass	Clear glass bottle, rectangular base, 2 piece cup mold; medicine bottle
39	T-6	Ib	90-147	1		19.1			6	Glass	Clear glass bottle two-piece cup mold, round bottle with tooled crown finish (1880-1920s)
40	T-6	Ib	90-147	1		21.6			6.1	Glass	Green-aqua complete glass bottle, embossed on body vertically: “PACIFIC/ SODA WORKS CO. LTD./ HONOLULU T.H.”, Base: “P”, round base, mold-blown, two-piece cup mold, tooled crown finish Similar bottle shown in Elliot & Gould 1988:188; # 257, dated ca. 1916

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
41	T-6	Ib	90-147	1						Ceramic, stoneware	Round Chinese green-glazed ginger jar
42	T-8	Ib	110-114	1	7		5.6	2.2		Basalt	Basalt Secondary flake
43	T-10	Ic	10-40	4						Metal	Iron nails – too corroded to type
44	T-10	Ic	10-40	3						Metal	Iron wire nail (post-1894)
45	T-10	Ic	10-40	2						Metal	Iron hinge (?) and other fragment
46	T-10	Ic	10-40	1						Glass	Amber bottle glass body fragment
47	T-10	Ic	10-40	1						Glass	clear glass fragment
48	T-10	Id	40-76	5						Metal	Iron nails/brads– too corroded to type
49	T-10	Id	40-76	4	3.1					Metal	Iron wire nail (post-1894)
50	T-10	Id	40-76	2					1	Shell	Mother-of-pearl button, two hole, thickness uneven (0.5-1.0 cm)
51	T-10	Id	40-76	2						Glass	Flat clear glass fragments
52	T-10	Id	40-76	1						Fish tooth	Worked Labridae tooth
53	T-11	Ib	10-26	6						Metal	Iron wire nail (post-1894)
54	T-12	Ic	23-69	2						Metal	Iron nails – too corroded to type
55	T-12	Ib	40-65	1	6.6					Metal	Iron wire nail (post-1894)
56	T-13	Ic	18-75	1	8				2.8	Glass	Complete brown glass medicine bottle, square base, two-piece cup mold, tooled prescription finish, “WYETH / 201” on base (post 1880 for tooled lip)
57	T-13	Ic	18-75	1						Glass	Amber bottle fragment, neck to lip, machine-blown, ABM crown finish and crimped metal cap (post-1903)
58	T-13	Ic	18-75	1					5.7	Glass	Clear bottle fragment, base and body, round base, two-piece cup mold (post 1870 for clear glass)

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
59	T-13	Ic	18-75	2					7	Glass	Dark olive bottle base and body and 1 body fragment, round base, mold-blown, no side seams, “C” embossed on base (pre-1920 for mold-blown bottles); possibly spirits bottle
60	T-13	Ic	18-75	5						Glass	Clear bottle glass body fragments (post-1870)
61	T-13	Ic	18-75	1						Glass	Clear pressed glass body fragment with incised lines; possible drinking glass
62	T-13	Ic	18-75	2					3.2	Glass	Clear bottle base to body fragments (pieces mend), round base; no side seams evident (post-1870); possible shot glass
63	T-13	Ic	18-75	1						Glass	Clear bottle base fragment, round base, Owens suction scar; machine blown (post-1903)
64	T-13	Ic	18-75	3						Glass	Milk glass fragments, one painted yellow on one side
65	T-13	Ic	18-75	2						Metal	Iron nails – too corroded to determine type
66	T-13	Ic	18-75	1						Composite	Ceramic fuse
67	T-13	Ic	18-75	1						Organic	Fabric item, possible handle
68	T-13	Ic	18-75	1						Organic	Kukui nut endocarp
69	T-13	Ic	18-75	1						Building material	Brick fragment
70	T-13	Ic	18-75	1						Ceramic, earthenware	Earthenware flower pot rim to base fragment
71	T-13	Ic	18-75	3						Building material	Unknown material, possibly mortar
72	T-13	Ic	18-75	1						Ceramic, pipe	Kaolin pipe stem, with incised: “CAPORAL / FRANCE”. Caporal was a strong, low-cost type of tobacco grown in France (mentioned in Manson 1891:6)
73	T-13	Ic	18-75	1					8.5	Ceramic, stoneware	Stoneware bottle fragment, base to body, round base; brown salt glaze (pre-1920s; Lebo 1997:G-11; Lockhart 2010:98)

Acc. No.	T-#	Str.	Depth (cmbs)	# of Pieces	Leng. (cm)	Ht. (cm)	Width (cm)	Thick (cm)	Diam (cm)	Material Type	Comments
74	T-13	Ic	18-75	1					10.5	Ceramic, earthenware	Refined earthenware (whiteware) plate fragment base to body; no decoration
75	T-13	Ic	18-75	1					16.5	Ceramic, porcelain	Hollowware, porcelain rim to body fragment; no decoration
76	T-13	Ic	18-75	1					~21	Ceramic, porcelain	Tableware, porcelain rim to body fragment, scalloped rim, no decoration
77	T-13	Ic	18-75	1						Ceramic, earthenware	Tableware, flat fragment, refined earthenware (whiteware) base fragment; partial stamp
78	T-13	Ic	18-75	3						Ceramic, porcelain	Porcelain fragments from same vessel, painted red with gold leaves on one side, red swirls on other side, wavy rim; possibly Chinese
79	T-13	Ic	18-75	3						Ceramic, porcelain	Hollowware, porcelain, rim (2) and body fragments (1); painted underglaze floral pattern (bamboo leaves) on exterior; probably Japanese (mid-19th to early 20th century)
80	T-13	Ic	18-75	1						Ceramic, earthenware	Refined earthenware (whiteware) tableware body fragment; no decoration
81	T-1	Ib	20-83	1						Glass	Turquoise glass bead
82	T-12	Ic	40-47	1						Plastic	White polyethylene fragment (post-1940s)

Figure 110. Artifact (Acc. # 52) collected from Trench 10, Stratum Id

Figure 111. Artifact (Acc. # 42) collected from Trench 8, Stratum Ib

are common in late nineteenth century and early twentieth century Hawaiian archaeological sites, such as the round headed nails, bottle glass, ceramics, porcelain, and earthenware fragments.

Most of the historic artifacts collected came from fill deposits in Trenches 1, 2, 6, 10, and 13. These fill layers are necessarily related, and likely represent multiple deposition events. However, they are probably associated with development in Waikīkī during the first half of the twentieth century. Those artifacts that could be dated to a narrow time frame (less than 25 year production window) were generally consistent with a deposition event after the first few decades of the twentieth century, except Trench I Stratum Ib, which contained plastic a post 1940s deposition period. Instead of discussing artifacts by type, the artifacts from in Trenches 1, 2, 6, 10, and 13 are discussed in the context of associated finds according to fill event.

6.1.2.1 Trench 1 historic artifacts

Trench 1 Stratum Ib (20-83 cmbs) consisted of imported sandy clay loam fill containing bottle glass, a turquoise glass bead, nails, wire, plastic, ceramic fragments, fired brick, a terracotta roofing tile, concrete fragments, butchered faunal bone, as well as a few basalt cobbles, and waterworn pebbles (Acc. #s 1–13 and 81; Figure 112 to Figure 114). A red brick (Acc. #1) that was 3 ¾ in wide x 2 ¼ inch thick was produced after 1918 (Meide 1994:25). Ceramics included a blue-patterned Japanese tea cup (Acc. # 3) and a brown-glazed refined earthenware fragment (Acc. # 8). An aqua glass bottle rim fragment (Acc. # 7) had a double ring finish widely used on a variety of bottle types between 1840 and the 1920s (BLM/SHA 2013). A piece of a “Fritos Corn Chips” plastic wrapper (Acc. # 13) dates between 1932 and 1961. Fritos was established in 1932 by C. E. Doolin and merged with H.W. Lay & Co. in 1961 (FritoLay 2014). The presence of the plastic children’s clothing hanger hook (Acc. # 5) and plastic lotion squeeze tube (Acc. # 6) indicate a post 1940s deposition date.

6.1.2.2 Trench 2 historic artifacts

Trench 2 Stratum Ic (27-85 cmbs) consisted of sandy loam fill containing burnt trash that had been repurposed as fill. Recovered artifacts (Acc. #s 14–22 and 28) included nails, broken glass, slag, porcelain, terracotta, fire-affected rock (461.1 g), and butchered bone. The presence of clear broken glass (Acc. #s 14, 15, and 17; Figure 115) generally produced sometime after the last decades of nineteenth century and a clear glass machine-blown bottle fragment (Acc. # 22) produced after 1905 (BLM/SHA 2013) suggest an initial discard period dating later than the turn of the twentieth century. A broken clear glass medicine/perfume bottle (Acc. # 15) made in a two-piece cup mold with tooled prescription finish dates to the post 1880s to 1920s period (BLM/SHA 2013). The appearance of the assemblage of burnt artifacts was consistent with prolonged, open air burning. Although they could not be tightly dated, the burnt rubbish in Stratum Ic likely represents material from the early part of the twentieth century, which corresponds to the period of open air trash burning in Honolulu. The subsequent layer (Stratum Id; 56-87 cmbs) consisted of sand disturbed by construction events. It contained historic debris, including glass and ceramic artifacts (Acc. #s 23–25; Figure 116) as well as faunal bones. A clear glass window fragment (Acc. # 23) was 0.3 cm, indicating it was produced after 1915 (Weiland 2009:35). This suggests that the sand layer was disturbed sometime later than the second decade of the twentieth century and that Stratum Ic was deposited after 1915. Stratum Id was probably disturbed by the fill event associated with Stratum Ic, and it is possible that the bone and historic artifacts were integrated during this event.

Figure 112. Artifacts (Acc. #s 1-3) collected from Trench 1, Stratum Ib, from left to right

Figure 113. Artifacts (Acc. #s 4-13) collected from Trench 1, Stratum Ib, from left to right

Figure 114. Artifact (Acc. # 81) collected from Trench 1, Stratum Ib

Figure 115. Artifacts (Acc. #s 14-22) collected from Trench 2, Stratum Ic, from left to right

Figure 116. Artifacts (Acc. #s 23-25) collected from Trench 2, Stratum Id, from left to right

Figure 117. Artifacts (Acc. #s 26-27) collected from Trench 2, Stratum Ic, from left to right

6.1.2.3 Trench 3 historic artifacts

Trench 3 Stratum Ib (22-90 cmbs) consisted of loamy sand fill containing cut faunal bone butchered with a metal blade, a nail (Acc. # 30), and fragment of porcelain with pink and gold trim flower overglaze design (Acc. # 31; Figure 118). This appears to be a Chinese Four Flowers decoration dating from the nineteenth to mid-twentieth centuries. Stratum Ib was associated with a utility pit.

6.1.2.4 Trench 6 historic artifacts

Trench 6 Stratum Ib (9-147 cmbs) consisted of dark brown loamy sand fill containing numerous historic artifacts (Acc. #s 32–41; Figure 119 through Figure 122), metal pipe fragments, and faunal remains. Ceramic artifacts included two earthenware fragments (Acc. #s 32 and 33) and a round Chinese green-glazed ginger jar (Acc. # 41; Figure 122). The round ginger jar may date as early as the 1850s, however, it became largely popular in America during the 1920s (Wegars 1988). Glass fragments (Acc. #s 34-39; Figure 119) included rim and neck from a clear bottle (post 1903) with an ABM wide mouth finish (Acc. # 35), and the base of a clear glass rectangular medicine bottle (Acc. # 38). A fragments of a clear glass bottle made in a two-piece cup mold (Acc. # 39; Figure 120) had a tooled crown finish which was produced between the 1880 and the 1920s. An intact Pacific Soda Works bottle (Acc. # 40; Figure 121) vertically embossed with “PACIFIC/ SODA WORKS CO. LTD./ HONOLULU T.H.” and a tooled crown finish was similar to one depicted in Elliot & Gould 1988 (188; # 257) which was dated to ca. 1916. The crown-style finish did not gain popularity until the prevalent use of the automatic bottle machine in the early twentieth century, as the crown finish design required a higher degree of accuracy to properly seal the bottles (BLM/SHA 2013). The material content was consistent with an early twentieth century deposition event.

6.1.2.5 Trench 10 historic artifacts

Trench 10 Stratum Ic (16-65 cmbs) was disturbed layer of sandy fill that contained charcoal, faunal bones, historic debris, rusted sire nails (Acc. #s 43–44; Figure 123), a hinge (Acc. # 45), and amber and clear glass fragments (Acc. #s 46–47; Figure 124;). Stratum Id (40-60 cmbs) was a fill layer containing redeposited A-horizon material, historic debris, charcoal, water rounded and fire affected rocks, and both shell and vertebrate midden material. Historic artifacts included iron brads and wire nails (Acc. #s 48-49; Figure 125), a mother-of-pearl two-hole buttons of uneven thickness (Acc. # 50; Figure 126), and two clear glass fragments (Acc. # 51; Figure 127). The incised Labridae tooth (mentioned above) was found in this layer (Acc. # 52). The material content was consistent with a post-nineteenth century deposition event.

6.1.2.6 Trench 12 historic artifacts

Trench 12 Stratum Ic (23-69 cmbs) was a fill layer containing redeposited A-horizon material that truncated the underlying intact A-horizon (Stratum II, SIHP # -7598) and Jaucas sand (Stratum III). Stratum Ic contained faunal bone, a small amount of midden, and historic debris including rusted nails (Acc. # 54; Figure 130) and a small white polyethylene fragment (Acc. # 82; Figure 132) indicating a post 1940s deposition date.

Figure 118. Artifacts (Acc. #s 30-31) collected from Trench 3, Stratum Ib, from left to right

Figure 119. Artifacts (Acc. #s 32-37) collected from Trench 6, Stratum Ib, from left to right

Figure 120. Artifacts (Acc. #s 38-39) collected from Trench 6, Stratum Ib, from left to right

Figure 121. Artifact (Acc. # 40) collected from Trench 6, Stratum Ib

Figure 122. Artifact (Acc. # 41) collected from Trench 6, Stratum Ib

Figure 123. Artifacts (Acc. # 43-45) collected from Trench 10, Stratum Ic

Figure 124. Artifacts (Acc. # 46-47) collected from Trench 10, Stratum Ic

Figure 125. Artifacts (Acc. # 48-49) collected from Trench 10, Stratum II

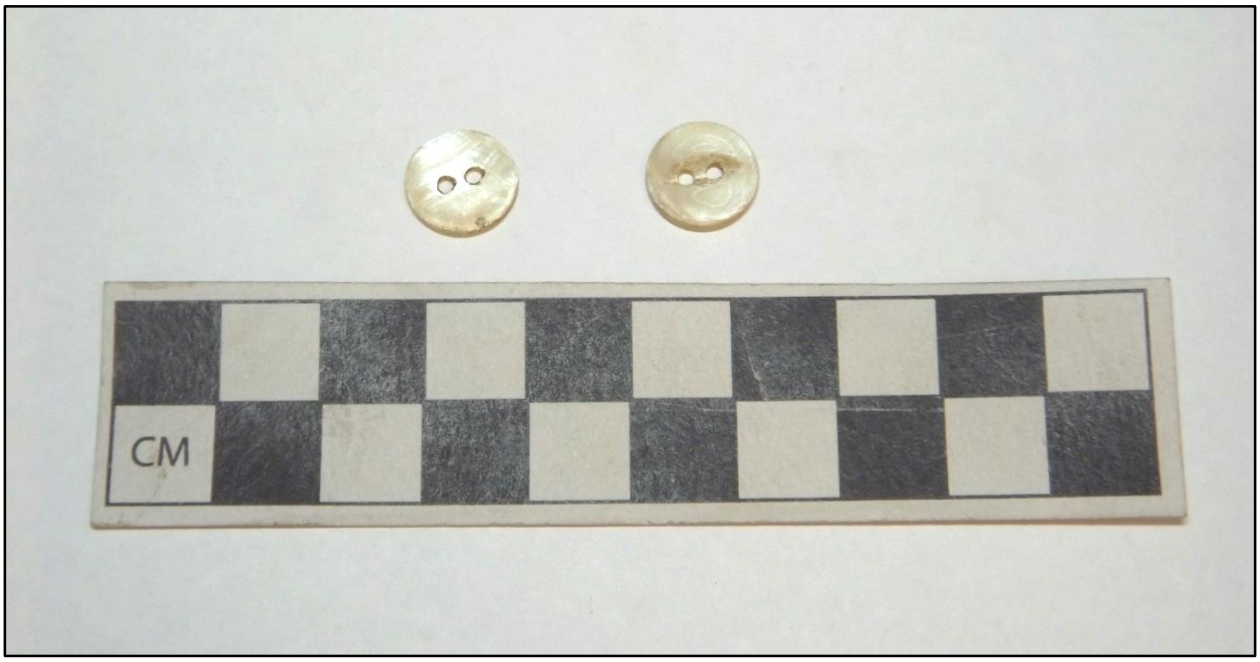

Figure 126. Artifacts (Acc. # 50) collected from Trench 10, Stratum II

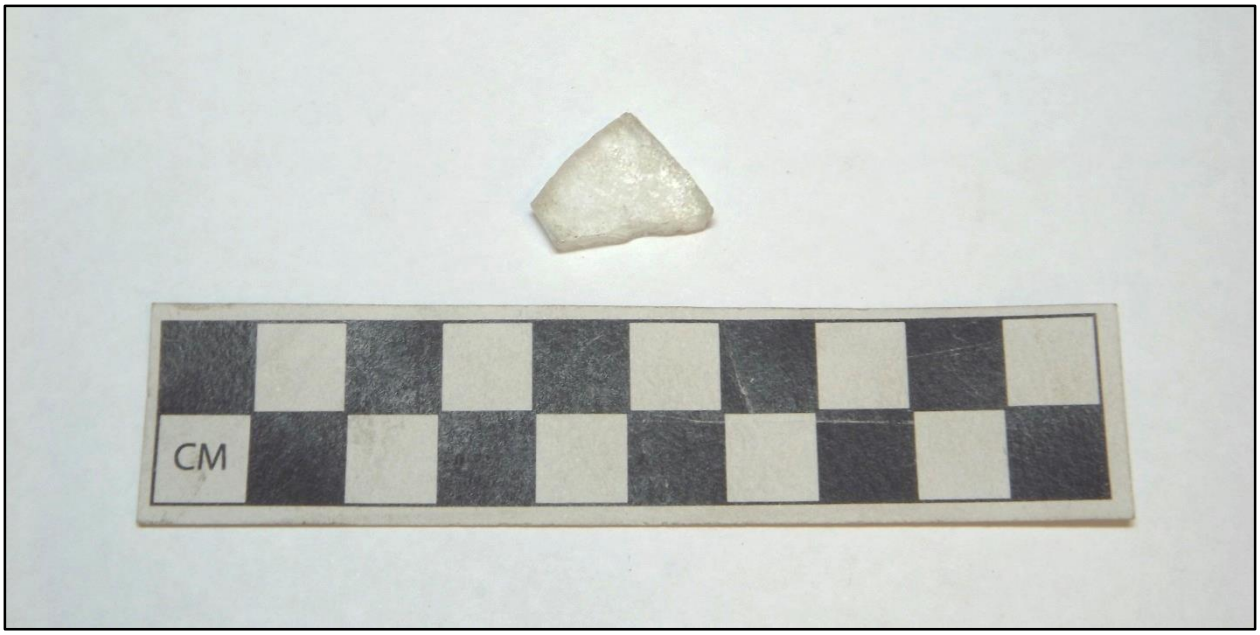

Figure 127. Artifact (Acc. # 51) collected from Trench 10, Stratum II

Figure 128. Artifact (Acc. # 52) collected from Trench 10, Stratum II

Figure 129. Artifact (Acc. # 53) collected from Trench 11, Stratum Ib

Figure 130. Artifact (Acc. # 54) collected from Trench 12, Stratum II

Figure 131. Artifact (Acc. # 55) collected from Trench 12, Stratum Ib.

Figure 132. Artifact (Acc. # 82) collected from Trench 12, Stratum Ic.

6.1.2.7 Trench 13 historic artifacts

Trench 13 Stratum Ic (12-85 cmbs) consisted of very dark grayish-brown loamy sand containing abundant historic materials (Figure 133 to Figure 143). Glass artifacts (Acc. #s 56-64; Figure 133 to Figure 136) included a complete brown medicine bottle with a tooled lip and "WYETH / 201" embossed on its square base that had been produced after 1880 (Acc. # 56; Figure 133), machine blown bottle fragments produced after 1903 (Acc. # 57 and 63; Figure 134 and Figure 136), fragments from a dark olive mold-blown spirits bottle with a "C" on its base that had been produced before 1920 (Acc. # 59; Figure 135), and numerous clear glass shards. Ceramic fragments (Acc. # 70 – 80; Figure 137 to Figure 143) included a stoneware bottle fragment with brown salt glaze (Acc. # 73; Figure 139) which had been produced before the 1920s (Lebo 1997:G-11; Lockhart 2010:98), rim and body fragments from a Japanese porcelain vessel with a painted underglaze of bamboo leaves which was produced in Japan between the mid-nineteenth and early twentieth century (Acc. # 79; Figure 142), as well as variety of porcelain and whiteware shards. Of particular interest was a Kaolin pipe stem (Acc. # 72; Figure 138) that had been incised with "CAPORAL / FRANCE". Caporal was a strong, low-cost type of tobacco grown in France (Manson 1891:6). The narrowly dateable artifacts were mostly produced during the first two decades of the twentieth century.

Figure 133. Artifact (Acc. # 56) collected from Trench 13, Stratum Ic

Figure 134. Artifact (Acc. # 57) collected from Trench 13, Stratum Ic

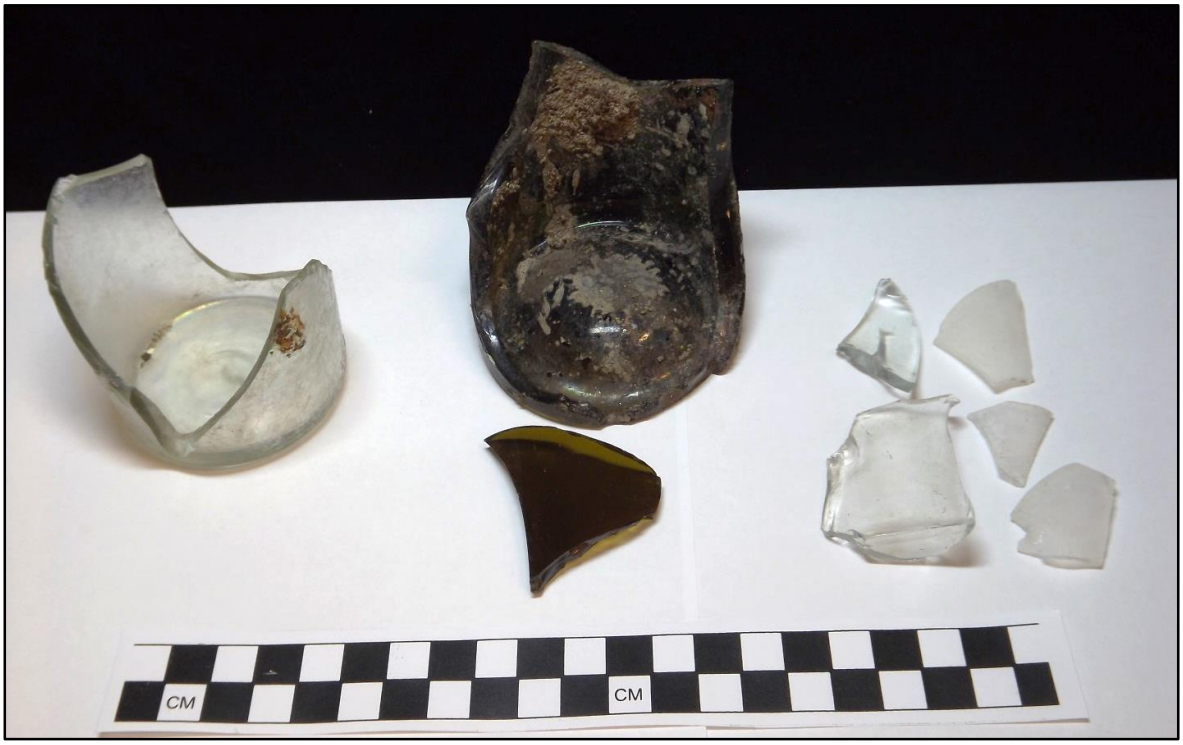

Figure 135. Artifacts (Acc. # 58-60) collected from Trench 13, Stratum Ic

Figure 136. Artifacts (Acc. # 61-65) collected from Trench 13, Stratum Ic

Figure 137. Artifacts (Acc. # 66-71) collected from Trench 13, Stratum Ic

Figure 138. Artifact (Acc. # 72) collected from Trench 13, Stratum Ic

Figure 139. Artifacts (Acc. # 73-77) collected from Trench 13, Stratum Ic

Figure 140. Artifact (Acc. # 78) collected from Trench 13, Stratum Ic (obverse)

Figure 141. Artifact (Acc. # 78) collected from Trench 13, Stratum Ic (reverse)

Figure 142. Artifacts (Acc. # 79) collected from Trench 13, Stratum Ic

Figure 143. Artifact (Acc. # 80) collected from Trench 13, Stratum Ic

6.2 Faunal Analysis

6.2.1 Terrestrial Faunal Remains

Faunal bone was found mixed in fill layers throughout the project area (Table 29). These layers were associated with construction and land development throughout the twentieth century. Thee remains primarily represent food refuse, and are predominantly post-Contact species. Significant amounts of *Bos taurus* bones (cut with a metal blade consistent with blades used in commercial butcher shop) were found in Trench 1 Stratum Ib (33.7 g), Trench 3 Stratum Ib (59.6 g), and Trench 13 Stratum Ic (57.3 g). Significant amounts of *Sus scrofa* bones (cut with a metal blade consistent with blades used in commercial butcher shop) were found in fill layers Trench 3 Stratum Ib (51.4 g) as well as small amounts in Trench 1 Stratum Ib and Trench 6 Stratum Ic. A *Gallus gallus* long bone fragment (0.5 g) from Trench 1 Stratum Ic was the only bird remain encountered during the project. *Canis lupus familiaris* remains were found in Trench 1 Stratum Ib, Trench 8 Stratum Ib, and Trench 11 Ib, along with juvenile *Canis lupus familiaris* remains in Trench 13 Stratum Ic. The vertebrate remains collected from these fill deposits represent 45.72% of the total sample collected during the project.

Trench 2 Stratum Ic contained burnt trash that had been repurposed as fill. In addition to a large quantity of burnt artifacts including nails, broken glass, slag, porcelain, terracotta, fire-affected rock, Trench 2 Stratum Ic contained a significant amount of calcined and butchered *Bos taurus* fragments (109.2 g), including long bone fragments cut with a metal blade consistent with blades used in commercial butcher shop. Some fractures in the bones were caused by a hand-held metal implement/blade (kerf was present on multiple shaft fragments) indicative of traditional Hawaiian techniques. Cranial fragments also sustained fracturing caused by fire. The burnt rubbish in Stratum Ic likely represents material from the early part of the twentieth century, which corresponds to the period of open air trash burning in Honolulu. The underlying layer of disturbed sand (Stratum Id) contained a *Bos taurus* rib fragment (58.8 g), a *Sus scrofa* proximal metacarpus fragment (7.6 g), and unidentified medium mammal (non-human) irregular bone fragments (0.7 g). Trench 2 Stratum Id was probably disturbed by the fill event associated with Stratum Ic. The vertebrate remains collected from Trench 2 fill deposits represent 34.8% of the total sample collected during the project.

Material from the former culturally enriched A-horizon was redeposited as part of a fill event in Trenches 7, 10, 12, and 13. These mixed fill deposits contained only a small amount of vertebrate faunal material, 4.1% of the total sample collected during the project. *Canis lupus familiaris* cranial fragments were found in Trench 7 Stratum Ib (3 g) and phalanx and vertebrae fragments in Trench 12 Stratum Ic (7.6 g). Trench 10 Stratum Id contained *Sus scrofa* metatarsus fragments (7.7 g) and a tooth fragment (0.5 g). In total, fill layers accounted for 85% of the vertebrate faunal material recovered during the project.

Only a small amount of faunal bone was recovered from the culturally enriched A-horizon deposits (SIHP # -7598) and associated features. The bulk of these deposits consisted of *Sus scrofa* phalanges, metatarsus fragments and a molar fragment (47.9 g) that were recovered from screened back dirt from Trench 11 Stratum II (SIHP # -7598). Additional *Sus scrofa* remains (9.5 g) were found in Trench 11 Stratum III, directly beneath the cultural layer, and might be the result of disturbance. Trench 14 Stratum II contained a *Sus scrofa* maxillary fragment (1.7 g).

Only four of the twelve features associated with SIHP # -7958 contained terrestrial faunal bone, primarily pig and dog. SIHP # -7598 Feature 1 in Trench 7 contained a *Canis lupus familiaris* rib neck (1 g). Feature 3 in Trench 10 contained scant unidentified Mammalia (non-human) fragments (0.4 g). Feature 9 in Trench 14 contained *Canis lupus familiaris* fragments (2.1 g), *Sus scrofa* fragments (1 g). Feature 11 in Trench 15 contained *Canis lupus familiaris* fragments (1.9 g) and *Sus scrofa* fragments (7 g). None of the features could be convincingly classified as a midden pit or *imu*. In general, the terrestrial faunal remains identified in the enriched cultural deposits (SIHP # -7598) and associated features were fairly limited. This might indicate that limited food processing and procurement activities occurred in the area. More likely, the minimal faunal remains in general are a product of the extensive disturbance activities. It is probably that most of the A-horizon deposits were removed during grading, leaving only the deepest parts of the deposits and the bottom sections of features.

6.2.2 Marine Vertebrate and Invertebrate Remains

A small amount marine midden was found in the project area. *Turbo sandwicensis* and *Strombus* sp. were a food source harvested from the shallow sandy portions of the coast protected from the surf. Conidae exist on benches fringing the shorelines. *Ctena bella* and *Brachidontes crebristriatus* thrive on rocks and rock shelves within intertidal zones, while rocky substrates and tide-pools provide shelter for *Nerita picea, Theodoxus neglectus* (which migrate between freshwater and saltwater), various Cypraeidae, and *Cypraea caputserpentis* (Hammatt et al. 2000; Kay 1979). The Hawaiians were known to collect a variety of these shells for food. *Isognomon* shells were also used to make fishhooks. Other species, such as the small *Ctena bella*, were probably not food, but may have been transported to habitation areas clinging to rocks or shoreline vegetation (Titcomb 1979:337-353). Trace amounts of Crustacea (e.g., crab) and Echinoidea (e.g. sea urchin) were also present in the midden signature, including *Echinometra mathaei* (*‘ina*, or rock-boring urchin) and *Echinothrix diadema* (*wana*, or long-spined urchin), which live on rocks near the coast.

Marine midden was not generally identified in fill deposits (Table 29). However, Trench 10 Stratum Ic contained a significant quantity, including *Nerita picea* (3.4 g), *Periglypta reticulata* (1.3 g), *Strombus* sp. (0.4 g), *Turbo sandwicensis* (3.8 g), and *Echinometra mathaei* (0.1 g). This material probably was mixed into Trench 10 Ic when an associated utility pit truncated the underlying layer (Stratum Id) which contained redeposited A-horizon material.

Material from the former culturally enriched A-horizon was redeposited as part of a fill event in Trenches 7, 10, 12, and 13. Only a very small amount of fish remains were recovered, including a Scaridae *Scarus* sp. pharyngeal grinding plate (1 g) and one fish vertebra fragment (0.1 g) from Trench 7 Stratum Ic and Osteichthyes fragments (0.3 g) from Trench 12 Stratum Ic. Fish remains included a modified Labridae tooth (Acc. # 52; Table 28; Figure 110) that had been notched by a sharp hand-tool beneath the enamel near where the root of the tooth would attach into the socket of the alveolar bone. Significant amounts of marine midden were found in Trench 10 and Trench 12, comprising 59% of the total sample collected during the project. Trench 10 Stratum Id consisted of *Cellana sandwicensis* (13.7 g), *Ctena bella* (1.2 g), *Conus* sp. (2.2 g), *Nerita picea* (1.7 g), *Pinctada radiata* (0.3 g), *Echinometra mathaei* (0.2 g), *Echinothrix diadema* (0.2 g), and Echinoidea mouth parts/tests (2.9 g). Trench 12 Stratum Ic contained *Brachidontes crebristriatus* (0.4 g), *Turbo sandwicensis* (0.3 g), *Isognomon californnicum*

(0.1 g), *Nerita picea* (0.3 g), *Echinometra mathaei* (0.2 g) and Echinoidea mouth parts/tests (0.5 g). Trench 10 Stratum Id and Trench 12 Stratum Ic may represent redeposited local material associated with the culturally enriched A-horizon deposits (SIHP # -7598) found in the southeast corner of the project area. The high levels of marine midden in these two trenches suggests that the source deposit for the now displaced A-horizon material may have once contained a significant amount material related to traditional Hawaiian marine resource procurement.

Samples from the culturally enriched A-horizon (SIHP # -7598) contained minimal amounts of marine midden. A 19 l. sample from Trench 12 Stratum II contained only a very small amount of midden, consisting of Osteichthyes (0.1 g) and *Conus* sp. (1.5 g). Samples of A-horizon deposits from Trenches 13 and 14 contained no midden. Five of the twelve features associated with SIHP # -7598 contained a small amount of marine midden, while the remaining seven contained no midden at all. Trench 10 Feature 11 contained *Ctena bella* (0.1 g), *Pinctada maragaritifera* (0.2 g), *Turbo sandwicensis* (1.5 g), and *Echinometra mathaei* (0.1 g). Within Trench 11, SIHP # -7598 Feature 5 contained *Tellina palatam* (1.5 g) and *Turbo sandwicensis* (1.6 g); Feature 6 contained Osteichthyes (0.5 g), *Isognomon californnicum* (0.4 g) and *Turbo sandwicensis* (0.7 g); Feature 7 contained Osteichthyes (0.5 g), *Tellina palatam* (1.3 g) and *Strombus* sp. (0.5 g). Trench 12 Feature 8 contained only Osteichthyes (0.1 g) and *Conus* sp. (1.5 g). Within these features, *Turbo sandwicensis* and *Tellina palatam* were the most frequent species encountered.

Table 29. Table of Faunal Remains

Test Trench	**T-1**	**T-1**	**T-2**	**T-2**	**T-3**	**T-6**	**T-7**	**T-7**	**T-8**
Stratum	Ib	Ib	Ic	Id	Ib	Ib	Ic	n/a	Ib
Feature								1	
Depth (cmbs)	20-83	20-83	27-85	56-87	22-90	9-147	50-60	55-75	20-145
Sample size (liters)									
Fauna - Vertebrate									
Mammalia				0.7	13.8				
Mammalia cf. *Canis lupus familiaris*							3		
Canis lupus familiaris		1.6						1	3.2
Sus scrofa		1		7.6	56.9	3.9			
Bos taurus	29.4	4.3	109.2	58.8	51.4				
Rattus norvegicus							0.1		
Aves (bird) *Gallus gallus*	0.5								
Osteichthyes (fish)							0.1		
Scaridae: *uhu*							1		
Total Fauna - Vertebrate	**29.9**	**6.9**	**109.2**	**67.1**	**122.1**	**3.9**	**4.2**	**1**	**3.2**
Fauna - Invertebrate									
Brachidontes crebristriatus									
Cellana sandwicensis									
Ctena bella									
Conus sp.									
Cypraea sp.									
Isognomon californnicum									
Nerita picea									
Periglypta reticulata									
Pinctada radiata									
Pinctada maragaritifera									
Strombus sp.									
Tellina palatam									
Trochus intexus									
Turbo sandwicensis									
Echinoidea									
Echinometra mathaei									
Echinothrix diadema									
Mouth parts/tests									
Crustacea									
Burned crustacea									
Total Fauna - Invertebrate	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Test Trench	**T-9**	**T-9**	**T-10**	**T-10**	**T-10**	**T-10**	**T-10**	**T-10**
Stratum	II	III	Ic	Id	Id	Id	n/a	n/a
Feature							3	3
Depth (cmbs)	45-60	~150	10-40	40-55	40-76	53-70	40-57	57-67
Sample size (liters)		n/a	0.75	n/a	0.25	n/a	1.25	1.25
Fauna - Vertebrate								
Mammalia								0.4
Mammalia cf. *Canis lupus familiaris*								
Canis lupus familiaris								
Sus scrofa				7.2	0.5			
Bos taurus								
Rattus norvegicus								
Aves (bird) *Gallus gallus*								
Osteichthyes (fish)		0.2				0.1		
Scaridae: *uhu*								
Total Fauna - Vertebrate	**0**	**0.2**	**0**	**7.2**	**0.5**	**0.1**	**0**	**0.4**
Fauna - Invertebrate								
Brachidontes crebristriatus						0.1		
Cellana sandwicensis					13.7			
Ctena bella					1.2		0.1	
Conus sp.					2.2			
Cypraea sp.								
Isognomon californnicum								
Nerita picea			3.4		1.7	2.8		
Periglypta reticulata			1.3					
Pinctada radiata					0.3			
Pinctada maragaritifera							0.2	
Strombus sp.			0.4					
Tellina palatam								
Trochus intexus								
Turbo sandwicensis			3.8				1.5	
Echinoidea								
Echinometra mathaei			0.1	0.1	0.1		0.1	
Echinothrix diadema				0.1	0.1			
Mouth parts/tests					2.9	0.1		
Crustacea								
Burned crustacea								
Total Fauna - Invertebrate	**0**	**0**	**9**	**0.2**	**22.2**	**3**	**1.9**	**0**

Test Trench	**T-11**	**T-11**	**T-11**	**T-11**	**T-11**	**T-11**	**T-11**	**T-11**	**T-11**
Stratum	Ib	II	II	II	II	II	II	III	II
Feature				4	5	6	7	Stain	
Depth (cmbs)	20	50-54	Back dirt	50-55	50-60	69-84	70-82	59-82	45-50
Sample size (liters)	n/a	19	n/a	3	3	2.5	3	3	n/a
Fauna - Vertebrate									
Mammalia									
Mammalia cf. *Canis lupus familiaris*	1.3								
Canis lupus familiaris									
Sus scrofa			47.9						9.5
Bos taurus									
Rattus norvegicus									
Aves (bird) *Gallus gallus*									
Osteichthyes (fish)						0.5	0.1		
Scaridae: *uhu*									
Total Fauna - Vertebrate	**1.3**	**0**	**47.9**	**0**	**0**	**0.5**	**0.1**	**0**	**9.5**
Fauna - Invertebrate									
Brachidontes crebristriatus		0.1							
Cellana sandwicensis									
Ctena bella		0.1							
Conus sp.									
Cypraea sp.								0.6	
Isognomon californnicum						0.4			
Nerita picea									
Periglypta reticulata									
Pinctada radiata									
Pinctada maragaritifera									
Strombus sp.							0.5		
Tellina palatam		2.3			1.5		1.3		
Trochus intexus									
Turbo sandwicensis		0.3			1.6	0.7		0.3	
Echinoidea									
Echinometra mathaei		0.1						0.1	
Echinothrix diadema									
Mouth parts/tests									
Crustacea									
Burned crustacea								0.1	
Total Fauna - Invertebrate	**0**	**2.9**	**0**	**0**	**3.1**	**1.1**	**1.8**	**1.1**	**0**

Test Trench	**T-12**	**T-12**	**T-12**	**T-12**	**T-12**	**T-12**	**T-13**	**T-13**	**T-13**
Stratum	Ib	Ic	Ic	Ic	n/a	n/a	Ic	II	II
Feature					8	8			12
Depth (cmbs)	40-65	23-69	40-47	30-50	36-48	44-52	55	51-71	83-89
Sample size (liters)	8	132	5	19	4	3	n/a	2.5	0.5
Fauna - Vertebrate									
Mammalia				0.4					
Mammalia cf. *Canis lupus familiaris*									
Canis lupus familiaris		7.6		0.1			6.1		
Sus scrofa			0.4						
Bos taurus							57.3		
Rattus norvegicus									
Aves (bird) *Gallus gallus*									
Osteichthyes (fish)	1			0.1		0.1			
Scaridae: *uhu*			0.1						
Total Fauna - Vertebrate	**1**	**7.6**	**0.5**	**0.6**	**0**	**0.1**	**63.4**	**0**	**0**
Fauna - Invertebrate									
Brachidontes crebristriatus	0.4	0.1							
Cellana sandwicensis									
Ctena bella									
Conus sp.						1.5			
Cypraea sp.		1							
Isognomon californnicum	0.1				0.1				
Nerita picea	0.3								
Periglypta reticulata		2							
Pinctada radiata		0.1							
Pinctada maragaritifera									
Strombus sp.									
Tellina palatam									
Trochus intexus		0.5							
Turbo sandwicensis		4.2	0.1	0.2	1				
Echinoidea									
Echinometra mathaei		0.1		0.2					
Echinothrix diadema		0.1							
Mouth parts/tests	0.5								
Crustacea									
Burned crustacea									
Total Fauna - Invertebrate	**1.3**	**8.1**	**0.1**	**0.4**	**1.1**	**1.5**	**0**	**0**	**0**

Test Trench	**T-14**	**T-14**	**T-14**	**T-15**	**T-16**	**T-16**
Stratum	II	II	Utility	II	II	II
Feature		9		11		
Depth (cmbs)	38	38	60	47-80	35-38	41-57
Sample size (liters)	n/a		n/a	47		
Fauna - Vertebrate						
Mammalia						
Mammalia cf. *Canis lupus familiaris*						
Canis lupus familiaris		2.1		1.9	4.4	
Sus scrofa	1.7	1		7		
Bos taurus			29.5			
Rattus norvegicus						
Aves (bird) *Gallus gallus*						
Osteichthyes (fish)						
Scaridae: *uhu*		0.3				
Total Fauna - Vertebrate	**1**	**3.4**	**29.5**	**8.9**	**4.4**	**0**
Fauna - Invertebrate						
Brachidontes crebristriatus						
Cellana sandwicensis						
Ctena bella						
Conus sp.						
Cypraea sp.						
Isognomon californnicum						
Nerita picea						
Periglypta reticulata						
Pinctada radiata						
Pinctada maragaritifera						
Strombus sp.						
Tellina palatam						
Trochus intexus						
Turbo sandwicensis						
Echinoidea						
Echinometra mathaei						
Echinothrix diadema						
Mouth parts/tests						
Crustacea						
Burned crustacea						
Total Fauna - Invertebrate	**0**	**0**	**0**	**0**	**0**	**0**

6.3 Disposition of Collections

All collections, including samples and artifacts, resulting from the AIS process, excluding human remains and grave goods, will be the property of the land owner. Upon conclusion of the AIS investigation, all collected materials, excluding human remains and grave goods, will be temporarily curated at the offices of Cultural Surveys Hawai‘i, Inc. in Waimanalo, O‘ahu, until a permanent curation facility can be determined, based on consultation with the landowner, SHPD, and any other potential stakeholders.

Section 7 Summary and Interpretation

In compliance with and to fulfill applicable Hawai‘i State historic preservation legislation, CSH conducted this AIS for the 133 Ka‘iulani Project, located in Waikīkī Ahupua‘a. The fieldwork component of the AIS was conducted between December 2013 and February 2014. The subsurface testing program included the excavation of 16 backhoe test trenches. The 16 trenches had a combined excavation footprint of approximately 27.16 square meters (292.3 sq. ft.). Subsurface testing excavated 0.64% of the King's Village project area, and 3.37% of the area that had not been previously impacted by a subterranean parking garage beneath the King's Village Shopping Center.

Within the project area, the stratigraphy consisted of either concrete or ceramic tile surface overlying multiple imported fill deposits which were overlying naturally-deposited Jaucas sand and/or marine sand. The stratigraphy patterns observed during subsurface testing indicate that the project area was subjected to intensive land reclamation during the twentieth century, paralleling the known history of land development in Waikīkī. Trenches 2, 3, 6, 7, 8, 10, 11, 12, 14, 15, and 16 had been heavily disturbed during prior construction events, including foundation excavations and utility installation. These subsurface disturbance events are likely related to the development of King's Village Shopping Center in 1972 and the adjacent apartment buildings during the mid to late-twentieth century.

Numerous historic artifacts were discovered in fill deposits throughout the project area, though they were primarily concentrated in Trenches 1, 2, 6, 10, and 13. The artifacts come from unrelated fill events. Those artifacts that could be dated to a narrow time frame (less than 25 year production window) were generally consistent with a deposition event after the first few decades of the twentieth century. Trench 2 contained fill mixed with burnt trash (Stratum Ic). Although the associated artifacts could not be tightly dated, the burnt trash layer in Trench 2 likely represents material from the early part of the twentieth century, which corresponds to the period of open air trash burning in Honolulu.

A heavily disturbed, culturally enriched A-horizon with 12 associated features (SIHP # -7598) was identified within the southeast corner of the project area. Trenches 13 and 15 contained thicker, more intact deposits. The cultural layers in Trenches 11, 12 and 14 were heavily impacted by construction and grading events, and only a few centimeters remained. The cultural layer contained charcoal, fire-altered rock, *Canis lupus familiaris*, butchered *Bos taurus*, butchered *Sus scrofa*, and a small amount of marine midden. The butchered bones were primarily cut with metal blades, indicating post-Contact activity. No traditional Hawaiian artifacts were found in the intact A-horizon deposits or associated features. The only manmade artifacts found within the layer were fragments of metal and wire nails, indicating disturbance or deposition into the nineteenth century at least. A total of 12 features were identified during the AIS (Table 31). All were pits of indeterminate function. None of the features could be convincingly classified as a posthole, *imu*, or other formal features. Most of the features contained fill that was similar to the originating A-horizon sediment, or contained only minimal cultural material.

Material from the former culturally enriched A-horizon was redeposited as part of a fill event in Trenches 7, 10, 12, and 13. These fill deposits clearly truncated features in Trenches 7, 10, and

12 (SIHP # -7598 Features 1, 2, 3, and 8). These deposits contained a large amount of butchered bone.

An isolated human vertebra fragment (SIHP # -7599) was identified in a fill deposit within Trench 1. The vertebra fragment was not in original context, and was not part of an intact burial. It could not be convincingly attributed to SIHP # - 7598, the culturally enriched A-horizon encountered in the southeast corner of the project area. The age, cultural affiliation, and date of redeposition of the vertebra could not be determined.

In summary, two historic properties were identified during the AIS for the 133 Ka‘iulani Project. SIHP # -7599 was a displaced human vertebra in fill. SIHP #- 7598 was a heavily disturbed, culturally enriched A-horizon with 12 associated features. It is likely that this cultural layer represents a land surface that was marginally utilized during the post-Contact period. Evidence of occupation and activity were largely destroyed during a series of twentieth century grading and construction events. The area has provided information related to Hawaii during the post-Contact period, and has basic integrity of materials or location.

Section 8 Historic Property Descriptions

8.1 SIHP # 50-80-14-7598

FORMAL TYPE:	Subsurface cultural deposit
FUNCTION:	Activity area
PREVIOUS DOCUMENTATION:	None
AGE:	Pre- and post-Contact
NUMBER OF FEATURES:	12
TYPES OF FEATURES:	12 pits of indeterminate function
DISTRIBUTION:	Area: 0.04 acres, (161 m^2) Primary N/S extent: 13.5 m Primary E/W extent: 21.5 m
LOCATION:	Deposits were identified beneath the 2413 Prince Edward apartment building in the center section of the block bounded by Ka‘iulani Ave. (NW), Prince Edward St. (NE), Uluniu Ave. (SE), and Koa St (SW).
TAX MAP KEY:	[1] 2-6-023:037 and 076
LAND JURISDICITON:	Private: BlackSand Capital
TEST EXCAVATIONS:	Trenches T-7, T-10 through T-15

SIHP # -7598 is a heavily disturbed culturally enriched A-horizon with 12 associated features. The historic property is located in the center section of the block bounded by Ka‘iulani Ave. (northwest side), Prince Edward St. (northeast side), Uluniu Ave. (southeast side), and Koa St (southwest side), (Figure 144 Figure 145, and Figure 146). During the current AIS, cultural deposits were identified in Trench 13 within the Hale Waikiki building grounds (2410 Koa Ave, Honolulu, HI 96815) and in Trenches 10 through 15, within the Prince Edward apartment building and grounds (2413 Prince Edward St., Honolulu, HI 96815). The current estimated area of the historic property is 0.04 acres (161 m^2).

SIHP # -7598 consists of a subsurface culturally enriched A-horizon that accumulated as the result of Historic and traditional Hawaiian activity. The cultural layer contained charcoal, fire-altered rock, butchered faunal material, and a small amount of marine midden. Where intact, the lower boundary of the A horizon/cultural layer had the characteristic "scalloped" appearance that results from the excavation of repeated small pits into the underlying Jaucas sand.

The layer had been heavily impacted by modern development. A-horizon deposits had been completely removed from most of the trenches within the project area. Where A-horizon deposits remained (Trenches 11, 12, 13, 14, and 15), it was apparent that their upper boundaries had been removed during grading events or similarly disturbed during a fill event. The general stratigraphy of trenches containing SIHP # -7598 associated cultural deposits consisted of concrete overlying layers of fill that truncated a natural A-horizon, which was atop Jaucas sand overlying marine sand (Figure 147).

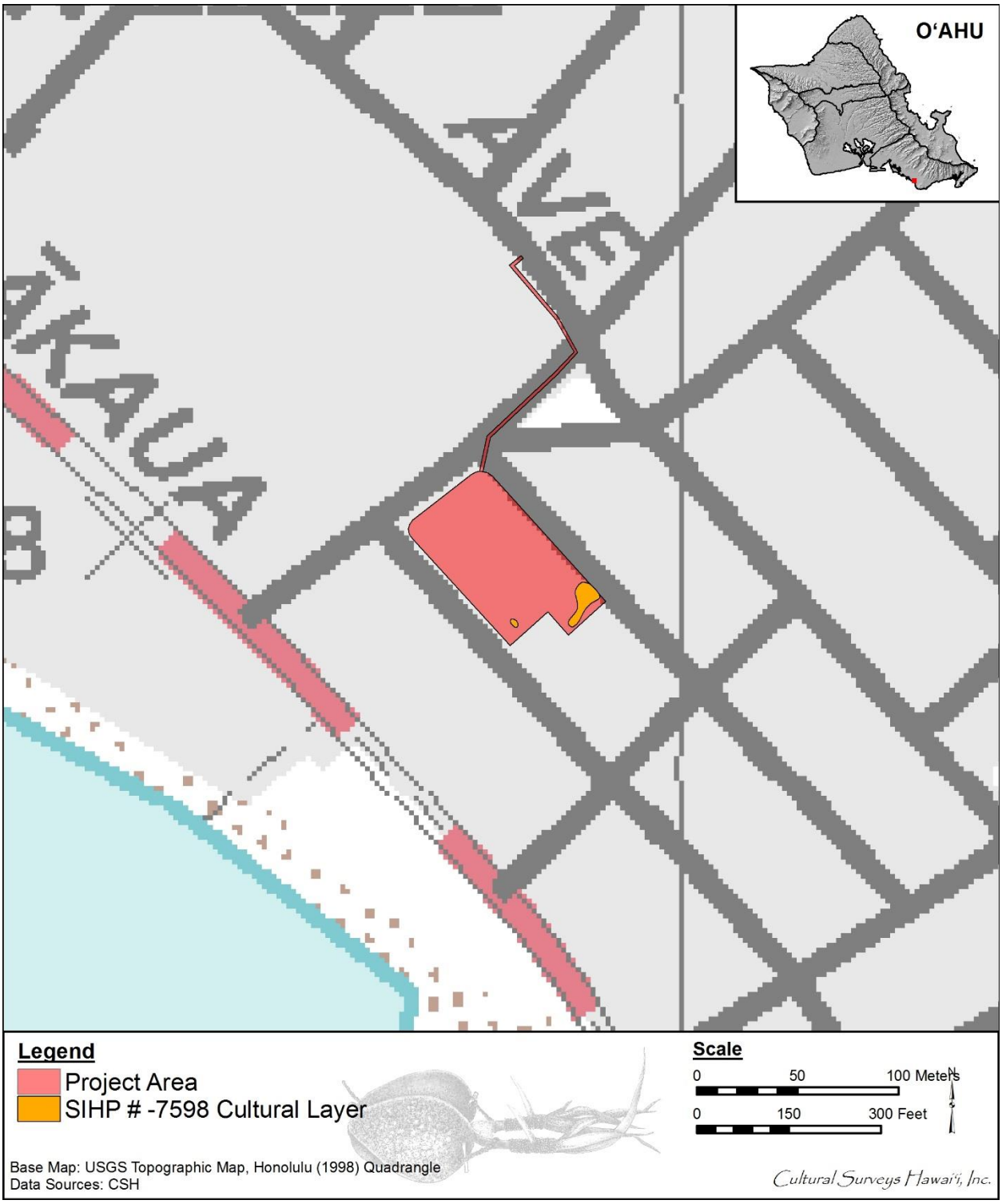

Figure 144. Location of the potential historic property beneath the 2413 Prince Edward Apartment building between Prince Edward Street and Koa Avenue (Base Map: 1998 USGS Topographic Map of Honolulu)

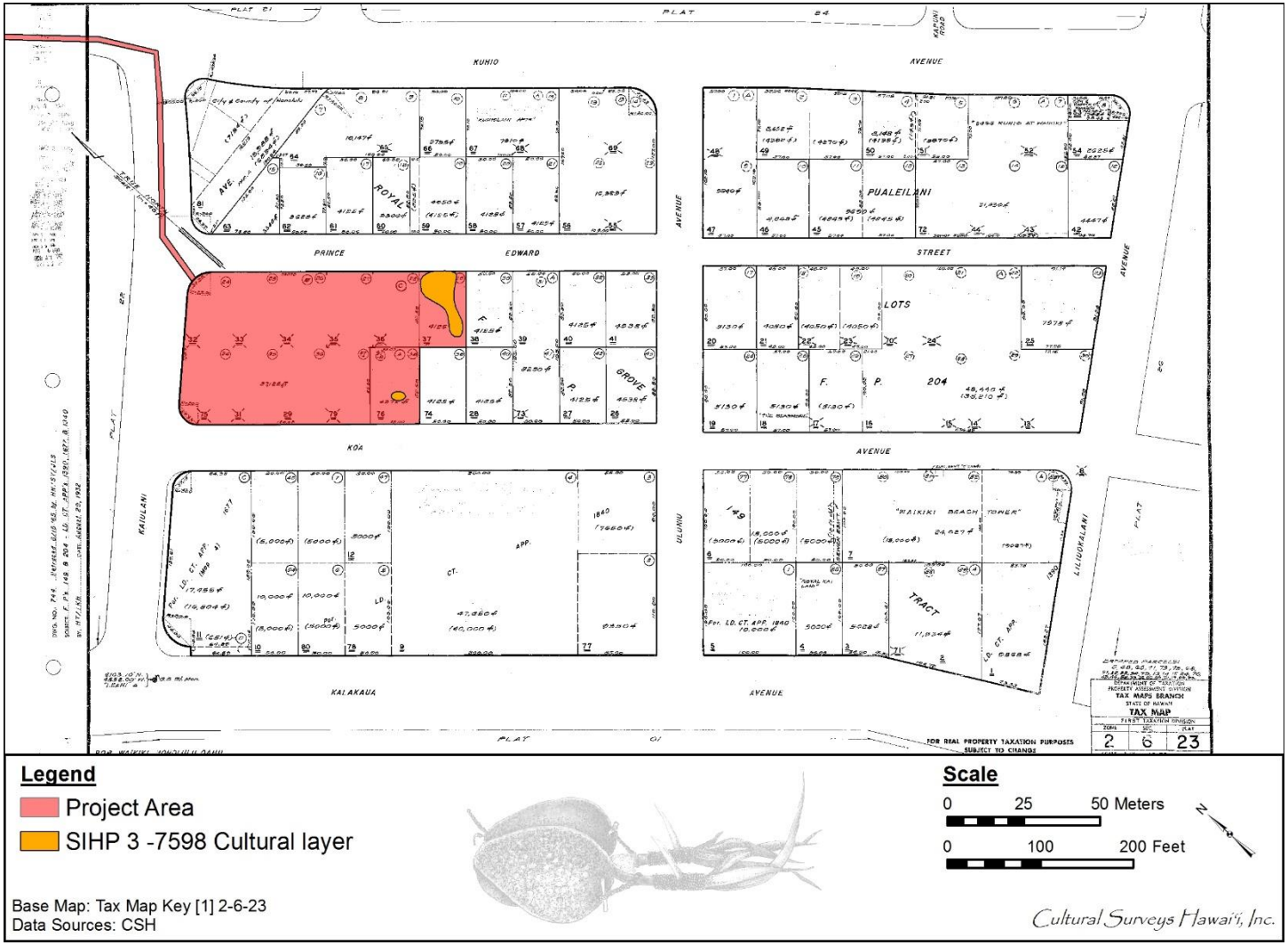

Figure 145. Location of the potential historic property beneath the 2413 Prince Edward Apartment building between Prince Edward Street and Koa Avenue (Base Map: Tax Map Key [1] 2-6-023)

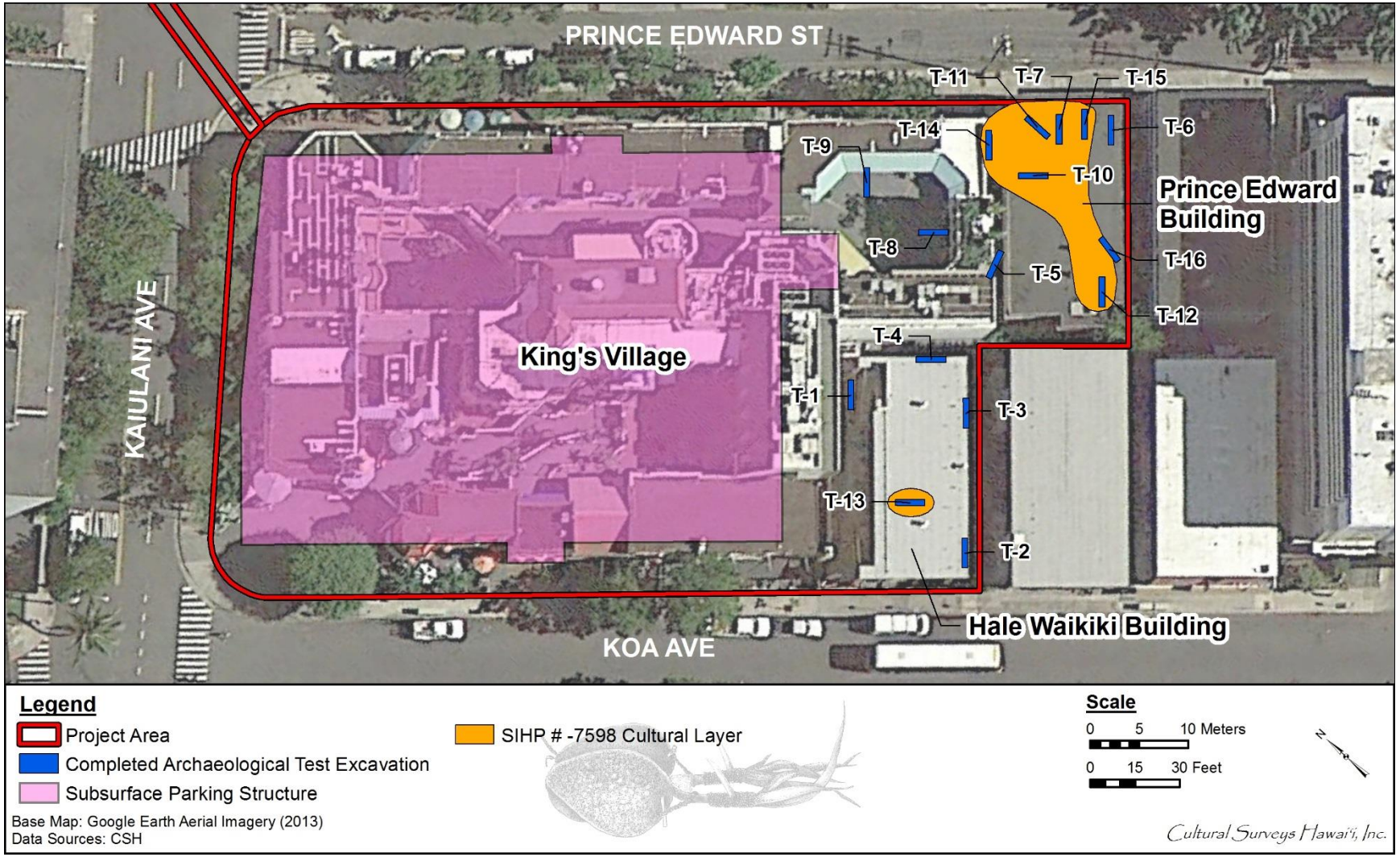

Figure 146. Google Earth imagery showing the location of the potential historic property, AIS test trenches, the King’s Village Shopping Center, Hale Waikiki Building and Prince Edward Apartment Complex (Base Map: Google Earth Imagery)

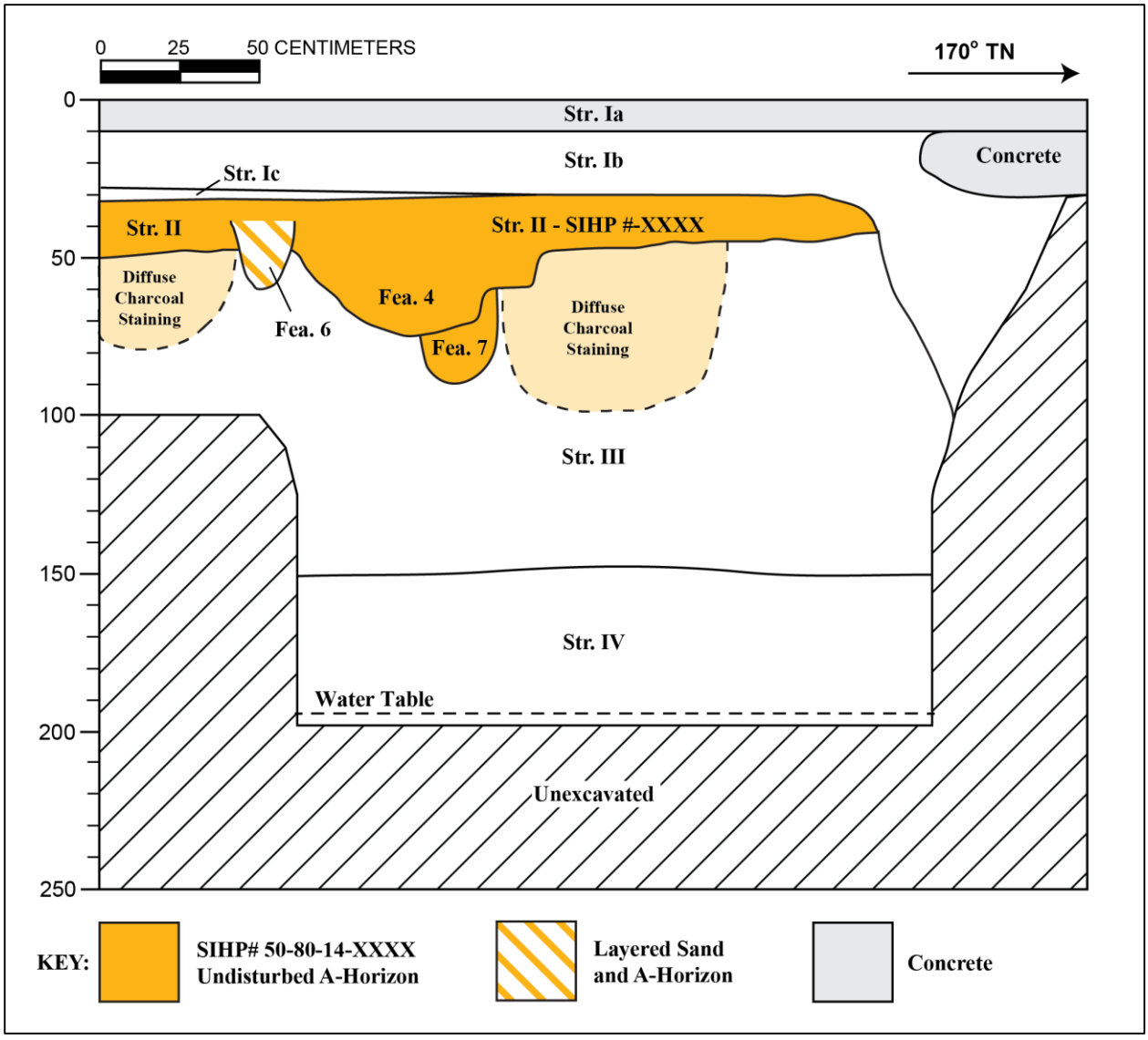

Figure 147. The east sidewall profile from Trench 11 shows the complex stratigraphy of intact deposits. Concrete (Ia) overlaid fill (Ib-Ic) which truncated a culturally enriched A-horizon (Stratum II, SIHP # -7598) which developed atop Jaucas sand (Stratum III) which was atop marine sand (Stratum IV). Three features (SIHP # -7598 Features 4, 6, and 7) originated within the cultural layer. The charcoal rich A-horizon deposits created large areas of staining

8.1.1 A-horizon description

Within the project area, the A-horizon deposits generally consisted of a brown to very dark brown loamy sand. These A-horizon deposits are considered to be component of the Jaucas series, and are the results of the accumulation of organic matter and alluvium atop the Jaucas sand deposits. The A-horizon was culturally enriched and impacted. It contained charcoal, features, and a small amount of cultural material. Faunal bone included *Canis lupus familiaris*, butchered *Bos taurus*, butchered *Sus scrofa*, and unidentified mammal bone (non-human). The butchered bones were primarily cut with metal blades, indicating post-Contact activity. Marine shell midden and fish bone were scarce throughout the deposits. The only manmade artifacts found within the layer were fragments of metal and nails.

Remnants of the culturally enriched A-horizon were identified in 5 of the 16 test trenches excavated during the AIS (Trenches 11, 12, 13, 14, and 15, see Table 30). Most of these deposits were concentrated in the southeast corner of the project area, with the deposits in Trench 13 isolated in the western section. A-horizon deposits greater than 20 cm thick were recorded in Trench 11 and 13. A-horizon deposits were less than 10 cm thick in Trenches 12, 14, and 15 (not counting the depth of associated features). These thin layers were heavily impacted by construction and grading events. There may have been very thin A-horizon deposits in Trench 16; however, they were so disturbed by roots that they no longer had any cultural integrity. Trench 16 should not be included in the historic property.

The A-horizon had been completely removed in the majority of the test trenches excavated during the AIS. In these trenches, the boundary between the fill and underlying Jaucas sand deposits was abrupt and linear, and is likely the result of grading. In Trenches 7, 10, 12 and 13, it appears that material from the former culturally enriched A-horizon was redeposited as part of the fill event. These fill deposits clearly truncated features in Trenches 7, 10, and 12 (Figure 148 and Figure 149). The features in Trenches 7 and 10 were the only remnants of the former A-horizon.

8.1.2 Features

A total of 12 features were identified during the AIS (Table 31). All were pits of indeterminate function. None of the features could be convincingly classified as a posthole, *imu*, or other formal features. They varied in diameter from 12 cm to 85 cm in diameter, and from 16 to 55 cm deep. Most of the features contained fill that was similar to the originating A-horizon sediment, or contained only minimal cultural material. There was a concentration of features in the southeast corner of the project area (Figure 150), focused in Trench 10 (two features), Trench 11 (four features), and Trench 15 (two features). The concentration of features in the southeast corner may indicate the presence of an activity area. However, Trench 11 also had the thickest deposits of cultural material. Thus, the apparent concentration of features may simply be related the presence of more intact cultural deposits.

8.1.2.1 Trench 7 (SIHP # -7598 Feature 1)

Trench 7 contained one feature. SIHP # -7598 Feature 1 was a small pit of indeterminate function observed in the floor and southeast wall of Trench 7 (Figure 59, Figure 62, and Table 31). The upper portion of the feature had been clearly truncated by the overlying redeposited A-horizon fill (Stratum Ic). A bulk sample collected from Feature 1 contained charcoal particulates,

and a *Canis lupus familiaris* rib neck (1 g). Feature 1 was the only remnant of the cultural layer within Trench 7.

Table 30. Culturally enriched A-horizon deposits (SIHP # -7598) within the project area

Trench	Str.	Depth (cmbs)	Content Summary	Stratum Description
T-11	II	30-55	Dense charcoal; faunal remains: *Sus scrofa* phalanges, metatarsus, molar (47.9 g); minimal midden: *Brachidontes crebristriatus* (0.1 g), *Ctena bella* (0.1 g), *Tellina palatam* (2.3 g), *Turbo sandwicensis* (0.3 g), and *Echinometra mathaei* (0.1 g); SIHP # -7598 Features 3, 4, 5, and 6	Natural A-horizon; 10YR 3/3, very dark brown; loamy medium sand; structureless single-grain; moist loose consistency; non-plastic; mixed origin; abrupt smooth lower boundary; common medium roots, root staining present; culturally enriched A-horizon (SIHP # -7598)
T-12	II	36-50	Charcoal flecking; associated with SIHP # -7598 Features 7 and 8	Natural A-horizon; 10YR 3/2, very dark grayish brown ; loamy medium sand; weak very fine granular structure; moist loose consistency; non-plastic; mixed origin; clear irregular lower boundary; few fine to medium roots; culturally enriched A-horizon (SIHP # -7598)
T-13	II	45-74	Charcoal flecking; 12 unidentifiable bone fragments (from 0.5 to 2.3 cm long) ; associated with SIHP # -7598 Feature 12	Natural A-horizon; 10YR 4/3, brown; fine to medium loamy sand; weak fine crumb structure; moist loose consistency; non-plastic; mixed origin; clear smooth lower boundary; no roots observed; Natural A-horizon (SIHP # -7598)
T-14	II	30-45	Charcoal flecking; *Sus scrofa* maxillary fragment (1.7 g); associated with SIHP # -7598 Feature 9	Natural A-horizon; 10YR 5/3, brown; fine loamy sand; weak fine crumb structure; moist very friable consistency; non-plastic; mixed origin; diffuse, broken/discontinuous lower boundary; no roots observed; contained plastic, glass, fire affected rock, and marine shell midden; disturbed/truncated buried A-horizon (SIHP # -7598)
T-15	II	45-63	Dense charcoal lens; associated with SIHP # -7598 Features 10 and 11	Natural A-horizon; 10YR 4/2, dark grayish brown; medium sand; structureless, single-grain; moist, very friable consistency; non-plastic; mixed origin; diffuse, broken/discontinuous lower boundary; no roots observed; disturbed/truncated buried A-horizon, SIHP # -7598

Figure 148. Photograph of the southeast wall of Trench 10, showing Stratum Ic truncating the remnant of SIHP # -7598 Feature 2

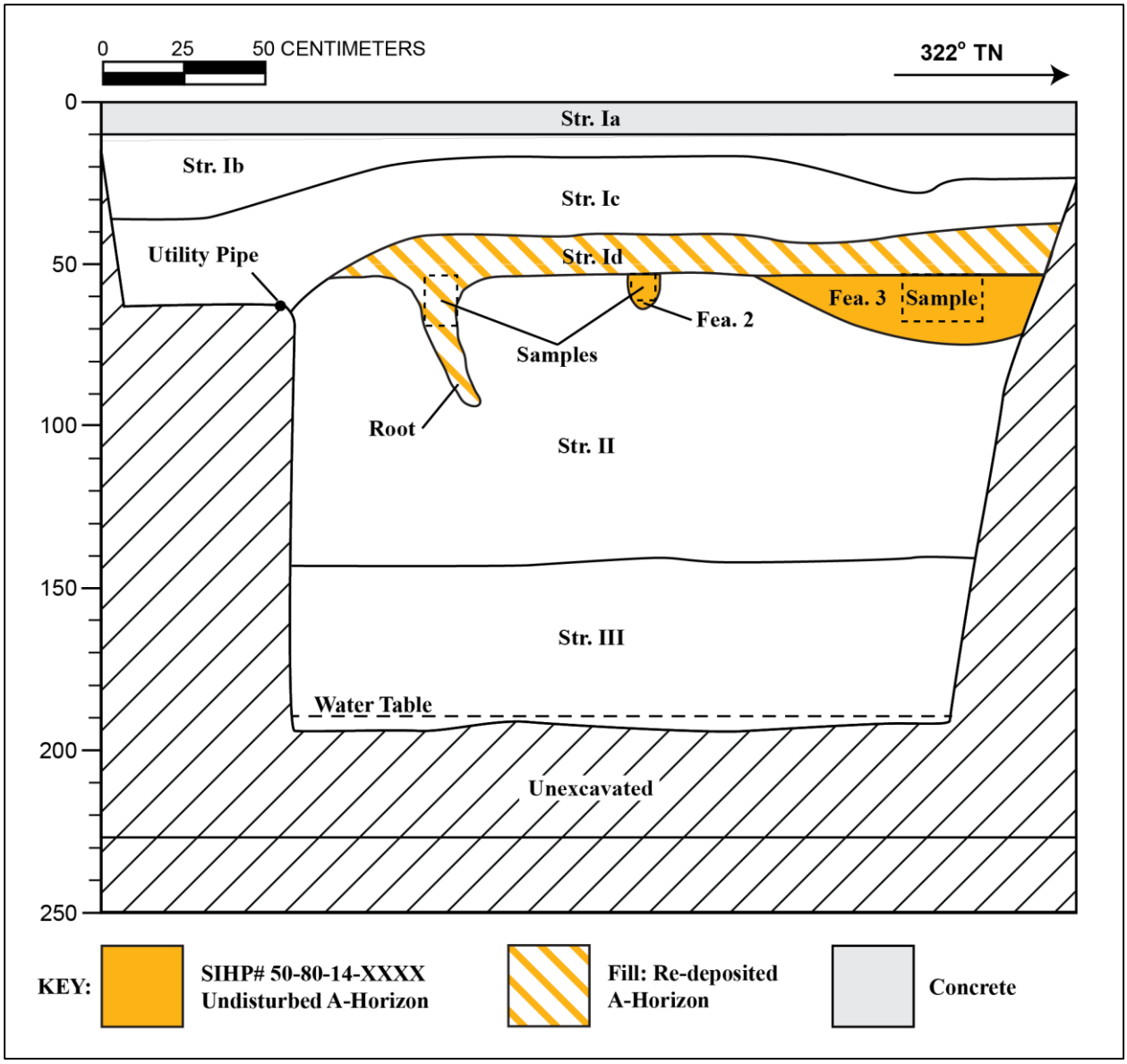

Figure 149. The southwest sidewall profile from Trench 10 shows the impacted former land surface. Features 2 and 3 were truncated by Stratum Id (redeposited A-horizon material). The culturally enriched A-horizon (SIHP # -7598) was likely removed during a grading event. Features 2 and 3 are the only remnant of the cultural layer in Trench 10.

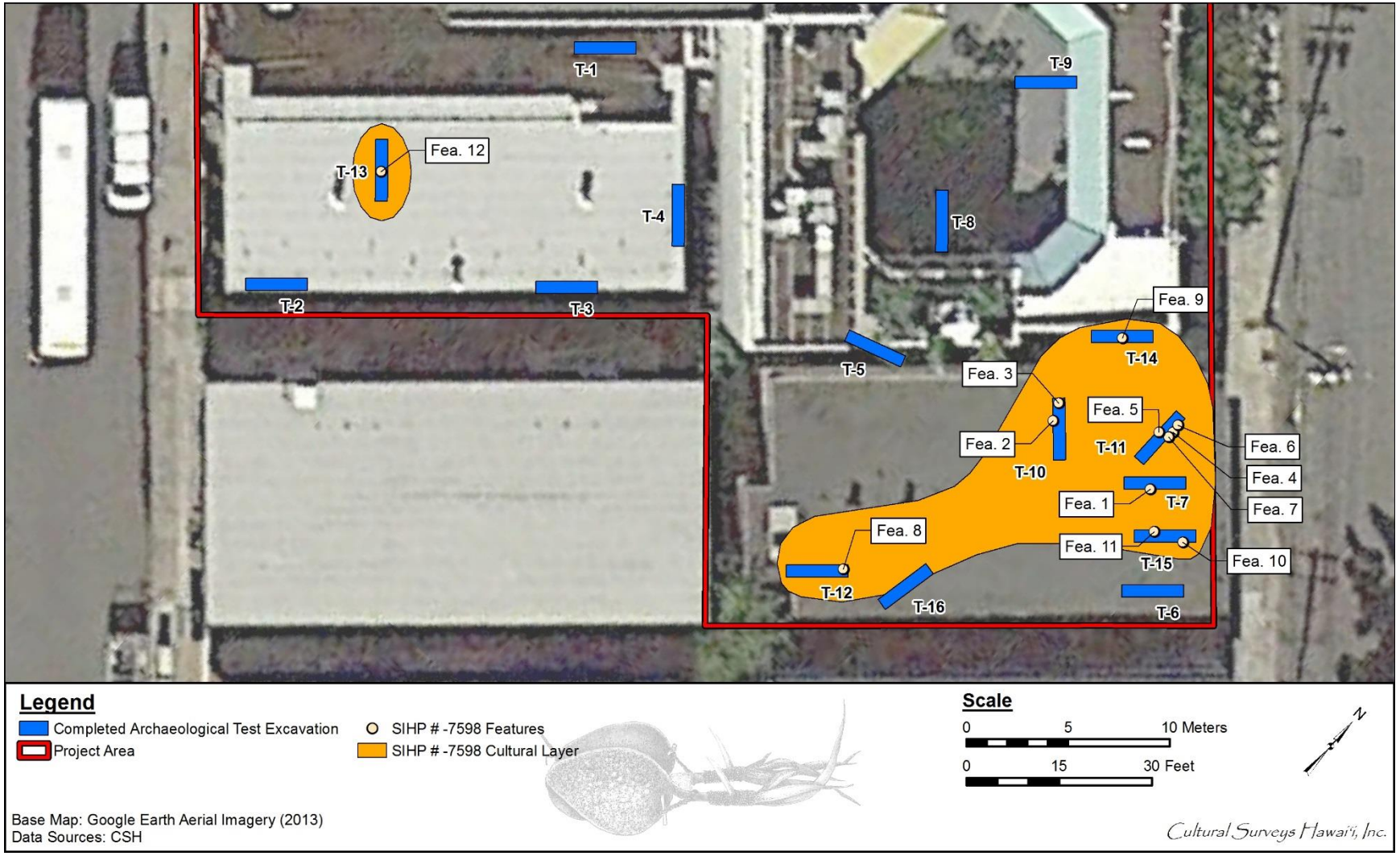

Figure 150. Aerial photograph showing the potential historic property, associated features, and test trenches excavated during the AIS (Base Map: 2013 Google Earth Imagery)

Table 31. SIHP # -7598 Features

Feature #	Trench	Depth (#-# cmbs)	Dia. (cm)	Type	Function	Contents
1	T-7	30 cm (55-75)	25	Small pit	Indeterminate	Charcoal flecking; *Canis lupus familiaris* rib neck (1 g).
2	T-10	20 cm (55-65)	10	V. small pit	Indeterminate	No cultural material
3	T-10	23 cm (55-78)	65+	Large pit	Indeterminate	Unidentified Mammalia (non-human) fragments (0.4 g); minimal midden: *Ctena bella* (0.1 g), *Pinctada maragaritifera* (0.2 g), *Turbo sandwicensis* (1.5 g), and *Echinometra mathaei* (0.1 g).
4	T-11	25 cm (50-75)	85+	Very large stepped pit	Indeterminate	Charcoal
5	T-11	18 cm (50-68)	60+	Large irregular pit	Indeterminate	Charcoal flecking; small amount of marine shell midden: *Tellina palatam* (1.5 g) and *Turbo sandwicensis* (1.6 g).
6	T-11	55 cm (40-95)	28	Deep pit	Indeterminate	Minimal midden: Osteichthyes (0.5 g), *Isognomon californnicum* (0.4 g) and *Turbo sandwicensis* (0.7 g).
7	T-11	30 cm (60-90)	20	Small pit	Indeterminate	Minimal midden: Osteichthyes (0.5 g), *Tellina palatam* (1.3 g) and *Strombus* sp. (0.5 g).
8	T-12	16 cm (44-60)	70+ x 50+	Large pit	Indeterminate	Minimal midden: Osteichthyes (0.1 g) and *Conus* sp. (1.5 g).
9	T-14	29 cm (38-67)	35 x 20	Irregular pit	Indeterminate	A piece of fire affected rock; faunal bone: *Canis lupus familiaris* fragments (2.1 g), *Sus scrofa* fragments (1 g), and Scaridae (*uhu*, 0.3 g); minimal marine shell midden.
10	T-15	18 cm (45-63)	35 x 20	Pit	Indeterminate	Charcoal flecking
11	T-15	16 cm (45-61)	50 x 40	Large pit	Indeterminate	Charcoal flecking; fire affected rock; faunal bone: *Canis lupus familiaris* (1.9 g) and *Sus scrofa* fragments (7 g)
12	T-13	17 cm (72-89)	12	V. small pit	Indeterminate	Charcoal flecking

8.1.2.2 Trench 10 (SIHP # -7598 Features 2 and 3)

Trench 10 contained two pit features (Figure 76, Figure 148, Figure 149, and Table 31). SIHP #-7598 Feature 2 was a small pit of indeterminate function observed in the floor and southeast wall of Trench 10. The upper portion of the feature was clearly truncated by the overlying redeposited A-horizon fill (Stratum Id, Figure 77). The feature fill contained no cultural material, and it is possible that it was the product of natural processes (e.g. plants, animals, erosion). SIHP #-7598 Feature 3 was a large basin shaped pit of indeterminate function observed extending into the southeast, southwest, and northwest sidewalls of Trench 10. The upper portion of the feature was truncated by the overlying redeposited A-horizon fill. The feature fill contained a small amount of unidentified Mammalia fragments (0.4 g) and minimal midden consisting of *Ctena bella* (0.1 g), *Pinctada maragaritifera* (0.2 g), *Turbo sandwicensis* (1.5 g), and *Echinometra mathaei* (0.1 g). Both pits were remnants of a former culturally enriched A-horizon that was removed during grading and construction activities. Other than these two features, there were no intact portions of the A-horizon layer in Trench 10.

8.1.2.3 Trench 11 (SIHP # -7598 Features 4, 5, 6, and 7)

Trench 11 had thicker cultural deposits than seen elsewhere in the project area and had the most complex stratigraphy encountered in the AIS. The trench contained four features. Three of these features (Feature 4, 6 and 7 were visible in the east sidewall of Trench 11 (Figure 79, Figure 81, Figure 83, Figure 84, and Table 31). SIHP # -7598 Feature 4 was a large irregular stepped pit observed in the floor and east sidewall. It was 85 cm long, 25 cm deep and the southern edge had a stepped appearance. The feature fill was very dark and contained lots of charcoal flecking and staining, but contained no midden material. The large amount of charcoal and intense staining indicates that Feature 4 was likely associated with a burn event. SIHP # -7598 Feature 6 was a deep pit of indeterminate function originating from within the former A-horizon. The upper portion of the feature fill consisted of banded, layered sand (Stratum III) and A-horizon material (Stratum II). The feature fill contained a minimal midden, consisting of Osteichthyes (0.5 g), *Isognomon californnicum* (0.4 g) and *Turbo sandwicensis* (0.7 g). SIHP # -7598 Feature 7 was a pit of indeterminate function. The upper portion of the feature was truncated by Feature 4, but it likely originated in the former A-horizon (Stratum II). The feature fill was dark, but did not contain the same level of charcoal flecking as observed in Feature 4 and the adjacent areas of extensive staining. The feature fill contained a very small amount of midden, consisting of Osteichthyes (0.5 g), *Tellina palatam* (1.3 g) and *Strombus* sp. (0.5 g). The sides and shape of Feature 7 were well defined; however, it is possible that Feature 7 represented charcoal staining that had leeched downward from Feature 4. SIHP # -7598 Feature 5 was a large irregular pit of indeterminate function observed in the floor and west sidewall of Trench 11 (Figure 80, Figure 82, Figure 83, Figure 84, and Table 31). The feature fill was dark, contained charcoal flecking and a very small amount of marine shell midden, consisting of *Tellina palatam* (1.5 g) and *Turbo sandwicensis* (1.6 g). As with the other features in Trench 11, the cultural material content was not significantly different than the originating A-horizon deposits.

8.1.2.4 Trench 12 (SIHP # -7598 Feature 8)

Trench 12 contained the western-most cultural deposits in the primary concentration (which excludes the isolated deposits in Trench 13). Trench 12 contained one feature. SIHP # -7598 Feature 8 was a large basin shaped pit of indeterminate function observed in the floor and

northwest sidewall of Trench 12 (Figure 87, Figure 91, and Table 31). It contained minimal midden, consisting of Osteichthyes (0.1 g) and *Conus* sp. (1.5 g). The feature originated from within a former A-horizon which had largely been removed during grading. The only remnant of the cultural layer was a small lens of A-horizon material contiguous with Feature 8.

8.1.2.5 Trench 13 (SIHP # -7598 Feature 12)

Trench 13 contained an isolated A-horizon deposit in the western half of the project area. Trench 13 contained one feature. SIHP # -7598 Feature 12 was a small pit feature observed in the floor of Trench 13 (Figure 95 and Table 31). It was at least 12 cm in diameter and 17 cm deep (from 72-89 cmbs). It contained no midden or cultural material aside from charcoal flecking. It is possibly a posthole, but the form of the feature did not provide any conclusive information about its use.

8.1.2.6 Trench 14 (SIHP # -7598 Feature 9)

Trench 14 was heavily disturbed by previous construction events, and only a few centimeters of the cultural layer remained (Stratum II). Trench 14 contained one feature. SIHP # -7598 Feature 9 was an irregular shaped pit of indeterminate function observed in the floor of Trench 14 (Figure 99 and Table 31). It contained a piece of fire affected rock, faunal bone consisting of *Canis lupus familiaris* fragments (2.1 g), *Sus scrofa* fragments (1 g), and Scaridae (*uhu,* 0.3 g) and a small amount of marine shell midden. The feature fill was not significantly different than the A-horizon (Stratum II), and the form of the feature was very irregular, it is possible that it was the product of natural processes (e.g. plants, animals, erosion).

8.1.2.7 Trench 15 (SIHP # -7598 Features 10 and 11)

Trench 15 was disturbed by previous construction events, and only a few centimeters of the cultural layer remained (Stratum II). Trench 15 contained two features. SIHP # -7598 Feature 10 was a small pit of indeterminate function observed in the floor of Trench 15 and extending into the southeast sidewall (Figure 101 through Figure 104, and Table 31). It originated within the former A-horizon. It contained charcoal flecking, but no faunal or marine shell midden. SIHP # -7598 Feature 11 was a larger pit of indeterminate function observed in the floor of Trench 15 and extending into the west sidewall. It was at least 75 cm long, 50 cm wide and 40 cm deep (from 50-90 cmbs). It contained charcoal flecking, fire affected rock and a small amount of faunal bone consisting of *Canis lupus familiaris* fragments (1.9 g) and *Sus scrofa* fragments (7 g), but did not contain marine shell midden.

8.1.3 Significance

SIHP # -7598 is a culturally enriched A-horizon with 12 associated features. The deposit contained minimal cultural material. Faunal bone included *Canis lupus familiaris,* as well as *Bos taurus* and *Sus scrofa* remains which were cut with metal blades, indicating post-Contact activity. Marine shell midden and fish bone were scarce throughout the deposits. The only manmade artifacts found within the layer were fragments of metal and nails. The deposit likely dates to the late pre-Contact and post-Contact period.

The deposits associated with SIHP # -7598 had been heavily impacted/disturbed. The majority of the A-horizon deposits within the project area had been removed during construction and grading activities during the early twentieth century. Only the deeper A-horizon deposits and

bottom portions of features survived. Because of the impacted nature of the potential historic property, SIHP # -7598 only has basic integrity of location and materials. SIHP # -7598 is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history) pursuant to HAR § 13-284-6.

8.2 SIHP # 50-80-14-7599

FORMAL TYPE:	Previously identified burial
FUNCTION:	Burial
PREVIOUS DOCUMENTATION:	None
AGE:	Unknown
NUMBER OF FEATURES:	1
TYPES OF FEATURES:	1 human vertebra fragment
DISTRIBUTION:	Isolated find
LOCATION:	Discovered in a trench on the northwest side of the Hale Waikiki building (2410 Koa Ave, Honolulu, HI 96815)
TAX MAP KEY:	[1] 2-6-023:076
LAND JURISDICITON:	Private: BSC KVSC, LLC
TEST EXCAVATIONS:	Trench 1

SIHP # -7599 is a single isolated human vertebra fragment. The human vertebra fragment was discovered in Trench 1, which was located along the northwest side of the Hale Waikiki building, 2410 Koa Ave, Honolulu, HI 96815 (Figure 151, Figure 152, and Figure 153). The vertebra fragment was not in original context, and was not part of an intact burial. It could not be convincingly attributed to SIHP # -7598, the culturally enriched A-horizon encountered in the southeast corner of the project area.

Because the isolated vertebra fragment was identified during an AIS investigation it is a "previously identified" burial under Hawaii state burial law (HAR §13-300-2). During a 7 February 2014 meeting with SHPD representatives, CSH requested clarification on whether or not disarticulated, fragmented human remains found during an AIS should be treated as a burial site under Hawai‘i State burial law (HAR § 13-300). Kawika Farm (SHPD Culture and Historic Branch) indicated that the direction he had been given from SHPD's Culture and History Branch Chief and SHPD's Attorney General's Office advisors was that all human remains found during AISs were to be considered burial sites under Hawai‘i burial law. This directive was discussed with a group of previously recognized Cultural Descendants to burials in Waikīkī on 11 March 2014.

The human vertebra was encountered in fill deposits in Trench 1. The stratigraphy of Trench 1 consisted of ceramic tiles and concrete (Stratum Ia), overlying imported fill material (Stratum Ib), overlying natural Jaucas sand (Stratum II) (Figure 154, Figure 155, and Table 32). Stratum Ib (20-83 cmbs) consisted of imported sandy clay loam fill containing cultural material, including bottle glass, a turquoise glass bead, nails, wire, plastic, ceramic fragments, bricks, concrete fragments, cut faunal bone, as well as a few basalt cobbles, and waterworn pebbles The presence of the plastic hanger (Acc. #s 5) and plastic tube (Acc. # 6) indicated a post 1940s redeposition date for the material. The human vertebra fragment was dislodged from the fill layer (Stratum Ib) during hand excavation of the underlying Jaucas sand (Stratum II). All adjacent fill material and Jaucas sand were screened through a 1/8-inch screen. No additional human or probable-human remains were identified.

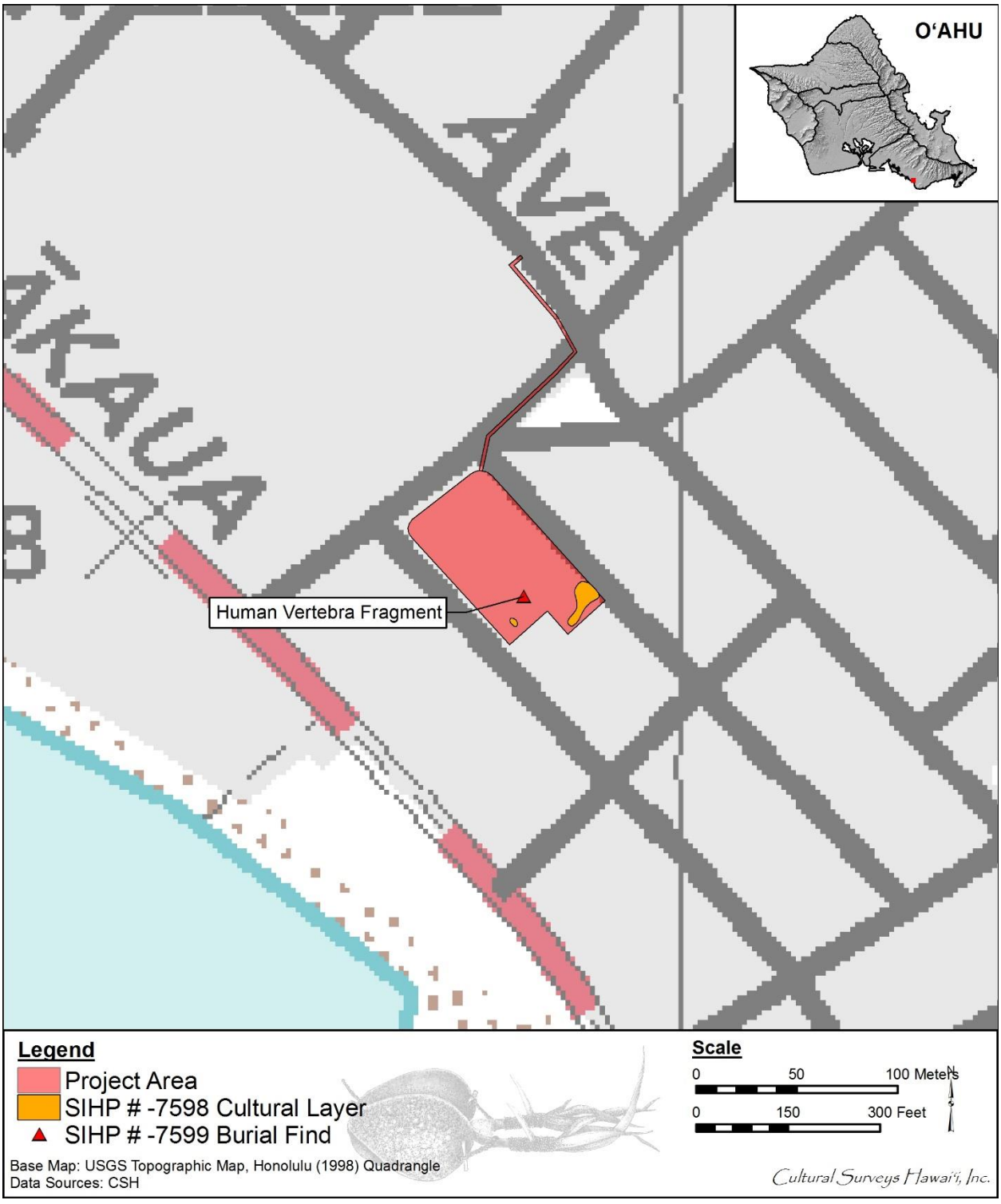

Figure 151. Location of the human vertebra burial find beneath the along the northwest side of the Hale Waikiki building, 2410 Koa Ave, Honolulu, HI 96815 (Base Map: 1998 USGS Topographic Map of Honolulu)

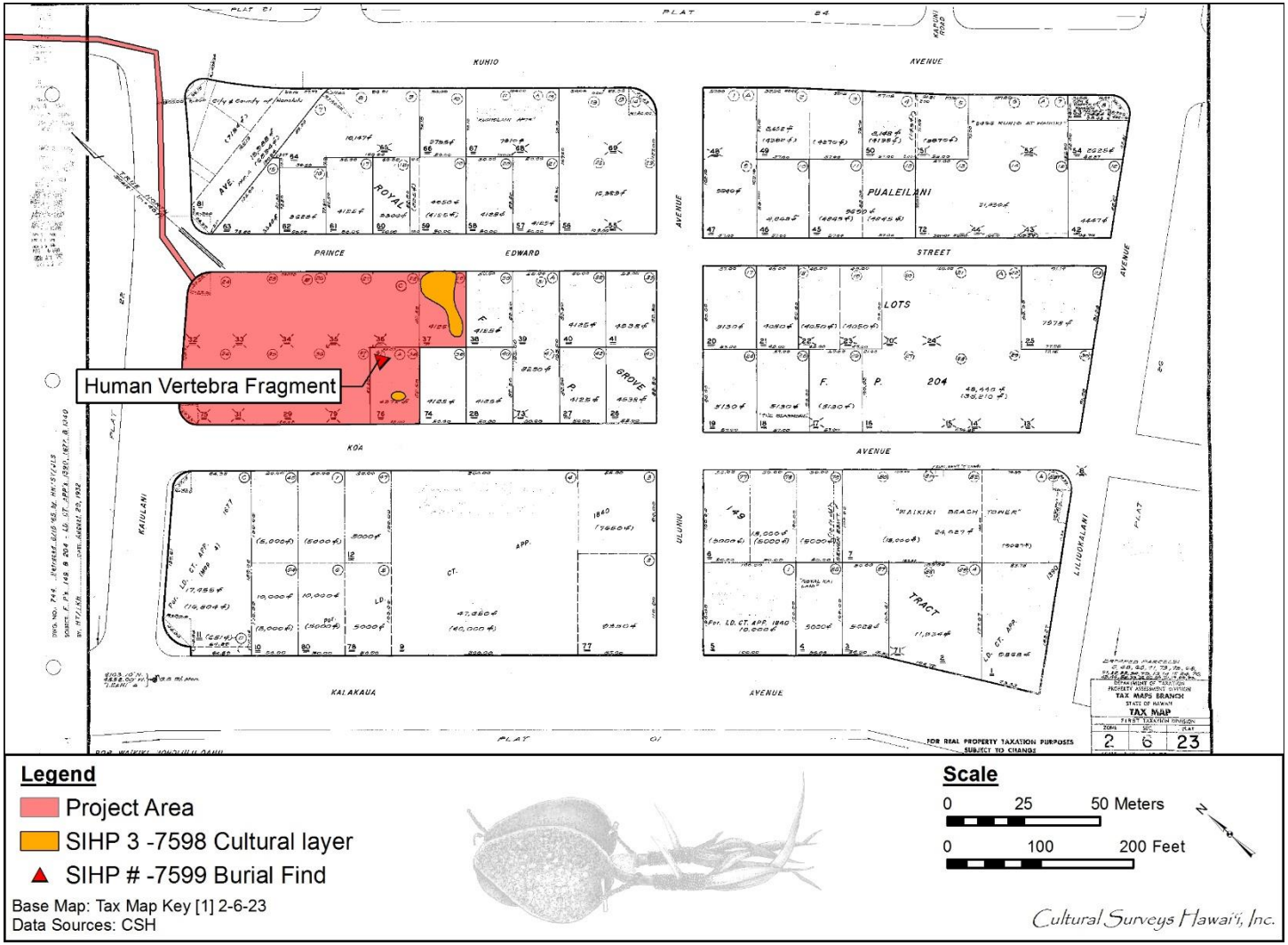

Figure 152. Location of the human vertebra burial find beneath the along the northwest side of the Hale Waikiki building, 2410 Koa Ave, Honolulu, HI 96815 (Base Map: Tax Map Key [1] 2-6-023)

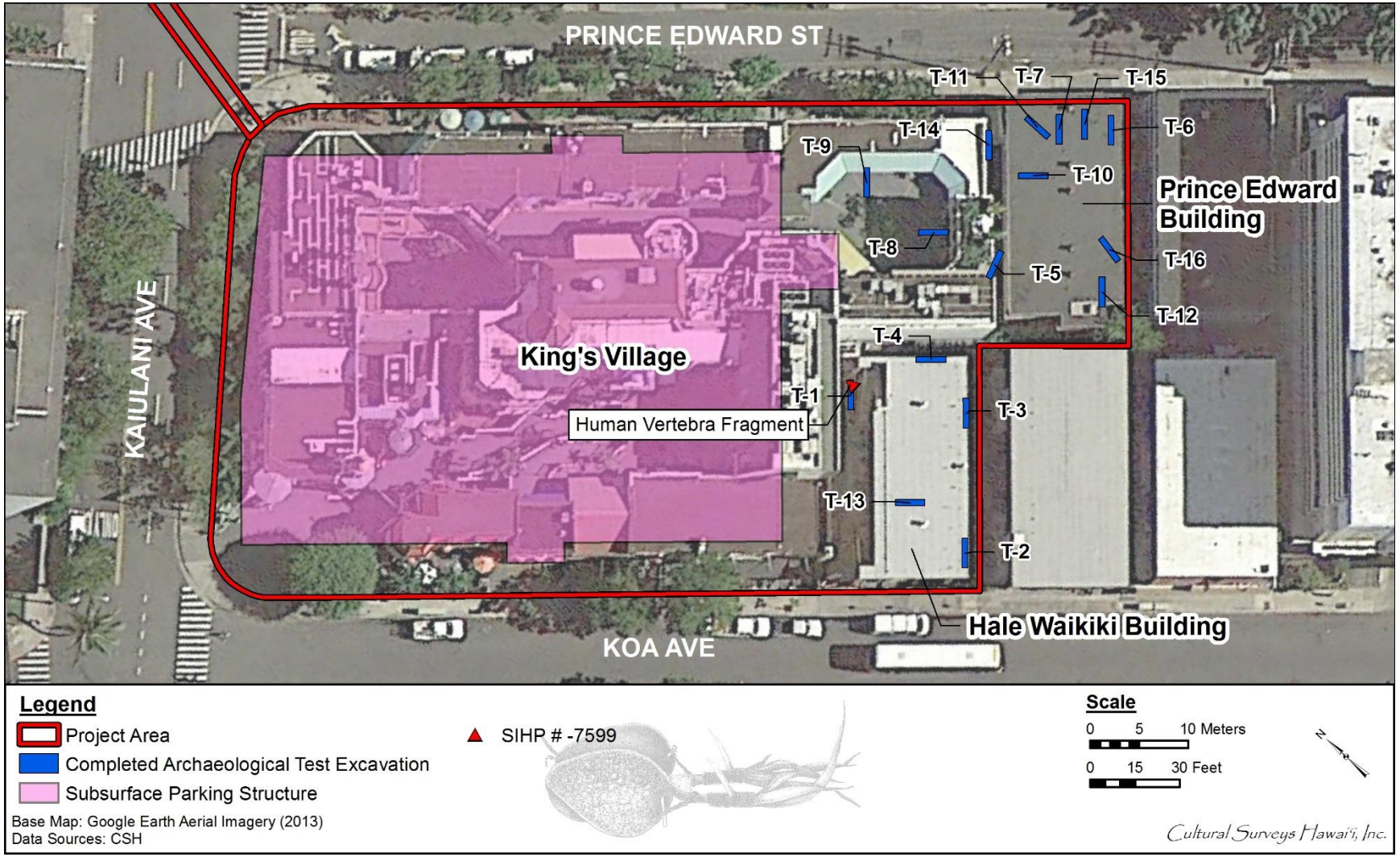

Figure 153. Google Earth imagery showing the location of the human vertebra burial find beneath the along the northwest side of the Hale Waikiki building (2410 Koa Ave, Honolulu, HI 96815), AIS test trenches, the King’s Village Shopping Center, and the Prince Edward Apartment Complex (Base Map: Google Earth Imagery)

Figure 154. Trench 1 northwest sidewall, view to the north

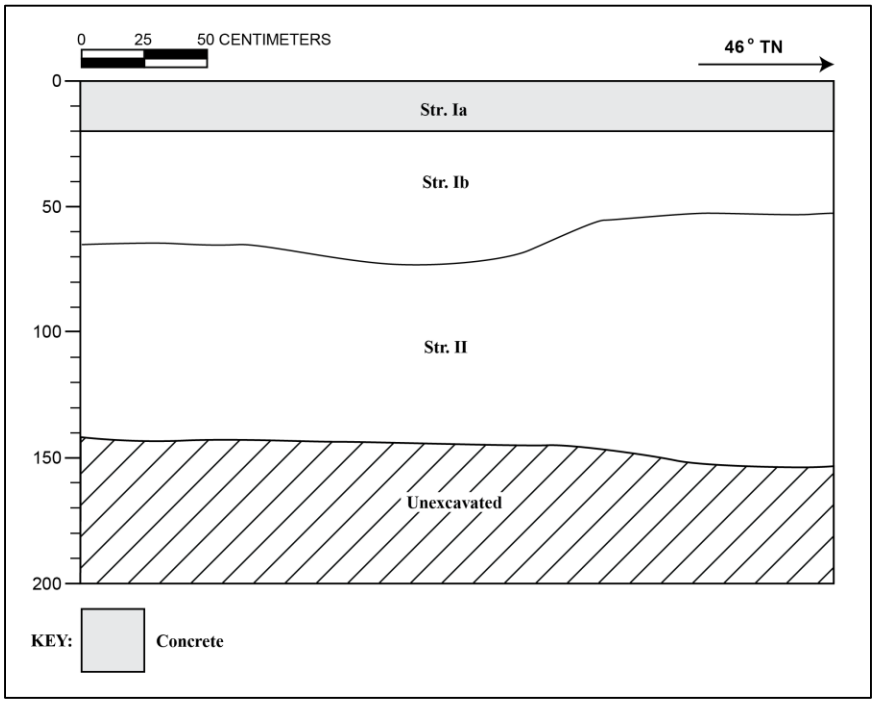

Figure 155. Trench 1 profile of northwest sidewall

Table 32. Trench 1 stratigraphy table

Stratum	Depth (cmbs)	Description
Ia	0-20	Concrete and ceramic tiles
Ib	20-83	Fill; 10YR 3/2, very dark grayish brown; mottles 10YR 7/4; sandy clay loam; weak, fine, granular structure; moist, loose consistency; slightly plastic; mixed origin; clear, smooth lower boundary; no roots observed; contained brick, plastic, nails, two waterworn pebbles, cut faunal bone, and a human vertebra fragment; imported fill
II	63-165	Natural; 10YR 8/2, very pale brown; medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; no roots observed; Jaucas sand

The vertebra fragment was protected with the assistance of cultural monitors from ‘Ōiwi Cultural Resources and subsequently reinterred (30-60 cmbs) in the northeast end of Trench 1 prior to closing the trench (Figure 156). On Thursday, 27 March 2014 Trench 1 was reopened under the observation of cultural monitors from ‘Ōiwi Cultural Resources so that the vertebra could be reexamined and confirmed as human. Dr. Michael Pietrusewsky confirmed that the bone was an adult human vertebral fragment preserving an articulating facet and adjoining transverse process. He concluded that it was most likely from the cervical (neck) region. The fragment was then reinterred in the same location, 30-60 cmbs in the northeast end of Trench 1.

The age, cultural affiliation, and date of deposition of the vertebra could not be determined through osteological analysis. During a 7 February 2014 meeting with SHPD representatives, Kawika Farm (SHPD Culture and Historic Branch) indicated that the direction he has been given from SHPD’s Culture and History Branch Chief and SHPD’s Attorney General’s Office advisors was that unless there was evidence to the contrary, SHPD ethnicity determinations for these burial sites should be Native Hawaiian. Therefore, the ethnicity determination for SIHP # -7599 is “most likely Native Hawaiian.”

The isolated human vertebra (SIHP # -7599) is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history) and “e” (historic property has cultural significance to an ethic group, including, but not limited to, religious structures, burials, and traditional cultural properties), pursuant to HAR § 13-284-6.

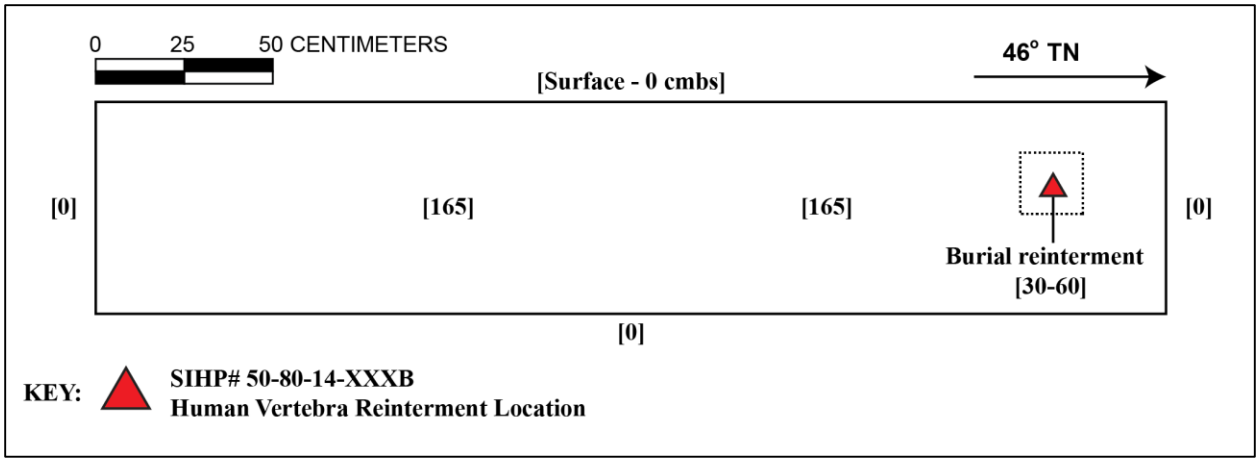

Figure 156. Trench 1, showing the reinterment location of the human vertebra, SIHP # -7599

Section 9 Significance Assessments

Two new historic properties (SIHP # 50-80-14-7598 and SIHP # 50-80-14-7599) were observed within the current project area and evaluated for significance according to state of Hawai‘i significance criteria “a” through “e” under HAR §13-284-6. The five criteria are:

a. Associated with events that have made an important contribution to the broad patterns of our history;

b. Associated with the lives of persons important in our past;

c. Embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, or possesses high artistic value;

d. Have yielded, or is likely to yield information important for research on prehistory or history;

e. Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property, or due to associations with traditional beliefs, events or oral history accounts, these associations being important to the group’s history and cultural identity.

SIHP # 50-80-14-7598 is a heavily disturbed subsurface cultural deposit containing charcoal, fire-altered rock, butchered faunal material, and a small amount of marine midden. Because of the impacted nature of the potential historic property, SIHP # -7598 has only basic integrity of location and materials. SIHP # -7598 is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history) pursuant to HAR § 13-284-6.

SIHP # 50-80-14-7599 consists of a previously identified, isolated human vertebra fragment. SIHP # -7599 is assessed as significant under Hawai‘i state historic property significance criterion “d” (has yielded, or is likely to yield information important for research on prehistory or history) and “e” (historic property has cultural significance to an ethic group, including, but not limited to, religious structures, burials, and traditional cultural properties), pursuant to HAR § 13-284-6.

Table 33. Summary of Identified Historic Properties

SIHP# 50-80-14	Site Type	Feat.	Probable Age	Functional Interpretation	Significance Criteria	Mitigation Recommendation
-7598	Cultural Deposit	12	Pre- to post-Contact	Activity Area	d	No further work
-7599	Burial Find	N/A	Unknown	Burial	e	Burial Treatment

Section 10 Project Effect and Mitigation Recommendations

The following project effect discussion and cultural resource management recommendations are intended to facilitate project planning and support the proposed project's required historic preservation consultation. For the purposes of this archaeological inventory survey (AIS), the project's APE for archaeological historic properties is defined as the entire approximately 1.05-acre project area. The surrounding built environment is urban (paved streets and low rise and high-rise buildings) and the proposed project construction is unlikely to impose additional auditory, visual, or other environmental impacts to any surrounding potential archaeological historic properties outside the project area footprint. Accordingly, although no specific studies were done to evaluate this APE definition, an AIS APE beyond the actual project area footprint does not seem warranted based on the surrounding built environment.

10.1 Project Effect

CSH's project specific effect recommendation is "effect, with agreed upon mitigation commitments." The mitigation measures described below will help alleviate the project's impact on SIHP # 50-80-14-7598 and SIHP # 50-80-14-7599 and assist with the proper identification, documentation, and treatment of any additional archaeological historic properties encountered during project construction.

10.2 Mitigations Recommendations

10.2.1 Burial Treatment Plan

The isolated human skeletal fragment (SIHP # 50-80-14-7599) was identified during an AIS investigation and is therefore defined as a "previously identified" burial under Hawaii state burial law (HAR §13-300-2). It is a requirement of Hawai‘i state burial law that the treatment of the previously identified burial site within the project area be addressed in a project-specific burial treatment plan prepared for the consideration of the O‘ahu Island Burial Council (OIBC) (HAR §13-300-33). The burial treatment plan will incorporate appropriate input from SHPD, the recognized lineal/cultural descendants, and the OIBC.

10.2.2 Archaeological Monitoring

In order to mitigate the potential impact to SIHP # 50-80-14-7598 (a culturally enriched A-horizon), or any as yet unidentified archaeological cultural resources within the project area, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits. A program of on-site archaeological monitoring is recommended for all subsurface project construction activities below 18 inches within the project area. The approximately 400 linear feet of new sewer line installation within adjacent City-owned streets associated with the project will be included within the project's archaeological monitoring program.

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Appendix A Land Commission Awards

LCA 104 F.L., Kekuanaoa

Kekuanaoa, Haliimaile, 3 December 1851 N.R. 765-766v3

The Honorable William L. Lee, Greetings: I hereby present my claim in some ‘*Ilis* in Honolulu and in Waikīkī in the lands of the Fort which I am caring for. Here are the names:

[Following discussion of Honolulu ‘*Ili* lands omitted]

Here are my claims at Waikīkī:

2 *lo‘i* at Kalia, ‘Ili in Waikīkī.

5 fishponds at Kalia in Waikīkī.

1 *muliwai* of Piinaio, in Waikīkī.

Those are my claims which I have thought of. There is one cocoanut grove. Makalii, also at Kalia. That is what I state to you. Farewell to you. M. KEKUANAOA

N.T. 390v10 No. 104 F.L. M. Kekuanaoa (from page 320) for 17 August 1854, Victoria Kamamalu L. Kukoa, sworn, I have seen his house site in Kapuni, Waikīkī, Kona, O‘ahu.

Mauka, Road

Waialae, Hamohamo boundary

Makai, beach

Honolulu, a meeting house.

This place was received from Kinau in 1839. She had received it from her mother.

Mahuka, sworn, the statements above are correct and I have seen his other claims. 2 ponds named Paweo, also Kaipuni, Pau, Kaihikapu, Manolepa and Kaohai in Waikīkī, Kona, O‘ahu.

He had received the land from Kinau in 1839. She had received it from Kaahumanu in 1832. No objections.

[Award 104 F.L.; R.P. 4492 (Kaihikapu Puuiki)& 4493; Kalia Waikīkī Kona; 1 ap.; 1.49 Acs; Kuhimana Honolulu Kona; 1 ap.; 2 Acs; no R.P. ; Kamanolepa Waikīkī Kona; 1 ap.; 2.06 Acs; R.P. 4492; Kapuni Waikīkī Kona; 1 ap.; 31 Acs; R.P. 4492; Uluniu Waikīkī Kona; 1 ap.; 31 Acs; R.P. 4493; Uluniu Waikīkī Kona; 1 ap.; 71.7 Acs]

LCA 1506

No. 1506, Waikiki /Female/
N.R. 138v3

To the Land Commissioners, Greetings: I, the undersigned, hereby tell of my land claim for two rows of hills /of taro/ in the lo`i of Hohe in Waikīkī, also a small *kula* and also a house lot. That is what I have to tell you.
WAIKĪKĪ /Female/
Ulukou at Waikīkī, December 4, 1847

F.T. 67v3
Cl. 1506, Waikīkī, *wahine*, December 27, 1848

Kamae, sworn, I know this land. It is in Hohe, Waititi, consisting of *kalo* land, and in Uluko of House lot.

1. House lot. Claimant has 1 house, partly fenced:
Mauka is Government land
Waialae is Opupahoa
Makai, sea
Honolulu is Keawe.

2. Two rows of kalo in a large patched owned by many.
Mauka by my kalo ground
Waialae is Paku
Makai is my land separated by water course
Honolulu, Kaluahinenui.

Claimant had these two lots from Ka‘ahumanu I, and then held them from Kinau & now under Victoria, and never had them disputed.

Second witness.

N.T. 393v3
No. 1506, Waikīkī (Female), December 27, 1848

Kanae, sworn, I have seen Waikīkī's (Female) land at Hohe in Waikiki. There is one patch and a house lot at Ulukou. One house is there and one side of the property has been enclosed.

[No.] 1.
Mauka is a government pasture
Waialae, Opupahaa's place

Makai, the sea
Honolulu, Keawe's land.

2. Two rows of taro at Hohe where:
Mauka are my taro rows
Waialae, Paku's land
Makai, my land
Honolulu here, Kaluahinenui's land.

Waikīkī's land and house site are from Ka‘ahumanu I. After her death, the land was under Kinau and at his death, it is now under V. Kamamalu.

Postponed until a witness has been summoned.

[Award 1506; R.P. 4723; Ulukou Waikīkī; 1 ap.; .16 Ac.]

LCA 2006

No. 2006, Male
N.R. 321v3
I, the one whose name is below, hereby state my claim for four *lo`i* in Kalokoeli in Waikīkī, the banks of two separate irrigation ditches, a house lot which has not been completely fenced, and some coconut trees within my lot. I pay my landlord four times a year /There is/ a pool for fish fry in the stream. -
MALE X His mark
Waikīkī, O‘ahu, 23 December 1847

F.T. 238-239v3
Cl. 2006, Male
Kaaha, sworn, I know the land of the claimant. It is in the ‘*ili* of Kalokoeli, Waikīkī, O‘ahu. It consists of five *lo‘i* in one piece and a house lot on the sea beach, but he has no title to this sea beach, except that of residing there at suffrance.

There *lo‘i* are bounded:
Mauka by Kauhao's land
Waialae by Kamakahonu's land
Makai by Kalia's land
Honolulu by Kalaimoku's land.

The claimant received this land from Waiaania, the *konohiki* in the days of Ka‘ahumanu I, and his title has never been disputed.
Kamakahiki, sworn, I know the land of Male, and what Kaaha testified concerning it is correct.

N.T. 575v3
No. 2006, Male, December 28, 1848

Kaaha, sworn, I have seen his place at Kalokoeli in Waikīkī.

5 taro patches in one section together:
Mauka, Kauhao's land
Waialae, Kamakahonu's land
Makai, Kalia's land
Honolulu, Kalaimoku's land.

Waiaania, the konohiki, had given him his land during the time of Ka‘ahumanu I and he has lived comfortably; no one has ever objected.
Makahiki, sworn, We both have known alike; no ne has objected.

[Award 2006, R.P. 5066; Kalokoeli Waikīkī Kona; 2 ap.; .98 Ac.; Kamoomuku Waikīkī Kona; 1 ap.; .27 Ac.]

LCA 2079

N.R. 349v3

I, the one whose name is below, hereby state my claim for my 7 lo`i, however, 3 are for my keiki. They are at Kiki, an `ili in Waikiki. There is also a house lot. There are some other lo`is at a place for my kane, at Mookahi, a mo`o auwai /path between irrigation ditches/, a row* at Hohe and with it a section of irrigation ditch. Some other lo`is are at Kawalaala, and 2 kula, a house lot, and one small kiopua.** Some lauhala trees of the mat variety are in a kula of mine. These are my claims which I hereby tell.

KAUHOLA X, her mark

Waikiki, 23 December 1847

/*a row of taro/
/** pool for raising fish fry/
F.T. 23-24v3

Cl. 2079, Kauhola, wahine, October 16 [1848]

Paele, sworn, This land is in the ilis of Makiki and Mookahi, Waititi, consisting of 7 kalo patches in Makiki, 2 in Mookahi, 1 line of kalo and 1 kahawai of kalo in Hohe, 4 kalo patches in Kawaiaala and 1 kula land in Kaluahole.

1. Seven kalo ptaches in Makiki

   Mauka & makai is "Kahia"
   Waialae by aupuni kalo patches
   Honolulu by Alex. Adams' land.

2. Two kalo patches in Mokahi

   Mauka & Honolulu is "Kalia"
   Waialae and Makai si Kanaina's.

3. One line (lolani) of kalo and Kahawai in Hohe:

   Mauka and Waialae is Kanealoa's
   Makai, Mahuka's
   Honolulu, "Kaloa."

4. Four kalo patches in Kawaiaala:

   Mauka is Nalaweha's
   Waialae, Government kalo land
   Makai, "Kalia"
   Honolulu, A. Adams.

5. Kula land in Kaluahole is included in the last described boundaries.

These lands were given to claimant in time of Kaahumanu 1 by Kamaukoli and she has occupied them ever since in peace. She has a husband named Kiku.

N.T. 349-350v3

No. 2079, Kauhola, October 16, 1848

Paele, sworn, I have seen Kauhola's land of 7 patches at Kiki. There are 2 patches at Mookahi, a row of taro at Hohe, also a ditch and a stream, four patches at Kawaiaala and a pasture in the ili of Kaluahole.

1. Seven patches at Kiki:

Mauka is Kalia
Waialae is Friday patches
Makai is Kalia
Honolulu is Alika's land.

2. Two patches at Mookahi:

Mauka is Kalia
Waialae and makai is Kanaina's land
Honolulu is Kalia.

3. A row at Hohe:

Mauka and Waialae by Kaneloa's land
Makai by Mahuka's land
Honolulu by Kalia.

4. Four patches at Kawaiaala:

Mauka is Nalaweha's land
Waialae is Tuesday patches
Makai is Kalia
Honolulu is Alika's land.

5. 1 pasture at Kaluahole: The boundaries are not known.

Kamaukoli had given Kauhola land and this land had been from Kaahumanu received during the time of Kaahumanu. She has lived there in peace and both she and her husband, Kiha, are taking care of this land. See page 104. Vol. 10

N.T. 204v10

No. 2079, Kauhala (from page 349, volume 3), 4 March 1852

Kamaukoli, sworn, I have seen this house lot. It is in Kalia, Waikiki in one section.

Mauka and Honlulu, Kanaina's land

Makai and Waialae, konohiki's land.

Land from Kamaukoli at the time of Kaahumanu I. Peaceful living.

[Award 2079; R.P. 723; Waikiki Kona; 2 ap.; 7.25 Acs]

LCA 2082

No. 2082, Kuene
N.R. 350v3

I, the one whose name is below, hereby state my claim for four lo`i and an edge of an irrigation ditch. There is also a house lot which has been enclosed with fence, and with two houses in it. There are four coconut trees in my lot with which I pay my annual tax. This place is at Mookahi, Waikīkī.
I am, with thanks,
KUENE X, his mark
Waikīkī, O‘ahu 23 December 1847

N.T. 637-638v3
No. 2082, Kuene, July 3, 1850

Haumalu, sworn, I have seen his land at Mookahi in Waikīkī - 2 land sections.

1. 4 taro patches and stream:
Mauka, Kihewa
Waialae, Kamakahonu
Makai, my land
Honolulu, land of Makoli.

2. House lot:
Mauka, Kaluahinenui
Waialae and *Makai*, Keohokalole
Honolulu, Kanaina.

Kuene received section 1 from Kuluehu in 1829; section 2 was an idle land on which he had worked before the death of Kinau in 1837 and he has lived comfortably to this time. No one has objected.

Ku, sworn, We have known similarly; the report above is true.

[Award 2082; R.P. 2418; Kalia Waikīkī Kona; 2 ap.; .90 Ac.]

LCA 2084

No. 2084, Keohokahina
N.R. 350-351v3

I hereby state my claim to you for two small *lo`i*, at Kalokoeli; also a row /of taro/ at Hohe, and my house lot at Ulukou. *Mauka* and to the east of my lot is an unused place, *makai* is Male, towards Hono-lulu is a stream.
KEOHOKAHINA X, his mark
Waikīkī, O‘ahu, 23 December 1847

N.T. 638-639v3
No. 2084, Keohokahina, July 3, 1850

Kaniho, sworn, I have seen his sections of land in Waikīkī as follows:

Section 1 - house lot in the ‘*ili* of Hamohamo.
Section 2 - 1 patch and ditch in Kalokoele ‘ili.
Section 3 - 1 patch, 1 ditch in Kalokoeli ‘ili.

He had received sections 2, & 3 in 1830 from Male. Male had received his interest from Kana, the konohiki; Section 1, an idle land in 1833 and he has lived in peace on these lands to the present time. No one has objected.

[Award 2084; R.P. 3640; Kalokoeli Waikīkī Kona; 1 ap.; .25 Ac.; Kamookahi Waikīkī Kona; 1 ap.; .38 Ac.; Ulukou Waikīkī Kona; 1 ap.; .53 Ac.]

APPENDIX 7

BIOLOGICAL SURVEY

Biological survey at King's Village shopping complex in Waikīkī (TMK: 2-6-023:029, 037, & 076), Island of O'ahu[1]

December 12, 2013 *AECOS* No. 1374

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Introduction

King's Village in Waikīkī is located at 131 Ka'ilulani Avenue (TMK: 2-6-023:029, 037, and 076; see Fig. 1). This commercial shopping complex is bordered on the west by Koa Avenue, on the north by Ka'iulani Avenue (Kānekapōlei Street on some maps), and on the east by Prince Edward Street. The site is fully built- out, maintained, and landscaped. A majority of the site comprises stores within a 2- and 3-story building complex, access walkways, and (presumably not part of the property) surrounding streets and sidewalks (Fig. 2). Other commercial properties (including hotels and apartments) surround King's Village in all directions.

Survey Methods

A biological survey of the grounds at King's Village was undertaken by the authors during the morning hours on November 21, 2013. The survey consisted of walking over all of the public-accessible grounds, identifying all plants encountered and surveying for birds using a standard count station method. An attempt was made to identify all vascular plants growing in soil and in various containers at King's Village. This survey included plants located along the streets, some of which presumably are under control of the City & County of Honolulu. Because plants present here are maintained, the season of the survey was not significant to the botanical findings.

[1] This report was prepared for Kobayashi Group LLC, Honolulu.
[2] Rana Biological Consulting Inc., Kailua-Kona, Hawai'i.

Figure 1. Entrance side of King's Village at the corner of Ka'iulani Avenue and Koa Avenue in Waikīkī.

Two avian count stations were sited on either side of the shopping complex: one on King Edward Street across from the Alamo rental car office, and a second on Koa Avenue across from the Hyatt Regency ABC store. A single eight-minute avian point count was made at each station. Field observations were made with the aid of Leica 8 X 42 binoculars and by listening for vocalizations. Point counts were conducted between 8:00 am and 9:00 am, the peak of bird activity.

All terrestrial mammals found on the Island of O'ahu are alien species, with the singular exception of the endangered Hawaiian hoary bat or *'ōpe'ape'a* (*Lasiurus cinereus semotus*). When not conducting point counts, the zoologist searched the site for mammals and, additionally, any bird species and habitats not detected during the avian point counts. The survey of mammals at King's Village was limited to visual and auditory detection, coupled with any observation of animal sign. A running tally was kept of all mammalian species

detected within the survey area. Weather conditions were good with unlimited visibility and winds of between one and four kilometers per hour.

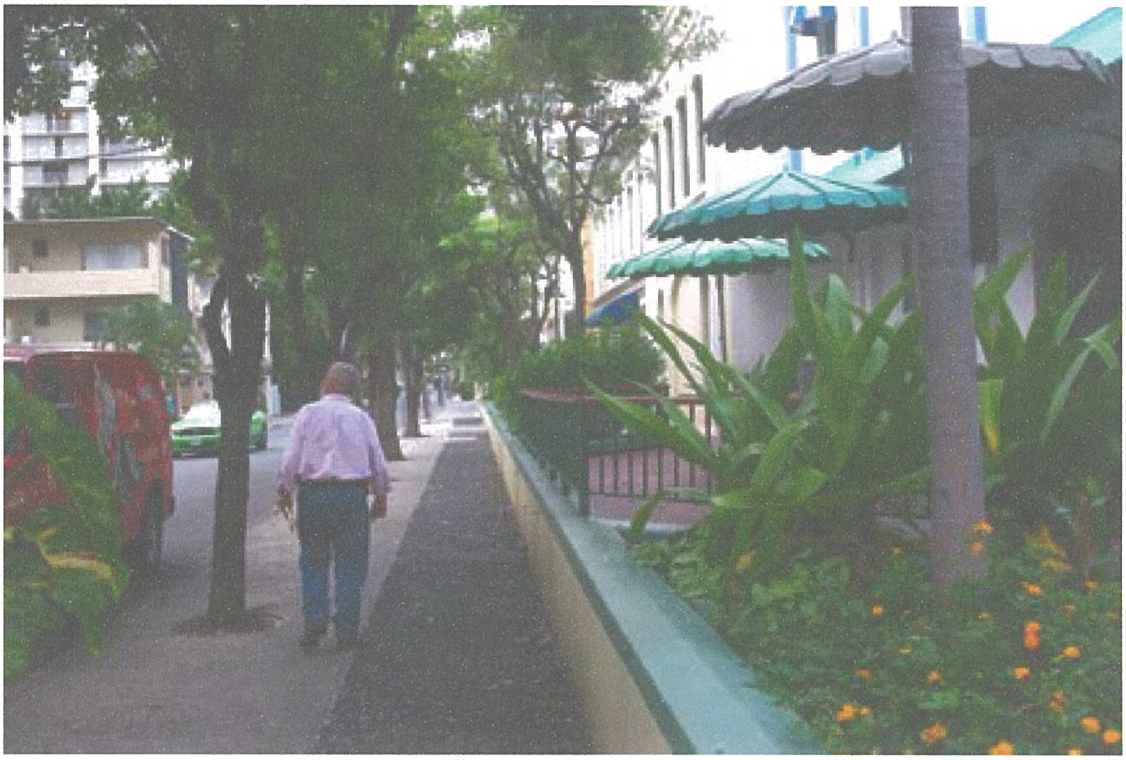

Figure 2. View of the Prince Edward Street side of King's Court complex showing typical presentation of flora with street trees and structural landscaping.

In this report, plant names mostly follow *Manual of the Flowering Plants of Hawai'i* (Wagner et al., 1990, 1999) for native and naturalized flowering plants and *A Tropical Garden Flora* (Staples and Herbst, 2005) for crop and ornamental plants. Fern and fern ally names are from *Hawai`i's ferns and fern allies* (Palmer, 2003). As appropriate, plant species names have been updated following more recently published literature as summarized in Imada (2012). The avian phylogenetic order and nomenclature follows the *AOU Check-List of North American Birds* (American Ornithologists' Union, 1998), and the 42nd through the 51st supplements to the Check-List (American Ornithologists' Union, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008; Chesser et al., 2009, 2010, 2011, 2012, 2013). Mammal scientific names follow Wilson and Reeder (2005).

Results

Vegetation

The vegetation on the site is landscaping, including some trees along the sidewalk bordering the property (Fig. 2, above). In close proximity to the building complex and in fixed and moveable pots of various sizes, a variety of herbs and shrubs are maintained. Included is a roof area where potted plants are kept (Fig. 3) to be recycled back into the public areas.

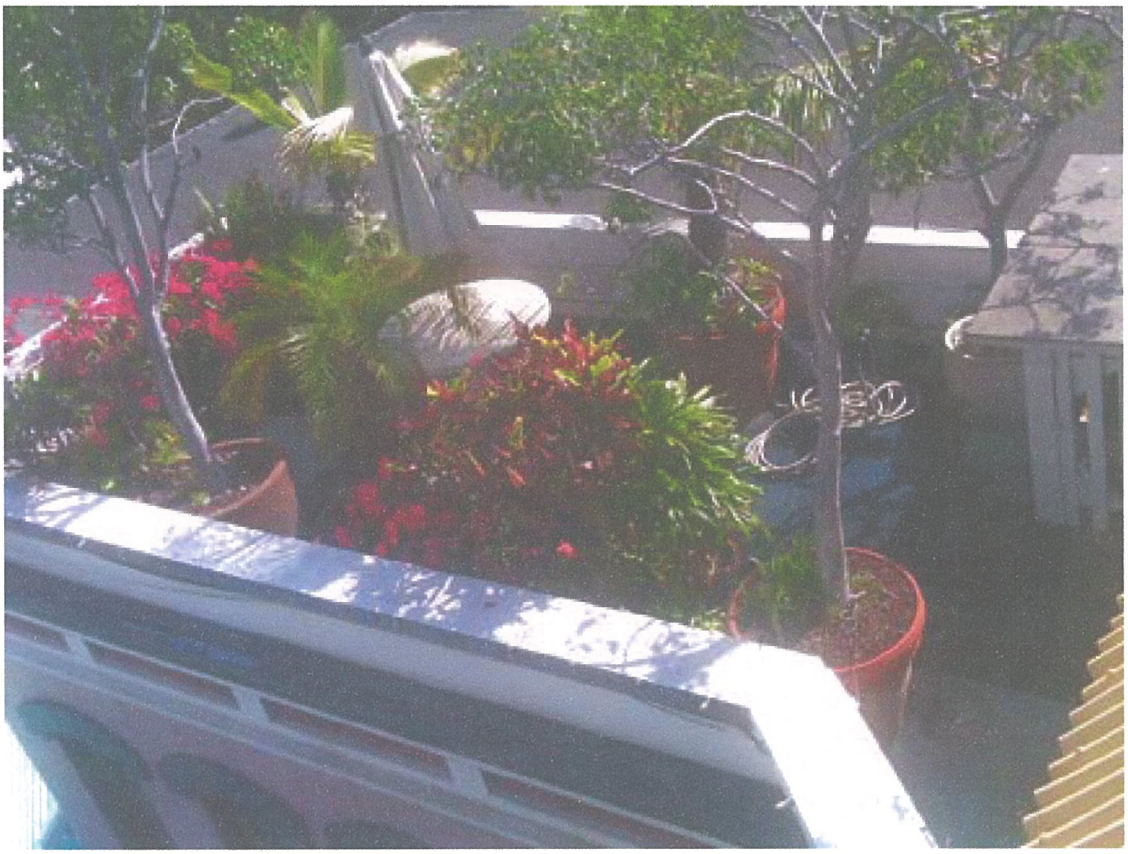

Figure 3. Roof "garden" area with various potted plants (photo provided by E. Paeste of MMI Realty Services, Inc.).

Flora

The plant survey recorded 57 species of vascular plants (Table 1) at King's Village and along the surrounding streets (one ornamental street tree remains

Table 1. Plant species identified from November 2013 survey of King's Court in Waikīkī.

Species listed by family	Common name	Status	Abundance	Notes
	FERNS and FERN ALLIES			
NEPHROLEPIDACEAE				
Nephrolepis cordifolia (L.) C. Presl.	sword fern	**Ind**	R	
POLYPODIACEAE				
Microsorum scolopendria (N.L. Burm.) E.B. Copeland	*maile*-scented fern	Nat	C	
Microsorum scolopendria var.	curly *lauae*	Orn	R	
	CONIFERS and CYCADS			
CUPRESSACEAE				
Juniperus cf. *horizontalis* Moench	creeping juniper	Orn	R	
CYCADACEAE				
Cycas sp.	sago-palm	Orn	R	
	FLOWERING PLANTS DICOTYLEDONES			
ACANTHACEAE				
Barlaria repens C. Nees	pink-ruellia	Nat	U	
APOCYNACEAE				
Plumeria obtusa L. 'Singapore dwarf petite'	Singapore plumeria hybrid	Orn	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	octopus tree, umbrella tree	Nat	R	
Schefflera arboricola (Hayata) Merr.	dwarf schefflera	Orn	R	
ASTERACEAE (COMPOSITAE)				
Emilia fosbergii Nicolson	*pualele*	Nat	U	<1>
BIGNONIACEAE				
Tabebuia berteroi (A. P. de Cand.) Britton	Hispaniolan rosy trumpet tree	Orn	R	
Tabebuia heterophylla (A. P. de Cand.) Britton	pink tecoma	Nat	C	
ERICACEAE				
Rhododendron hybrids	azelias (2)	Orn	R	
EUPHORBIACEAE				
Codiaeum variegatum (L.) Blume	croton	Orn	C	
Euphorbia albomarginata Torr. & A. Gray	rattlesnake weed	Nat	R	<1>
Euphorbia milii Des Moulins	crown-of-thorns	Orn	O	
Phyllanthus debilis Klein ex Willd.	niuri	Nat	U	<1>
Phyllanthus tenellus Roxb.	---	Nat	U	<1>

Table 1 (continued)

Species listed by family	Common name	Status	Abundance	Notes
MALVACEAE				
Hibiscus rosa-sinensis cf. 'Rose flake'	Chinese hibiscus cult.	Orn	R	
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	R	<1>
MORACEAE				
Ficus benjamina 'Variegata'	variegated ficus	Orn	R	
Ficus cf. *microcarpa* L. f.	Chinese banyan	Nat	R	
NYCTAGINACEAE				
Bougainvillea cf. *spectabilis* Willd.	bougainvillea	Orn	U	
OXALIDACEAE				
Oxalis corniculata L.	yellow wood sorrel	**Pol?**	R	<1>
PORTULACACEAE				
Portulaca oleracea L.	pigweed	Nat	R	<1>
RUBIACEAE				
Ixora sp.	ixora	Orn	R	
URTICACEAE				
Pilea microphylla (L.) Liebm.	artillery plant	Nat	O	<1>
VERBENACEAE				
Citharexylum spinosum L.	fiddlewood	Orn	U	
Lantana camara L.	lantana	Nat	R	
	FLOWERING PLANTS			
	MONOCOTYLEDONES			
AGAVACEAE				
Agave cf. *lophantha* Schiede	---	Orn	R	
Dracaena fragrans (L.) Ker-Gawl.	cult. 'Warneckei'	Orn	R	
Dracaena marginata Lam.	money tree	Orn	R	
Dracaena marginata 'tri-color'	tricolor dracaena	Orn	R	
Dracaena sanderiana M.T. Masters	sanderiana	Orn	R	
Cordyline fruticosa (L.) A. Chev.	*ki*, ti hybrids	Nat	O	
Sansevieria trifasciata Prain	mother-in-law's tongue	Orn	R	
ARACEAE				
Epipremnum pinnatum (L.) Engler	pothos	Nat	U	
Syngonium sp.	nephthys	Nat	O	
Zamioculcas zamiifolia (Lodd.) Engl.	Zanzibar gem, ZZ	Orn	R	
ARECACEAE				
Dypsis lutescens (H. Wendl.) Beentje & J. Dransfield	areca palm	Orn	U	
Raphis excelsa (Thunb.) Rehder	lady palm	Orn	O	
Veitchia merrillii (Beccari) H.E. Moore	Manila palm	Orn	O	
BROMELIACEAE				
Ananas sp.	ornamental pineapple	Orn	R	
Neoregelia carolinea 'Variegata'	cultivar	Orn	R	
Neoregelia marmorata (J. G. Baker) L. B. Smith	---	Orn	R	

Table 1 (continued)

Species listed by family	Common name	Status	Abundance	Notes
BROMELIACEAE (continued)				
Neoregelia spp. hybrids	neoregelias	Orn	R	<2>
CYPERACEAE				
Cyperus gracilis R. Br.	*menehune* grass	Nat	U	
Cyperus rotundus L.	nut grass	Nat	U	
LILIACEAE				
Crinum sp.	spider lily	Orn	R	<2>
Liriope sp.	lily turf	Orn	R	<2>
MARANTACEAE				
Calathea 'triostar'	---	Orn	R	
POACEAE				
Eragrostis tenella (L.) P. Beauv. ex Roem. & Schult.	lovegrass	Nat	R	<1>
Sporobolus sp.	rat-tail grass	Nat	R	<1>
Zoysia matrella var. *pacifica* Goud.	Mascarene grass	Orn	O3	
ZINGIBERACEAE				
Alpinia purpurata (Vieil.) K, Schum.	red ginger	Orn	R	

Legend to Table 1

STATUS = distributional status for the Hawaiian Islands:

Ind = indigenous; native to Hawaii, but not unique to the Hawaiian Islands.

Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.

Orn = A cultivated plant; a species not thought to be naturalized (spreading on its own) in Hawai'i.

Pol? = Probably introduced by early Polynesian migrants before arrival of Cooke in 1778, although possibly indigenous (**Ind**).

ABUNDANCE = occurrence ratings for plant species:

-- - Species not present in area.

R – Rare — seen in only one or perhaps two locations.

U - Uncommon — seen at most in several locations

O - Occasional — seen with some regularity

C - Common — observed numerous times during the survey

A - Abundant — found in large numbers; may be locally dominant.

AA - Very abundant — abundant and dominant; defining vegetation type.

Numbers (1 – 3) following qualitative rating of abundance indicate localized abundance is greater than occurrence rating. For example, R3 would be a plant encountered only once or twice, but very numerous where encountered.

NOTES: <1> – A weed in this location (not planted or tended).

<2> - Plant lacking key diagnostic characteristics (flower, fruit); identification, therefore, uncertain.

unidentified). By status (column 3 in Table 1) is meant whether a plant is native or non-native, and if non-native, whether it is naturalized ("Nat"; growing on its own in the wild) or ornamental ("Orn"; growing by human maintenance; not typically surviving in the wild). Status is that of the species and not the conditions under which it is found in the survey area. It is fair to say that all of the plants at King's Village are either planted for ornamental use (regardless of status) or are weeds appearing in planting beds. The latter are differentiated in Table 1 by note <1>. Native plants are either indigenous ("**Ind**") or endemic ("**End**") depending upon their distribution within and outside of the Hawaiian Islands (see Legend at end of Table 1). Finally, a special group of botanically non-native species are the so-called "canoe plants" or early Polynesian introductions ("Pol"): species introduced by the early Polynesian migrants when settling the Hawaiian Islands.

Only one or two species in the list are native plants: the fern, (*Nephrolepis cordifolia*) and *'ihi'ai* (*Oxalis corniculata*), a possibly indigenous species or early Polynesian introduction. All other plants observed are not native to the Hawaiian Islands. Even plants that were not positively identified to species are certainly not native species.

Avian Survey

A total of 104 individual birds of six species, representing five separate families, were recorded during station counts (Table 2). All of the species detected are alien to the Hawaiian Islands (that is, no native bird species were seen). One species, House Sparrow (*Passer domesticus*), accounted for 54% of the total number of individual birds recorded.

Mammalian Survey

No terrestrial mammalian species other than humans (*Homo sapiens*) were detected on site during the course of this survey.

Discussion

In terms of significant or sensitive botanical resources, we can differentiate between plants that provide particular values and plants that are protected by statute (and also provide values, of course). At King's Village, landscaping is important, but subject to constant change. A plant that provides significant landscape value that is not easily replaced would be perhaps the street trees.

Table 2 – Avian Species Detected During Point Counts Kings Village Waikīkī.

Common Name	Scientific Name	ST	RA
	COLUMBIFORMES		
	COLUMBIDAE – Pigeons & Doves		
Rock Dove	*Columba livia*	A	10.50
Zebra Dove	*Geopelia striata*	A	2.00
	PASSERIFORMES		
	PYCNONOTIDAE – Bulbuls		
Red-vented Bulbul	*Pycnonotus cafer*	A	2.00
	STURNIDAE – Starlings		
Common Myna	*Acridotheres tristis*	A	8.00
	FRINGILLIDAE – Fringilline and Carduleline Finches & Allies		
	Carduelinae – Carduline Finches		
House Finch	*Haemorhous mexicanus*	A	1.50
	PASSERIDAE - Old World Sparrows		
House Sparrow	*Passer domesticus*	A	28.00

Legend to Table 2

ST Status
A Alien – Introduced to the Hawaiian Islands by humans
RA Relative Abundance - Number of birds detected divided by the number of count stations (2)

These trees are not protected by statute and none is listed as an exceptional tree by the City & County of Honolulu (DPR, 2013). Although not unusual to find a listed plant species in a landscape setting, there are no federal restrictions on maintaining such specimens. Under state law it is legal to possess a listed plant (all plants listed under the Endangered Species Act are listed by the State of Hawai'i) as an ornamental, although when purchased the plant should have been tagged and the tag kept with the planting. No plant species currently protected or proposed for protection under either federal or state endangered species statutes (DLNR, 1998; USFWS; 2005a, 2005b, 2013) were detected during the course of our survey, nor are any expected to occur at King's Village.

The findings of the avian survey are consistent with the location of the site in Waikīkī, a highly urbanized environment. All six species observed during the course of our survey are alien to the Hawaiian Islands.

Although no seabirds were detected during the survey, several seabird species potentially overfly the site on occasion and in low numbers. The primary cause of mortality in resident seabirds is thought to be predation by alien mammalian species at the nesting colonies (USFWS 1983; Simons and Hodges 1998; Ainley et al., 2001). Collision with man-made structures is considered a second most significant cause of mortality in locally nesting seabird species in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, these seabirds may collide with man-made structures and, if not killed outright, are rendered easy prey for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al., 1998; Ainley et al., 2001; Hue et al., 2001; Day et al., 2003). King's Village, as presently configured and operated, is not a significant source of lighting in Waikīkī, being surrounded by much taller and more lighted buildings.

No avian or mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs were detected during the course of this survey, nor are any expected to occur in this location (DLNR, 1998; USFWS; 2005a, 2005b, 2013).

There is no federally delineated Critical Habitat encompassing the site (USFWS, 2012). There is no equivalent statute under state law.

Conclusions

No issues with respect to natural resources are present at King's Village that would impose restrictions on or raise concerns with any proposed redevelopment plans.

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APPENDIX 8

ENGINEERING REPORT

ENGINEERING REPORT

133 KAIULANI

133 Kaiulani Avenue
TMK 2-6-023: 029, 037 & 076

Prepared for:

BlackSand Capital, LLC
1288 Ala Moana Boulevard, Suite 288
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October 2014

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LIST OF FIGURES/PHOTOS

APPENDICES

APPENDIX A

Location Map

Tax Map Key 2-6-023

Flood Insurance Rate Maps (FIRM) Portion of Panel 368 of 395, Map Number 15003C0368G January 19, 2011

Flood Insurance Study (FIS), Volume 2 of 3 City and County of Honolulu, Hawaii Table 9 Floodway Data | Manoa Stream – Palolo Stream – Ala Wai Canal January 19, 2011

Flood Insurance Study (FIS), Volume 2 of 3 City and County of Honolulu, Hawaii 4P Flood Profiles – Ala Wai Canal January 19, 2011

File Plan No. 149 | Royal Grove Feb 25th, 1915

Letter of Map Amendment Determination Document (Removal) June 03, 2014

APPENDIX B

Domestic Water Consumption Data 05/17/12 to 11/19/04

APPENDIX C

Existing Storm Drainage System

Existing Water System

Existing Sanitary Sewer System

1 GENERAL

1.1 PURPOSE AND SCOPE

The purpose of this report is to identify and evaluate the property for the following:

- existing site conditions
- existing storm drainage infrastructure and site drainage conditions
- existing water and sanitary sewer infrastructure

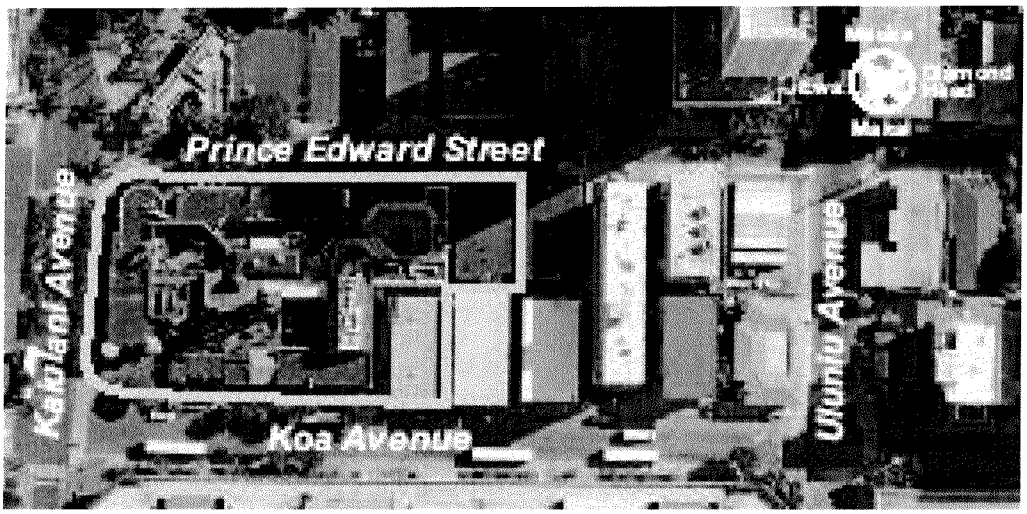
Above were evaluated to support the development of:

- residential/hotel tower with 244/275 units (168 studios, 72 - 1 bedroom, 3 - 2 bedroom with lock-off, 1 – 3 bedroom)
- retail space with 9,000 square feet
- restaurant 5,000 sf

Following information is based on various sources including but not limited to discussions with City agencies and officials.

1.2 PROJECT LOCATION

The 45,622 square feet (1.05 acres) site is located in the Waikiki area of Honolulu on the island of Oahu at 131 Kaiulani Avenue and identified by Tax Map Key 2-6-023: 029, 37 and 76. The property is bounded by Prince Edward Street on the Mauka side, Kaiulani Street on the Ewa side, Koa Avenue on the Makai side and parcels 37 and 76 on its Diamond Head side. See Aerial View below and the Location Map and Tax Map in Appendix A.

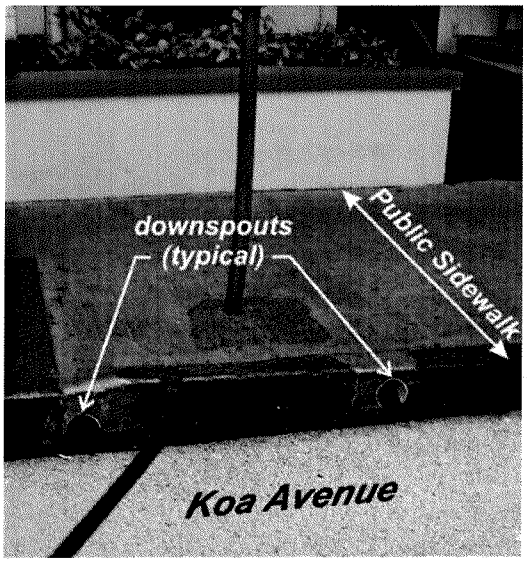


1-1 | Aerial View of King's Village Shopping Center and Surrounding Area

Current layout of existing curb ramps and driveways within the City's public sidewalk do not comply with City Standards and ADA Standards for Accessible Design. The ramps will have to be redesigned and constructed to meet current ADA Standards.

2.3 STORM DRAINAGE

The vast majority of the site is covered by impervious ground cover: pavement and roof. Storm water runoff generated at the perimeter store fronts is directed towards the public sidewalk. Storm water runoff generated within the site is collected by floor drains and roof drains with downspouts which daylight at the face of the curbs on all three streets at the perimeter of the site. The storm water runoff continues to surface flow along the roadway where it is collected by the City's catch basins or drain inlets. The collected runoff is conveyed below grade by the City's drainage system and outfalls into the Ala Wai Canal. See Existing Storm Drainage System in Appendix C.



2-1 | Downspouts at the Face of the Curb

The proposed development is not anticipated to increase the amount of storm water runoff.

The project will have to comply with the City & County of Honolulu new storm drainage requirements which were enacted in June of this year. New water quality requirements are part of the Standards and will have to be addressed by the Project. Water quality volume to be retained on site.

WQV = PxCxAx3630
P = Water Quality Design Storm Depth (1")
C = Runoff Coefficient
A = Area in Acres
C = 0.05 + 0.009 x % Impervious
C = 0.05 + 0.009 x 80% (Assume)
= .77

WQV = (1")(0.77)(1.05)(3630)
= 0.81 x 3630
= 2.940 CF

For runoff leaving the site, bio-filter with appropriate LID (low impact development) bio-filtration post-construction control BMP's will have to be implemented.

Approved methods are:

1. Vegetated Bio-filter
2. Green Roof
3. Enhanced Swale
4. Vegetated Swale
5. Vegetated Buffer Strip
6. Tree Box Filter

The projects will have to try to incorporate these methods of low impact developments into the drainage system.

2.4 FLOOD ZONE

Flood Insurance Rate Maps (FIRM) published by the Federal Emergency Management Agency (FEMA) indicates that the site is located in a flood hazard area subject to inundation by the 100-year flood. The site is located within Zones AE and X, with the majority of the site in Zone X. Zone X is an area of minimal flood hazard and determined to be outside of the 500-year floodplain. Zone AE is designated as an area where base flood elevations have been determined. The base flood elevation at the site is 5.8-feet. See portion of FIRM map, Flood Insurance Study (FIS) Floodway Data Flood Profiles in Appendix A.

Although FEMA takes great care to ensure that the FIRMs are accurate, due to scale limitations, FIRMs cannot reflect every rise in terrain. Some areas of high ground may be inadvertently included in a Special Flood Hazard Area (SFHA) and this was the case for the project site. The terrain within Lots of 24, 25 and 26 of the Royal Grove plat of File Plan No 149 (portion of TMK Parcel 29) is higher than the base flood elevation. The lowest lot elevation within those three (3) lots is 5.9 based on the project's topographic survey. See File Plan No 149 in Appendix A.

A Letter of Map Amendment (LOMA) was submitted to FEMA to request a revision to the SFHA to reflect its current conditions. In response, FEMA had determined that the three (3) lots are not located within the SFHA, thus were removed from such. The

Letter of Map Amendment Determination Document (Removal) amends the effective FIRM to remove the property from the SFHA located on the effective FIRM. The LOMA determination document is included in Appendix A.

3 UTILITIES

3.1 WATER

Domestic

The property is serviced by a 2-inch meter (Premise ID 1060075, S/N 0170096). The 2-1/2" Type E copper lateral taps off a 12-inch line within Kaiulani Street. The 2-inch meter has a maximum capacity of 160 gpm and a maximum of 631 fixture units (FU) based on a flush valve system.

The property has an average water consumption of 16,530 gallons per day (gpd) based on the usage within the last seven (7) years. Water consumption data for the property dating back to the November 2004 is included in Appendix B.

The capacity of the existing domestic water meter is not adequate to support the proposed development. A 4-inch domestic meter will be needed.

Fixture Unit Calculations for Residential Units

Studio

2	Lavatory	1.2 FU
1	Water Closet (Tank)	1.7 FU
1	Tub/Shower	1.6 FU
1	Kitchen Sink	1.6 FU
1	Washing Machine	2.0 FU
		8.1 FU Per Unit

One Bedroom

3	Lavatory	1.8 FU
2	Water Closet (Tank)	3.4 FU
1	Tub/Shower	1.6 FU
1	Kitchen Sink	1.6 FU
1	Washing Machine	2.0 FU
		10.4 FU Per Unit

Two Bedroom and Three Bedroom		
4	Lavatory	2.4 FU
2	Water Closet (Tank)	3.4 FU
2	Tub/Shower	3.2 FU
1	Kitchen Sink	1.6 FU
1	Dishwasher	1.5 FU
1	Washing Machine	2.0 FU
		14.1 FU Per Unit

168 Units x 8.1 FU =	1360.8 FU
72 Units x 10.4 FU =	748.8 FU
4 Units x 14.1 FU =	56.4 FU
244 Units	2166.0 FU

Fixture units for amenities, retail and restaurant will be developed during design.

Fire Protection

The building fire protection system is serviced by a 6-inch detector check meter (S/N 5169709) on the Kaiulani Street side of the property. Downstream of the meter is a standpipe with siamese connections located within the landscape planter.

There are two (2) fire hydrants in the vicinity of the property. One is near the property's corner of Kaiulani Avenue and Prince Edward Street. The other is on the corner of Kaiulani Avenue and Koa Avenue, on the opposite side of the property. See Existing Water System in Appendix C.

The capacity of the existing fire protection water meter to support the proposed development will be evaluated when the required fire flow is determined.

Cross Connection

Cross connection to the Board of Water Supply's (BWS) water system is regulated by backflow preventers. Backflow preventers are typically located immediately downstream of the water meter within private property prior to any branches or tees. Presently, there is no backflow prevention assembly immediately downstream of the water meter.

The proposed development will require a backflow prevention assembly after the meter and before any branches or tees. Size of the backflow preventer will be determined when the domestic meter size, building piping system size and allowable pressure drop is ascertained.

Preliminary discussions with BWS indicate that the existing water system is presently adequate to service the proposed development. The availability of water will be confirmed at the time of Building Permit approval.

3.2 SANITARY SEWER

The property is serviced by four (4) sewer laterals, two on each side of the property. The laterals on Prince Edward Street discharge into a 6-inch sewer line. The laterals on Koa Avenue discharge into an 8-inch sewer line. Both lines are collected by an-8-inch in Uluniu Street. The sewer lines continue on Kuhio Avenue, Kanekapolei Street, Ala Wai Boulevard and Lewers Street before discharging into the Beach Walk Wastewater Pump Station. See Existing Sanitary Sewer System in Appendix C.

The Department of Planning and Permitting, Wastewater Branch (WWB) has indicated that existing City sewer system that receives the property's wastewater flows has inadequate capacity, particularly the 6-inch, 8-inch and 27-inch lines in Koa Ave, Prince Edward St, Uluniu Ave and Ala Wai Blvd.

WWB has calculated that the present site generates approximately 11,200 gpd. This is based on an average per capita wastewater flow of 80[1] gallons per day and an equivalent population of 140[1] capita per acre for a community business land use. Calculation as follows:

$$\text{Avg Flow}_{exist} = 1.0 \text{ ac} \times 140 \text{ cpa} \times 80 \frac{\text{gpd}}{\text{capita}} = 11{,}200 \text{ gpd}$$

As a comparison, based on water consumption data, WWB recognizes a 15,700 gpd water consumption with a 20% deduction for landscape irrigation. Wastewater flow by this method of calculation yields 12,560 gpd.

$$\text{Avg Flow}_{exist} = 15{,}700 \text{ gpd} - 0.20(15{,}700) \text{ gpd} = 12{,}560 \text{ gpd}$$

The proposed development will generate approximately 38,601 gpd of wastewater flow plus the flow from the proposed restaurant. Restaurant flow is based upon the number of seats and the type of restaurant. That flow will be developed when more information is known. Residential units generating 37,184 gpd and retail generating 1,417 gpd with calculation as follows:

[1] Design Standards of the Department of Wastewater Management, Volume I, July 1993

Breakdown of Residential/Hotel Units
(Use Hotel Units since the number of units is greater)

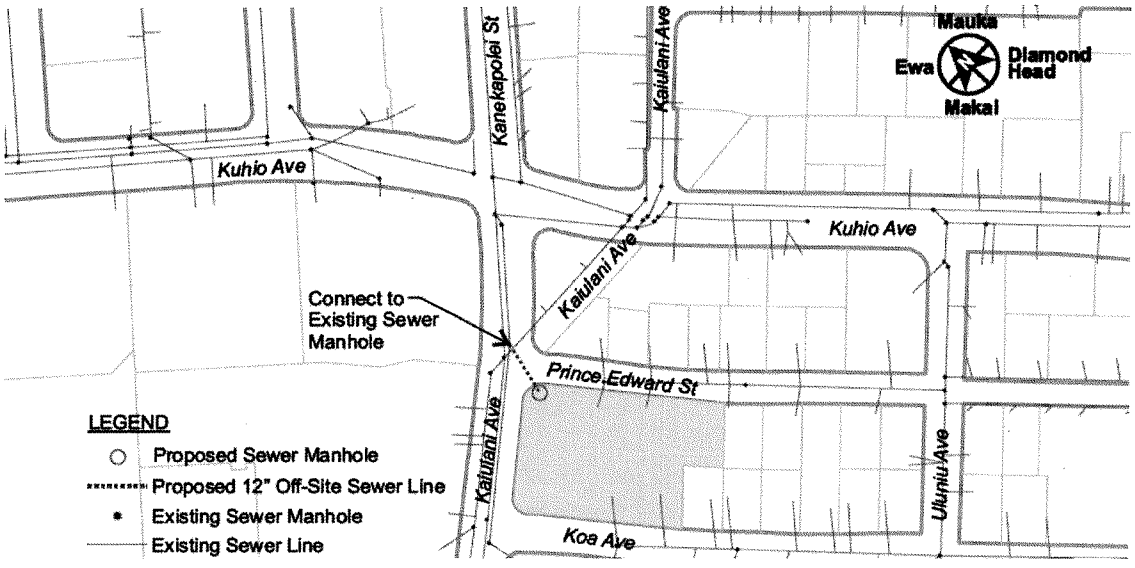
Type of Unit	No of Units	Capita/Unit	Capita
Studio	184	2.0	368
1 B/R	88	2.0	176
3 B/R	3	2.8	8.4
	275		552.4

$$\text{Avg Flow}_{\text{propsed residential}} = 552.4 \text{ capita} \times 80 \frac{\text{gpd}}{\text{capita}} = 44{,}192 \text{ gpd}$$

$$\text{Avg Flow}_{\text{proposed retail}} = 8{,}500 \text{ sf} \times \frac{1 \text{ employee}}{150 \text{ sf floor area}} \times 25 \frac{\text{gpd}}{\text{employee}} = 1{,}417 \text{ gpd}$$

Off-Site Sewer Improvements

Presently, the City's sewer system receiving the property's wastewater flows has inadequate capacity. An appeal letter had been filed with the Department of Environmental Services (ENV). In turn ENV has confirmed the inadequacy, however, only the sewer lines in Uluniu Ave. In light of this response, a sewer connection to the existing manhole at the intersection of Kaiulani Ave and Prince Edward St was proposed to ENV. This alternate connection point, would entail a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream (mauka direction), as required, to meet hydraulic requirements



3-1 | Proposed Off-Site Sewer Improvements – Alternate Connection

ENV hydraulically evaluated this alternate point of connection into their sewer system and has determined that it has adequate capacity to service the proposed development's flows.

Due to the location of the proposed grease interceptors with respect to the alternate sewer connection point, it is proposed that the existing sewer lateral(s) at Prince Edward and/or Koa Avenue be retained and utilized. The proposed grease interceptor flows into the existing sewer laterals will be less than the current flows with majority of the development's flows directed towards the new alternate connection on Kaiulani Ave.

3.3 ELECTRIC AND COMMUNICATIONS

Hawaiian Electric Company's (HECO), Hawaiian Telecom's (HTCO), and Oceanic Time Warner Cable's (OTWC) existing facilities serving this area consist of aerial cables attached to a joint overhead pole line on the south side of Prince Edward Street and underground ductlines, containing their respective cables, in Kaiulani and Koa Avenues. In general, where OTWC does not have its own underground duct system, OTWC will enter into a leasing agreement with HTCO for space in HTCO's duct system, currently this is true of the underground ductlines on Kaiulani and Koa Avenues.

The proposed electric and communications service connections would be developed in accordance with the specifications and standards of HECO, HTCO and OTWC. As State Public Utility Commission (PUC) regulated public utilities, HECO and HTCO are responsible for the development of off-site facilities that meet island-wide needs, such as power generating plants and power and signal transmission lines, and facilities that serve regional needs of the West Oahu area. Presently, the existing off-site facilities that would serve this development are HECO's Kapahulu Substation, located adjacent to the fire station on Kapahulu Avenue and HECO's Kuhio Substation, located on Kuhio Avenue and HTCO's Waikiki central office located on Kapuni Street. OTWC is a State Department of Commerce and Consumer Affairs cable television franchisee. Recently, HTCO was also granted a cable television franchise. Although not a PUC regulated utility, Oceanic's off-site facility construction policy is to provide such facilities where the anticipated revenue from the prospective service connections warrants the expenditure. Both HTCO and OTWC offer video, broadband and telephone services. The design and construction of the proposed onsite electric and communications service ductlines would need to meet the respective utility company's standards.

OFFSITE ELECTRIC

HECO has indicated that electric service to the site will be extended from HECO's Kuhio Avenue regional duct system through the existing duct system on Kaiulani Avenue. HECO further indicated that there is sufficient capacity to serve the proposed

HECO further indicated that there is sufficient capacity to serve the proposed development. However, as a public utility, HECO has an obligation to provide service to all legitimate requestors and cannot "reserve" current capacity for any specific project.

It is understood that the existing overhead line along Prince Edward Street will not impact construction of the proposed development and, therefore, is to remain in place.

OFFSITE COMMUNICATIONS

Telephone and cable television service will be extended to the site from the existing HTCO manhole and duct system located at the Kaiulani Avenue/Prince Edward Street intersection. Separate conduit laterals will be provided for HTCO and OTWC, however, all conduits will be connected to HTCO's duct system since OTWC does not presently have an underground duct system in Kaiulani Avenue. Both utility companies indicate that they currently have sufficient capacity to serve the proposed development.

ONSITE

The onsite electric and communications systems would consist of concrete encased, PVC conduits that will be extended to the HECO transformer pad location and the building telecommunications room/space. If the distance from the service connection point to the aforementioned is great, the respective utility company may require a handhole.

STREET LIGHTING

The existing street lights along Kaiulani Avenue, Koa Avenue and Prince Edward Street are owned and maintained by the City and County of Honolulu and will remain in place unless impacted by access improvements for the proposed development. If impacted the plans for modification to the street light systems must be reviewed and approved by the Department of Design and Construction.

APPENDIX A

Location Map

Tax Map Key 2-6-023

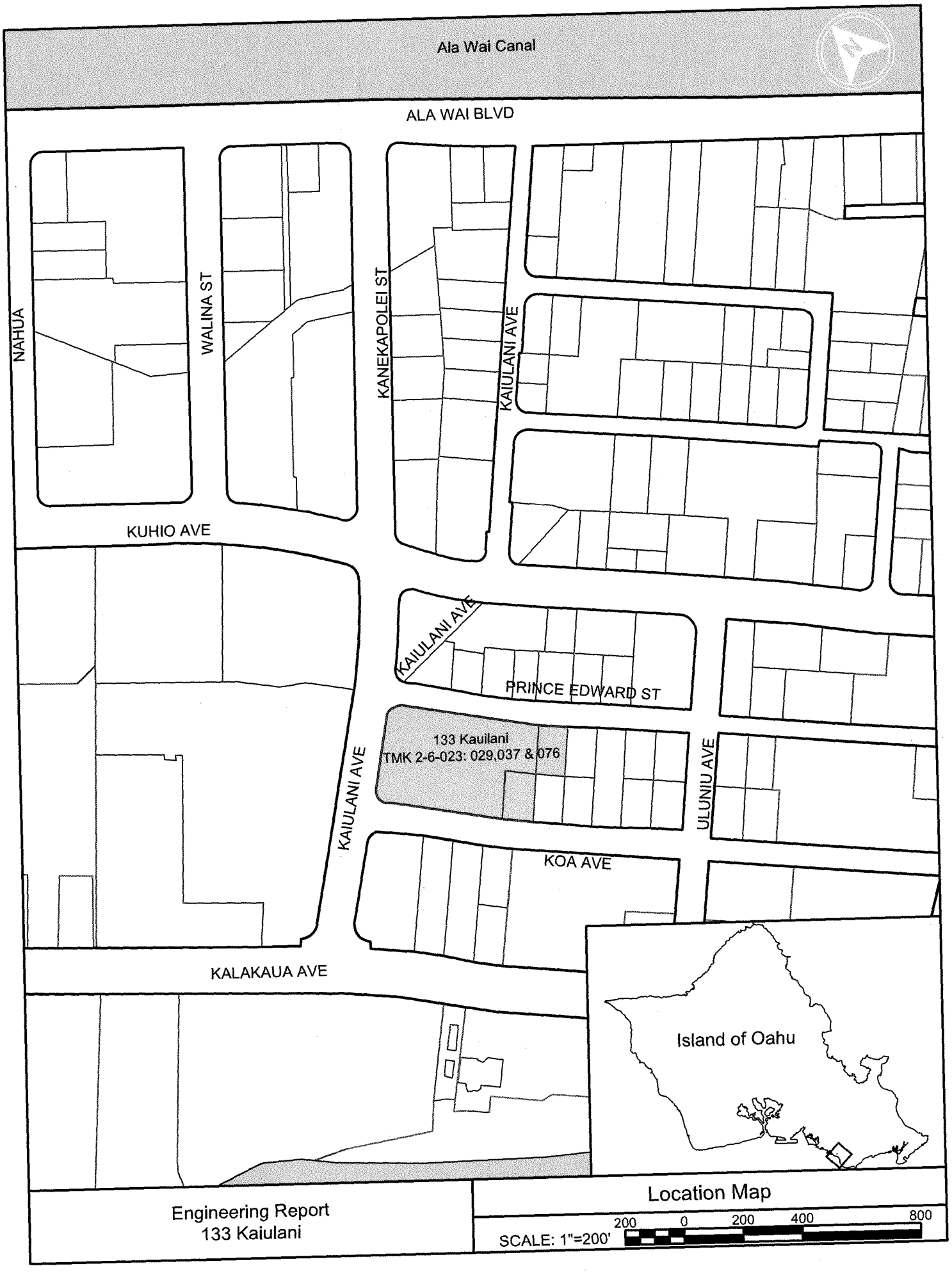
Flood Insurance Rate Maps (FIRM)
Portion of Panel 368 of 395, Map Number 15003C0368G
January 19, 2011

Flood Insurance Study (FIS), Volume 2 of 3
City and County of Honolulu, Hawaii
Table 9 Floodway Data | Manoa Stream – Palolo Stream – Ala Wai Canal
January 19, 2011

Flood Insurance Study (FIS), Volume 2 of 3
City and County of Honolulu, Hawaii
4P Flood Profiles – Ala Wai Canal
January 19, 2011

File Plan No. 149 | Royal Grove
Feb 25th, 1915

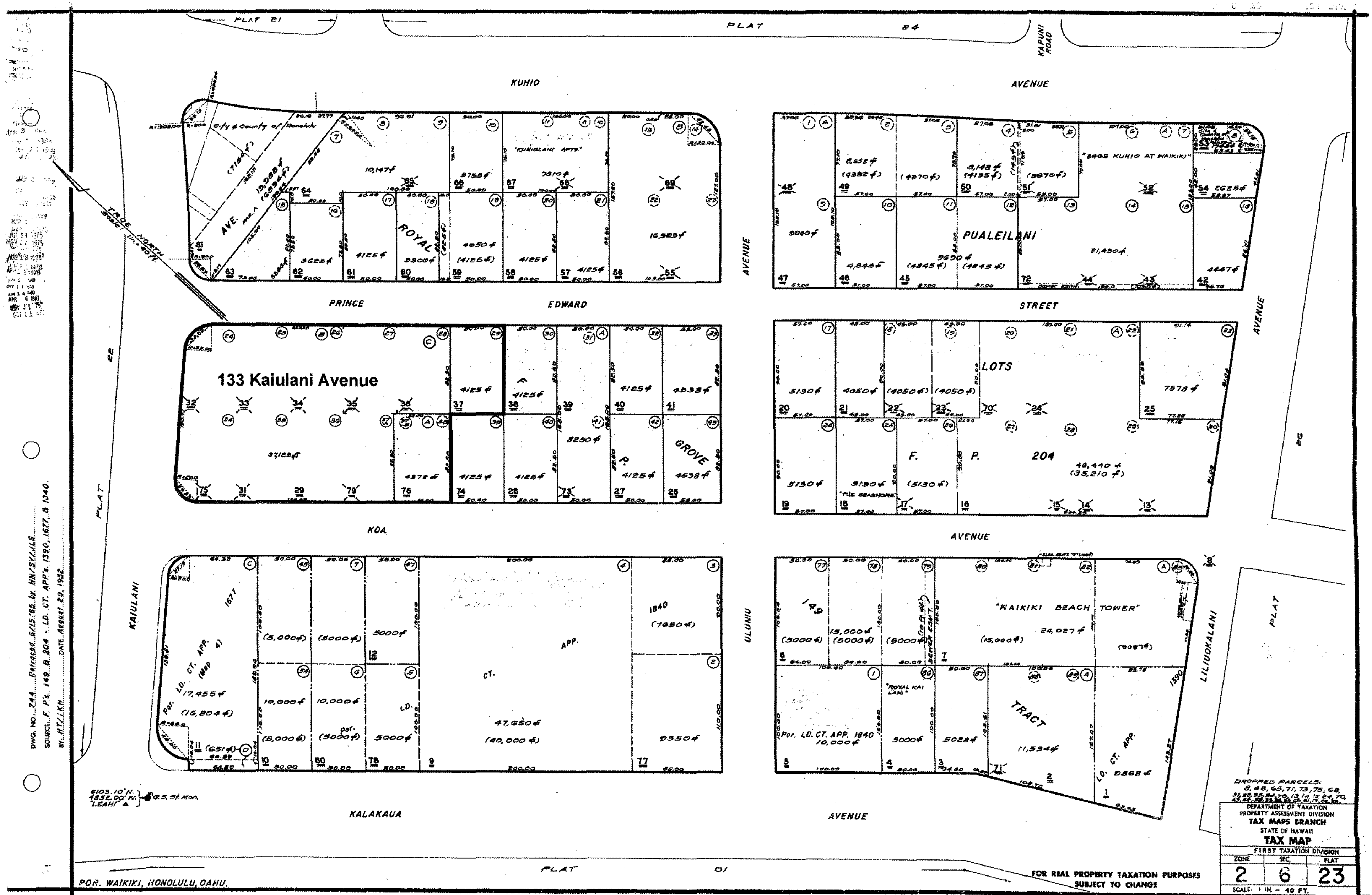
Letter of Map Amendment Determination Document (Removal)
June 03, 2014



Engineering Report
133 Kaiulani

Location Map

SCALE: 1"=200' 200 0 200 400 800


KUHIO AVENUE
KAPUNI ROAD
PLAT 24
PLAT 21
PLAT 22
PLAT 10
PLAT 26
PLAT
PRINCE EDWARD STREET
KOA AVENUE
ULUNIU AVENUE
KALAKAUA AVENUE
KAIULANI AVENUE
LILIUOKALANI AVENUE
ROYAL AVE.
ROYAL GROVE
PUALEILANI
LOTS
F. P. 204
"WAIKIKI BEACH TOWER"
TRACT
LD. CT. APP.
"KUHIOLANI APTS."
"2425 KUHIO AT WAIKIKI"
"ROYAL KAI LANI"
"THE SEASHORE"
City & County of Honolulu
133 Kaiulani Avenue
TRUE NORTH
Scale: 1 in. = 40 ft.
FOR REAL PROPERTY TAXATION PURPOSES
SUBJECT TO CHANGE
DEPARTMENT OF TAXATION
PROPERTY ASSESSMENT DIVISION
TAX MAPS BRANCH
STATE OF HAWAII
TAX MAP
FIRST TAXATION DIVISION
ZONE 2 SEC. 6 PLAT 23
SCALE: 1 IN. = 40 FT.
POR. WAIKIKI, HONOLULU, OAHU.
DWG. NO. 744 Retraced 6/15/65 by HN/SY/JLS
SOURCE: F. P's. 149 & 204 - LD. CT. APP's. 1390, 1677 & 1840.
BY H.T./K.H. DATE August 29, 1932

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0368G

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII

PANEL 368 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0368	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
15003C0368G

MAP REVISED
JANUARY 19, 2011

Federal Emergency Management Agency

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (LOCAL TIDAL DATUM)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Manoa Stream (continued)								
Y	16,490[1]	160	717	12.0	185.5	185.5	185.5	0.0
Z	17,290[1]	82	564	15.0	195.0	195.0	195.0	0.0
AA	18,690[1]	57	405	16.8	214.7	214.7	214.7	0.0
AB	19,290[1]	47	364	18.7	222.9	222.9	222.9	0.0
AC	20,690[1]	69	446	14.6	253.7	253.7	253.7	0.0
AD	21,340[1]	94	602	11.2	266.4	266.4	266.4	0.0
Palolo Stream								
A	-320[2]	50	315	16.8	52.8	52.8	52.8	0.0
B	80[2]	53	387	13.6	76.6	76.6	76.6	0.0
C	740[2]	57	376	14.0	84.9	84.9	84.9	0.0
D	1,410[2]	34	306	17.3	95.5	95.5	95.5	0.0
Ala Wai Canal								
A	6,700[3]	265	6,797	0.6	5.8	5.8	5.8	0.0
B	7,200[3]	265	6,322	0.5	5.8	5.8	5.8	0.0
C	7,700[3]	265	4,088	0.7	5.8	5.8	5.8	0.0
D	8,200[3]	265	4,261	0.7	5.8	5.8	5.8	0.0
E	8,670[3]	225	5,247	0.8	5.8	5.8	5.8	0.0
F	9,170[3]	190	4,002	0.9	5.8	5.8	5.8	0.0
G	9,350[3]	225	2,321	1.2	5.8	5.8	5.8	0.0

[1]Feet above confluence with Ala Wai Canal
[2]Feet from St. Louis High School Access Road
[3]Feet above mouth

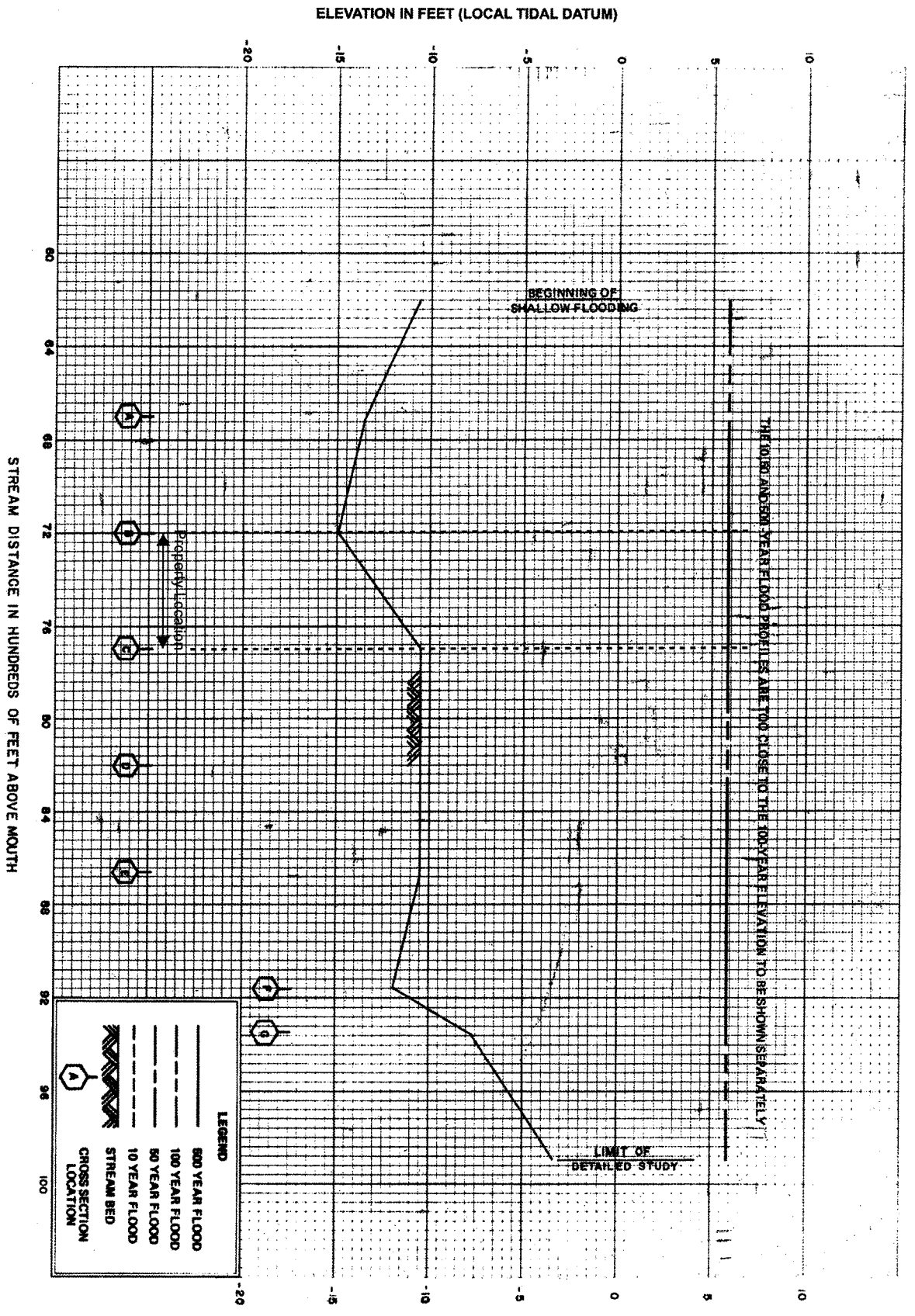
TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY AND COUNTY OF HONOLULU, HI

FLOODWAY DATA

MANOA STREAM – PALOLO STREAM – ALA WAI CANAL



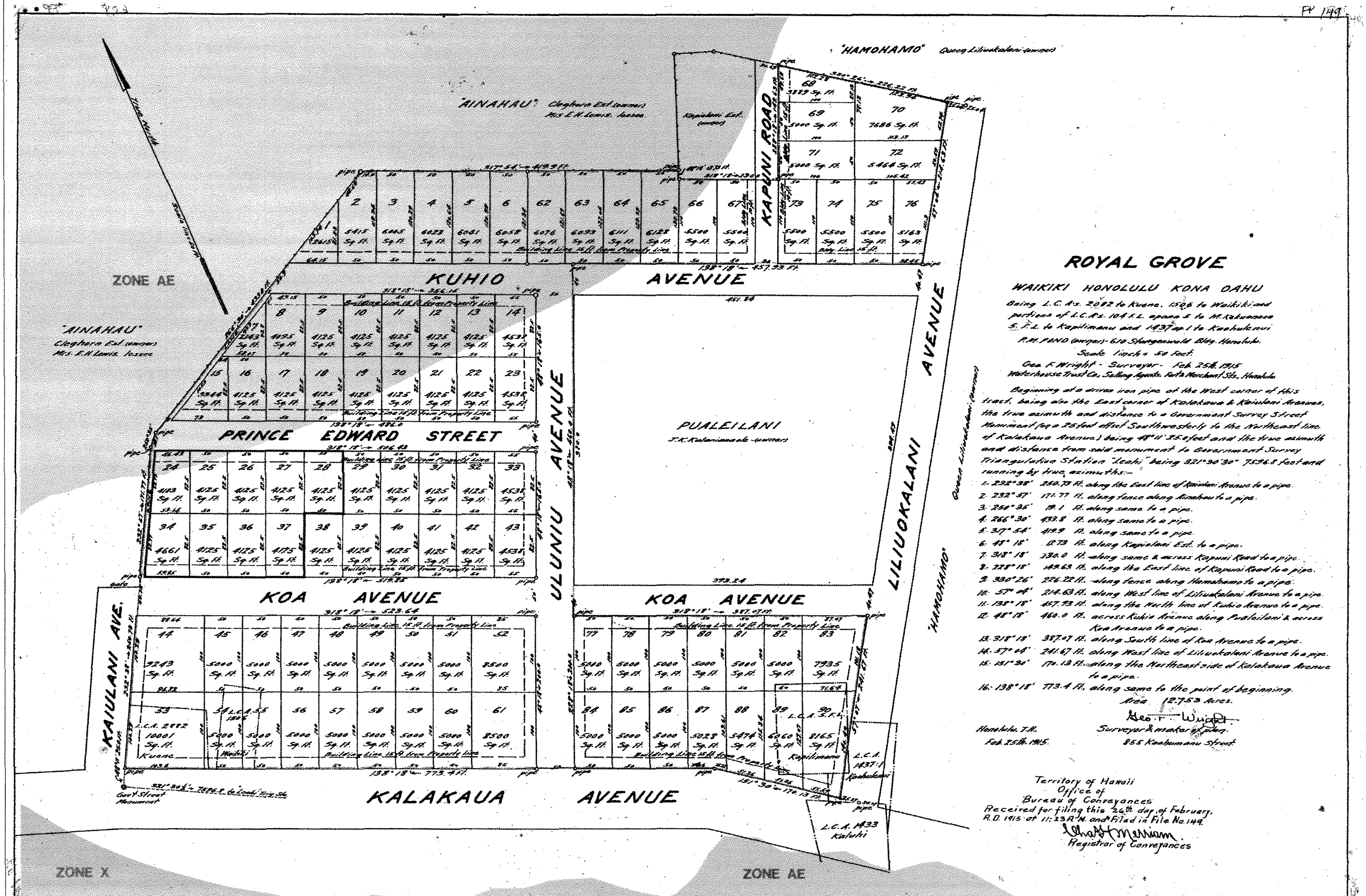
4P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY AND COUNTY OF HONOLULU, HI

FLOOD PROFILES

ALA WAI CANAL


FP 149
ROYAL GROVE
WAIKIKI HONOLULU KONA OAHU
Being L.C.A's. 2082 to Kuane, 1506 to Waikiki and portions of L.C.A's. 104 F.L. apana 5 to M. Kekuanaoa 5. F.L. to Kapilimanu and 1437 ap. 1 to Kaahukenui
P.M. POND (owner) - 610 Stangenwald Bldg. Honolulu.
Scale 1 inch = 50 feet.
Geo. F. Wright - Surveyor - Feb. 25th 1915
Waterhouse Trust Co., Selling Agents. Fort & Merchant Sts., Honolulu
Beginning at a driven iron pipe at the West corner of this tract, being also the East corner of Kalakaua & Kaiulani Avenues, the true azimuth and distance to a Government Survey Street Monument (for a 25 feet offset Southwesterly to the Northeast line of Kalakaua Avenue) being 48°11' 25.0 feet and the true azimuth and distance from said monument to Government Survey Triangulation Station "Leahi" being 321°30'30" 7536.8 feet and running by true azimuths:—
1. 232°38' 250.73 ft. along the East line of Kaiulani Avenue to a pipe.
2. 232°57' 171.77 ft. along fence along Ainahau to a pipe.
3. 250°35' 19.1 ft. along same to a pipe.
4. 266°30' 433.8 ft. along same to a pipe.
5. 317°54' 419.9 ft. along same to a pipe.
6. 48°18' 12.73 ft. along Kapiolani Est. to a pipe.
7. 318°18' 230.0 ft. along same & across Kapuni Road to a pipe.
8. 228°18' 149.63 ft. along the East line of Kapuni Road to a pipe.
9. 330°26' 226.22 ft. along fence along Hamohamo to a pipe.
10. 57°04' 214.63 ft. along West line of Liliuokalani Avenue to a pipe.
11. 138°18' 457.93 ft. along the North line of Kuhio Avenue to a pipe.
12. 48°18' 460.0 ft. across Kuhio Avenue along Pualeilani & across Koa Avenue to a pipe.
13. 318°18' 387.47 ft. along South line of Koa Avenue to a pipe.
14. 57°04' 241.67 ft. along West line of Liliuokalani Avenue to a pipe.
15. 151°30' 170.13 ft. along the Northeast side of Kalakaua Avenue to a pipe.
16. 138°18' 773.4 ft. along same to the point of beginning.
Area 12.753 Acres.
Geo. F. Wright
Surveyor & maker of plan.
855 Kaahumanu Street
Honolulu, T.H.
Feb. 25th 1915.
Territory of Hawaii
Office of
Bureau of Conveyances
Received for filing this 26th day of February, A.D. 1915 at 11:23 A.M. and Filed in File No. 149.
Chas. H. Merriam
Registrar of Conveyances
"HAMOHAMO" Queen Liliuokalani (owner)
"AINAHAU" Cleghorn Est. (owner) Mrs. E.H. Lewis, lessee
Kapiolani Est. (owner)
PUALEILANI
J.K. Kalanianaole (owner)
True North
KUHIO AVENUE
KAPUNI ROAD
PRINCE EDWARD STREET
ULUNIU AVENUE
KOA AVENUE
LILIUOKALANI AVENUE
KAIULANI AVE.
KALAKAUA AVENUE
Gov't Street Monument
L.C.A. 2082 Kuane
L.C.A. 1506 Waikiki
L.C.A. 5 F.L. Kapilimanu
L.C.A. 1437:1 Kaahukenui
L.C.A. 1433 Kaluhi
ZONE AE
ZONE X
ZONE AE

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	CITY AND COUNTY OF HONOLULU, HAWAII	Lots 24, 25, and 26, Royal Grove, as shown on the Plat recorded as File No. 149, in the Office of the Bureau of Conveyances, Honolulu County, Hawaii
	COMMUNITY NO.: 150001	
AFFECTED MAP PANEL	NUMBER: 15003C0368G	
	DATE: 1/19/2011	
FLOODING SOURCE: ALA WAI CANAL		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.277, -157.825 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
24 - 26	--	Royal Grove	Kaiulani Avenue	Property	X (unshaded)	5.8 feet	--	5.9 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

APPENDIX B

Domestic Water Consumption Data
05/17/12 to 11/19/04

```
CS0590B1            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                        - BROWSE BILLS -                        03:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                                  SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:                  Next Read Date: 09/12/2012
Life Support: N          Num of Services:     2            Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A                Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
05/17/2012  RE     11617.58 06/06/2012 03/23/12 05/17/12     842   55   15309.09
03/23/2012  RE     14485.90 04/12/2012 01/19/12 03/23/12    1050   64   16406.25
01/19/2012  RE     13664.94 02/08/2012 11/18/11 01/19/12    1006   62   16225.80
11/18/2011  RE     12565.03 12/08/2011 09/20/11 11/18/11     931   59   15779.66
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or ENTER screen value to select
```


```
CS0590B1            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                        - BROWSE BILLS -                        03:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                                  SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:                  Next Read Date: 09/12/2012
Life Support: N          Num of Services:     2            Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A                Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-    -A
```


Bill Date	Type	Bill Amt	Due Date	Start Dt	End Dt	Cons	Days	Gals/Day
09/20/2011	RE	14062.42	10/10/2011	07/19/11	09/20/11	1042	63	16539.68
07/25/2011	RE	12351.82	08/15/2011	05/24/11	07/19/11	932	56	16642.85
06/01/2011	RE	12389.23	06/21/2011	03/24/11	05/24/11	944	61	15475.40
04/08/2011	RE	13150.08	04/28/2011	01/21/11	03/24/11	1002	62	16161.29


```
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or ENTER screen value to select
```

```
CS0590B1            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                        - BROWSE BILLS -                        03:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC       Close Date.....:                 Next Read Date: 09/12/2012
Life Support: N           Num of Services:      2          Outst Bal....:
Cycle.......: 23          Prem Cust Stat.: A               Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-     -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
02/01/2011  RE     12612.24 02/22/2011 11/24/10 01/21/11     961   58   16568.96
11/29/2010  RE     13543.62 12/20/2010 09/23/10 11/24/10    1032   62   16645.16
09/28/2010  RE     14304.46 10/18/2010 07/20/10 09/23/10    1090   65   16769.23
07/22/2010  RE     12750.58 08/11/2010 05/18/10 07/20/10    1051   63   16682.53
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or ENTER screen value to select
```

```
CS0590B1            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                        - BROWSE BILLS -                        03:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC       Close Date.....:                 Next Read Date: 09/12/2012
Life Support: N           Num of Services:      2          Outst Bal....:
Cycle.......: 23          Prem Cust Stat.: A               Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-     -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
05/18/2010  RE     10767.72 06/07/2010 03/18/10 05/18/10     920   61   15081.96
03/18/2010  RE     10159.42 04/07/2010 01/19/10 03/18/10     868   58   14965.51
01/19/2010  RE     11504.69 02/08/2010 11/17/09 01/19/10     983   63   15603.17
                          ****** End of Data ******
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or ENTER screen value to select
```

```
CS0590BA            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                              Prem Rte: 436
           HONOLULU       96815-3247                     Old S/N.: 30163700
Prem Name:                                             ------ Credit Info ------
Cust Name:                                             LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                              SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:              Next Read Date: 09/12/2012
Life Support: N          Num of Services:     2        Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A            Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:              Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
11/17/2009  RE     11270.73 12/07/2009 09/17/09 11/17/09     963   61   15786.88
09/17/2009  RE     11270.73 10/07/2009 07/17/09 09/17/09     963   62   15532.25
07/17/2009  RE      9297.63 08/06/2009 05/18/09 07/17/09     877   60   14616.66
05/19/2009  RE      8670.05 06/08/2009 03/17/09 05/18/09     850   62   13709.67
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                   main
Position cursor or enter screen value to select
```

```
CS0590BA            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                              Prem Rte: 436
           HONOLULU       96815-3247                     Old S/N.: 30163700
Prem Name:                                             ------ Credit Info ------
Cust Name:                                             LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                              SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:              Next Read Date: 09/12/2012
Life Support: N          Num of Services:     2        Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A            Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:              Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
03/19/2009  RE     8517.14 04/08/2009 01/15/09 03/17/09     836   61   13704.91
01/21/2009  RE     8150.16 02/10/2009 11/17/08 01/15/09     799   59   13542.37
11/19/2008  RE     8955.48 12/09/2008 09/16/08 11/17/08     878   62   14161.29
09/18/2008  RE    10668.07 10/08/2008 07/18/08 09/16/08    1046   60   17433.33
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                   main
Position cursor or enter screen value to select
```

```
CS0590BA            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                              Prem Rte: 436
           HONOLULU       96815-3247                     Old S/N.: 30163700
Prem Name:                                             ------ Credit Info ------
Cust Name:                                             LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                              SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:              Next Read Date: 09/12/2012
Life Support: N          Num of Services:     2        Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A            Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:              Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons   Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
07/21/2008  RE      9782.55 08/11/2008 05/20/08 07/18/08    1071   59   18152.54
05/21/2008  RE      9694.98 06/10/2008 03/17/08 05/20/08    1110   64   17343.75
                        *** End of Data ***

Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                   main
Position cursor or enter screen value to select
```

```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                   3:13 PM

Prem Addr: 131 KAIULANI AVE                              Prem Rte: 436
           HONOLULU       96815-3247                     Old S/N.: 30163700
Prem Name:                                             ------ Credit Info ------
Cust Name:                                             LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                              SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:              Next Read Date: 09/12/2012
Life Support: N          Num of Services:     1        Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A            Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:              Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons   Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
03/18/2008  RE     10262.43 04/07/2008 01/14/08 03/17/08    1175   63   18650.79
01/14/2008  RE     10227.51 02/04/2008 11/15/07 01/14/08    1171   60   19516.66
11/16/2007  RE      9555.30 12/06/2007 09/19/07 11/15/07    1094   57   19192.98
09/20/2007  RE     10131.48 10/10/2007 07/19/07 09/19/07    1160   62   18709.67
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                   main
Position cursor or enter screen value to select
```

```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC      Close Date.....:                  Next Read Date: 09/12/2012
Life Support: N          Num of Services:     1            Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A                Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
07/19/2007  RE      6608.51 08/08/2007 05/17/07 07/19/07    1010   63   16031.74
05/17/2007  RE      5262.32 06/06/2007 03/19/07 05/17/07     929   59   15745.76
03/20/2007  RE      5052.90 04/09/2007 01/22/07 03/19/07     894   56   15964.28
02/02/2007  MI       352.47 02/22/2007
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or enter screen value to select
```

```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC      Close Date.....:                  Next Read Date: 09/12/2012
Life Support: N          Num of Services:     1            Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A                Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
01/22/2007  RE      5800.02 02/12/2007 11/20/06 01/22/07    1024   63   16253.96
11/21/2006  RE      5352.60 12/11/2006 09/18/06 11/20/06     955   63   15158.73
09/19/2006  RE      5149.90 10/09/2006 07/20/06 09/18/06     954   60   15900.00
09/14/2006  MI       132.17 10/04/2006
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or enter screen value to select
```

```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC       Close Date.....:                 Next Read Date: 09/12/2012
Life Support: N           Num of Services:      1          Outst Bal....:
Cycle.......: 23          Prem Cust Stat.: A               Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-     -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
07/21/2006  RE      5131.20 08/10/2006 05/22/06 07/20/06     990   59   16779.66
05/23/2006  RE      5098.79 06/13/2006 03/24/06 05/22/06    1002   59   16983.05
03/24/2006  RE      5164.96 04/13/2006 01/24/06 03/24/06    1014   59   17186.44
01/24/2006  RE      6305.12 02/13/2006 11/18/05 01/24/06    1238   67   18477.61
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or enter screen value to select
```

```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                 ------ Credit Info ------
Cust Name:                                                 LP:      FN:      CS:
Bus Name.: KINGS ALLEY CO                                  SS:    1 NS:      UN:
Check Notes.: PR PC       Close Date.....:                 Next Read Date: 09/12/2012
Life Support: N           Num of Services:      1          Outst Bal....:
Cycle.......: 23          Prem Cust Stat.: A               Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                  Pending Refund:
Sewer Class.: 1-30-     -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
11/18/2005  RE      5338.02 12/08/2005 09/19/05 11/18/05    1048   60   17466.66
09/19/2005  RE      5673.96 10/10/2005 07/20/05 09/19/05    1114   61   18262.29
07/20/2005  RE      5235.42 08/09/2005 05/20/05 07/20/05    1122   61   18393.44
05/20/2005  RE      4603.33 06/09/2005 03/22/05 05/20/05    1029   59   17440.67
Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                    main
Position cursor or enter screen value to select
```

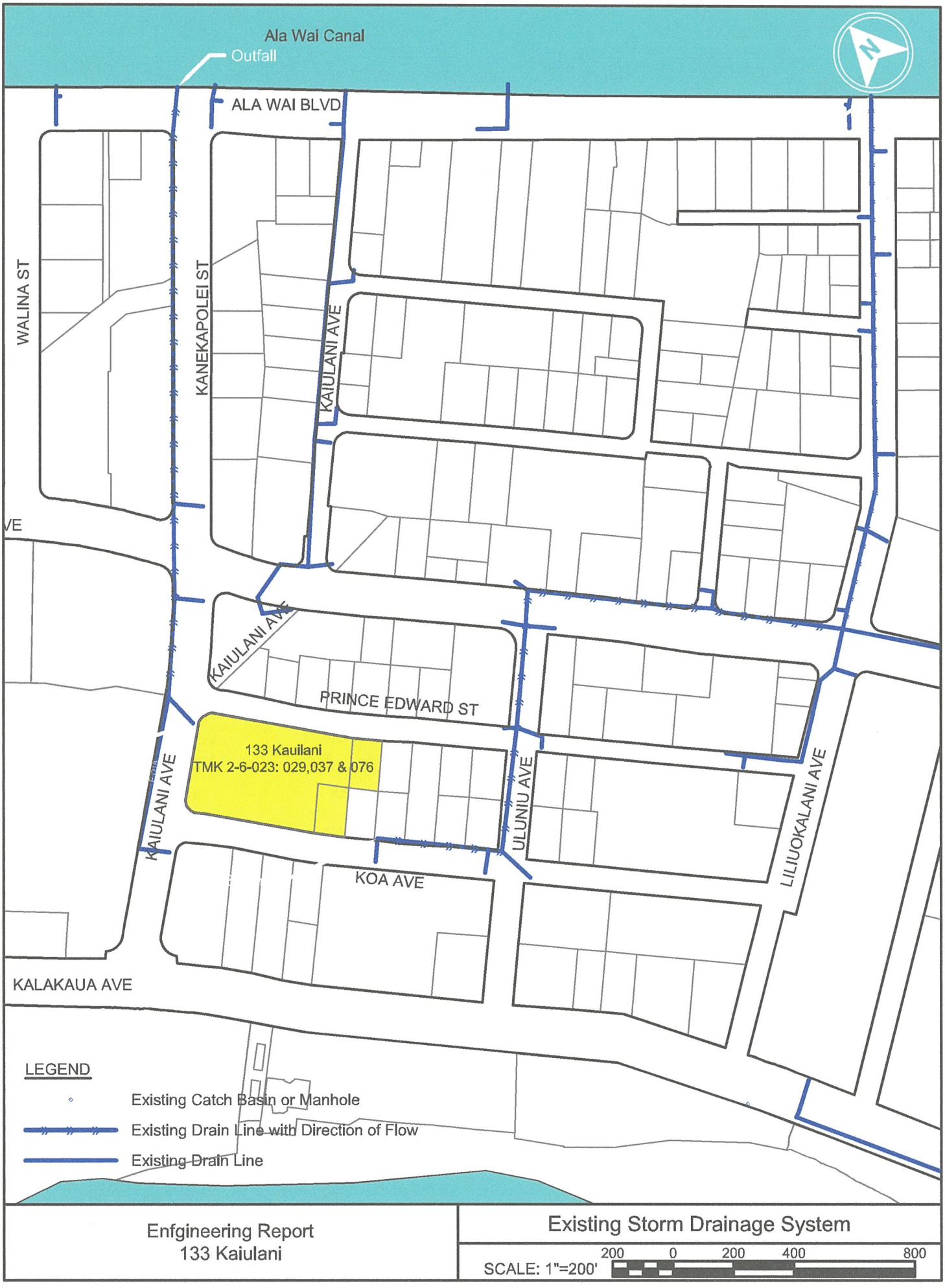
```
CS0590BG            ***** CUSTOMER SERVICE SUBSYSTEM *****
Jul 13,12                    - BROWSE ARCHIVE2 BILLS -                    3:13 PM

Prem Addr: 131 KAIULANI AVE                                  Prem Rte: 436
           HONOLULU       96815-3247                         Old S/N.: 30163700
Prem Name:                                                  ------ Credit Info ------
Cust Name:                                                  LP:     FN:     CS:
Bus Name.: KINGS ALLEY CO                                   SS:   1 NS:     UN:
Check Notes.: PR PC      Close Date.....:                   Next Read Date: 09/12/2012
Life Support: N          Num of Services:     1             Outst Bal....:
Cycle.......: 23         Prem Cust Stat.: A                 Disputed Bal..:
Eff Date....: 06/20/1972 Payment Type...:                   Pending Refund:
Sewer Class.: 1-30-    -A
Bill Date  Type  Bill Amt    Due Date  Start Dt  End Dt   Cons    Days  Gals/Day
---------- ---- ---------- ---------- -------- -------- ------- ---- ----------
03/22/2005  RE      5023.51 04/11/2005 01/21/05 03/22/05    1123   60   18716.66
01/21/2005  RE      5108.44 02/10/2005 11/19/04 01/21/05    1142   63   18126.98
                         *** End of Data ***

Prem ID: 1060075  Cust ID: 1064160
Direct Command: ____________________________________________________________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      help  retrn quit        flip        bkwrd frwrd                   main
Position cursor or enter screen value to select
```

APPENDIX C

Existing Storm Drainage System

Existing Water System

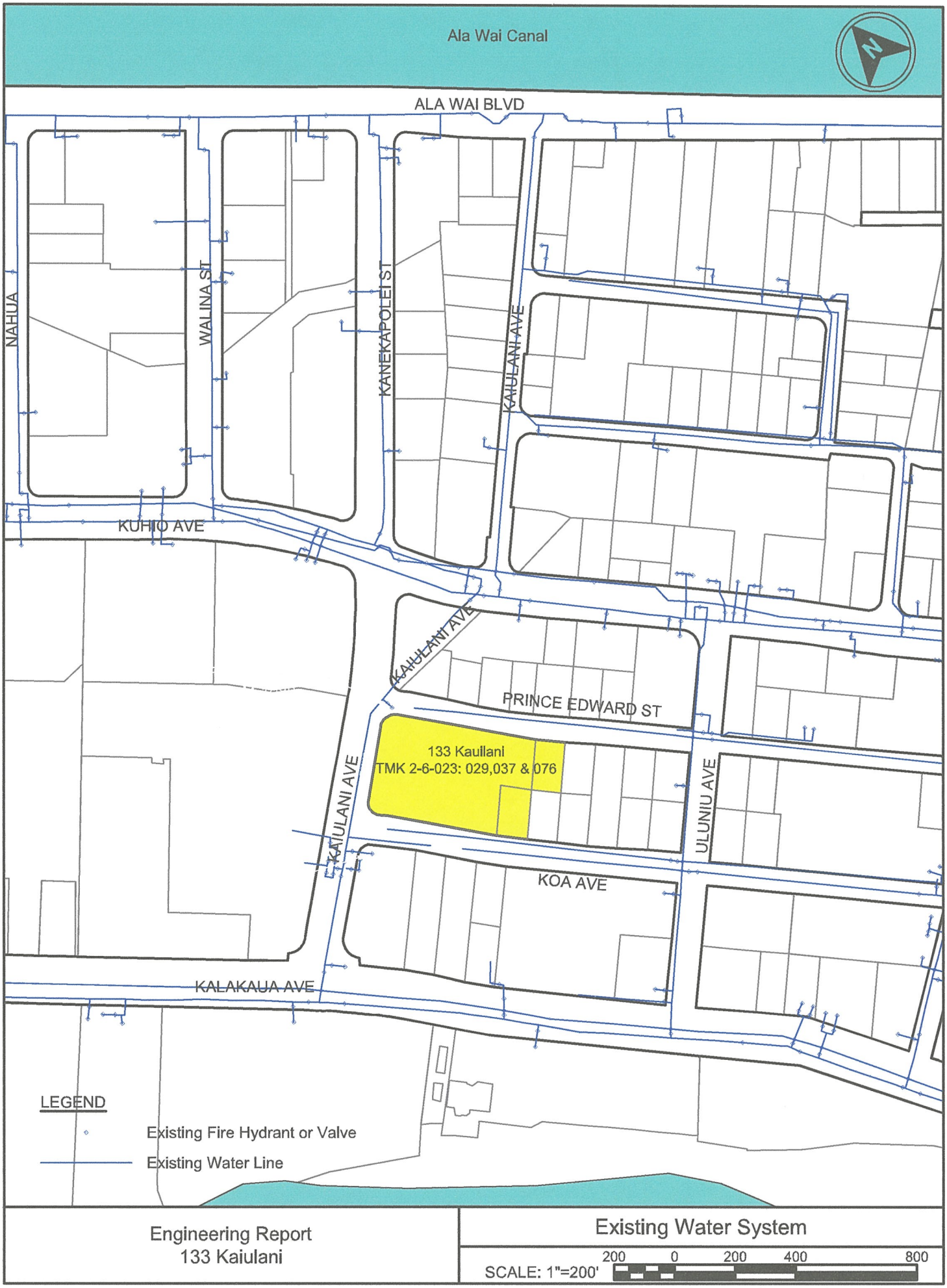
Existing Sanitary Sewer System



Enfgineering Report
133 Kaiulani

Existing Storm Drainage System

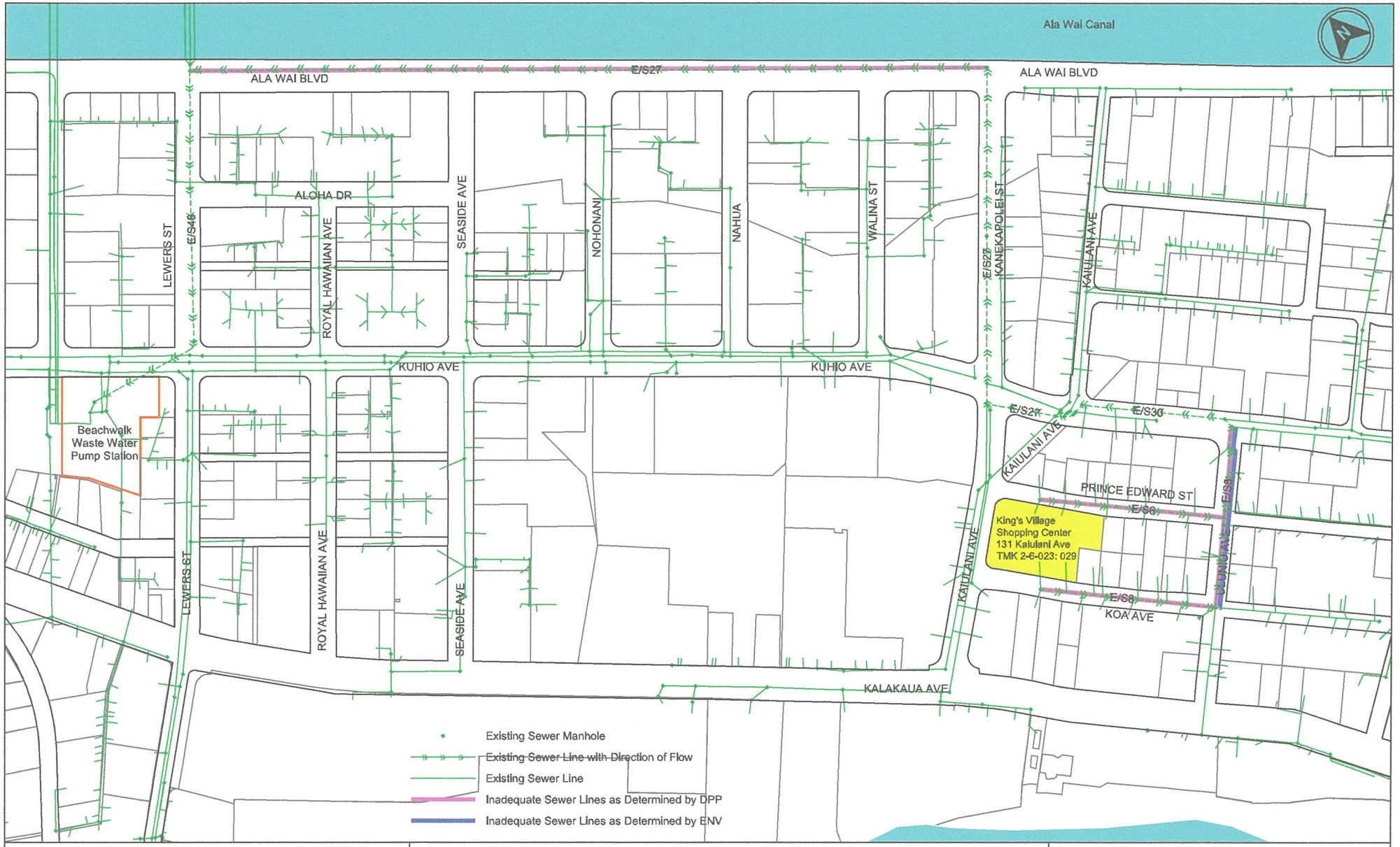
SCALE: 1"=200' 200 0 200 400 800



Engineering Report
133 Kaiulani

Existing Water System

SCALE: 1"=200' 200 0 200 400 800



Engineering Report
133 Kaiulani

Existing Sanitary Sewer System

SCALE: 1"=200' 200 0 200 400 800

APPENDIX 9

HEIGHT DIAGRAMS

SITE
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

SITE ANALYSIS -PUNCH BOWL VIEW CORRIDOR 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

SITE ANALYSIS -PUNCH BOWL VIEW CORRIDOR 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

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

Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing view of Diamond Head.

VIEW STUDY -FROM PUNCH BOWL
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000

Land Use Ordinance
Sec. 21-9.80-1
Waikiki Special District - Objectives

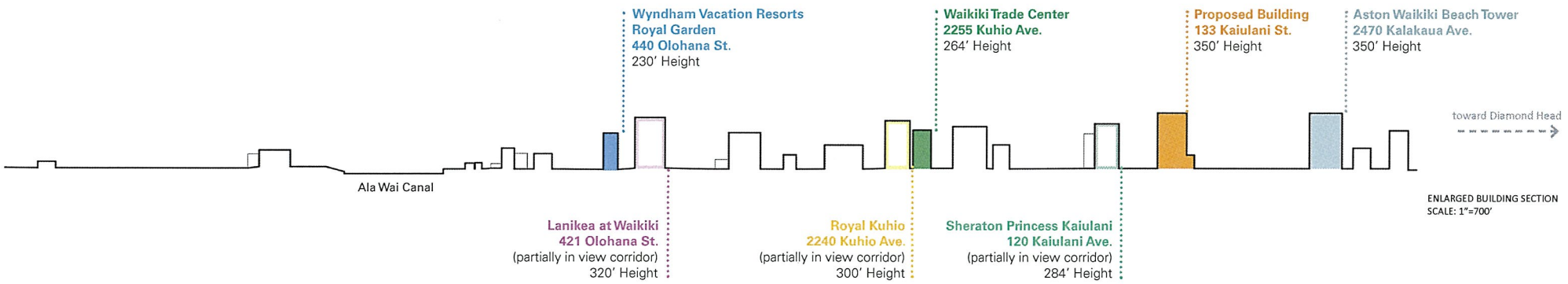
(K) Maintain a substantial view of Diamond Head from the Punchbowl lookouts by controlling building heights in Waikiki that would impinge on this view corridor.

Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing view of Diamond Head.

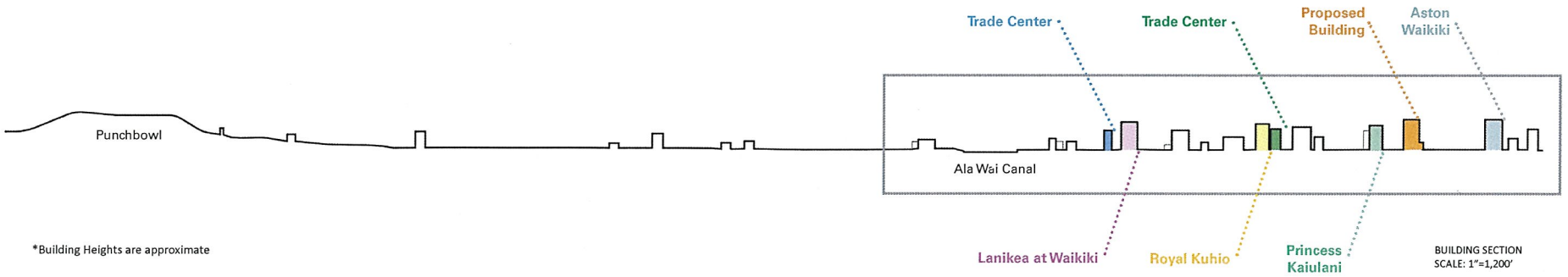
VIEW STUDY -FROM PUNCH BOWL
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014

2012036.000



ENLARGED BUILDING SECTION
SCALE: 1"=700'



BUILDING SECTION
SCALE: 1"=1,200'

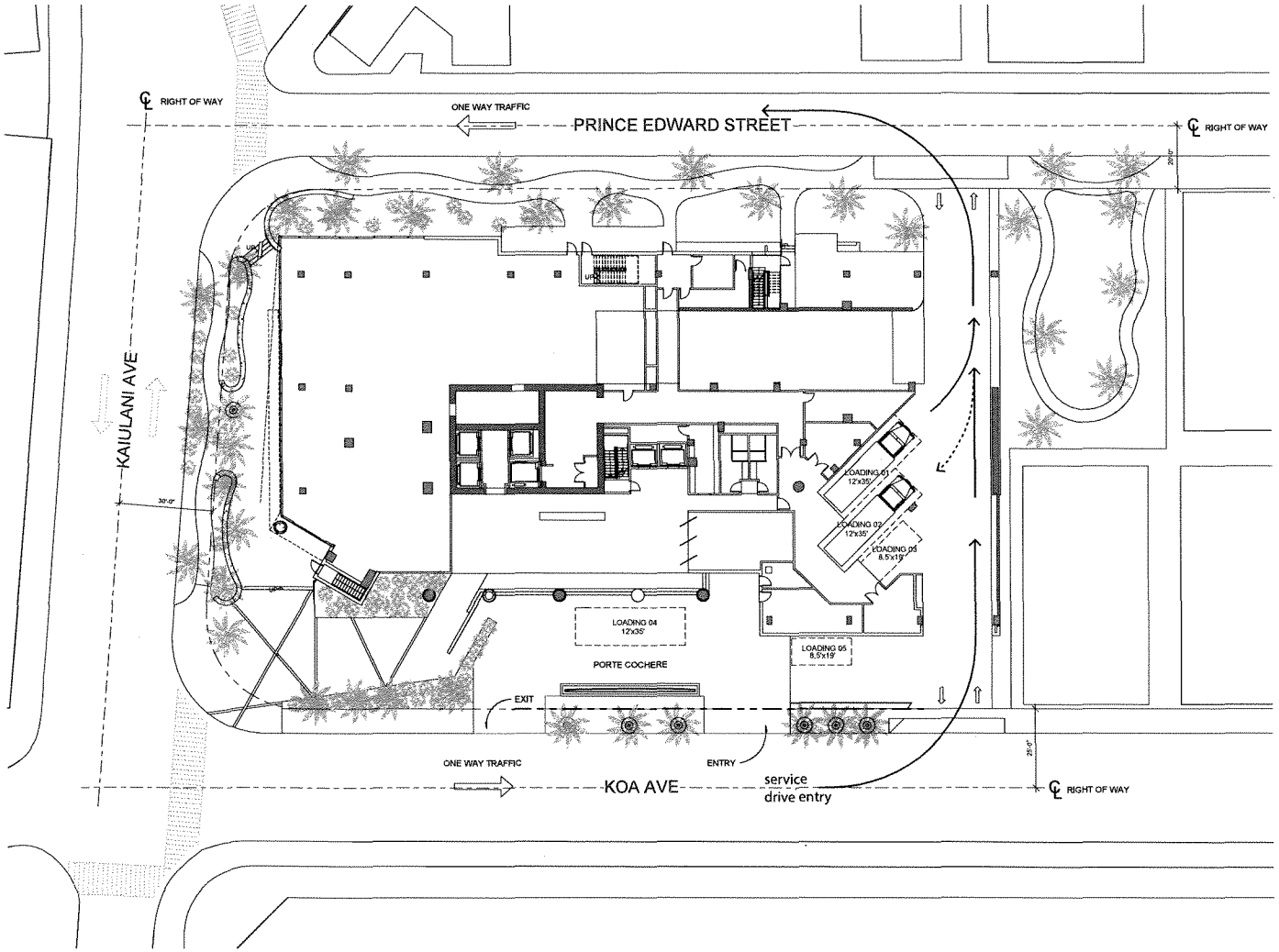
*Building Heights are approximate

SECTION STUDY- THROUGH VIEW CORRIDOR
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000

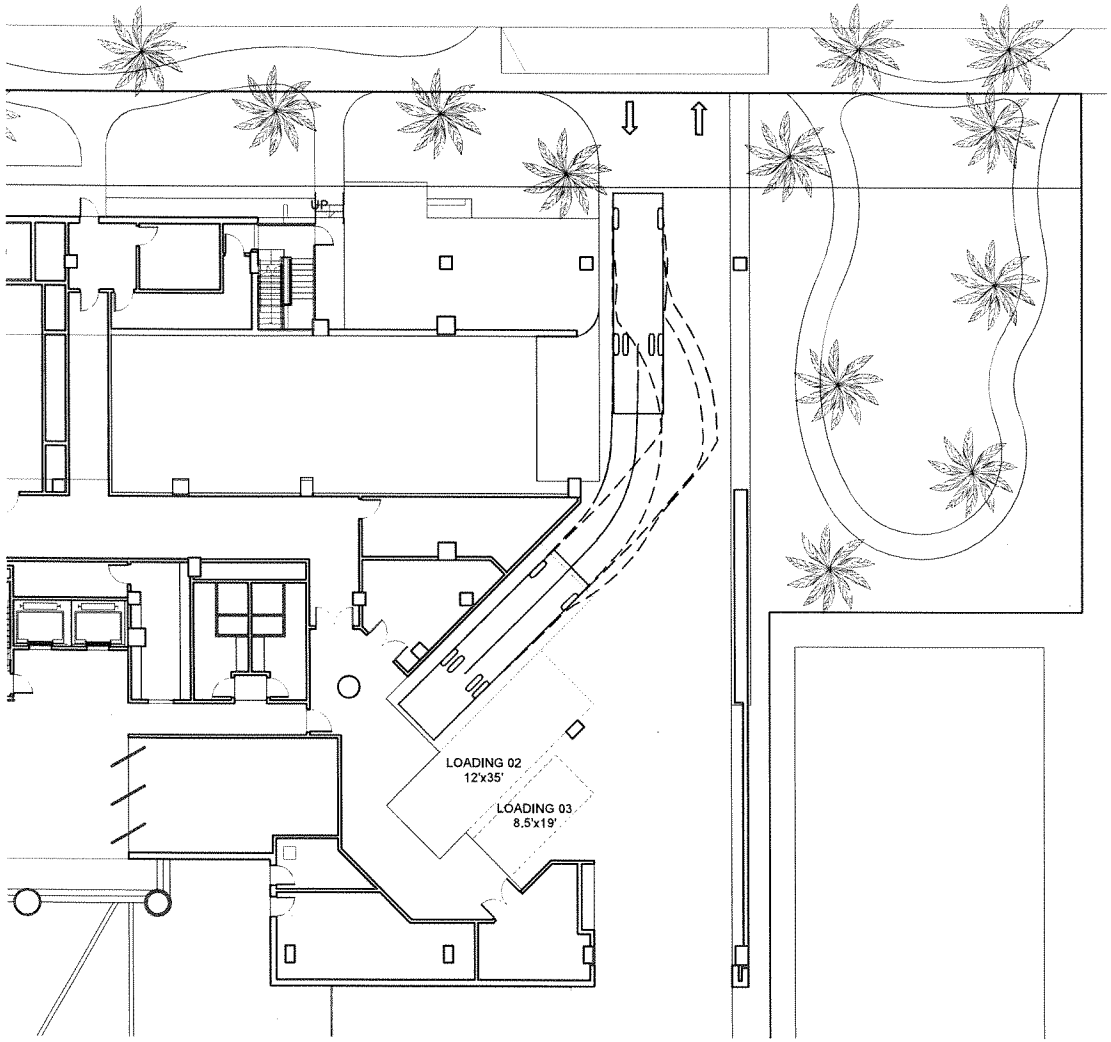
APPENDIX 10

LOADING DIAGRAMS



SERVICE TRUCK CIRCULATION
133 KAIULANI AVE
Honolulu, Hawaii

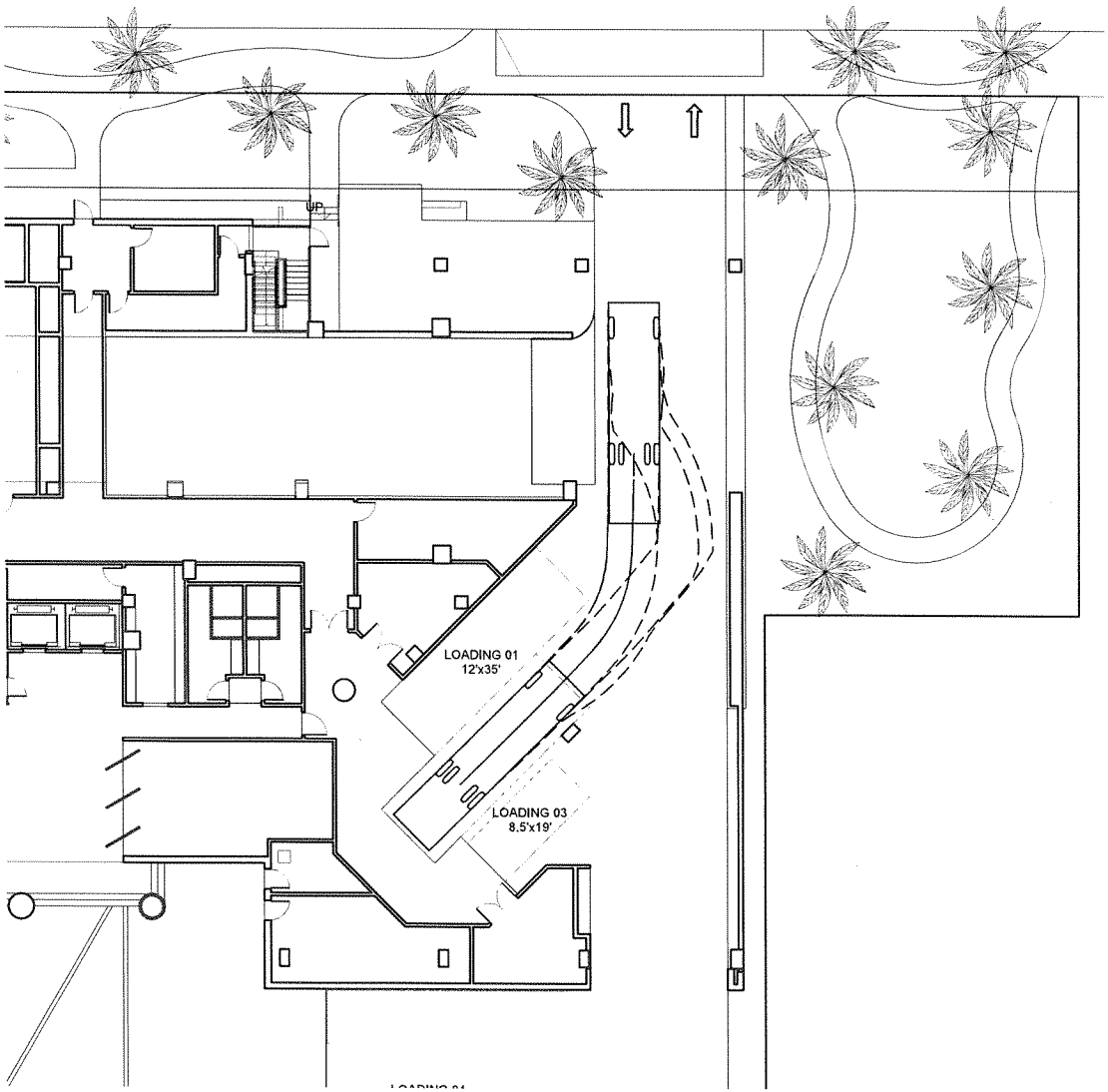
7.23.2014
2012036.000



SERVICE TRUCK CIRCULATION- LOADING 01
133 KAIULANI AVE
Honolulu, Hawaii

7.23.2014

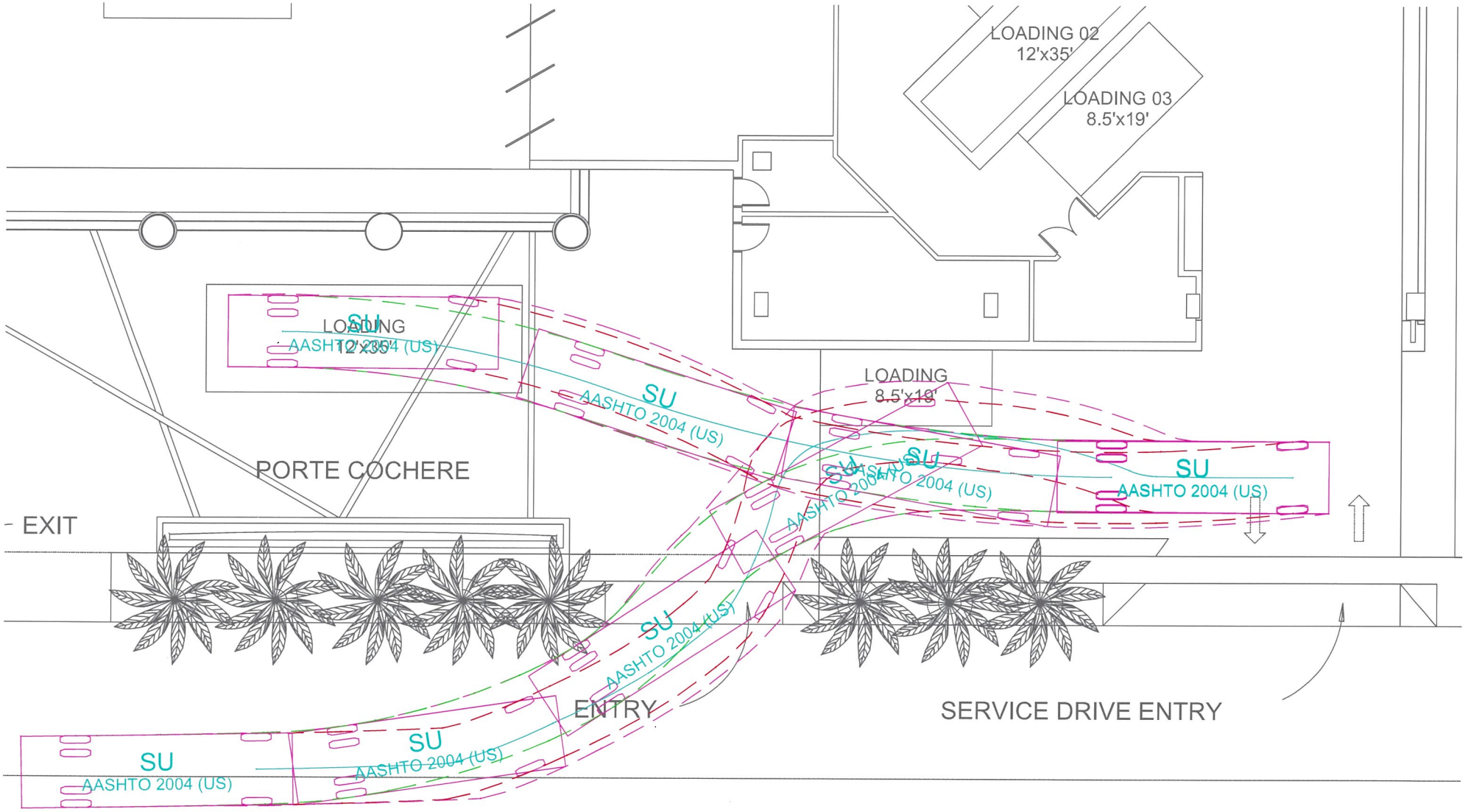
2012036.000



SERVICE TRUCK CIRCULATION- LOADING 02
133 KAIULANI AVE
Honolulu, Hawaii

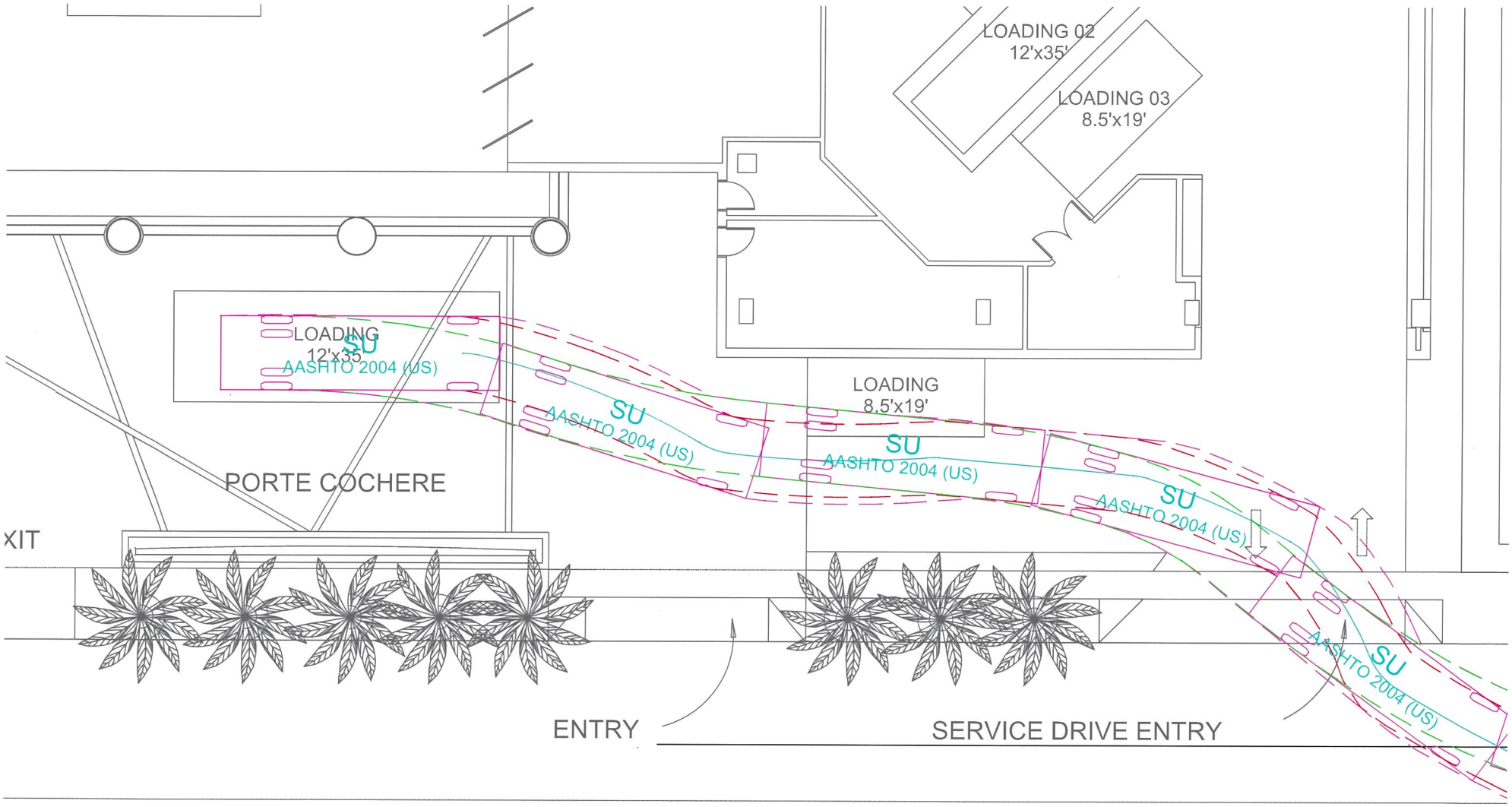
7.23.2014

2012036.000



FORWARD PULL IN, REVERSE INTO LOADING STALL AT PORTE COCHERE

SERVICE TRUCK CIRCULATION- LOADING 04 7.23.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000



FORWARD EXIT FROM LOADING STALL AT PORTE COCHERE

SERVICE TRUCK CIRCULATION- LOADING 04 7.23.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

APPENDIX 11

PEDESTRIAN WIND ASSESSMENT

Tel: 519.823.1311
Fax: 519.823.1316

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada
N1K 1B8

Kings Village

Honolulu, Hawaii

Final Report

Pedestrian Wind Consultation

RWDI # 1400926
January 30, 2015

SUBMITTED TO

Mr. Elton Wong
Kobayashi Group
1288 Ala Moana Boulevard
Suite 201
Honolulu, HI 96814
ewong@kobayashi-group.com

SUBMITTED BY

William Schinkel, B.A.Sc.
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1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by Kobayashi Group to consult on the pedestrian wind conditions for the proposed Kings Village project in Honolulu, Hawaii. The purpose of the study was to assess the wind environment around the development in terms of pedestrian wind comfort and safety. The achievement of this objective included wind tunnel testing of a 1:400 scale model of the proposed development for the following configurations:

A - Existing: existing and approved/in-construction surroundings with the existing site building; and,

B - Proposed: existing and approved/in-construction surroundings with the proposed development.

The photographs in Figures 1a and 1b show the test models in RWDI's boundary-layer wind tunnel. The proposed building is 376 ft – 6 in high, consisting of a 33-storey tower and an eight-story podium. The test model was constructed using the design information and drawings listed in Appendix A. This report summarizes the methodology of wind tunnel studies for pedestrian wind conditions, describes the RWDI pedestrian wind comfort and safety criteria, presents the local wind conditions and their effects on pedestrians and provides conceptual wind control measures, where necessary.

The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site, and reviewed by Kobayashi Group.

2. SUMMARY OF WIND CONDITIONS

The wind conditions around the proposed Kings Village development are discussed in detail in Section 5 of this report and may be summarized as follows:

- All locations are predicted to pass the wind criterion used to assess pedestrian wind safety.
- In general, the addition of the proposed development is not expected to change the local wind climate significantly at grade level, with the exception of two locations. Accelerated wind speeds between the proposed development and the existing building immediately to the east are expected to result in uncomfortable conditions. Additionally, wind speeds which are higher than typically desired at an entrance are expected at the entrance on the north side of the proposed development.
- Wind speeds on the Levels 7 and 8 outdoor areas are higher than typically desired in an amenity space.
- Local wind comfort conditions can be improved at grade level and the Levels 7 or 8 outdoor areas with the addition of wind control measures as presented in Section 5.

3. METHODOLOGY

As shown in Figures 1a and 1b, the wind tunnel model included the proposed development and all relevant surrounding buildings and topography within a 1600 ft radius of the study site. The boundary-layer wind conditions beyond the modeled area were also simulated in RWDI's wind tunnel. The model was instrumented with 49 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 5 ft. These measurements were recorded for 36 equally incremented wind directions.

Wind statistics recorded at the Honolulu International Airport between 1979 and 2009 were analyzed for the Summer (May through October) and Winter (November through April) seasons. Figure 2a graphically depicts the directional distributions of wind frequencies and speeds for the two seasons. Winds from the northeast and east-northeast directions are predominant in both the summer and winter as indicated by the wind roses. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 33 ft) occur slightly more often in the winter (4.0%) than in the summer (3.3%).

Wind statistics from the Honolulu International Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the RWDI criteria for pedestrian comfort and safety.

4. EXPLANATION OF CRITERIA

The RWDI pedestrian wind criteria are used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974 (References 1 through 6). They have also been widely accepted by municipal authorities as well as by the building design and city planning community.

RWDI Pedestrian Wind Criteria

Comfort Category	GEM Speed (mph)	Description
Sitting	≤ 6	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 8	Gentle breezes suitable for main building entrances and bus stops
Strolling	≤ 10	Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park
Walking	≤ 12	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
Uncomfortable	> 12	Strong winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended
Notes: (1) Gust Equivalent Mean (GEM) speed = *max*(mean speed, gust speed/1.85); and (2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 6:00 and 23:00.		

Safety Criterion	Gust Speed (mph)	Description
Exceeded	> 56	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.
Note: Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.		

A few additional comments are provided below to further explain the wind criteria and their applications.

- Both mean and gust speeds can affect pedestrian comfort and their combined effect is typically quantified by a Gust Equivalent Mean (GEM) speed, with a gust factor of 1.85 (References 1, 5, 7 and 8).

- Nightly hours between midnight and 5 o'clock in the morning are excluded from the wind analysis for wind comfort since limited usage of outdoor spaces is anticipated.

- A 20% exceedance is used in these criteria to determine the comfort category, which suggests that wind speeds would be comfortable for the corresponding activity at least 80% of the time or four out of five days.

- Only gust winds need to be considered in the wind safety criterion. These are usually rare events, but deserve special attention in city planning and building design due to their potential safety impact on pedestrians.

- These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age, health, clothing, etc. can also affect people's perception of the wind climate. Comparisons of wind speeds for different building configurations are the most objective way in assessing local pedestrian wind conditions.

5. PREDICTED WIND CONDITIONS

Table 1, located in the Tables section of this report, presents the predicted wind comfort and safety conditions pertaining to the two tested configurations. These conditions are graphically depicted on a site plan in Figures 3a through 4b.

In our discussion of anticipated wind conditions, reference is made to the following generalized wind flows. Tall buildings tend to intercept the stronger winds at higher elevations and redirect them to the ground level (see Image 1). Such a *Downwashing Flow* is often the main cause for wind accelerations around large buildings at the pedestrian level. Also, when two buildings are situated side by side, wind flow tends to accelerate through the space between the buildings due to the *Channeling Effect* (see Image 2). In addition, it is often to have wind accelerations through passages underneath buildings (see *Passage Acceleration* in Image 3). When winds accelerate around building corners at pedestrian level, a

localized increase in the wind activity can be expected in that area (see Image 4). If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity.

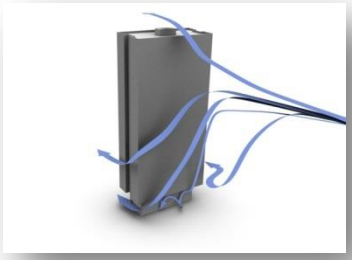


Image 1 – Downwashing Flow

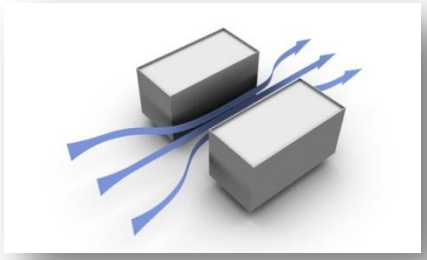


Image 2 – Channeling Effect

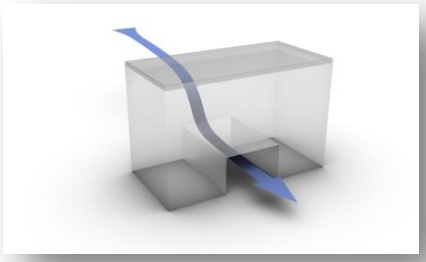


Image 3 – Passage Acceleration

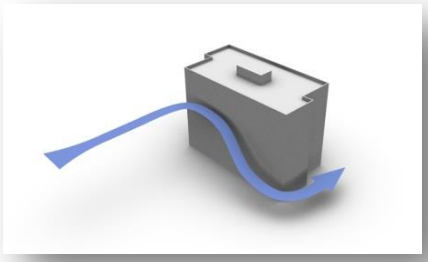


Image 4 – Corner Acceleration

Wind conditions which pass the wind safety criterion are predicted for both tested configurations. The following is a detailed discussion of the suitability of the predicted wind comfort conditions for the anticipated pedestrian use of each area.

5.1 Grade Level (Locations 1 through 34)

Wind conditions comfortable for walking or strolling are appropriate for sidewalks. Lower wind speeds conducive to standing are preferred at main entrances where pedestrians are apt to linger.

Wind conditions comfortable for walking or better are expected at most locations surrounding the proposed development for both tested configurations in both the summer and winter (Locations 1 through 34 in Figures 3a through 4b). Wind conditions at the main entrance lobby (Locations 13 through 15) are predicted to be comfortable for sitting throughout the year. There are only two exceptions to this appropriate wind microclimate. Uncomfortable wind conditions are expected in the area between the proposed development and the adjacent building to the east during both seasons (Locations 9, 10 in Figures 3b and 4b) and south of the proposed development during the summer (Location 12 in Figure 3b). These uncomfortable wind conditions are caused by channeling of strong northeasterly winds between the proposed development and the building to the east (See Image 5). Additionally, wind

conditions appropriate for walking and strolling are expected at the entrance on the north side of the building in the summer and winter, respectively (Location 3 in Figures 3b and 4b). These wind conditions are higher than typically desired near an entrance.

Wind conditions can be improved in these locations by including dense vegetation placed as shown schematically in Image 6. Samples of such vegetation are provided in Image 7.

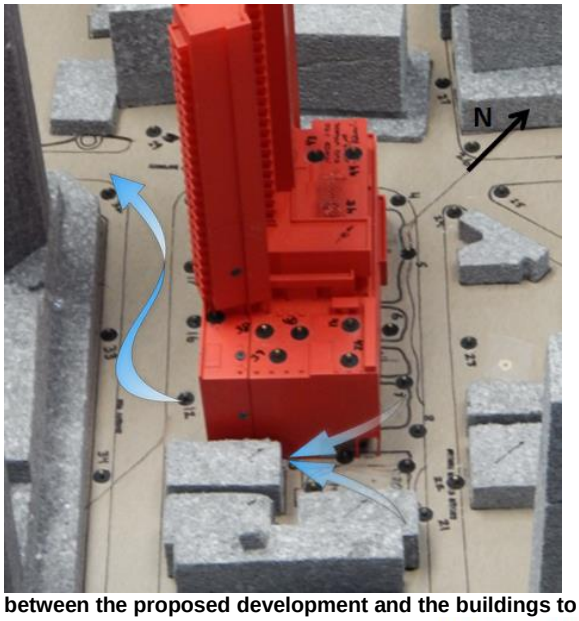


Image 5 – Wind flow between the proposed development and the buildings to the east and south

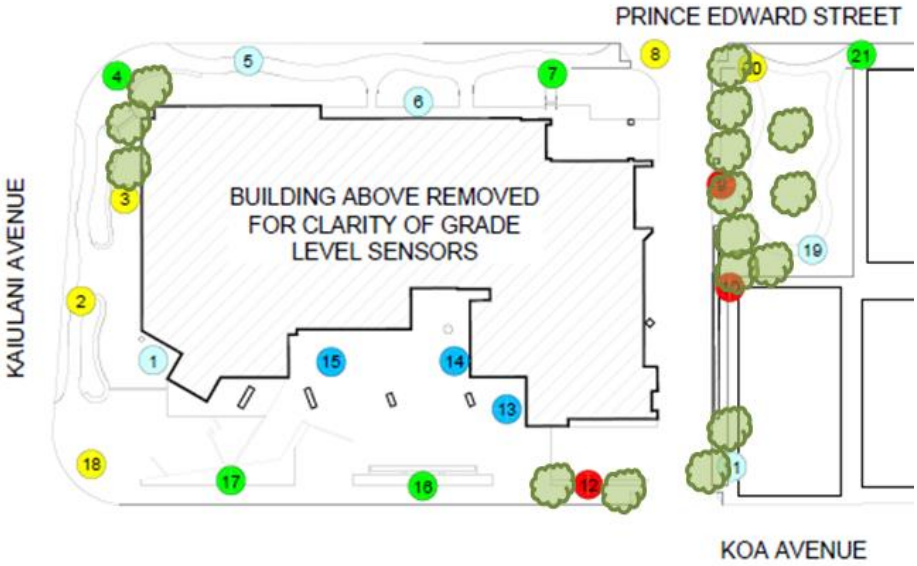


Image 6 – Dense vegetation placed in the path of channeling winds in order to provide improved wind comfort conditions

Image 7 – Sample dense vegetation (images courtesy of Google Earth)

5.2 Levels 7 and 8 Outdoor Areas (Locations 35 through 49)

Ideally, sitting conditions would be desired on a terrace and pool deck. However, standing conditions are generally accepted by users around a pool, as a breeze is often considered pleasant in a warmer climate, such as that found in Hawaii.

Adequate wind comfort conditions are expected on Level 7 in the Lobby area throughout the year (Locations 48 and 49 in Figures 3b and 4b). Wind conditions comfortable for standing are expected on the west portion of the Adult Pool Deck area (Location 41 in Figures 3b and 4b) and for sitting along the northwest edge of the Level 7 amenity area (Location 36) throughout the year. Wind speeds which are higher than typically desired are expected on the other outdoor areas of Levels 7 and 8 (Locations 35, 37 through 40 and 42 through 47 in Figures 3b and 4b). In particular, wind speeds at Locations 37 and 38 are uncomfortable for both seasons and wind mitigation would be required in these areas if passive pedestrian activities are desired in this area. Improved wind conditions can be achieved in the outdoor areas of Levels 7 and 8 by including wind control measures oriented perpendicular to strong northeasterly winds (shown schematically in Image 8). Such wind control measures could be solid or porous vertical windscreens (See Image 9) or dense local vegetation or vegetated planters (See Image 10) and should be at least 8 ft in height. They can be placed along the perimeter of the terraces and on the north and east sides of seating areas. Additionally, overhead trellises or canopies could be placed over the pool deck (Locations 37 and 38). These features would serve to reduce the effects of northeasterly winds downwashing along the tower façade and causing increased wind activity around the pool deck (See Images 11 and 12).

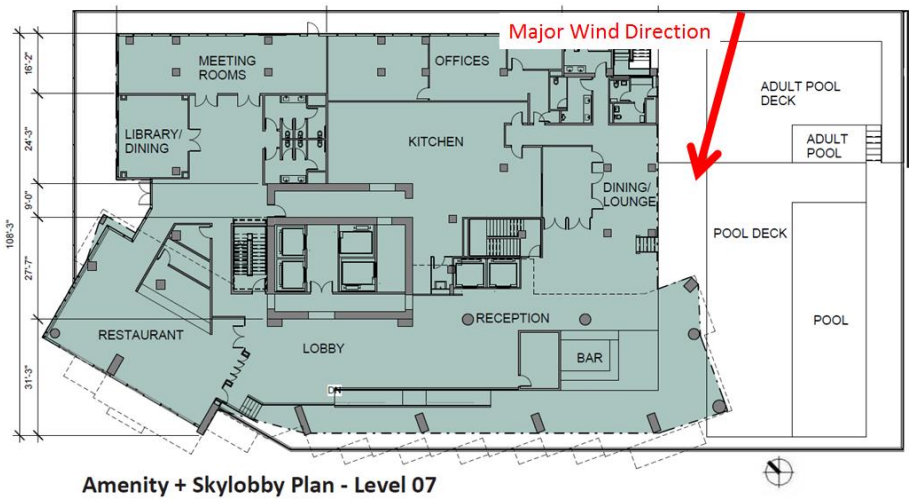


Image 8 – Direction of major winds

Image 9 – Sample wind screens: Solid (left) and porous (right)

Image 10 – Sample dense local vegetation (left) and vegetated planters (right)

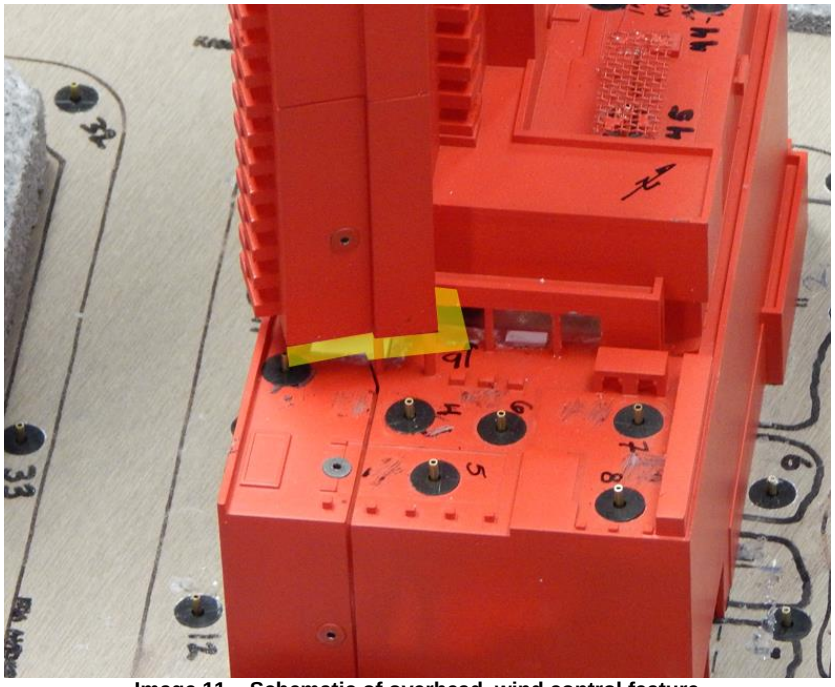


Image 11 – Schematic of overhead wind control feature

Image 12 – Sample overhead canopy (left) and overhead trellis (right)

6. APPLICABILITY

The wind conditions presented in this report pertain to the proposed Kings Village development as detailed in the architectural design drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind condition predictions presented may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

7. REFERENCES

1) ASCE Task Committee on Outdoor Human Comfort (2004). *Outdoor Human Comfort and Its Assessment*, 68 pages, American Society of Civil Engineers, Reston, Virginia, USA.

2) Williams, C.J., Hunter, M.A. and Waechter, W.F. (1990). "Criteria for Assessing the Pedestrian Wind Environment," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.36, pp.811-815.

3) Williams, C.J., Soligo M.J. and Cote, J. (1992). "A Discussion of the Components for a Comprehensive Pedestrian Level Comfort Criteria," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.41-44, pp.2389-2390.

4) Soligo, M.J., Irwin, P.A., and Williams, C.J. (1993). "Pedestrian Comfort Including Wind and Thermal Effects," *Third Asia-Pacific Symposium on Wind Engineering*, Hong Kong.

5) Soligo, M.J., Irwin, P.A., Williams, C.J. and Schuyler, G.D. (1998). "A Comprehensive Assessment of Pedestrian Comfort Including Thermal Effects," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.77&78, pp.753-766.

6) Williams, C.J., Wu, H., Waechter, W.F. and Baker, H.A. (1999). "Experiences with Remedial Solutions to Control Pedestrian Wind Problems," *Tenth International Conference on Wind Engineering*, Copenhagen, Denmark.

7) Lawson, T.V. (1973). "Wind Environment of Buildings: A Logical Approach to the Establishment of Criteria", *Report No. TVL 7321*, Department of Aeronautic Engineering, University of Bristol, Bristol, England.

8) Durgin, F. H. (1997). "Pedestrian Level Wind Criteria Using the Equivalent average", *Journal of Wind Engineering and Industrial Aerodynamics*, Vol. 66, pp. 215-226.

TABLES

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
1	Existing	DATA NOT AVAILABLE					
	Proposed	7	Standing	7	Standing	25	Pass
2	Existing	8	Standing	8	Standing	29	Pass
	Proposed	12	Walking	11	Walking	36	Pass
3	Existing	4	Sitting	4	Sitting	17	Pass
	Proposed	11	Walking	10	Strolling	36	Pass
4	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	31	Pass
5	Existing	8	Standing	8	Standing	27	Pass
	Proposed	7	Standing	6	Sitting	22	Pass
6	Existing	DATA NOT AVAILABLE					
	Proposed	7	Standing	6	Sitting	21	Pass
7	Existing	7	Standing	7	Standing	21	Pass
	Proposed	9	Strolling	8	Standing	30	Pass
8	Existing	8	Standing	8	Standing	26	Pass
	Proposed	11	Walking	10	Strolling	34	Pass
9	Existing	DATA NOT AVAILABLE					
	Proposed	16	Uncomfortable	14	Uncomfortable	45	Pass
10	Existing	5	Sitting	5	Sitting	21	Pass
	Proposed	14	Uncomfortable	13	Uncomfortable	41	Pass
11	Existing	7	Standing	7	Standing	27	Pass
	Proposed	8	Standing	8	Standing	27	Pass
12	Existing	7	Standing	7	Standing	22	Pass
	Proposed	13	Uncomfortable	12	Walking	39	Pass
13	Existing	DATA NOT AVAILABLE					
	Proposed	6	Sitting	6	Sitting	17	Pass
14	Existing	DATA NOT AVAILABLE					
	Proposed	4	Sitting	4	Sitting	14	Pass
15	Existing	4	Sitting	4	Sitting	20	Pass
	Proposed	6	Sitting	5	Sitting	19	Pass
16	Existing	DATA NOT AVAILABLE					
	Proposed	10	Strolling	9	Strolling	30	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
Proposed = with the proposed development

Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
17	Existing	7	Standing	6	Sitting	24	Pass
	Proposed	10	Strolling	9	Strolling	32	Pass
18	Existing	8	Standing	8	Standing	28	Pass
	Proposed	12	Walking	12	Walking	37	Pass
19	Existing	5	Sitting	5	Sitting	20	Pass
	Proposed	8	Standing	8	Standing	27	Pass
20	Existing	8	Standing	7	Standing	25	Pass
	Proposed	11	Walking	10	Strolling	35	Pass
21	Existing	7	Standing	7	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	32	Pass
22	Existing	6	Sitting	6	Sitting	24	Pass
	Proposed	9	Strolling	9	Strolling	30	Pass
23	Existing	7	Standing	6	Sitting	22	Pass
	Proposed	11	Walking	10	Strolling	33	Pass
24	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	9	Strolling	32	Pass
25	Existing	10	Strolling	9	Strolling	30	Pass
	Proposed	8	Standing	8	Standing	28	Pass
26	Existing	11	Walking	10	Strolling	32	Pass
	Proposed	10	Strolling	9	Strolling	30	Pass
27	Existing	6	Sitting	6	Sitting	22	Pass
	Proposed	7	Standing	7	Standing	24	Pass
28	Existing	10	Strolling	9	Strolling	29	Pass
	Proposed	12	Walking	11	Walking	32	Pass
29	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	29	Pass
30	Existing	12	Walking	12	Walking	33	Pass
	Proposed	12	Walking	11	Walking	33	Pass
31	Existing	12	Walking	12	Walking	35	Pass
	Proposed	11	Walking	10	Strolling	32	Pass
32	Existing	10	Strolling	10	Strolling	32	Pass
	Proposed	10	Strolling	9	Strolling	30	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
Proposed = with the proposed development

Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
33	Existing	8	Standing	8	Standing	28	Pass
	Proposed	12	Walking	11	Walking	37	Pass
34	Existing	10	Strolling	9	Strolling	31	Pass
	Proposed	10	Strolling	10	Strolling	34	Pass
35	Existing	DATA NOT AVAILABLE					
	Proposed	12	Walking	12	Walking	38	Pass
36	Existing	DATA NOT AVAILABLE					
	Proposed	5	Sitting	5	Sitting	27	Pass
37	Existing	DATA NOT AVAILABLE					
	Proposed	14	Uncomfortable	13	Uncomfortable	40	Pass
38	Existing	DATA NOT AVAILABLE					
	Proposed	16	Uncomfortable	15	Uncomfortable	48	Pass
39	Existing	DATA NOT AVAILABLE					
	Proposed	12	Walking	12	Walking	37	Pass
40	Existing	DATA NOT AVAILABLE					
	Proposed	12	Walking	11	Walking	36	Pass
41	Existing	DATA NOT AVAILABLE					
	Proposed	8	Standing	8	Standing	26	Pass
42	Existing	DATA NOT AVAILABLE					
	Proposed	10	Strolling	10	Strolling	32	Pass
43	Existing	DATA NOT AVAILABLE					
	Proposed	10	Strolling	9	Strolling	30	Pass
44	Existing	DATA NOT AVAILABLE					
	Proposed	12	Walking	12	Walking	37	Pass
45	Existing	DATA NOT AVAILABLE					
	Proposed	11	Walking	10	Strolling	32	Pass
46	Existing	DATA NOT AVAILABLE					
	Proposed	12	Walking	10	Strolling	35	Pass
47	Existing	DATA NOT AVAILABLE					
	Proposed	8	Standing	9	Strolling	38	Pass
48	Existing	DATA NOT AVAILABLE					
	Proposed	7	Standing	7	Standing	24	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
Proposed = with the proposed development

Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
49	Existing	DATA NOT AVAILABLE					
	Proposed	4	Sitting	4	Sitting	22	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
Proposed = with the proposed development

Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

FIGURES

Wind Tunnel Study Model
Existing

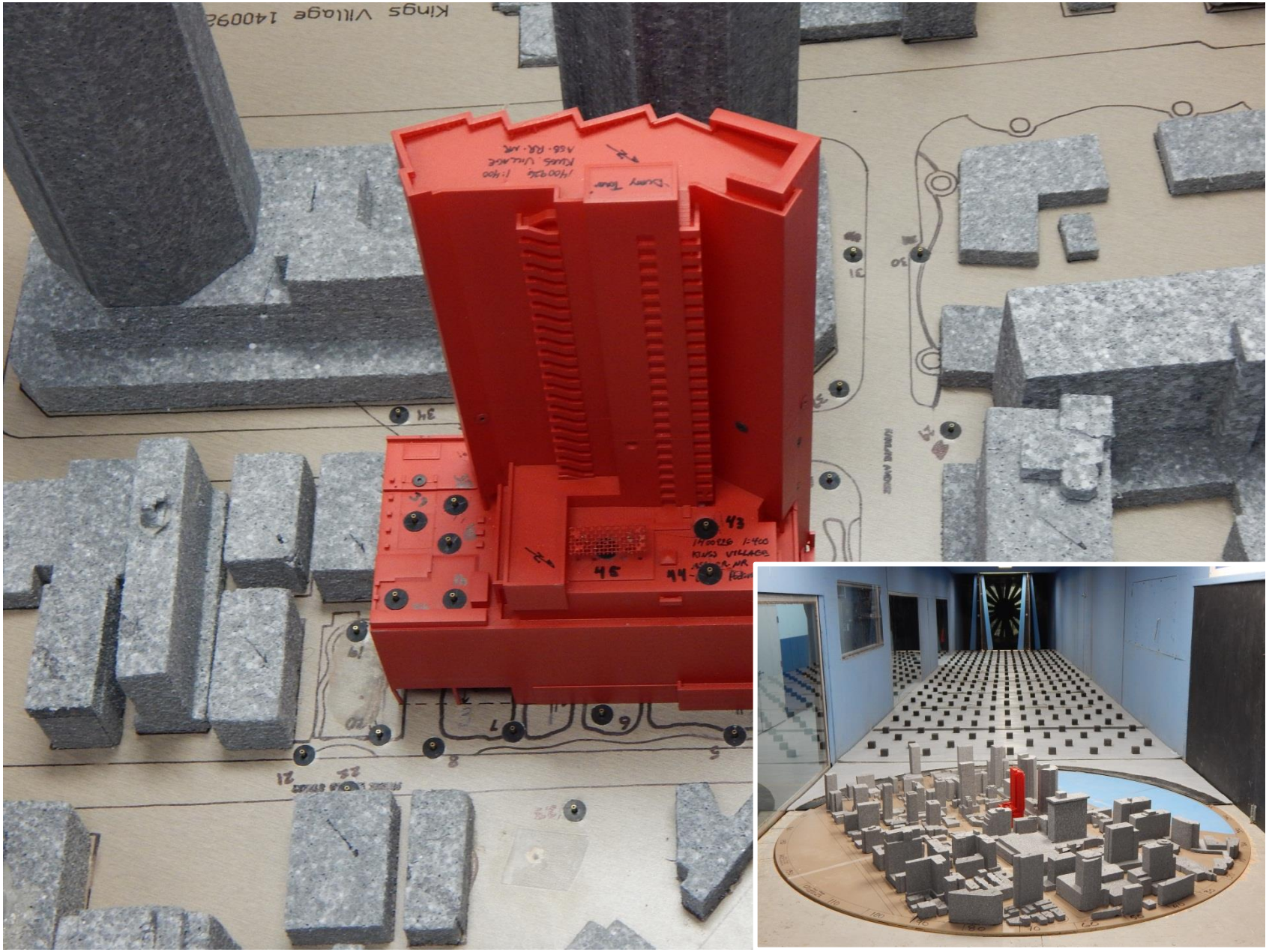
Figure No. 1a

Kings Village – Honolulu, HI

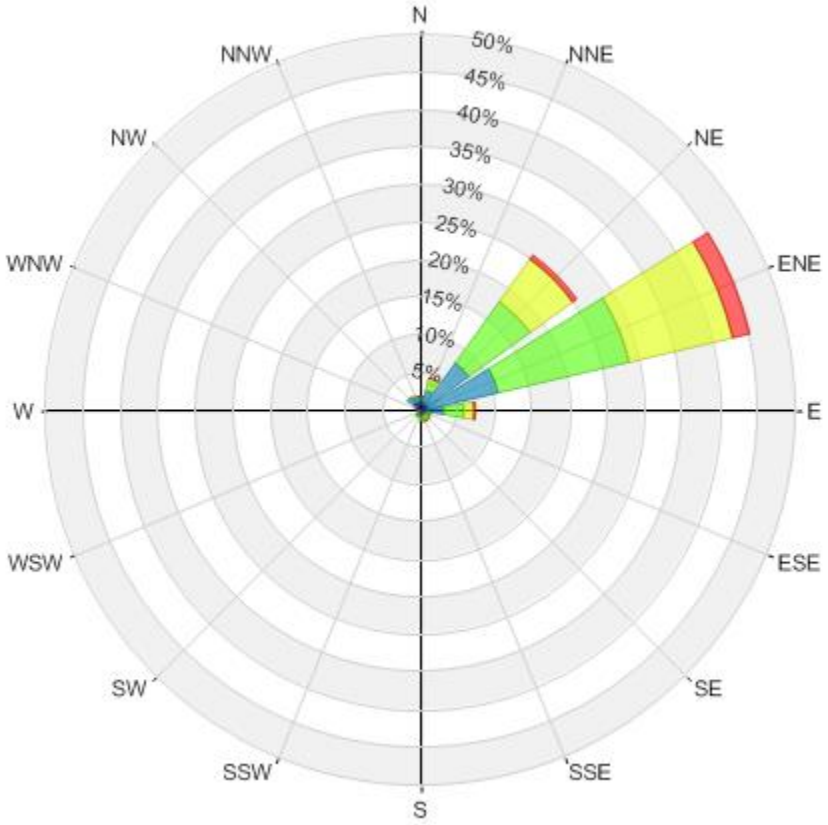
Project #1400926

Date: January 28, 2015

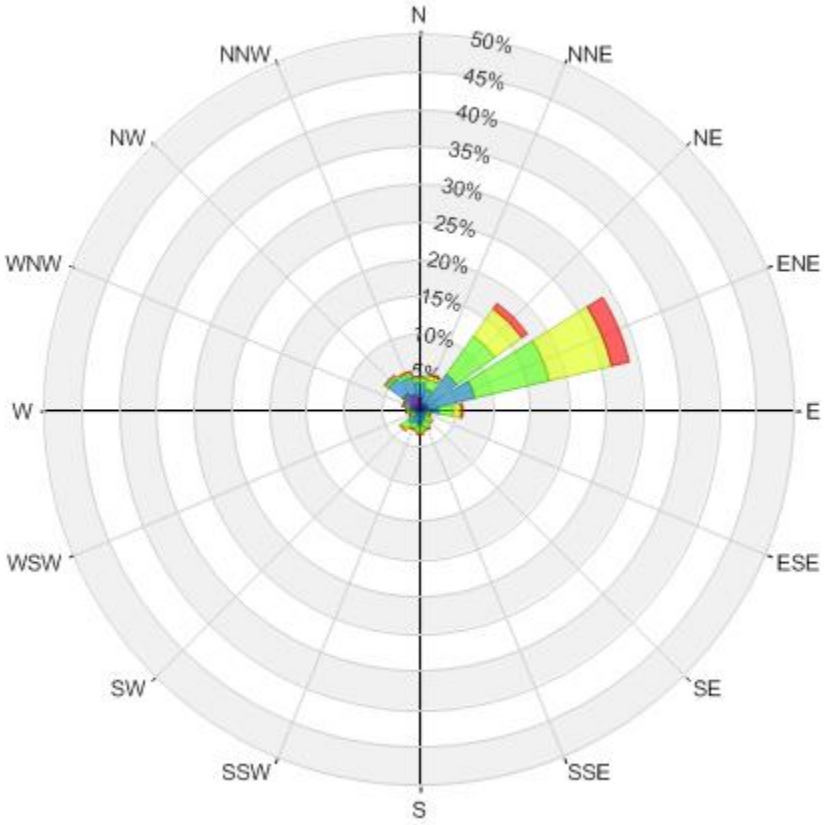
RWDI



Wind Tunnel Study Model **Proposed**		Figure No. 1b	RWDI
Kings Village – Honolulu, HI	Project #1400926	Date: January 28, 2015	



Summer
(May - October)



Winter
(November - April)

Wind Speed (mph)	Probability (%) Summer	Winter
Calm	2.9	6.0
1-5	8.2	14.4
6-10	27.4	31.8
11-15	34.7	26.9
16-20	23.6	16.9
>20	3.3	4.0

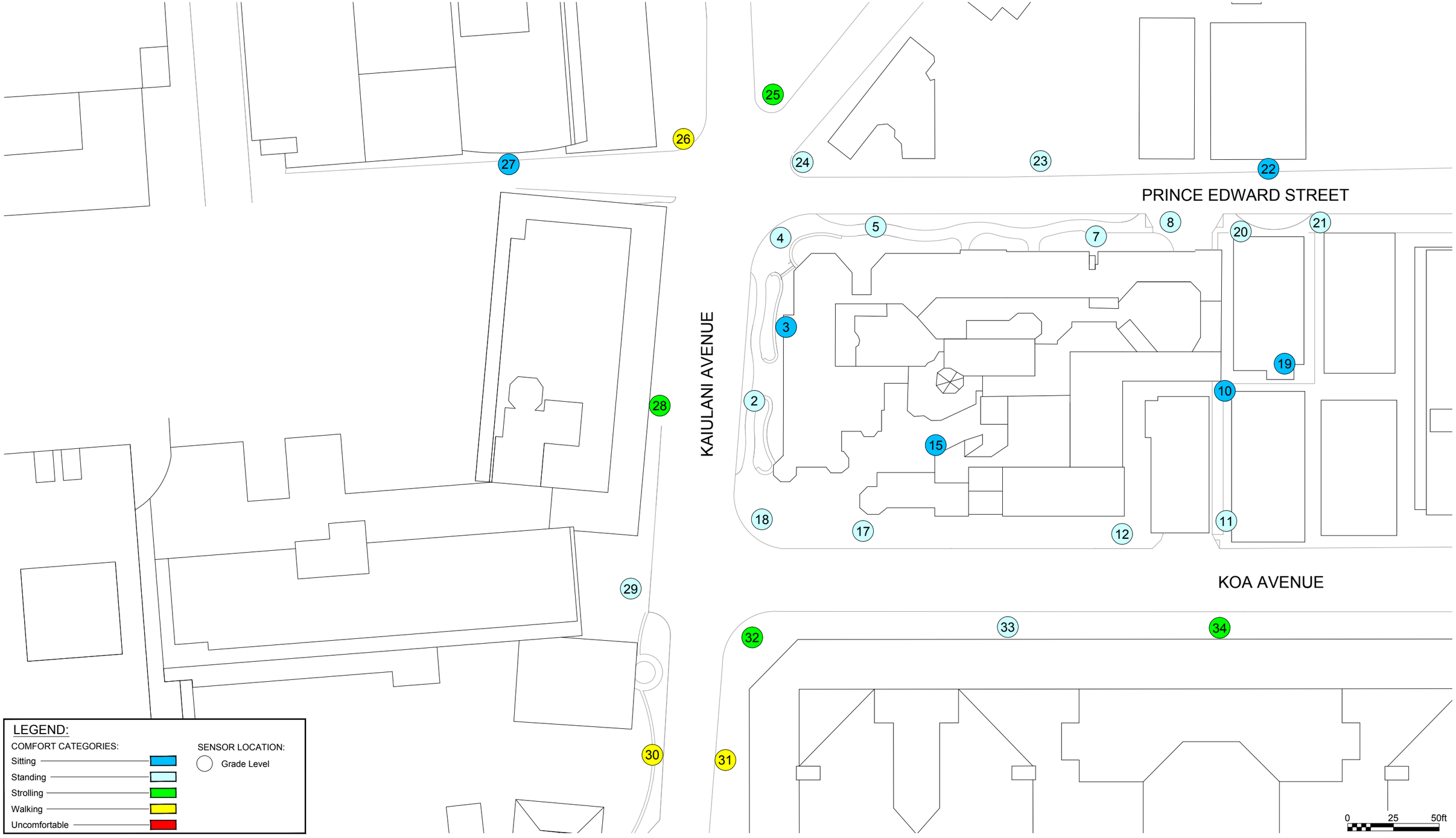
Directional Distribution (%) of Winds (Blowing From)
Honolulu International Airport (1979 - 2009)

Figure No. 2

Kings Village – Honolulu, HI

Project #1400926

Date: January 28, 2015



LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level

Pedestrian Wind Comfort Conditions - Existing
Summer (May to October, 6:00 to 23:00)

Kings Village - Honolulu, Hawaii

True North

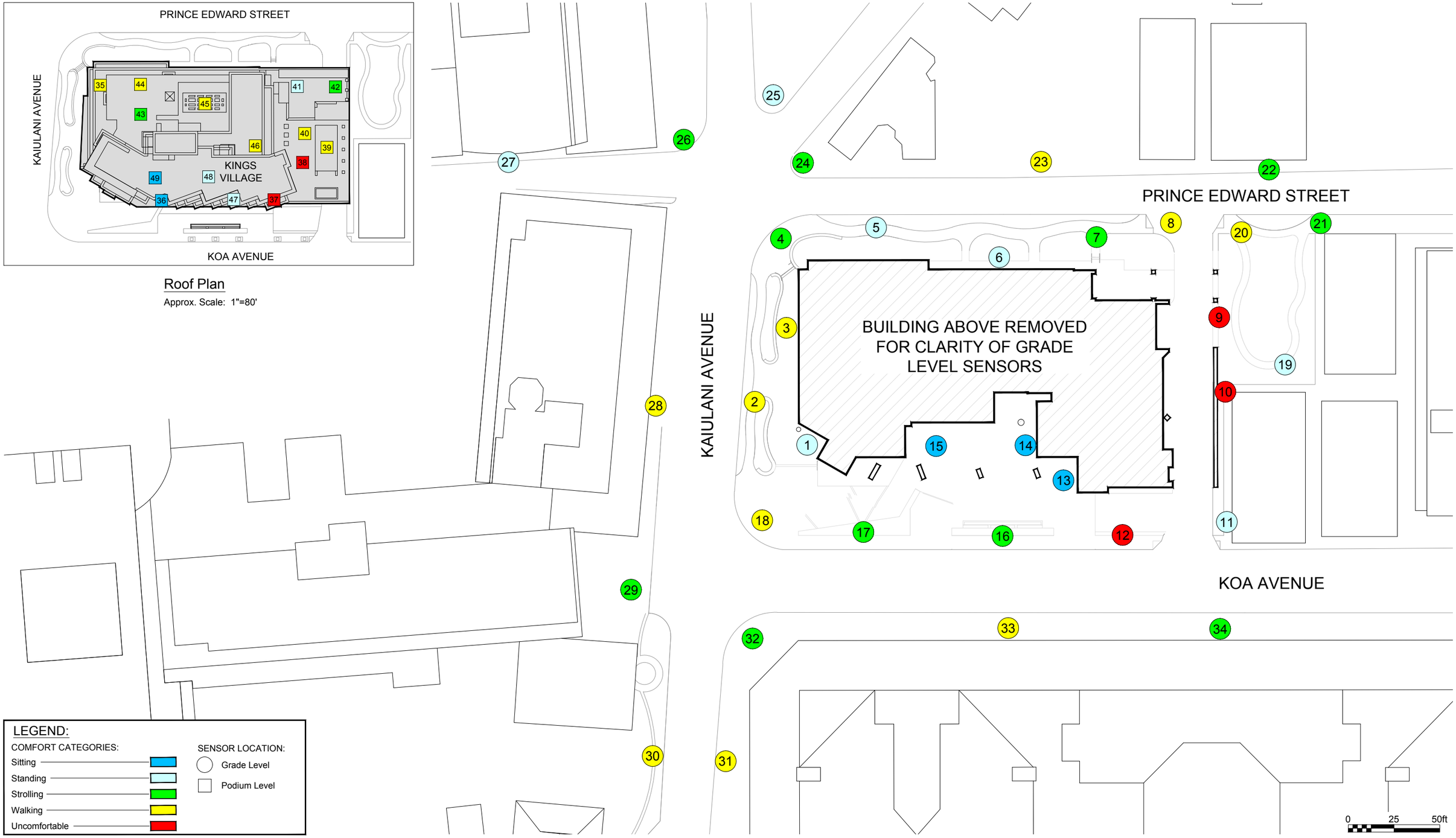
Project #1400926

Drawn by:	ARM	Figure:	3a
Approx. Scale:			1"=50'
Date Revised:			Jan 21, 2015

RWDI

Roof Plan

Approx. Scale: 1"=80'



LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

Pedestrian Wind Comfort Conditions - Proposed
Summer (May to October, 6:00 to 23:00)

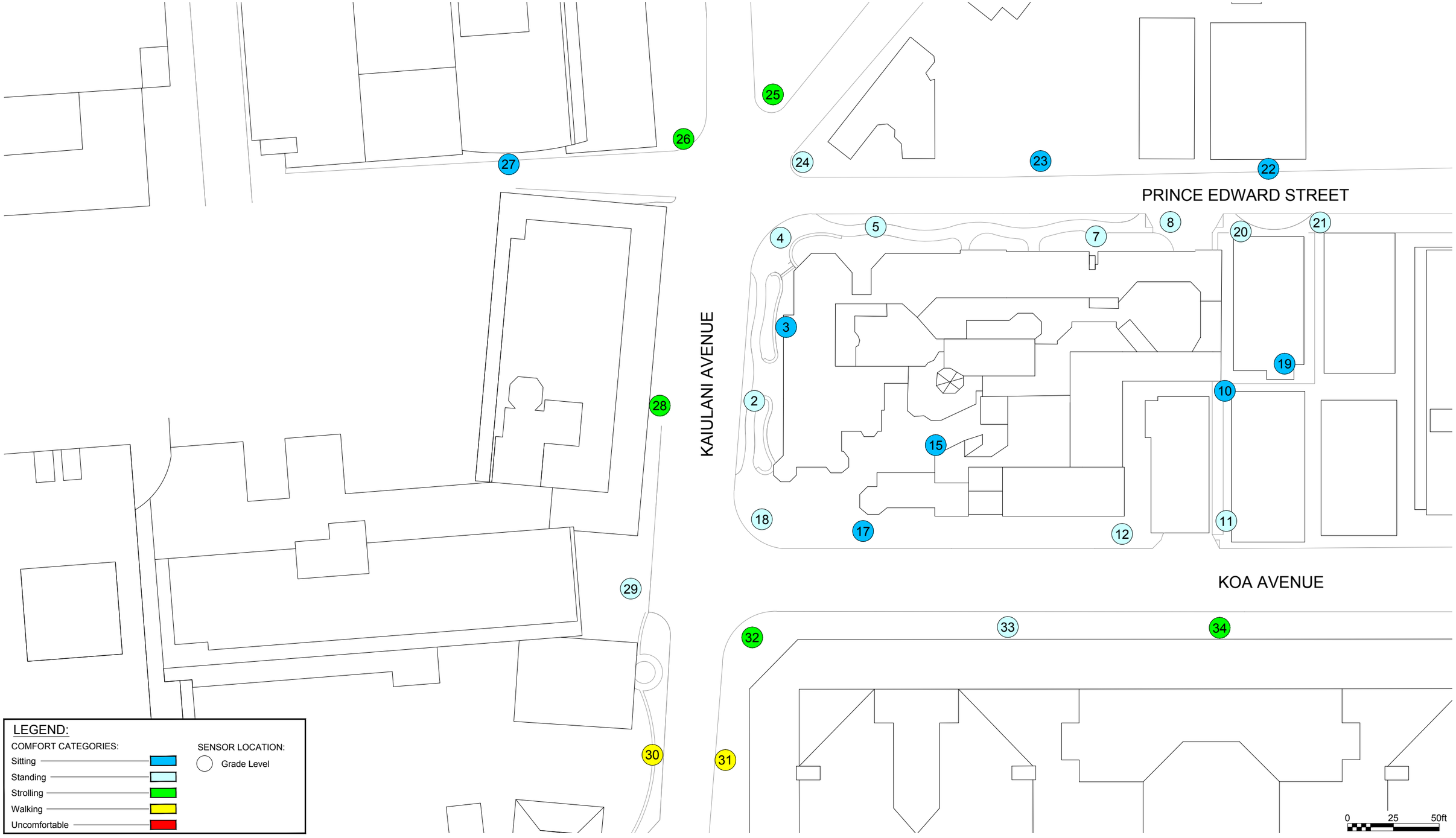
Kings Village - Honolulu, Hawaii

True North

Project #1400926

Drawn by:	ARM	Figure:	3b
Approx. Scale:			1"=50'
Date Revised:			Jan 21, 2015

RWDI



LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level

Pedestrian Wind Comfort Conditions - Existing
Winter (November to April, 6:00 to 23:00)

Kings Village - Honolulu, Hawaii

True North

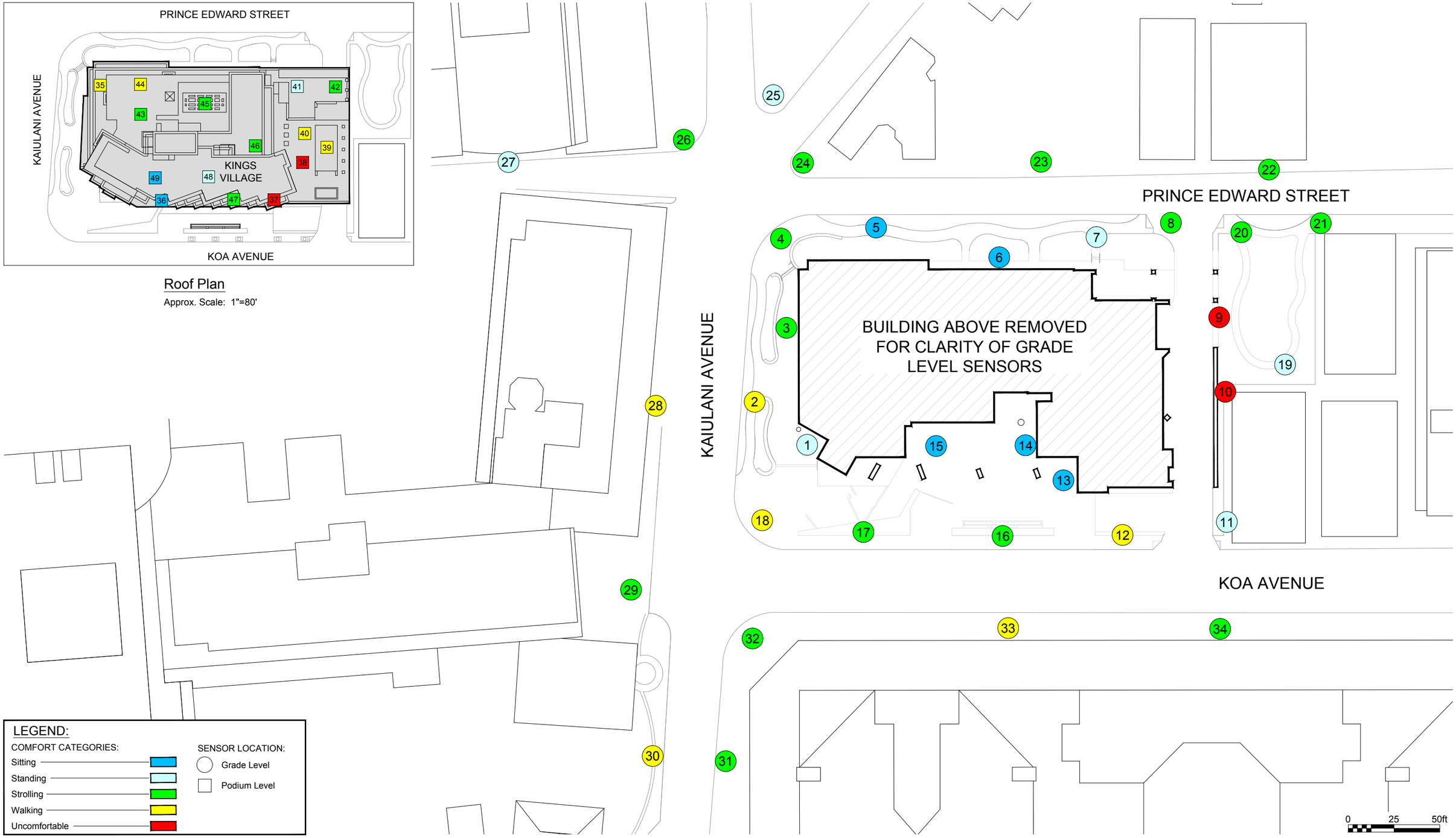
Project #1400926

Drawn by:	ARM	Figure:	4a
Approx. Scale:			1"=50'
Date Revised:			Jan 21, 2015

RWDI

Roof Plan

Approx. Scale: 1"=80'



LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

Pedestrian Wind Comfort Conditions - Proposed
Winter (November to April, 6:00 to 23:00)

Kings Village - Honolulu, Hawaii

True North

Project #1400926

Drawn by:	ARM	Figure:	4b
Approx. Scale:			1"=50'
Date Revised:			Jan 21, 2015

RWDI

APPENDIX A

APPENDIX A: DRAWING LIST FOR MODEL CONSTRUCTION

The drawings and information listed below were received from the Kobayashi Group and were used to construct the scale model of the proposed Kings Village project. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design area made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

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A2-07.dwg	AutoCAD	05/08/2014
A2-08.dwg	AutoCAD	05/08/2014
A2-09.dwg	AutoCAD	05/08/2014
A2-10.dwg	AutoCAD	05/08/2014
A2-11.dwg	AutoCAD	05/08/2014
A2-22.dwg	AutoCAD	05/08/2014
A2-24.dwg	AutoCAD	05/08/2014
A2-32.dwg	AutoCAD	05/08/2014
A2-33.dwg	AutoCAD	05/08/2014
A3-01.dwg	AutoCAD	05/08/2014
A3-02.dwg	AutoCAD	05/08/2014
A3-05.dwg	AutoCAD	05/08/2014
A3-06.dwg	AutoCAD	05/08/2014
1302374_PRINCESS KA'IULANI.dwg	AutoCAD	16/09/2013

Memorandum

Tel: 519.823.1311
Fax: 519.823.1316
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8

Date: January 22, 2015 RWDI Reference #: 1400926

To: Elton Wong, Kobayashi Group E-Mail: ewong@kobayashi-group.com

From: Analene Belanger, RWDI E-Mail: analene.belanger@rwdi.com
Hanqing Wu, RWDI hanqing.wu@rwdi.com
Will Schinkel, RWDI william.schinkel@rwdi.com

RE: Kings Village Waikiki
Pedestrian Wind Study – Preliminary Results

Attached are the results for the Pedestrian Wind Study conducted for the proposed Kings Village Waikiki project. The results at each wind measurement location are outlined in the attached tables and figures for your review. This memorandum is an update to the previous pedestrian level wind desktop assessment report entitled *133 Kaiulani Pedestrian Wind Assessment* (submitted April 10, 2014). This document reflects the current design, and is based on wind tunnel testing data.

- Photographs of the test model in the wind tunnel for the two tested configurations (Figure 1a and 1b);
- Graphical depiction of the results at each measurement location for the summer and winter seasons (Figure 3a, 3b, 4a and 4b);
- Wind comfort and safety results (Table 1); and,
- Pedestrian Wind Criteria. The RWDI criteria deal with both pedestrian safety and comfort as it relates to wind force. Thermal effects (e.g., temperature, humidity, sun/shades, etc.) are not considered in these comfort criteria.

All locations have passed the wind safety criteria.

Grade level wind conditions are similar to those predicted in the report entitled 133 Kaiulani Pedestrian Wind Assessment, due to the similarity in building location, orientation and general massing, especially the large podium structure.

For the existing configuration, wind conditions at grade level are expected to be comfortable for walking or better throughout the year. With the addition of the proposed development, wind conditions are expected to remain comfortable for walking or better in general. One exception to these appropriate wind conditions is expected in a localised area along the east side of the building (Locations 9, 10 and 12). Uncomfortable wind conditions are expected in this area as a result of winds accelerating between the proposed development and the existing building to the east (see Image 1).

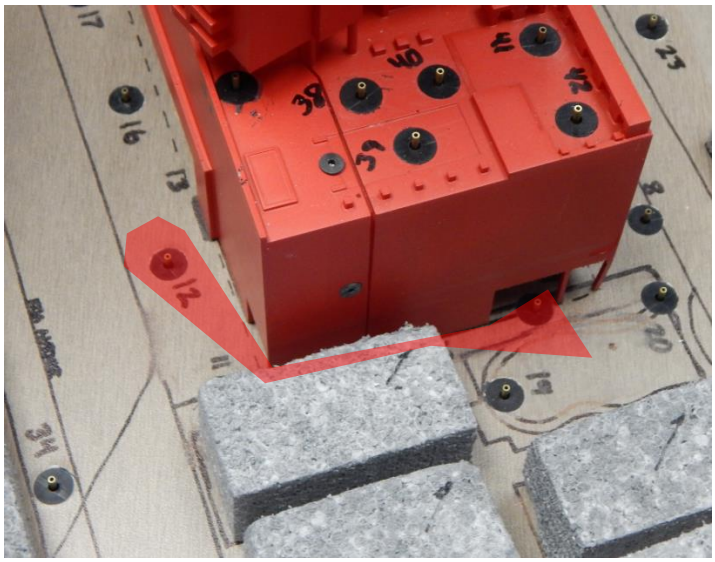

Image 1 – Local wind acceleration between the proposed development and the existing building to the east

Wind speeds which are higher than typically desired in an amenity space are expected on the terrace areas which are exposed to northeasterly winds (Locations 35 and 37 through 45). This is largely due to downwashing along the east facing tower façade. Acceleration of winds around the tower corner is also expected. The addition of wind control elements, such as local dense landscaping, porous wind screens, overhead canopies and overhead trellises is expected to result in appropriate wind conditions for the space.

The lobby area at the 7th and 8th floors has changed significantly from the original design. The open area below the tower structure is expected to be subjected to northeasterly winds, similar to the terrace areas.

TABLES

RWDI WIND COMFORT CRITERIA

Comfort Category	GEM Speed (mph)	Description
Sitting	≤ 6	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 8	Gentle breezes suitable for main building entrances and bus stops
Strolling	≤ 10	Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park
Walking	≤ 12	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
Uncomfortable	> 12	Strong winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended
Notes: (1) Gust Equivalent Mean (GEM) speed = *max*(mean speed, gust speed/1.85); and (2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 6:00 and 23:00.		

Safety Criterion	Gust Speed (mph)	Description
Exceeded	> 56	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.
Note: Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.		

A few additional comments are provided below to further explain the wind criteria and their applications.

- Both mean and gust speeds can affect pedestrian's comfort and their combined effect is typically quantified by a Gust Equivalent Mean (GEM) speed, with a gust factor of 1.85.
- Nightly hours between midnight and 5 o'clock in the morning are excluded from the wind analysis for wind comfort since limited usage of outdoor spaces is anticipated.
- A 20% exceedance is used in these criteria to determine the comfort category, which suggests that wind speeds would be comfortable for the corresponding activity at least 80% of the time or four out of five days.
- Only gust winds need to be considered in the wind safety criterion. These are usually rare events, but deserve special attention in city planning and building design due to their potential safety impact on pedestrians.
- These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age,

health, clothing, etc. can also affect people's perception of the wind climate. Comparisons of wind speeds for different building configurations are the most objective way in assessing local pedestrian wind conditions.

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
1	Existing	DATA NOT AVAILABLE					
	Proposed	7	Standing	7	Standing	25	Pass
2	Existing	8	Standing	8	Standing	29	Pass
	Proposed	12	Walking	11	Walking	36	Pass
3	Existing	4	Sitting	4	Sitting	17	Pass
	Proposed	11	Walking	10	Strolling	36	Pass
4	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	31	Pass
5	Existing	8	Standing	8	Standing	27	Pass
	Proposed	7	Standing	6	Sitting	22	Pass
6	Existing	DATA NOT AVAILABLE					
	Proposed	7	Standing	6	Sitting	21	Pass
7	Existing	7	Standing	7	Standing	21	Pass
	Proposed	9	Strolling	8	Standing	30	Pass
8	Existing	8	Standing	8	Standing	26	Pass
	Proposed	11	Walking	10	Strolling	34	Pass
9	Existing	DATA NOT AVAILABLE					
	Proposed	16	Uncomfortable	14	Uncomfortable	45	Pass
10	Existing	5	Sitting	5	Sitting	21	Pass
	Proposed	14	Uncomfortable	13	Uncomfortable	41	Pass
11	Existing	7	Standing	7	Standing	27	Pass
	Proposed	8	Standing	8	Standing	27	Pass
12	Existing	7	Standing	7	Standing	22	Pass
	Proposed	13	Uncomfortable	12	Walking	39	Pass
13	Existing	DATA NOT AVAILABLE					
	Proposed	6	Sitting	6	Sitting	17	Pass
14	Existing	DATA NOT AVAILABLE					
	Proposed	4	Sitting	4	Sitting	14	Pass
15	Existing	4	Sitting	4	Sitting	20	Pass
	Proposed	6	Sitting	5	Sitting	19	Pass
16	Existing	DATA NOT AVAILABLE					
	Proposed	10	Strolling	9	Strolling	30	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
Proposed = with the proposed development

Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
17	Existing	7	Standing	6	Sitting	24	Pass
	Proposed	10	Strolling	9	Strolling	32	Pass
18	Existing	8	Standing	8	Standing	28	Pass
	Proposed	12	Walking	12	Walking	37	Pass
19	Existing	5	Sitting	5	Sitting	20	Pass
	Proposed	8	Standing	8	Standing	27	Pass
20	Existing	8	Standing	7	Standing	25	Pass
	Proposed	11	Walking	10	Strolling	35	Pass
21	Existing	7	Standing	7	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	32	Pass
22	Existing	6	Sitting	6	Sitting	24	Pass
	Proposed	9	Strolling	9	Strolling	30	Pass
23	Existing	7	Standing	6	Sitting	22	Pass
	Proposed	11	Walking	10	Strolling	33	Pass
24	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	9	Strolling	32	Pass
25	Existing	10	Strolling	9	Strolling	30	Pass
	Proposed	8	Standing	8	Standing	28	Pass
26	Existing	11	Walking	10	Strolling	32	Pass
	Proposed	10	Strolling	9	Strolling	30	Pass
27	Existing	6	Sitting	6	Sitting	22	Pass
	Proposed	7	Standing	7	Standing	24	Pass
28	Existing	10	Strolling	9	Strolling	29	Pass
	Proposed	12	Walking	11	Walking	32	Pass
29	Existing	8	Standing	8	Standing	27	Pass
	Proposed	10	Strolling	10	Strolling	29	Pass
30	Existing	12	Walking	12	Walking	33	Pass
	Proposed	12	Walking	11	Walking	33	Pass
31	Existing	12	Walking	12	Walking	35	Pass
	Proposed	11	Walking	10	Strolling	32	Pass
32	Existing	10	Strolling	10	Strolling	32	Pass
	Proposed	10	Strolling	9	Strolling	30	Pass

Seasons
Summer = May to October
Winter = November to April

Hours
6:00 to 23:00 for Comfort
0:00 to 23:00 for Safety

Configuration
Existing = without the proposed development
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Wind Comfort Category
(20% Seasonal Exceedance)

≤ 6 mph	Sitting
7 to 8	Standing
9 to 10	Strolling
11 to 12	Walking
> 12 mph	Uncomfortable

Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

		Wind Comfort (20% Seasonal Exceedance)				Wind Safety (0.1% Exceedance)	
		Summer		Winter		Annual	
Location	Configuration	Speed (mph)	Rating	Speed (mph)	Rating	Speed (mph)	Rating
33	Existing	8	Standing	8	Standing	28	Pass
	Proposed	12	Walking	11	Walking	37	Pass
34	Existing	10	Strolling	9	Strolling	31	Pass
	Proposed	10	Strolling	10	Strolling	34	Pass
35	DATA NOT AVAILABLE						
	Proposed	12	Walking	12	Walking	38	Pass
36	DATA NOT AVAILABLE						
	Proposed	6	Sitting	6	Sitting	24	Pass
37	DATA NOT AVAILABLE						
	Proposed	13	Uncomfortable	12	Walking	40	Pass
38	DATA NOT AVAILABLE						
	Proposed	17	Uncomfortable	16	Uncomfortable	48	Pass
39	DATA NOT AVAILABLE						
	Proposed	12	Walking	11	Walking	37	Pass
40	DATA NOT AVAILABLE						
	Proposed	13	Uncomfortable	12	Walking	39	Pass
41	DATA NOT AVAILABLE						
	Proposed	8	Standing	8	Standing	25	Pass
42	DATA NOT AVAILABLE						
	Proposed	10	Strolling	10	Strolling	32	Pass
43	DATA NOT AVAILABLE						
	Proposed	10	Strolling	9	Strolling	30	Pass
44	DATA NOT AVAILABLE						
	Proposed	12	Walking	12	Walking	37	Pass
45	DATA NOT AVAILABLE						
	Proposed	11	Walking	10	Strolling	32	Pass

Seasons
Summer = May to October
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≤ 6 mph	Sitting
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Wind Safety Category
(0.1% Annual Exceedance)

≤ 56 mph	Pass
> 56 mph	Exceeded

FIGURES

Wind Tunnel Study Model
Existing

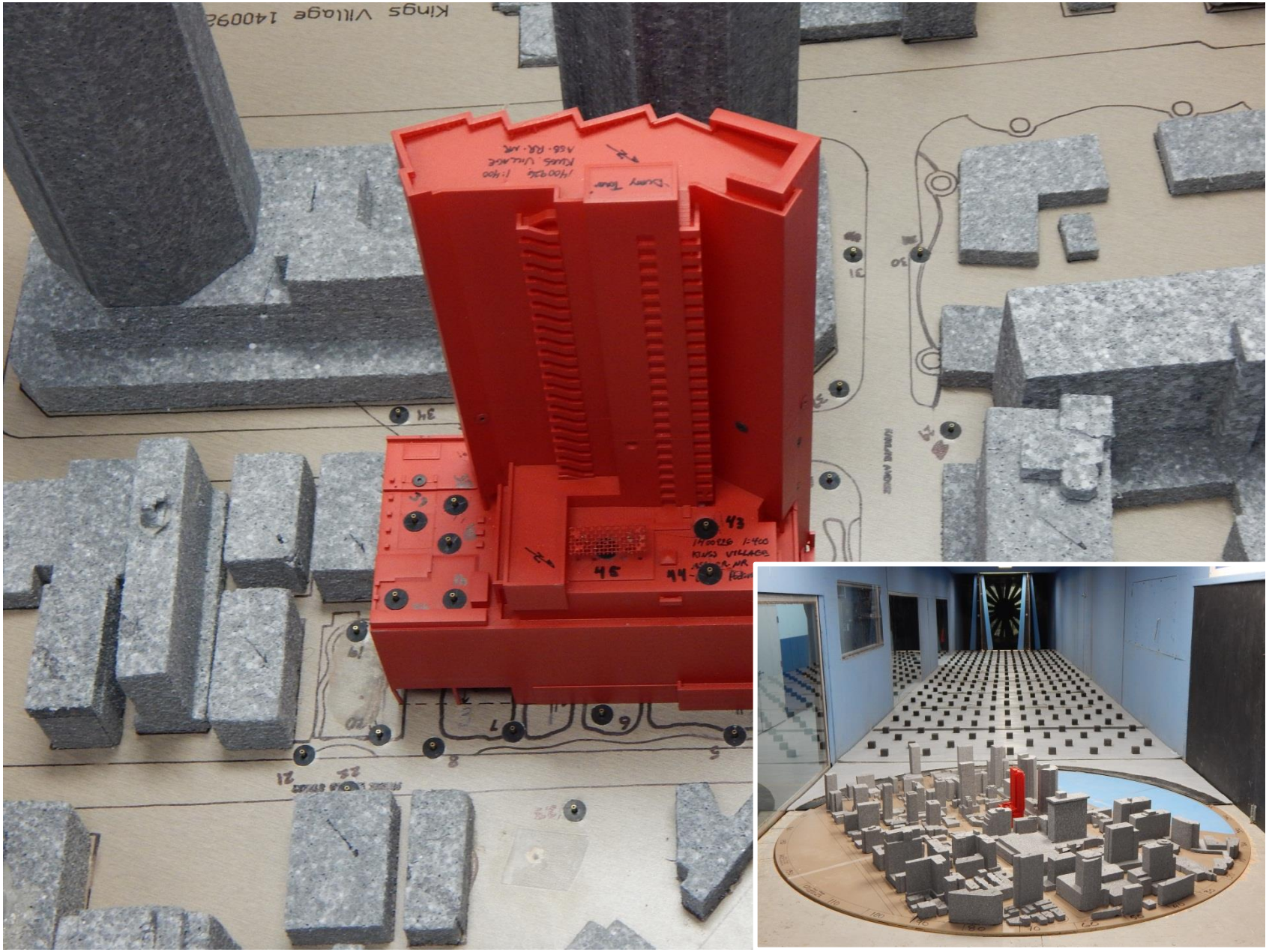
Kings Village Waikiki – Honolulu, HI

Project #1400926

Figure No. 1a

Date: January 16, 2015

RWDI



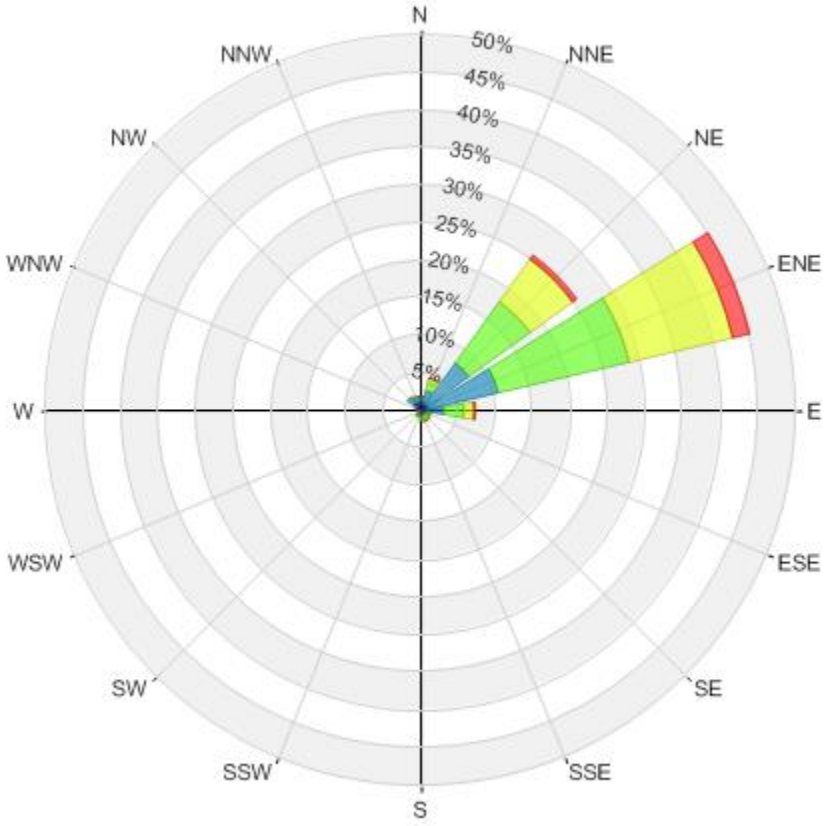
Wind Tunnel Study Model
Proposed

Kings Village Waikiki – Honolulu, HI

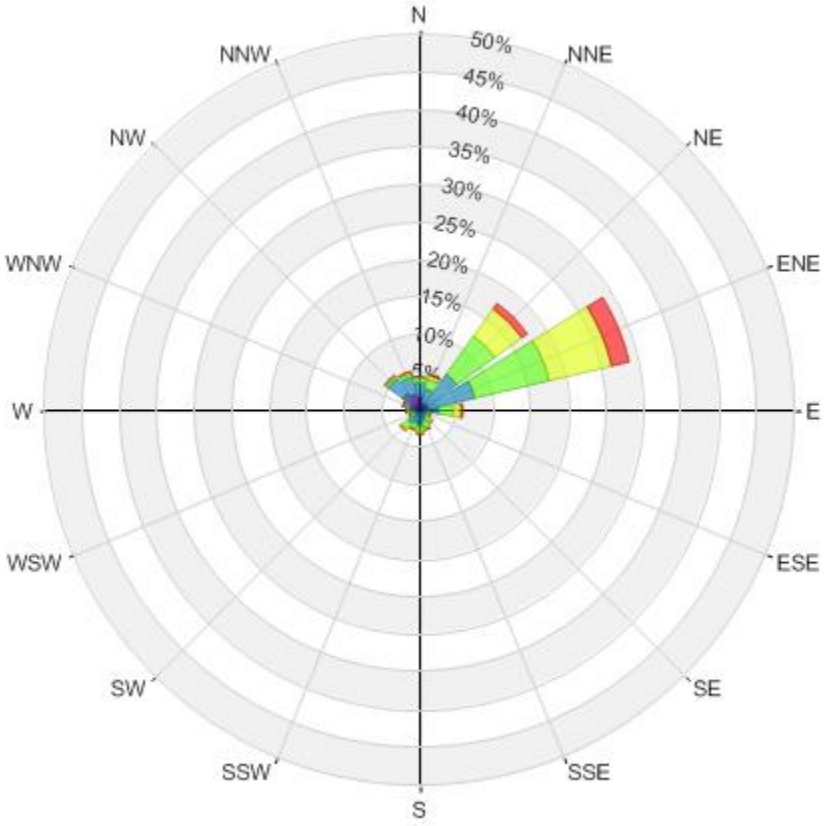
Project #1400926

Figure No. 1b

Date: January 16, 2015



Summer
(May - October)



Winter
(November - April)

Wind Speed (mph)	Probability (%) Summer	Winter
Calm	2.9	6.0
1-5	8.2	14.4
6-10	27.4	31.8
11-15	34.7	26.9
16-20	23.6	16.9
>20	3.3	4.0

Directional Distribution (%) of Winds (Blowing From)
Honolulu International Airport (1979 - 2009)

Figure No. 2

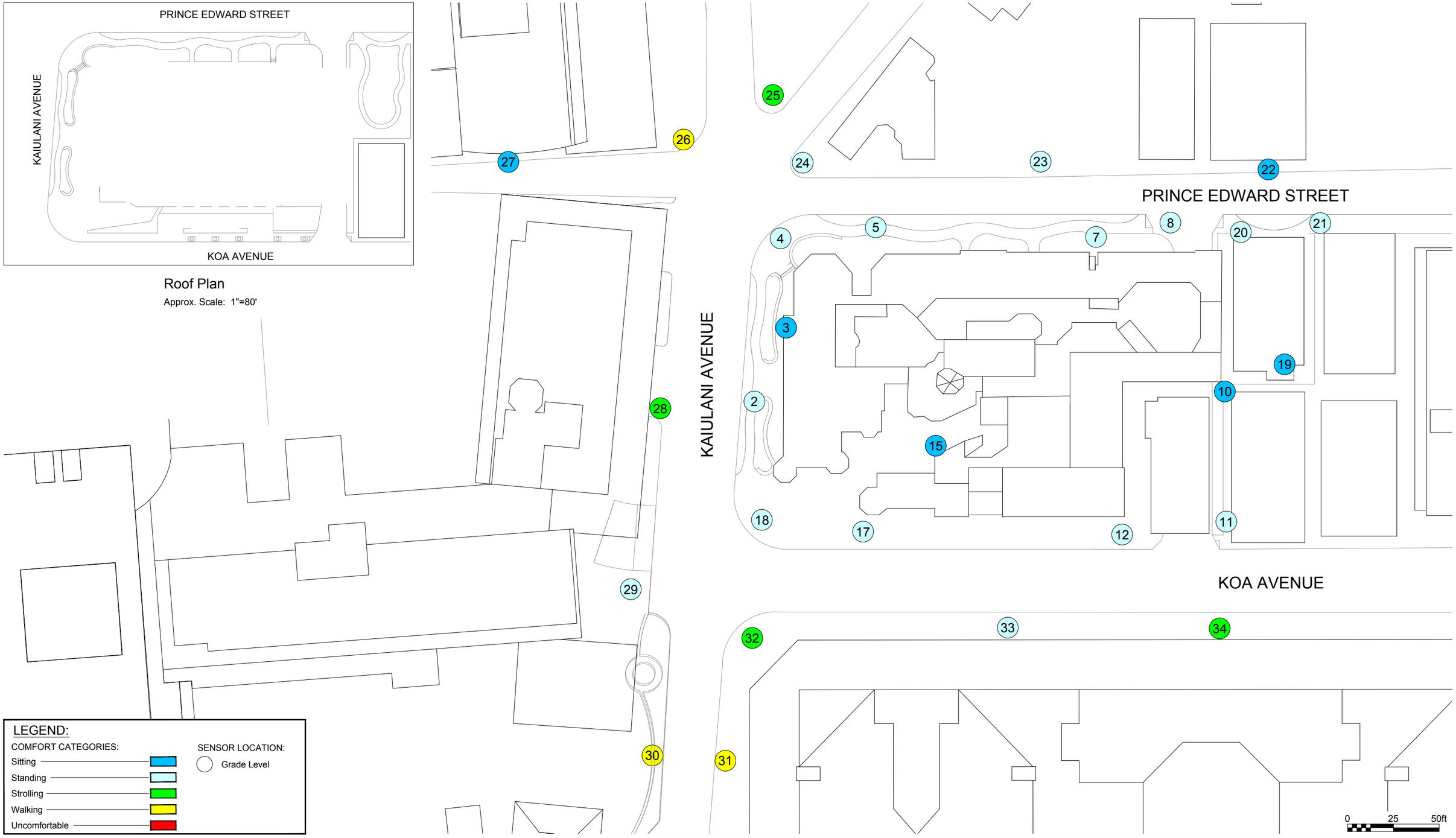
Kings Village Waikiki – Honolulu, HI

Project #1400926

Date: January 16, 2015

Roof Plan

Approx. Scale: 1"=80'



LEGEND:

COMFORT CATEGORIES:
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- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level

0 25 50ft

Pedestrian Wind Comfort Conditions - Existing
Summer (May to October, 6:00 to 23:00)

True North

Kings Village - Honolulu, Hawaii

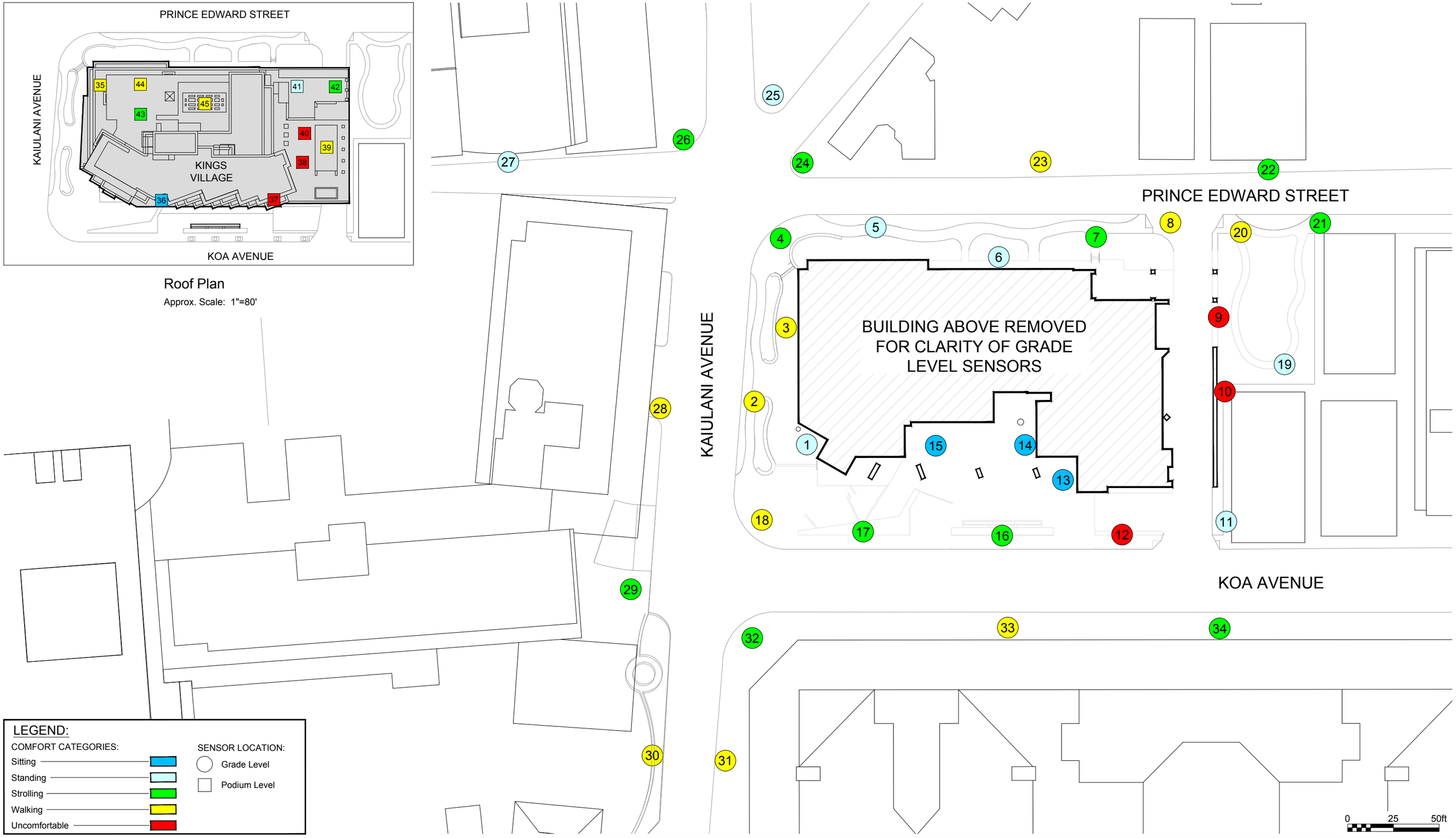
Project #1400926

Drawn by:	ARM	Figure:	3a
Approx. Scale:			1"=50'
Date Revised:			Jan 14, 2015

RWDI

Roof Plan

Approx. Scale: 1"=80'



LEGEND:

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- Sitting
- Standing
- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

Pedestrian Wind Comfort Conditions - Proposed
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Kings Village - Honolulu, Hawaii

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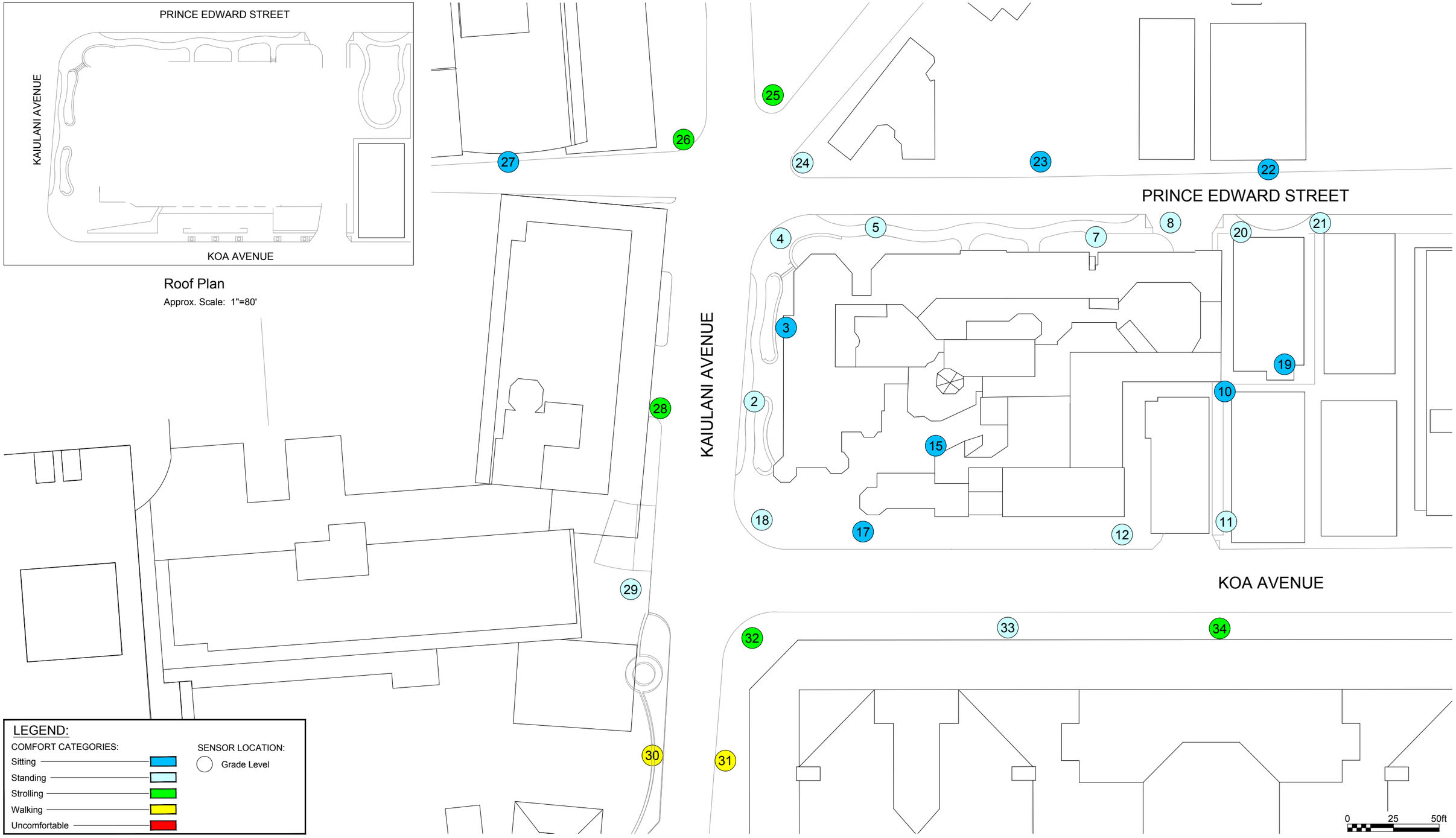

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True North

Kings Village - Honolulu, Hawaii

Project #1400926

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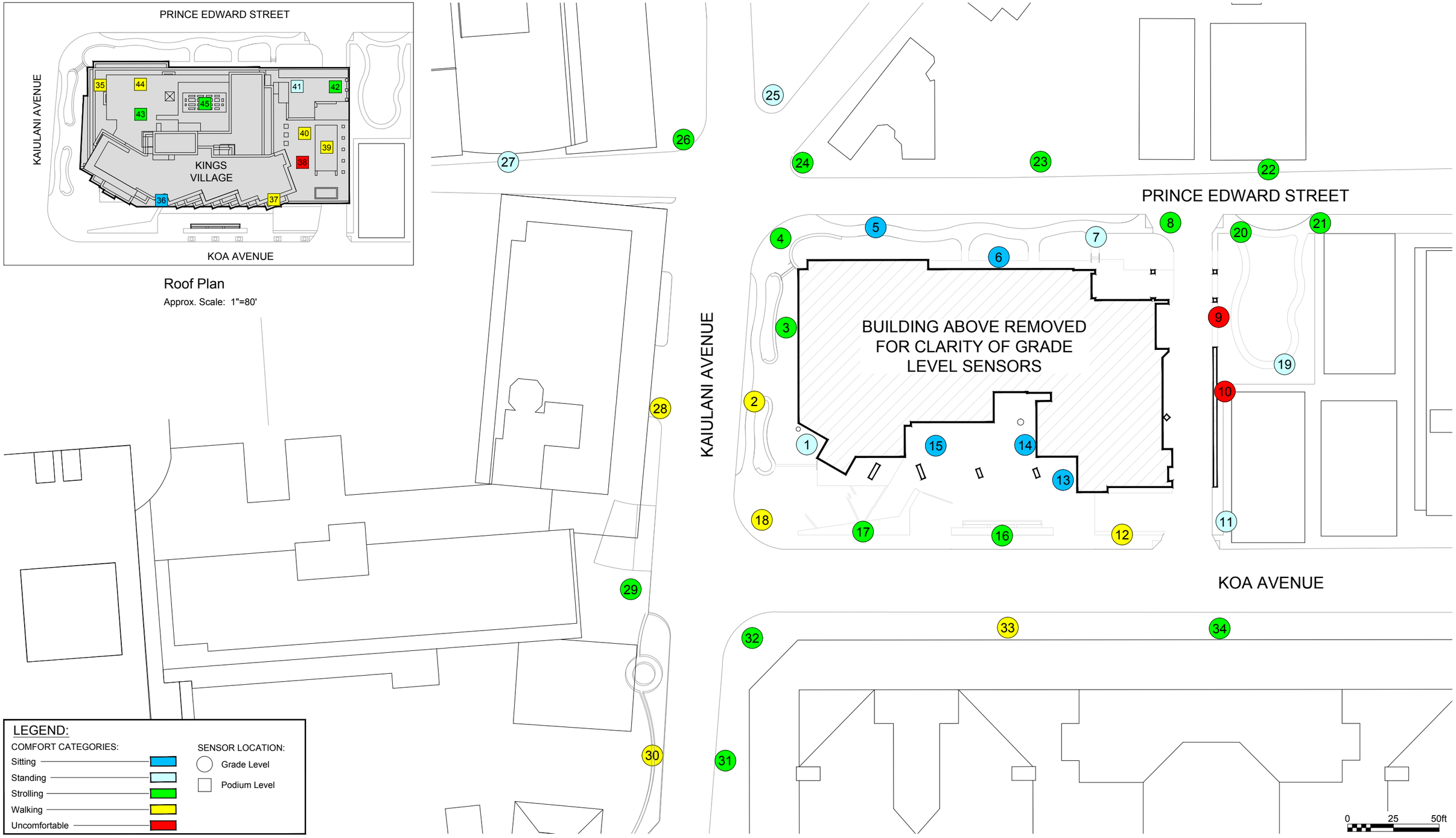

LEGEND:

COMFORT CATEGORIES:
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- Strolling
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

Pedestrian Wind Comfort Conditions - Proposed
Winter (November to April, 6:00 to 23:00)

True North

Kings Village - Honolulu, Hawaii

Project #1400926

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RWDI

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A2-10.dwg	AutoCAD	05/08/2014
A2-11.dwg	AutoCAD	05/08/2014
A2-22.dwg	AutoCAD	05/08/2014
A2-24.dwg	AutoCAD	05/08/2014
A2-32.dwg	AutoCAD	05/08/2014
A2-33.dwg	AutoCAD	05/08/2014
A3-01.dwg	AutoCAD	05/08/2014
A3-02.dwg	AutoCAD	05/08/2014
A3-05.dwg	AutoCAD	05/08/2014
A3-06.dwg	AutoCAD	05/08/2014
1302374_PRINCESS KA'IULANI.dwg	AutoCAD	16/09/2013

APPENDIX 12

CULTURAL IMPACT ASSESSMENT

FINAL

Cultural Impact Assessment for the 133 Kaʻiulani Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Oʻahu TMKs: [1] 2-6-023:029, 037, and 076 (por.)

Prepared for
BSC KVSC, LLC

Prepared by
Nicole Ishihara, B.A.,
Angela Faʻanunu, M.S.P.H.,
and
Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawaiʻi, Inc.
Kailua, Hawaiʻi
(Job Code WAIKIKI 123)

January 2014

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Fax: (808) 244-1994

Prefatory Remarks on Language and Style

A Note about Hawaiian and Other Non-English Words:

Cultural Surveys Hawai‘i recognizes the Hawaiian language as the native language of the State of Hawai‘i, therefore, does not follow the conventional use of italics to identify and highlight all Hawaiian words. Other non-English words, however, are still italicized. CSH parenthetically translates or defines in the text the Hawaiian and non-English words at first mention.

A Note about Plant and Animal Names:

When community participants mention specific plants and animals by Hawaiian, other non-English, or common names, CSH provides their possible scientific names (Genus and species) in the *Common and Scientific Names of Plants and Animals Mentioned by Community Participants* (Appendix B). CSH derives these possible names from authoritative sources, but since the community participants only name the organisms and do not taxonomically identify them, CSH cannot positively ascertain their scientific identifications. CSH does not attempt in this report to verify the possible scientific names of plants and animals in previously published documents; however, citations of previously published works that include both common and scientific names of plants and animals appear as in the original texts.

Abbreviations

APE	Area of Potential Effect
BC	Boundary Certificate Number
BCT	Boundary Commission Testimony
CIA	Cultural Impact Assessment
CSH	Cultural Surveys Hawai‘i
DOH/OEQC	Department of Health/Office of Environmental Quality Control
HAR	Hawai‘i Administrative Rules
HRS	Hawai‘i Revised Statutes
HSRM	Hawai‘i Survey Registered Maps
LCA	Land Commission Award
OEQC	Office of Environmental Quality Control
OHA	Office of Hawaiian Affairs
OIBC	O‘ahu Island Burial Council
RM	Registered Map
SIHP	State Inventory of Historic Properties
SHPD	State Historic Preservation Division
TCP	Traditional Cultural Property
TMK	Tax Map Key
UH	University of Hawai‘i
UHCOH	University of Hawai‘i’s Center for Oral History
USGS	United States Geological Survey

Management Summary

Reference	Cultural Impact Assessment (CIA) for the 133 Ka‘iulani Project, Waikīkī Ahupua‘a, Kona District, O‘ahu, TMKs: [1] 2-6-023:029, 037, and 076 (por.) (Ishihara et al. 2014)
Date	January 2014
Project Number	CSH (Cultural Surveys Hawai‘i) Job Code: WAIKIKI 123
Agencies	State of Hawai‘i Department of Health/Office of Environmental Quality Control (DOH/OEQC)
Project Location	King’s Village Shopping Center
Project Description	This project consists of three parcels including the King’s Village Shopping Center, Prince Edward Apartments, and the Hale Waikiki Apartments. The project involves the redevelopment of the subject properties into a new 34-story condo-hotel.
Project Acreage	The total project acreage is approximately 1.05 acres.
Area of Potential Effect (APE) and Survey Acreage	The APE is defined as the approximately 1.05 acres in total. While this investigation focuses on the project APE, this study considered the whole ahupua‘a (land division) of Waikīkī.
Document Purpose	This CIA was prepared to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the proposed project’s potential effect on cultural beliefs, practices, and resources. Through document research and cultural consultation efforts, this report provides information, compiled to date, pertinent to the assessment of the proposed project’s potential impacts to cultural beliefs, practices, and resources (per the *Office of Environmental Quality Control’s Guidelines for Assessing Cultural Impacts*) which may include Traditional Cultural Properties (TCPs) of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places. The document is intended to support the project’s environmental review and may also serve to support the project’s historic preservation review under HRS §6E-8 and Hawai‘i Administrative Rules (HAR) §13-284.
Results of Background Research	Background research for this study yielded the following results which are presented in approximate chronological order: 1. The project area is located within the ‘ili (land section) of

	Kapuni and Uluniu in the modern day ahupua‘a (land division extending from the uplands to the sea) of Waikīkī in the area known as Waikīkī Kai. The name Waikīkī translates as “water spurting from many sources,” and reveals the character of the intact watershed system of Waikīkī prior to European Contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground. 2. A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately AD 1400. This, in combination with coconut groves and fishponds along the shoreline, enabled the growth of a sizeable population, including the coastal village of Waikīkī, which most likely centered around the mouth of ‘Āpuakēhau Stream in the vicinity of the project area. 3. Numerous wahi pana (storied places), ‘ōlelo no‘eau (proverbs), ‘oli (chants), and mo‘olelo (stories), are associated with Waikīkī which suggests the ahupua‘a’s historical significance, abundance of natural resources, and presence of a viable Native Hawaiian population. These include mo‘olelo of Ka-lua-‘Ōlohe, the heiau (pre-Christian place of worship) of Papa‘ena‘ena and ‘Āpuakēhau, the high priest Ka‘opulupulu, the warrior Kawelo, the life-giving stones of Kapaemahu and Kapuni. 4. Cultural layers excavated throughout Waikīkī Kai and radiocarbon dated to approximately AD 1400 to 1800 provide evidence of this habitation, cultivation and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes. In close proximity to the project area are cultural layers indicative of habitation at the Princess Ka‘iulani Hotel (State Inventory of Historic Places [SIHP] # 50-80-14-7066, Runyon et al. 2010), Moana Hotel (SIHP # 50-80-14-1974, Simons et al. 1991; SIHP # 50-80-14-7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP # 50-80-14-5796, Yucha et al. 2009). 5. At least seven heiau and other religious sites were located in Waikīkī Kai, including Helumoa Heiau (also called ‘Āpuakēhau Heiau) (Thrum 1907a:44) and Nā Pōhaku ‘Ola Kapaemahu a Kapuni (commonly called the Wizard Stones) (Paglinawan 1997; Thrum 1907b:139–141) in the vicinity of the project area. These sites are connected through mo‘olelo to ‘Āpuakēhau Stream, which once flowed through the southeast

	portion of the project area. 6. Four of these heiau were associated with human sacrifice, including Helumoa Heiau (Thrum 1907a:44). Sacrificial drownings of kauwā (outcast caste) also took place in Waikīkī (Ka Loea Kālai‘āina 1899, translation in Sterling and Summers 1978:33). In addition, excavations and surveys have documented a high density of burials within the Jaucus sand deposits of Waikīkī, including 24 burials at the Moana Hotel (SIHP # 50-80-14-1974, Simons et al. 1991). 7. Historic trails on the south side of O‘ahu included a trail that ran along the coastal area of Waikīkī most likely where the present Kalākaua Avenue is located, near the project area. ‘Ī‘ī describes that the trail went through the ‘ili of Kapuni where the project area is located (‘Ī‘ī 1959:92–94). 8. Waikīkī Kai was a place of royal residence, starting with Mā‘ilikūkahi in approximately AD 1490 (Kamakau n.d., cited in McAllister 1933:74) and extending through Kamehameha (‘Ī‘ī 1959:17). The ‘ili of Kaluaokau and of Helumoa, adjacent to the ‘ili of the project area, were places of previous royal residence. 9. During the Māhele (division of Hawaiian lands), there were 437 land claims in Waikīkī Ahupua‘a of which only 243 were awarded. Within the ‘ili of Kapuni and Uluniu, only one land claim (Land Commission Award [LCA] 00104FL), which includes the project area, was awarded to M. Kekuanaoa who also owned land in other ‘ili of Waikīkī. The LCA included a house lot in a coconut grove which most likely referred to the land in Uluniu and Kapuni, where a coconut grove once stood. LCAs in nearby lots are also described to have contained many fishponds and taro lo‘i (irrigated terraces). The nearby ‘ili of Kaluaokau was granted to William Lunalilo (LCA 8599, ‘Āpana [parcel] 31), and bequeathed to Queen Emma. 10. Oral histories indicate early twentieth century gathering practices of several varieties of limu (seaweed) and wana (sea urchin) along the Waikīkī coast, and catching of manini (reef surgeonfish) in the near-shore waters and moi (threadfish), shrimp, ‘oama (young weke, or goatfish), mullet, ‘a‘awa (wrasse), āholehole (juvenile āhole, or Hawaiian flagtail), pāpio (juvenile bigeye jack), and ‘o‘opu (goby) in ‘Āpuakēhau. 11. Oral histories also indicate the Waikīkī School, the Kawaiha‘o Church Waikīkī Branch, and associated cemetary were located in the immediate vinicity of the project area directly across

	Kalākaua Avenue from the Moana Hotel. The Waikīkī Theatre, also in close proximity, opened in 1936.
Results of Community Consultation	CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural descendants of Waikīkī in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to a total of 78 individuals or groups; seven responded, and two of these kama‘āina and/or kūpuna (elder) met with CSH for a more in-depth interview. CSH is still awaiting written responses from SHPD and OHA. This community consultation indicates the following: 1. Mr. Edward Halealoha Ayau of Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei recalled conducting a reinterment on Prince Edward Street. The project is bound on the mauka (towards the mountain) side by Prince Edward Street. 2. Mrs. Winona (Nona) Kamai and her daughter Dwynn shared their memories of Waikīkī and the project area. King’s Alley, the former name for King’s Village, was once a place of employment for Dwynn. She recalled cultural demonstrations such as lei making, coconut frond weaving, and hula performances by kumu hula (hula teacher) Aloha Dalire and her hālau (group). 3. 1n 1972, Bishop Museum opened the Heritage Theater at King’s Alley. According to Dwynn, an exhibit pertaining to the Hawaiian Monarchy in Waikīkī was on display. Double-decker buses provided transportation between Bishop Museum in Kalihi, the Falls of Cylde ship at Aloha Tower, and the Heritage Theater in Waikīkī. The theater was open for many years before downsizing to a bookstore and gift shop. 4. The cultural landscape of Waikīkī extends beyond the modern division of Waikīkī Kai. Mr. Becket indicated the locations of two culturally significant sites. SIHP # 50-80-14-5463 is located in Wa‘ahila Valley on the lower slope of Wa‘ahila Ridge. Although # -5463 is designated as a house site, the Committee for the Preservation of Cultural Sites and Properties, under the O‘ahu Council of Hawaiian Civic Clubs, has determined it is likely a heiau. The other site is located at Kamanele Park in Mānoa Valley and the Committee similiary has determined that it is likely a pre-Contact heiau. 5. La Pietra Hawai‘i School for Girls was built over po‘okanka (sacrificial) class heiau, Papa‘ena‘ena. Although the heiau is completely demolished, Mr. Becket recalled having a

	conversation with the late Marion Kelly, anthropologist and activist, during the 1980s-1990s regarding possible remnants of the lower portion of Papa‘ena‘ena Heiau below the school. CSH and Mr. Becket investigated a portion of Kapi‘olani Park below La Pietra. The outcome was deemed inconclusive. 6. Diamond Head Lighthouse was the former site of the Pahu-a-Maui Heiau. The lighthouse is now owned and operated by the Coast Guard. Mr. Becket recalled seeing a photo of a dry stacked wall with the Diamond Head Lighthouse built on it. The former location of the dry stacked wall is possibly the current site of a caretaker’s home or administrative building for the Coast Guard. 7. The land of Waikīkī Kai was comprised of a vast agricultural system including lo‘i and fishponds. The great-great-great grandfather of Mr. Clarence Medeiros Jr. was conveyed LCA 1268 via Nakai. The 1.60-acre parcel consisted of lo‘i (irrigated terrace). Mr. Medeiros’ maternal great-great grandfather, Zen Man Sing, arrived to Hawai‘i from China in 1888. Shortly after his arrival he worked in Waikīkī with relatives planting rice and taro.
Impacts and Recommendations	Based on the information gathered for the cultural and historic background and community consultation detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. Below, CSH identifies these potential impacts (Nos. 1-2) and makes two recommendations (Nos. 3-4). 1. Although Native Hawaiians likely conducted traditional practices within the project area, there are no customary practices that are occurring on these lands at this time. A trail formerly cut through the project area toward Papa‘ena‘ena Heiau and at one time there may have been other cultural resources connected to the project area including lo‘i. Although the lands of the project area have since been developed, there is a possibility that remnants of these cultural resources may still exist. 2. There is a high possibility iwi kūpuna, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural finds. The project area contains Jaucus sand deposits, the preferred sediment for interment of the dead. In addition, a community participant indicates performing a reinterment mauka of the project area.

	3. Personnel involved in the construction activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials (or other cultural finds) be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law. 4. BSC KVSC, LLC should consult with the cultural descendants of Waikīkī to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts are uncovered during construction or long-term maintenance for the project.

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Section 1 Introduction

1.1 Project Background

At the request of BSC KVSC, LLC, Cultural Surveys Hawai‘i Inc. (CSH) conducted a cultural impact assessment (CIA) for the proposed 133 Ka‘iulani Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu, TMK: [1] 2-6-023:029, 037, and 076 (por.) (Figure 1 through Figure 3).

The proposed project is for the proposed 133 Ka‘iulani Project located on Kaiulani Avenue between Koa Avenue and Prince Edward Street. The project consists of three parcels that include the King’s Village Shopping Center, Prince Edward Apartments, and the Hale Waikiki Apartments. The project involves the redevelopment of the subject properties into a new 34-story condo-hotel.

1.2 Document Purpose

The Project requires compliance with the State of Hawai‘i environmental review process (Hawai‘i Revised Statutes [HRS] §343), which requires consideration of a proposed Project’s effect on cultural practices. Through document research and ongoing cultural consultation efforts, this report provides information pertinent to the assessment of the proposed Project’s impacts to cultural practices and resources (per the Office of Environmental Quality Control’s *Guidelines for Assessing Cultural Impacts*). The impacts may include Traditional Cultural Properties (TCPs) of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places. In accordance with Hawai‘i State Historic Preservation Statute (§6E) guidelines for significance criteria in the Hawai‘i Administrative Rules (HAR) §13-275 under Criterion “e,” any historic property determined to be significant shall:

> Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

The document is intended to support the Project’s environmental review and may also serve to support the Project’s historic preservation review under HRS §6E and HAR §13-275.

1.3 Scope of Work

The scope of work for this CIA includes the following:

1. Examination of cultural and historical resources, including Land Commission documents, historic maps, and previous research reports, with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal, and other resources or agricultural pursuits as may be indicated in the historic record.

Figure 1. USGS 7.5-minute topographic map showing the proposed Project area (USGS 1998)

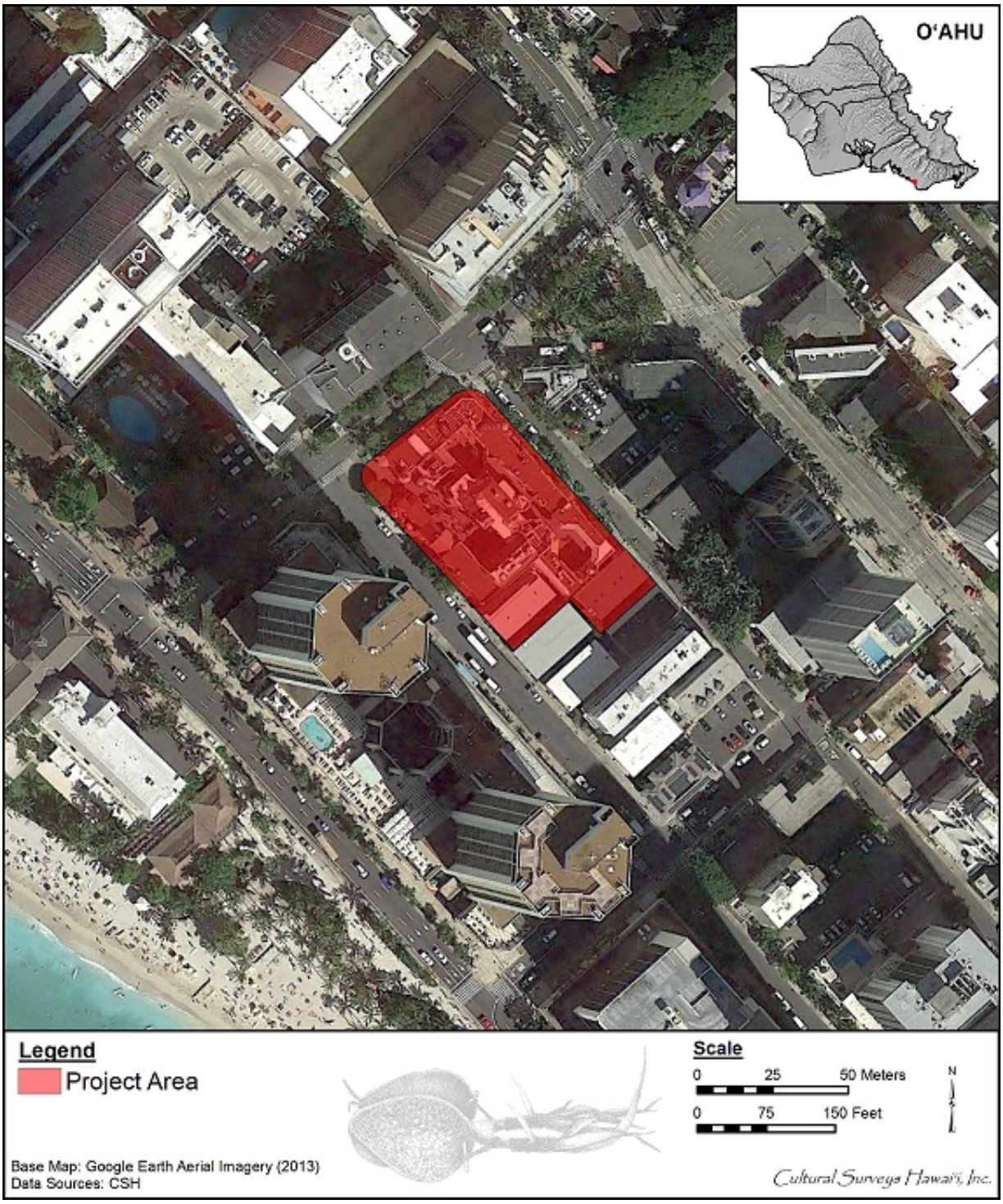

Figure 2. Aerial phototgraph showing the Project area (Google Earth 2013)

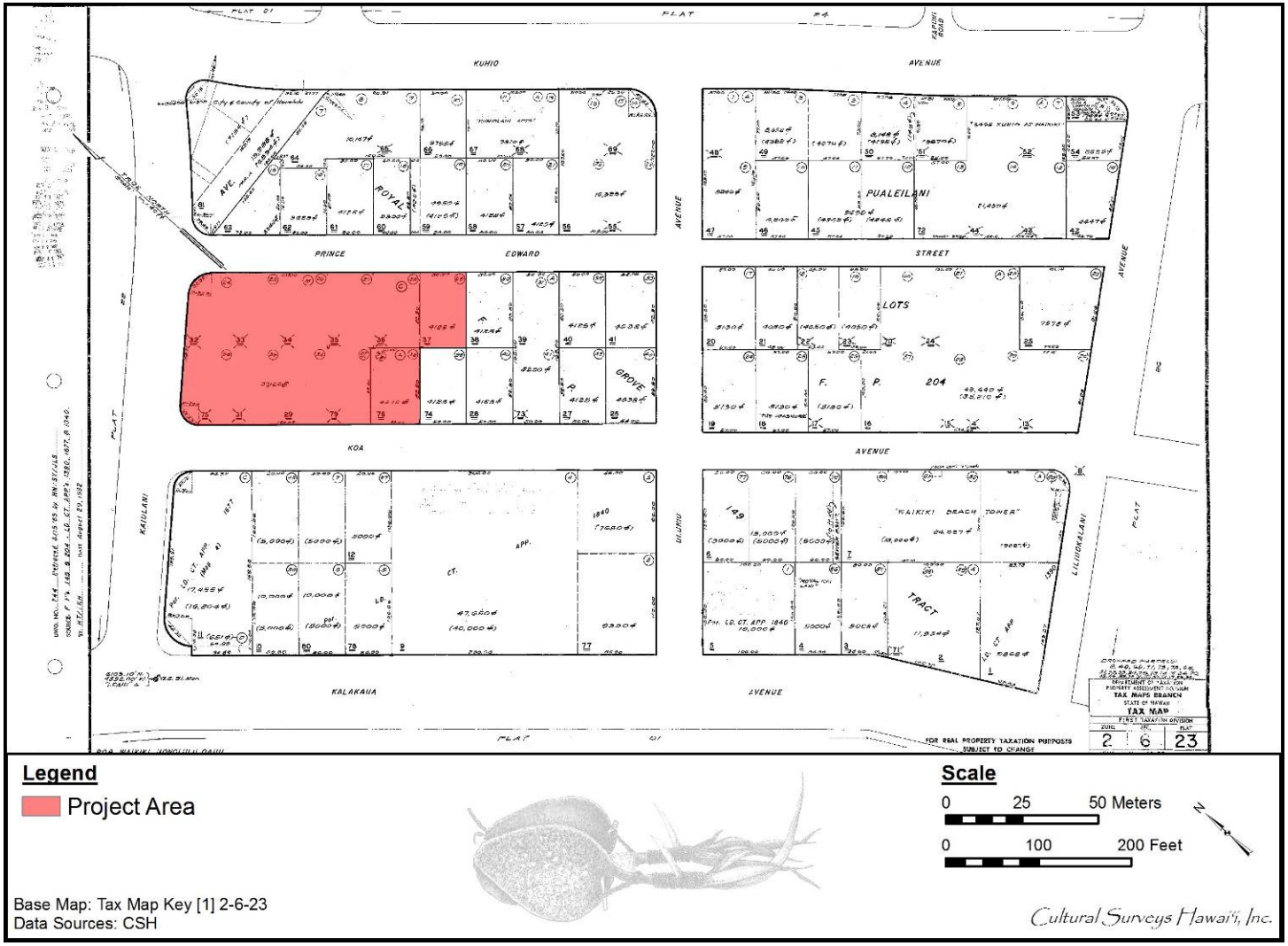

Figure 3. Tax map plat of the proposed Project (Hawai‘i TMK Service 2014)

2. Review of previous archaeological work at and near the subject parcel that may be relevant to reconstructions of traditional land use activities; and to the identification and description of cultural resources, practices, and beliefs associated with the parcel.
3. Consultation and interviews with knowledgeable parties regarding cultural and natural resources and practices at or near the parcel; present and past uses of the parcel; and/or other practices, uses, or traditions associated with the parcel and environs.
4. Preparation of a report that summarizes the results of these research activities and provides recommendations based on findings.

1.4 Natural Environment

The project area is situated on the level, low-lying coastal area of Waikīkī, and is approximately 2 m, or 6 ft above mean sea level (AMSL). The water table is typically observed at 1.3 m to 2.0 m below the current land surface. The average rainfall in this coastal area of Waikīkī is between 20-30 inches per year, with temperatures ranging from 60 to 85 degrees Fahrenheit (Armstrong 1973:56).

Although the area has been altered by construction, the natural soil deposit is Jaucus sand (JaC), calcareous soils developed in wind and water deposited sand from coral and seashells (Figure 4). The slope range of this soil is 0 to 15%, but in most places, the slope does not exceed 7%. The soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. In many places, the surface layer is dark brown as a result of accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile (Foote et al. 1972). Generally, vegetation in the Waikīkī area today includes mainly introduced exotics, such as banyan, MacArthur palm, Brassaia, coconut, plumeria, money, Alexander palm, Manila palm, date palm, fern, monkey pod, tulip wood, and opiuma trees, and a variety of grasses.

1.5 Built Environment

The project area is in the center of the old historic section of Waikīkī, in the vicinity of the oldest hotels in Waikīkī, the Moana Surfrider Hotel and the Royal Hawaiian Hotel. The project area is currently surrounded by hotels and infrastructure to support the prevalent tourist industry in Waikīkī. Immediately to the north along Ka‘iulani Road is the Princess Ka‘iulani Hotel with the International Market Place further north. Directly makai (towards the ocean) of the project area, is the Hyatt Regency Waikiki Hotel which is located along Kalākaua Avenue. Across the street from the Hyatt and makai of Kalākaua is the Moana Surfrider, which is situated adjacent to the Outrigger Hotel, and then the Royal Hawaiian Hotel. Kūhio Avenue is west of the project area where many hotels, shops, and restaurants are located.

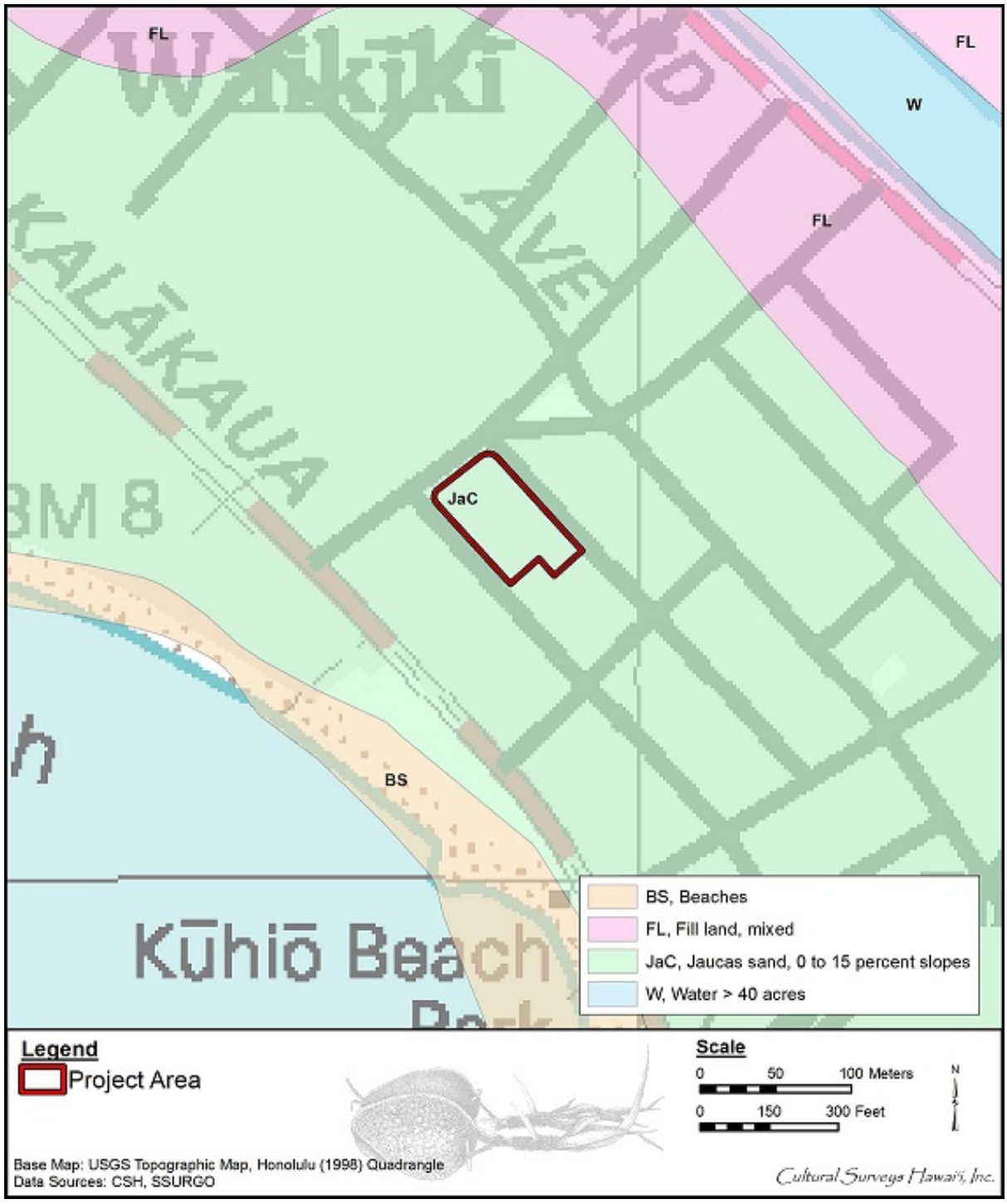

Figure 4. Soil map of the proposed Project (Foote et al. 1972; USGS 1998)

Section 2 Methods

2.1 Archival Research

Historical documents, maps, and existing archaeological information pertaining to the Project area were researched at the CSH library and other archives including the University of Hawai‘i at Mānoa’s Hamilton Library, the State Historic Preservation Division (SHPD) library, the Hawai‘i State Archives, the State Land Survey Division, and the Bishop Museum Archives. Previous archaeological reports for the area were reviewed, as were historic maps and photographs and primary and secondary historical sources. Information on Land Commission Awards (LCAs) was accessed through Waihona ‘Aina Corporation’s Māhele database (Waihona ‘Aina 2000) and the Office of Hawaiian Affairs (OHA) Papakilo database (Office of Hawaiian Affairs 2014) as well as a selection of CSH library references.

For cultural studies, research for the Traditional Background section centered on Hawaiian activities including religious and ceremonial knowledge and practices, traditional subsistence land use and settlement patterns, gathering practices and agricultural pursuits, as well as Hawaiian place names and mo‘olelo (story), mele (songs), oli (chant), ‘ōlelo no‘eau (proverb) and more. For the Historic Background section, research focuses on land transformation, development, and population changes beginning in the early post–European Contact era to the present day (see Scope of Work above).

2.2 Community Consultation

2.2.1 Sampling and Recruitment

A combination of qualitative methods, including purposive, snowball, and expert (or judgment) sampling, were used to identify and invite potential participants to the study. These methods are used for intensive case studies, such as CIAs, to recruit people who are hard to identify, or are members of elite groups (Bernard 2006:190). Our purpose is not to establish a representative or random sample. It is to “identify specific groups of people who either possess characteristics or live in circumstances relevant to the social phenomenon being studied . . . This approach to sampling allows the researcher deliberately to include a wide range of types of informants and also to select key informants with access to important sources of knowledge” (Mays and Pope 1995:110).

We began with purposive sampling informed by referrals from known specialists and relevant agencies. For example, we contacted the SHPD, OHA, O‘ahu Island Burial Council (OIBC), and community and cultural organizations in the Honolulu (Kona) District for their brief response/review of the project and to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the study area and vicinity, cultural and lineal descendants of the study area, and other appropriate community representatives and members. Based on their in–depth knowledge and experiences, these key respondents then referred CSH to additional potential participants who were added to the pool of invited participants. This is snowball sampling, a chain referral method that entails asking a few key individuals (including agency and organization representatives) to provide their comments and referrals to other locally

recognized experts or stakeholders who would be likely candidates for the study (Bernard 2006:192). CSH also employs expert or judgment sampling which involves assembling a group of people with recognized experience and expertise in a specific area (Bernard 2006:189–191). CSH maintains a database that draws on over two decades of established relationships with community consultants. These are cultural practitioners and specialists, community representatives and cultural and lineal descendants. The names of new potential contacts were also provided by colleagues at CSH and from the researchers' familiarity with people who live in or around the study area. Researchers often attend public forums (e.g., Neighborhood Board, Burial Council, and Civic Club meetings) in (or near) the study area to locate potential participants. Please refer to Table 3, Section 5 for a complete list of individuals and organizations contacted for this CIA.

CSH focuses on obtaining in–depth information with a high level of validity from a targeted group of relevant stakeholders and local experts. Our qualitative methods do not aim to survey an entire population or subgroup. A depth of understanding about complex issues cannot be gained through comprehensive surveying. Our qualitative methodologies do not include quantitative (statistical) analyses, yet they are recognized as rigorous and thorough. Bernard (2006:25) describes the qualitative methods as "a kind of measurement, an integral part of the complex whole that comprises scientific research." Depending on the size and complexity of the project, CSH reports include in-depth contributions from about one-third of all participating respondents. Typically this means three to 12 interviews.

2.2.2 Informed Consent Protocol

An informed consent process was conducted as follows: 1) before beginning the interview the CSH researcher explained to the participant how the consent process works, the project purpose, the intent of the study, and how his/her information will be used; 2) the researcher gave him/her a copy of the Authorization and Release Form to read and sign (Appendix A); 3) if the person agreed to participate by way of signing the consent form or providing oral consent, the researcher started the interview; 4) the interviewee received a copy of the Authorization and Release Form for his/her records, while the original was stored at CSH; 5) after the interview was summarized at CSH (and possibly transcribed in full), the study participant was afforded an opportunity to review the interview notes (or transcription) and summary and to make any corrections, deletions or additions to the substance of their testimony/oral history interview (accomplished either via phone, post or email or through a follow-up visit with the participant); 6) the participant received the final approved interview and any photographs taken for the study for their records. If the participant was interested in receiving a copy of the full transcript of the interview (if there is one, as not all interviews are audio-recorded and transcribed), a copy was provided. Participants were also given information on how to view the report on the OEQC website and were offered a hardcopy of the report once the report is a public document.

If an interviewee agreed to participate on the condition that his/her name is withheld, procedures were taken to maintain his/her confidentiality (see Protection of Sensitive Information below).

2.2.3 Interview Techniques

To assist in discussion of natural and cultural resources and cultural practices specific to the study area, CSH initiated semi-structured interviews (as described by Bernard 2006), asking questions from the following broad categories: gathering practices and mauka (towards the mountain) and makai (towards the ocean) resources, burials, trails, historic properties and wahi pana (storied places). The interview protocol is tailored to the specific natural and cultural features of the landscape in the study area, identified through archival research and community consultation. For example, for this study fishing, ala hele (trails), and salt gathering were emphasized over other categories less salient to project area. These interviews and oral histories supplement and provide depth to consultations with government agencies and community organizations that may provide brief responses, reviews and/or referrals gathered via phone, email, and occasional face-to-face commentary.

2.2.3.1 In-depth Interviews and Oral Histories

Interviews were conducted initially at a place of the study participant's choosing (usually at the participant's home or at a public meeting place) and/or—whenever feasible—during site visits to the project area. Generally, CSH's preference is to interview a participant individually or in small groups (two–four); occasionally participants are interviewed in focus groups (six–eight). Following the consent protocol outlined above, interviews may be recorded on tape and in handwritten notes, and the participant photographed. The interview typically lasts one to four hours, and records the who, what, when, and where of the interview. In addition to questions outlined above, the interviewee is asked to provide biographical information (e.g., connection to the study area, genealogy, professional and volunteer affiliations, etc.).

2.2.3.2 Field Interviews

Field interviews are conducted with individuals or in focus groups comprised of kūpuna (elders) and kamaʻāina (native born) who have a similar experience or background (e.g., the members of an area club, elders, fishermen, hula dancers) who are physically able and interested in visiting the project area. In some cases, field visits are preceded with an off-site interview to gather basic biographical, affiliation, and other information about the participant. Initially, CSH researchers usually visit the project area to become familiar with the land and recognized (or potential) cultural places and historic properties in preparation for field interviews. All field activities are performed in a manner to minimize impact to the natural and cultural environment in the project area. Where appropriate, Hawaiian protocol may be used before going on to the study area and may include the hoʻokupu (offering) of pule (blessing), and oli (chant). All participants on field visits are asked to respect the integrity of natural and cultural features of the landscape and not remove any cultural artifacts or other resources from the area.

2.2.4 Study Limitations

Cultural impact assessments are limited by the time frame and costs of the study as well as community participation. Often, researchers have little control over the time frame or budget available for a project but may have more discretion over study design and the methodologies employed to illicit public participation. Various factors may affect participation, such as the availability of contact information for community members during the recruitment process, the

interest of the community in the project, and the commitment of participants through several phases of the interview process. For example, once an interview is scheduled and conducted, CSH engages the interviewee at least one more time (in person or by email or phone call) to gain their approval of the interview transcript or summary and to incorporate any changes they make. The voluntary nature of community participation in this process, combined with restraints on time and costs, often limits the number of interviews and the depth of information gathered during the interviews.

2.3 Compensation and Contributions to Community

Many individuals and communities have generously worked with CSH over the years to identify and document the rich natural and cultural resources of these islands for cultural impact, ethno-historical and, more recently, TCP studies. CSH makes every effort to provide some form of compensation to individuals and communities who contribute to cultural studies. This is done in a variety of ways. Individual interview participants are compensated for their time in the form of a small honorarium and/or other makana (gift). Community organization representatives (who may not be allowed to receive a gift) are asked if they would like a donation to a Hawaiian charter school or nonprofit of their choice to be made anonymously or in the name of the individual or organization participating in the study. Contributors are provided their transcripts, interview summaries, photographs and—when possible—a copy of the CIA report; CSH is working to identify a public repository for all cultural studies that will allow easy access to current and past reports. CSH staff do volunteer work for community initiatives that serve to preserve and protect historic and cultural resources (for example in Lāna‘i and Kaho‘olawe). Generally our goal is to provide educational opportunities to students through internships and sharing our knowledge of historic preservation and cultural resources and the State and Federal laws that guide the historic preservation process, and through involvement with an ongoing working group of public and private stakeholders collaborating to improve and strengthen the §343 environmental review process.

Section 3 Traditional Background

3.1 Overview

This section focuses on the traditional background of the study area which includes the ahupua‘a of Waikīkī located in the Kona District of O‘ahu Island.

3.2 Land Divisions

3.2.1 Kona Moku (District)

In approximately AD 1310 (a time estimate based on an average length of generational intervals in chiefly genealogies), Māweke partitioned O‘ahu into three districts: the Kona region; the ‘Ewa, Wai‘anae, and Waialua region; and the windward Ko‘olau region. Then, in approximately AD 1490, the ‘aha ali‘i (council of chiefs) chose Mā‘ilikūkahi, an ali‘i kapu (sacred chief) who was born at the sacred site of Kūkaniloko in the uplands of Waialua to be the new ali‘i nui (paramount chief) of O‘ahu. After his paramountship was installed at the heiau (pre-Christian place of worship) of Kapukapuākea in central Waialua, Mā‘ilikūkahi instituted an explicit land division and administration structure. O‘ahu was divided into six moku (district)—Kona, ‘Ewa, Wai‘anae, Waialua, Ko‘olauloa, and Ko‘olaupoko—that were further divided into 86 ahupua‘a and smaller territorial units, such as ‘ili or land section (Kirch 2010:84–90). Upon his ascent to ali‘i nui, Mā‘ilikūkahi shifted his residence from Waialua to Waikīkī, which may have initiated the pattern of royal residence at Waikīkī (Kamakau n.d., cited in McAllister 1933:74).

3.2.2 Waikīkī Ahupua‘a

The ahupua‘a of southeastern O‘ahu within the traditional moku of Kona once extended from the Ko‘olau mountain range on the mauka side to the shoreline on the makai side. The ancient ahupua’a of Waikīkī once extended from the land called Kou (Honolulu) to Maunalua (Hawai‘i-kai) (Hawaiian Studies Institute 1987), which was originally an ‘ili kūpono (a nearly independent ‘ili land division within an ahupua‘a, paying tribute to the ruling chief and not to the chief of the ahupua‘a) of Waimānalo that was integrated into Honolulu District in 1859 as an ahupua‘a (King 1935:223). On modern maps, the ancient ahupua‘a of Waikīkī is bounded in the west by Pi‘ikoi and Sheridan Streets and to the east by Maunalua, and mauka by the Ko‘olau mountain range and makai by the ocean.

Due to the growth of the settlements of Honolulu and Waikīkī following European Contact in 1778, the seaward sections of many ahupua‘a were cut off from the sea. The government later subdivided sections of Honolulu and Waikīkī into neighborhoods or districts. In modern times, the area identified as Waikīkī is generally bounded on the west by Kalākaua Avenue and on the east by Diamond Head, and mauka by King Street/Wai‘alae Avenue and makai by the ocean. A distinction is sometimes made between Waikīkī Kai, the coastal area on the makai side of the Ala Wai Canal, and Waikīkī Waena (middle), the mauka lands between King Street/Wai‘alae Avenue and Ala Wai Boulevard.

Considering the vast scale of the ancient ahupua‘a of Waikīkī, which includes the modern ahupua‘a designations of Mānoa, Pālolo, Wai‘alae Nui, Wai‘alae Iki, Wailupe, Niu, and Kuli‘ou‘ou, and the size of the marshland of Waikīkī (which was four times the size of Waikīkī today; Kanahele 1995:6), this report focuses on the coastal strip of Waikīkī—the modern ahupua‘a boundary of Waikīkī, or Waikīkī Kai. This area includes the Waikīkī Plain, which encompasses Kapi‘olani Park and the project area which is located in the ‘ili of Kapuni and Uluniu.

3.3 Wahi Pana

A Hawaiian wahi pana, also referred to as a place name, “physically and poetically describes an area while revealing its historical or legendary significance” (Landgraf 1994:v). Wahi pana can refer to natural geographic locations, such as streams, peaks, rock formations, ridges, and offshore islands and reefs, or they can refer to Hawaiian divisions, such as ahupua‘a, ‘ili (subdivision within an ahupua‘a), and man-made structures, such as fishponds. In this way, the wahi pana of Waikīkī, and the study area tangibly link the kama‘āina of Waikīkī to their past.

Many place names in this section appear in the online database compiled by Lloyd Soehren (2010) of Hawaiian Place Names. Soehren compiled all names from mid-nineteenth century land documents, such as Land Commission Awards (LCA) and Boundary Commission Testimony (BCT) reports. The BCT lists boundary points for many of the ahupua‘a. The names of ‘ili ‘āina (land units within an ahupua‘a) and ‘ili kū (land units rewarded separately from a specific ahupua‘a) are compiled from the testimony in Māhele Land Commission Awards, from both awards successfully claimed and from those rejected. Place names found by the authors on USGS maps and Hawai‘i Survey Registered Maps (HSRM) were also added to the database. The Soehren database includes place name meanings from the definitive book on Hawaiian place names, *Place Names of Hawaii* (Pukui et al. 1974). For cases in which Pukui et al. (1974) did not provide a meaning, Soehren suggested meanings for simple names from the *Hawaiian Dictionary* (Pukui and Elbert 1986). Thomas Thrum (1922) also compiled a list of place names in the 1922 edition of Lorrin Andrews’s *A Dictionary of the Hawaiian Language*, although these meanings are considered less reliable than those from Pukui et al. 1974.

The name **Waikīkī** translates as “water spurting from many sources,” and reveals the character of the intact watershed system of Waikīkī prior to European Contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground. Before the construction of the **Ala Wai Canal**, these streams did not merge until deep within Waikīkī. As they entered the flat plain of Waikīkī, the names of the streams changed; **Mānoa Stream** became **Kālia Stream** and **Pālolo Stream** became **Pāhoa Stream**. They joined in the ‘ili of **Hamohamo** (“rub gently” [as the sea on the beach]) and then divided into three new streams that flowed into the sea—**Kuekaunahi**, **‘Āpuakēhau**, and **Pi‘inaio**. The land between these three streams was called **Waikolu**, meaning “three waters” (Kanahele 1995:7–8).

Waikīkī Kai was once divided into smaller ‘ili lands, **Kālia** (“waited for”), **Pau** (“finished”), **Niukukahi** (“coconut standing alone”), **Loko Moo**, **Keōmuk**u (“the shortened sand”), **Helumoa** (“chicken scratch”), **Ulukou** (“kou tree grove”), **Mookahi**, **Kaluaokau**, **Auaukai**, **Hamohamo**, **Uluniu** (“coconut grove”), **Kapuni** (“the surrounding”), **Kekio**, **Kāneloa** (“tall Kāne”), **Kapua**

(“the flower”), and **Kaluahole** (“the āhole fish cavern”) (Bishop 1881; ‘Ī‘ī 1959:92–94). The project area is within the ‘ili of Uluniu and Kapuni.

Kapua ‘Ili, located in the eastern section of Waikīkī at the base of **Lē‘ahi** (Diamond Head Crater), was an ancient surfing area, now filled in and part of Kapi‘olani Park (Finney and Housten 1966:28). In 1809, Kamehameha put to death his nephew, Kanihonui, who committed adultery with Ka‘ahumanu, and placed his remains at a heiau on the western slope of Lē‘ahi, most likely **Papa‘ena‘ena Heiau**. As Ka‘ahumanu’s “wrath was aroused,” she began to make plans to take the kingdom from Kamehameha by force when she pronounced a surfing holiday at Kapua, since “the surf was rolling fine then” (‘Ī‘ī 1959:51). Other mo‘olelo describe how a shark called **‘Unihokahi**, a “one-toothed” shark, would bite the ali‘i (chief) as a warning that enemies were approaching by sea (Kamakau 1964:74). Kapua was also a site where “bone-breaking wrestlers” engaged in their sport (Kamakau 1992:72) (see Section 3.4.1, for the mo‘olelo of Ka-lua-‘Ōlohe, which describes a battle in the area of Kapi‘olani Park).

Kaluaokau ‘Ili, located in the central area of Waikīkī, has several possible meanings depending on pronunciation and combination of root words. Henry Kekahuna, a Hawaiian ethnologist, pronounced Kaluaokau as ka-lu‘a-o-ka‘u, which Thrum (1922:641) translated as “the grave of Ka‘u” (lu‘a means “heap, pile or grave”). Edith Kawelohea McKinzie (2005), drawing from the Hawaiian dictionaries by Pukui and Elbert (1986) and Andrews (1974), provides several other translations of Kaluaokau that suggest a place deeply connected to the mana (supernatural or divine power) of the Waikīkī ali‘i as indicated by interpretations of human sacrifice.

The term **Kaluaokau** can be divided as ka-lua-o-Kau, which literally translates as ka (the) lua (pit) o (of) Kau (a personal name), or “the pit of Kau” (McKinzie 2005:24). While others have similarly defined Kaluaokau without additional interpretation (Feesing 2006:90), McKinzie suggests Kaluaokau may be an epithet commemorating the burning sacrifice of Kauhi-a-Kama at **‘Āpuakehau Heiau** (2005:25–26). McKinzie elaborates that sacrifices were offered in a variety of ways, including the burning or baking of a person in an underground oven, a process called kālua, which is similar in phrasing to ka-lua (the pit). Since **Kau** may be a shortened name of **Kauhi-a-Kama**, the place name Kaluaokau may refer to “the pit of Kauhi-a-Kama” (Ka-lua-o-Kauhi-a-Kama), or, with the inclusion of a kahakō, **Kāluaokau** may refer to the “baking of Kauhi-a-Kama” (Kālua-o-Kauhi-a-Kama) (McKinzie 2005:25–26). McKinzie does not make use the kahakō [diacritical] in his text, which is added here).

Alternatively, **Kaluaokau** may be connected to human sacrifice through other meanings of the terms lua and kau (McKinzie 2005:27–28). Lua can refer to a type of dangerous hand-to-hand combat in which the fighters typically broke bones, dislocated bones at the joints, and inflicted severe pain by pressing on nerve centers, and kau can also mean to hang or crucify a criminal. Kaluaokau can thus be translated as “strike lua of kau [hanging]” (ka-lua-o-kau), which may refer to a strike or blow (ka) of a certain (o) fighting stroke (lua) similar to hanging (kau) (McKinzie 2005:27), i.e., a “lua fighting stroke of kau [hanging]” (Paglinawan 2008:8). McKinzie explains that “noosing” was a particular technique of lua fighting used for execution. To procure victims for sacrifice or to execute those who had broken kapu (taboo) laws, mū (public executioners) utilized basic cordage or a special strangling cord (ka‘ane) consisting of a

short handle and a cord loop to “noose” or strangle people to death in a manner similar to hanging (McKinzie 2005:27–28).

Helumoa ‘Ili, located in the central makai section of Waikīkī, translates as “chicken scratch,” a reference to mo‘olelo about the bodies of sacrificial victims being pecked over for maggots (see Section 3.4.3 for expanded mo‘olelo of Helumoa ‘Ili). Two foci of chiefly residence were at places called Helumoa, now the site of the Royal Hawaiian Hotel, and Ulukou, now the site of the Moana Hotel (Hibbard and Franzen 1986:2). **‘Āpuakēhau Stream**, literally “basket [of] dew” and possibly named for a rain (Pukui et al. 1974), emptied into the ocean between these two centers. The project area is located just directly south of this stream. **Kawehewehe**, sometimes synonymous with the mouth of ‘Āpuakēhau Stream and also the name of the reef entrance and channel at what is known today as Grey’s Beach just east of the contemporary Halekūlani Hotel, translates as “the removal,” which appears to refer to the water’s famous healing powers for removing sickness and forgiving of sins (Pukui et al. 1974:99). A famous surfing spot called **Kalehuawehe** was located at the mouth of ‘Āpuakēhau Stream (Hibbard and Franzen 1986:2).

Kālia ‘Ili, located in the western section of Waikīkī, is a name used for the central portion of Mānoa Stream and the name of the coastal area where the **Pi‘inaio Stream** emptied into the ocean. The exact meaning of Pi‘inaio is unknown, but pi‘ina means “climb or ascend” (Pukui and Elbert 1986:327). The stream’s mouth was on the western end of the Waikīkī coast, where the Ala Moana Shopping Center is now located, west of Duke Kahanamoku Beach and Lagoon.

While many other place names in Waikīkī have been lost to antiquity, a song composed by Kawelo during the reign of Kākuhihewa provides a glimpse into other place names of Waikīkī and the emotions they once evoked. After Kawelo surfed and participated in wrestling matches at the coconut grove of **Helumoa**, he sang the following love song for Kou, his sweetheart from Waikīki, upon his departure to his homeland of Kaua‘i:

Aloha **Kou** e, Aloha Kou,	Farewell to thee, farewell Kou,
Ke aloha mai nei Kou ia‘u	The love of Kou is within me,
Ka hoa hele i ka makani,	My companion of the windy days
I ka ‘āpa‘apa‘a anu o **Ahulu** nei.	And the cold of Ahulu.
E ualo mai ana ia‘u nā niu o **Pai**,	The coconut trees of Pai are calling me back,
E ‘ena‘ena mai ana i ku‘u maka,	They appear as raging fire to my eyes,
Ke a‘ā o **Kuamānu‘unu‘u**,	Like the volcanic rocks at Kuamānu‘unu‘u
‘I‘iau e ki‘i, e kui, a lei—e	I am tempted to get them, to string them, and to wear them,
Nā‘ākulikuli papa o **Huia** nei la,	The ‘ākulikuli blossoms there at Huia
E ualo mai ana ia‘u—e	For they are calling me back there
	[Hibbard and Franzen 1986:7]

Place names of Waikīkī are also listed in Table 1 which shows the place name, its meaning, a description of the place name, and the source from which the information was obtained. Figure 5 depicts the boundaries and locations of these wahi pana.

Table 1. Place Names of Waikīkī

Place Name	Meaning	Description	Source
‘Āpuakēhau Stream	Basket [of] dew	Stream entered the ocean at Helumoa (between the Royal Hawaiian and Moana Hotels), probably named for a rain; also called Ulukou	Kanahele 1995:7; Pukui et al. 1974
Auaukai	(undocumented)	‘Ili	Bishop 1881
Hamohamo	Rub gently [as the sea on the beach]	‘Ili where Kālia and Pāhoa Streams joined and then divided to form Kuekaunahi, ‘Āpuakēhau, and Pi‘inaio Streams	Kanahele 1995:7
Helumoa	Chicken scratch	‘Ili and site of a heiau where Kahanana was sacrificed, named in reference to mo‘olelo about the bodies of sacrificial victims pecked over for maggots	Pukui et al. 1974
Kālia	Waited for	‘Ili; a stream in the Waikīkī Plain that came from Mānoa	Kanahele 1995:7
Kalehuawehe	The removed lehua lei	An ancient surfing area, now called Castle’s	Finney and Housten 1966:38
Kaluahole	The āhole fish cavern	‘Ili; coast between Waikīkī and Black Point	‘Ī‘ī 1959:92; Pukui et al. 1974
Kaluaokau	(undocumented)	‘Ili	Bishop 1881
Kāneloa	Tall Kāne	‘Ili	Bishop 1881
Kapua	The flower	‘Ili; ancient surfing area, now filled in and part of Kapi‘olani Park	Finney and Housten 1966:28; Lyons 1876
Kapuni	The surrounding	‘Ili; ancient surfing area	Finney and Housten 1966:28
Kawehewehe	The removal	Name of the mouth of ‘Āpuakēhau Stream and also the name of the reef entrance and channel at what is known today as Grey’s Beach; the water had healing powers for removing sickness	Pukui et al. 1974:99
Kekio	(undocumented)	‘Ili	Bishop 1881

Place Name	Meaning	Description	Source
Keōmuku	The shortened sand	‘Ili	Bishop 1881
Kuekaunahi Stream	(undocumented)	Stream entered the ocean at Hamohamo (near intersection of ‘Ohua Avenue and Kalākaua Avenue)	Kanahele 1995:7
Loko Mo‘o	(undocumented)	‘Ili	Bishop 1881
Mo‘okahi	(undocumented)	‘Ili	Bishop 1881
Niukūkahi	Coconut standing alone	‘Ili; ancient surfing area	Finney and Housten 1996:28
Pae-ki‘i	(undocumented)	Stones marking a site where strangers suspected of initiating war or searching for human sacrifices were drowned, a type of death called kai he‘e kai	Beckwith 1970:89
Pāhoa Stream	(undocumented)	Stream in the Waikīkī Plain that came from Pālolo	Kanahele 1995:7
Pau	Finished	‘Ili	Bishop 1881
Pi‘inaio Stream	(undocumented)	Stream entered the ocean at Kālia, becoming a large delta	Kanahele 1995:8
Ulukou	Kou tree grove	‘Ili; another name for ‘Āpuakēhau	Bishop 1881; Pukui et al. 1974
Uluniu	Coconut grove	‘Ili	Bishop 1881
Waikīkī	Water spurting from many sources	Ahupua‘a	Pukui et al. 1974
Waikolu	Three waters	The land between Kuekaunahi, ‘Āpuakēhau, and Pi‘inaio Streams	Kanahele 1995

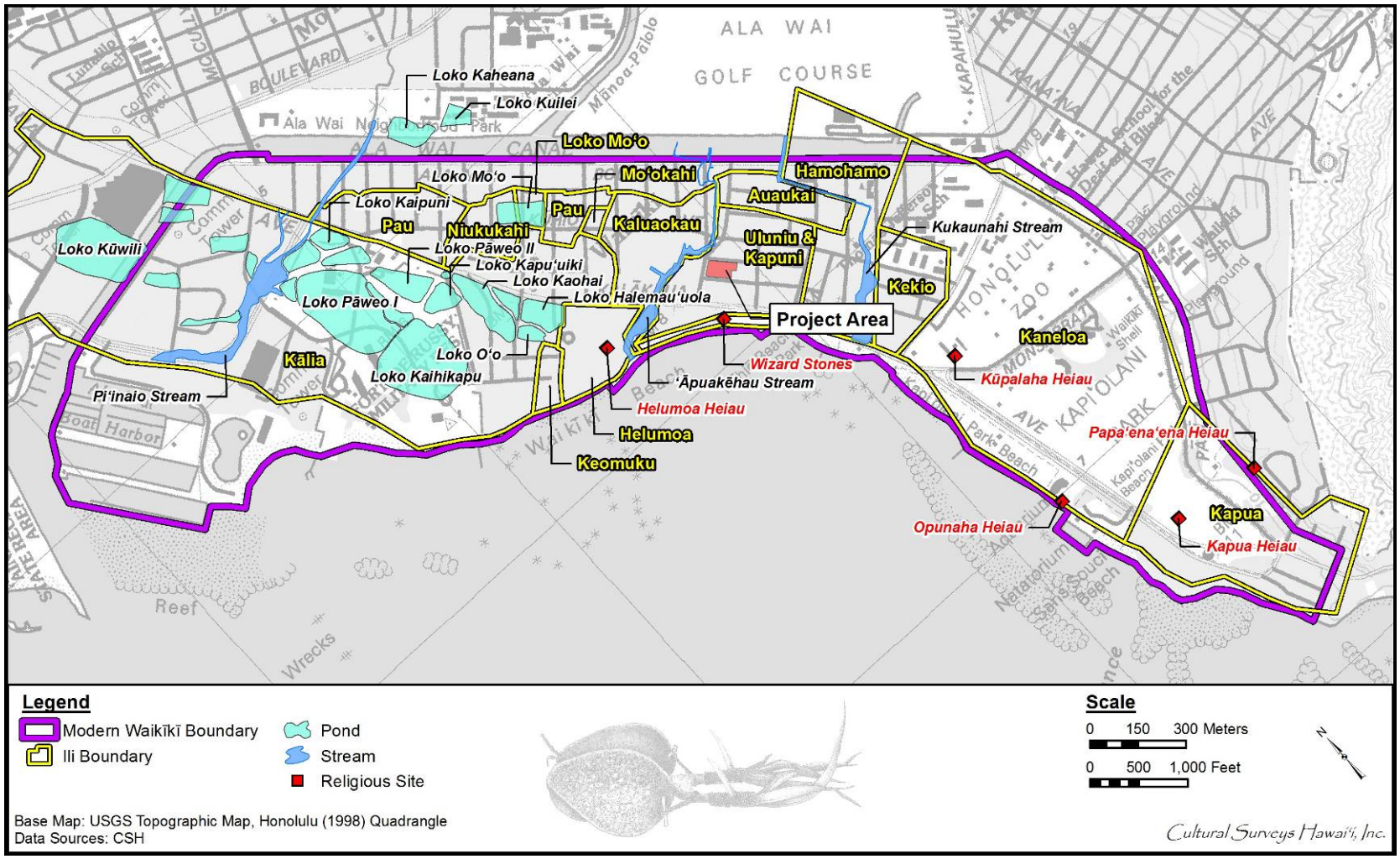

Figure 5. 1998 Honolulu USGS Topographic Quadrangle with overlay of ‘ili names, heiau, loko i‘a (fishpond), and streams within Waikīkī Ahupua‘a

3.4 Mo‘olelo (Stories)

Various mo‘olelo are associated with Waikīkī Ahupua‘a which suggest this area was settled by a significant Native Hawaiian population. The following section describes in detail these mo‘olelo associated with the study area.

3.4.1 Ka-lua-‘Ōlohe

Mo‘olelo describe how ‘Ōlohe was a cruel chief master of lua wrestling. The defeat of this chief involved a battle in Kapi‘olani Park and led to the naming of an area in Pālolo as Ka-lua-‘Ōlohe, or “the lua fighting of ‘Ōlohe”:

> Loheloa came from Waipio on a huge log. He came first to Makapuu and then to Keauau Point, now called Leahi. He saw a strange glow like a ball of fire there. He asked for the chief Olohe and was told that the light was his.
>
> He saw some fishermen who told him to go away for he was scaring the fish. He called to Ku and Hina to bring them a school of fish which they did. The natives were grateful. He lifted his huge canoe and rested one end at Haula and the other at Namahana, against the hill. He told the people that he wanted to wrestle with their chief Olohe, a dogman who lived at Apuakehau, Waikiki. A messenger came to tell the chief who accepted the challenge. In the meantime the men were busy catching fish brought to them by Loheloa. A messenger was sent to bring Loheloa to the chief and Loheloa suggested that they wrestle in the open where they can be seen. He would bet his bones and his canoe on himself.
>
> Olohe and Loheloa fought on the field now known as Kapiolani Park. Olohe punched and raised a gale that flattened the ilima bushes. Loheloa slapped his ear hard enough to throw him in the air. The place he fell is called Kalua-Olohe (Olohe’s pit) to this day. Loheloa won and the people shouted with joy over the defeat and death of their cruel chief. [Hainakolo, *Hawaii Holomua*, 21 July 1912, cited in Sterling and Summers 1978:279]

3.4.2 Papa‘ena‘ena Heiau

The mana of Papa‘ena‘ena Heiau is captured in the following ‘ōlelo no‘eau:

> Pili pono ka lā i Papa‘ena‘ena. *The sun concentrates its heat at Papa‘ena‘ena.*
>
> Said of the heat of temper. A play on ‘ena‘ena (red-hot) (Pukui 1983:291, #2654).

Kamehameha visited Papa‘ena‘ena Heiau before setting off to battle for Ni‘ihau and Kaua‘i in 1804. Two travelers, Daniel Tyerman and George Bennett, recorded the human sacrificial ceremonies at Papa‘ena‘ena Heiau as reported by an observer:

> In the year 1804, when the late king, Tamehameha [Kamehameha], was on his way from Hawaii, to invade Tauai [Kaua‘i], he halted with an army of eight thousand men at Oahu. The yellow fever broke out among the troops, and in the course of a few days swept away more than two-thirds of them. During the plague, the king repaired to the great marae at Wytiti [Waikīkī], to conciliate the

> god, whom he supposed to be angry. The priests recommended a ten days' tabu, the sacrifice of three human victims, four hundred hogs, as many cocoanuts, and an equal number of branches and plantains. Three men, who had been guilty of the enormous turpitude of eating cocoa-nuts with the old queen (the present king's mother), were accordingly seized and led to the marae. But there being yet three days before the offerings could be duly presented, the eyes of the victims were scooped out, the bones of their arms and legs were broken, and they were then deposited in a house, to await the coup de grace on the day of the sacrifice. While these maimed and miserable creatures were in the height of their suffering, some persons, moved by curiosity, visited them in prison, and found then neither raving nor desponding, but sullenly singing the national huru—dull as the drone of a bagpipe, and hardly more variable—as though they were insensible of the past, and indifferent to the future. When the slaughtering time arrived, one of them was placed under the legs of the idol, and the other two were laid, with the hogs and fruit, upon the altar-frame. They were then beaten with clubs upon the shoulders till they died of the blows. This was told us by an eye witness of the murderous spectacle. [Tyerman and Bennett 1831:423, cited in McAllister 1933:71]

Papa‘ena‘ena Heiau was also a "surfing heiau," as it was also dedicated to the surf and its riders. It overlooked "First Break," the start of a surfing course called Kalehuewehe that extended to Kālia (Kanahele 1995). Surfers offered their sacrifices at the heiau to obtain mana and knowledge of the surf, and kahuna (priest, sorcerer) signaled excellent surf conditions by flying a kite:

> There at Kalahuewehe [Kalehuewehe] is the big surf created by Papa‘ena‘ena.
>
> Arise, of ye surf of Kalahuewehe, arise! . . .
>
> The kahuna of Papa‘ena‘ena flies his moon kite
>
> To proclaim the suitability of the sea for surfing.
>
> The eager lookout on yonder highland
>
> Anxiously scans the skies for this signal,
>
> And relays the good news by runners;
>
> Farmers, woodsmen, bird catchers all,
>
> Leave their tasks and fetching their surf boards
>
> Hurry to the beach at Waikīkī
>
> Soon the sea is filled with natives
>
> Sporting in the billowy surf;
>
> Trick riding, zigging and zagging, amidst the foam,
>
> Shouting words of defiance against the angry surf
>
> To topple the rider if it can . . . (Kenn n.d., cited in Kanahele 1995:56–57)

3.4.3 Helumoa ‘Ili, ‘Āpuakēhau Heiau, and Ka‘opulupulu

Thrum (1998:203–214) recounts the mo‘olelo of the kahuna nui (highest priest) of O‘ahu, Ka‘opulupulu, whose curse upon his death resulted in ke one ‘ai ali‘i o Kakuhihewa (the chief devouring sand of Kakuhihewa). Ka‘opulupulu had a son named Kahulupu‘e, who he taught all the traditions and rituals of the priestly caste. At this time, the ruler (ali‘i aimoku) of O‘ahu was Kumuhana, a cruel chief who terrorized his people and would not listen to the counsel of his priest, Kahulupu‘e. Kumuhana was finally driven off the island by the people and the lesser chiefs. When Kahekili, the king of Maui, heard this news, he sent his foster son, Kahāhana (brother of Kumuhana), to rule O‘ahu in Kumuhana’s place (ca. 1773). Kahāhana chose a grove of coconut and kou trees, called Ulukou, located on the Waikīkī coast as his place of residence, and many ali‘i gathered in that place around him. One day, Kahāhana sent a messenger to Ka‘opulupulu to attend him at Ulukou, who traveled from his home in Waimea and was greeted by the retainers of the king when he reached the mouth of the stream ‘Āpuakēhau. At first Kahāhana valued the wisdom of the priest, but after several years, Kahahana began to be as cruel to the people as his predecessor, Kumuhana. In protest, the priest Ka‘opulupulu left Waikīkī to return to his home in Waimea, where he tattooed his knees, a sign that Kahāhana had turned a deaf ear to his advice. This angered the king, who sent messengers to order Ka‘opulupulu and his son, Kahulupu‘e, to come to Wai‘anae, where Kahāhana then resided.

At Wai‘anae, Ka‘opulupulu and his son were placed into a special grass hut, one tied to the end post and one tied to the corner post. The next day, Kahāhana ordered his men to torture the son, stabbing his eyes and stoning him while his father watched. When Ka‘opulupulu saw this, he commanded his son to flee into the sea, saying these words, which contained a prophecy:

E nui ke aho, e ku‘u keiki,	Take a deep breath, my son, and
a moe i ke kai, no ke kai la	lay yourself in the sea, for then
ho‘i ka ‘āina.	the land shall belong to the sea. [Pukui 1983:44]

Ka‘opulupulu was taken by the soldiers to Pu‘uloa (Pearl Harbor), at ‘Ewa, and slain before the king. His body was put into a canoe and taken to Waikīkī, where it was placed high in the coconut trees at Kukaeunahi at the heiau of Helumoa, so that the flesh would decompose and fall to the sand (Thrum 1998:214). According to one mo‘olelo, the meaning of Helumoa, “chicken scratch,” refers to chickens scratching to find the maggots that fell from victims placed in the trees who were human sacrifices at the heiau of ‘Āpuakēhau (Pukui et al. 1974:44). When the king of Maui, Kahekili, heard this news he grieved for Ka‘opulupulu and turned against his foster son. With his warriors, he set out over the sea for Waikīkī to take back the rulership of O‘ahu under his own authority. This fulfilled the prophecy of Ka‘opulupulu. According to S.M. Kamakau and David Malo, this saying was also in keeping with a prophecy by Kekiopilo presaging the arrival in the islands of foreigners, which would lead to “the foreigners possess[ing] the land” (Thrum 1998:214).

The sands of Ulukou was known as “Ke One ‘Ai Ali‘i o Kākuhihewa” because of the curse placed by the prophet Ka‘opulupulu. When Ka‘opulupulu was brought with his son, Kahulupu‘e, to be executed at Waikīkī, he cursed the place where his body-grease (hinu) would drip upon the sand, as well as the chiefs and the people (Hibbard and Franzen 1986:5). This curse continued to have an effect for the descendants of Kamehameha. Kamehameha II died in England. From the

warning of this curse by the kahuna, Luau-nui-a-lepokapo, after the death of Kamehameha II, Kamehameha III (Kauikeaouli) transferred the seat of the government from O‘ahu to Lahaina in 1838. He later reconsidered moving back to O‘ahu against the counsel of his kahuna:

> ‘O chief! This land of Oahu of Lua is made bitter by the fat of the man of god and his words lie like a squirming maggot for Kakuhihewa. If you listen to those who ask that the government be taken back to Oahu, it will become a maggot which will consume your race.’ [Green and Pukui 1936:123]

However, Kauikeaouli ignored the advice, and the prophecy was fulfilled with the smallpox epidemic of 1852–1853 (Thrum 1998:214).

3.4.4 Kawehewehe

‘Āpuakēhau Stream has sometimes been referred to as the muliwai (river, river mouth) of Kawehewehe. The place name Kawehewehe, cited by ‘Ī‘ī (1959:93) and in the Māhele records, is also of note. It not only identifies a land area in Waikīkī, according to Hawaiian scholars, it also names

> [The] Reef entrance and channel off Grey’s Beach, just east of the Hale-kū-lani Hotel, Wai-kīkī, Honolulu. The sick were bathed here as treatment. The patient might wear a seaweed (limu-kala) lei and leave it in the water as a request that his sins be forgiven, the lei being a symbol. Lit., the removal. [Pukui et al. 1974:99]

The līpōa seaweed of Waikīkī, especially at Kawehewehe, was so fragrant that one could smell it while standing on the shore. It was often mentioned in mo‘olelo about Waikīkī, including the following saying from Pukui (1983):

Na līpoa ‘ala The fragrant līpōa

O Kawehewehe. of Kawehewehe.

[Pukui 1983:246]

3.4.5 The Mo‘olelo of Kawelo

In the “Legend of Kawelo,” two boys are born on the same day, Kawelo-lei-makua, called Kawelo, the great nephew of the king of Kaua‘i, and Kawelo-aikanaka, called ‘Aikanaka, the grandson of the king. Kawelo’s older brothers and his parents soon moved from Kaua‘i to live at Waikīkī in O‘ahu near the ruling chief of O‘ahu, Kākuhihewa. The older brothers of Kawelo often challenged a famous wrestler living with Kākuhihewa, but they could never beat him.

The brothers of Kawelo were great surf riders, and they often went to ride the surf at Kalehuawehe (near the present Seaside Hotel in Waikīkī). After the surf ride they would go to the stream of ‘Āpuakēhau and wash, and from there they would go to the shed where the wrestling bouts were held and test their skill with Kākuhihewa’s strong man; but in all their trials they never once were able to throw him (Fornander 1918:4).

When the king of Kaua‘i died, ‘Aikanaka became the new king. The grandparents, who longed to see their other children, traveled with Kawelo to O‘ahu, to Ulukou in Waikīkī, near the mouth of the stream ‘Āpuakēhau, where his elder brother and parents had been living. His

grandparents later took him just inland of the coast. While Kawelo was working in the fields, he heard some shouting from the beach, and asked his grandparents, “What is that shouting down yonder?” (Fornander 1918:5). The grandparents answered that his older brothers had just finished surfing and must have challenged the king’s strong man. The shouting indicated one of them must have been thrown. Next day, Kawelo went down to the beach, went surfing with his brothers, and then bathed in the freshwater stream of ʻĀpuakēhau. He challenged the strong man to a match, even though his brothers mocked him, saying “Are you strong enough to meet that man? If we whose bones are older cannot throw him, how much less are the chances of yourself, a mere youngster?” (Fornander 1918:6). The strong man, impressed by Kawelo’s courage, said:

> ‘Ina wau e kahea penei, “Kahewahewa, he ua!” alaila, kulai kaua.’ Hai aku la no hoi o Kawelo i kana olelo hooulu, penei: ‘Kanepuaa! Ke nahu nei! Alia! Alia i oki ka aina o Kahewahewa, he ua!’
>
> ‘If I should call out “Kahewahewa, it is raining,” then we begin.’ Kawelo then replied in a mocking way: ‘Kanepuaa, he is biting, wait awhile, wait awhile. Don’t cut the land of Kahewahewa, it is raining.’ [Fornander 1918:6]

Kawelo won the match, shaming his older brothers so much that they returned to Kauaʻi. In another version (Thrum 1923:154), the strong man was from Halemano (central Oʻahu), and was killed by a mighty blow from Kawelo. The man’s body was given to the king of Oʻahu, and was carried as a sacrifice to the gods to a heiau in Lualualei, Waiʻanae.

3.4.6 Nā Pōhaku ʻOla Kapaemahu a Kapuni

Richard Paglinawan summarizes the history of Nā Pōhaku ʻOla Kapaemahu a Kapuni, or the Life-giving Stones of Kapaemahu and Kapuni, commonly referred to as the Wizard Stones (Paglinawan 1997). According to Mr. Paglinawan’s summary of various moʻolelo, four healers gifted in medicinal practices once came from Kahiki (the ancestral homeland of the Hawaiians), most likely the sacred land of Raiatea. While some sources claim they were homosexual, Tutu Mary Kawena Pukui asserts they were gender neutral. The wizards included Kapaemahu who, due to his neutral gender, could examine and heal both men and women; Kahoe, a diagnostician who could determine illness just by visual assessment; Kahaloa, who was able to breathe life into ill patients; and Kapuni, who could envelope his patients with his mana to overcome their illness (Paglinawan 1997).

When the four healers returned to Kahiki, they had stones placed to commemorate their existence. These were most likely quarried from a site in Kaimukī near the present-day intersection of Waiʻalae Avenue and Fifth Avenue, and then transported to Waikīkī. The coastal and inland region of Waikīkī was dominated by loʻi (irrigated terrace), which would have made the movement of these pōhaku (rock) difficult, but, according to Dr. George S. Kanahele, the stones may have been moved on a 12-ft wide causeway that extended between Mānoa and Waikīkī., which had been observed by George Vancouver in 1792 (Paglinawan 1997).

Two of the commemorative stones were placed at the healers’ residences, and two were placed in their bathing place in the sea. The Honorable A.S. Cleghorn unearthed an 8-ton stone at his residence close to the Moana Hotel in 1905. Another stone weighing 10 tons was uncovered by Mr. Lutted, and two more were excavated in a straight line with the others. Underneath the 10-ton stone Mr. Cleghorn uncovered a female jaw bone and some crude images, which he later

cemented onto the stone. In 1941, the Waikiki Bowling Alley was constructed with the stones serving as part of the foundation, but they were uncovered in 1958 when the building was razed. In 1963 the stones were located together on the beach, and in 1980 they were relocated to their present site near the police substation. The location of Mr. Cleghorn's cement casings indicated the stones had been positioned incorrectly; however, a decision was reached to leave them as they had been placed (Paglinawan 1997).

3.4.7 Kālia

The fact that several ‘ōlelo no‘eau are associated with seaweed, crabs, and fish of the nearby ‘ili of Kālia in Waikīkī suggests the coastal area of of Waikīkī was once abundant in marine resources.

The seaweed called limu ‘ele‘ele was plentiful near the stream's outlet. A Hawaiian saying talks about this pleasant portion of the coast:

Ke kai wawalo leo le‘a o Kālia *The pleasing, echoing sea of Kālia.*

[Pukui 1983:186, #1734]

Kālia is also a place where ‘alamihi crabs were once plentiful, leading to a play on the word ‘ala-mihi (path of repentance), indicating someone who is in a repentant mood (Pukui 1983:110):

Ho‘i i Kālia ka ‘ai ‘alamihi. *Gone to Kālia to eat ‘alamihi crabs.*

Kālia was also known for a fishing technique used to catch schools of mullet. When a school of mullet appeared, a bag net was set and the men swam out in a row, surrounded the fish, and slapped the water together and kicked their feet, thus driving the frightened fish into the opening of their bag net. The fishermen of Kālia became known as human fishnets (Pukui 1983:150, #1378):

Ka i‘a pīkoi kānaka o Kālia; *The fish caught by the men of Kālia;*

he kānaka ka pīkoi, *men are the floaters,*

he kānaka ka pōhaku. *men are the sinkers.*

Kālia is also mentioned in a story about a woman who left her husband and children on Kīpahulu, Maui to go away with a man of O‘ahu. Her husband missed her and went to see a kahuna who was skilled in hana aloha (sorcery for love-making potions with herbs, prayers and even hypnosis). The kahuna told the man to find a container with a lid and then speak into it of his love for his wife. The kahuna then uttered an incantation into the container, closed it, and threw it into the sea. The wife was fishing one morning at Kālia, O‘ahu, and saw the container. She opened the lid, and was possessed by a great longing to return to her husband. She walked until she found a canoe to take her home (Pukui 1983:158, #1463):

Ka makani kā‘ili aloha o *The love-snatching wind*

o Kīpahulu. *of Kīpahulu*

3.5 Traditional Settlement and Agricultural Patterns

While the surface archaeological record of Waikīkī has been extensively disturbed, obscured, and, in some cases, destroyed over the past two centuries, pioneering efforts in the early twentieth century to document sites based on the recollections of Hawaiian residents (McAllister 1933), recent archaeological research and cultural resource management work, combined with mo‘olelo, offer a window into the ancient past. Importantly, there was a close spatial association between major heiau and intensive agriculture for the entire island of O‘ahu, and residential sites are usually distributed around the margins of irrigation systems and up into lower valleys (Kirch 1992:16–17). Thus, fragments of information about residential sites, cultivation and irrigation, trails, burials, and monumental structures and other cultural sites derived from archaeology, ethnography, and historical records illuminate ancient settlement patterns, part of the overall cultural landscape. Reconstructing patterns of ancient settlement draws heavily from wahi pana.

The coastal village of Waikīkī was most likely centered around the mouth of ‘Āpuakēhau Stream in the vicinity of the project area, near the Royal Hawaiian Hotel. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to the lower valleys of Mānoa and Pālolo. This field system was an impressive feat of engineering, the design of which is traditionally attributed to the chief Kalamakua. It took advantage of streams descending from the valleys of Makiki, Mānoa and Pālolo. The lo‘i kalo (taro), in combination with coconut groves and numerous fishponds along the Waikīkī shoreline, enabled the growth of a sizeable population. Captain George Vancouver, arriving in Waikīkī in 1792, and the naturalist of the expedition, Archibald Menzies, described the village of Waikīkī, aqueducts (‘auwai) that irrigated vast fields of taro on the plain, and well-stocked fishponds (Menzies 1920:23–24; Vancouver 1798:161–164). This was later depicted by Lt. Charles R. Malden, of the British vessel *Blonde*, in 1825 (Figure 6), and Joseph Marie Henri de LaPasse, of the French ship *Eurydice*, in 1855 (Figure 7).

Archaeological surveys and excavations conducted for cultural resource management work in Waikīkī have uncovered cultural layers that have been radiocarbon dated to approximately AD 1400 to 1800. Many of these cultural layers contain evidence of habitation and occupational activities. For example, a cultural layer located approximately east of the project area and radiocarbon dated to between AD 1430–1630 contains evidence of habitation with pits, fire pits, post molds, food debris (shells, fish, birds, dogs, pigs, rodents), two human burials, and artifacts (basalt flakes, volcanic glass, worked pearl shell, basalt and volcanic glass cores, a basalt adze, adze fragments, a coral file and abraders, and a pearl shell fishhook) suggesting occupational activities of fishing, manufacture of tools or ornaments, and use of tools as adzes (State Inventory of Historic Properites [SIHP] # 50-80-14-4224; Beardsley and Kaschko 1997).

Several cultural layers indicative of habitation are located in close proximity to the project area. A well-defined cultural layer, located at the Princess Ka‘iulani Hotel, containing charcoal, fire affected rock, midden material, pits, and intact cultural deposits resulted in radiocarbon dates to AD 1725–1815 (SIHP # -7066; Runyon et al. 2010). A cultural layer (charcoal) in association with 24 burials located at the Moana Hotel with pits, postholes, and artifacts (boar tooth pendant, volcanic glass, cowry and pearl shell lures and scrapers, coral abraders, basalt adze fragments,

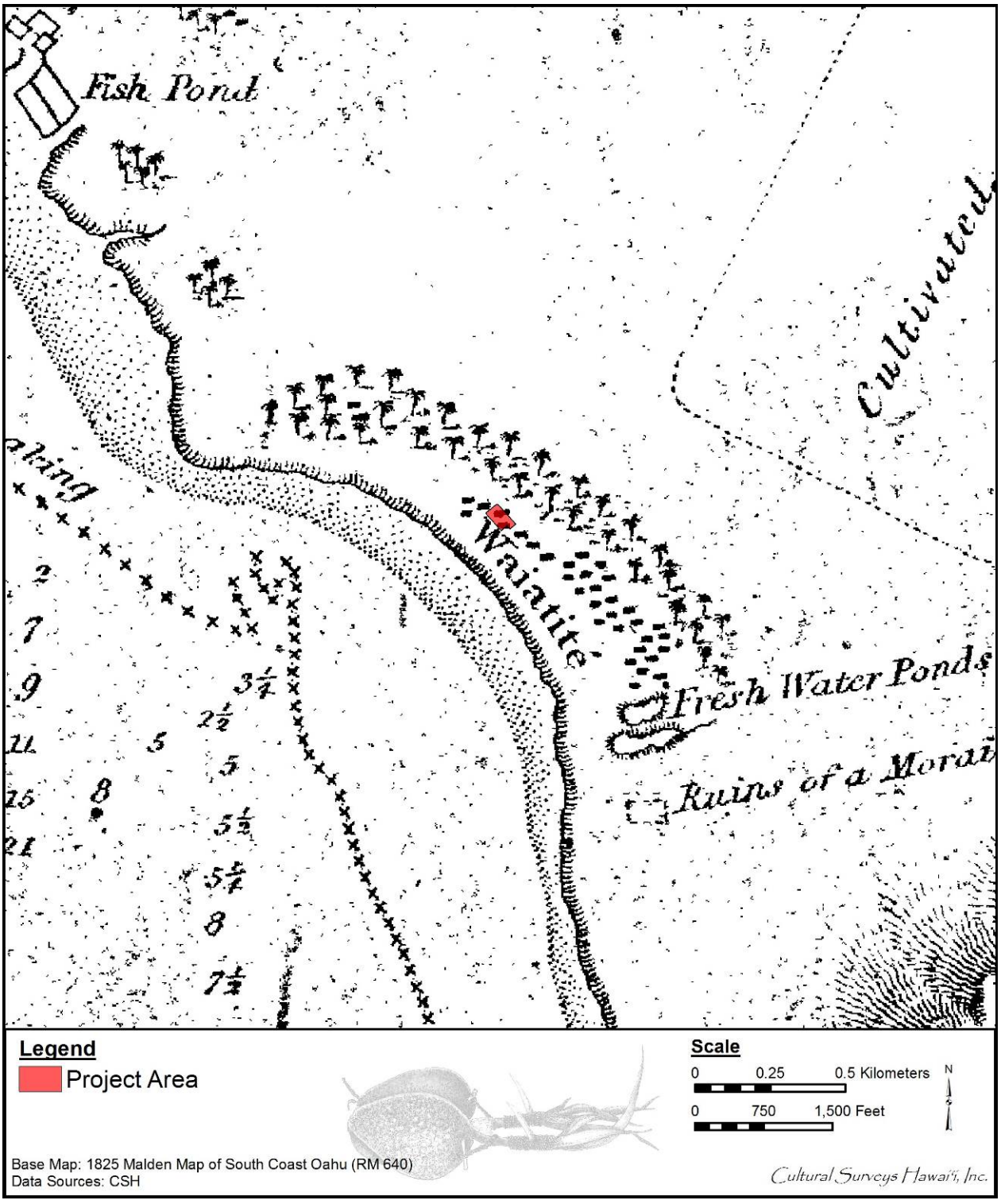

Figure 6. 1825 Malden map of the south coast of O‘ahu

Figure 7. 1855 LaPasse Map of Honolulu depicting project area

and basalt flakes, awls, adzes, and hammerstones) was radiocarbon dated to AD 1334–1955 (SIHP # -1974; Simons et al. 1991). Another cultural layer at the Moana Hotel containing fire-cracked rock and charcoal deposits was radiocarbon dated to AD 1801–1939 (SIHP # -7068; Thurman et al. 2009). In addition, a trench (No. 10) extending across Kalākaua Avenue near the project area uncovered an imu (underground oven) pit with an entire pig still *in situ* (in position), radiocarbon dated to AD 1441–1671 (no SIHP number; Bush et al. 2002).

Other cultural layers provide evidence of vast wetland cultivation, including buried lo‘i sediments, retaining walls and bunds, channelized muliwai and ‘auwai (irrigated ditch), and kuāuna (a bank of an irrigated taro patch) for locations and descriptions throughout Waikīkī. One such cultural layer is located in close proximity to the project area. At the Waikīkī Shopping Plaza, a culturally modified wetland ground surface with organic material radiocarbon dated to AD 1440–1640 and AD 1390–1490 contains soil ridges indicative of ‘auwai, which is an extension of a wetland agricultural environment documented by LeSuer et al. (2000) (SIHP # -5796; Yucha et al. 2009).

Mā‘ilikūkahi, upon his ascent to ali‘i nui of O‘ahu in approximately AD 1490, shifted his residence from Waialua to Waikīkī, which may have initiated the pattern of royal residence at Waikīkī (Kamakau n.d., cited in McAllister 1933:74). With the ascension of Mā‘ilikūkahi, Waikīkī became the ruling seat of the O‘ahu chiefs (Beckwith 1970:383), with the royal courts established primarily at Helumoa (now the Royal Hawaiian Hotel) and Ulukou (now the Moana Hotel) (Hibbard and Franzen 1986:2; Paglinawan 2008:9). Five generations later, during the late 1500s, the ali‘i Kākuhihewa lived at Ulukou just makai of the project area. La‘ie-lohelohe, the daughter of noted Waikīkī chief Kalamakua-a-Kapuholua, was raised within the bounds of Kaluaokau. She was betrothed to a Maui chief and later gave birth to Kiha-a-Pi‘ilani, the great Maui leader. Kiha-a-Pi‘ilani was born at ‘Āpuakēhau Heiau, once located on the beach near Kaluaokau (Kamakau 1991:49). The preeminence of Waikīkī as a residence of chiefs continued into the eighteenth century, marked by Kamehameha’s decision to reside there upon wresting control of O‘ahu by defeating the island's chief, Kalanikūpule, in 1795. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī, a member of the ali‘i, notes the king’s Waikīkī residence was located at Pua‘ali‘ili‘i near the sands of ‘Āpuakehau (‘Ī‘ī 1959:17). These various mō‘ī (kings, rulers) who established their residence in Helumoa ‘Ili would have had hundreds of support staff in the ‘ili of Kaluaokau, Hamohamo, and Uluniu (Paglinawan 2008:10).

The focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O‘ahu changed with Euro-American Contact. The village of Kou, with the only sheltered harbor on O‘ahu, became the center for trade with visiting foreign vessels, drew increasing numbers of Hawaiians away from cultivation and aquaculture in Waikīkī, and foreign diseases devastated the populace (Chamberlain 1957:26). The shift in the preeminence of Waikīkī is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu.

3.6 Marine Resources

3.6.1 Loko I‘a (Fishponds)

Historic maps and images depict the locations of numerous loko i‘a in Waikīkī and historic documents describe “several hundred” and “innumerable” artificial freshwater fishponds

extending a mile inland from the shore (Figure 8; Bloxam 1925:35–36, cited in McAllister 1933:76). Two studies by the U.S. Commission of Fish and Fisheries (Bowers 1902:429; Cobb 1902, cited in McAllister 1933:76) listed extant fishponds in Kālia in 1901, including Ka‘ihikapu (“the taboo sacredness”), Kūwili (“stand swirling”), Kaipuni (1 and 2), Paweo (1 and 2), Kapu‘uiki, Kapaakea, Maalahia, Opu, and Opukaala, as well as several fishponds with undocumented names. In addition, historic maps provide the locations of several of these and other fishponds: Kaohai, Oo, Halemauuola, Moo, Kuilei (“lei stringing”), and Kaheana (Bishop 1881).

Excavated sediments of four loko in Fort DeRussy—Ka‘ihikapu (SIHP # -4575; Denham and Pantaleo 1997b), Kaipuni (SIHP # -4573; Denham and Pantaleo 1997b), Kapu‘uiki (SIHP # -4577; Denham and Pantaleo 1997b), and Loko Paweo I (SIHP # -4574; Denham and Pantaleo 1997a, 1997b), have radiocarbon dated to approximately AD 1400–1700 and indicate inland burning associated with clearance of land for agriculture.

3.7 Heiau

Thomas G. Thrum reports seven heiau were once located in Waikīkī, including Papa‘ena‘ena Heiau, Kapua Heiau, Kūpalaha Heiau, Helumoa Heiau, Makahuna Heiau, Kamauakapu Heiau, and Kulanihakoi Heiau (1907a:44), as well as four large pōhaku that constituted a religious site, commonly called the Wizard Stones of Kapeimāhū (see Section 3.4.6; Thrum 1907b:139–141). Samuel Kamakau notes another heiau of Waikīkī called Halekumukaaha Heiau (n.d., cited in McAllister 1933:78). Several of the heiau were of po‘okanaka classification, used ceremoniously for human sacrifices (Stokes 1991:24). The locations of several heiau in the vicinity of Kapi‘olani Park are indicated on early historic maps, such as by LaPasse in 1855 (see Figure 7).

3.7.1 Helumoa Heiau or ‘Āpuakēhau Heiau

Helumoa Heiau, also known as **‘Āpuakēhau Heiau**, was located in central Waikīkī near the muliwai (river mouth) of ‘Āpuakēhau Stream in the vicinity of the project area. This heiau, of po‘okanaka class, was the site of the sacrifice of Kauhi-a-Kama, a defeated mō‘ī of Maui, during his attempted conquest of O‘ahu about 1610 (Thrum 1907a:44). This sacrificial heiau was also where Ka‘opulupulu—the last O‘ahu-born Kahuna Nui of O‘ahu—was laid after being slain in Wai‘anae by Kahāhana (Thrum 1904:112–113). The memory of Kauhi-a-Kama’s death and descecration of his remains at ‘Āpuakēhau Heiau may have instigated his descendant, Kahekili, to massacre the O‘ahu chiefs and sacrifice Kahāhana at ‘Āpuakēhau Heiau (Fornander 1878:II:208). Portions the Royal Hawaiian Hotel are built on the former site of ‘Āpuakēhau Heiau. An athletic field for ali‘i was also formerly built at the site of the Royal Hawaiian Hotel, as excavations for the hotel uncovered ‘ulumaika (game) stones (Thrum 1907a:79) (see Section 3.4.3, for expanded mo‘olelo of Helumoa ‘Ili, ‘Āpuakēhau Heiau, and Ka‘opulupulu).

3.7.2 Wizard Stones of Kapeimāhū

Another religious site in Waikīkī is, according to mo‘olelo, Nā Pōhaku ‘Ola Kapaemahu a Kapuni, commonly referred to as the Wizard Stones of Kapeimāhū (Figure 9). These stones were

Figure 8. Photo of fishponds in the Kālia area of Waikīkī (foreground) with Lē‘ahi (Diamond Head) in background, ca. 1900s (Hawai‘i State Archives)

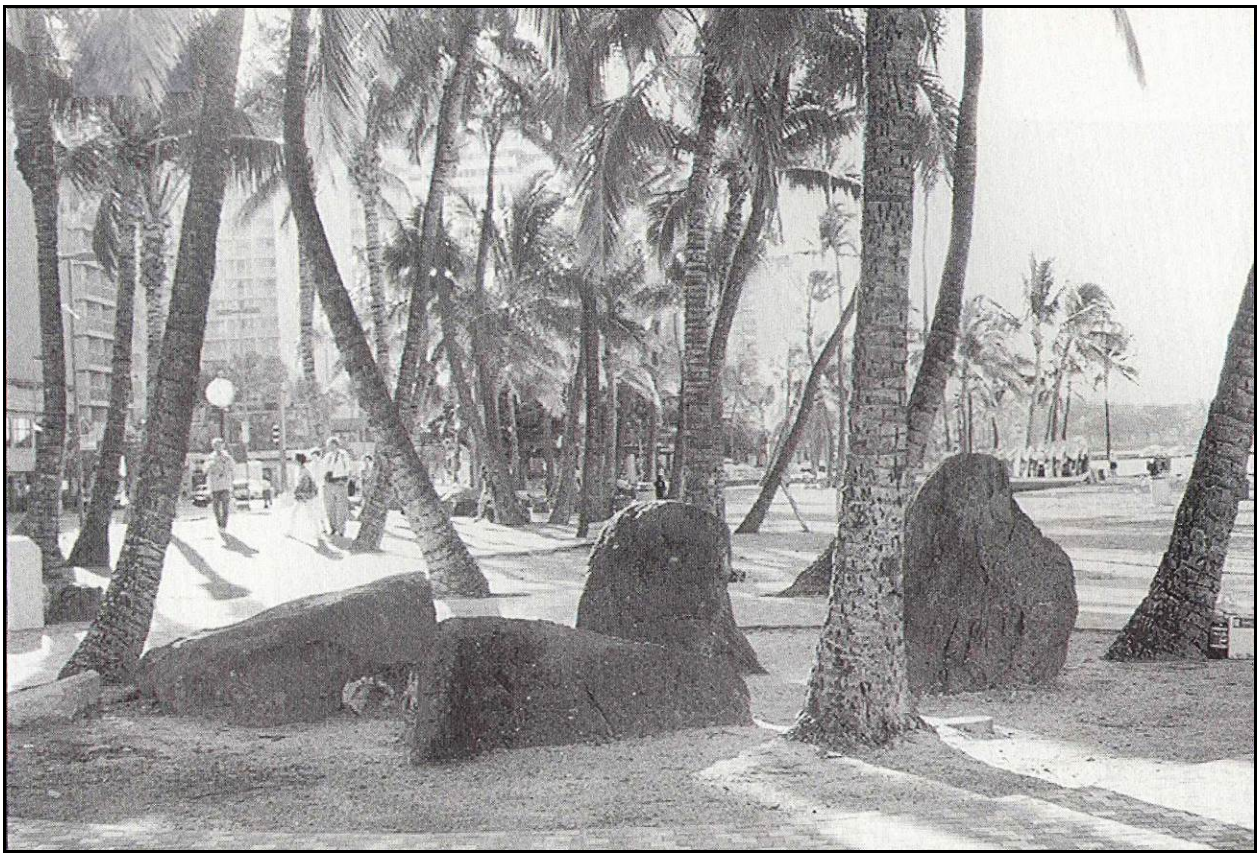

Figure 9. Photo of Nā Pōhaku ‘Ola Kapaemahu a Kapuni, more commonly known as the Wizard Stones (Hawai‘i State Archives n.d.)

unearthed in the late 1800s on the Waikīkī premises of the Cleghorn family, including Governor A. Cleghorn, his wife Princess Likelike, and their daughter Princess Ka‘iulani. According to a mo‘olelo gathered by Thrum (1907b:139–141), four soothsayers from the court of a Tahiti king came to Hawai‘i and helped heal many people. Four large stones were gathered from the vicinity of a "bell rock" in Kaimukī and erected in Waikīkī to commemorate them, two at their habitation and two at their bathing place in the sea. The chief of the wizards, Kapaemahu, named his stone after himself, and a virtuous young chiefess was sacrificed and placed beneath the stone. Today they are located at Kūhiō Beach Park (Thrum 1907b:139–141).

3.7.3 Papa‘ena‘ena Heiau

At the base of Lē‘ahi (Diamond Head), **Papa‘ena‘ena Heiau** was once seen from Waikīkī and visited and described by many early voyagers to Hawai‘i (Site 58, McAllister 1933:71–74, noted as "Ruines de Morae" in Figure 7). Papa‘ena‘ena Heiau, of po‘okanaka class, was a quadrangular paved terrace approximately 130 by 70 ft with walls on three sides but open to west, which faced the village of Waikīkī (McAllister 1933:74). Kamehameha commanded sacrifices at Papa‘ena‘ena Heiau, and in 1795, the bodies of Kiana, mō‘ī of O‘ahu, and other slain chieftains from the battle of Nu‘uanu were impaled upon its walls (Jarves 1843:59–60, cited in McAllister 1933:73). Two travelers, Daniel Tyerman and George Bennett, recorded the ceremonies of this heiau as reported by an observer, as quoted previously in Section 3.4.2.

Kamehameha was said to have visited Papa‘ena‘ena Heiau before setting off to battle for Ni‘ihau and Kaua‘i in 1804. Five years later, Kamehameha placed the remains of his nephew, Kanihonui, who had committed adultery with Ka‘ahumanu, at Papa‘ena‘ena Heiau, "all prepared in the customary manner of that time" ('Ī'ī 1959:51). This would have been one of the last human sacrifices in the kingdom. After it was destroyed by Kanaia in about 1856, the stones of the heiau were used to enclose the premises of Queen Emma as well as for road construction (Thrum 1907a:44). Now, the Hawai‘i School for Girls at La Pietra is located on the former site of Papa‘ena‘ena Heiau (Becket 1999:x).

3.7.4 Kapua Heiau

Kapua Heiau, of po‘okanaka class, was located in Kapi‘olani Park near Camp McKinley. It is reported to have been connected to **Papa‘ena‘ena Heiau**. Fragments of its walls torn down in 1860 reveal it was approximately 240 sq ft. Mo‘olelo indicate Kaolohaka, a chief from Hawai‘i, was sacrificed at Kapua Heiau on suspicion of being a spy (Thrum 1907a:44).

3.7.5 Kūpalaha Heiau

Another heiau in Kapi‘olani Park closely associated with Papa‘ena‘ena Heiau was **Kūpalaha Heiau**, located near the Cunha cottages (Thrum 1907a:44). According to a previously collected oral history, these cottages were located at the intersection of Lemon Road and Kapahulu Avenue (University of Hawai‘i Center for Oral Histories 1985:924). Kākuhihewa, mō‘ī of O‘ahu ca. 1540–1634, attempted to sacrifice a man from Honolulu named Kapo‘i at Kūpalaha Heiau for consecrating a heiau called Manu‘a on a day the mō‘ī had made kapu (restricted, taboo). Kākuhihewa's warriors were then attacked by owls from Moloka‘i, Lana‘i, Maui, Hawai‘i, O‘ahu, Kaua‘i, and Ni‘ihau at the order of Kapo‘i's ‘aumakua (deified ancestor), which was a pueo (owl). The owls defeated Kākuhihewa's warriors in the mo‘olelo known as the "Battle of

the Owls.” Kākuhihewa acknowledged that Kapo‘i’s akua (god) was a powerful one and from that time, the owl has been recognized as one of the many deities venerated by the Hawaiian people (Kamakau 1964:23; Thrum 1905:200–202). This failed attempt to sacrifice Kapo‘i at Kūpalaha Heiau may indicate this heiau was of po‘okanaka class.

3.8 Burials

Four heiau in Waikīkī, of po‘okanaka class, were associated with human sacrifice, including Papa‘ena‘ena Heiau, Kapua Heiau, Helumoa Heiau (Thrum 1907a:44), and Kūpalaha Heiau (Thrum 1905:200–202) (see Section 3.7, Heiau). In addition, sacrificial drownings of kauwā, an outcast caste, took place at several sites on O‘ahu, including Kawailumaluma‘i, Kewalo, Kualoa, and Waikīkī. Mo‘olelo indicate the sea of Waikīkī was used for such drowning (*Ka Loea Kālai‘āina* 1899, translation in Sterling and Summers 1978:33). According to James Macrae, a member of his party discovered numerous skulls at the base of the steep makai cliffs of Lē‘ahi in 1825, which he later learned was a place of execution of criminals (Macrae 1922:33–34, cited in McAllister 1933:77–78). In Waikīkī, a row of rocks called **Pae-ki‘i** marks a site where, according to Mary Pukui, strangers suspected of initiating war or searching for human sacrifices were drowned, a type of death called kai he‘e kai (Beckwith 1970:89).

Previous archaeological excavations and surveys have indicated a relatively high density of burials within the Jaucus sand deposits of Waikīkī. The preferred locations for interment of the dead within these deposits were lands slightly elevated above the water table. Areas of very high density of burials include the present Outrigger Canoe Club (96 burials; Bishop Museum NAGPRA Inventory O‘ahu Federal Register 1998), Kālia Road in Fort DeRussy (45 burials; Denham and Pantaleo 1997a, 1997b), near the intersection of Kalākaua Avenue and Kealohilani Avenue (44 burials; Winieski et al. 2002), and the Moana Hotel (24 burials, SIHP # -1974; Simons et al. 1991).

Smaller concentrations of burials (e.g., two to ten individuals) and individual burials have also been uncovered throughout much of Waikīkī. The following burials have been uncovered along or near Kalākaua Avenue in close proximity to the project area: SIHP # -5856-A and SIHP # -5856-B, which was found in a flexed position indicative of traditional Hawaiian burial practices (Winieski et al. 2002); SIHP # -5856-C, SIHP # -5864-C, # -5860-U and -V, which were part of a concentration of burials (Bush et al. 2002); SIHP # -3745 (Griffin 1987); SIHP # -6703 (two burials), which were associated with wetland agricultural soils that radiocarbon dated to AD 1400–1460 (O’Leary et al. 2005); and SIHP # -5863 (two burials) (Winieski et al. 2001). Also, a burial at the Princess Ka‘iulani Hotel was uncovered in an extended position with historic-era funerary objects (glass beads) (SIHP # -7067; Runyon et al. 2010), and disarticulated human skeletal elements were uncovered within the former Kawaiaha‘o Waikīkī Branch Church and Cemetery (SIHP # -7065; Runyon et al. 2010).

3.9 Ala Hele (Trails)

John Papa ‘Ī‘ī describes the historic trails system of O‘ahu (‘Ī‘ī 1959:89) depicted in Figure 10. Many lateral and mauka-makai (mountain to the sea) trails traversed the island of O‘ahu from Honolulu to Wai‘anae. Figure 10 shows the historic trails on the south side of the island which indicates a trail ran along the coastal area of Waikīkī most likely where the present Kalākaua Avenue is located, near the project area. ‘Ī‘ī describes the trail going through the ‘ili of Kapuni where the project area is located:

> The trail from Kawaiahao which led to lower Waikiki went along Kaananiau, into the coconut grove at Pawaa, the coconut grove of Kuakuaka, then down to Piinaio; along the upper side of Kahanaumaikai’s coconut grove, along the border of Kaihikapu pond, into Kawehewehe; then through the center of Helumoa of Puaaliilii, down to the mouth of the Apuakehau stream; along the sandy beach of Ulukou to Kapuni, where the surfs roll in; thence to the stream of Kuekaunahi; to Waiaula and to Paliik . . .
>
> From Paliiki the trail ran up to Kalahu, above Leahi, and on to the place where the Waialae stream reached the sand. The trail that ran through Kaluahole went to Kaalawai, up over, and down into Kahala, to meet the other trail at the place where the stream reached the sand. [‘Ī‘ī 1959:92–94]

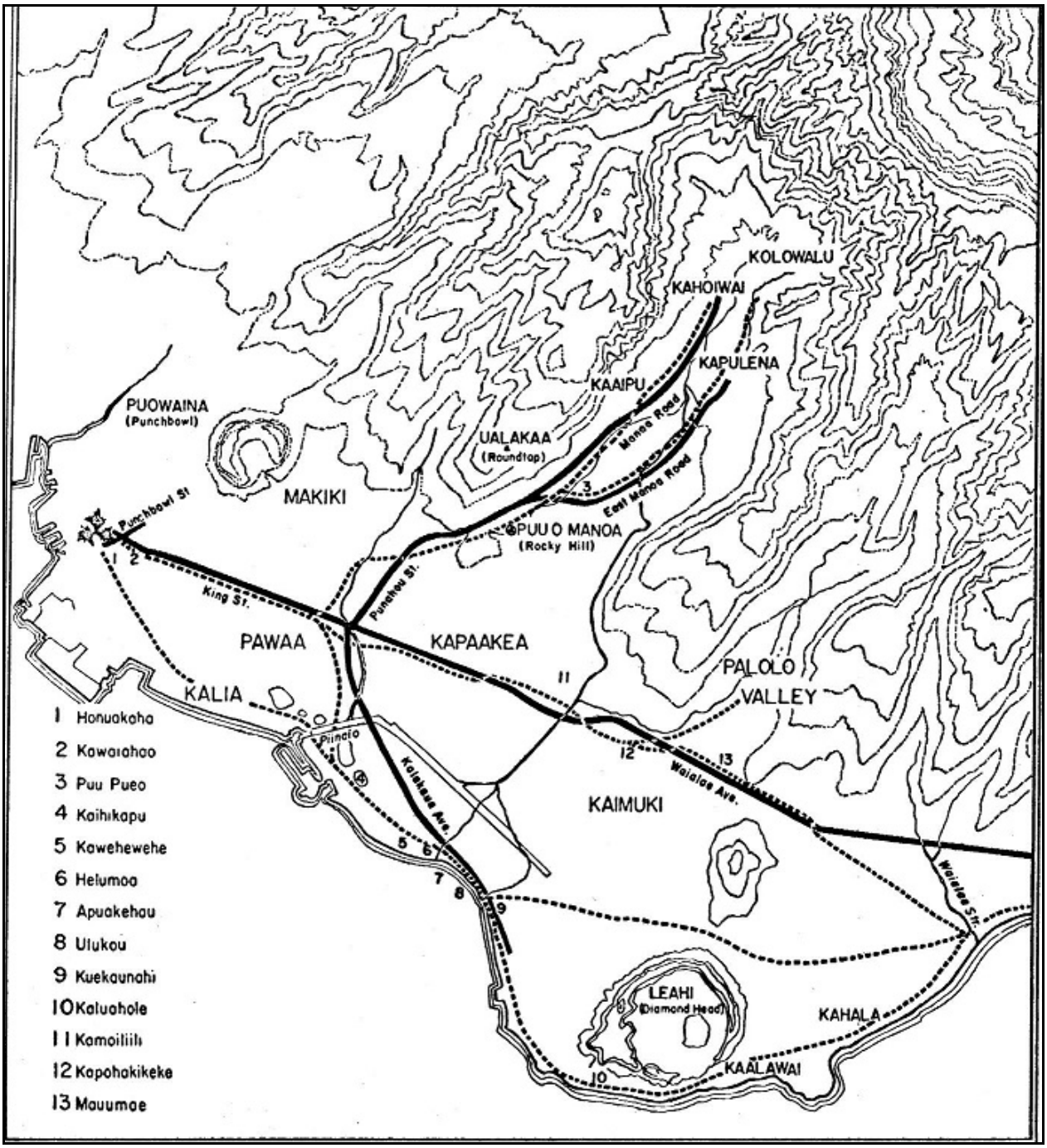

Figure 10. Historic trails in southern O‘ahu (‘Ī‘ī 1959:89)

Section 4 Historical Background

4.1 Overview

The following section provides a summary of the history of Waikīkī Ahupua‘a from the time of the arrival of Captain Cook in 1778, the first explorer to visit Hawai‘i, until present day.

4.2 Pre-Contact to Early Post-Contact Period

By the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, Waikīkī had long been a center of population and political power on O‘ahu. Martha Beckwith (1940) writes that by the end of the fourteenth century, Waikīkī had become "the ruling seat of the chiefs of O‘ahu." The preeminence of Waikīkī continued into the eighteenth century, betokened by Kamehameha's decision to reside there after winning control of O‘ahu by defeating the island's chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī, himself a member of the ali‘i, describes the king's Waikīkī residence (Helumoa is depicted in Figure 11):

> Kamehameha's houses were at Puaaliilii, makai of the old road, and extended as far as the west side of the sands of Apuakehau. Within it was Helumoa, where Kaahumanu ma went to while away the time. The king built a stone house there, enclosed by a fence . . . [‘Ī‘ī 1959:17]

‘Ī‘ī (1959:17) further notes the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili."

Figure 11. Photo of Helumoa ca. 1863 (Kamehameha Schools Archive 1863)

Chiefly residences, however, were only one element of a complex of features which were able to sustain the large population that characterized Waikīkī up to pre-Contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system—an impressive feat of engineering traditionally attributed to the chief Kalamakua—took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the ahupua‘a. Water was also available from springs in nearby Mō‘ili‘ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver, arriving at "Whyteete" in 1792, captured something of this profusion in his journals:

> On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.
>
> [Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.
>
> This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.
>
> [We] found the plain in a high state of cultivation, mostly under immediate crops of *taro*; and abounding with a variety of wild fowl, chiefly of the duck kind . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence. [Vancouver 1798:161–164]

Further details of the exuberant life of the time are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of coconut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to

> admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Draecena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. [Menzies 1920:23–24]

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O‘ahu was soon to change, disrupted by Euro-American Contact. The ahupua‘a of Honolulu became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. The shift in pre-eminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. By 1828, Levi Chamberlain described a journey into Waikīkī and noted,

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. [Chamberlain 1957:26]

Tragically, the depopulation of Waikīkī was not simply a result of the attractions of Honolulu (where, by the 1820s, the population was estimated at 6,000 to 7,000) but also of the European diseases that had devastating effects upon the Hawaiian populace.

4.3 TheMid-Nineteenth Century to Present

4.3.1 The Great Māhele (1848)

Prior to 1848, all land belonged to the akua, held in trust for them by the paramount chief and managed by subordinate chiefs. In the mid-1800s, Kamehameha III decreed a division of lands called the Māhele, which divided land for private land ownership in Hawaiian society (Chinen 1958). In 1848, lands were divided into three portions, crown lands, government lands, and lands set aside for the chiefs. Individual plots, called kuleana (Native Hawaiian land rights) awards, were granted within these divided lands to native inhabitants who lived on and farmed these plots and came forward to claim them. The chiefs and konohiki (headman of an ahupua‘a land division under the chief) were required to pay a commutation fee for their lands, usually about one-third the value of any unimproved lands. Awardees usually “returned” a portion of the lands

awarded to pay the commutation fee for the lands they “retained.” The returned lands usually became government lands (Chinen 1958:13).

The Kuleana Act was legislated in 1850 allowing maka‘āinana (commoners) to own land parcels which they were currently and actively cultivating and/or using as a residence. In theory, this “set aside” hundreds of thousands of acres as potential kuleana parcels which led to about 10,000 claimants obtaining approximately 30,000 acres. The konohiki, 252 chiefs, divided up about a million acres. Many Hawaiians were disenfranchised by these acts (Cordy et al. 1991).

In the ahupua‘a of Waikīkī, there were 437 land claims of which only 243 were awarded. Within the ‘ili of Kapuni and Uluniu, only one land claim (LCA 104FL) was awarded (Table 2). The claimant of this land parcel was M. Kekuanaoa who also owned land in other ‘ili of Waikīkī. As presented in Figure 12, this LCA was large and includes the project area. The LCA describes a house lot in a coconut grove which most likely referred to the land in Uluniu and Kapuni, where a coconut grove once stood. LCAs in nearby lots are also described as containing many fishponds and lo‘i.

Table 2. LCAs in the Vicinity and within the Project Area

LCA Number	Claimant	‘Ili	Notes
5FL	Kapilimanu	Kālia, Pahupahuapuaa	‘Āpana (parcel) 1: House lot ‘Āpana 2: House lot ‘Āpana 3: Loko ‘Āpana 4: Paukū kahawai (section of a stream) ‘Āpana 5: Paukū kahawai
104FL	Kekuanaoa, M./Victoria Kamamalu	Kaukahoku, Kuhimana, Alewa, Kunawai, Kuwili, Kālia, Piinaio, Kapuni, Kamanolepo	Two lo‘i and five fishponds in Kālia, one muliwai in Piinaio, and house lot in a coconut grove
1433	Kaluhi	Kanukukahi/Niukukahi, Kiki	‘Āpana 1: Four lo‘i ‘Āpana 2: House lot with kula (plain)
1437	Kaohulenui	Pahupahuapuaa 1, Kālia, Hamohamo	‘Āpana 1: House lot in Hamohamo ‘Āpana 2: Kula in Pahupahuapuaa ‘Āpana 3: Three lo‘i and an ‘auwai in Kālia
1506	Waikiki (w)	Uluko, Hohe	‘Āpana 1: House lot, partially fenced ‘Āpana 2: Two rows of kalo in a large community patch
2006	Male	Kalokoeli, Kamoomuku	Five lo‘i and house lot on the beach
2079	Kauhola (w)	Makiki, Mokahi, Hohe, Kawaiaala, Kaluahole, Kālia	‘Āpana 1: Seven kalo patches in Maikiki ‘Āpana 2: Two kalo patches in Mokahi ‘Āpana 3: One line of kalo in Hohe ‘Āpana 4: Four kalo patches in Kawaiaala ‘Āpana 5: Kula lands in Kaluahole
2082	Kuene (John Neddles)	Kālia, Kamookahi	‘Āpana 1: Mo‘o of kalo and ‘auwai in Kamookahi ‘Āpana 2: House lot in Kālia

LCA Number	Claimant	‘Ili	Notes
2084	Keohokahina	Kalokoeli, Kamookahi, Ulukou	‘Āpana 1: One lo‘i and a portion of an ‘auwai and fishpond in Kalokoeli ‘Āpana 2: Two lo‘i and a loko in Kamookahi ‘Āpana 3: House lot with kula in Ulukou
Grant 3143	Puhene	Kālia	No information available
Grant 3144	Kalawaianui	Kālia	No information available
Grant 3195	Cleghorn, M. Likelike	Auaukai	No information available
6324	Kameheu	Auaukai	‘Āpana 1: One lo‘i ‘Āpana 2: One lo‘i ‘Āpana 3: One lo‘i ‘Āpana 4: House lot
7597	Kamaukoli, Anederea	Auaukai, Kālia, Nanapua	‘Āpana 1: One lo‘i in Auaukai ‘Āpana 2: Lo‘i, kula, and a section of a stream in Auaukai and Kālia ‘Āpana 3: House lot in Kālia
8269	Okuu	Auaukai	‘Āpana 1: One lo‘i ‘Āpana 2: One lo‘i
8616	Kamole	Kahapuupuu	Not awarded; no information available

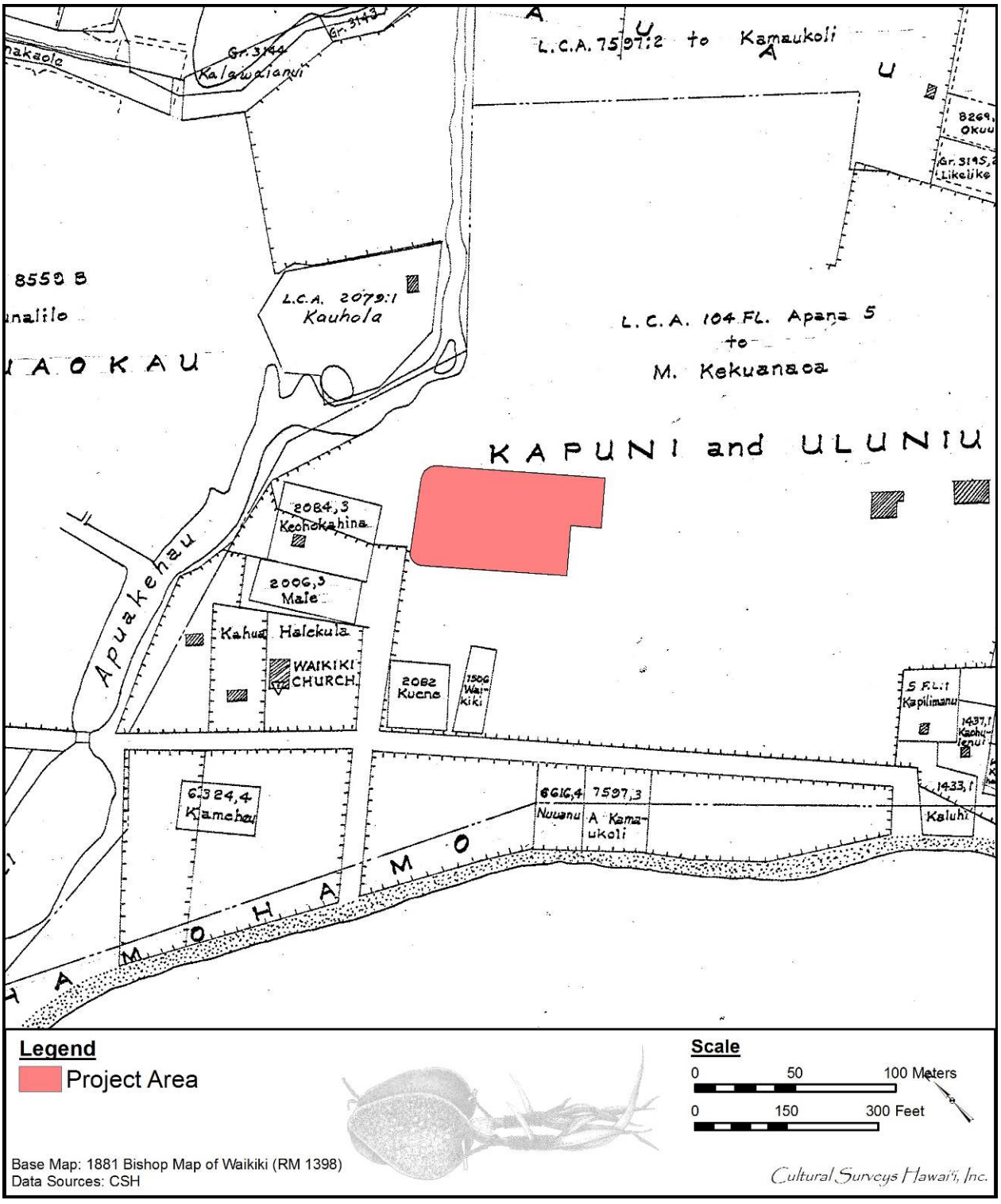

Figure 12. 1881 Bishop Map of Waikīkī with LCA parcels and project area

4.3.2 Later half of the Nineteenth Century

Waikīkī became a popular site among foreigners—mostly American—who had settled on O‘ahu throughout the course of the nineteenth century. An 1865 article in the *Pacific Commercial Advertiser* mentions a small community that had developed along the beach. Figure 13 depicts Waikīkī looking towards Diamond Head in 1859, which shows the coconut groves of Waikīkī. The area continued to be popular with the ali‘i and several notables had residences there. A visitor to O‘ahu in 1873 describes Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

Several developments during the second half of the nineteenth century dramatically impacted and altered the landscape of Waikīkī during the twentieth century. These included improvement of the road connecting Waikīkī to Honolulu (now the present day Kalākaua Avenue); the building of a tram line between the two areas; and the opening of Kapi‘olani Park on 11 June 1877. Traditional land uses in Waikīkī were abandoned or modified. By the end of the nineteenth century most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States (Figure 14; Coulter and Chun 1937).

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the Islands. Upon completion of their contracts, a number of the immigrants remained in the Islands, many becoming merchants or rice farmers. As was happening in other locales in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming (Coulter and Chun 1937). By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O‘ahu (Figure 15).

In the late nineteenth century, the Waikīkī beach area in Ulukou and Kahaloa was dotted with small cottages and some bathing houses. These “bathing houses,” placed strategically near the beach, were places where people could change into their bathing suits, rent towels, and walk directly into the ocean. One of the first of these bathhouses was the “Long Branch Baths,” named after a popular New Jersey resort. This long wooden shed was built near the edge of ‘Āpuakēhau Stream by James Dodd in 1881 at the former residence of Kākuhihewa (Scott 1968).

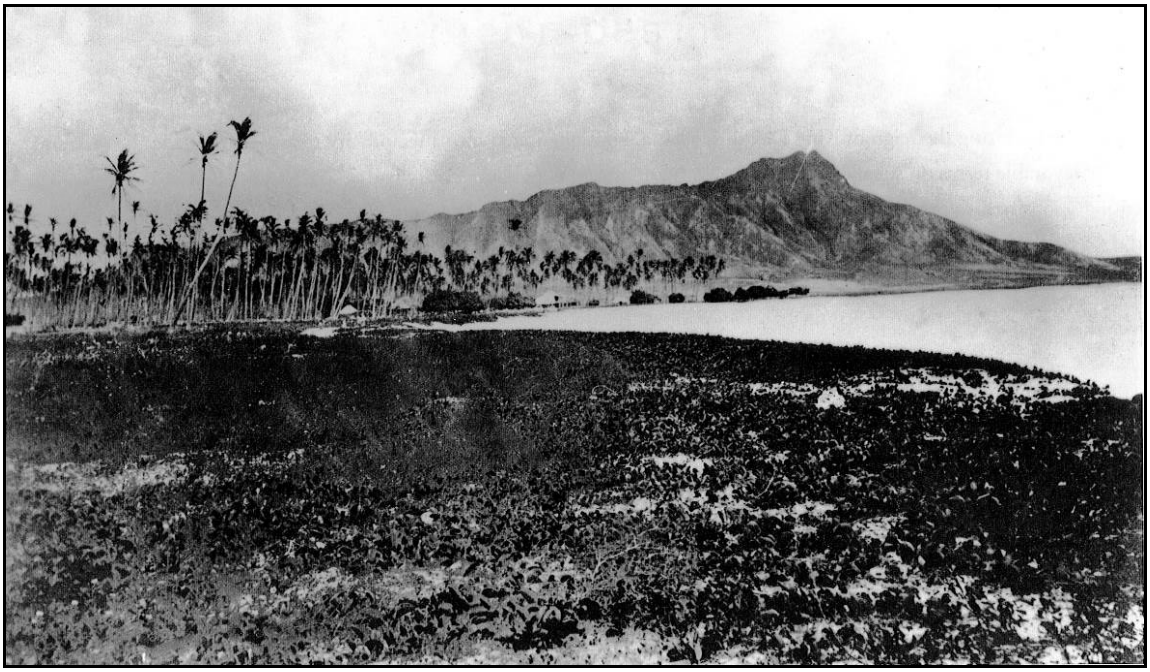

Figure 13. Photo of Diamond Head from Helumoa Grove ca. 1859 (Hawai‘i State Archives)

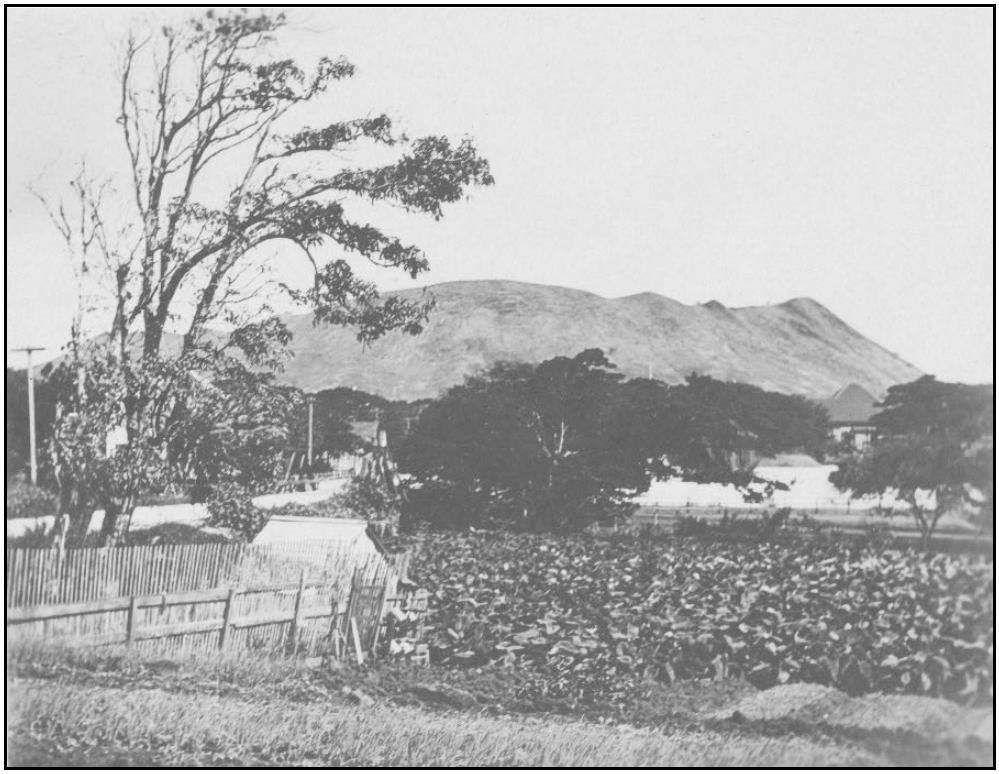

Figure 14. Photo of Diamond Head across taro fields ca. 1900 (University of Hawai‘i at Mānoa Digital Collection)

Figure 15. Photo of Kalākaua Road with trolley tracks (right) and Diamond Head (background), ca. 1890 (Hawaiian Historical Society Collection)

4.3.3 ‘Āinahau

Historic maps identify the present project area as adjacent to a portion of ‘Āinahau, the Waikīkī estate of Archibald Cleghorn (1835-1910), his wife Princess Miriam Likelike (1851-1887), and their daughter Princess Ka‘iulani (1875-1899) – all significant personages in the history of Hawai‘i (Figure 16). This estate began when Princess Likelike and her husband purchased six acres of land in the ‘ili of ‘Au‘aukai from Ma‘aua and Koihala in 1872. Additional land came to the property in 1875, when 3.9 acres was gifted to Princess Ka‘iulani at her christening by her aunt and godmother Ruth Ke‘elikōlani, who inherited the land from her father, Mataio Kekūanaō‘a. Princess Ruth gave an additional 1.3 acres to Ka‘iulani later, creating a total estate of 12 acres (Kanahele 1995:133-134, 137). The estate was called ‘Āinahau (hau tree land), named for the many hau trees that grew along ‘Āpuakēhau Stream (Pukui et al. 1974:7).

The property in 1872 had several native grass huts, which Cleghorn removed, and replaced with a neo-Hawaiian-style bungalow. He later built a new, large two-story Victorian style house, designed by the famous Honolulu architect, Clinton B. Ripley.

> Cleghorn not only beautified Waikīkī through his work at Kapi‘olani Park [he had been instrumental in the park’s creation and design], but also at his estate, ‘Āinahau, which he had purchased in 1872 for $300. Inheriting a love of horticulture from his father, Cleghorn lavishly landscaped this parcel, making it “the most beautiful private estate in the Hawaiian Islands” [Hibbard and Franzen 1986: 12].

The current project area appears to be adjacent to (southeast of) the westernmost-most corner of the ‘Āinahau estate, which, based on historic maps contained no structures and was likely the location of the access drive from Kalākaua Avenue. In his book on the Princess Ka‘iulani Hotel, Cohen notes:

> The site for the hotel [Princess Ka‘iulani] fronts the old Waikiki Road, now Waikiki’s main thoroughfare, Kalakaua Avenue. The hotel’s Porte Cochere on Ka‘iulani Avenue is at the approximate southern entrance driveway to Ainahau. The rest of the original estate lies to the north fronting Ala Wai Boulevard. The entrance to the hotel’s parking lot marks the approximate spot of the trellised arch entrance to the beautiful Ainahau garden, where Governor Cleghorn, assembled flora from throughout the islands and abroad. The princess’ private driveway entered from Waikiki through that arch and wound gracefully through rows of stately palms to the white house set deep within the grounds [Cohen 1997:48-49].

When Princess Likelike died in February of 1887, her daughter, Princess Ka‘iulani, was named heir apparent to the throne. By all accounts, Princess Ka‘iulani was a beautiful and charming young woman who spent much time wandering the estate grounds. Robert Louis Stevenson visited the estate in 1889 when Princess Ka‘iulani was 13 years old.

> [He] was so impressed with the young girl that he spent many afternoons with her, sitting under the great banyan tree, telling her stories. When he learned she was going to go to school in Scotland, he wrote her a little poem in her red-plush album to keep her company on her travels. [Grant 1996: 24]

After her return to ‘Āinahau from Scotland, the Princess’ health began to fail and in 1899 she passed away at just 24 years of age. According to Grant (1996: 24):

> The night she died, her beloved peacocks screeched wildly. Since her favorite flower had been the Chinese jasmine, Hawaiians called the flower “pikake”, or peacock, in honor of the Princess.

Cleghorn himself continued to reside at ‘Āinahau until his death in 1910. After his death, the house was used as a hotel and then as a rental property until 1921, when it was claimed by a fire.

> One August night in 1921, W.T. Aldrich, the “movie picture man,” was having dinner when his wife yelled “Fire!” He ran to the room where the gas heater stood and saw flames. Neighbors tried to help by beating them out with cloths. A fire truck was summoned from Kaimukī, but the pin holding together the steering gear fell out and the truck crashed into a fence. By the time help arrived, the building could not be saved and the Cleghorn house burned to the ground. [Stassen-McLaughlin 1986:182]

Figure 16. Photograph of ‘Āinahau circa 1915 (Hawai‘i State Archives)

4.4 20th Century-Present

Fort DeRussy

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 Brigidier General R.E. DeRussy of the Army Corps of Engineers (Figure 17):

> On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post . . . Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O‘ahu. At DeRussy other activities also had to be attended to—especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground. [Hibbard and Franzen 1986:79]

Figure 17. Photo of Fort DeRussy ca. 1938; note the Ala Wai Canal has been constructed in the background (Hawai‘i State Archives)

4.4.1 Hotel Development in Waikīkī

4.4.1.1 The Moana Hotel

W.C. Peacock, a wealthy Honolulu landowner, had a seaside cottage in Waikīkī, east of ‘Āpuakēhau Stream and directly makai of the project area. He tore down his cottage and built the Moana Hotel, which opened on 11 March 1901 (Figure 18 and Figure 19). The first hotel building had 75 rooms, each with its own private bath and telephone, an unheard of luxury. In 1905, Peacock sold the hotel to Alexander Young, who had an interest in several other Hawaiian hotels. Young’s estate managed the hotel until 1928, when it was purchased by the Matson Navigation Company to cater to the new steamship tourists who were flocking to Hawai‘i as a vacation spot. Under the title of the Territorial Hotel Company, Ltd., Matson operated a number of hotels in Hawai‘i, including the Moana, the Royal Hawaiian, and its predecessor the Seaside Hotel.

An oral history interviewee, Mr. Joeseph Akana (for an expanded version see Section 4.5.2), lived and grew up in Waikīkī in the 1920s. He shared his memories of the Moana Hotel and the area directly makai of the project area. He also pointed out that he went to Waikiki School located right across the street from the Moana Hotel which was a Hawaiian church with a cemetery.

The Seaside Hotel was built in 1906, and consisted of a 10-acre parcel west of ‘Āpuakēhau Stream, and west of the Moana Hotel. Scattered on the grounds were bungalows and tent houses for guests. Many famous people came to stay at the hotel, including Alice Roosevelt Longworth, the daughter of the Theodore Roosevelt, and Jack London, who wrote several of his South Pacific stories at the hotel during his stay (Scott 1968).

By the 1920s, the Territorial Hotel Company owned the Moana Hotel and held the lease for the Seaside Hotel. In 1925, they began to move many of the bungalows and cottages from the Seaside Hotel beach area to the mauka side of Kalākaua Avenue to clear the ground for construction of the new Royal Hawaiian Hotel. An oral history interviewee, Beatrice Tominagam, who lived in the Moana Hotel employee housing area east of Ka‘iuilani Street from 1919 to 1925, shared memories of life in this area when she was just a young girl:

> Oh, when we were there when I was a little girl, this was an empty lot. Just empty, nothing was on it. When I was living there, we watched them build these four big beautiful buildings (and a small two-bedroom cottage). They were beautiful (and painted white). They were two stories and they had a chimney on each one of them, and a big yard. The hotel called it the Moana Hotel Annex. And then, this part, ‘Ainahau Court, had many two-bedroom cottages and lot of date trees over here. We used to pick dates when they fell on the ground. [University of Hawai‘i Center for Oral History 1985:4:1986]

Mrs. Tominagam remembered that many of the buildings on the mauka side of Kalākaua Avenue were used for hotel guests; not all the buildings were used for hotel employees. The small cottages mauka of the Moana Annex, in the ‘Āinahau Court, were also for visitors. She noted, “Ainahau Court, were (for) Mainland people who rented those cottages and they lived

there for many years." She described the area where the current International Market place is located, north of the nearby project area:

> Oh, this area right here where the International Market [Place] is now was the Seaside Hotel cottages that they moved from Kālia Road to make room for the Royal Hawaiian Hotel. They moved them here and they were over here. They were cottages, you see. After the war [World War II] they got rid of those cottages. And in the middle 1950s they built the International Market Place. [University of Hawai‘i Center for Oral History 1985:4:1987]

Stan Cohen (1997:42), in his book on the Princess Ka‘iulani Hotel, recounts, "In 1920 cottages and an expansive lawn were built across Kalākaua Avenue at the former site of ‘Āinahau." These generally refer to a number of small rectangular cottages directly opposite the Moana Hotel on the mauka side of Kalākaua Avenue, east of Ka‘iulani Avenue.

4.4.1.2 The Royal Hawaiian Hotel

The Royal Hawaiian Hotel, also known as the "Pink Palace of the Pacific," opened on 1 February 1927 at an estimated cost of $4 million. Construction began in 1925 (Figure 20) and at the time, it was the biggest construction project in the Pacific. Notable visitors to the Royal Hawaiian Hotel included the Rockefellers, the Beatles and Marilyn Monroe (Figure 21). During World War II, the hotel closed its doors after Pearl Harbor was attacked. Subsequently, the United States Navy used the hotel as a rest and recreation center for enlisted sailors. The Navy vacated the hotel shortly after the end of World War II and it reopened in January 1947 (Fischer n.d.:1–2).

Figure 18. Photo of the Moana Hotel on its opening day of 11 March 1901 with bunting (Hawai‘i State Archives)

Figure 19. Photo of the Moana Hotel ca. 1929, note the agricultural fields in the background (University of Hawai‘i at Mānoa Digital Collection)

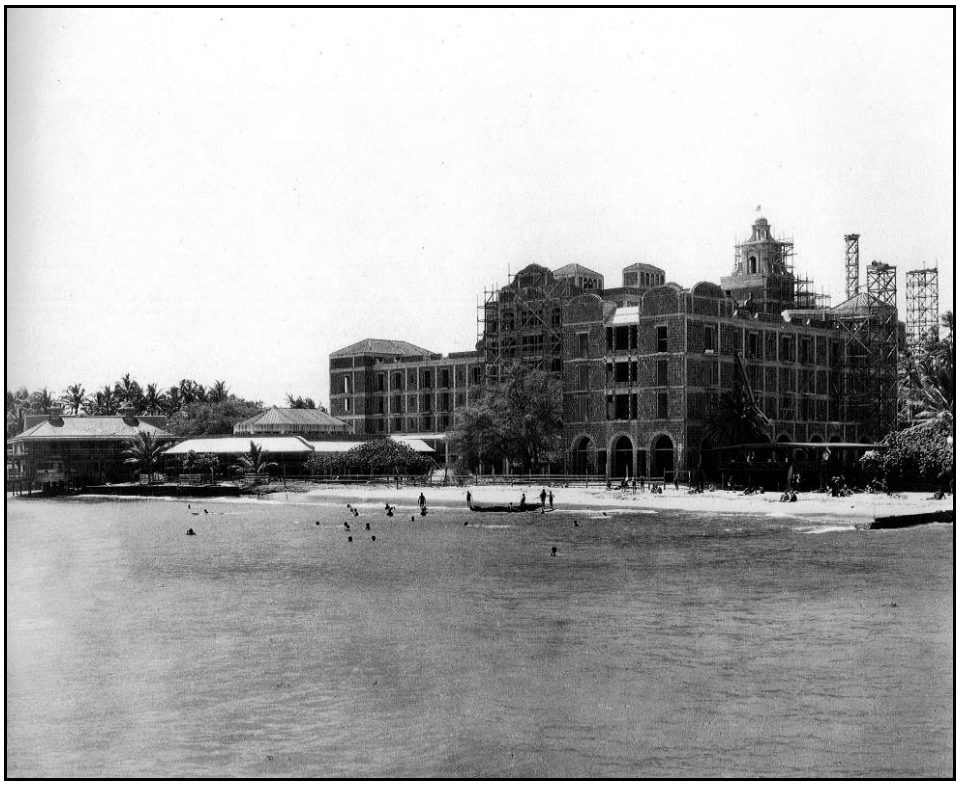

Figure 20. Photo of the Royal Hawaiian Hotel under construction in 1926 (Hawai‘i State Archives)

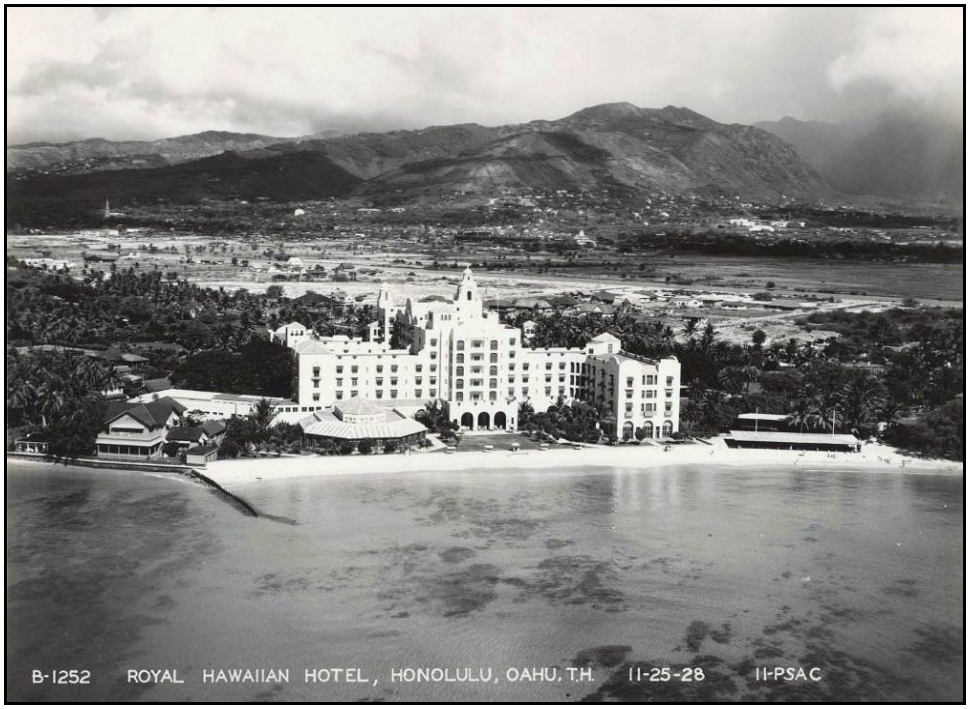

Figure 21. Photo of the Royal Hawaiian Hotel ca. 5 December 1928 (Hawai‘i Aviation Museum)

4.4.2 The Ala Wai Canal

During the 1920s, the Waikīkī landscape was transformed by construction of the Ala Wai Drainage Canal—begun in 1921 and completed in 1928—which resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī (Figure 22 and Figure 23). The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō‘ili‘ili, and McCully districts, as well as lower Makiki and Mānoa. The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block. (Johnson 1991:311)

Newly created land tracts following the Ala Wai Canal’s construction spurred a rush to development in the 1930s. An article in the *Honolulu Star-Bulletin* in 1938 extolled the area’s progress:

> The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.
>
> These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. [Newton 1939:10]

Figure 22. Photo of fishermen in the Ala Wai Canal, 1931 (Hawai‘i State Archives)

Figure 23. Photo of the dredging of the Ala Wai Canal (Hawai‘i State Archives:n.d.)

4.4.3 World War II

The Japanese bombing of Pearl Harbor on 7 December 1941, put a hold on development plans for Waikīkī as a tourist destination. The tourist trade was non-existent while the war was still on; “the Navy controlled travel to and from Hawai‘i and did not allow pleasure trips” (Brown 1989:141). During the war, Waikīkī was used as a recreation area for military personnel.

It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military (Brown 1989:141).

4.4.4 Post-World War II

The war ended in 1945 and by the mid-1950s there were more than 50 hotels and apartment buildings from the Kālia area to the Diamond Head end of Kapi‘olani Park. The Waikīkī population at that time was not limited to transient tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

Development of hotel properties in Waikīkī during the 1950s raised concern over public rights-of-way for access to the Waikīkī beach which, like all of Hawai‘i’s beaches, is public from the ocean to the high water mark. An article in the *Honolulu Star-Bulletin* of 16 January 1957 noted there were no public right-of-ways to the beach for “nearly a half mile strip in the heart of Waikiki” from “the Diamond Head side of the Surf Rider Hotel to the Ewa side of the Halekulani Hotel.”

4.4.5 Historic Maps

A series of historic maps illustrate the dramatic changes that occurred within the project area as Western commercial interests supplanted the traditional Native Hawaiian way of life.

An 1893 map by W.A. Wall (Figure 24) shows the project area in an uncultivated area surrounded by cultivated fields mauka of the project area. Although no houses are shown in the project area on this map, this does not mean there was no cottage on the property. Early surveyors mapped only what they considered substantial “permanent” structures, not grass houses or “beach cottages.” Also of note is ‘Āpuakēhau Stream, which is to the north of the project area and eventually empties into the ocean.

A 1910 U.S. Engineers map (Figure 25) shows the project area on undeveloped land and overlapping what looks like a road off of the main Kalākaua Avenue. On this map, two large rectangular structures are shown—a structure oriented diagonally to ‘Āpuakēhau Stream and a structure south and oriented parallel to the stream, which is possibly the Moana Hotel and pier.

A 1917 Bishop Museum Government Survey Map (Figure 26) depicts Kaiulani Avenue north of the project area. The Moana Hotel is located south of ‘Āpuakēhau Stream.

As shown in the 1919 U.S. Army War Development Fire Control Map (Figure 27), a church is present on the corner of what is now Kalākaua Avenue and Kaiulani Avenue makai of the project area. The church was the site of the former Kawaiha‘o Waikīkī Branch Church and Cemetery.

The pier that extended from the Moana Hotel is not depicted in the map and more development is evident in Waikīkī Kai. ‘Āpuakēhau Stream is still present.

A 1933 U.S. Army War Department Fire Control Map (Figure 28) and a 1943 U.S. Army War Department Terrain Map (Figure 29) illustrate that ‘Āpuakēhau Stream has now been filled in. An H-shaped structure makai of the project area is the Moana Hotel. More development is present within Waikīkī and the project area. The Kawaiha‘o Waikīkī Branch Church and Cemetery is no longer present.

A 1959 U.S. Army Map (Figure 30) shows Princess Ka‘iulani Hotel almost directly across Ka‘iulani Road from the project area and the Moana Hotel located makai of Kalākaua Avenue. By 1976, the Hyatt Regency Waikiki Hotel was built directly makai of the project area. The Hyatt consists of two 40-foot towers and appears in a 1978 USGS Orthophotoquad Aerial Photograph (Figure 31).

4.4.6 King’s Village Shopping Center

King’s Village Shopping Center (Figure 32) was built in 1972 by Chris Hemmeter. The center is a 38,764-sq-ft retail center that houses more than 45 shops and restaurants, including Tanaka of Tokyo, Rock Island Cafe, King’s Guard Museum and Honolulu Surf & Sport. In 2012, the shopping center was sold by Edna Investments, LLC to a local buyer and the complex was valued at $23 million (Shimogawa 2012).

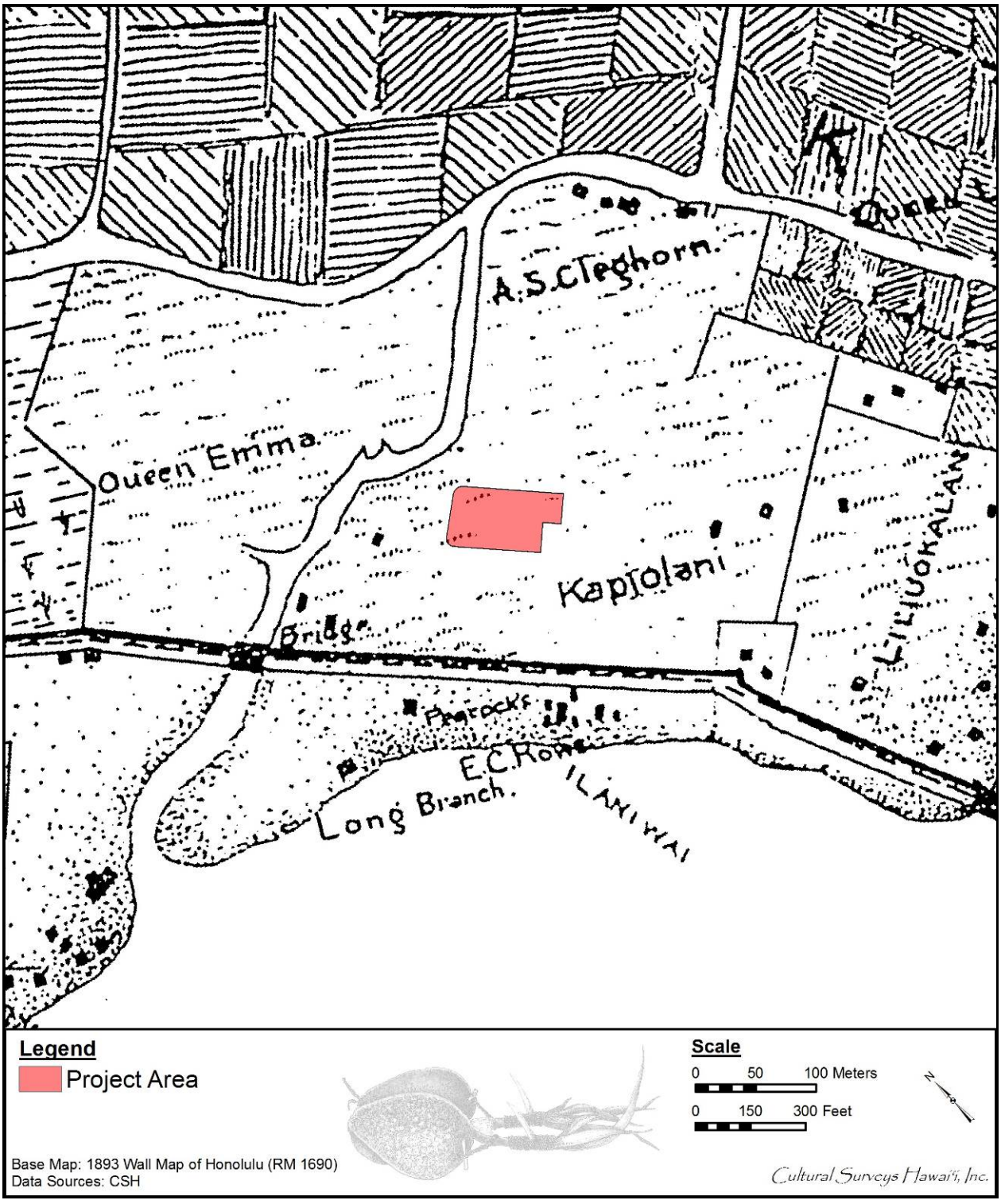

Figure 24. 1893 Walter Wall map of Honolulu (portion) depicting project area

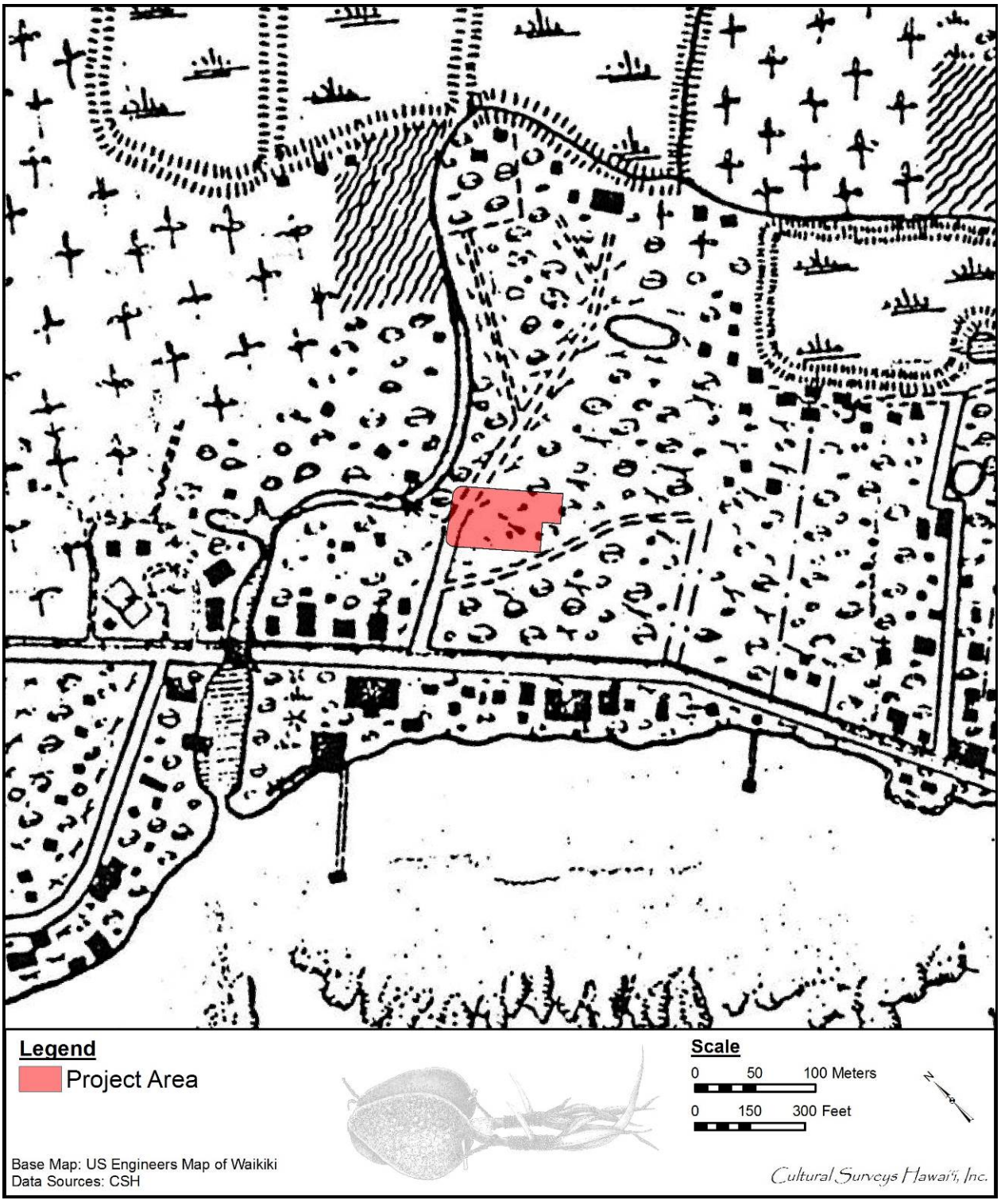

Figure 25. 1910 U.S. Army Engineers map of Waikīkī (portion) depicting project area

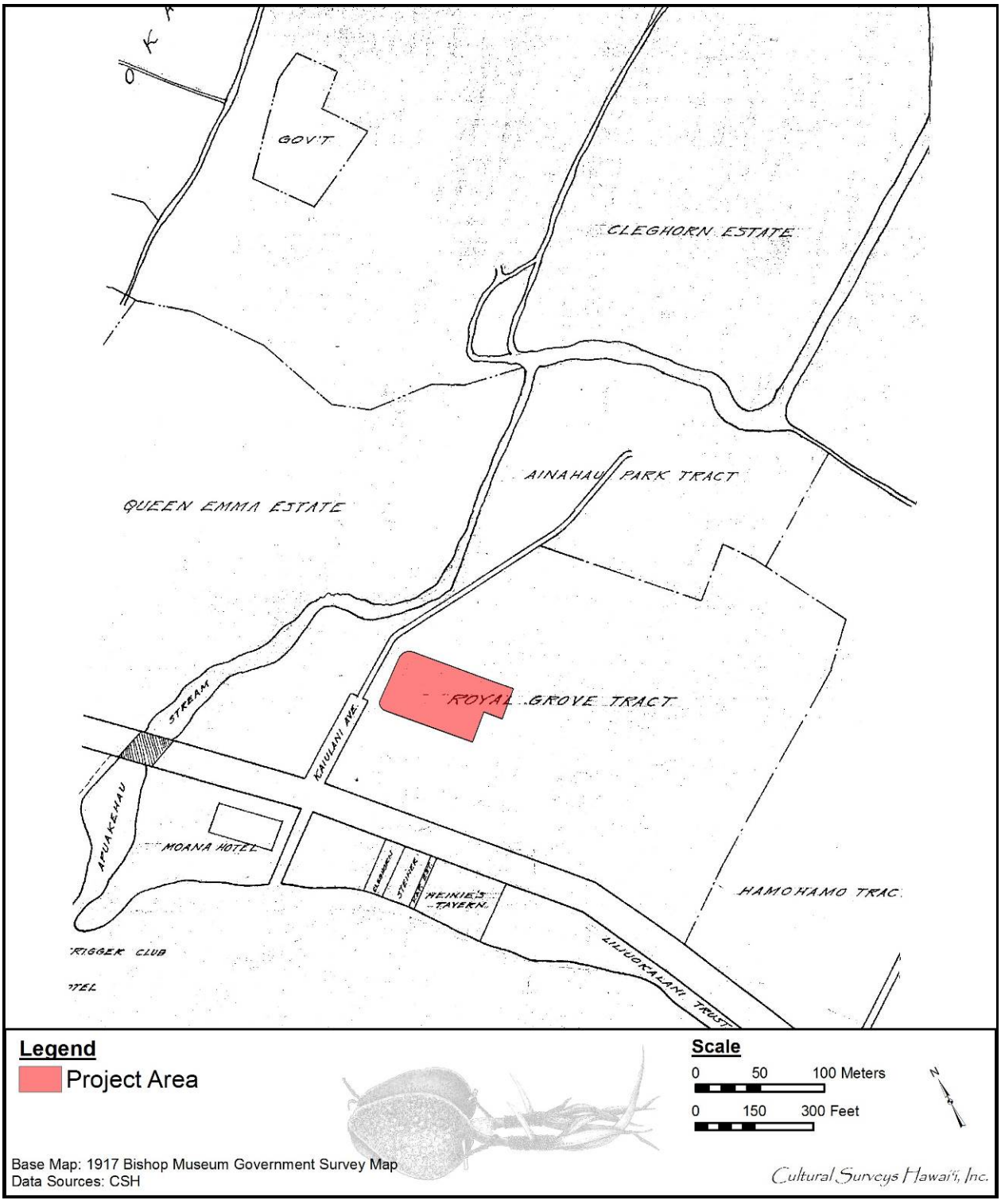

Figure 26. 1917 Bishop Museum Government Survey map showing the project area

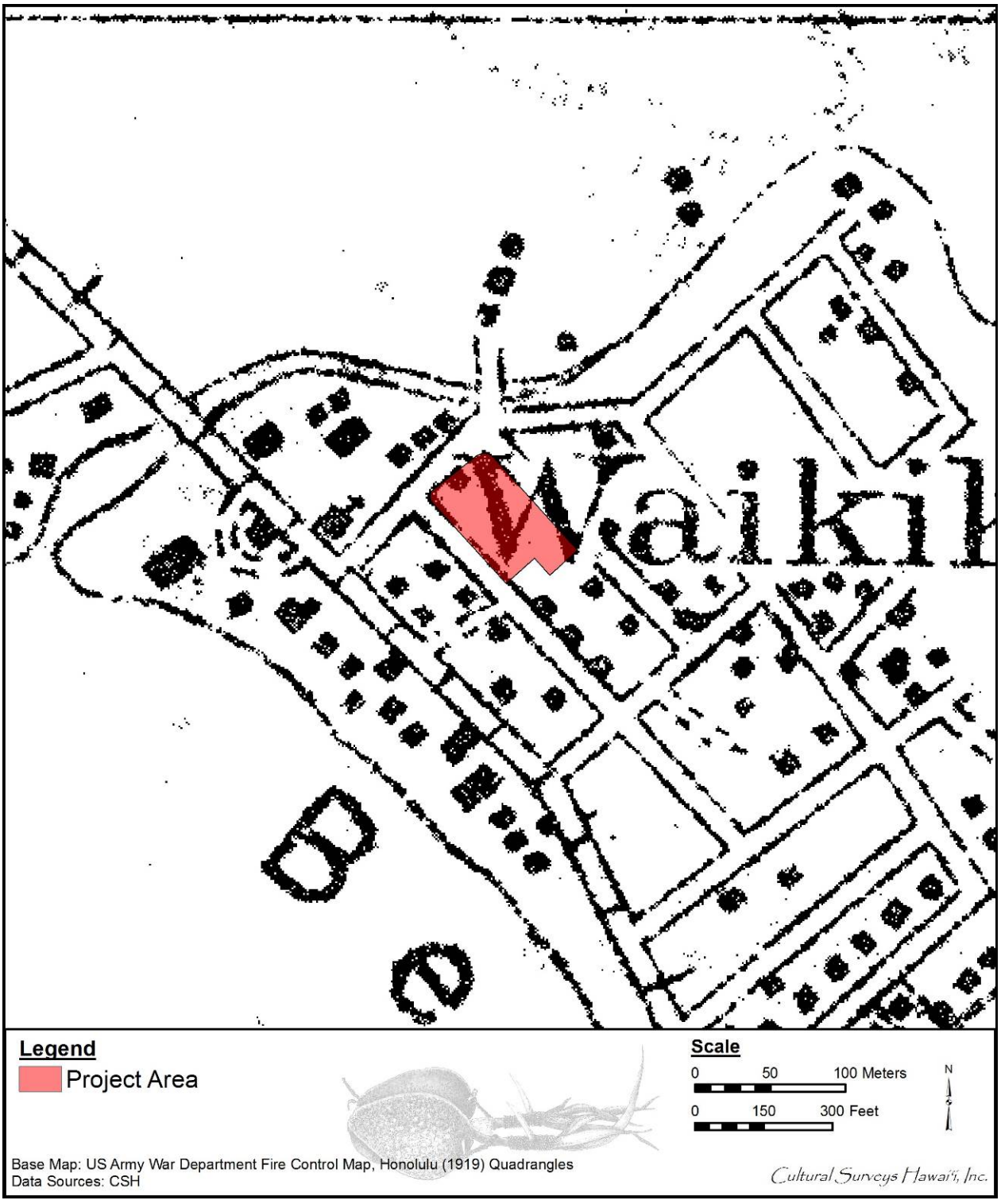

Figure 27. 1919 U.S. Army War Department Fire Control map, Honolulu quadrangle (portion) with project area

Figure 28. 1933 U.S. Army War Department Fire Control map, Honolulu quadrangle (portion) with project area; note more development present in Waikīkī Kai; the H-shape near the coastline makai of the project area is the Moana Hotel

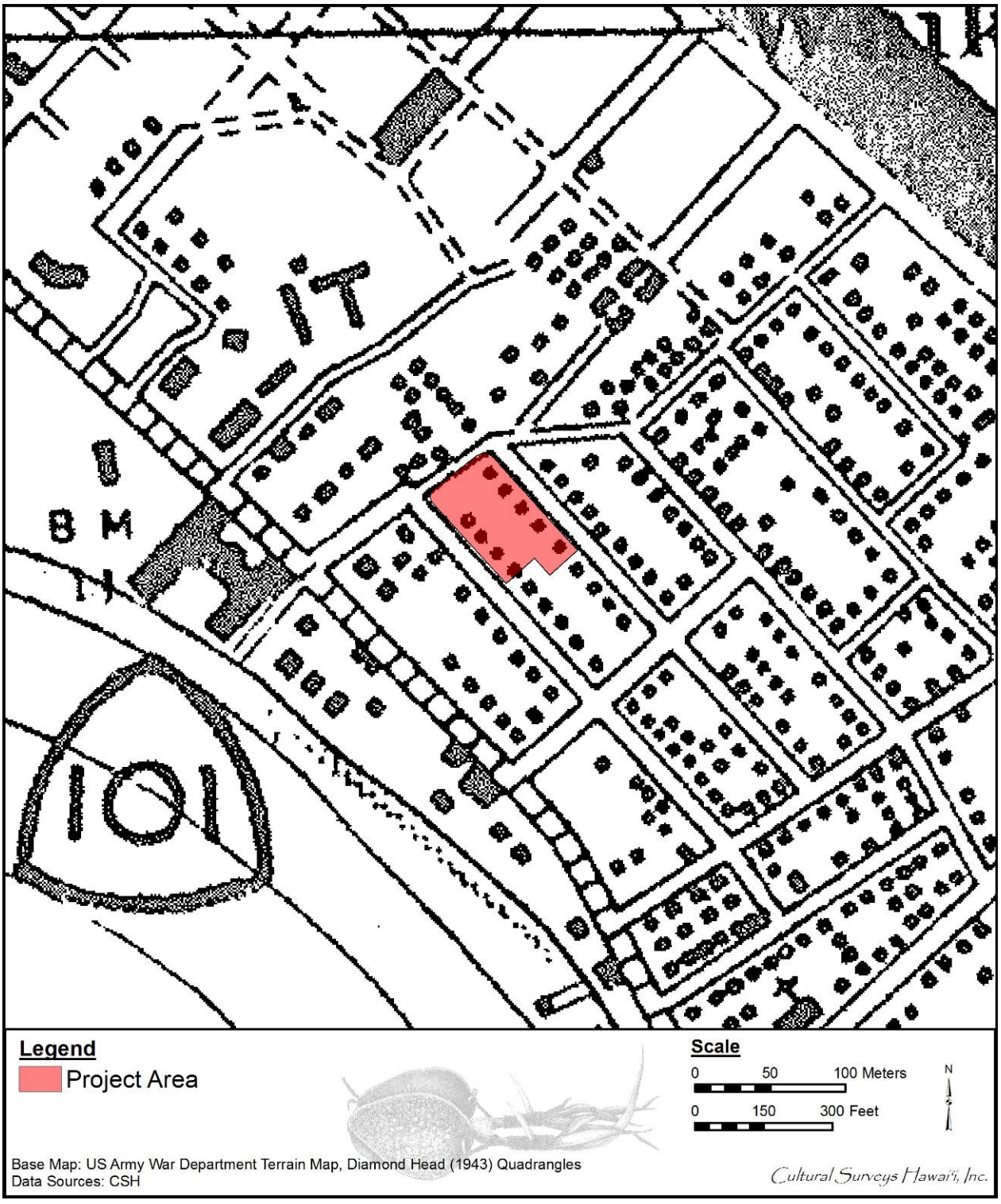

Figure 29. 1943 U.S. Army War Department Terrain map, Diamond Head quadrangle (portion) depicting project area

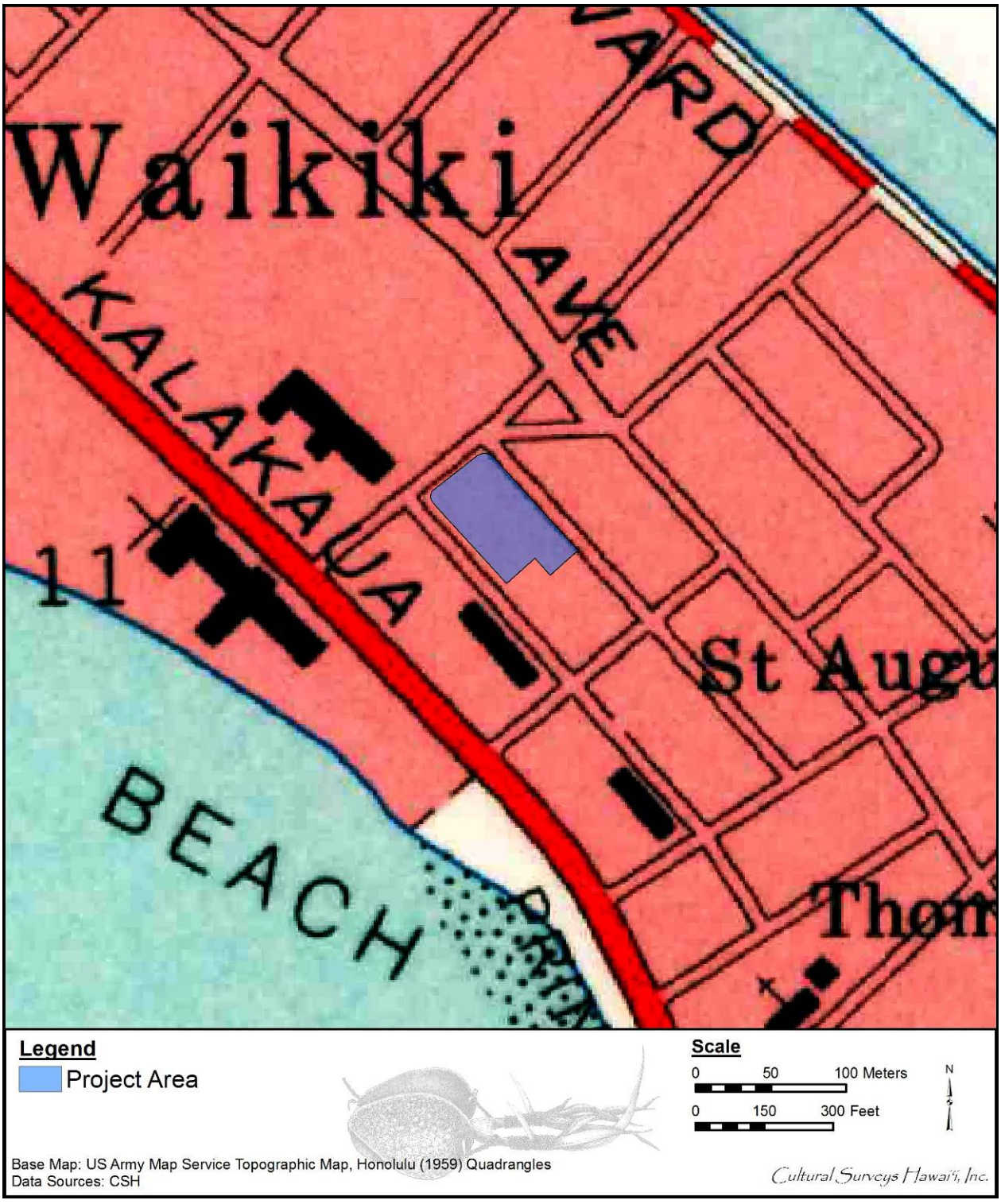

Figure 30. 1959 U.S. Army Service Topographic Map, Honolulu quadrangle (portion) with project area; note the extended Moana Hotel

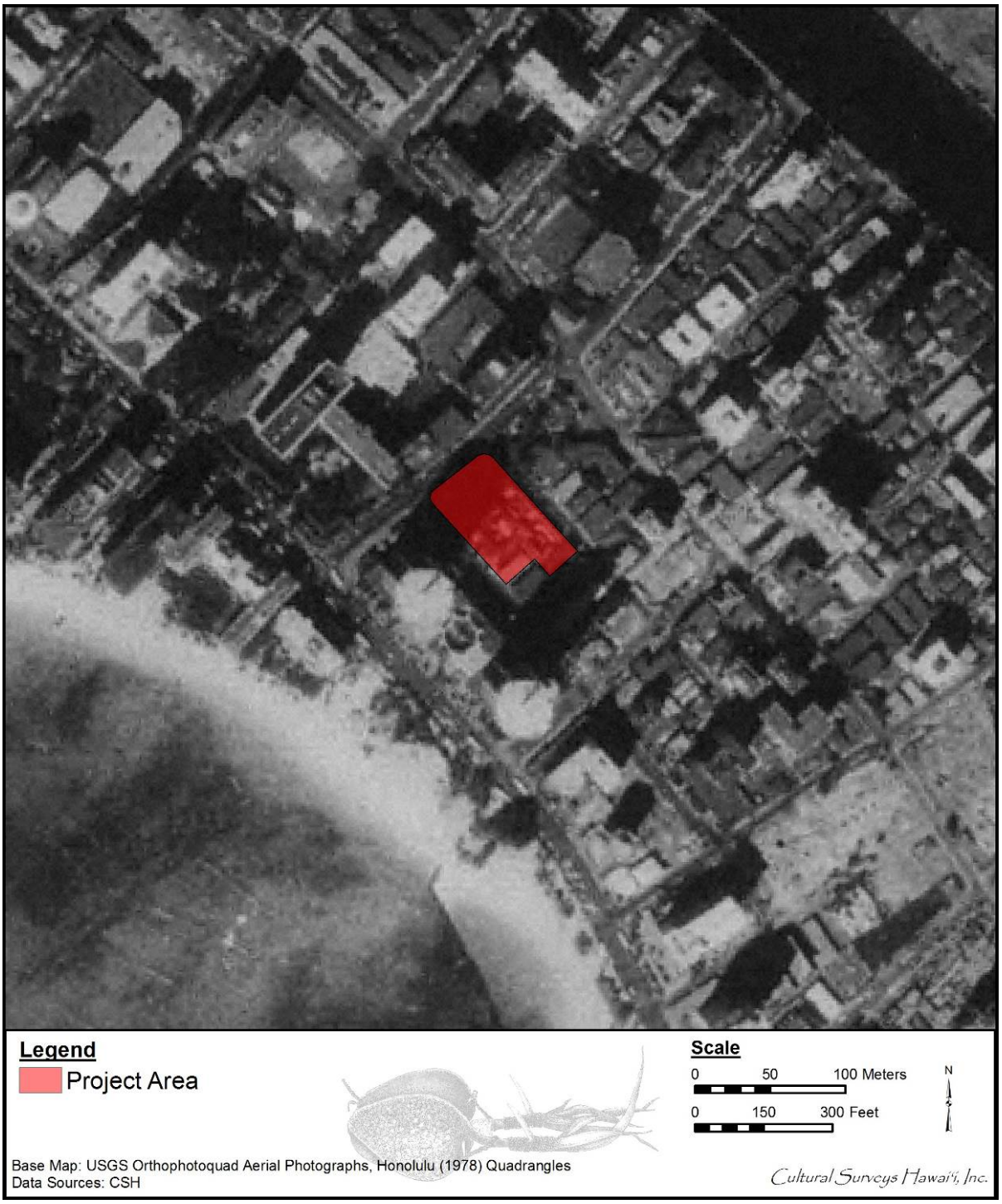

Figure 31. 1978 USGS Orthophotoquad aerial photograph, Honolulu quadrangle depicting project area

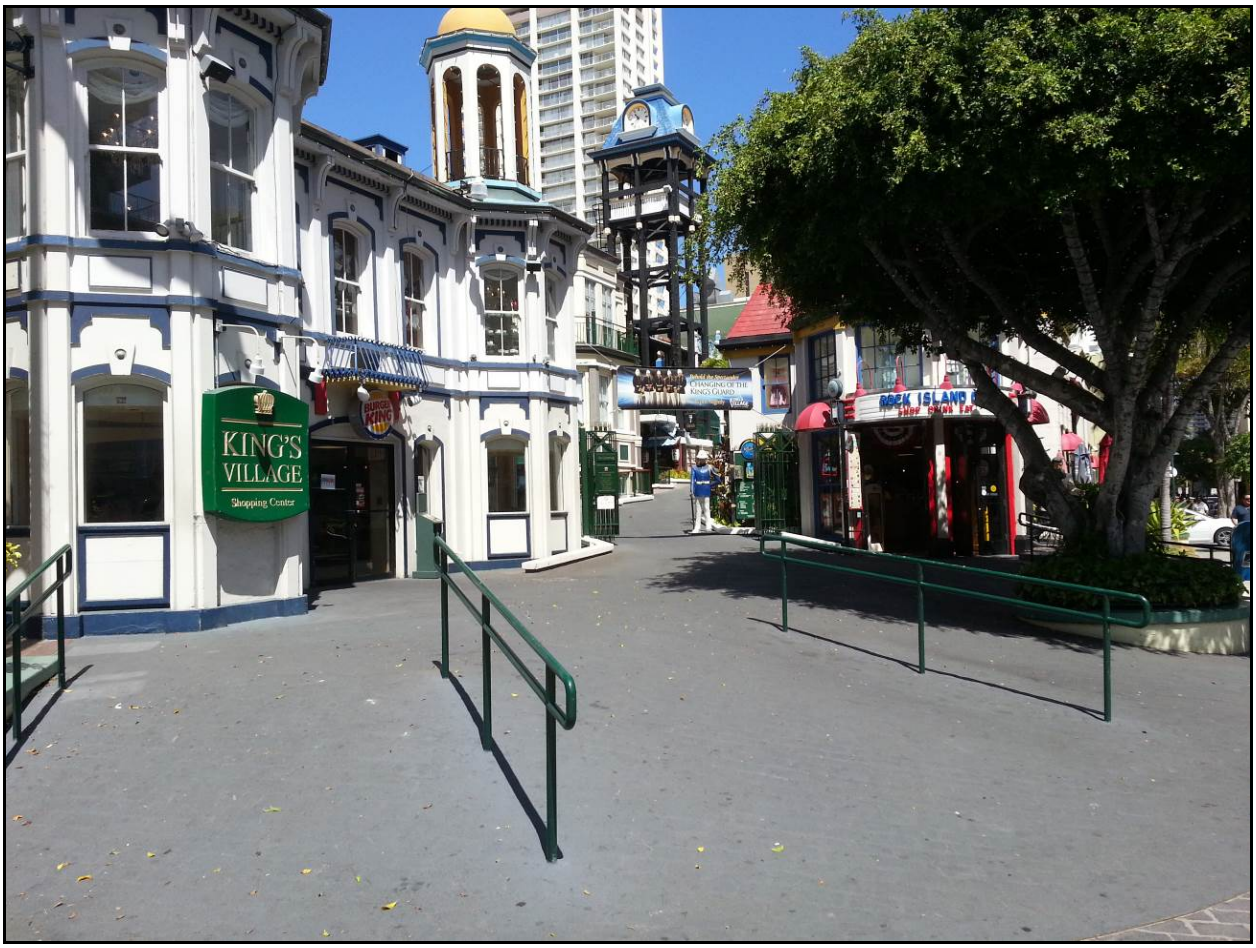

Figure 32. Photo of King’s Village Shopping Center in Waikīkī (CSH 2013)

4.5 Previous Oral History Research

This section draws from previous oral history research conducted by the University of Hawai‘i’s Center for Oral History (UHCOH) in 1985 to highlight the voices of several people who had deep knowledge of the culture and history of the ahupua‘a of Waikīkī. Their mo‘olelo color the cultural and historical background with nuanced recollections and add depth to the information provided by kūpuna and kama‘āina who were interviewed for this CIA (see Section 6). Summaries and excerpts from this collection of oral histories are presented below.

4.5.1 Sadao Hikida

The UHCOH documented the autobiography of Mr. Sadao Hikida on 18 December 1986. Mr. Hikida was born in 1914 and raised in Waikīkī and is a *nisei* (second generation) Japanese. He was a caretaker for ‘Āinahau, the former home of Princess Ka‘iulani, and a night watchmen for the Moana Hotel. In his autobiographical recollections recorded by UHCOH, Mr. Hikida shared his childhood memories of Kapi‘olani Park:

> The Kapi‘olani Park and zoo, as I remember in my childhood days, had many little islands, with tiny bridges to cross over, that were planted with palm trees, hibiscus, crotons, and willows. There also were picnic areas and many lily ponds, some with goldfishes and ducks swimming in them. When the lilies were in bloom it was a beautiful sight to see various hues matching the colorful colors of the goldfishes . . . Monsarrat and Kapahulu Avenues was mostly marshland with bulrushes and other swamp grass inhabited by mosquito fish and shrimp. The roads were mostly dirt roads lined with many date palms. I used to climb those date trees, trim the thorns and pick the delicious fruit to eat.
>
> In the early 1920s the park’s ponds, streams and marshlands were filled with the dredging material of coral and mud from the Ala Wai Canal. The park also had a sports arena where they had polo matches, horse racing, and buggy cart and auto racing.
>
> I would like to mention three wonderful and unforgettable memories. 1) Daisy the elephant, we used to ride on her back with the care taker walking her around in a wide circle. 2) The blimp (balloon airship) which hovered over the tree tops anchored by a long rope to the ground. 3) The chimpanzee who was set free to roam although tied to a tree by a long chain. Other activities I recall are the tennis tournaments, family outings, school and club outings, hanamatsuri, etc. [University of Hawai‘i Center for Oral History 1985:2:975]

Mr. Hikida shared a story about ‘Āpuakēhau Stream:

> The ‘Āpuakēhau Stream flowed pass our back and front yards and emptied into the ocean between the Moana Hotel and the Outrigger Canoe Club. The banks of the river were lined with hau groves and palm trees. The river was abundant with shrimp and fishes such as mullet, ‘a‘awa [wrasse], āholehole [young stage of āhole, or Hawaiian flagtail], pāpio [young stage of ulua, or crevalle, jack or

> pompano], manini and ‘o‘opu [goby]. I spent many happy relaxing hours fishing from the banks of the river or from the bridge which spanned the river. There was also a pond by our home which was connected to the ‘Āpuakēhau Stream. It was filled with shrimps and small fishes. And it was where we raised our ducks. [University of Hawai‘i Center for Oral History 1985:2:967]

Mr. Hikida also discussed the Ala Wai Canal project during his youth in the 1920s:

> The dredging of Ala Wai Canal started about 1920 and was completed around 1926. The canal is about two and a half miles long, ending at Makee Road. It is about 150 feet wide and about 10 to 20 feet deep. This solved the flooding problem of Waikīkī. The dredged material of mud and coral was used to fill up hundreds of acres of pond fields and marshland in Waikīkī, Mō‘ili‘ili, McCully, Kapahulu and Kapi‘olani Park. They also filled up the ‘Āpuakēhau, the Kukaunahi and other small streams. While the ‘Āpuakēhau Stream was being filled, thousands of mullet and other fishes and shrimps were being smothered by the land fill. [University of Hawai‘i Center for Oral History 1985:2:970]

4.5.2 Joseph Akana

The UHCOH interviewed Joe Akana on 22 March 1985 in his Hawai‘i Kai home. Mr. Akana was born and raised on ‘Ōhua Lane in Waikīkī, and he grew up and worked in Waikīkī as a Beach Boy during the summer and winter months. Mr. Akana described the area of Waikīkī known as Long Branch:

> Yeah, included the Seaside—the street, Seaside Avenue; where the school was; and down towards the Seaside Hotel which was on the water side, beside, across the street. Both sides of Kalakaua Avenue was the Seaside Hotel. It included that Waikiki Theater [area]. I think it went as far as Lewers Street. And in the area there where the Waikiki Theater is, there were banana patches. Of course wherever there was banana, we always went to steal bananas. [University of Hawai‘i Center for Oral History 1985:1:6]

He also recalled Waikīkī School and the Kawaiha‘o Waikīkī Branch Church and Cemetery, which was located north of the project area at the current location of the Princess Kai‘ulani Hotel:

> There was a cemetery there. I can’t say exactly what year. Let’s see, could be about 1909 or 1910. (JA clarifies to after 1915.) I mention those years because the Waikīkī School moved then between Hamohamo [Road] and Kaneloa [Road]. Waikīkī School. I don’t know what year it moved to the present site [3710 Lē‘ahi Avenue] . . . I think the church went down and they disinterred the (remains for burial elsewhere). Even those years, I think, they did things properly, you know. They removed the bones and whatnot. I don’t know where to. [University of Hawai‘i Center for Oral History 1985:1:6]

Mr. Akana remembered the Waikiki Theater and the dredging of the Ala Wai Canal:

> The Waikiki Theater didn’t go up until about . . . I could get it pretty close. (Pause) About the middle ‘20s. [Waikiki Theater opened in 1936.] You know why? That late? It was because the dredging of the canal didn’t occur till about the early ‘20s.
>
> And then, of course, where the Waikiki Theater is now is filled-in property. All coral. It was all coral that came in from the canal. The dredger had pumps that pumped the drainage, whatever, the coral and what not that were dug out. That’s the first time in my life I noticed suction—dredging by suction. Before that, they used to have big clam shells that went down and grabbed the coral, lifted it up, swung it across, and put ‘em in trucks, and the trucks hauled ‘em away. The dredger would grind coral, and they had big pipes close by. They suck the coral right into a big pipeline. Pipes about this big (twenty or twenty-four inches in diameter. Spiked grinders loosened coral that was spontaneously sucked and forced through pipes and spilled to designated areas. [University of Hawai‘i Center for Oral History 1985:1:7]

Mr. Akana also discussed the politics surrounding the dredging of the Ala Wai Canal and pointed out that Ala Moana Park used to be the city dump:

> You see, the Dillinghams [Hawaiian Dredging] engaged in a contract with the State [Territory of Hawai‘i] that they [the Territorial government] would provide all the money necessary to dredge the canal, but with the proposition that certain areas that they filled—don’t know what the acreage would be—that they [the Territory] could keep. And the [Ala Moana] Shopping Center was one of them. And where the [Ala Moana] Park is now used to be a dump, the city dump . . . Yeah, city dump. So they filled that in and gave it to the City. (Actually, the City already owned the property. Dillingham filled the dump and surrounding swamp area to create the park.) So they had a pretty good agreement going. Everything went fine. There were no big squawks. Of course, they were responsible for a lot of Ala Moana Boulevard, you know. That’s all coral. What they dredged. [University of Hawai‘i Center for Oral History 1985:1:7]

Mr. Akana also explained the streetcars that travelled around Waikīkī:

> Well, the streetcar used to travel on Kalakaua [Avenue] and it made a turn up to King Street on elevated tracks. You know how trains do. They build elevated banks so that they could lay the rails and the train [streetcar] would ride on these rails. Well, the same thing happened at McCully. It was the McCully area, they called it. And everybody who rode streetcars could see the ducks, white ducks. You could see eggs in the islets, you know. Chinn Ho lived in that area. And it was a fact that the duck ponds did not have—people who lived there didn't have water lines, fresh water, drinking water. There was no line for drinking water. So, Chinn Ho, after school—you remember the old days when they used to carry the five-gallon tanks? Kerosene cans, they were. One here, one here [one on each side of the body], and they have a stick [on the shoulder]? You know. They still do that in the Orient, I guess. He went across the street and ask the people for water,

> brought it home daily. I believe he had a newspaper route, too, later on. He was older than me. [University of Hawai‘i Center for Oral History 1985:1:5]

4.5.3 Robert Anderson

The UHCOH interviewed Robert Anderson on 4 March 1988 at his Diamond Head home. Mr. Anderson was born in Honolulu on 6 June 1894 and graduated from Punahou School in 1912. Mr. Anderson is best known as one of Hawai‘i’s most prolific composers of hapa-haole songs (a hybrid song type using both English and Hawaiian languages). Mr. Anderson’s most famous work is *Mele Kalikimaka*, which translates as Merry Christmas in Hawaiian and is learned by most grade school students throughout Hawai‘i. Other compositions by Mr. Anderson include *Lovely Hula Hands* and *Haole Hula*. In his interview with UHCOH, Mr. Anderson described what Waikīkī was like during the early 1900s:

> Well the Moana Hotel was there. That was the biggest thing. And it did not have the wings at that time. It was just the central building which was frame construction. Later on, the two wings were built of concrete. That was in 1918 that the wings were put on.
>
> The Halekūlani Hotel, I don’t remember the year, but that was just about along in there. And Niumalu [Hotel], little further down where the Hilton [Hawaiian Village Hotel] is today. That was about it. Coming out this way, there was the—I forget what the year the Outrigger [Canoe] Club started.
>
> Well, they had what they call the Royal Hawaiian Hotel and cottages right next to Bertha Young where it is today. It was just a frame building and some little cottages scattered all through the grounds. And then, next to that was the Outrigger and then the Moana. The other side of the Moana was Judge Steiner’s home, and then a place called the Waikīkī Tavern. And about that time, you came to the seawall out there.
>
> Across the way were coconut palms and undeveloped property. And there was quite a bit of water up in there, the ponds. And when it ever rained hard, you’d get a run-off right past the Outrigger Club, which was next to the Royal Hawaiian at that time, and mud would come down into the ocean. You’d get some dirty conditions in the water for a few days, until much later when they built the Ala Wai Canal to take care of that extra drainage. It dried it all up. [University of Hawai‘i Center for Oral History 1985:209]

4.5.4 John C. Ernstberg

The UHCOH interviewed John C. Ernstberg on 15 March 1985 at his home in Waikīkī. Mr. Ernstberg was born in 1910 in Kahului, Maui and is a former Waikīkī beach boy, musician, and a retired Honolulu City and County lifeguard. In his interview with UHCOH, Mr. Ernstberg described the various ocean resources in Waikīkī during his youth:

> The limu [seaweed] was there. You want limu. You need limu now. All the Hawaiian[s] do. I do. My wife needs limu because she’s got goiter, in that for the throat and things like that. Before all the limu, all the lipoa and everything I can

> get here manauea, lipoa, wawae‘iole and eh, everything you like. All kinds of limu. You like lipoa?
>
> You like manini [reef surgeonfish]? I love manini, one, two manini. I go out there, see, I go on the reef over there when the tide coming up. You go out there with your net, walk outside on the reef, flat reef, you wait over there. Soon as the tide starts coming up, you see the manini. All big schools come up. They go on top of the reef. When the wave break, you can see them—all that green. You stay up there. You wait, wait, wait, wait till they all come on the flat one time. Throw. You look, you see the all green and spiral. You go in there and pick ‘em up little by little now. Go pick up, put ‘em all in your bag. You look—full, ‘nough. Going home. [University of Hawai‘i Center for Oral History 1985:1:125]

4.5.5 Wilbur Craw

The UHCOH interviewed Mr. Wilbur Craw on 11 April 1985 at his home in Ka‘a‘awa on the island of O‘ahu. Mr. Craw is a former Waikīkī beach boy and founded a food brokerage company along with his brother. In his interview with UHCOH, Mr. Craw described his experiences with ‘Āpuakēhau Stream in Waikīkī:

> When we first got down there, the old Outrigger [Canoe Club] was built on the banks of the [‘Āpuakēhau] stream that came into the water between the Moana Hotel and the Seaside Hotel which is now the present site of the Royal Hawaiian [Hotel].
>
> (Across) that stream, (a) bridge was built across Kalākaua Avenue, a low concrete bridge, almost flat on the road, then the stream went up into the duck ponds. We used to paddle surfboards up there, small kids, go (up) and (explore) at the duck ponds, the rice paddies, the taro patches and we’d paddle along and look around. Now and then you’d see duck eggs, (and) swipe the duck eggs, (don’t) know what the hell for. Used to kinda be adventurous, you know, all these waterways going up all around (and) which is all built now in highrises.
>
> Then when we would get back down we would go fishing in the stream. They had lots of little baby fish, I guess, you might call them ‘mosquito fish.’ Or when the stream would open up and the water would come in, it would be moi [threadfish] season or ‘oama [young of the weke, or goatfish] season, some of these fish would go up in there. Actually, some of the regular fish like manini and stuff, they became acclimated to the water. You’d see these damn manini swimming around in the fresh water! [University of Hawai‘i Center for Oral History 1985:1:334–335]

Mr. Craw also stated that the area in front of the Royal Hawaiian Hotel, where ‘Āpuakēhau Stream entered the ocean, was once abundant with various types of limu:

> They had a lot of limu there . . . Manauea and limu līpoa. Waikīkī was very famous for its limu. It had līpoa, they had manauea. They had huluhuluwaena. They had, some spots there, wāwae‘iole. Only thing that you couldn’t find too much of and wasn’t a good place for it, was lipēpē [limu līpēpē]. It’s crunchy,

> when it grows flat looks like a Christmas tree. It’s very crunchy, and real good tasting. Oh, boy! There’s some out here but it’s scrubby stuff.
>
> Oh, limu-kala is broader leaf than the other limu līpoa. It is a coarser limu. It has almost the same taste but it is a wide coarse limu, and for that reason, the Hawaiians don’t particularly care for it. They call it limu-kala. It is the līpoa that has the fine (leaf). It’s about half or one-third the width of the limu-kala, and that is the preferred limu [līpoa]. [University of Hawai‘i Center for Oral History 1985:1:335–336]

Mr. Craw shared a recipe that he used for limu gathered from the shores of Waikīkī:

> . . . it’s that red manauea . . . if you want to make namasu-style [pickled]; you gotta clean out the fine (green) limu that grows in with every now and then. You have to clean that out, chop it up, blanch it and then run it under cold water so it doesn’t cook because when it gets too cooked it gets soft and mushy. But just so you blanch it, and then you make your vinegar, sugar, ginger, (sauce) namasu-style, put it in.
>
> Otherwise, you would chop it up, mix it with say wāwae‘iole, a good mix is līpoa, wāwae‘iole, lipēpē and manauea. Mix ‘em all together, put it together. Whew! [University of Hawai‘i Center for Oral History 1985:1:336]

4.5.6 Lemon “Rusty” Holt

The UHCOH interviewed Mr. Lemon “Rusty” Holt on 15 March 1985 at his home in Wilhemina Rise in Honolulu. Mr. Holt was born in 1904 and raised in Waikīkī. Mr. Holt graduated from Kamehameha Schools in 1928 and later from the University of Hawai‘i. Later he became a postmaster, personnel department head, and store and apartment manager. In his interview with UHCOH, Mr. Holt described his experiences with the dangers of gathering wana (sea urchin) in Waikīkī during his youth:

> The best wana grounds is at where Queen’s Surf is. There’s a little channel, and right next to the channel is a reef. Wana growing underneath running water or (white) waves breaking is supposed to be fat. Good wana. Worthwhile getting and eating. You pick them in the month of October. They’re fatter then.
>
> Well, one day we went out, and (who was) steering, I forget. I was in the middle. We had gotten what wana we wanted—three or four gunny sack bags, filled up. They were in the front of me, at the bow was my sister Dawn Kinney, who just recently passed away. So in coming in, we caught a wave, a good sized wave. We shouldn’t have. We shouldn’t have, but we did. I can’t remember now who was steering. Anyway, we caught the wave and as we came in, it ran into white water. The spray, came into the boat. My sister, who was sitting at the bow, when the spray came in, leaned back. When she leaned back, she leaned back onto the wana (bags), into the spears. Those spears are deadly because they break off. You can’t get them out unless you use tweezers right away. I don’t know how many hours it took for somebody to pick out all they could find.

> Years later, quite a few years later, I can’t remember how many years later, my sister complained of her big toe hurting. So somebody got a razor and started to scrape around where she said it was hurting because they could feel it was hard. Then somebody got a pair of tweezers, and they opened it up a little bit, and they pulled out the tip of one of those wana spears . . .
>
> After all those years, one of them came out in her big toe. It was white in color, being in the stream, the bloodstream, all that time. But they could see, they could tell that it was still in the shape of the wana point. [University of Hawai‘i Center for Oral History 1985:2:808–809]

Section 5 Community Consultation

Throughout the course of this assessment, an effort was made to contact and consult with Hawaiian organizations, agencies, and community members including cultural descendants of Waikīkī, in order to identify individuals with cultural expertise and/or knowledge of the ahupua‘a of Waikīkī. CSH initiated the outreach effort in December 2013 through letters, email, telephone calls, and in-person contact. CSH completed the community consultation in January 2014. In the majority of cases, letters along with a map and an aerial photograph of the project area were mailed with the following text:

> At the request of BSC KVSC, LLC, Cultural Surveys Hawai‘i Inc. (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed King’s Village Redevelopment Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu Island, TMK: [1] 2-6-023:029, 037, and 076 por.
>
> The proposed project is for the King’s Village Redevelopment Project located on Kaiulani Avenue between Koa Avenue and Prince Edward Street. The project consists of three parcels that include the King’s Village Shopping Center, Prince Edward Apartments, and the Hale Waikiki Apartments. The project involves the redevelopment of the subject properties into a new 34-story condo-hotel (see USGS map and aerial).
>
> The purpose of the CIA is to gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about this area. The research and interviews assists us when assessing potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the planned project. We are seeking your kōkua (assistance) and guidance regarding the following aspects of our study:
>
> - **General history and present and past land use of the project area.**
> - **Knowledge of cultural sites--for example, historic sites, archaeological sites, and burials.**
> - **Knowledge of traditional gathering practices in the project area, both past and ongoing.**
> - **Cultural associations of the project area, such as legends and traditional uses.**
> - **Referrals of kūpuna or elders and kama‘āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua‘a lands.**
> - **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.**

In most cases, two or three attempts were made to contact individuals, organizations, and agencies. Community outreach letters were sent to a total of 78 individuals or groups; seven

responded, and two of these kama‘āina and/or kūpuna (elder) met with CSH for a more in-depth interview. The results of the community consultation process are presented in Table 3. The interview summaries are presented in Section 6 .

Table 3. Results of Community Consultation

Name	Affiliation	Comments
Agard, Louis "Buzzy"	Resident, kūpuna	Letter and figures sent via email on 2 December 2013
Ayau, Halealoha	Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei	Letter and figures sent via email on 2 December 2013 Mr. Ayau responded to CSH on 5 December 2013 via email; see Section 5.3 for an expanded version of his response
Bates, Cline	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Bates, Ke‘ala	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Becket, Jan	Author, photographer, and teacher	Letter and figures sent via email on 3 January 2014 CSH sent an email to Mr. Becket on 9 January 2014 regarding a possible site visit to Diamond Head State Monument and Diamond Head Lighthouse Mr. Becket confirmed site visit for12 January 2014 to Diamond Head State Monument and lower portion of La Pietra Site visit and authorization form signed on 12 January 2014 Mr. Becket sent a follow-up email to CSH on 12 January 2014 regarding site visit CSH responded to Mr. Becket on 13 January 2014 Mr. Becket responded to CSH on 14 January 2014 with a write up on Pahu-a-Maui (the present site of the Diamond Head Lighthouse): *I checked in the original 1933 McAllister and the DH Lighthouse is listed as the location for Pahu a Maui. There is also an interesting account of somebody walking below the peak in the early days and finding lots of skulls, and then being told it was a place of execution where people were thrown off the peak, with the bodies lying unburied in the gulches. That is something not in the Le‘ahi brochure.* CSH sent Mr. Becket a draft of his interview summary on 16 January 2014 Mr. Becket sent two images from the site visit on 21

Name	Affiliation	Comments
		January 2014 Mr. Becket approved his interview summary on 22 January 2014
Boyd, Manu	Cultural Director at Royal Hawaiian Center	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Crabbe, Kamana‘opono	CEO, OHA	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
DaMate, Leimana	Executive Director, Aha Moku Advisory Committee, DLNR	Ms. DaMate called CSH to speak on behalf of kūpuna who are concerned about the project. Two things covered on phone call: *Kūpuna are asking, "What does it matter if they give mana‘o on the project, they are still going to build no matter what." Kūpuna say "no more condos and high rises."* Ms. DaMate's family is from Waikīkī; related to the Holt ‘Ohana; has connection to Waikīkī prior to 1778 Ms. DaMate would follow up with CSH via email. CSH contacted Aha Moku Advisory Committee for Ms. DaMate's contact information on 23 December 2013 Charles Ka‘aiai sent an email to CSH with Ms. DaMate's contact information on 27 December 2013 Letter and figures sent on 7 January 2014 Ms. DaMate replied to CSH via email on 7 January 2014 with the following statement: *Aloha Nicole,* *I truly apologize for not calling you earlier. Been swamped with legislative issues preparing for this upcoming session. Yes, I am interested in participating and actually also have some kupuna of Waikiki who are lineal descendants of the area and have been living in Waikiki since the 1930's. My own father was born there in 1929.* *Let me know how I can participate, and I will bring my father as well. He's 85 now, but our family traditionally is from Waikiki.* CSH emailed Ms. DaMate on 8 January 2014 with the details of what the CIA process entails and possibly scheduling a date for an interview
Del Toro, Benjamin	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014

Name	Affiliation	Comments
Del Toro, Daniel	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Del Toro, Rachel	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Del Toro, Samuel	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Downing, George	President, Save Our Surf	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Finley, Robert J.	Chair, Waikīkī Neighborhood Board	Letter and figures sent on 2 December 2013 Mr. Finley replied to CSH via email on 4 December 2013 with the following statement: *Aloha Nicole,* *Once again I lack the expertise to make many comments of past use and cultural importance of the area involved in the Kaiulani/Koa/Prince Edward area.* *Most of the visitors and residents I speak with really enjoy the current King's Village and the small businesses in the area. In my opinion and only my opinion this project combined with the loss of the current International Market Place will reduce the number of interesting areas for visitors to "find and explore" while visiting in Waikiki.* *I also assume that we will have many questions of the ability of the area infrastructure to support increased number of rooms, water, sewage, traffic and all those normal issues.* *Sorry I am not really a cultural expert on the area.*
Galuteria, Juliette	Former resident of Kaka‘ako	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Gomes, Phoebe	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Gomes, Robin	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Grace, Nadine	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Harris, Cy K.	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kaleikini, Ali‘ikaua	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014

Name	Affiliation	Comments
Kaleikini, Haloa	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kaleikini, Kala	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kaleikini, Moehonua	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kaleikini, No‘eau	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kaleikini, Paulette Ka‘onohi	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kamai, Winona	Director, Waikīkī Hawaiian Civic Club	Letter and figures sent via email on 2 December 2013 Second letter and figures sent via email on 7 January 2014 Aunty Winona’s daughter, Dwynn, wrote on behalf of her mother via email on 13 January 2014 with memories of the project area CSH replied to Aunty Winona and Dwynn via email on 13 January 2014 Dwynn responded to CSH via email on 14 January 2014 with more information related to the project area CSH responded to Dwynn via email on 15 January 2014 asking permission to create a consultation summary from previous statements made; Dwynn agreed CSH emailed Dwynn a draft consultation summary on 24 January 2014 Dwynn responded to CSH with minor changes to the consultation summary on 24 January 2014
Koko, Kanaloa	Cultural descendant	Letters and figures sent on 2 December 2013 Letters and figures returned to CSH on 5 December 2013
Keana‘āina, Betty	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keana‘āina, Kīhei	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keana‘āina, Luther	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keana‘āina, Michelle	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 5 December 2013
Keana‘āina,	Cultural descendant	Letter and figures sent on 2 December 2013

Name	Affiliation	Comments
Noelani		Second letter and figures sent on 3 January 2014
Keana‘āina, Regina	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keana‘āina, Vicky	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keana‘āina, Wilsam	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kekaula, Ashford	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014 Second letter and figures returned to CSH on 8 January 2014
Kekaula, Mary K.	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keli‘inoi, Kalahikiola	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keli‘inoi, Kilinahe	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keli‘inoi, Moani	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keli‘ipa‘akaua, Chase	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keli‘ipa‘akaua, Justin	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keohokālole, Dennis	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Keohokālole, Jeanine	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keohokālole, Joseph	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keohokālole, Lori	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Keohokālole, Ema	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kini, Debbie	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kini, Nalani	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Kuloloio, Manuel	Cultural descendant	Letter and figures sent on 2 December 2013

Name	Affiliation	Comments
		Letter and figures returned to CSH on 5 December 2013
Lew, Haumea	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Lopes, Leina‘ala	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Luka, Alika	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Mamac, Violet	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Medeiros Jr., Clarence (and ‘Ohana)	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent via email on 10 December 2013 Third letter and figures sent via email on 9 January 2014 CSH contacted Mr. Medeiros via phone on 10 January 2014 Mr. Medeiros called CSH on 10 January 2014 and approved the use of previous interview summaries; he emphasized his support of cultural and historic resources to be preserved in the project area
Nobrega, Malia	President, Waikīkī Hawaiian Civic Club	Letter and figures sent via email on 2 December 2013 Second letter and figures sent on 3 January 2014
Norman, Carolyn	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Norman, Eileen	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Norman, Kaleo	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Norman, Keli‘inui	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Norman, Theordore	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Olds, Nalani	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Papa Jr., Richard Likeke	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Pascua, Bruce H.	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014

Name	Affiliation	Comments
Rash, Regina	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Rodrigues, Hinano	Interim History and Culture Branch Chief, SHPD	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Roy, Corbett	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Shirai, Jacqueline	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Shirai, Thomas T.	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Soares, Moani Kaleikini	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Spinney, Charles	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Takaki, Miles	Cultural descendant	Letters and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Takaki, Moses	Cultural descendant	Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Takaki, Tracy	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 4 December 2013
Takizawa, Lorna Medeiros	Cultural descendant	Letter and figures sent on 2 December 2013 Letter and figures returned to CSH on 17 December 2013
Waikīkī Community Center		Letter and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2014
Yokooji, Dayleen	Cultural descendant	Letters and figures sent on 2 December 2013 Second letter and figures sent on 3 January 2013

5.1 Response from the Office of Hawaiian Affairs

CSH contacted Kai Markell and Everett Ohta of the Compliance Enforcement Program at OHA, on behalf of Kamana‘opono Crabbe, CEO, on 2 December 2013. CSH sent a second community contact letter with figures depicting the project area on 3 January 2014. CSH is still awaiting a response from OHA.

5.2 Response from SHPD

CSH contacted Hinano Rodrigues, Interim History and Culture Branch Chief of SHPD-O‘ahu, on 2 December 2013. CSH sent a second community contact letter with figures of the project area on 3 January 2014. CSH is still awaiting a response from SHPD.

5.3 Response from Edward Halealoha Ayau

CSH contacted Edward Halealoha Ayau of Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei on 2 December 2013 via email. Mr. Ayau responded to CSH via email on 5 December 2013 with the following statement:

> Aloha no,
>
> Please check SHPD records. I recall doing a reburial on Prince Edward Street only because I thought it was cool that they named a street after me. But it helped me to recall this event. Although the area may have been in kalo cultivation at some point, there is still the liklihood of discovering more iwi kūpuna [ancestral bones]. Please be careful!
>
> Ola na iwi,
>
> Halealoha

5.4 Response from Winona and Dwynn Kamai

CSH contacted Mrs. Winona (Nona) Kamai, Alaka‘i (Director) of the Waikīkī Hawaiian Civic Club, on 2 December 2013 via email. Aunty Nona’s daughter, Dwynn, responded to CSH on behalf of her mother and herself on 13 and 14 January 2014 with a series of statements on the project area via email. These are presented below.

Waikīkī is a special place and contains a lot of history for Aunty Nona Kamai and her daughter Dwynn. Visitors come to Hawai‘i learn about the culture and history of the island and they usually leave knowing that the islands are being heavily developed. Today, the shores of Waikīkī are lined with hotels and condominiums. Aunty Nona stated, “We need to look at what we are doing and the image we leave in their [tourist’s] minds.”

The project area was once a place of employment for Dwynn. She recalled hula shows, the changing of the guards, mo‘olelo shared at the Heritage Theater, as well as the delicious dishes from restaurants within King’s Alley, the former name of King’s Village. Every Saturday, kumu hula (hula teacher) Aloha Dalire and her hālau (group) performed in the courtyard. In addition, Dalire’s husband taught fire knife dancing and would have his haumāna (students) demonstrate

their talents. Cultural demonstrations such as lei making and coconut frond weaving also took place at King's Alley.

She noted that the changing of the guard was "always spectacular." Twice a day the guards at King's Alley changed shifts dressed in their regalia of a helmet with tassel, regal guard long-sleeve shirt, white slacks, and white shoes. Their performance included the twirling of mock rifles, throwing them back and forth to each other in a synchronized formation. Dwynn compared the guards' wardrobe to the guards at ‘Iolani Palace.

In 1972, the Heritage Theater of the Bishop Museum was opened at King's Alley (Creutz 1978). A number of exhibits pertaining to the Hawaiian monarchy in Waikīkī were on display. The theater presented a daily program on a variety of cultural arts run by Pele Suganuma and Uncle George Holokai. Double decker buses provided transportation between Bishop Museum in Kalihi Ahupua‘a, the *Falls of Clyde* ship at Aloha Tower, and the Heritage Theater in Waikīkī. The theater was open for many years but was later downsized to a bookstore and a gift shop. Dwynn recalled an ‘uhane (spirit) named Charlie who frequented the Heritage Theater. She stated he was a kolohe (mischievous, naughty) ghost who "pulled fun antics," often leaving water puddles and playing with the curtains in the theater.

Aunty Nona and Dwynn do not want to see another high-rise in Waikīkī. Dwynn recalled when her mother used to enjoy driving through Waikīkī but now she has no interest in seeing the developments and redevelopments of the area. They recommended reviving King's Village rather than redeveloping it into a condominium. "Bring back the culture of our Islands and show the malihini [stranger] who we really are."

Section 6 Interviews

6.1 Acknowlegements

The authors and researchers of this report extend our deep appreciation to everyone who took time to speak and share their mana‘o with CSH whether in interviews or brief consultations, including contacts who opted not to contribute to the current cultural impact assessment, but nevertheless spent time explaining their position on the proposed project. We request that if these interviews are used in future documents, the words of contributors are reproduced accurately and in no way altered, and that if large excerpts from interviews are used, report preparers obtain the express written consent of the interviewee/s.

6.2 Jan Becket

Jan Becket is a teacher with Kamehameha Schools well-recognized for his black-and-white photographic documentation of sacred sites. He has conducted extensive archival research on sites of cultural significance, learned from kūpuna, and photographed many undocumented sites on O‘ahu, which resulted in a co-written book, *Pana O‘ahu* (Becket and Singer 1999). He is a member of the Committee for the Preservation of Cultural Sites and Properties under the O‘ahu Council of Hawaiian Civic Clubs, and reports back to the chair of the committee (Shad Kāne) on issues concerning cultural sites in the Kona district of O‘ahu.

On 28 April 2012, Mr. Becket led CSH on a site visit to two cultural sites within the broad cultural landscape of Waikīkī. One cultural site is located in the center of Wa‘ahila Valley on the lower slope of Wa‘ahila Ridge, mauka (toward the mountain) of the Kamakakuokalani Center for Hawaiian Studies at the University of Hawai‘i at Mānoa. This site, nestled between a rock face, a steep drop-off and three low, basalt walls, would command an impressive view of Waikīkī were it not for the unchecked vegetation. The site is now composed of two small terraces built upon natural rock (Figure 33), a po‘o pōhaku (a stone with an outcropping that looks like a head) (Figure 34 and Figure 35), and an area of loose cobbles and boulders. An enclosing wall runs along the makai side of the site. Based on a previous visit, Mr. Becket pointed out how mountain bikers ten years ago had used the stones from the mauka wall of the enclosure to make a pavement that allowed them to actually ride across the site and jump off the po‘o pōhaku. Mr. Becket helped inform the State of this site’s destruction which led to the closing of the bikers’ access trail. Currently, a homeless person lives within this site.

Paul Rosendahl assessed this cultural site as part of an archaeological inventory survey in a nearby area in 1996 though no excavations were made. Designated as Site 5463, Rosendahl (1996:22) described it as “an area used for agriculture, with some potential for containing habitation features” likely associated with pre-Contact activity (Figure 36).

Mr. Becket and other members of the Committee for the Preservation of Cultural Sites and Properties, under the O‘ahu Council of Hawaiian Civic Clubs, collectively felt that Site 5463 may be a possible heiau. In a letter to the DLNR in 2001, the preservation committee explained their reasoning:

Figure 33. Site 5463 with terrace in foreground and Waikīkī in background ca. 1998 (photo courtesy of Jan Becket)

Figure 34. Site 5463 with terrace in foreground and po‘o pōhaku in background, 1998 (photo courtesy of Jan Becket)

Figure 35. Po‘o pōhaku at Site 5463, April 2012 (photo courtesy of Jan Becket)

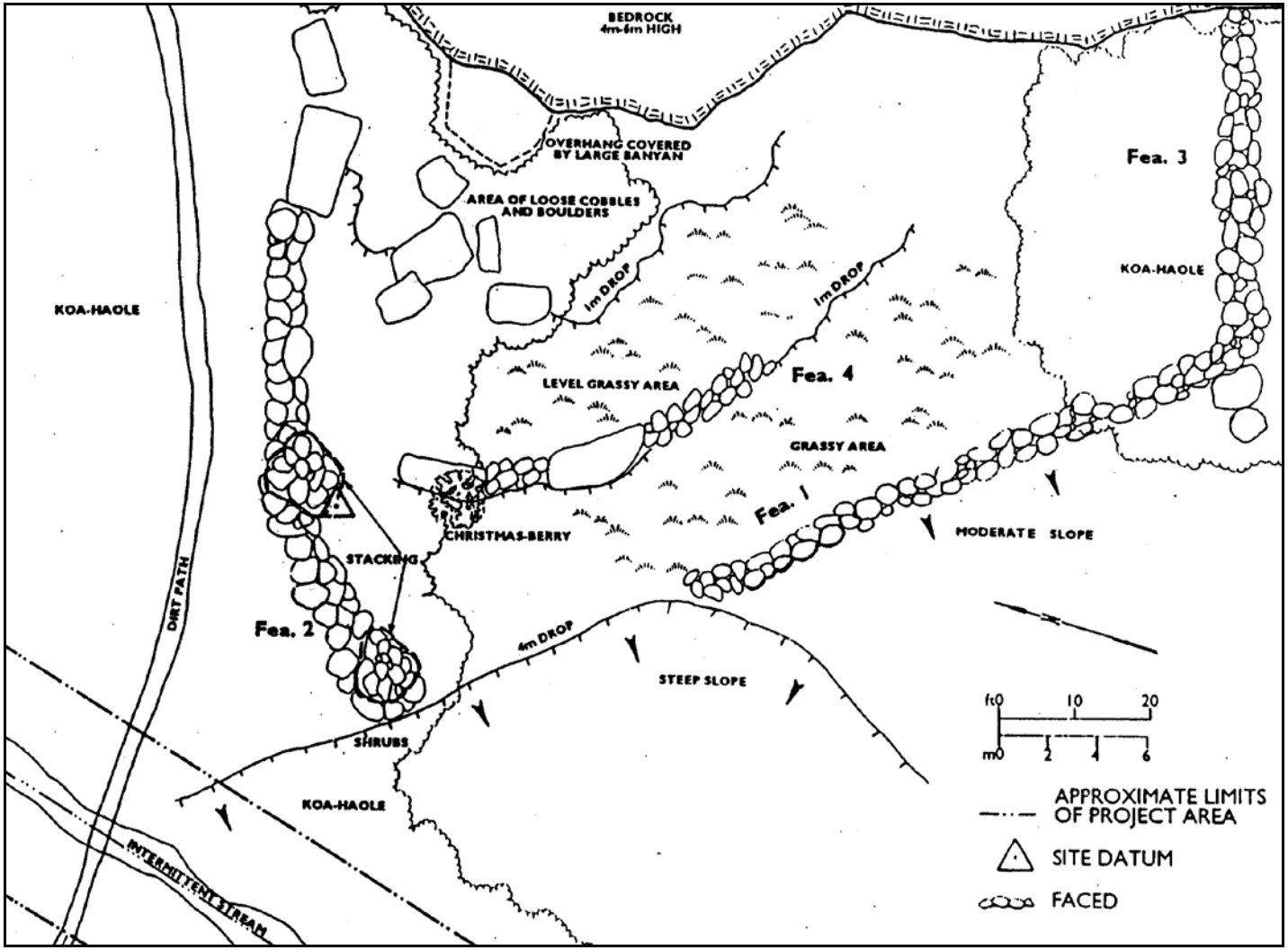

Figure 36. Sketch of Site 5463 (Rosendahl 1996:22)

> It is the only ancient structure in that area, with no features usually associated with agriculture (‘auwai, lo‘i) either in the surrounding forest or within the structure itself. Although the structure sits on marginal upland soil, it lies above the Mānoa/Mō‘ili‘ili plain, one of the richest growing areas on O‘ahu. This unusual placement raises the question of which crops might have been raised so far from habitations and from other, far more productive cultivation areas. No house platforms are evident within the enclosure.
>
> On the other hand, no information about the rectangular enclosure contradicts the interpretation of its function as ceremonial. It looks out over Waikiki, directly over the ancient seat of political power for the entire island since the time of Ma‘ilikukahi: Helumoa (or ‘Apuakehau), now the location of the Royal Hawaiian Hotel. Often, heiau were deliberately placed so that they would command such sweeping views. Furthermore, at the center of the enclosure lies an unusual and prominent stone [the po‘o pōhaku]. Our cultural resource experts tell us that some heiau were constructed around such prominent stones, which were the focus of the structures, their reason for existing. Although no one can be absolutely sure at this point, the enclosure does appear to be constructed around such a stone, although the archaeological survey makes no mention of it.

The preservation committee elaborated on how the area surrounding Site 5463 is culturally significant in several ways. The ridge of Wa‘ahila is a wao nahele (upland forest zone) close to the city for gathering and other cultural activities. The ridge is also associated with one of the early gods—Kauhi, whose form can be seen along the ridgeline from Mānoa. This wahi pana of Kauhi makes the ridge, to some degree, a wai akua (abode of the gods), according to the preservation committee.

The other cultural site is located in Kamanele Park in Mānoa Valley. Situated on the makai side of the park just below the grounds of the Mid-Pacific Institute is, at first glance, a large natural stone outcropping. An archaeologist had previously pointed out to Mr. Becket that the grains of most of these large stones, remnants of a basalt lava flow that cooled in an unusual way, run in the same direction, indicating this is a natural formation. Behind this massive feature and along its sides, however, are several areas of distinct artificial terracing (Figure 37 through Figure 39), as well as a small rock overhang. After clearing some vegetation, Mr. Becket indicated an alignment of stones that is possibly an ahu. He noted how an upright stone rises above two stones that form a kohe (vagina), with a small terrace below it. A similar Papa/Wakea feature exists at a recorded heiau in Hālawa Valley, in the complex under the H-3 Freeway and at a site at Maunawili, O‘ahu, according to Mr. Becket (Figure 40).

Mr. Becket also recalled that an early twentieth century article titled “Where Fact and Fancy Meet,” published in *The Mid-Pacific Student* (1907), described three heiau in Mānoa Valley—Ka-ua-laa (the sacred rain), Ka-uwalo-malie (the place of the silent crying), and Ka-ui-o-Mānoa (the beauty of Mānoa). The description of the latter heiau as being located on “the rounded knoll” on the Mid-Pacific property may refer to the Kamanele Park cultural site, according to Mr. Becket.

Mr. Becket also shared (with the permission of the chair of the Committee) a report from the Committee for the Preservation of Cultural Sites and Properties to the O’ahu Council of

Figure 37. Heiau at Kamanele Park showing alignment, April 2012 (photo courtesy of Jan Becket)

Figure 38. Heiau at Kamanele Park showing terraces, April 2012 (photo courtesy of Jan Becket)

Figure 39. Heiau at Kamanele Park with terrace in foreground, April 2012 (photo courtesy of Jan Becket)

Figure 40. Heiau at Kamanele Park with possible ahu, April 2012 (photo courtesy of Jan Becket)

Hawaiian Civic Clubs in 2011 regarding the cultural significance of this site. The Committee noted an old City and County map labeled the site as a heiau, and explained their rationale for why this cultural site was pre-Contact—the features include stone-faced terraces, small platforms and enclosures. In 2011, the Committee's report to the O‘ahu Council of Hawaiian Civic Clubs reiterated their statement that this culturally significant site was likely a pre-Contact structure. The report elaborated that although questions had been previously raised about the name of the structure, the primary issue surrounding this unrecorded site is its origin and function. The Committee's cultural experts observed that pre-Contact use of existing natural rock formations was not unusual and can be seen in several major heiau on O‘ahu, and that both ends of this outcrop appear to have been modified, in addition to the features described above.

On 12 January 2014, Mr. Becket led CSH on second site visit. This particular site visit entailed viewing and photographing the cultural landscape of Waikīkī from a panoramic perspective. Mr. Becket and CSH hiked to the summit of Diamond Head State Monument. From the summit Mr. Becket pointed out several cultural sites including the approximate location of Papa‘ena‘ena Heiau, which currently is the site of La Pietra Hawai‘i School for Girls (Figure 41), and Pahu-a-Maui Heiau, which once stood at the current site of the Diamond Head Lighthouse. Mr. Becket added that he would like to find the approximate location of Kapua Heiau. Kapua is an ‘ili located within Waikīkī Ahupua‘a in the southern portion of Kapi‘olani Park and is also considered a po‘okanaka class heiau. The area of Kapua is bound by Lē‘ahi Avenue to the east, Poni Moi Road to the south, and the ocean to the west. The northern boundary of Kapua ‘Ili is approximately 1,050 ft from the Waikīkī Shell. Mr. Becket attribute his knowledge of Kapua Heiau to Buddy Neller, a former archaeologist.

Mr. Becket explained to CSH that La Pietra was built over Papa‘ena‘ena Heiau. He recalled reading a firsthand account of a sacrifice being made at the heiau including numerous accounts by early visitors. Although the heiau is completely demolished, Mr. Becket recalled having a conversation with the late Marion Kelly, anthropologist and activist, sometime between the 1980s-1990s, regarding possible remnants of the lower portion of Papa‘ena‘ena Heiau below the site of La Pietra. After descending Diamond Head State Monument, Mr. Becket and CSH traversed the southern portion of Kapi‘olani Park to investigate the area south of the City and County of Honolulu's nursery located mauka of Kapi‘olani Park. A small mound covered in California grass was discovered south of the nursery. A couple of basalt rocks wedged into the mound as well as a small piece of coral and several waterworn rocks were found in the vicinity. Mr. Becket recalled being told by cultural practitioners that branch coral at a structure might indicate a ceremonial function or a burial. Other materials such as trash, rebar, and chunks of concrete slabs were found within and in the vicinity of the mound indicating heavy disturbance. The outcome of finding the lower portion of Papa‘ena‘ena Heiau was deemed inconclusive. CSH and Mr. Becket continued to travel south of the mound. Three medium-sized pōhaku were found in the southern-most area surveyed within the park. Mr. Becket concluded these three pōhaku most likely were transported or fell during grading of the dirt wall above the park that separates private townhomes from Kapi‘olani Park.

Pahu-a-Maui was once a heiau that stood on the current site of the Diamond Head Lighthouse. Today, the lighthouse is owned and operated by the Coast Guard. Mr. Becket recalled seeing a photo of a dry stacked wall with the Diamond Head Lighthouse built on it. Photos taken at the summit of Diamond Head State Monument suggest the location where the dry stacked wall once

stood is possibly now the site of a caretaker’s home or administrative building (Figure 42). However, closer investigation of the lighthouse property is recommended to confirm the existence of the dry stacked wall.

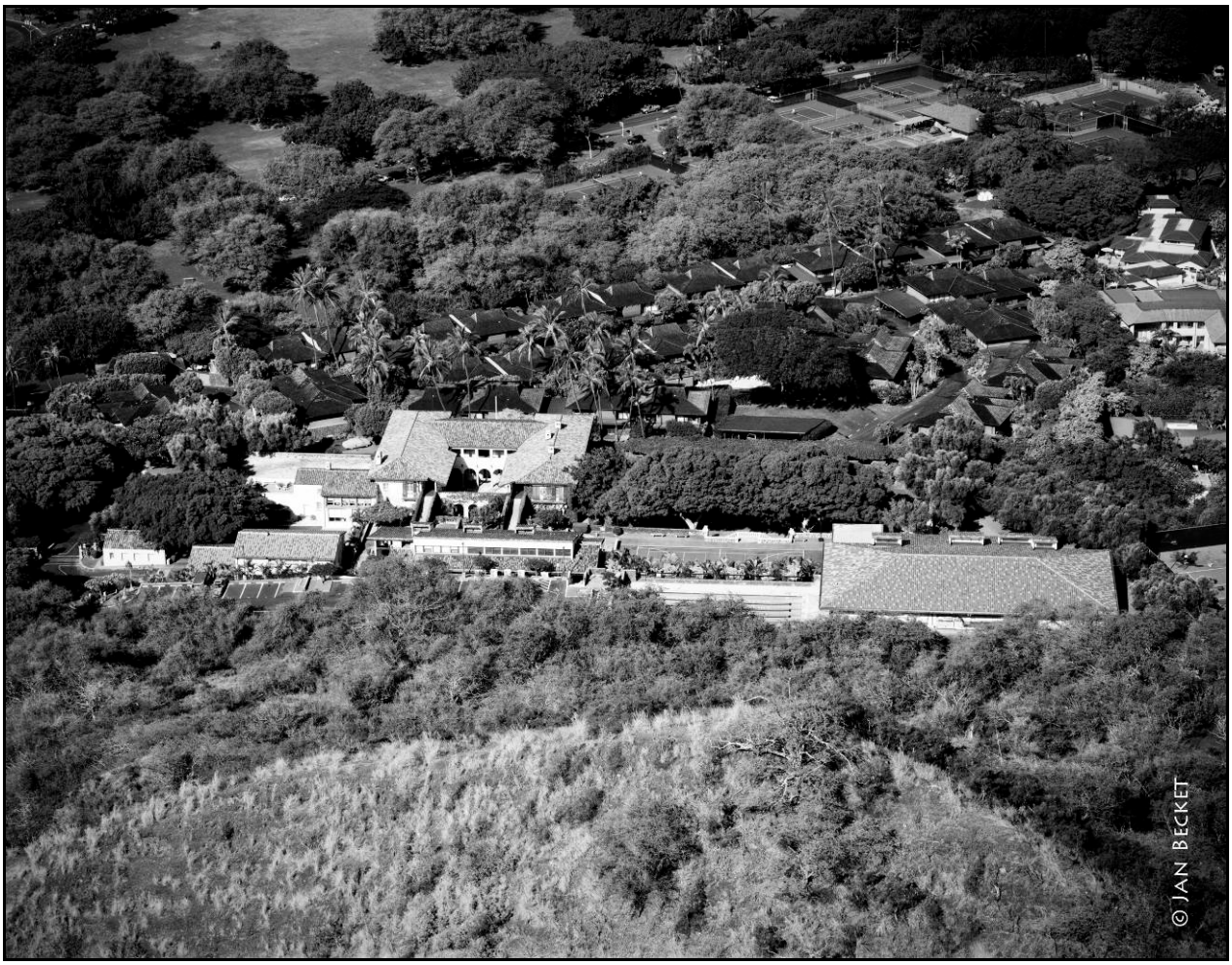

Figure 41. Photo of La Pietra Hawai‘i School for Girls, the former site of Papa‘ena‘ena Heiau, January 2014 (photo courtesy of Jan Becket)

Figure 42. Photo of Diamond Head Lighthouse, the former site of Pahu-a-Maui Heiau, January 2014 (photo courtesy of Jan Becket)

6.3 Clarence Medeiros Jr.

CSH talked with Mr. Medeiros on 10 January 2014 regarding the proposed King's Village Redevelopment Project. Mr. Medeiros approved the use of previous interviews which document his four genealogical connections to Waikīkī. He also emphasized preservation of cultural and historic resources in the project area. The following statement is a composite of several interviews from 2010 to 2012.

Mr. Medeiros was born in 1952 in South Kona to Clarence Medeiros Sr. and Pansy Hua Kalalahua. He served in the United States Army from 1969 to 1972, including a tour of duty in Vietnam. Mr. Medeiros has been married to his wife Nellie for 43 years and they tend to a coffee, taro, and macadamia nut farm on Hawai‘i Island. They have two children, Jacob, 39, and Kareen, 41.

An active Hawaiian cultural practitioner, Mr. Medeiros remains passionate about the preservation of Hawaiian culture and researching his genealogy. He discussed the importance of Hawaiian genealogy to traditional Hawaiians and how for kanaka maoli (Native Hawaiians), ancestors' names had mana. As a young boy, his interest in genealogy began when he came across a picture of his grandmother, Violet Leihulu Mokuohai Parker. Grandma Violet was tall, fair, and had green eyes. Inside, however, she was pure Hawaiian.

As he grew up, Mr. Medeiros learned about his grandmother through stories from his parents, kūpuna, and his grand-uncle, the famed canoe carver Charles Mokuohai Parker, the brother of Grandma Violet. Grand-uncle Charles made canoes for canoe clubs throughout the Hawaiian Islands. By the time Mr. Medeiros was in his 20s, he had spent many hours documenting his family connections. He outlined four connections to Waikīkī using oral history, Mormon genealogical records, and scholarly works.

In his 27 May 2010 interview, he showed CSH a map of Waikīkī in 1874 and noted "Mānoa, Makiki, and Pauoa Ahupua‘a all take care of the Waikīkī area" and that Kamehameha IV owned many large portions.

Stating that he has Hawaiian, Portuguese, English, Scottish, Spanish, and Chinese in his background, Mr. Medeiros explained that his first connection to Waikīkī is through his great-great-great grandfather, Samuel Puhalahua. He had documented LC Award 1268, awarded to Nakai. It involved 1.60 acres and 23/100 acres in Waikīkī waena (in the middle), not at the beach area of Waikīkī. The land consisted of a lo‘i. Nakai conveyed the land to William Smith who later conveyed it to Naomi Nakuapa Puhalahua, the wife of Kuwalu Puhalahua. Kuwalu, the father of Samuel Puhalahua, was Mr. Medeiros' great-great-great-great grandfather.

Samuel Puhalahua married Kanika and they had a son named John Mokuohai Puhalahua, the great-great-grandfather of Mr. Medeiros. Mr. Puhalahua married a half-English, half-Hawaiian woman named Kaehamalaole Elemakule Clark. They had one child, Abigail Mokuohai, who is the great-grandmother of Mr. Medeiros. Abigail married William Parker Jr. and they had two children, one of whom was Violet Leihulu Mokuohai Parker, the grandmother of Mr. Medeiros whose picture first inspired his genealogical interest when he was a young boy.

As for the second connection to Waikīkī, Mr. Medeiros described his great-grandfather, Zen Man Sing (also known as "Zane Man Sing"), who is connected to Mr. Medeiros' maternal side.

His great-grandfather was Chinese and arrived in Hawai‘i in 1888. Shortly after his arrival, Mr. Medeiros' great-grandfather worked in Waikīkī with relatives planting rice and taro and working in the Sun/Soong stores owned by his mother's family. Mr. Medeiros stated the following:

> It was all water, swampland. Waikīkī was all lo‘i kind of land around 1890s. Life was kind of hard then. But they [great-grandfather and family] are Chinese; they are business-minded. They are looking to get better. After five years of planting rice, great-grandpa came to Kona, hearing stories that coffee would make money. He went to Ho‘okena where he met my great-grandmother, Kaaumoana Niau. They got married and ended up in Kalahiki. Then he moved back to O‘ahu. All his kids were raised in Kalahiki as well as O‘ahu. Now they are all over Honolulu.

From this union, Mr. Medeiros' grandma, Annie, was born in Waiea, South Kona. Her full name was Annie Man Sing Zen, and she did not follow her parents and siblings when they later moved to Honolulu. Instead, she stayed behind and lived with different family members in Ki‘ilae, Honaunau, Kēōkea, and Kalahiki. Grandma Annie married her first husband, Charles Hua, the grandfather of Mr. Medeiros. After Hua's death, Annie married Charles Weeks.

In 1975, Mr. Medeiros went to a family reunion and spent time with his grandma Annie and other relatives.

> My grandma was still alive at that time. In her 90s, and also one of her brothers. We got to talk about their life in Kalahiki and O‘ahu . . . They remembered going to school in Kalahiki and Ho‘okena; [they] walked to school, fished, worked in the farm and picked coffee. When they moved to O‘ahu, they worked in a hotel. The older ones liked the old-time life, fishing, hunting which they could do in Kalihiki, but not in O‘ahu.

Regarding the third connection to Waikīkī, Mr. Medeiros explained that his grand-aunt Miriam Peleuli Crowingburg Amalu owned several parcels of choice land in Waikīkī. She and Mr. Medeiros shared the same bloodline through a relative named Kameeiamoku. Miriam was a close friend and relative of Queen Lili‘uokalani and often visited the palace to see the queen. She later had her properties auctioned off and conveyed to others. It was from Miriam's grandson that some properties were conveyed to Mr. Medeiros. These properties included 1.25 acres at Ho‘okena Beach and more than 300 acres in Waimea on Hawai‘i Island.

His fourth connection to the ahupua‘a of Waikīkī is from the Portuguese side of his family. When Mr. Medeiros was around seven years old, he attended school on O‘ahu. He first lived with his great-grandmother Mary Costa Pimental. Mr. Medeiros' great-grandma Mary's maiden name was Pacheco and she came from a Portuguese-Italian background. During the year he visited and lived with them in their home on Birch Street, Mr. Medeiros watched his great-grandpa by marriage, Frank Pimental, play *bocci* (ancient game stemming from the Roman Empire which resembled bowling) along with other elderly men. He and great-grandma Mary would bake bread every Thursday. All the great-aunts would converge to help with the baking of bread and *malasadas* (sweet doughnuts originating from a Portuguese colony), and they would hug and squeeze their eight-year-old great-nephew until he was blue.

His great-grandma Mary had married three times. Her first marriage was to Marion Medeiros, whose son was Frank Medeiros. Frank Medeiros had married Grandma Violet, who was a direct descendant of Samuel Puhalahua who owned land in the middle part of Waikīkī (see above).

While his father worked for the survey of the Wilson Tunnel, Mr. Medeiros went to Lanakila School in Kalihi. His father also worked part-time for former Mayor Frank Fasi as a truck driver. Mr. Medeiros recalled old landmarks of Honolulu during his time there, like the old Honolulu Stadium and Fort DeRussy where his great-grandpa played bocci. In Kalihi, there was a wigwam store that is no longer there. The remaining eight months of that year, Mr. Medeiros lived with his father's half-sister who was also named Violet. Her neighbors were relatives of Mr. Medeiros' mother. Kalihi had a river, and he used to catch tilapia there with relatives and friends.

In addition to these connections to the project area, Mr. Medeiros also mentioned familial ties to nearby areas. From his father's side, he noted that his great-great-grandparents, William Sr. and Rose Parker, lived in Pauoa Valley in the 1880s to the1890s. One of their neighbors was the Akaka family. Mr. Medeiros shared that Senator Akaka later went on to serve in the army with Clarence Sr., and his father and the future senator were good friends.

Regarding Fort DeRussy in Waikīkī, Mr. Medeiros singled out the five ‘ōhi‘a ki‘i (statues) standing prominently at the entrance. According to him, these ki‘i were carved by Rocky Jensen and represent ancient Hawaiian soldiers. The ‘ōhi‘a logs used to make the ki‘i were donated by his family and Mr. Medeiros assisted in bringing the logs down from the Honokua forests above the kuleana (property) belonging to the Medeiros family.

In previous interviews for various Waikīkī projects, Mr. Medeiros discussed with CSH his viewpoint of what happens if burials are found in a project area. He shared his dissatisfaction with the current process and with the State Historic Preservation Division. He shared a letter written by the United States' Department of Interior and addressed to the Department of Land and Natural Resources, highlighting some of the issues Mr. Medeiros thinks should be addressed. He stated the following:

> During 1890s, when my family was helping build the city, if no one came forward to claim burials, everything would be inadvertent finds . . . If they find something, what should they do? Consult descendants and other entities. What happens to iwi [bones] can be determined by family. [But] in the end, historic preservation has the final decision. The system now, it ends up pitting Hawaiians against each other. It seems like the descendants have the say, but it's actually the SHPD.

What concerns Mr. Medeiros is the protection of Hawaiian culture and the land, as well as preventing something like the Ke‘eaumoku Walmart case from happening again, where 64 iwi kūpuna were unearthed in 2003 and kept for six years in a refrigerated container.

> I'm glad that the developers are working ahead of the trouble . . . to see if somebody finds something, they will look for it. Now is the time to say something. That is good. But SHPD doesn't work this way. They are dysfunctional and a waste of time. I am glad that Kamehameha Schools is doing this in advance. This comment is not just for this project, but for others. For virgin lands, the regulating [of] who is overlooking. In some cases, no action is taken,

> whether it is favoritism or whatever, mostly regarding virgin lands. What we lose is the culture.

Mr. Medeiros called for the SHPD to hire what he described as “regulatory people who will do a professional job of reviewing claimants,” to make sure what claimants are saying is being investigated. Archaeological reports should not be swayed to favor the developer, and the claimants should also be unbiased.

In conducting studies of undeveloped land, land owners such as Kamehameha Schools or Bishop Estate start on the right path, stated Mr. Medeiros. He addd the following:

> Bottom line is: SHPD has last say, and courts will follow. On virgin land, we start right. Save the trails, save the burials. It is hard to do with things already there [cites example of the Walmart in Ke‘eaumoku] . . . If Kamehameha Schools or Bishop Estate looks at it, and sees that if virgin lands are being assessed, they should really take a look at what the claimants are really saying, so future problems don’t come up. We need a state-level investigation through legislature, not just federal, to investigate the Historic Preservation Division. Do it right the first time.

Mr. Medeiros mentioned he would like to share his mana‘o (thoughts, opinion, knowledge) in other projects:

> I would like to be consulted on any future development projects that involve the following lands: 25 parcels of land on the island of O‘ahu that were once owned by Nakuapa Puhalahua, wife of Kuwalu Puhalahua.

Listed below for clarification are the 25 parcels of land:

> Waikele, ‘Ewa
>
> Lot on the corner of King and Maunakea Streets
>
> Lot on the corner of Queen Street
>
> Lot on the corner of Queen and Maunakea Streets
>
> Lot on Fort Street
>
> Three lots in Kahehuna
>
> Lot in Waikīkī-waena
>
> Lot in ‘Ālewa, Liliha Street
>
> Lot in Kaaleo, adjoining Nu‘uanu Cemetary
>
> Lot in Kaaleo
>
> Lot in Kaaleo, makai of Judd Street
>
> ‘Ili ‘āina of Kawānanakoa
>
> Lot on Wyllie Street
>
> Four lots in Kaolu

Three lots in Kawānanakoa

Lot in Palikea

Lot in Haimilo, Kailua

Land in Pū‘iwa, Kāne‘ohe

Waimea Valley

Lands on Maui and Hawai‘i Island

He is a direct descendant of the Parker/Hiller/Medeiros ‘ohana that once owned or resided at Pauoa Valley, Miller Street and Punchbowl. As a direct descendant of the Pacheco/Santos family, Mr. Medeiros also has historical interests in Kaka‘ako and Magellan Avenue where they once owned or resided. In addition, he is also a direct descendant of Don Francisco de Paula Marin who once owned Ford Island, Vineyard Street, and Maunakea Street.

Mr. Medeiros strongly emphasized the following:

> Just want to make sure that it is clear that I do not have or claim any ownership to these lands. I do have knowledge/documentation that my ‘ohana once owned/resided in these areas so I would just like to provide comments if future developments occur in these areas.

Section 7 Cultural Landscape

Discussions of specific aspects of traditional Hawaiian culture as they may relate to the Project area are presented below. This section integrates information from Sections 3–6 in examining cultural resources and practices identified within or in proximity to the Project area in the broader context of the encompassing Waikīkī landscape. Excerpts from interview sessions from past and present cultural studies are incorporated throughout this section where applicable.

7.1 Hawaiian Habitation

While the surface archaeological record of Waikīkī has been extensively disturbed, obscured, and, in some cases, destroyed over the past two centuries, pioneering efforts in the early twentieth century to document sites based on the recollections of Hawaiian residents (McAllister 1933), combined with mo‘olelo and recent archaeological research and cultural resource management work, offer a window into the ancient past. Importantly, there was a close spatial association between major heiau and intensive agriculture for the entire island of O‘ahu, and residential sites were usually distributed around the margins of irrigation systems and up into lower valleys (Kirch 1992:16–17). Thus, fragments of information about residential sites, cultivation and irrigation, trails, burials, and monumental structures and other cultural sites derived from archaeology, ethnography, and historical records illuminate ancient settlement patterns, part of the overall cultural landscape. Reconstructing patterns of ancient settlement draws heavily from wahi pana.

The project area is located within the ‘ili of Kapuni and Uluniu in the modern day ahupua‘a of Waikīkī in the area known as Waikīkī Kai. However, the cultural landscape of Waikīkī extends from the coastal strip and plain of Waikīkī Kai to Waikīkī Waena, and from there to the mauka lands of Mānoa and Wa‘ahila valleys. Community participant Mr. Jan Becket led CSH on site visits to two sites in Mānoa and Wa‘ahila. Although previously identified as a house site (Rosendahl 1996:22), SIHP # -5463 has been described by the Committee for the Preservation of Cultural Sites and Properties, under the O‘ahu Council of Hawaiian Civic Clubs, as a possible heiau. This site commands an impressive view of Waikīkī Kai. The other site at Kamanele Park is also a possible pre-Contact heiau according to Mr. Becket and the preservation committee. This may be a heiau called Ka-ui-o-Mānoa, one of three heiau mentioned in *The Mid-Pacific Student* (1907).

Cultural layers excavated throughout Waikīkī Kai and radiocarbon dated to approximately AD 1400 to 1800 provide evidence of this habitation, cultivation, and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes (see Appendix B). In close proximity to the project area are cultural layers indicative of habitation at the Princess Ka‘iulani Hotel (SIHP # -7066, Runyon et al. 2010), the Moana Hotel (SIHP # -1974, Simons et al. 1991; SIHP # -7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP # -5796, Yucha et al. 2009).

7.2 Wahi Pana and Mo‘olelo

Numerous wahi pana, ‘ōlelo no‘eau, ‘oli, and mo‘olelo are associated with Waikīkī which suggests the ahupua‘a’s historical significance, abundance of natural resources, and the presence of a viable Native Hawaiian population. These include mo‘olelo of Ka-lua-‘Ōlohe, the heiau of Papa‘ena‘ena and ‘Āpuakēhau, the high priest Ka‘opulupulu, the warrior Kawelo, the life-giving stones of Kapaemahu and Kapuni.

7.3 Agriculture

A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately AD 1400. This field system was an impressive feat of engineering, using a design traditionally attributed to the chief Kalamakua. It took advantage of streams descending from the valleys of Makiki, Mānoa, and Pālolo. The lo‘i kalo (taro), in combination with coconut groves and numerous fishponds along the Waikīkī shoreline, enabled the growth of a sizeable population.

Community participant Mr. Clarence Medeiros Jr. indicated that LCA 1268 awarded to Nakai was later conveyed to his great-great-great grandfather, Samuel Puhalahua. The 1.60-acre parcel in Waikīkī Waena consisted of lo‘i. His maternal great-grandfather, Zen Man Sing, arrived in Hawai‘i in 1888. Zen Man Sing worked in Waikīkī with relatives planting rice and taro for five years before moving to Kona to work in the coffee industry.

7.4 Marine and Freshwater Resources

Historic maps and images depict numerous loko i‘a in Waikīkī. Historic documents describe Waikīkī having several hundred artificial freshwater ponds that extended a mile inland from the shoreline. A study conducted by the U.S. Commission of Fish and Fisheries (Bowers 1902; Cobb 1902) listed extant fishponds in Kālia in 1901 including Ka‘ihikapu, Kūwili, Kaipuni (1 and 2), Paweo (1 and 2), Kapu‘uiki, Kapaakea, Maalahia, Opu, and Opukaala. In addition, many fishponds had undocumented names not included in the study. Excavated sediments of loko i‘a in the Kālia area were radiocarbon dated to approximately AD 1400-1700, indicating inland burning associated with clearance of land for agriculture (Denham and Pantaleo 1997a and 1997b).

In an UHCOH interview, Mr. Sadao Hikida indicated ‘Āpuakēhau Stream, once located makai of the project area, was at one time abundant with shrimp, mullet, ‘a‘awa, āholehole, pāpio, manini, and ‘o‘opu. Another UHCOH interviewee, Mr. John C. Ernestberg, recalled gathering various ocean resources during his youth in Waikīkī. He described limu being readily available for food and medicinal purposes. Varieties such as manauea, līpoa, and wāwae‘iole were available on the shores of Waikīkī. Fish such as manini were available on the reef and could be caught when the tide was rising. Mr. Lemon “Rusty” Holt who also participated in the UHCOH project recalled a surfing break called Queen’s Surf being the best wana picking grounds. Mr. Wilbur Craw, another UHCOH interviewee, stated the area where ‘Āpuakēhau Stream entered the ocean was abundant with various types of limu including the huluhuluwaena and lipēpē varieties.

7.5 Burials

Waikīkī Kai was home to four heiau of po‘okanaka class associated with human sacrifice including Papa‘ena‘ena Heiau, Kapua Heiau, Helumoa Heiau, and Kūpalaha Heiau. In addition, sacrificial drowning of kauwā, an outcast caste, took place at several sites on O‘ahu including Kawailumaluma‘i, Kewalo, Kualoa, and Waikīkī. According to Mary Kawena Pukui, a row of rocks called Pae-ki‘i marks the site where strangers suspected of initiating war or searching for human sacrifices were drowned. This cause of death was called kai he‘e kai (Beckwith 1970:89). Community participant Mr. Becket indicated the Diamond Head Lighthouse was once the site of Pahu-a-Maui Heiau. According to a McAllister's survey in 1933, many human skulls were discovered by someone walking below the lighthouse area. The account indicated the area was a place of execution where people were thrown off Diamond Head with bodies lying unburied in the gulches.

Previous archaeological excavations and surveys have indicated a relatively high density of burials within the Jaucus sand deposits of Waikīkī. The preferred locations for interment of the dead within these deposits were lands slightly elevated above the water table. Burials have been found along or in the vicinity of Kalākaua Avenue in close proximity to the project area. Community participant Mr. Edward Halealoha Ayau of Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei recalled reinterring iwi kūpuna on Prince Edward Street. The project area is bound by Prince Edward Street on the mauka side.

Section 8 Summary and Recommendations

CSH undertook this CIA at the request of BSC KVSC, LLC. The research broadly covered the entire ahupua‘a of Waikīkī, including the 1.05-acre project area.

8.1 Results of Background Research

Background research for this study yielded the following results which are presented in approximate chronological order:

1. The project area is located within the ‘ili of Kapuni and Uluniu in the modern day ahupua‘a of Waikīkī in the area known as Waikīkī Kai. The name Waikīkī translates as “water spurting from many sources,” and reveals the character of the intact watershed system of Waikīkī prior to European Contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground.
2. A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately AD 1400. This, in combination with coconut groves and fishponds along the shoreline, enabled the growth of a sizeable population, including the coastal village of Waikīkī, which most likely centered around the mouth of ‘Āpuakēhau Stream in the vicinity of the project area.
3. Numerous wahi pana, ‘ōlelo no‘eau, ‘oli, and mo‘olelo are associated with Waikīkī which suggests the ahupua‘a’s historical significance, abundance of natural resources, and the presence of a viable Native Hawaiian population. These include mo‘olelo of Kalua-‘Ōlohe, the heiau of Papa‘ena‘ena and ‘Āpuakēhau, the high priest Ka‘opulupulu, the warrior Kawelo, the life-giving stones of Kapaemahu and Kapuni.
4. Cultural layers excavated throughout Waikīkī Kai and radiocarbon dated to approximately AD 1400 to 1800 provide evidence of this habitation, cultivation, and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes. In close proximity to the project area are cultural layers indicative of habitation at the Princess Ka‘iulani Hotel (SIHP # -7066, Runyon et al. 2010), the Moana Hotel (SIHP # -1974, Simons et al. 1991; SIHP # -7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP # -5796, Yucha et al. 2009).
5. At least seven heiau and other religious sites were located in Waikīkī Kai, including Helumoa Heiau (also called ‘Āpuakēhau Heiau) (Thrum 1907a:44) and Nā Pōhaku ‘Ola Kapaemahu a Kapuni (commonly called the Wizard Stones) (Paglinawan 1997; Thrum 1907b:139–141) in the vicinity of the project area. These sites are connected through mo‘olelo to ‘Āpuakēhau Stream, which once flowed to the north of the project area.
6. Four of these heiau were associated with human sacrifice, including Helumoa Heiau (Thrum 1907a:44). Sacrificial drownings of kauwā also took place in Waikīkī (*Ka Loea*

Kālai‘āina 1899, translation in Sterling and Summers 1978:33). In addition, excavations and surveys have documented a high density of burials within the Jaucus sand deposits of Waikīkī, including 24 burials at the Moana Hotel (SIHP # -1974, Simons et al. 1991).

7. Historic trails on the south side of O‘ahu included a trail along the coastal area of Waikīkī most likely where the present Kalākaua Avenue is located, near the project area. ‘Ī‘ī describes the trail going through the ‘ili of Kapuni where the project area is located (‘Ī‘ī 1959:92–94).
8. Waikīkī Kai was a place of royal residence, starting with Mā‘ilikūkahi in approximately AD 1490 (Kamakau n.d., cited in McAllister 1933:74) and extending through Kamehameha (‘Ī‘ī 1959:17). The ‘ili of Kaluaokau and of Helumoa, adjacent to the ‘ili of the project area, were places of previous royal residence.
9. During the Māhele, there were 437 land claims in Waikīkī Ahupua‘a of which only 243 were awarded. Within the ‘ili of Kapuni and Uluniu, only one land claim (LCA 00104FL), which includes the project area, was awarded to M. Kekuanaoa who also owned land in other ‘ili of Waikīkī. The LCA included a house lot in a coconut grove which most likely referred to the land in Uluniu and Kapuni, where a coconut grove once stood. LCAs in nearby lots are also described as containing many fishponds and lo‘i. The nearby ‘ili of Kaluaokau was granted to William Lunalilo (LCA 8599, ‘Āpana 31) and bequeathed to Queen Emma.
10. Oral histories indicate early twentieth century gathering practices of several varieties of limu and wana along the Waikīkī coast, and the catching of manini in the nearshore waters and moi, shrimp, ‘oama, mullet, ‘a‘awa, āholehole, pāpio, and ‘o‘opu in ‘Āpuakēhau.
11. Oral histories also indicate the Waikīkī School, the Kawaiha‘o Church Waikīkī Branch, and its associated cemetary were located in the vinicity of the project area directly across Kalākaua Avenue from the Moana Hotel. The Waikīkī Theatre, also in close proximity, opened in 1936.

8.2 Results of Community Consultations

CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural descendants of Waikīkī in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to a total of 78 individuals or groups; seven responded, and two of these kama‘āina and/or kūpuna (elder) met with CSH for a more in-depth interview. CSH is still awaiting written responses from SHPD and OHA. This community consultation gathered the following information:

1. Mr. Edward Halealoha Ayau of Hui Mālama I Nā Kūpuna ‘O Hawai‘i Nei recalled conducting a reinterment on Prince Edward Street. The project area is bound on the mauka side by Prince Edward Street.
2. Mrs. Winona (Nona) Kamai and her daughter Dwynn shared their memories of Waikīkī and the project area. King’s Alley, the former name for King’s Village, was once a place

of employment for Dwynn. She recalled cultural demonstrations such as lei making, coconut frond weaving, and hula performances by kumu hula Aloha Dalire and her hālau.

3. 1n 1972, Bishop Museum opened the Heritage Theater at King’s Alley. According to Dwynn, an exhibit pertaining to the Hawaiian Monarchy in Waikīkī was on display. Double decker buses provided transportation between Bishop Museum in Kalihi, the *Falls of Clyde* ship at Aloha Tower, and the Heritage Theater in Waikīkī. The theater was open for many years before downsizing to a bookstore and gift shop.
4. The cultural landscape of Waikīkī extends beyond the modern division of Waikīkī Kai. Mr. Becket shared the locations of two culturally significant sites. SIHP # -5463 is located in Wa‘ahila Valley on the lower slope of Wa‘ahila Ridge. Although # -5463 is designated as a house site, the Committee for the Preservation of Cultural Sites and Properties, under the O‘ahu Council of Hawaiian Civic Clubs, has determined it is likely a heiau. The other site is located at Kamanele Park in Mānoa Valley and the Committee similiary has determined it is likely a pre-Contact heiau.
5. La Pietra Hawai‘i School for Girls was built over a po‘okanka class heiau, Papa‘ena‘ena. Although the heiau is completely demolished, Mr. Becket recalled having a conversation with the late Marion Kelly, anthropologist and activist, during the 1980s-1990s regarding possible remnants of the lower portion of Papa‘ena‘ena Heiau below the school. CSH and Mr. Becket investigated a portion of Kapi‘olani Park below La Pietra. The outcome was deemed inconclusive.
6. Diamond Head Lighthouse was the former site of the Pahu-a-Maui Heiau. The lighthouse is now owned and operated by the Coast Guard. Mr. Becket recalled seeing a photo of a dry stacked wall with the Diamond Head Lighthouse built on it. The location of the former dry stacked wall is possibly the current site of a caretaker’s home or administrative building for the Coast Guard.
7. The land of Waikīkī Kai was comprised of a vast agricultural system including lo‘i and fishponds. The great-great-great grandfather of Mr. Clarence Medeiros Jr. was conveyed LCA 1268 via Nakai. The 1.60-acre parcel consisted of lo‘i. Mr. Medeiros’ maternal great-great grandfather, Zen Man Sing, arrived in Hawai‘i from China in 1888. Shortly after his arrival he worked in Waikīkī with relatives planting rice and taro.

8.3 Recommendations

Based on information gathered for the cultural and historic background and community consultation detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH identifies below these potential impacts (Nos. 1-2) and makes two recommendations (Nos. 3-4):

1. Although Native Hawaiians likely conducted traditional practices within the project area, there are no customary practices occurring on these lands at this time. A trail formerly cut through the project area toward Papa‘ena‘ena Heiau and at one time there may have been other cultural resources connected to the project area including lo‘i. Although the lands of the project area have since been developed, there is a possibility remnants of these cultural resources may still exist.

2. There is a high possibility iwi kūpuna, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural finds. The project area contains Jaucus sand deposits, the preferred sediment for interment of the dead. In addition, a community participant indicated performing a reinterment mauka of the project area.
3. Personnel involved in the construction activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials (or other cultural finds) be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies should be notified pursuant to applicable law.
4. BSC KVSC, LLC should consult with the cultural descendants of Waikīkī to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts are uncovered during construction or long-term maintenance for the project.

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Appendix A Authorization and Release Form

Cultural Surveys Hawai‘i, Inc.
Archaeological and Cultural Impact Studies
Hallett H. Hammatt, Ph.D., President

P.O. Box 1114 Kailua, Hawai‘i 96734 Ph: (808) 262-9972 Fax: (808) 262-4950

Job code: WAIKIKI 123 nishihara@culturalsurveys.com www.culturalsurveys.com

AUTHORIZATION AND RELEASE FORM

Cultural Surveys Hawai‘i (CSH) appreciates the generosity of the *kūpuna* and *kama‘āina* who are sharing their knowledge of cultural and historic properties, and experiences of past and present cultural practices for the proposed King’s Village Redevelopment Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu Island, TMK: [1] 2-6-023:029, 037, and 076 por.

We understand our responsibility in respecting the wishes and concerns of the interviewees participating in our study. Here are the procedures we promise to follow:

1. The interview will not be tape-recorded without your knowledge and explicit permission.
2. If recorded, you will have the opportunity to review the written transcript of our interview with you. At that time you may make any additions, deletions or corrections you wish.
3. If recorded, you will be given a copy of the interview notes for your records.
4. You will be given a copy of this release form for your records.
5. You will be given any photographs taken of you during the interview.

For your protection, we need your written confirmation that:

1. You consent to the use of the complete transcript and/or interview quotes for reports on cultural sites and practices, historic documentation, and/or academic purposes.
2. You agree that the interview shall be made available to the public.
3. If a photograph is taken during the interview, you consent to the photograph being included in any report/s or publication/s generated by this cultural study.

I, _____, agree to the procedures outlined above and, by my
(Please print your name here)
signature, give my consent and release for this interview to be used as specified.

_____
(Signature)

_____
(Date)

APPENDIX 13

FLOOD STUDY AND FIRM MAP

Federal Emergency Management Agency
Washington, D.C. 20472

June 03, 2014

MS. LIANA CHOY
SATO & ASSOCIATES INC
2046 SOUTH KING STREET
HON, HI 96826

CASE NO.: 14-09-2492A
COMMUNITY: CITY AND COUNTY OF HONOLULU, HAWAII
COMMUNITY NO.: 150001

DEAR MS. CHOY:

This is in reference to a request that the Federal Emergency Management Agency (FEMA) determine if the property described in the enclosed document is located within an identified Special Flood Hazard Area, the area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood), on the effective National Flood Insurance Program (NFIP) map. Using the information submitted and the effective NFIP map, our determination is shown on the attached Letter of Map Amendment (LOMA) Determination Document. This determination document provides additional information regarding the effective NFIP map, the legal description of the property and our determination.

Additional documents are enclosed which provide information regarding the subject property and LOMAs. Please see the List of Enclosures below to determine which documents are enclosed. Other attachments specific to this request may be included as referenced in the Determination/Comment document. If you have any questions about this letter or any of the enclosures, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Sincerely,

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

LIST OF ENCLOSURES:
LOMA DETERMINATION DOCUMENT (REMOVAL)

cc: State/Commonwealth NFIP Coordinator
Community Map Repository
Region

Date: June 03, 2014 | Case No.: 14-09-2492A | LOMA

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	CITY AND COUNTY OF HONOLULU, HAWAII	Lots 24, 25, and 26, Royal Grove, as shown on the Plat recorded as File No. 149, in the Office of the Bureau of Conveyances, Honolulu County, Hawaii
	COMMUNITY NO.: 150001	
AFFECTED MAP PANEL	NUMBER: 15003C0368G	
	DATE: 1/19/2011	
FLOODING SOURCE: ALA WAI CANAL		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 21.277, -157.825 SOURCE OF LAT & LONG: GOOGLE EARTH PRO DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (LTD)	LOWEST ADJACENT GRADE ELEVATION (LTD)	LOWEST LOT ELEVATION (LTD)
24 - 26	--	Royal Grove	Kaiulani Avenue	Property	X (unshaded)	5.8 feet	--	5.9 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

ADDITIONAL INFORMATION REGARDING LETTERS OF MAP AMENDMENT

When making determinations on requests for Letters of Map Amendment (LOMAs), the Department of Homeland Security's Federal Emergency Management Agency (FEMA) bases its determination on the flood hazard information available at the time of the determination. Requesters should be aware that flood conditions may change or new information may be generated that would supersede FEMA's determination. In such cases, the community will be informed by letter.

Requesters also should be aware that removal of a property (parcel of land or structure) from the Special Flood Hazard Area (SFHA) means FEMA has determined the property is not subject to inundation by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This does not mean the property is not subject to other flood hazards. The property could be inundated by a flood with a magnitude greater than the base flood or by localized flooding not shown on the effective National Flood Insurance Program (NFIP) map.

The effect of a LOMA is it removes the Federal requirement for the lender to require flood insurance coverage for the property described. The LOMA *is not* a waiver of the condition that the property owner maintain flood insurance coverage for the property. *Only* the lender can waive the flood insurance purchase requirement because the lender imposed the requirement. *The property owner must request and receive a written waiver from the lender before canceling the policy.* The lender may determine, on its own as a business decision, that it wishes to continue the flood insurance requirement to protect its financial risk on the loan.

The LOMA provides FEMA's comment on the mandatory flood insurance requirements of the NFIP as they apply to a particular property. A LOMA is not a building permit, nor should it be construed as such. Any development, new construction, or substantial improvement of a property impacted by a LOMA must comply with all applicable State and local criteria and other Federal criteria.

If a lender releases a property owner from the flood insurance requirement, and the property owner decides to cancel the policy and seek a refund, the NFIP will refund the premium paid for the current policy year, provided that no claim is pending or has been paid on the policy during the current policy year. The property owner must provide a written waiver of the insurance requirement from the lender to the property insurance agent or company servicing his or her policy. The agent or company will then process the refund request.

Even though structures are not located in an SFHA, as mentioned above, they could be flooded by a flooding event with a greater magnitude than the base flood. In fact, more than 25 percent of all claims paid by the NFIP are for policies for structures located outside the SFHA in Zones B, C, X (shaded), or X (unshaded). More than one-fourth of all policies purchased under the NFIP protect structures located in these zones. The risk to structures located outside SFHAs is just not as great as the risk to structures located in SFHAs. Finally, approximately 90 percent of all federally declared disasters are caused by flooding, and homeowners insurance does not provide financial protection from this flooding. Therefore, FEMA encourages the widest possible coverage under the NFIP.

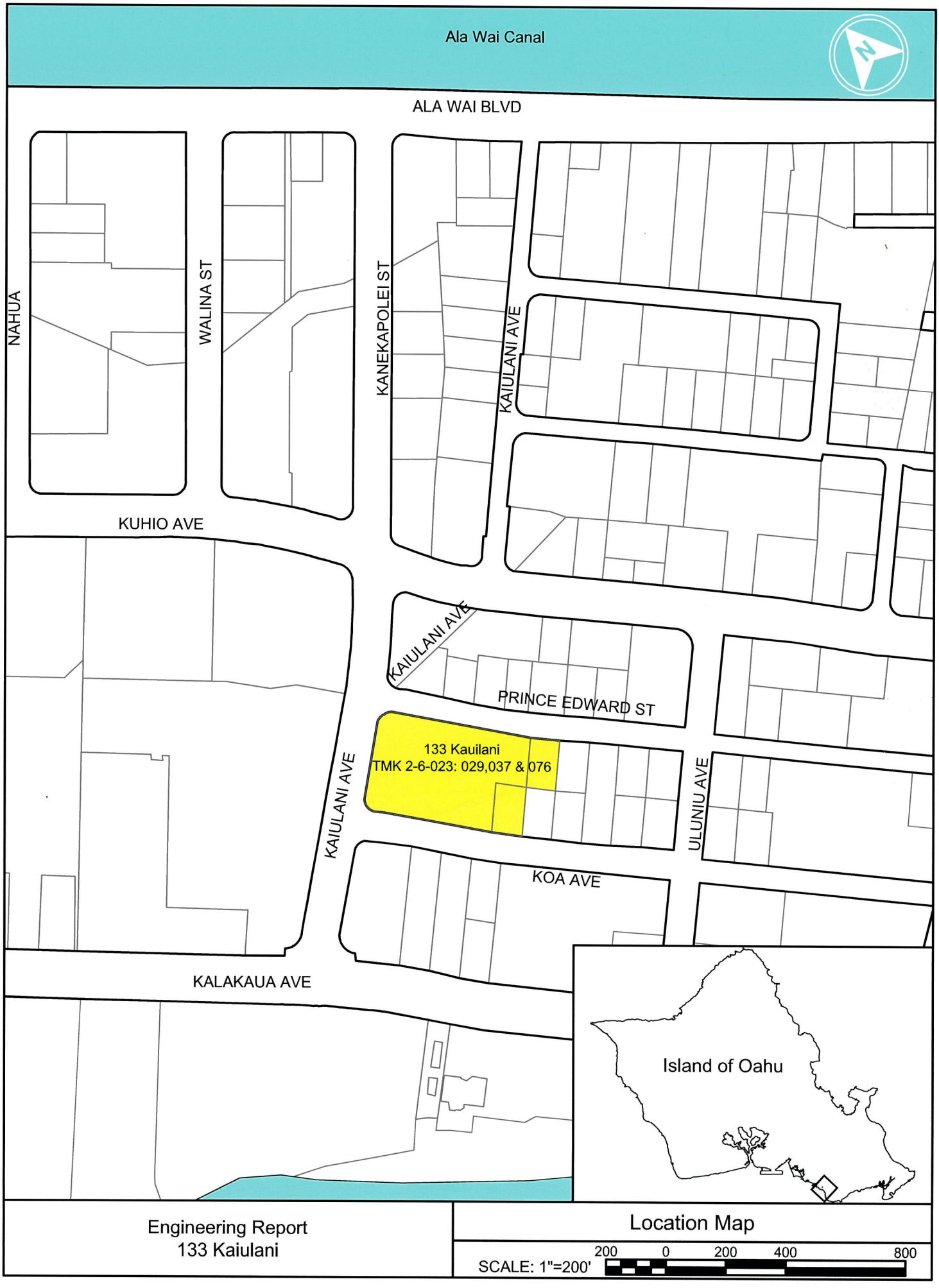
The NFIP offers two types of flood insurance policies to property owners: the low-cost Preferred Risk Policy (PRP) and the Standard Flood Insurance Policy (SFIP). The PRP is available for 1- to 4-family residential structures located outside the SFHA with little or no loss history. The PRP is available for townhouse/rowhouse-type structures, but is not available for other types of condominium units. The SFIP is available for all other structures. Additional information on the PRP and how a property owner can quality for this type of policy may be obtained by calling the Flood Insurance Information Hotline, toll free, at 1-800-427-4661. Before making a final decision about flood insurance coverage, FEMA strongly encourages property owners to discuss their individual flood risk situations and insurance needs with an insurance agent or company.

FEMA has established "Grandfather" rules to benefit flood insurance policyholders who have maintained continuous coverage. Property owners may wish to note also that, if they live outside but on the fringe of the SFHA shown on an effective NFIP map and the map is revised to expand the SFHA to include their structure(s), their flood insurance policy rates will not increase as long as the coverage for the affected structure(s) has been continuous. Property owners would continue to receive the lower insurance policy rates.

LOMAs are based on minimum criteria established by the NFIP. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If a State, county, or community has adopted more restrictive and comprehensive floodplain management criteria, these criteria take precedence over the minimum Federal criteria.

In accordance with regulations adopted by the community when it made application to join the NFIP, letters issued to amend an NFIP map must be attached to the community's official record copy of the map. That map is available for public inspection at the community's official map repository. Therefore, FEMA sends copies of all such letters to the affected community's official map repository.

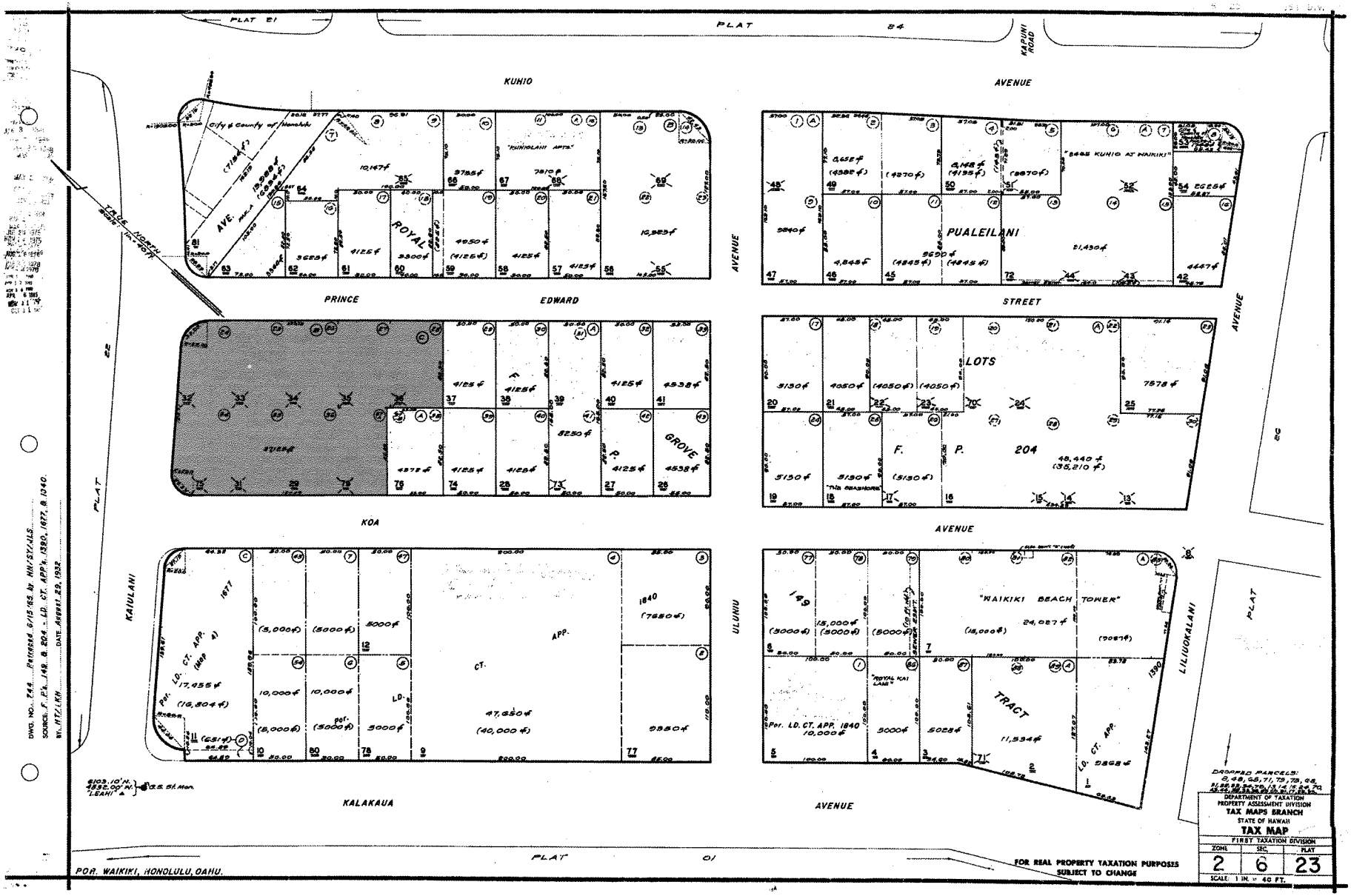
When a restudy is undertaken, or when a sufficient number of revisions or amendments occur on particular map panels, FEMA initiates the printing and distribution process for the affected panels. FEMA notifies community officials in writing when affected map panels are being physically revised and distributed. In such cases, FEMA attempts to reflect the results of the LOMA on the new map panel. If the results of particular LOMAs cannot be reflected on the new map panel because of scale limitations, FEMA notifies the community in writing and revalidates the LOMAs in that letter. LOMAs revalidated in this way usually will become effective 1 day after the effective date of the revised map.

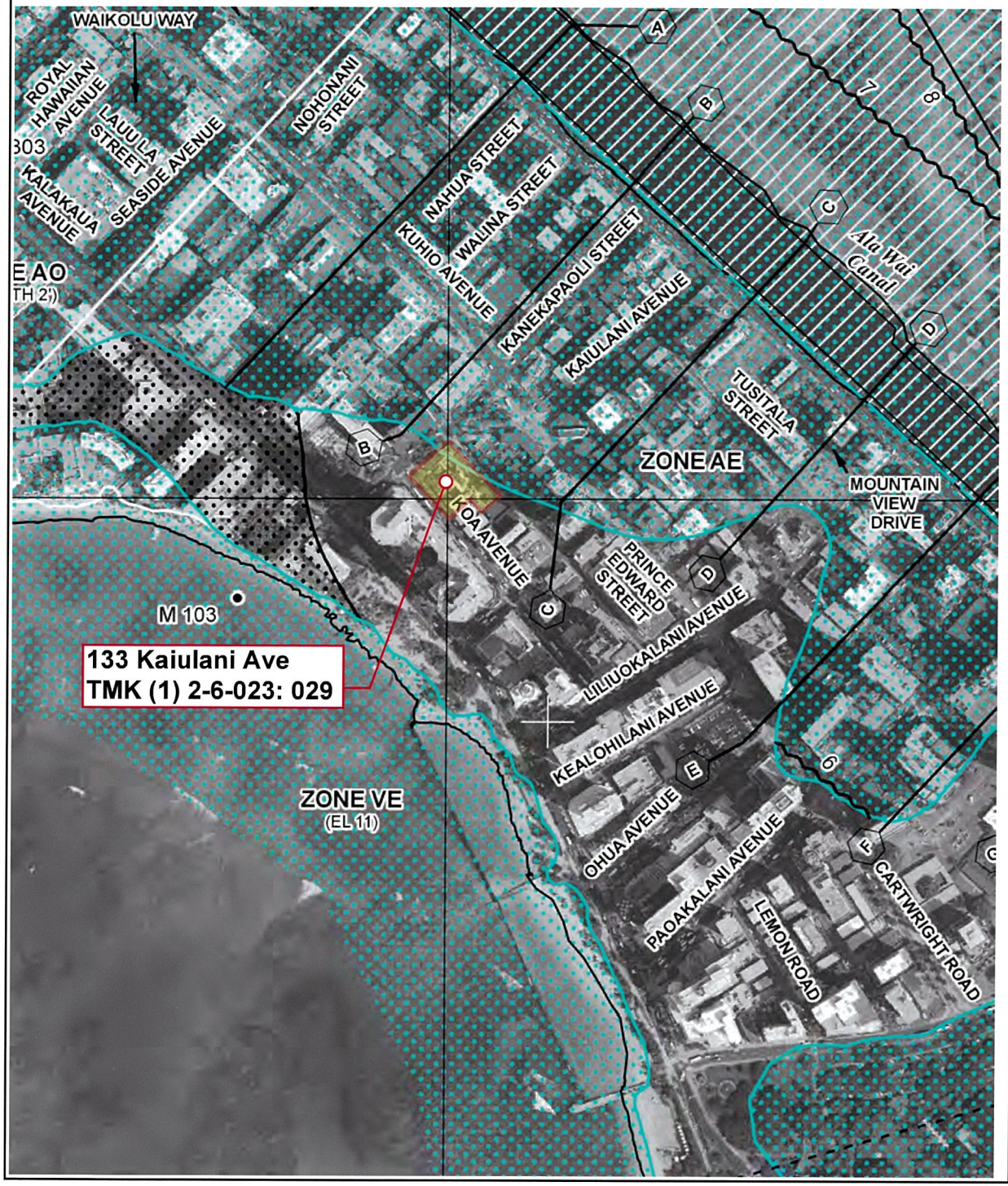


Engineering Report
133 Kaiulani

Location Map

SCALE: 1"=200' 200 0 200 400 800


PLAT 21
PLAT 24
KAPUNI ROAD
KUHIO AVENUE
"KUHIOLANI APTS."
"KUHIO AT WAIKIKI"
PUALEILANI
ROYAL
PRINCE
EDWARD
STREET
AVENUE
LOTS
F. P. 204
48,440 ± (35,210 ±)
"THE SEASHORE"
KOA
AVENUE
GROVE
"WAIKIKI BEACH TOWER"
"ROYAL KAI LANI"
TRACT
KAIULANI
ULUNIU
LILIUOKALANI
PLAT 2
PLAT 6
KALAKAUA
AVENUE
PLAT 01
POR. WAIKIKI, HONOLULU, OAHU.
FOR REAL PROPERTY TAXATION PURPOSES
SUBJECT TO CHANGE
DEPARTMENT OF TAXATION
PROPERTY ASSESSMENT DIVISION
TAX MAPS BRANCH
STATE OF HAWAII
TAX MAP
FIRST TAXATION DIVISION
ZONE 2 SEC. 6 PLAT 23
SCALE: 1 IN. = 40 FT.



MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0368G

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII

PANEL 368 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0368	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
15003C0368G

MAP REVISED
JANUARY 19, 2011

Federal Emergency Management Agency

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (LOCAL TIDAL DATUM)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Manoa Stream (continued)								
Y	16,490[1]	160	717	12.0	185.5	185.5	185.5	0.0
Z	17,290[1]	82	564	15.0	195.0	195.0	195.0	0.0
AA	18,690[1]	57	405	16.8	214.7	214.7	214.7	0.0
AB	19,290[1]	47	364	18.7	222.9	222.9	222.9	0.0
AC	20,690[1]	69	446	14.6	253.7	253.7	253.7	0.0
AD	21,340[1]	94	602	11.2	266.4	266.4	266.4	0.0
Palolo Stream								
A	-320[2]	50	315	16.8	52.8	52.8	52.8	0.0
B	80[2]	53	387	13.6	76.6	76.6	76.6	0.0
C	740[2]	57	376	14.0	84.9	84.9	84.9	0.0
D	1,410[2]	34	306	17.3	95.5	95.5	95.5	0.0
Ala Wai Canal								
A	6,700[3]	265	6,797	0.6	5.8	5.8	5.8	0.0
B	7,200[3]	265	6,322	0.5	5.8	5.8	5.8	0.0
C	7,700[3]	265	4,088	0.7	5.8	5.8	5.8	0.0
D	8,200[3]	265	4,261	0.7	5.8	5.8	5.8	0.0
E	8,670[3]	225	5,247	0.8	5.8	5.8	5.8	0.0
F	9,170[3]	190	4,002	0.9	5.8	5.8	5.8	0.0
G	9,350[3]	225	2,321	1.2	5.8	5.8	5.8	0.0

[1]Feet above confluence with Ala Wai Canal
[2]Feet from St. Louis High School Access Road
[3]Feet above mouth

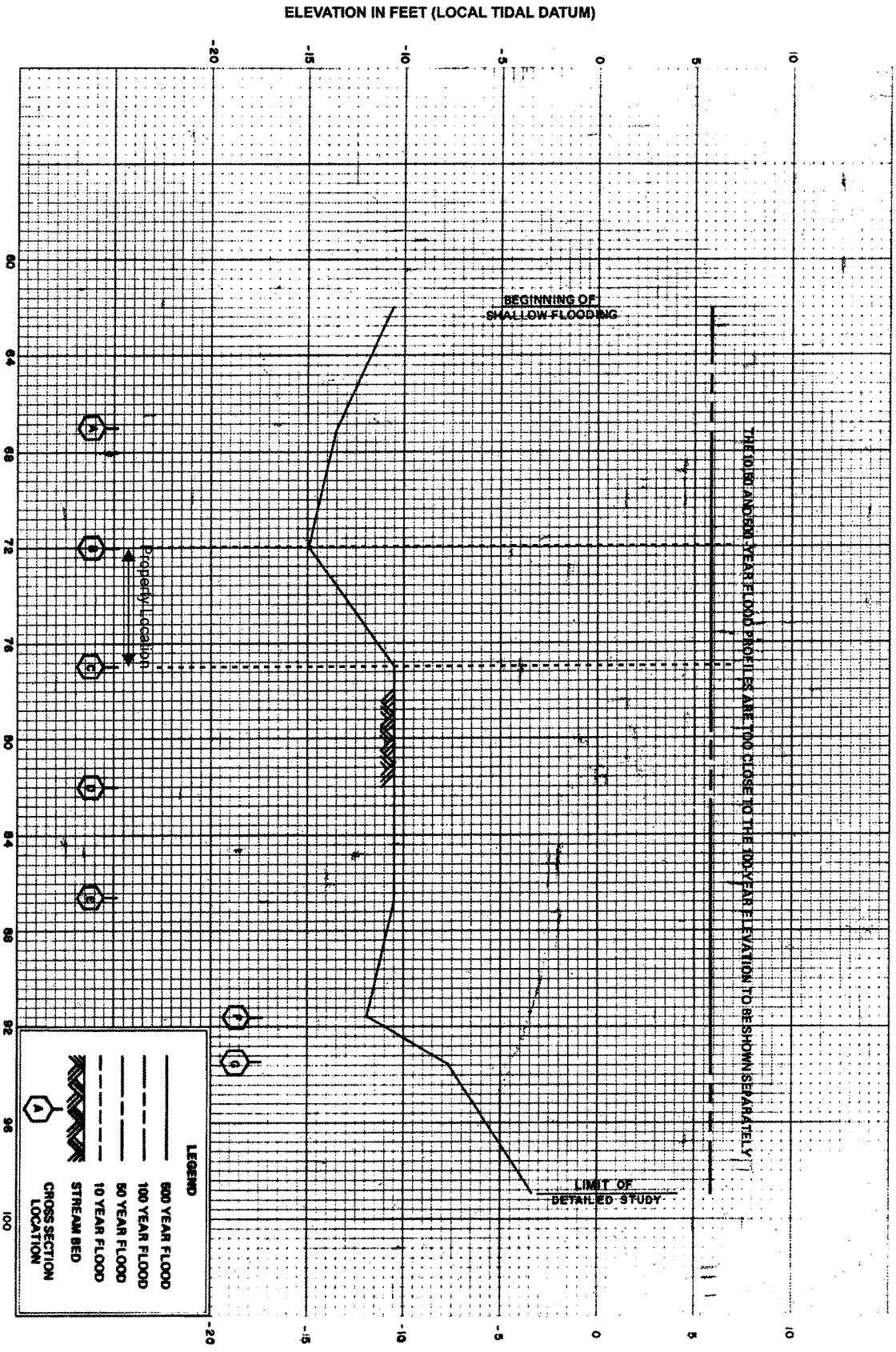
TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY AND COUNTY OF HONOLULU, HI

FLOODWAY DATA

MANOA STREAM – PALOLO STREAM – ALA WAI CANAL



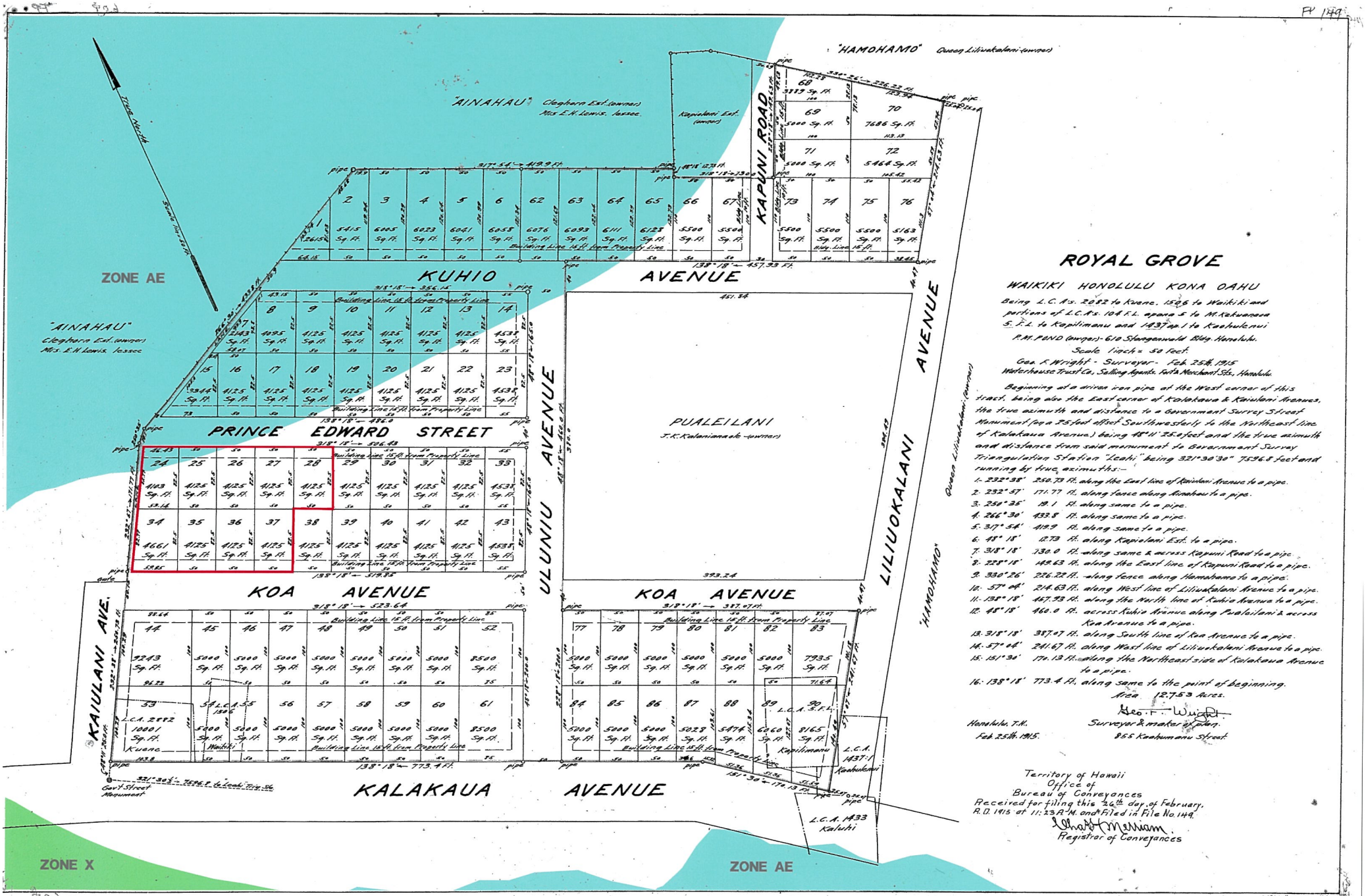
4P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY AND COUNTY OF HONOLULU, HI

FLOOD PROFILES

ALA WAI CANAL



ROYAL GROVE

WAIKIKI HONOLULU KONA OAHU

Being L.C.A.s. 2082 to Kuanc. 1526 to Waikiki and portions of L.C.A.s. 104 R.L. apana 5 to M. Kekuanaoa 5. R.L. to Kapilimanu and 1437 ap. 1 to Kaohukuhui

P.M. PAND (owner) - 610 Stangenwald Bldg. Honolulu.

Scale 1 inch = 50 feet.

Geo. F. Wright - Surveyor - Feb. 25th. 1915

Waterhouse Trust Co., Selling Agents. Fort & Merchant Sts., Honolulu.

Beginning at a drive iron pipe at the West corner of this tract, being also the East corner of Kalakaua & Kaiulani Avenues, the true azimuth and distance to a Government Survey Street Monument, no. 25 feet offset Southwesterly to the Northeast line of Kalakaua Avenue, being 48° 11' 25 offset and the true azimuth and distance from said monument to Government Survey Triangulation Station "Leahi" being 321° 30' 30" 7596.8 feet and running by true azimuths:—

1. 232° 38' 250.73 ft. along the East line of Kaiulani Avenue to a pipe.
2. 232° 57' 171.77 ft. along fence along Ainahau to a pipe.
3. 250° 35' 19.1 ft. along same to a pipe.
4. 266° 30' 433.8 ft. along same to a pipe.
5. 317° 54' 419.9 ft. along same to a pipe.
6. 48° 18' 12.73 ft. along Kapiolani Est. to a pipe.
7. 318° 18' 130.0 ft. along same & across Kapuni Road to a pipe.
8. 228° 18' 142.63 ft. along the East line of Kapuni Road to a pipe.
9. 330° 26' 226.22 ft. along fence along Hamohamo to a pipe.
10. 57° 04' 214.63 ft. along West line of Liliuokalani Avenue to a pipe.
11. 138° 18' 457.33 ft. along the North line of Kuhio Avenue to a pipe.
12. 48° 18' 460.0 ft. across Kuhio Avenue along Pualeilani & across Koa Avenue to a pipe.
13. 318° 18' 387.07 ft. along South line of Koa Avenue to a pipe.
14. 57° 04' 241.67 ft. along West line of Liliuokalani Avenue to a pipe.
15. 151° 30' 176.13 ft. along the Northeast side of Kalakaua Avenue to a pipe.
16. 138° 18' 773.4 ft. along same to the point of beginning.

Area 12.753 Acres.

Geo. F. Wright
Surveyor & maker of plan.
855 Kaahumanu Street.

Honolulu, T.H.
Feb. 25th. 1915.

Territory of Hawaii
Office of
Bureau of Conveyances
Received for filing this 26th day of February, A.D. 1915 at 11:23 A.M. and Filed in File No. 1149

Chas. T. Merriam
Registrar of Conveyances

APPENDIX 14

WAIKIKI NEIGHBORHOOD BOARD MINUTES

WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

DRAFT REGULAR MEETING MINUTES
TUESDAY, APRIL 8, 2014
WAIKIKI COMMUNITY CENTER

CALL TO ORDER: Chair Robert Finley called the meeting to order at 7:00 p.m. **with a quorum of 13 members present**. Note: This 17-member Board requires nine (9) members to establish a quorum and to take official Board action.

Moment of Silence: Chair Finley asked for a moment of silence in memory of the soldiers killed at Fort Williams.

Board Members Present: Jo-Ann Adams (Arrived at 7:29 p.m.), Jeff Apaka (Departed at 8:05 p.m.), Helen Carroll, Louis Erteschik, Robert Finley, Walt Flood, William Lofquist, Jeffrey Merz, John Nigro, Michael Peters, Jim Poole, Mark Smith, Mary Simpson, and Larry Williams.

Board Members Absent: John Dew and Roy Wyttenbach.

Guests: Carlton N. Middleton, Raytan Vares (Office of Senator Brickwood Galuteria), Gregory Shiu and Dominic Dias (Board of Water Supply); Elvice Conley, Richard Sparks, J. Pinedo, Gordon Fahey, Liz Fahey, Mark Garrity Mayor Kirk Caldwell's Representative/Deputy Director, Department of Transportation Services), Michael Leong (Office of Councilmember Stanley Chang), Corey Dillman, Natalie Iwasa, Liz Larson, Mark Wallen, Captain Nalu Kukea (Honolulu Fire Department), Danielle Yafuso and K. Mizuno (Halekulani Corp.); Lynn Fallin (Governor's Representative/Department of Health), Jan Bappe, Lieutenant Dien Shearer (Honolulu Police Department, District 6-Waikiki), Keith Kurahashi (Kusao and Kurahashi), (David Jones (Video Recorder), and Nola J. Frank (Neighborhood Commission Office staff).

Vacancies: Subdistrict 1 (one (1) seat).

VOTE ON THREE (3) ABSENCE RETENTION OR REMOVAL OF MEMBER ROY "SKY" WYTTENBACH – Chair Finely announced that Board member Wyttenbach's intention is to remain on the Board. However, Wyttenbach is ill and unable to attend tonight's meeting. Chair Finley asked to defer this item until the May 2014 meeting. **There were no objections.**

CITY MONTHLY REPORTS:

Honolulu Police Department (HPD) – Lieutenant Dien Shearer reported the following:

- March 2014 Statistics Compared to February 2014 – There were 8/5 robberies, 27/22 burglaries, 198/217 thefts and 31/26 unauthorized entries into a motor vehicle (UEMV). Other statistics included warning/citation/arrests – Speeding 0-172-0/12-321-0; parking 0-856-0/0/862/0; loud muffler 0-8-0/0-10-0; and park closures70-113-5/62-79-0.
- Statistic Details – Visit www.honolulupd.org, go to Information-Statistics.
- Keiki Safety Tip – Whether children are walking to school, the park, or a friend's house make sure they arrive safely. Teach kids to be safe and walk on sidewalks or paths and cross at street corners. Teach kids to put down their devices and to look left, right, and left again when crossing the street. Remind kids to make eye contact with drivers before crossing the street and to watch out for cars that are turning or backing up. When driving, be especially alert in residential neighborhoods and school zones and be on the lookout for bikers, walkers or runners who may be distracted or may step into the street unexpectedly.

Questions, comments and concerns: Trash Pick up Truck Noise – Erteschik asked if there is an ordinance restricting trash pick-up before 6:00 a.m. Shearer noted calling and was informed that there is no ordinance. Shearer suggested to log on to www.oplala.org for more information. It was also noted to contact the private trash collectors. Smith relayed that several years ago Councilmember Kobayashi invited private trash removal companies to a town hall meeting to address sensitive complaints. It was noted at that time if private collectors do not start work at 4:00 a.m. the truck would be getting to the H-Power Plan and that the workers shift would also be

over. Peters asked if this is a City issue with noise from trash pick-up. Peters understanding is that at 4:00 a.m. commercial trash is pick-up and resident trash after 6:00 a.m. Peters noted that this is a good policy for Waikiki to follow.

Honolulu Fire Department (HFD) –Captain Nalu Kukea reported the following:

- March 2014 Fire Statistics – There were 120 medical and 3 fire calls for service.
- Kid Safe Zone Safety Tip – In 2011, approximately 136,000 children nationwide were treated in emergency rooms for burns. Create a" kid free zone" in the kitchen, around stoves, ovens, and hot items. Place pots and pans on the back burner. Preschoolers and kindergarten s are more likely to play with matches and lighters, start a fire, and are fatally injured. Keep cigarettes, lighters, and matches, and other smoking materials out of children's reach or in a locked cabinet.

Questions, comments and concerns: Designated Non-smoking Condominiums – A resident asked and Kukea replied that the numbers of designated non-smoking condominiums were not available tonight.

Board of Water Supply (BWS) – Dominic Dias highlighted the following:

- .Water Main Breaks – There was one (1) water main break reported on March 24, 2014 at 2224 Aloha Drive; n eight (8) inch PVC Main installed in 1995.
- Tours and Educational Programs – In support of the Neighborhood Commission's "Community for Keiki" month in April, the BWS invites island youth and other community organizations to visit one (1) of the educational facilities to learn about Oahu's precious water resources. Each facility is a unique experience and perspective on water conservation. Sites included are Fred Ohrt Water Museum/Kalihi Pumping Station (Learn about Oahu's water history at a live pumping station); Halawa Xeriscape Garden (Learn how to reduce outdoor water usage in the landscape); Nu`uanu Watershed (Learn about the important role watersheds play in the water cycle); Honouliuli Water Recycling Facility (Learn how the BWS recycles wastewater for irrigation and industrial use to free up the groundwater for potable uses; and Waihee Tunnel (Learn about a major water source for Windward Oahu). To schedule a tour, email tours@bws.org or call 748-5041. Due to the many requests received, at least three (3) weeks' notice is required to book a tour. Visit www.boardofwatersupply.com for more information.
- Water Conservation Week – Mahalo to the more than 1,300 keiki artists and poets for participating in the 2014 Water Conservation Week contests. This year's theme "Conserve Water: No Effort is Too Small" emphasizes that every drop saved contributes to a larger island-wide effort to preserve and protect the precious water resources. BWS appreciates the support of the community and educators for encouraging Oahu's youth and families to conserve water. An award ceremony to reveal contest winners will be held in May. Visit boardofwatersupply.com on May 8, 2014 to see the winners.
- BWS Water System Improvement Project (March 31, 2014 to December 2014) – An informational flyer was distributed. Please call 748-5000 with any concerns relating to the project.

RESIDENTS'/COMMUNITY CONCERNS:

1. Candidates – Janet Grace announced that her candidacy for the House of Representatives. Carlton Middleton announced that is candidacy for the State Senate.
2. Parking Citation – A member of the audience reported receiving a $35 parking citation for parking in an unmarked stall. It was suggest to post parking restriction signs.

ELECTED OFFICIALS AND OTHERS:

Mayor Kirk Caldwell's Representative – Deputy Director of the Department of Transportation Services (DTS), Mark Garrity announced that copies of "The City News" were available on the back table; and reported the following:

- "Community for Keiki Month" – Neighborhood Boards were thanked for taking part in April's "Community Keiki Month."
- Honolulu Police Department (HPD) Foot Patrols near Ala Moana Boulevard and Hobron Lane – According to HPD foot patrols are in the area staffing permitting.
- Muffler Noise Enforcement – From January to the third week of March 2014, District 6 issued 27 citations for loud mufflers. Continued enforcement action will be taken when violations are observed.
- Trash Pick-up Time Restrictions – There are no laws or regulations that impose time restriction on refuse collection. The City Refuse Division does not collect refuse prior to 6:00 a.m., except for certain routes in

the downtown business district. Private refuse haulers do provide earlier morning service, particularly in commercial districts including Waikiki.

- Loud Motorcycles Cruising through Waikiki – HPD will continue to take enforcement action when violations are observed.
- Statistics Report of Property Crimes not Personal Crimes – The reporting of crime statistics format was changed. Other statistics can be viewed by the public on the HPD website at www.honolulupd.org by clicking on "Information," "Statistics." and then "D6". The address is also provided on the statistical report provided at the Neighborhood Board meeting.
- Trailer Covered with Graffiti on Kuhio Avenue – The contractor trailer will be painted by April 4, 2014 and removed when the job is completed by February 2015.
- Paoakalani Avenue Meeting Request – A meeting was held on Monday, March 24, 2014 with the City Department of Transportation (DTS) Deputy, Traffic Engineering Division and the Neighborhood Commission Office (NCO) Executive Secretary.
- Closed Restroom Across Foster Tower – As of April 4, 2014 a response was not received. The item was referred to the Department of Parks and Recreation (DPR) via email. DPR will follow up with the response.
- Keeping Restroom Back of HPD Station Open 24-Hours – A response was not received as of April 4, 2014. This item was referred to the Department of Parks and Recreation (DPR).
- Special Tourist District with Vagrancy Enforcement – Laws are not legislated by HPD, especially those that target the homeless.
- Sidewalks for Cleghorn Street – Streets without sidewalks exist because past standards allowed them. Frontages with concrete sidewalks exist today because of required current subdivision standards. The construction of street improvements by the City to upgrade an existing area to present City standards, are undertaken through the creation of an improvement district (I.D.) project. The I.D. program requires that the community support and initiate the improvements through their councilmember.
- Kuhio Crosswalk at Kaiolu Street Lack of Lighting/Safety – A response was not received as of April 4, 2014. The item was referred to the Department of Design and Construction (DDC).

Questions, comments and concerns:

1. Trash Pick-up Times – Peters noted there is no ordinance, but a policy of a 4:00 a.m. hotel trash collection time. According to the private trash collectors, over the past years the trucks get a head start to avoid traffic. Also, workers do not receive overtime pay if running late and their shifts are over.
2. Aloha Park – Lofquist asked Mayor Caldwell's stance regarding the Aloha Park. Garrity noted that a response was reported a few months ago. It was added that the Department of Parks and Recreation (DPR) is seeking solutions.
3. Vagrancy Laws – Liz Larson pointed out that vagrancy laws would target the homeless. Garrity noted an ordinance would allow the police to enforce stored property blocking access on City streets. There are no laws preventing sleeping in public areas.

Disclosure – Chair Finley disclosed that he and Board member Merz attended the Paoakalani Avenue meeting.

Governor Neil Abercrombie's Representative – Lynn Fallin reported the following:

- "Race to the Top" – Hawaii has now been called "rising star' by the U.S. Secretary of Education Arne Duncan. It was acknowledged that Hawaii in its Year 3 Race to the Top report was praised highly for accomplishments from September 2012 to September 2013. Hawaii's fourth and eighth graders were among the nations leaders to improved progress in mathematics and reading achievement. The Governor thanked the Legislature for including funding for early learning in their respective draft budgets.
- Purchase of Trash Cans – It is the responsibility of the Parks Division to purchase new trash cans. According to the Department of Health Environmental Health Division, the Department of Land and Natural Resources (DLNR) and the City would place the cans where the agencies see fit.
- DLNR Change to Surf Instruction Rules – The issue will be discussed at a future meeting.

Questions, comments and concerns followed:

1. Restaurant Inspections – Smith asked and Fallin will follow up regarding inspections of restaurants. Fallin noted a report card will be started for each restaurant inspected. Department of Health (DOH) plans to work with the restaurant industry and training of staff on health and safety matters.
2. Grant to House the Homeless – Chair Finley asked if there was an update from Collin Kippen, regarding a grant to house the homeless. Fallin replied that the City and State are working together to increase the

supply of housing overall, "Housing First." Policy changes relates to substance use, being clean and sober before receiving housing.

Councilmember Stanley Chang – Michael Leong distributed a written report and highlighted the following:

- Kuhio Avenue/Kaiolu Drive Unsignalized Intersection – Regarding the request for delineator signs, per the Department of Transportation Services (DTS) the cross lines are visible and there is no traffic history of pedestrian accidents. However, the mauka/koko head tree branches block the street light illumination. The concern was forward to the Department of Parks and Recreation (DPR) to clear the canopy by Thursday, April 18, 2014.
- Numerous Potholes on Manukai Street – Potholes reported on Manukai Street, between Royal Hawaiian and Seaside Avenues was forwarded to the Department of Facility Maintenance (DFM). Councilmember Chang is waiting a response.
- Motorcyclists Gathering at Smoke House and the Irish Rose – Noise concerns regarding loud motorcycles and riders gathering at the Smoke House and the Irish Rose on Kalia and Hobron Lane, and riding through Waikiki on Sundays between 10:00 a.m. and 11:00 a.m. were referred to HPD to patrol and set up check pointes.
- Councilmember Chang's Position regarding Resolution 14-38 relating to the 2139 Kuhio Project – Board members attended the special Council Zoning Meeting and provided testimony, regarding concerns about the 2139 Kuhio Avenue project on March 4, 2014. The Neighborhood Board would like to know Councilmember Chang's position as to why he voted in support of the project.
- Kapahulu Avenue Groin Shower – The shower has been out of order for several weeks and forwarded to DPR. Shower repairs were done one (1) week ago.

Questions, comments and concerns followed:

1. 2121/2139 Kuhio Avenue – Peters pointed out that last month Erteschik asked when Councilmember Chang could come back to the Board and explained by he voted to support the 2121 Kuhio project. Erteschik wanted to know if Councilmember Chang would be attending a future Board meeting to explain his vote in light of opposition by the Neighborhood Board regarding this project. Flood asked of the Councilmember supports both the 2121 and 2139 Kuhio Avenue projects. Leong will follow up.
2. Kaiolu Drive and Kuhio Avenue Crosswalk – Merz reported poor visibility at this intersection. However, a reply to a request to the Department of Transportation Services (DTS) noted that delineators are not warranted.
3. Launiu Street Complaint – Merz received a complaint of overgrown tree branches hitting the buses as they drive by.
4. Kuhio Avenue Projects – Flood asked if Councilmember Chang supports the projects at 2121 and 2139 Kuhio Avenue.
5. Street Performers – Flood reported street performers on Kalakaua Avenue are accepting credit cards. Leong replied that someone called the office today noting the street performers are accepting advance payments.
6. Aloha Park – Lofquist thanked Leong for following up on the Aloha Park matter. Leong noted that the issue was referred to DPR.
7. Bill 59 – Smith commented regarding voting urban versus suburban. Smith stated that people are congregating on sidewalks along Kapahulu and Kalakaua Avenues. Unkempt males on substances are asking for money and laughing. It is unsure if they are homeless or not. Smith asked how Bill 59 can be restarted to help resolve these issues.
8. City Budget Process – Chair Finley reported that one (1) Councilmember removed $46,000 from the Neighborhood Commission Office budget that would advertise Neighborhood Board election. Leong will send Chair Finley a response.

Senator Brickwood Galuteria – Raytan Vares distributed a written report and highlighted the following:

- Kupuna Power – The Second Kupuna Day will be held on Wednesday, April 16, 2014 from 9:00 a.m. to 11:30 a.m. in the State Capitol Rotunda.
- End of Legislative Session – The session will be ending on May 1, 2014. House Bill 1866 relates to the Hawaii Community Development Authority. (HCDA) passed today. The House made changes to Senate Bill 2609 which relates to wages, increasing the minimum wage to $10 (2018), Senate Bill 2345 relates to the Kupuna joint majority package Office of Securities and Commissioners passed third reading.

Questions, comments and concerns followed:

1. Support of Wage Increase – Peters asked if Senator Galuteria supports or opposes the minimum wage increase. Vares replied that the Senator supports the bill. The Chamber of Commerce has voiced opposition.
2. Restroom Status – Poole asked the status of the restrooms. A response will be sent to Poole.
3. University of Hawaii System Update – Poole asked for a University of Hawaii system update. A response will be sent to Poole.
4. Increase in Medical Insurance Rates – Chair Finley reported that the Hawaii Medical Service Association (HMSA) plans a 12.8% increase, and asked the impact to State retirees. Vares will follow up.
5. Meeting Regarding the Homeless – Nigro asked if meetings regarding the homeless are open to the public. Chair Finley noted that he would report to the Board if he is invited to the next meeting.

Waikiki Improvement Association (WIA) – Rick Egged reported that the WIA is working with Councilmember Chang, the Administration and publishers regarding the magazine racks. Fees for magazine racks will increase starting Wednesday, April 16, 2014. A bill would give greater flexibility to remove unused racks, which are protected by the current and cannot be removed.

Questions, comments and concerns followed:

1. Magazine Racks New Law – Smith noted that a new law would publish guidelines in several languages with basic information. Egged will pass the suggestion on. Merz noted that the taxpayers pay for the magazine racks. Merz pointed out the new law should make the racks totally independent, self sufficient, and 80% should be removed from the sidewalks. Egged replied that the law is not self sufficient and does allow consolidating the small racks. Peters raised concern about the regulations and the nature of publications (adult in nature) of publications in Waikiki. Peters noted to keep the nature of publications tourist oriented. Egged replied that due to free speech, the regulation cannot refer to content. It was noted to have the requirement go through the City process.
2. Hapalua Half Marathon – Merz noted that the Hapalua Half Marathon is scheduled for Sunday, April 13, 2014 at 6:00 a.m. along Kalakaua Avenue. Egged replied that the race is run by the Honolulu Marathon.
3. Duke Kahanamoku Canoe Challenge Race – The race will be on Sunday, April 13, 2014, Hilton Hawaiian Village Great Lawn starting at 9:00 a.m. Entertainment will be provided from 10:00 a.m. to 2:00 p.m. The Hokule`a will be anchored nearby and will leave for a four (4) year tour on May 18, 2014.
4. Earth Day – Cleaning of Kuhio Beach will take place on Saturday, April 26, 2014 from 7:00 a.m. to 9:00 a.m. starting at the Duke Kahanamoku statue. Area businesses will be donating refreshments.

APPROVAL OF THE MARCH 11, 2014 REGULAR MEETING MINUTES: **Flood moved, seconded by Peters to APPROVE the March 11, 2014 regular meeting minutes.** Discussion followed: **The March 11, 2004 regular meeting minutes were ADOPTED as amended by UNANIMOUS CONSENT, 14-0-0 (Aye:** Adams, Apaka, Carroll, Erteschik, Finley, Flood, Lofquist, Merz, Nigro, Peters, Poole, Smith, Simpson, and Williams). The corrections are:

- Page 2, item 9 last sentence should read, "...There are traffic cameras at the intersection of Kuhio and **Seaside** Avenues, but no one is assigned to monitor the cameras..."
- Page 3, Bike Mom last sentence should read, "...Riding on other sidewalks is okay as long as going 10 miles per hour (mph) **or less**..."

BOARD BUSINESS:

Waikiki Parc Hotel Project Upgrade – Keith Kurahashi showed a power point presentation and highlighted the following:

- Applicant – The Halekulani Corporation has submitted a Draft Environmental Assessment (EA) to the Department of Planning and Permitting (DPP) and will be submitting a Variance, Special Management Area Use Permit (SMA) and Waikiki Special District Permit applications as well.
- Location – The project will be located on 48,411 square foot site in the Waikiki and involve the renovation of the existing hotel.
- Major Interior Renovations – The renovations includes the existing 297 rooms into all one (1) bedroom and two (2) bedroom room (reducing the count to 126 rooms); removing guest rooms on the 8th floor, and providing a new restaurant, kitchen, dinning rooms, fitness center and hospitality room, and renovating the ground floor lobby, restrooms, back-of-house facilities, and improvements to the existing restaurant.

- Exterior Improvements – The improvements include the 8th floor pool deck and the 8th floor stage/gathering area; provide a new roof top bar and create an open air cocktail/viewing platform on the roof; and extension of the elevator and stairs to the roof top.
- Additional Exterior Improvements – Additional exterior improvements provides façade improvements, improving the existing pedestrian hotel entrance porte cochere; and streetscape and landscape enhancements.
- Height – The height of the hotel will increase about two (2) feet from the current 236.5 feet.
- Parking – The 476 parking stalls will be maintained.
- Floor Area – The project involves a net increase in floor area of 2,562 square feet, including the new roof top bar and cocktail lounge, rooftop elevator, 8th floor canopy, and improvements at the new hotel entry on Kalia Road.
- Hotel Units Reduction – The result will be a reduction in vehicle trip generation, water and wastewater use, and impact on other utilities.
- Construction – Construction is expected to begin in fall 2016 with completion and re-opening of the hotel in early 2018.
- Cost – Renovation cost is expected to be $50 to $60 million dollars.

Adams moved, Nigro seconded that the Waikiki Neighborhood Board No. 9 supports the Waikiki Parc Hotel project upgrades. The motion was ADOPTED BY UNANIMOUS CONSENT, 15-0-0 (Aye: Adams, Apaka, Carroll, Erteschik, Finley, Flood, Lofquist, Merz, Nigro, Peters, Poole, Smith, Simpson, and Williams).

8:05 p.m. Board member Jeff Apaka departed the meeting; **14 members present.**

King's Village Area Renovation – Keith Kurahashi reported the following:

- Project – There is a proposed 133 Kaiulani Hotel Development.
- Permit Applications – Plans are to submit applications for a Draft Environmental Assessment and Planned Development-Resort and Waikiki Special District Permit to the City Department of Planning and Permitting (DPP).
- Location – The project will located on a 45,622 square foot site in Waikiki and involve demolition of the existing structures on the property and the development of a new hotel (condo-hotel).
- Demolition – The King's Village (131 and 133 Kaiulani Avenue and 2401 and 2407 Prince Edwards Street), Prince Edwards apartments (2413 Prince Edwards Street) and Hale Waikiki (2410 Koa Avenue) will be demolished to make way for the new hotel.
- Units – The new hotel will have approximately 256 hotel units. The contemplated structure is currently planned to have a 350-foot, 33-story tower.
- Ground Floor – The ground floor will be composed of a large retail space, hotel lobby, and support spaces.
- Amenity Deck above the Parking Floors) – The deck will consist of the hotel reception area, lobby lounge, bar lounge, full-service restaurant, as well as multiple event spaces and executive offices. The open podium area will be used as an outdoor dining terrace and main pool deck. The tower above the amenity deck will mostly be hotel units with a fitness center and spa.
- Porte-Cochere – The porte-cochere will prove for valet drop-off with loading, trash and vehicular access.
- Kaiulani Avenue and Koa Street Corner – This area will provide an ample open-space plaza to serve as the main pedestrian access to both the hotel and retail functions. A cohesive paved and landscaped area will connect the plaza wrap around Kaiulani Avenue with access to the retail portion, and connect to the Price Edward Street side of the property. The pathway continues and connects to a landscaped pocket park for use by hotel guests, Waikiki residents and the general public.
- Planned Development Permit-Resort – A planned development permit-resort which allows heights up to 350 feet, a greater floor area ration and adjustment to the height setbacks in Waikiki subject to an acceptable design and provisions of community benefits and reviewed by DPP and approval by the City Council is being requested.
- Public Benefits – Benefits to the public include an increase in public open space, including a pocket park maintained by the applicant; greater average setback along Koa Avenue, Kaiulani Avenue and Price Edward Street, provides 256 additional hotel rooms, economic and job-creating stimulus for the local economy, and increase in property values.
- Additional Community Benefits Proposed – The applicant proposes to set aside $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area; provide up to $100,000 toward construction of the American Disabilities Act (ADA) improvements for access and a bathroom at the

Waikiki Community Center; provide up to $200,000 to the City for use in programs/projects to help alleviate the issue surrounding the homeless community; and provide up to $300,000 to support certain bathrooms in Waikiki being kept open after 0:00 p.m.

8:30 p.m. Chair Finley called a recess to view the plans; 8:40 p.m. the meeting resumed.

Questions, comments and concerns followed:

1. Street Level for Pedestrians – Adams asked for a description of the street level for pedestrians. Kurahashi noted that the details would be ironed out with DPP. No awnings will higher than 25 feet.
2. Entrance – Nigro asked and it was noted that entrance would be on Koa Avenue.
3. Corporation – Peters asked and Wong replied that the applicant is with the Black Sand Corporation, which is a local company.
4. King's Village – Peters asked what happened to King's Village. In response, in recent years the buildings have not been up kept with economic needs due to retail growth in Waikiki. Peters asked and it was noted that the person in charge of the King's Guards is retiring, but other activities would be available.
5. Community Benefits – Erteschik noted that according to the plans the views would not be blocked as much as possible. Concerns were that the height would be higher than permitted. Merz agreed with Erteschik. Kurahashi replied that there were compromises with the plans.

8:35 p.m. Board member Poole departed the meeting; 12 members present.

6. Presentation – Smith commented that the presentation was thorough and comprehensive providing lots of hotel specifics.
7. Traffic – Adams asked and responses were shown on the Power Point.
8. Other Projects – Chair Finley asked and it noted that other projects include the Ohana Hotel, Waikiki Beach Walk, Princess Kaiulani Hotel Diamond Head Tower, and the International Market Place.
9. Deadline – Merz asked and it was noted that the deadline for the Environmental Assessment (EA) is at the end of April or early May 2014. Merz noted that the concept works with the plan.
10. View Plain – Egged asked if the view plane in the law is more comprehensive
11. Hawaiian Sense – Smith agreed with Adams and Merz comments that there is no Hawaiian sense in the plans

Flood moved and Smith seconded that the Waikiki Neighborhood Board No. 9 supports the concept of the King's Village Renovation.

Discussion followed:

1. Advisory – Erteschik replayed that the Board's capacity is advisory and at the mercy of the developer. Erteschik was in support of the project." Hawaiianess."
2. Comment – Lofquist commented "what is missing." Lofquist noted that a sense of an audience is missing.

The motion was ADOPTED 11-1-0 (**Aye:** Adams, Erteschik, Finley, Flood, Lofquist, Merz, Nigro, Peters, Smith, Simpson, and Williams; **Nay**: Carroll).

Treasurer's Report – Treasurer Adams reported expenditures of $50.40 for printing and postage leaving a balance of $549.27. The report was filed.

Legislative Report – Erteschik reported the following:

- HB 1660 HD1 – Relates to sidewalks and Obstruction of public passage: Specifies that the offense of obstructing includes, in addition to obstructing a highway or public passage, providing less than one (1) meter of space for passage on any paved public sidewalk, except as authorized by law, or failing to obey a law enforcement officer's order or request to cease any of the foregoing activities.
- HB 1934 – Relates to housing: homelessness, housing, homeless assistance working group, and appropriation. Part 1 appropriates funds to the Department of Health (DOH) for substance abuse treatment, mental health support services, and clean and sober housing services. Part II appropriates funds for a rental assistance program also known as a shallow subsidy program. Parts II and IV appropriates funds to the Department of Human Services (DHS) to continue to administer housing first programs for chronically homeless individuals and to reestablish the homeless prevention and rapid re-housing program. Part V appropriates matching funds for the federal to continuum of care permanent supportive housing programs to provide rental assistance in connection with supportive services. Part VI appropriates funds for the

homeless assistance working group. Part VII transfers the homeless assistance working group from the DHS to the legislature.

District 1 Report – There was no report.

Subdistrict 2 Report – Flood reported upwards of 16 persons living in a two (2) story apartment with four (4) rooms and only one (1) working bathroom on Kalaimoku Street. All tenants were evicted, and the sub-lessee is in court facing charges. The City and County of Honolulu has over $110,000 in fines for multiple violations. Flood noted that he attended the "bridge across the Ala Wai Canal" meeting.

Subdistrict 3 Report – Smith reported a homeless person lying at the corner of Kalakaua and Kapahulu Avenues.

Chair Report – Chair Finley reported the following:

- Waikiki Circulator Meeting – Approximately 170 people attended the McCully Mo`ili`ili Neighborhood Board meeting. Sixty percent of the attendees were in favor of a connecting bridge across the Ala Wai Canal to Waikiki. The message will be relayed to Mayor Caldwell.
- PACREP – An update will be presented at the May 2014 Board meeting.

ANNOUNCEMENTS:

- Next Meeting – The next meeting will be held on Tuesday, May 13, 2014 at 7:00 p.m.
- Video Recording of Board Meetings – View this meeting on `Olelo Channel Focus 49 at 9:00 p.m. the 4th Tuesday each month; and on `Olelo Channel Views 54 at 6:00 a.m. the 1st and 3rd Sunday of each month. View online at http://olelo.granicus.com/ViewPublisher.php?view_id=2.

ADJOURNMENT – **Flood moved, Peters seconded to adjourn the meeting. There were no objections.** The meeting adjourned at 9:40 p.m.

Submitted by: Nola J. Frank, Neighborhood Assistant
Reviewed by: K. Russell Ho, Neighborhood Assistant
Reviewed and Finalized by: Robert Finley, Chair

• Print

Waikiki Neighborhood Board No. 9

Printable Version (copy and paste into browser)

http://www.honolulu.gov/rep/site/nco/nb9/15/09_2015_02Min.pdf

DRAFT REGULAR MEETING MINUTES

TUESDAY, FEBRUARY 10, 2015

WAIKIKI COMMUNITY CENTER

CALL TO ORDER: Chair Robert Finley called the meeting to order at 7:00 p.m., **established quorum with 14 members present**. Note: This 17-member Board requires nine (9) members to establish quorum and to take official Board action.

Board Members Present: Jo-Ann Adams, Jeff Apaka, Helen Carroll, John Dew, Louis Erteschik, Robert Finley, Walt Flood, Janet Grace, William 'Bill' Lofquist, Jeff Merz, John Nigro, Mary Simpson, Mark Smith and Larry Williams.

Board Members Absent: John Moore, Kuuipo Kumukahi, and Jim Poole

Guests: Stacelynn Eli (Senator Brickwood Galuteria's Office staff), Ronald Borromeo (Board of Water Supply), Deputy Director of the Department of Transportation Services Mark Garrity (Mayor Kirk Caldwell's representative), Representative Tom Brower, Councilmember Trevor Ozawa, Kenny Amazaki and Kurt Tsuneyoshi (Councilmember Trevor Ozawa's Office staff), Rick Egged (Waikiki Improvement Association), Lieutenant Dien Shearer (Honolulu Police Department, District 6-Waikiki), Alex Garcia (Firefighter 1-Honolulu Fire Department) Jared Higashi (Hawaii Lodging and Tourism Association), Keith Kurahashi, Andy Hryoiekich, Pam Walker, Leo Nicolai, Daniel Berman, Aaron Landry (Ala Moana-Kakaako Neighborhood Board No. 11), John B. Williams, Richard Sparks, Lloyd Nakamaejo, Glenn Park, Irene Chan, Carlito V. Onig MP, Lynn K., Anne Uyzhal, Lou Palhler, James Lee, Eun Ho Lee, Rachael Pasini, Kim Jorgensen, D. Jorgensen, Amy Ammen, Don Schrimpf, John Paulino, Jan Bappe, David Moskowitz, David Benson, David and Krystal Carvalho, Sharon K, Norman Hendricks, Kathryn Henski, Mark Hapeman, Michelle Matson (Diamond Head/Kapahulu/Saint Louis Heights Neighborhood Board No. 5), Mark Howard, Kat Zman, David Amodo (videographer) and Jordan Ozaki (Neighborhood Commission Office staff).

Vacancies: There were no vacancies.

CITY MONTHLY REPORTS:

Honolulu Fire Department (HFD): Firefighter I Alex Garcia reported the following:

- January 2015 Statistics: There were 3 fires, 134 emergency medical services/rescues, 2 hazardous conditions, 6 service calls, 62 good intent calls, and 13 false calls.
- Hiking Safety Tip: When planning for a hike, inform others of your plans, including name of the trail and your expected return time. Plan hikes to account for sufficient daylight, stay on the trails, and carry a fully charged cell phone.

Honolulu Police Department (HPD): Lieutenant Dien Shearer reported the following:

- January 2015 Statistics: There were 25 burglaries, 201 thefts, 18 unauthorized entries into a motor vehicle (UEMV). HPD issued 440 pedestrian citations, 135 citations during park closure, 46 bicycles on sidewalks citations, 29 speeding citations, and 117 citations for using a mobile electronic device while driving.
- Park Closure Warnings: Dew asked for a clarification of the number of park closure citations and warnings. Lt. Shearer said he believed there were 38 warnings.
- Loud Muffler Citations and Enforcement: Two community members asked about the enforcement of citing motorcycle, mopeds, and cars with excessive noise. Lieutenant Shearer reported that officers must observe the violation in order to issue a citation. A community member also asked for loud muffler citation statistics and asked why there were no muffler citations given at the Toys for Tots event. Lieutenant Shearer responded that there is active enforcement and statistics were not available in time for the meeting and that he will follow up on the Toys for Tots question at the next meeting.
- Skateboards on Sidewalks: Carroll asked about skateboards on sidewalks and Lieutenant Shearer reported that skateboarding on sidewalks in Waikiki is illegal and HPD has been issuing citations.

Board of Water Supply (BWS): Ronald Borromeo distributed a flyer to the Board and reported the following:

- New Parking Procedure: Beginning in March 2015, there will be a new parking procedure at the BWS Beretania Office, in an effort to provide adequate and free parking stalls for visitors conducting official business with the BWS. There will be parking control arms where visitors will press the intercom button to speak with a BWS security officer and indicate the purpose of the visit.
- Payment at Bank of Bank of Hawaii: Effective Wednesday, April 1, 2015, customers can drop off water bill payments at any traditional Bank of Hawaii branch on Oahu. First Hawaiian Bank will no longer accept bill payments after Tuesday, March 31, 2015.
- Water Main Breaks: There were no water main breaks in the last two (2) months.

Three (3) Absences for John Moore: Chair Finley announced that Board member Moore did not respond to the three (3) absences notification. **Merz moved and Apaka seconded to remove John Moore as a Board member, vacating a seat in subdistrict 3. The motion was PASSED UNANIMOUSLY 14-0-0 (AYE:** Adams, Apaka, Carroll, Dew, Erteschik, Finley, Flood, Grace, Lofquist, Merz, Nigro, Simpson, Smith and Williams)

RESIDENTS' COMMUNITY CONCERNS:

Visitor's Industry Charity Walk: Jared Higashi from the Hawaii Lodging and Tourism Association (HLTA) announced the 37th annual Visitor's Industry Charity Walk. He reported that the walk has raised $27 million over the past 36 years, and benefited over 200 charities. This year's route will have a turnaround point at Kalakaua Avenue at the Royal Hawaiian Shopping Center. Food and drinks are served at different checkpoints along the 6-mile route. For more information and grant applications, visit hawaiiandlodging.org.

Upcoming Parades: Chair Finley announced that the Honolulu Festival Parade is on Sunday, March 8, 2015. Duke's Challenge is on Sunday, March 15, 2015, and the St. Patrick's Day Parade is on Tuesday, March 17, 2015.

ELECTED OFFICIALS:

Mayor Kirk Caldwell's Representative: Mark Garrity reported the following:

- Candidate and Voter Registration for the 2015 Neighborhood Board Elections: The deadline to apply is Friday, February 20, 2015. Paper applications are available through the Neighborhood Commission Office, or online at www.honolulu.gov/nco. More information on the boards and the election are also available on that site or by calling 768-3708.
- Honolulu Zoo Ti Leaf Collection: The Mayor's Office of Culture and the Arts (MOCA) and the Honolulu Zoo are asking for donations of lā'ī ti leaf) to help repair the hale lā'ī. Ti leaf donations may be dropped off in plastic bags at the Honolulu Zoo entrance.

- "Sew a Lei for Memorial Day" Poster Contest: Students grades K-12 are invited to enter the City and County of Honolulu's "Sew a Lei for Memorial Day" poster contest, which runs from Monday, January 26, 2015 through February 27, 2015. The posters should depict lei-making activities or ceremonial actions at the National Memorial Cemetery of the Pacific at Punchbowl. For more information, contact Alex Ching at 768-3028 or email aching2@honolulu.gov.
- Crosswalk Signal Pole Stickers: The Department of Transportation Services (DTS) will be placing stickers on crosswalk signal poles that clarify the meaning of pedestrian walking signals.
- 24-hour Restroom in Waikiki: The security guard service is provided by the Waikiki Business Improvement District Association, and not by the Department of Parks and Recreation (DPR). The security guard is not allowed to enter the restrooms due to liability issues. If the security guard sees an unsafe situation developing or occurring, he or she will contact HPD immediately.
- Okada Trucking: Okada Trucking is under contract to support the City's capital improvement projects (CIP), therefore the use of the lot as a base yard with storage of materials is a permitted use under the Land Use Ordinance (LUO). Currently, Okada Trucking is finishing up a contract on the BWS Woodland project. The project is scheduled for completion in March 2015.
- Street lights along Kalakaua Avenue: The street lights along Kalakaua Avenue are currently not scheduled for painting or surface refurbishment. The Street Light Operations Office may be contacted during normal business hours at 768-5300 to report any specific concerns about a City street light.
- HPD in Waikiki: Currently, there are approximately 150 patrol, plainclothes, and forth watch police officers assigned to the Waikiki district. Patrol officers drive in vehicles while handling cases and walking beat assignments during peak hours. There are nine (9) officers that patrol Waikiki on bicycles and plainclothes officers frequently walk the area gathering information about the activities of individuals or groups of individuals.
- Length of Permit Validation for Lunch Wagons: Special District Permit No. 2013/SDD-90 was approved with conditions on Tuesday, December 3, 2013 for the lunch wagons located at 234 Beach Walk in Waikiki. There is no expiration date for this permit.
- Ena Road Sidewalk Business: Site investigation on Friday, January 23, 2015 showed that tables and chairs have been placed in the sidewalk area fronting 432 Ena Road and 2310 Kuhio Avenue. Additionally, a wooden ramp has been placed in the sidewalk fronting 432 Ena Road. Notices of violations were issued.

Questions, comments and concerns followed:

1. Food Trucks on Beach Walk: Dew noted that two front units had health inspection certificates displayed; however, the rest of the units did not appear to have inspection certificates.
2. Sidewalk along Waikiki Sunset: Merz noted that for more than thirty years, Waikiki residents have been asking for sidewalk improvements along Paoakalani Avenue. Garrity reported that the Department of Facility Maintenance (DFM) has agreed to set up an interim solution for the area and that he will follow up on the status of the project with DFM.
3. 2462 Kuhio Avenue Park Maintenance: Dew noted that there is no upkeep for the park between 2462 Kuhio Avenue and Liliuokalani Street. He contacted DPR and received no response. He has also been in contact with Hilton Hotels discussing cost effective ways of maintaining the park.
4. Segways on Sidewalks: A resident reported that she was being pushed off the sidewalk by Segway groups and inquired about the legality of cyclists and Segways on sidewalks on Kalakaua Avenue. Garrity noted that he will take back the concern of the resident and reported that Segways are personal mobility devices and are, therefore, legal on sidewalks; however, bicycles and skateboards are not legal on sidewalks in Waikiki.
5. Shuttle Busses in Waikiki: A resident reported that he observed trolleys outnumbering city busses 7 to 1 with about 6-12 people riding in the evening. He inquired about regulation of trolleys. Garrity responded that state regulates the licensing of vehicles while the city works to regulate the separation of city and trolley bus stops.
6. Lunch Wagons: A community member reported that he had followed up with the Department of Health (DOH) and that the lunch wagons will receive a citation for not moving off the property. He also noted that he is exploring the possibility of a private police force to assist HPD. He will be filing federal and civil rights complaints for not being allowed to use certain busses in Waikiki. Garrity reported that some busses are express busses and toward the end of some lines, they only discharge passengers and do not pick up new passengers.

Governor David Ige's Representative: A representative was not present; a report was not available.

Councilmember Trevor Ozawa: Councilmember Ozawa circulated a report and reported the following:

- Meetings with Waikiki Stakeholders: A meeting with HLTA was held to go over legislative priorities. He also met with Rick Egged to discuss the Waikiki Beach Improvement District and noted that both short and long term plans for Waikiki Beach preservation are being discussed.
- Car Sharing: Bill 65, relating to car sharing, would allow car sharing companies to use public parking spaces. Public stalls should not be used by private companies.
- 2121 Ala Wai Boulevard Pothole: DFM reported that the pothole on 2121 Ala Wai Boulevard was patched in December 2014.
- Showers in Ala Moana Beach Park and at 2476 Kalakaua Avenue: In response to a resident's observation of wasteful showering practices at Ala Moana Beach Park and 2476 Kalakaua Avenue, there will be signs to prohibit the use of shampoo and soap.

Questions, comments and concerns followed:

1. Rail Overrun Costs: Erteschik inquired about the role of the City Council in controlling the potential cost of rail. Councilmember Ozawa reported that the City Council will ensure that the costs overruns do not occur by working with the Honolulu Authority for Rapid Transit (HART). Councilmember Ozawa explained that delayed claims and lawsuits have resulted in additional costs. He is proposing a resolution that would require HART's meetings to be aired on 'Ōlelo.
2. Citation Revenue: Flood asked what Councilmember Ozawa could do to ensure that more revenue from citations goes to the City instead of the State. Council member Ozawa agreed and noted that he would like to work on keeping the revenue for the City, especially if the ticket was written without the use of State resources.
3. King's Village Exemptions: A resident raised a concern about the Kobayashi Group's purchase of King's Village and their request for ordinance exemptions. Councilmember Ozawa stated that he will follow up on the issue.
4. Curbside Trolley Pick Up: A resident raised a concern about shuttle companies picking up passengers at the curbside near the Duke Kahanamoku Statue.
5. Motorcycle Noise Enforcement: A resident asked Councilmember Ozawa to assist in the issue of motorcycle noise enforcement and Councilmember stated that he would confer with the Mayor on this issue.
6. Counties Control of Segways: Chair Finley noted that five years ago the Hawaii State Legislature passed a bill to allow counties to determine the legality of Segways on sidewalks and stated that he believed that the City could propose a bill to limit Segways on certain sidewalks.

Senator Brickwood Galuteria: Stacelynn Eli circulated a report and announced that on Wednesday, April 8, 2015 Senator Galuteria will be hosting the third Kupuna Power Day from 9:00 a.m. to 11:30 a.m. at the State Capitol rotunda. Vendors dedicated to senior concerns will be present.

Questions, comments and concerns followed: Vouchers: A resident raised a concern about vouchers used by Japanese tour companies that were prepaid in Japan.

Representative Tom Brower: Representative Brower was not present at this time. A written report was distributed.

Waikiki Improvement Association (WIA): Rick Egged provided a PowerPoint Presentation on the establishment of a Waikiki Beach special improvement district. He stated that the WIA proposes to establish a Waikiki beach management district, hire a coordinator, draft a beach management plan with the City and Department of Land and Natural Resources, and fund a replacement for the Royal Hawaiian Groin. He noted that the initial project would be the Royal Hawaiian Groin, as the wall is in imminent danger of collapse.

Questions, comments and concerns followed:

1. Restroom Upkeep: Flood asked if it would be possible to put soap and other restroom toiletries in the budget. Egged noted that the City is trying to resolve this issue.
2. The State's Role: Merz inquired about the State's role in approving special improvement district projects. Egged noted that the State would provide a letter of commitment to secure funding for the projects.

Erteschik moved and Flood seconded the motion that the Waikiki Neighborhood Board No. 9 supports the creation of a special improvement district under Bill 82.

Discussion Followed:

1. Sinkhole Prior to Sandbags: A community member noted that a sinkhole had occurred before the sandbags were put up. Egged reported that the State has appropriated money for that particular project.
2. Project Coordinator: Dew expressed concerns about the project's lack of a coordinator. Egged noted that the WIA has been working with the University of the Hawaii Sea Grant for several years and that there is an expert prepared to step into the coordinator position.
3. Efforts to Repair the Groin: Lofquist noted that the Royal Hawaiian Hotel was built in 1927, the same year as the groin. He asked if there were any efforts made since 1927 to repair the wall. Egged commented that the State has assumed ownership of the wall, but no major effort was made.
4. Kapiolani Park: A community member expressed support for the special improvement district project. She asked Egged why the district is extended into Kapiolani Park and what the landowners could contribute to the park. She inquired about additional projects after the Royal Hawaiian groin and raised concerns about Bill 82. Egged noted that no projects are being contemplated along Kapiolani Park and explained that the district plan would have to be amended in order to include additional projects. He emphasized that the new beach district association would provide community input and private sector matching, but the City and State would execute the projects.
5. Board of Directors: A community member inquired about the selection of the board of directors for the new beach district association. Egged explained that there would be twenty-five board members which would include contributing commercial property owners who are paying the property tax. The board would also include a Governor's representative, Mayor's representative, and Councilmember Ozawa. WIA would provide a similar function as other nonprofits with no development authority. Funding would come from assessments on Waikiki's commercial properties.
6. Commercial Hotel Condo Contributions: In response to Flood's inquiry, Egged noted that residents living within commercial hotel buildings will not be financial contributors.
7. Businesses and Umbrellas: A community resident raised a concern about the use of Waikiki Beach for commercial business and preset umbrellas. Egged reported that it is illegal to place preset umbrellas, however hotels are allowed to rent out umbrellas.
8. Benefits of the Special Improvement District: Chair Finley commented that he is supportive of the special improvement district as it would not tax residents and would help expedite projects that would be beneficial to Waikiki beach improvement.

The motion was ADOPTED by UNANIMOUS CONSENT, 14-0-0 (Aye: Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams).

APPROVAL OF THE JANUARY 13, 2015 MINUTES: **The January 13, 2015 regular meeting minutes were UNANIMOUSLY APPROVED as written, 14-0-0 (Aye:** Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist,

Merz, Nigro, Simpson, Smith, and Williams).

NEW BOARD BUSINESS:

King's Village: Keith Kurahashi provided a PowerPoint presentation showing images of how the King's Village luxury condominium hotel would be profiled in the existing landscape. Kurahashi reported the following:

- Removal of the Wing: The new proposal removes a 240-foot wing, widening the 350-foot portion of the tower, preserves more Diamond Head and ocean views, and reduces the length of the tower by eight (8) feet and the width of the tower by 30 feet.
- Community Benefits: The developers will be contributing $1 million in community benefits to Waikiki including Waikiki Beach replenishment, Americans with Disabilities Act (ADA) improvements, homeless services, and public restrooms.
- Minimizing the Impact on Scenic Views: Most of the structure is the same height as the Hyatt tower in order to minimize the impact on scenic views. About 56-feet of the proposed structure sticks out beyond the Hyatt.

Questions, comments and concerns followed:

1. Exemptions: A community member expressed concerns about the exemption to the 240-foot height limit in exchange for community benefits. Kurahashi reported that it is within the rules of the special design district that the City may approve certain exemptions in exchange for community benefits.
2. Traffic: A community member raised a concern about traffic in that area during and post production. Kurahashi reported that loading zones will be provided on the property.
3. Ocean View Loss: A community member noted that she would lose her ocean view, her apartment's biggest asset. Kurahashi reported that ocean views for the 20th floor and below will most likely be improved by the redesign.
4. Lack of Retail Diversity: A community member raised a concern about the lack of diversity of stores in Waikiki and added that more buildings do not add value to the area.
5. Community Benefit: A community member asked the Board to represent the voices of the community and expressed that the community would not benefit from the new development.
6. Mauka-Makai Orientation: A community member noted that the orientation of the building is parallel to the ocean, and asked if the mauka-makai orientation was considered for the building.
7. Impact on the Skyline: A community member raised concerns about the impact of special interest groups on the skyline of Waikiki.
8. Construction Noise: A community member expressed concerns about the level of noise during construction and added that community is not being considered.
9. Available Online: Lofquist inquired if the presentation is available online. Kurahashi said it was not.
10. Written Testimony: Merz noted the importance of submitting opinions in writing for the environment assessment and advised the public to be aware of the review period and legal process for the project.

Legislative Report: Erteschik circulated a sheet with a list of bills that may impact Waikiki and the neighborhood boards and noted that the board could revisit the bills at a later date as some bills will be deferred during the legislative process. Erteschik and Chair Finley noted that House Bill 313 and House Bill 317 relate to the Sunshine Law and neighborhood boards.

Smith moved and Flood seconded the motion to support Senate Bill 419, Senate Bill 420, House Bill 313, House Bill 317 (Relating to Neighborhood Boards), Senate Bill 475 (relating to open government), and Senate Bill 1210 (Relating to relating to public agency meetings).

The motion PASSED UNANIMOUSLY, 14-0-0 (Aye: Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams**).**

Adams moved and Flood seconded the motion to oppose House Bill 1322 (relating to a homeless person's bill of rights).

Discussion followed: Bill of Rights: Erteschik stated that it was an unnecessary bill as it conflicts with civil rights.

The motion PASSED UNANIMOUSLY, 14-0-0 (Aye: Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams).

Permitted Interaction Group Report (PIG) on the Permitting Process: Adams and Merz provided a PowerPoint presentation on their findings and suggestions for improving the permitting process. The Palolo, Kuliouou-Kalani Iki, Diamond Head/Kapahulu/St. Louis Heights, and North Shore Neighborhood Boards, as well as the Deputy Director of the Department of Planning and Permitting were consulted for the report. Adams and Merz provided the following:

- Efficiency and Transparency: There is a call amongst the boards and community for increased transparency, efficiency, and enforcement for the permitting process. Some suggestions included making information regarding permits and the approval process available online and searchable by permit number.
- Knowledge of Zoning: DPP suggested that buyers should be informed of their zoning type when they purchase a property. Merz underscored the importance of regulations and noted that realtors should inform buyers of land use limitations and rights.
- Expert Software: Currently, only fifty percent of small owner builder permits are accepted. Expert software could help streamline the process for approval.
- Expedition of Certain Permits: Certain types of permits and applicants that are small or have little or no effect on the area could be expedited.
- Seasonal Employees: County departments could expand or contract the workload through the hiring of seasonal employees and by training more "planning technicians" with basic requirements to fulfill jobs that do not require specific educational knowledge. San Jose was cited as an example for this system. It was also suggested that that the DPP could be more self-funded through its fees or fines going directly to the department instead of the general fund.

Flood moved and Apaka seconded the motion for the Waikiki Neighborhood Board No. 9 to accept the Permitted Interaction Group's (PIG) presentation on the findings and suggestions for improving the permitting process.

Discussion followed:

1. Substantive Recommendations: Erteschik raised the concern that the substantive recommendations should be closely examined. Adams noted that these are just ideas to be explored.
2. Support for the PIG Presentation: Smith expressed his support for the presentation and noted that the findings were only recommendations which will receive further scrutiny by the appropriate departments. Chair Finley also expressed support for the report.
3. Personal Renovations: Flood raised concerns about permitting for personal renovations.
4. Public Input: A community member commented that some rules regarding planning and permitting are arbitrary and that public input should be made early. The community member also expressed the concern that DPP does not thoroughly review critiques from the public.

The motion PASSED 13-0-1 (Aye: Adams, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams; **Abstain**: Carroll).

REPORTS:

Treasurer's Report: Treasurer Williams reported $75.08 of expenditures for printing and mailing, leaving a balance of $358.65. The Treasurer's report was filed.

Subdistrict 3 Report: Smith noted that concerns about Segways should be revisited.

Chair Report: Chair Finley reported the following:

- International Marketplace Meeting: The International Marketplace Manager will come to the Board meeting 15 months before the opening of the marketplace. Input and questions are welcomed.
- New Liquor Licenses: Chair Finley offered personal support for new liquor licenses for two (2) of the five (5) business displaced by Ohana West Project and will send applications for new licenses to each board member for feedback.

ANNOUNCEMENTS:

- Next Meeting: The next Waikiki Neighborhood Board No. 9 regular meeting will be held on Tuesday, March 10, 2015, at 7:00 p.m. at the Waikiki Community Center.

ADJOURNMENT: The meeting adjourned at 9:58 p.m.

Submitted by: Jordan E.E. Ozaki, Senior Elections Clerk

Reviewed by: Uyen Vong, Neighborhood Assistant

Reviewed by: and finalized by: Robert Finley, Chair; Lou Erteschik, Vice Chair; Jo-Ann Adams, Board Secretary

Last Reviewed: March 03, 2015

APPENDIX 15

SEWER CONNECTION APPLICATION APPROVAL

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

KIRK CALDWELL
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

TIMOTHY A. HOUGHTON
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO
PRO 14-098

July 11, 2014

Ms Liana S.F. Choy
Sato & Associates, Inc.
2046 South King Street
Honolulu, Hawaii 96826

Dear Ms. Choy:

SUBJECT: Appeal for 131 Kaiulani Avenue, 2013/SCA-0560
(TMK: 2-6-023:029, 037, and 076)

The City and County of Honolulu Department of Environmental Services (ENV) has reviewed your letter dated May 23, 2014. We informed the Department of Planning and Permitting (DPP), Site Development Division, Wastewater Branch that we approve of your Sewer Connection Application (SCA), application number 2013/SCA-0560. This approval is based on our department's analysis of downstream sewer lines of the project connection location. Please follow-up with DPP regarding the next steps for your SCA.

If you have any questions or require additional information, please call Lisa Kimura, Civil Engineer V, at 768-3455. Thank you for your consideration of this matter.

Sincerely,

Ross S. Tanimoto

Lori M.K. Kahikina, P.E.
Director

cc: DPP, SDD, Wastewater Branch

APPENDIX 16

PARTIES CONSULTED

Distribution List for 2014/ED-7

City County of Honolulu (C&C of Honolulu):

1. C&C of Honolulu, Fire Department
2. C&C of Honolulu, Police Department
3. C&C of Honolulu, Department of Planning and Permitting (DPP), Planning Division
4. C&C of Honolulu, DPP, Site Development Division (SDD), Civil Engineering Branch
5. C&C of Honolulu, DPP, SDD, Traffic Review Branch
6. C&C of Honolulu, DPP, SDD, Wastewater Branch

State of Hawaii (State Messenger):

* Mr. William J. Aila, Jr.
Chairperson
Department of Land and Natural Resources
State of Hawaii
Kalanimoku Building
1151 Punchbowl Street
Honolulu, Hawaii 96813

Attn: Samuel J. Lemmo
Administrator
Office of Conservation and Coastal Lands

Attn: Division of Aquatic Resources

Attn: Lisa Hadway
Administrator
Division of Forestry and Wildlife

* Mr. Alan S. Downer
Administrator
State Historic Preservation Division
State Department of Land and Natural Resources
State of Hawaii
601 Kamokila Boulevard
Kakuhihewa Building
Kapolei, Hawaii 96707

* Ms. Linda M. Rosen, M.D., M.P.H.
Director
State Department of Health
State of Hawaii
1250 Punchbowl Street
Honolulu, Hawaii 96813

Mr. Stuart Yamada, P.E.
Environmental Management Division
Department of Health
State of Hawaii
919 Ala Moana Boulevard, Room 300
Honolulu, Hawaii 96814

Attn: Clean Air Branch

Attn: Clean Water Branch

Attn: Solid and Hazardous Waste Branch

* Mr. Daniel E. Orodenker
Executive Officer
Land Use Commission
Department of Business, Economic Development and Tourism
State of Hawaii
235 South Beretania Street, Suite 406
Honolulu, Hawaii 96804-2359

* Dr. Kamanaopono Crabbe
Chief Executive Officer
Office of Hawaiian Affairs
State of Hawaii
560 North Nimitz Highway, Suite 200
Honolulu, Hawaii 96817

* Mr. Jesse K. Souki
Director
Office of Planning
Department of Business, Economic Development and Tourism
State of Hawaii
235 South Beretania Street, 6th Floor
Honolulu, Hawaii 96804-2359

Others:

* University of Hawaii
  Environmental Center
  Krauss Annex 19
  2500 Dole Street
  Honolulu, Hawaii 96822

* U.S. Army Corps of Engineers
  Honolulu District
  Honolulu District Public Affairs
  Building 230, Room 302
  Fort Shafter, Hawaii 96858-5440

ALL LIST

2014/ED-7

Don Kitaoka
Dept of the Corporation Counsel (COR)
Honolulu Hale, Room 110
CITY MESSENGER

Office of the City Clerk (CLK)
530 South King Street
Honolulu Hale, Room 100
CITY MESSENGER

Office of Council Services (CSV)
550 South King Street
Honolulu Hale, 2nd Floor
CITY MESSENGER

The Outdoor Circle
1314 South King Street # 306
Honolulu, HI 96814

Construction Industry Legislative Organization
1065 Ahua Street
Honolulu, HI 96819-4424

DUANE SHIMOGAWA
737 Bishop Street Suite 1590
Honolulu, Hawaii 96813

Oahu Metropolitan Planning Organization
707 Richards Street No. 200
Honolulu, Hawaii 96813-4623

AIA HONOLULU
828 FORT STREET MALL SUITE 100
HONOLULU, HAWAII 96813-4314

Honolulu City Council (CCL)
530 South King Street
Honolulu Hale, 2nd Floor
CITY MESSENGER

Daniel A. Grabauskas, Executive Director & CEO
H.A.R.T.
CITY MESSENGER

Hawaiian Electric Company
P.O. Box 2750
Honolulu, HI 96840

DEPT OF BUDGET & FISCAL SERVICES (BFS)
530 South King Street
Honolulu Hale, Room 115
CITY MESSENGER

Municipal Reference and Records Center (MRRC
558 South King Street
CITY MESSENGER,

Hawai'i's Thousand Friends
25 Maluniu Avenue, Suite 102, PMB 282
Kailua, Hawaii 96734

HAWAII FARM BUREAU FEDERATION
PO Box 253
Kunia, HI 96759-0253

HISTORIC HAWAI'I FOUNDATION
680 Iwilei Road, Suite 690
Honolulu, HI USA 96817

SIERRA CLUB
P.O. Box 2577
HONOLULU, HI 96803

KHON TV 2
88 Piikoi Street
Honolulu, HI 96814

KITV 4
801 South King Street
Honolulu, HI 96813

Neighborhood Commission (NB)
Honolulu Hale, Room 406
CITY MESSENGER

Department of Customer Services (CSD)
550 South King Street
1st Floor CITY MESSENGER

The League of Women Voters of Honolulu
49 S. Hotel St Room 314
Honolulu, HI 96813

Midweek Printing
500 Ala Moana Boulevard 7-500
Hawaii, HI 96813

B. P. Bishop Trust Estate
567 S. King Street, #200
Honolulu, HI 96813

Commanding Officer
US Coast Guard Civil Engineering Unit
300 Ala Moana Boulevard
PJKK Federal Bldg., #8122
Honolulu, HI 96850

Editorial Department
Pacific Business News
737 Bishop Street, Suite 1590
Honolulu, HI 96813

EMBER LEE SHINN, Managing Director
Managing Director's Office (MD)
Honolulu Hale
CITY MESSENGER

Honolulu Star-Advertiser
Public Hearings
500 Ala Moana Blvd. 7 Waterfront Plaza
Suite 210
Honolulu, Hawaii 96813

James Moncur, Coordinator
UH Environmental Center
2500 Dole Street, Krauss Annex 19
Honolulu, HI 96822

KGMB-TV
c/o Brenda Salgado
420 Waiakamilo Road Suite 205
Honolulu, Hawaii 96817

KIRK W. CALDWELL, MAYOR
Mayor's Office (MAY)
Honolulu Hale
CITY MESSENGER

Mr. David Z. Arakawa, Executive Director
Land Use Research Foundation of Hawaii
1100 Alakea Street, Suite 468
Honolulu, Hawaii 96813

Ms. Anna Broverman
State Historic Preservation Division
601 Kamokila Boulevard, #555
Kapolei, Hawaii 96707

Office of Hawaiian Affairs
Kamana'opono M. Crabbe, CEO
737 Iwilei Road
Honolulu, HI 96817-5015

Office of Hawaiian Affairs
Attn: Jessica Freedman
560 N. Nimitz Hwy., Suite 200
Honolulu, Hawaii 96817

The Pacific Resource Partnership
Stacy Ellamar, Government Relations Assistant
1100 Alakea Street 4th Floor
Honolulu, Hawaii 96813

COUNCIL LIST - 2/10/15

2014/ED-7

Council District 4
Councilmember Trevor Ozawa
Honolulu Hale
CITY MESSENGER

Council District 4
Ala Moana
Satellite City Hall
c/o Department of Customer Services
Mission Memorial Building CITY MESSENGER

Council District 4
Hawaii Kai - Waimanalo - Kaimuki
Satellite City Hall
c/o Department of Customer Services
Mission Memorial Building CITY MESSENGER

Council District 4
The Waikiki News
1656 Hartley Avenue
Henderson, NV 89052

Council District 4
Hawaii Kai Marina Community Association
377 Keahole St D-1C
Honolulu, HI 96825

Council District 4
Waikiki / Oahu Visitor's Association
2270 Kalakaua Avenue, #801
Honolulu, HI 96815

Council District 4
Kaimuki Business & Professional Assn.
P.O. Box 10187
Honolulu, HI 96816

Council District 4
Duke Sturgeon
444 Namahana Street # 2-C
Honolulu, HI 96815

Council District 4
Waikiki Community Center
310 Paoakalani Avenue
Honolulu, HI 96815

Council District 4
Jack Gillmar
Palolo-Uka Association
P.O. Box 2902
Honolulu, HI 96802

Council District 4
William Gleason, President
Diamond Head Home Owners
4999 Kahala Avenue Apt 225
Honolulu, HI 96816

Council District 4
Neighborhood Board No. 11
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Diamond Head/Kapahulu/St. Louis Heights
Neighborhood Board No. 5
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Hawaii Kai
Neighborhood Board No. 1
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Kaimuki
Neighborhood Board No. 4
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Kuliouou - Kalani Iki
Neighborhood Board No. 2
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Waialae-Kahala
Neighborhood Board No. 3
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Waikiki
Neighborhood Board No. 9
c/o Neighborhood Commission
Honolulu Hale, Room 406 CITY MESSENGER

Council District 4
Aina Haina Community Association
5246 Kalanianaole Hwy.
Honolulu, HI 96821

Council District 4
Representative Gene Ward
c/o
State Capitol, Room 318 STATE MESSENGER

Council District 4
Senator Laura Thielen
c/o
State Capitol, Room 223 STATE MESSENGER

Council District 4
Senator Les Ihara, Jr.
c/o
State Capitol, Room 220 STATE MESSENGER

Council District 4
Senator Breene Harimoto
c/o
State Capitol, Room 215 STATE MESSENGER

Council District 4
Senator Sam Slom
c/o
State Capitol, Room 214 STATE MESSENGER

Council District 4
Representative Tom Brower
c/o
State Capitol, Room 315 STATE MESSENGER

Council District 4
Representative Bertrand Kobayashi
c/o
State Capitol, Room 304 STATE MESSENGER

Council District 4
Representative Scott Saiki
c/o
State Capitol, Room 418 STATE MESSENGER

Council District 4
Representative Calvin Say
c/o
State Capitol, Room 431 STATE MESSENGER

Council District 4
Representative Mark J. Hashem
c/o
State Capitol, Room 424 STATE MESSENGER

Council District 4
Representative Scott Y. Nishimoto
c/o
State Capitol, Room 441 STATE MESSENGER

OWNERS LIST

2014/ED-7

2-6-021: 002
218 KAIULANI LLC
3536 HARDING AVE 500
HONOLULU, HI 96816

2-6-021: 101
QUEEN EMMA LAND CO
615 PIIKOI ST 701
HONOLULU, HI 96814

2-6-022: 001
KYO-YA KAIULANI LLC
2255 KALAKAUA AVE 2
HONOLULU, HI 96815

2-6-022: 039
QUEEN EMMA LAND CO
1301 PUNCHBOWL ST ST 701
HONOLULU, HI 96813

2-6-022: 040
QUEEN EMMA LAND CO
1301 PUNCHBOWL ST
HONOLULU, HI 96813

2-6-022: 041
KYO-YA KAIULANI LLC
2255 KALAKAUA AVE 2
HONOLULU, HI 96815

2-6-023: 006
AZABU NEWCO INC
2444 KALAKAUA AVE
HONOLULU, HI 96815

2-6-023: 006
BRE WAIKIKI OWNER LLC
345 PARK AVE
NEW YORK, NY 10154

2-6-023: 009
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST SUITE 505
HONOLULU, HI 96813

2-6-023: 010
BEA INVESTMENTS LLC
45 NORTH KING ST 600
HONOLULU, HI 96817

2-6-023: 011
BEA INVESTMENTS LLC
45 NORTH KING ST 600
HONOLULU, HI 96817

2-6-023: 012
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST SUITE 505
HONOLULU, HI 96813

2-6-023: 012
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST SUITE 505
HONOLULU, HI 96813

2-6-023: 019
GULSONS KOA LLC
307 LEWERS ST 6
HONOLULU, HI 96815

2-6-023: 020
ALII INC
800 BETHEL ST., SUITE 501
HONOLULU, HI 96813

2-6-023: 026
SMK INC
766 POHUKAINA ST
HONOLULU, HI 96813

2-6-023: 027
ALOHA PALMS WAIKIKI LLC
620 HAKAKA PL
HONOLULU, HI 96816

2-6-023: 028
CARRILHO,LAURENCE II
2420 KOA AVE
HONOLULU, HI 96815

2-6-023: 029
BSC KVSC LLC
1288 ALA MOANA BLVD 288
HONOLULU, HI 96814

2-6-023: 037
PRINCE EDWARD APTS
1045 MAPUNAPUNA ST
HONOLULU, HI 96819

2-6-023: 038
AKAU,THELMA I
2326 METCALF ST
HONOLULU, HI 96822

2-6-023: 039
ELDA HANA LLC
1505 NE VILLAGE ST
FAIRVIEW, OR 97024

2-6-023: 040
MARIPOSA PROPERTIES LTD PRT
2117 MAUNA PL
HONOLULU, HI 96822

2-6-023: 041
WONG,KIM OI TR

2-6-023: 041
AZABU USA CORP
138 ULUNIU AVE
HONOLULU, HI 96815

2-6-023: 047
FONG INVESTMENT CO LTD
151 ULUNIU AVE
HONOLULU, HI 96815

2-6-023: 056
PACIFIC MONARCH
2427 KUHIO AVE Honolulu / Waikiki 96815
Honolulu / Waikiki, HI 96815

2-6-023: 057
AOAO OF BAMBOO
2425 KUHIO AVE
HONOLULU, HI 96815

2-6-023: 058
AOAO OF BAMBOO
2425 KUHIO AVE
HONOLULU, HI 96815

2-6-023: 059
TAISEI BULLDOZER KENSETSU KABUSHIKI
6-1-19 OKAMURA ISOGO-KU
YOKOHAMA-SHI KANAGAWA

2-6-023: 060
WAIKIKI PARADISE LLC
1149 BETHEL ST #612
HONOLULU, HI 96813

2-6-023: 061
BSC KVSC LLC
1288 ALA MOANA BLVD 288
HONOLULU, HI 96813

2-6-023: 062
CSH LLC
1505 NE VILLAGE
FAIRVIEW, OR 97024

2-6-023: 063
CSH LLC
1505 NE VILLAGE ST
FAIRVIEW, OR 97024

2-6-023: 064
HAWAIIAN EBBTIDE HOTEL INC
800 BETHEL ST #501
HONOLULU, HI 96813

2-6-023: 066
BUNKER HILL DEVELOPMENTS INC
99-128 AIEA HTS DR., STE 703
AIEA, HI 96701

2-6-023: 067
BAMBOO
2415 KUHIO AVE Honolulu / Waikiki 96815
Honolulu / Waikiki, HI 96815

2-6-023: 074
CAPRI APARTMENTS
2412 KOA AVE
HONOLULU, HI 96815

2-6-023: 076
BSC KVSC LLC
1288 ALA MOANA BLVD 288
HONOLULU, HI 96814

2-6-023: 077
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST STE 505
HONOLULU, HI 96813

2-6-023: 078
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST SUITE 505
HONOLULU, HI 96813

2-6-023: 080
2424 KALAKAUA ASSOCIATES
1111 BISHOP ST SUITE 505
HONOLULU, HI 96813

2-6-023: 081
CITY AND COUNTY OF HONOLULU

2-6-024: 017
CITY AND COUNTY OF HONOLULU
c/o 2424 KUHIO AVE Honolulu / Waikiki 96815
Honolulu / Waikiki, HI 96815

2-6-024: 019
CITY AND COUNTY OF HONOLULU
c/o 2418 KUHIO AVE Honolulu / Waikiki 96815
Honolulu / Waikiki, HI 96815

2-6-024: 020
LU CHING-SHUI FAMILY CORP
2414 KUHIO AVE
HONOLULU, HI 96815

2-6-024: 021
HALE HUI LTD
46-306 HAIKU PLANTATION DR
KANEOHE, HI 96744

2-6-024: 022
CHUN,FAMILY TRUST

2-6-024: 022
CHEE,ALBERT D K SR
92-802 PALAILAI ST
KAPOLEI, HI 96707

133 Kaiulani Condo-Hotel DEA

TMK 2-6-23: 28
Diane R. Janot
1181 S. Cherokee Drive
Show Low, AZ 85901

TMK 2-6-23: 38
Donald W. Ferreira Trust
431 Nahua Street, Apt. 804
Honolulu, HI 96815

TMK 2-6-23: 62
William G. Giola
2396 Prince Edward Street
Honolulu, HI 96815

TMK 2-6-23: 74
Eric X.V. Nguyen
18 Petal PT
Brampton, ON, L6SSE6, Canada

Senator Brickwood Galuteria
12th Senatorial District
Hawaii State Capitol, Room 208
415 South Beretania Street
Honolulu, Hawaii 96813

Honolulu, Hawaii 96813
U.S. Fish & Wildlife Service
P.O. Box 50167
Honolulu, Hawaii 96850

The Honorable Neil Abercrombie
Governor, State of Hawai`I
Executive Chambers
State Capitol
Honolulu, Hawai`i 96813

Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810-0119

Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Department of Hawaiian Homelands (DHHL)
P.O. Box 1879
Honolulu, Hawaii 96805

Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Office of Economic Development
530 So. King Street, Room 306
Honolulu, Hawaii 96813

Department of Environmental Services
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707

Department of Community Services
715 South King Street, Room 311
Honolulu, Hawaii 96813

Water Resources Research Center
University of Hawaii at Manoa
Holmes Hall 283
2540 Dole Street
Honolulu, HI 96822

Department of Education
Hawaii Documents Center
1390 Miller Street
Honolulu, HI 96813

Department of Defense (State)
Office of the Adjutant General
3949 Diamond Head Road
Honolulu, HI 96816

Waikiki Improvement Association
2255 Kuhio Avenue, # 760
Honolulu, HI 96815

Hawaii State Library
478 S King Street
Honolulu, HI 96813

Hawaii State Library
Waikiki/Kapahulu Branch
400 Kapahulu Avenue
Honolulu, HI 96815

UHM Thomas H. Hamilton Library
2550 McCarthy Mall
Honolulu, Hawaii 96822

Legislative Reference Bureau Library
Hawaii State Capitol, Rm 005
Honolulu, Hi 96813

APPENDIX 17

DRAFT EA COMMENTS AND RESPONSES

LIST OF AGENCIES AND INDIVIDUALS
THAT RESPONDED TO THE REQUEST FOR COMMENTS ON THE DRAFT EA

CITY

1. Board of Water Supply
2. Department of Design and Construction
3. Department of Facility Maintenance
4. Department of Parks and Recreation
5. Department of Planning and Permitting, Development Plans Division
6. Department of Planning and Permitting, Traffic Review Branch
7. Department of Planning and Permitting, Urban Design Branch
8. Department of Transportation Services
9. Honolulu Fire Department
10. Honolulu Police Department

STATE

11. Department of Accounting and General Services
12. Department of Defense
13. Department of Education
14. Department of Hawaiian Homelands
15. Department of Health, Clean Air Branch
16. Department of Health, Clean Water Branch
17. Department of Land and Natural Resources, Engineering Division
18. Department of Land and Natural Resources, Land Division and Commission on Water Resources
19. Department of Transportation
20. Office of Environmental Quality Control
21. Office of Hawaiian Affairs
22. Office of Planning

UTILITY COMPANY

23. Hawaiian Electric

WAIKIKI NEIGHBORHOOD BOARD

24. Waikiki Neighborhood Board No. 9, Chair Robert J. Finley
25. Waikiki Neighborhood Board No. 9, Development Review, Jeff Merz

BUSINESS

26. ABC Stores, Mr. Lewis Capeda
27. ABC Stores, Mr. Adrian Chung
28. ABC Stores, Mr. Edmar Monton
29. ABC Stores, Mrs. Corrine Sillapachai
30. ABC Stores, Mr. Glen Takenaka
31. ADM Retail Planning and Architecture, Inc., Mr. Darin M. Fukunaga
32. Alaka'i Mechanical, Mr. Ralph T. Inouye
33. Albert C. Kobayashi, Mr. Russell Young
34. Aloha Hospitality Consulting, Mr. William T. Tanaka
35. Bank of Hawaii, Mr. Daniel Kim
36. Central Pacific Bank, Mr. John C. Dean
37. Cirrus Asset Management, Mr. Steve Heimler
38. Commercial Plumbing Inc., Mr. Randal M. Hiraki
39. Elite Parking Services, Mr. Ryan Chun
40. First Hawaiian Bank , Mr. Robert T. Fujioka
41. Freaky Tiki Tropical Orchid, Mr. Ryken Shibasaki
42. Hospitality Advisors LLC, Mr. Joseph Toy
43. Jororo, LLC, Mr. Benjamin Rafter
44. Ku'iwalu Consulting, Ms. Dawn Chang
45. Leather Soul, Mr. Thomas Park
46. NAI ChaneyBrooks, Mr. Steve Sombrero
47. Queen Emma Land Company, Mr. Leslie Y. Goya
48. Roberts Hawaii, Mr. Percy Higashi
49. Tanaka of Tokyo Restaurants, Mr. Richard E. Tanaka
50. TZ Economics, Paul H. Brewbaker, Ph.D.
51. UNITE HERE, Local 5, Mr. Benjamin Sadoski
52. Waikiki Shopping Plaza and Waikiki Business Plaza, Mr. Leighton Mau
53. Wang Chung's Karaoke Bar, Mr. Danny Chang
54. Y. Hata & Co., Limited, Mr. Russell Hata

INDIVIDUALS

55. Mr. Fumiki Abe
56. Mr. Jeff Avis
57. Ms. Mayumi Avis
58. Ms. Michele Bertoia and Mr. Peter Galarneau
59. Ms. Denise Boisvert
60. Ms. Irene Chan
61. Ms. Chinako Furukawa
62. Mr. Ryota Furukawa
63. Mr. Andrew Hryniewich
64. Ms. Jeanette Jones
65. Ms. Kim Jorgensen

66. Ms. Marilyn Winston Katzman
67. Mr. Timothy Lewis
68. Ms. Yuko Lewis
69. Ms. Diane Mackey
70. Mr. Larry Mackey
71. Mr. and Mrs. Stan Michaels
72. Mr. and Mrs. Patrick Mion
73. Mr. Bryan Moseley
74. Mr. Leonhard Nicolai
75. Mr. Roland Nipps
76. Mr. Michael A. O'Dwyer
77. Carlito V. Orig, M.D.
78. Ms. Jean Q. Orig
79. Ms. Yuko San Juan
80. Mr. Donald Schrimpf
81. Ms. Pamela J. Walker

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Supply
City and County of Honolulu
630 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Mr. Robert Chun
Project Review Branch, Water Resource Division

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Lau:

Thank you for your letter dated March 13, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The applicant appreciates your comment that the existing water system is presently adequate to accommodate the proposed development. However, the applicant further understands that the final decision on availability of water will be confirmed when the building permit application is submitted for approval.

The applicant understands that when water is made available, the applicant will be required to pay your Water System Facilities charges for resource development, transmission and daily storage.

The applicant understands that for this high-rise Project booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in your water system.

The applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems in an effort to reduce wastewater and potable water demands. In addition, condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

As you have recommended, the on-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

March 13, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Your Memorandum Dated February 10, 2015 on the Draft Environmental Assessment for the133 Kaiulani Condo-Hotel Project, 2014/ED-7(GT) - Tax Map Key: 2-6-023: 029, 037, 076

The existing water system is adequate to accommodate the proposed 260-unit condo-hotel development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

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.

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 Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

cc: Gerald Toyama, DPP

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 16, 2015

Robert J. Kroning, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 So. King Street, 11th Floor
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Kroning:

Thank you for your letter dated April 7, 2015, regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project.

The applicant appreciates that you have no comments on the DEA.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
MAYOR

ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

April 7, 2015

Kusao & Kurahashi, Inc.
Manoa Marketplace
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Attn: Keith Kurahashi

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment (EA)
for 133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

The Department of Design and Construction does not have comments to offer on the draft environmental assessment.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

for

Robert J. Kroning, P.E.
Director

RJK: cf (603353)

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Ross S. Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
1000 Ulu'ohia Street, Suite 215
Kapolei, Hawaii 96707

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear. Mr. Sasamura:

Thank you for your letter of March 2, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

Once construction commences, the applicant will install Best Management Practices fronting all drainage facilities (catch basin/drainage inlets along Koa Avenue, Kaiulani Avenue, and Prince Edward Street).

During construction and upon completion of the Project, any damages to Koa Avenue, Kaiulani Avenue, and Prince Edward Street rights-of-way shall be corrected by the applicant to City Standards and accepted by the City.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, 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

KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 15-147

March 2, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment (EA)
133 Kaiulani Condo-Hotel Project

Thank you for the opportunity to review and provide our input regarding the above-subject project.

Our comments are as follows:

- Once construction phase commence, install approved Best Management Practices fronting all drainage facilities (Catch Basin/Drainage inlets along Koa Avenue, Kaiulani Avenue, and Prince Edward Street).

- During construction and upon completion of project, any damages/deficiencies to Koa Avenue, Kaiulani Avenue, and Prince Edward Street right-of-ways shall be corrected to City Standards and accepted by the City.

If you have any questions, please contact Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E
Director and Chief Engineer

cc: Department of Planning and Permitting
Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Ms. Michele Nekota, Director
Department of Parks and Recreation
City and County of Honolulu
630 So. Beretania Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Nekota:

Thank you for your letter dated February 25, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

We appreciate that your Department has no comments. We are pleased to be able to provide park space for public use that will be maintained by the Project's hotel operator or association.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

February 25, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
TMK: 2-6-23, 29, 37 and 76.

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the 33 story, 260 unit, 133 Kaiulani Condo Hotel Project being developed on the site of the existing King's Village, Prince Edward Apartments and Hale Waikiki.

The Department of Parks and Recreation has no comment.

Sincerely,

Michele K. Nekota
Director

MKN:jr
(598355)

cc: Department of Planning and Permitting, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. George I. Atta, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Ms. Adrienne Siu-Li
Planning Division

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Atta:

Thank you for your email received on March 2, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

The Final Environmental Assessment (FEA) will include an analysis of the possible impact of sea level rise on the Project. It is unlikely that sea level rise will increase the risk of flooding during the life of the structure, since the Project was designed to accommodate any rising sea levels by raising the project finish grade to 9 feet MSL (mean sea level).

Based on the Army Corp of Engineering on-line information, it appears that the sea level rising rate would reach the building's lobby floor anywhere between 2141 and 3818. Taking the more recent event 2141 and opening of the hotel in 2018, the 123 years far exceeds the life of the structure. Say the building had a 60 year life, the mean sea level would rise anywhere 0.42 – 3.10 feet. Waikiki would be functional with a 2 foot sea level rise. The new structure sited at 9 feet MSL will be safe from rising sea level for the life of the structure.

Your email and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

Subject: FW: 133 Kaiulani Condo-Hotel Project

From: Toyomura, Gerald F. [mailto:gtoyomura@honolulu.gov]
Sent: Monday, March 02, 2015 8:55 AM
To: Keith Kurahashi (kkurahashi@hawaii.rr.com)
Subject: 133 Kaiulani Condo-Hotel Project

Keith,

Below are comments from the City Development Plans Division (Adrian Siu-Li 768-8031) for your response in the FEA.

The DEA should include an analysis of the possible impact of sea level rise on the project. If it is likely that sea level rise will increase the risk of flooding during the life of the structure, the DEA should discuss how the design and operation of the project will address that risk and provide resilience in recovering from any flooding.

The Army Corps of Engineers (COE) has issued an Engineering Circular (EC 1165-2-212) which provides guidance on likely ranges of sea level rise through 2100 which they require to be used in evaluating projects in shoreline areas subject to COE review.

More recently they have provided online tools which can be used to adapt the circular's guidance to reflect historic sea level rise conditions measured at the closest local tidal gauge.

Using the circular as adapted to reflect the local sea level rise rate, the elevation above sea level at the project site, and the estimated life of the structures involved in the project, a determination of whether sea level rise is likely to increase the risk of flooding at the project site during the life of the project structures can be made.

A practical example of how the COE circular and the tidal gauge adjustments can be incorporated into a Honolulu area study is provided by the Army Corps of Engineers Ala Wai Canal Study.

For further details on how the Engineering Circular and local tidal gauge information could be used to assess sea level rise risk for a local project, contact Mr. Michael Wong, Chief, Engineering and Construction Technical Branch, Army Corps of Engineers, Honolulu District (808-835-4138).

Gerald F. Toyomura, A.I.A.
Planner/Architect
Urban Design Branch
Department of Planning and Permitting/LUPD
City and County of Honolulu
Ph. (808) 768-8056

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April 10, 2015

Mr. George I. Atta, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Mr. Mel Hirayama, Chief
Traffic Review Branch

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Atta:

Thank you for your email received on March 23, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

The following time line for the Project will be included in the Final Environmental Assessment:

1. November 2015 Submit Construction Management Permit (CMP)
2. February 2016 Issuance of Building Permit
3. January 2018 Submit Traffic Management Plan (TMP)
4. April 2018 Issuance of Certificate of Occupancy
5. April 2019 Post Traffic Impact Assessment Report (TIAR)

The applicant understands that roadway and sidewalk improvements will be required to enhance the pedestrian, bicycle and vehicular circulation in and around the development, including the conversion of Kaiulani Avenue to two-way between Kalakaua and Koa Avenues. We will discuss these improvements and possible cost sharing with the Princess Kaiulani and 2424 Kalakaua Avenue.

The applicant's traffic consultant will meet with traffic staff at the Department of Transportation Services and Department of Planning and Permitting to determine final location of driveways and loading docks and the treatment of traffic flow to minimize vehicular impacts to the surrounding public streets.

Your email and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

From: Toyomura, Gerald F. <gtoyomura@honolulu.gov>
Sent: Monday, March 23, 2015 8:25 AM
To: 'Elton Wong'; 'Keith Kurahashi'
Cc: Ching, Anthony X.
Subject: RE: 133 Kaiulani DEA - TRB'S comments

Good Morning Elton and Keith,

TRB's comments are attached below. TRB will have more detailed comments on the WSD and PD-R permits. Do you know when these permits will be submitted?

Gerald F. Toyomura, A.I.A.
Planner/Architect
Urban Design Branch
Department of Planning and Permitting/LUPD
City and County of Honolulu
Ph. (808) 768-8056

Gerald... TRB comments:

As part of the traffic conditions for this development, a time line or phasing plan will be required prior to the issuance of any major construction plan review or permitting. The time line or phasing plan will identify the occurrence of major development mile stones to determine when a construction management plan (CMP), a traffic management plan (TMP) and any updates to the traffic impact analysis report (TIAR) will be needed. A post TIAR will also be required approximately one year after the issuance of the certificate of occupancy.

Roadway and sidewalk improvements will be required to enhance the pedestrian, bicycle and vehicular circulation in and around this development. Roadway improvements to vehicular circulation, such as the conversion of Kaiulani Avenue between Kalakaua and Koa Avenues, may also be considered to be a part of this project. Other developments in the general vicinity of this project, such as Princess Kaiulani and 2424 Kalakaua, are also aware of this roadway improvement.

Meetings with traffic staff at DTS and DPP during the early stages of this project to determine where driveways and loading docks will be permitted and the treatment of traffic flow to minimize vehicular impacts to the surrounding public streets is strongly encouraged.

Mel H. - TRB

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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July 28, 2015

Mr. George I. Atta, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Mr. Gerald Toyomura
Urban Design Branch

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Atta:

Based on the "Summary of Meetings with DPP and Review Comments" provided through an email from Mr. Gerald Toyomura of your Urban Design Branch on the Draft Environmental Assessment (Draft EA) for the 133 Kaiulani Condo-Hotel Project (Project), we provide this response to the comments and requests from those meetings and review comments:

1. We have included in the Final EA a View Analysis from the street level with views from 6 locations on Kalakaua Avenue; 4 locations on Kuhio Avenue; 7 locations on Kaiulani Avenue; 2 on Koa Avenue; 2 on Prince Edward Street; 2 on Kanekapolei Street; and one from the Kuhio Beach. We have provided a written analysis of the impact to views from each of the locations in the View Analysis. Views mentioned in the Land Use Ordinance for the Waikiki Special District and the Project's impact on those views have been discussed in the Final EA. A thorough analysis of why a mauka-makai orientation for the building does not work is provided in the Final EA. An analysis of the various alternatives considered are discussed in the Final EA. We have responded to community criticism comments received to date and the Final EA provides a discussion on other impacts that have not been brought up by the community. A discussion of the view, shadow and wind studies have been provided in the Final EA, along with visuals depicting the view and shadow impacts and the complete wind studies provided on a cd in Appendix 11.

2. We have provided additional tabs for Appendix 1, breaking this Appendix into 16 sections.

3. An analysis for three alternative the preferred alternative and two mauka-makai alternatives has been provided in the Final EA. The visuals show the overlap with the Hyatt Towers shadows.

4. The wind study addresses public comments about a wind tunnel effect.

5. The FEA does have a discussion of the two-way alternative for Kaiulani Avenue and the Applicant has committed to pay his fair share for this conversion and will work with the two other projects planned to discuss the cost sharing for this conversion.

6. We have expanded the explanation for the following sections in the Final EA, Section 7.1.5 Higher Education, Section 7.1.8 Health, 7.1.11 Human Services and Section 8.6.9 Public Schools.

7. Section 7.3.2.3 Bicycles, we have updated this section to mention the planned start-up of Bike Share in early 2016.

8. Section 8.7.3.9 Sea Level Rise, we have expanded this section to include Climate Change.

9. Building Orientation, additional analysis done on the building orientation and the proposed east-west orientation versus two alternative mauka-makai orientations.

10. We have provided in Appendix 1P street views of the podium. The Applicant has decided to not use "green vine" at the podium level.

Your "Summary of Meetings with DPP and Review Comments" and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

SUMMARY OF MEETINGS WITH DPP AND REVIEW COMMENTS

1. Provide a **View Analysis** from the street level at 2-3 location on Kalakaua, 2-3 location on Kuhio, 1-2 locations on Ala Wai, 4-6 locations on Kaiulani, 2-3 locations on Koa and 2-3 locations Prince Edward **for each alternative**. Provide a written analysis: note impact from primary streets of Kalakaua and Kuhio; other impacts from minor streets. (Similar to 2139 Kuhio FEA) Should cover views mentioned in LUO, i.e. Major streets, mauka-makai views, views from public places, etc. A thorough analysis of why a mauka-makai orientation does not work. Analysis should show various options attempted and rejected. It should also respond to all the community criticisms and comments received and anticipated on this matter. Same goes for the view, shadow and wind studies.

2. Provide **additional tabbing** for Appendix 1. Each section should have a separate tab; ie view study tab, shadow study is tab, etc.

3. **Shadow Study** – provide analysis for each alternative. Will anyone be in the dark? How much is duplicated by the Hyatt shadow? Follow similar to 2139 Kuhio FEA; time of day, time of year and various options.

4. **Wind Study** – Public comments need to be addressed.

5. Update FEA addressed **TRB comments** to have Kaiulani two-way between Kalakaua and Koa.

6. Expand explanation for the following sections:
    a. Section 7.1.5 – Why will the Project not affect Policies and Goals for **Higher Education**?
    b. Section 7.1.8 – Why will the Project not affect Policies and Goals for **Health**?
    c. Section 7.1.11 – Why will the Project not affect Policies and Goals for **Human Services**?
    d. Section 8.6.9 – Why will the Project not impact **Public Schools**?

7. Section 7.3.2.3 **Bicycles** – Elaborate more due to the heightened interest in bicycles, such as the recent monies committed to the Bike share program.

8. Section 8.7.3.9 **Sea Level Rise** – Expand and include "Climate Change". Make sure climate change and sea level rise is addressed. The latest studies show a one and a half foot rise by mid century and the worst cast scenarios show a 4-5 foot rise within 100 years. Infrastructure is supposed to be designed for 50-100 years.

9. Building Orientation section – Need to do analysis. Include this section. Very important issue.

10. Provide **street views**. Described the podium changes being proposed and the "green vine". Provide examples of successful long term projects.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Michael D. Formby, Director
Department of Transportation Services
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention: Ms. Renee Yamasaki

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Formby:

Thank you for your letter, dated March 10, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. This inconsistency will be corrected in the Final Environmental Assessment (FEA).

2. Figure 2 will be revised in the FEA.

3. In Appendix 1 Conceptual Plans and Photos, page 57, the large loading stall in the porte cochere is not needed for operations and is shown to meet the loading zone requirement. This loading stall will be utilized only on rare occasions when the two primary large loading stalls located on the east side of the podium structure are full. Since there will be 24 hour valet service at the porte cochere, valet staff will help to ensure that the loading vehicles reverse safely to enter the loading space when necessary. Reversing maneuvers will not occur on the public roads.

4. The porte cochere has been designed to accommodate two lanes of drop off and one through lane. Our traffic engineer has indicated that the storage provided for up to seven vehicles should be more than adequate to ensure that porte cochere traffic will not back up onto Koa Avenue.

5. The applicant will coordinate construction schedules as needed with other nearby properties such as the Princess Kaiulani that may be under construction at the same time as this Project to minimize impact on City streets.

6. As recommended drop driveways will be utilized for safety and accessibility for pedestrians and bicyclists.

7. The applicant will continue to inform the Waikiki Neighborhood Board and area residents, businesses and emergency personnel on the details of the proposed project and impacts during construction on the adjoining local street area network.

8. The applicant spoke with Renee Yamasaki of your office on this matter. Any construction materials and equipment will be transferred to and from the Project site during off-peak traffic hours to minimize disruption to traffic on local streets.

9. A street usage permit will be obtained from your department for any construction-related work that may require temporary closure of any traffic lane or on-street parking spaces on a City street.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
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KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP2/15-598272R

March 10, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment (DEA), 133 Kaiulani Condo-Hotel Project, Waikiki, Oahu, Hawaii

This is in response to a letter dated February 10, 2015, from Mr. George I. Atta, FAICP, Director, Department of Planning and Permitting, requesting our review and comments on the above DEA. We have reviewed the document and have the following comments:

1. In the Traffic Impact Report, Figure 7 Year 2017 Peak Hour of Traffic with Project, diagram 3, the north bound right turn movement volume of 35 is not consistent with the Synchro 8 report, page 3, volume of 135.

2. In Appendix 4 Traffic Impact Report, Figure 2, it shows two driveways on Prince Edward Street, which is not consistent with Appendix 1 Conceptual Plans and Photos drawings on pages 41, 51, 52, 54, 55 and 56 that have one driveway on Prince Edward Street.

3. In Appendix 1 Conceptual Plans and Photos, page 57, it shows vehicles reversing into the loading stall at the porte-cochere. We do not recommend reversing into the stall because it is dangerous to pedestrians.

4. The porte-cochere should be designed to accommodate demands so that vehicles will not queue onto Koa Avenue and block the roadway.

5. The construction schedules should be regularly coordinated with other nearby properties that have planned developments to ensure minimal impact on City streets.

6. All access driveways to the project site should be designed for the safety of pedestrians and bicyclists to traverse. For safety and accessibility, drop driveways are recommended.

7. The area Neighborhood Board, as well as the area residents, businesses, and emergency personnel should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

8. The construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

9. A street usage permit from the City's Department of Transportation Services should be obtained for any construction-related work that may require the temporary closure of any traffic lane or on-street parking spaces on a City street.

Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

Michael D. Formby
Director

cc: Urban Design Branch, Department of Planning and Permitting

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Socrates D. Bratakos, Assistant Chief
Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813

Attention: Battalion Chief Terry Seelig
Fire Prevention Bureau

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Assistant Chief Bratakos:

Thank you for your letter of February 23, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

We appreciate your comments and offer the following responses:

1. The applicant will provide the necessary, fire department access roads in accordance with the National Fire Protection Association 1, Uniform Fire Code, 2006 Edition, Section 18.2.3.2.2. and Section 18.2.3.2.1., as you have noted.

2. The applicant will provide a water supply, approved by the County, capable of supplying the required fire flow for fire protection of all facilities and buildings on the premises. When any portion of a facility or building is in excess of 150 feet (45,720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the Authority Having Jurisdiction.

3. Civil drawings will be submitted to the Honolulu Fire Department for review and approval.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, 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

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

February 23, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
Manoa Market Place
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
131 and 133 Kaiulani Avenue
2401, 2407, and 2413 Prince Edward Street
2410 Koa Avenue
Tax Map Keys: 2-6-023: 029, 037, and 076

In response to a letter from Mr. George Atta, Director of the City and County of Honolulu's Department of Planning and Permitting (DPP), dated February 10, 2015, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1, Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 feet (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA1, UFC™, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1, UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

Sincerely,

Socrates D. Bratakos

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

cc: DPP, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Louis M. Kealoha, Chief of Police
Honolulu Police Department
City and County of Honolulu
801 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Major Lisa Mann, District 6 (Waikiki)

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Chief Kealoha:

Thank you for your letter of February 23, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

We appreciate your comment that "The Honolulu Police Department has no concerns regarding the project at this time."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE MT-DK

February 23, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in response to a letter from the Department of Planning and Permitting, dated February 10, 2015, requesting comments on the Draft Environment Assessment for the proposed 131 and 133 Kaiulani Avenue project located in Waikiki.

The Honolulu Police Department has no concerns regarding the project at this time.

If there are any questions, please call Acting Major Lisa Mann of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

cc: DPP

Serving and Protecting With Aloha

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Mr. James Kurata
Public Works Administrator
State of Hawaii
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810-0119

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Kurata:

Thank you for your letter dated March 30, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

The applicant appreciates that you have no comments to offer at this time.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR

DOUGLAS MURDOCK
Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

MAR 30 2015

(P)1058.5

Mr. Keith Kurahashi, President
Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
Manoa Market Place
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment for
133 Kaiulani Condo-Hotel Project

Thank you for the opportunity to comment on the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities. Therefore, we have no comments to offer at this time.

If you have any questions, your staff may contact Ms. Gayle Takasaki Planning Branch at 586-0584.

Sincerely,

JAMES K. KURATA
Public Works Administrator

GT:lnn

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Brigadier General Arthur J. Logan
Department of Defense
Office of the Adjutant General
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

Attention: Mr. Lloyd Maki
Assistant Chief Engineering Officer

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Brigadier General Logan:

Thank you for your letter dated April 6, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

The applicant appreciates that you have no comments to offer relative to the Project at this time.

The applicant will provide a copy of the Final Environmental Assessment upon its completion. We will contact Ms. Havinne Okamura of the Department of Defense, Hawaii Emergency Management Agency for input regarding the Planned Development-Resort and Waikiki Special Design District Permit.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR

ARTHUR J. LOGAN
BRIGADIER GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
COLONEL
DEPUTY ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

April 6, 2015

Mr. Keith Kurahashi, President
Kusao & Kurahashi, Inc.
Manoa Market Place
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai'i 96822

Subject: Draft Environmental Assessment for project titled "133 Kaiulani Condo-Hotel Project", TMK: (1) 2-6-023: 029, 037, and 076

Dear Mr. Kurahashi:

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.

Please provide a copy of the Final Environmental Assessment upon its completion, and contact Ms. Havinne Okamura of the Department of Defense, Hawaii Emergency Management Agency at 733-4300 for input regarding the Planned Development-Resort Permit and Waikiki Special Design District Permit. If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant Chief Engineering Officer at (808) 733-4250.

Sincerely,

ARTHUR J. LOGAN
Brigadier General
Hawaii National Guard
Adjutant General

c: Ms. Havinne Okamura, Hawaii Emergency Management Agency

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Mr. Kenneth G. Masden II
Public Works Manager, Planning Section
State of Hawaii, Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

Attention: Ms. Heidi Meeker
Facilities Development Branch

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Masden:

Thank you for your letter dated March 11, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project). As we discussed with Ms. Meeker in a follow up telephone call, we explained that units will be used primarily for hotel purposes.

This Project with about 246 condo-hotel units is projected to have about 85% of their units in a hotel program. There may be about 37 units which will not be under a hotel operation, but these 37 units will not all be permanent residences, as many will be second homes (vacation homes), retirement homes and some may be rented as vacation units outside of the hotel operation, as occurs in other condo-hotels. If we subtract from the 37 units the 23 existing apartment units on the Project site, we have the potential for a 14 unit increase. If we do not eliminate any units as second homes, retirement homes or private vacation rentals, the 14 apartment unit increase would generate 2 students in grades K through 12 (0.12 x 14) based on Department of Education standards for Waikiki. This will not have a significant impact on the schools in the area, which as you have stated have sufficient space to accommodate any increase in students generated by the Project.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

March 11, 2015

Keith Kurahashi, President
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Re: Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi:

The Department of Education (DOE) has reviewed the Draft Environmental Assessment (DEA) for the proposed 133 Kaiulani Condo-Hotel Project (Project). We question the basis for the statement on page 68 of the DEA which claims the Project will not affect the population of school age children and will not impact the local school system. The Project proposes to replace 23 existing apartments in two different buildings with up to 260 new condo-hotel units. The DEA does not discuss how many of the units the developers expect will be used like hotel rooms and how many may be used as residences that could include school age children.

The DOE assumes that a more than ten-fold increase in the number of dwelling units will result in some increase in the number of DOE students during the lifetime of the structure. We also assume that the increase in the number of students would be small. We think there is sufficient space in the existing public schools serving the area to accommodate any increase in students generated by the Project. The Waikiki area is not considered a high growth area and no school impact fees are being collected from projects in Waikiki. So, while the number of additional students who might live in the Project is too small to require any mitigation, we don't agree with the broad statement that there will be no effect on the population of school age children.

The DOE has no other comments or concerns with the proposed project. If you have any questions, please call Heidi Meeker of the Facilities Development Branch at 377-8301.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:jmb

c: Ruth Silberstein, Complex Area Superintendent, Kaimuki/McKinley/Roosevelt Complex Area

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Marvin Kaleo Manuel
Acting Planning Program Manager
State of Hawaii
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, Hawaii 96805

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Manuel:

Thank you for your letter dated April 1, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

The applicant appreciates that you have no comments to offer at this time.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

SHAN S. TSUTSUI
LT. GOVERNOR
STATE OF HAWAII

JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

April 1, 2015

Kusao & Kurahashi, Inc.
Manoa Market Place
2725 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment (EA)
Chapter 343 HRS
133 Kaiulani Condo-Hotel Project.
Tax Map Key: 2-6-23: 29, 37 and 76

Thank you for the opportunity to review the subject Draft Environmental Assessment.

The Department of Hawaiian Home Lands has no comment to offer at this time.

If you have any questions, please contact our Planning Office at 620-9481.

Aloha,

Marvin Kaleo Manuel,
Acting Planning Program Manager

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Nolan S. Hirai, P.E.
Manager, Clean Air Branch
Department of Health (DOH)
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Attention: Mr. Barry Ching
Clean Air Branch

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Hirai:

Thank you for your letter, dated March 19, 2015, regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The applicant will implement the dust control measures as outlined in the DEA. The applicant will also:

a) Plan the different phases of construction, to minimize the amount of dust-generating materials and activities, centralize on-site vehicular traffic routes, and locate potential dust-generating equipment in areas of least impact;
b) Provide an adequate water source at the site prior to start-up of construction activities;
c) Landscape and provide rapid covering of bare areas, including slopes as soon as practical;
d) Minimize dust from shoulders and access roads;
e) Provide adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Control dust from debris being hauled away from the project site. Also, control dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

Additionally, the applicant will require that the contractor implement a "hot line" for dust complaints so that issues can be immediately addressed even during non-construction days/hours.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

15-171A CAB

March 19, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project, Waikiki
Ref: 2014/ED-7(GT)

A significant potential for fugitive dust emissions exists during all phases of construction. The activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. We encourage the contractor to implement a dust control plan, which does not require approval by the Department of Health, to comply with the fugitive dust regulations.

The dust control program should include those actions listed in your Draft Environmental Assessment. Additional measures may include, but are not limited to, the following:

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

If you have any questions, please contact Mr. Barry Ching of the Clean Air Branch at 586-4200.

Sincerely,

NOLAN S. HIRAI, P.E.
Manager, Clean Air Branch

BC:rg

c: George I. Atta, FAICP, Director, Department of Planning and Permitting, City and County of Honolulu

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Alec Wong, P.E., Chief
Clean Water Branch
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Wong:

Thank you for your letter dated February 24, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant understands and will comply with the State's antidegradation policy (HAR Chapter 11-554-1.1, designated uses (HAR Chapter 11-554-1-3) and applicable water quality criteria (HAR Chapter 11-554-4 through 11-554-8).

2. The Project may require a National Pollutant Discharge Elimination System (NPDES) permit since the lot area is just over an acre and the area of disturbance may be greater than one acre of total land area. Applicable regulations related to NPDES requirements will be followed. We do not anticipate the need to obtain an NPDES permit for construction activity related to dewatering effluent discharge.

3. The Department of the Army has been contacted through this DEA process and since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project is not expected to require a Department of the Army Permit (401 Water Quality Certification).

4. The applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.

5. The applicant understands the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters.

a. The Project will increase landscaped open space on the Project Site from the existing approximately 1,200 square feet to approximately 7,500 square feet, allowing the natural percolation of some rain and storm water for irrigation and reduce storm water flowing into drainage ways.

b. The applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

c. The applicant will consider storm water Best Management Practice (BMP) approaches to minimize the use of potable water for irrigation.

d. As mentioned earlier, the applicant will significantly increase landscape areas on the property reducing excessive runoff, resulting in an improvement to stormwater quality by allowing percolation of storm water to recharge groundwater to revitalize natural hydrology.

e. The City provides existing storm water infrastructure, however, reduction of storm water runoff from our property will reduce the existing flows to the City's storm drainage system increasing the capacity of the drainage ways that presently support this site.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

02043PCTM.15

February 24, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Comments on Draft Environmental Assessment (DEA) for 133 Kaiulani Condo-Hotel Project Waikiki, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated February 10, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

   For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or

"CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at:http://health.hawaii.gov/cwb/, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

CTM:bk

c: Mr. Gerald Toyomura, DPP-Urban Design Branch [via e-mail gtoyomura@honolulu.gov only]

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Russell Y. Tsuji, Land Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Tsuji:

Thank you for your letter of March 25, 2015 providing additional comments regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

In response to your Engineering Division we offer the following response (in the order set forth in their memorandum).

1. The applicant appreciates your confirmation that the eastern, western, and southern portions of the Project Site are located in Zone X, according to the Flood Insurance Rate Map (FIRM), an area where flood hazards are undetermined. Also that the National Flood Insurance Program does not regulate developments within Zone X.

2. The applicant had applied to the Federal Emergency Management Agency (FEMA) to take the northern portion of the property out of the Special Flood Hazard Area (SFHA) and has received a Letter of Map Amendment Determination Document stating in part "This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply." The FEMA Letter of Map Amendment Determination Document and a copy of the applicable January 19, 2011 FIRM map are provided in Appendix 13 of the DEA and will be included in the Final Environmental Assessment (FEA).

3. As noted in item 2, the Federal mandatory flood insurance requirement does not apply for this Project.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN
INTERIM FIRST DEPUTY

W. ROY HARDY
ACTING DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 25, 2015

Kusao & Kurahashi, Inc.
Attention: Mr. Keith Kurahashi
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

via email: kkurahashi@hawaii.rr.com

Dear Mr. Kurahashi,

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated March 23, 2015, enclosed are additional comments from the Engineering Division on the subject matter. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

for Russell Y. Tsuji
Land Administrator

Enclosure(s)

c: Department of Planning and Permitting
Urban Design Branch
Attn: Mr. Gerald Toyomura via email to: gtoyomura@honolulu.gov

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN
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AQUATIC RESOURCES
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 12, 2015

MEMORANDUM

TO: FR:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

'15 FEB 13 PM 03 03 ENGINEERING

2015 MAR 23 P 2:57

FROM: TO: Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project

LOCATION: 131 and 133 Kaiulani Avenue, 2401, 2407 and 2413 Prince Edward Street, and 2410 Koa Avenue – Waikiki; Tax Map Key: 2-6-23: 29, 37 and 76

APPLICANT: MK Development Consulting, LLC by its agent Kusao & Kurahashi, Inc. (Keith Kurahashi)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by March 23, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: Chris Takeuchi
Print Name: for Carty S. Chang, Chief Engineer
Date: 3/23/15

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: DEA for 133 Kaiulani Condo-Hotel Project
Oahu.014

COMMENTS

(X) **We confirm that the eastern, western, and southern portions of the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X, an area where flood hazards are undetermined. The National Flood Insurance Program does not regulate developments within Zone X.**

( ) Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zone ___.

(X) **Please note that the correct Flood Zone Designation for the northern portion of the project site according to the Flood Insurance Rate Map (FIRM) is Zone AE. The National Flood Insurance Program regulates developments within Zone AE as indicated in bold letters below.**

(X) **Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.**

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- (X) **Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.**
- ( ) Mr. Carter Romero at (808) 961-8943 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- ( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

( ) Other: _____

_____

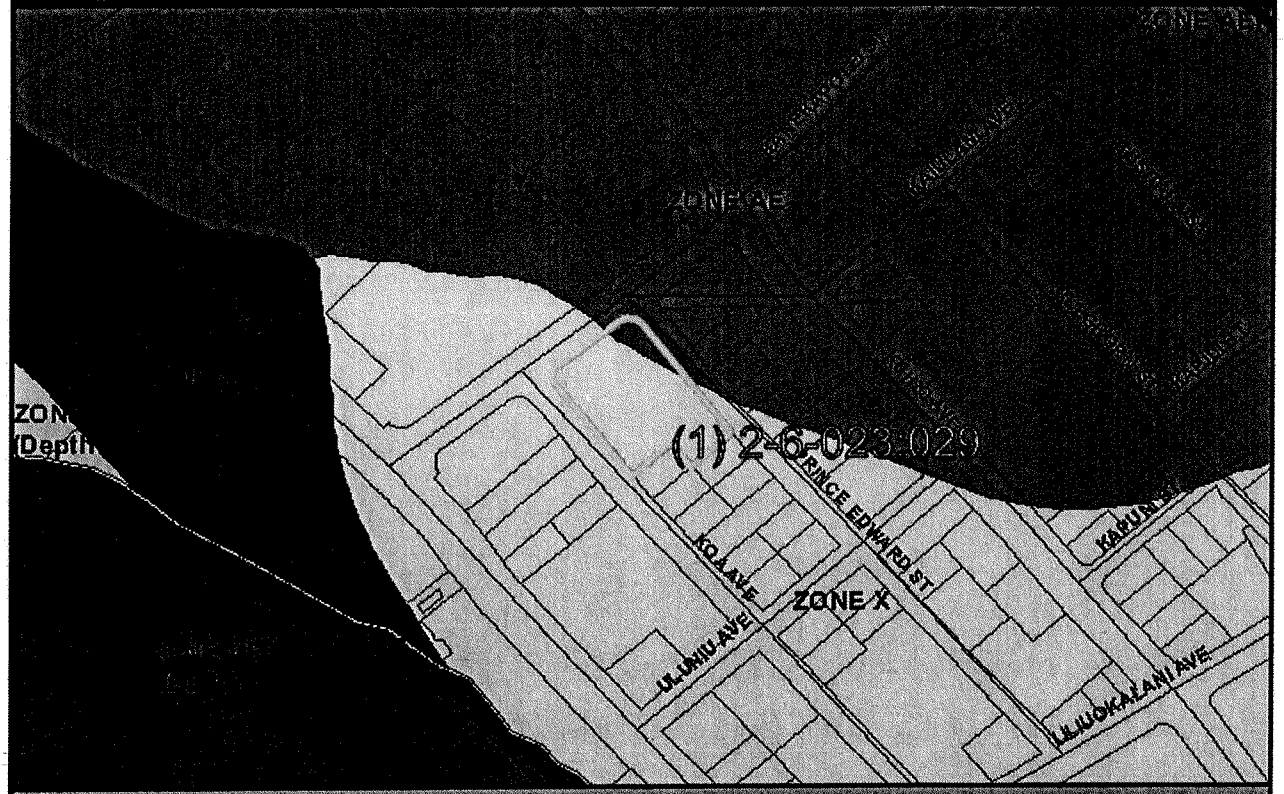
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: Chris Takuchige
for CARTY CHANG, CHIEF ENGINEER

Date: 3/23/15

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 2-6-023-029
PARCEL ADDRESS:	2407 PRINCE EDWARD ST HONOLULU, HI 96815
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	14-09-2492A
FEMA FIRM PANEL(S):	15003C0368G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Mr. Russell Y. Tsuji, Land Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Tsuji:

Thank you for your letter dated March 23, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate that your Land Division has no comments to offer and in response to your Commission on Water Resource Management we offer the following response (in the order set forth in their memorandum).

1. The Board of Water Supply commented that the existing water system is presently adequate to accommodate the proposed development.

2. Not checked off (not applicable).

3. This Project does not involve the reclassification of agricultural zoned land or the redistribution of agricultural resources.

4. The applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.

5. The applicant will incorporate storm water Best Management Practice (BMP) to minimize runoff. The applicant will significantly increase landscape areas on the property reducing excessive runoff, resulting in an improvement to water quality by allowing percolation of storm water to recharge groundwater to revitalize natural hydrology. As mentioned in item 4, the applicant will explore the use of non-potable water in planting areas in an effort to further reduce potable water demands.

6. The applicant will consider alternative water sources, where practicable.

7. The applicant will check the web address you provided and consider participating in the Hawaii Green Business Program.

8. The applicant will check the web address you provided and consider best management practices related to landscape irrigation conservation.

Other – The Final Environmental Assessment will include a discussion of the water requirements for the project, both potable and non-potable, and the calculations used to derive the projected water needs; water conservation and efficiency measures that will be implemented; the proposed water sources, including any alternative sources of water that may be available to meet nonpotable needs; and BMPs that will be implemented for stormwater management.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN
INTERIM FIRST DEPUTY

W. ROY HARDY
ACTING DEPUTY DIRECTOR - WATER

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

March 23, 2015

Kusao & Kurahashi, Inc.
Attention: Mr. Keith Kurahashi
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

via email: kkurahashi@hawaii.rr.com

Dear Mr. Kurahashi,

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (1) Land Division – Oahu District; and (2) Commission on Water Resource Management. No other comments were received as of our suspense date. Should you have any questions, please feel free to contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

c: Department of Planning and Permitting
Urban Design Branch
Attn: Mr. Gerald Toyomura via email to: gtoyomura@honolulu.gov

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 12, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project

LOCATION: 131 and 133 Kaiulani Avenue, 2401, 2407 and 2413 Prince Edward Street, and 2410 Koa Avenue – Waikiki; Tax Map Key: 2-6-23: 29, 37 and 76

APPLICANT: MK Development Consulting, LLC by its agent Kusao & Kurahashi, Inc. (Keith Kurahashi)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by March 23, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Print Name: _____
Date: 2/19/15

for

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 12, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project

LOCATION: 131 and 133 Kaiulani Avenue, 2401, 2407 and 2413 Prince Edward Street, and 2410 Koa Avenue – Waikiki; Tax Map Key: 2-6-23: 29, 37 and 76

APPLICANT: MK Development Consulting, LLC by its agent Kusao & Kurahashi, Inc. (Keith Kurahashi)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (EA), 133 Kaiulani Condo-Hotel Project", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by March 23, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(x) Comments are attached.

Signed: W Roy Hardy
Print Name: W. Roy Hardy, Acting Deputy Director
Date: March 5, 2015

FILE ID: RFD.4136.3
DOC ID: 12243

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

March 5, 2015

REF: RFD.4136.3

TO: Russell Tsuji, Administrator
Land Division

FROM: W. Roy Hardy, Acting Deputy Director
Commission on Water Resource Management

SUBJECT: Chapter 343, Hawaii Revised Statues, DEA, 133 Kaiulani Condo-Hotel Project

FILE NO.:
TMK NO.: 2-6-23: 29, 37 and 76

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://www.hawaii.gov/dlnr/cwrm.

Our comments related to water resources are checked off below.

☒ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☒ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

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

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

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

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

☒ 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf

☐ 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM:
Additional information and forms are available at http://hawaii.gov/dlnr/cwrm/info_permits.htm.

☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

☐ 11. A Well Construction Permit(s) is (are) required before any well construction work begins.

☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 14. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.

☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.

☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☒ OTHER:
The DEA should include a discussion of the water requirements (average day demand) for the project, both potable and non-potable, and the calculations used to derive the projected water needs; water conservation and efficiency measures that will be implemented; the proposed water sources, including any alternative sources of water that may be available to meet nonpotable needs; and BMPs that will be implemented for stormwater management.

If there are any questions, please contact Lenore Ohye of the Planning Branch at 587-0216.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

May 27, 2015

Mr. Ford N. Fuchigami, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Fuchigami:

Thank you for your letter dated April 27, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

The applicant appreciates that you have determined that "Based on the information provided, the proposed project does not appear to significantly impact the State highway system."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

DEPUTY DIRECTORS
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
HWY-2014
HWY-PS 2.9519

April 27, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment (No. 2014/ED-7)
133 Kaiulani Condo-Hotel Project, 131 and 133 Kaiulani Avenue
2401, 2407 and 2413 Prince Edward Street and 2401 Koa Avenue
Waikiki, Honolulu, Oahu, Tax Map Key No. 2-6-23: 29, 37 and 76

Thank you for consulting with us regarding the Draft Environmental Assessment (EA) required by Chapter 343, Hawaii Revised Statutes on the subject project. The proposed work will involve the construction of a 33-story condo-hotel with up to 260 units in the Waikiki District. Based on the information provided, the proposed project does not appear to significantly impact the State highway system.

If you have any questions, please contact Nami Wong, Systems Planning Engineer, Highways Division, Planning Branch, at (808) 587-6336. Please reference file review number PS 2015-032 in all contacts and correspondence regarding these comments.

Sincerely,

FORD N. FUCHIGAMI
Director of Transportation

c: Department of Planning and Permitting, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 10, 2015

Mr. Herman Tuiolosega, Senior Planner
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Tuiolosega:

Thank you for your letter dated March 24, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following responses (following the order set forth in your letter):

1. A list of acronyms will be included before the General Information page in the Final Environmental Assessment (FEA).

2. The term Accepting Authority will be changed to Approving Agency in the FEA.

3. Item M lists all parties consulted prior to preparation of the DEA.

4. Some of the consultations were done in meetings and did not result in written comments. Any written correspondence will be included in the FEA.

5. The Chapter 343-5, Hawaii Revised Statutes, project triggers will be provided in the General Information Table.

6. Potential Adverse Impacts, Section 2.3.3. of the FEA related to Construction Impacts will be expanded to include a discussion on stormwater management during site preparation and demolition, construction activities, dust control and noise. Impacts on wastewater, water, and energy will also be discussed in the FEA.

   FEMA has determined that a portion of the project site is no longer in a Special Flood Hazard Area (SFHA) as indicated on the Flood Insurance Rate Map (FIRM) dated January 19, 2011. This determination was issued as a Letter of Map Amendment (LOMA) on June 03, 2014 and amends the effective map. The amendment removes a portion of the site previously in Zone AE to Zone X, therefore, the entire project site is currently within Zone X. Zone X is an area of minimal flood hazard and determined to

be outside of the 500-year floodplain. The FEMA Letter of Map Amendment Determination Document and a copy of the effective January 19, 2011 FIRM map are provided in Appendix 13 of the FEA. Therefore, a flood study is not necessary.

7. The applicant shares your concern about the size of the DEA and FEA, but in order to have the appendices convenient for reviewers, we will include certain technical reports (appendices) on a CD included with the FEA and future environmental reports. This should significantly reduce the size of the FEA and future environmental reports.

8. In the FEA and in future DEAs the Parties to be Consulted section will be eliminated.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

JESSICA E. WOOLEY
DIRECTOR

STATE OF HAWAI'I
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Department of Health
235 South Beretania Street, Suite 702
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Email: oeqchawaii@doh.hawaii.gov

March 24, 2015

Mr. George I. Atta, FAICP, Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

SUBJECT: Chapter 343, Hawaii Revised Statutes Draft Environmental Assessment (EA) 133 Kaiulani Condo-Hotel Project

Dear Mr. Atta,

Aloha. Thank you for submitting the subject project for publication in the February 23, 2015, issue of The Environmental Notice. The publication started the 30-days review and comment period for the proposed project. OEQC staff reviewed the subject project and offers the following comments:

1. Acronyms are used throughout the Draft EA; it would be helpful to readers if a list of acronyms is included after the table of contents and before the General Information page.
2. The use of the term Accepting Authority on page one (page 13, PDF view), item C, General Information table, is incorrect; the proper term for EA documents is Approving Agency. We recommend changing the term Accepting Authority to Approving Agency.
3. Item M in the General Information table lists "agencies consulted prior to preparation of draft environmental assessment." Please include a list of other consulted parties such as citizen groups and individuals which the approving agency reasonably believes to be affected, if appropriate. This is a requirement pursuant to Hawai'i Administrative Rules, Chapter 11-200-9(b)1.
4. The written comments and responses to comments under the early consultation provision pursuant to HAR Section 11-200-9(b)(1), and 11-200-10(l), are missing from the DEA. Please provide comments and responses from early consultation process, as required by rules.
5. Please include the Chapter 343-5, Hawai'i Revised Statutes, project trigger in the General Information table.

6. The DEA is a disclosure document intended to provide all the relevant information about a project's impacts and mitigation. The section on Potential Adverse Impacts lists only three impacts is not so comprehensive.

   It is recommended that impacts on stormwater management during site preparation and demolition, construction activities, dust control, etc., be included in the Final EA. Wastewater management, water consumption, energy use, etc., are other impacts that are missing from the DEA.

7. The unresolved issues include a Flood Study. This important information should already be a part if this DEA; it is recommended that the flooding issue and National Flood Insurance Program compliance requirements be included in the FEA.

8. The many appendices to the subject DEA are probably required during the permitting process, but not necessarily required by the Hawai'i Environmental Policy Act (HEPA). This increases the size of the DEA with information not specifically required under Chapter 343, HRS. In the future, including only relevant information in the EA and referencing the appended studies and reports, including where copies of the said studies may be obtained, will suffice.

9. The Parties To Be Consulted section on page 99 (page 111, PDF view) is not appropriate at this level. The consultation process should occur before the DEA and the comments and respond to comments is a missing content requirement in the DEA. Please include your response to early consultation in the Final EA.

Thank you very much for the opportunity to review and comment on this project. Please feel free to call our office at (808) 586-4185, if you have further questions.

Sincerely,

Herman Tuiolosega
Senior Planner

copy: MK Development Consulting, LLC
✓Kusao & Kurahashi, Inc.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Kamana'opono M. Crabbe, PH.D.
Ka Pouhana, Chief Executive Officer
Office of Hawaiian Affairs
560 N. Nimitz Highway, Suite 200
Honolulu, Hawaii 96817

Attention: Mr. Jerry B. Norris

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Dr. Crabbe:

Thank you for your letter, dated March 9, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

The applicant has been meeting with the cultural descendants, recognized by the O'ahu Island Burial Council for this Project as well as 5 meetings with the Oahu Island Burial Council and will continue to incorporate their views as to the disposition of the previously identified iwi kupuna and the burial treatment plan.

Personnel involved with the construction activities of the Project will be informed of the possibility of inadvertent cultural finds, including human remains. In accordance with the recommendation of the Archaeological Inventory Survey, on-site archaeological monitoring will occur for all subsurface Project construction activities below 18 inches. The on-site archaeologist will immediately cease all work in the area and contact the appropriate agencies including the State Historic Preservation Division and the Office of Hawaiian Affairs.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

PHONE (808) 594-1888

FAX (808) 594-1938

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAI'I 96817

HRD 15/7374

March 9, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai'i 96822

Re: Request for Comments on a Draft Environmental Assessment (DEA) for the proposed 133 Kaiulani Condo-Hotel Project, 131 and 133 Kai'ulani Avenue, 2401, 2407 and 2413 Prince Edward Street, and 2410 Koa Avenue, Waikīkī
Waikīkī Ahupua'a, Kona Moku, O'ahu
TMK: (1) 2-6-023:029, 037 and 076

Aloha Mr. Kurahashi:

The Office of Hawaiian Affairs (OHA) is in receipt of your letter of February 10, 2015 requesting comments on a DEA for the proposed 133 Kaiulani Condo-Hotel Project, which will be constructed on developed parcels currently occupied by King's Village Shopping Center, the Prince Edward Apartments, and the Hale Waikīkī Apartments. The proposed project also includes the installation of 400 linear feet of sewer line, which will extend from the project area to the existing sewer line on Kūhiō Avenue between Wailana Street and Kānekapōlei Street. The project will exceed the 240-foot height limit with a 350-foot high building; exceed the maximum density of floor area ratio (FAR) of 3.5 with a FAR of 4.0, and provide less than the minimum 50% open space with only 39% open space.

The State Historic Preservation Division accepted the Archaeological Inventory Survey (AIS) for the project, noting that two subsurface historic properties were identified. Site 50-80-14-7598 (a disturbed cultural deposit containing charcoal, fire-altered rock, butchered faunal material, and a small amount of marine midden) was listed Criterion "d" for its potential to yield information about prior land use. Site 50-80-14-7599 (an isolated human vertebra fragment found in fill) was listed under Criterion "d" for its potential to yield information about prior land

use and "e" for its cultural significance to Native Hawaiians. The AIS concluded that mitigation will include a burial treatment plan (BTP) for Site 7599, a "previously identified" burial identified during an AIS investigation, and on-site archaeological monitoring during all construction-related ground-disturbing activities that will include the sewer excavation activity. The archaeological monitoring plan will facilitate the identification and proper treatment of any additional burials that might be discovered during the project construction and will gather additional information regarding the project's non-burial archaeological deposits. In compliance with Hawai'i Administrative Rules 13-300, the BTP should incorporate the views of cultural descendants, recognized by the O'ahu Island Burial Council for this project, as to the disposition of the previously identified iwi kupuna.

Personnel involved in the construction activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. OHA requests assurances that should iwi kūpuna or Native Hawaiian cultural materials be identified during the ground altering activity, all work in the area will immediately cease and appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Mahalo for the opportunity to comment. Should you have any questions, please contact Jerry B. Norris at 594-0227 or by email at jerryn@oha.org.

'O wau iho nō me ka 'oia 'i'o,

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:jbn

C: Honolulu Department of Planning and Permitting Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Leo R. Asuncion
Acting Director, Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Attention: Mr. Josh Hekekia

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Asuncion:

Thank you for your letter dated March 13, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. Section 7 of the Final Environmental Assessment (FEA) will list and incorporate an analysis of this Project's consistency with the Hawaii State Plan.

2. In the FEA, Section 8.3.2 will be expanded to include a discussion of conformance with sustainability guidelines listed in HRS § 226-108 as further described in the technical assistance memorandum on sustainability and how this Project will adhere to the principles of sustainability.

3. In the FEA, Section 8.8 will be expanded to include an analysis as to how the Project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
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Ref. No. P-14677

March 13, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment for 133 Kaiulani Condo-Hotel Project; TMK: (1) 2-6-023:029, 037 and 076

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the 133 Kaiulani Condo-Hotel Project. The review material was forwarded to our office by the City and County of Honolulu – Department of Planning and Permitting by letter, dated February 10, 2015. Our office was not consulted prior to the development of this Draft EA.

It is our understanding that this project proposes to demolish the existing structures of King's Village, Prince Edwards Apartments, and Hale Waikiki to make way for a new 33-story condo-hotel structure. This 350-foot high building will house up to 260 units and include both hotel and residential units, recreational facilities, retail spaces, dining areas, hotel amenities, and a cohesive landscaped area.

The Office of Planning (OP) has reviewed the Draft EA and has the following comments to offer:

1. The Draft EA fails to address the goals and objectives listed in the Hawaii State Plan, Hawaii Revised Statutes (HRS), Chapter 226. Section 2.6 (Compatibility with Land Use Plans and Policies), page 14, of the Draft EA neglects to include the Hawaii State Plan. Section 7 (Relationship to Land Use Plans, Policies, and Controls), page 37, of the Draft EA lists State Land Use and the General Plan, but does not list, nor include, an analysis of the Hawaii State Plan.

   HRS Chapter 226, the Hawaii State Planning Act, provides goals, objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the State. It contains diverse policies and objectives on topics of state interest including but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement,

climate change adaptation, and sustainability.

This project is relevant to a number of themes, goals, objectives, and policies in the Hawaii State Plan. These include, but are not limited to, HRS § 226-6 – the economy; HRS § 226-8 – the visitor industry; HRS § 226-12(5) – the physical environment (scenic, natural beauty, and historic resources); HRS § 226-13(6) – the physical environment (land, air, and water quality); HRS § 226-14(b)(1) - facility systems; and HRS § 226-19 – socio-cultural advancement (housing). Section 7 of the Final Environmental Assessment (Final EA), should list and incorporate an analysis on this project's consistency with the Hawaii State Plan.

2. Additionally, the Draft EA should examine the proposed projects conformity to the Hawaii State Plan's priority guidelines on Sustainability. Section 8.3.2, pg. 56, of the Draft EA examines "Sustainable Strategies." It contains a discussion on thermal efficiency, water conservation, efficient landscape irrigation, green-building designs, and energy efficiency. These principles are consistent with the sustainability guidelines listed in HRS § 226-108(2). Sustainability principles advocated in HRS § 226-108 call for sustainable development, smart growth, and resource conservation/green building standards. Please include the issues introduced in Section 8.3.2 of the Draft EA and incorporate them into a section of the Final EA, which identifies how this project will adhere to the principles on sustainability.

   OP has created technical guidance that provides greater detail on the principles that promote sustainability. This technical assistance memorandum on sustainability can be viewed or downloaded from our website at http://files.hawaii.gov/dbedt/op/docs/OP_TAM_2013-12-03.pdf

3. The Draft EA did not contain an analysis on the project's conformity with the Coastal Zone Management (CZM) objectives and policies found in HRS § 205A-2. Section 8.8, page 83, of the Draft EA incorrectly surmises that because the project is outside of the Special Management Area, it is not required to examine this project's consistency with the objectives and policies listed in HRS§ 205A-2.

   HRS § 205A-1 defines the entire state as being within coastal zone management area. Therefore this project is indeed within the CZM area and must conform to its objectives and policies. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources. In the Final EA, please include an analysis as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2.

Where a conflict or inconsistency exists, the analysis must describe the extent to which the applicant has reconciled its proposed action with this statute.

If you have any questions regarding this comment letter, please contact Josh Hekekia of our office at 587-2845.

Sincerely,

Leo R. Asuncion
Acting Director

c: George I. Atta, Director
Department of Planning and Permitting (DPP)

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Planning and Zoning Consultants

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April 10, 2015

Mr. Rouen Q.W. Liu, Permits Engineer
Hawaiian Electric
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Liu:

Thank you for your letter dated March 23, 2015, regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project.

We appreciate that you have no objection to the Project. A review of our ALTA Survey did not reveal any HECO easements on the property.

We will continue to keep you apprised of our Project as we will need your assistance in the future to allow connection to your system

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

BA/G

March 23, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hi 96822

Dear Mr. Kurahashi:

Subject: Chapter 343, Hawaii Revised Statutes Draft Environmental Assessment (EA)

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities.

We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed Kaiulani Condo-Hotel Project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.
If you have any questions, please call me at 543-7245

Sincerely,

Rouen Q.W. Liu
Permits Engineer

RL:kmk

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Robert J. Finley, Chair
Waikiki Neighborhood Board No. 9
C/o Neighborhood Commission Office
Honolulu Hale
530 South King Street, Room 406
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Finley:

Thank you for your letter dated March 23, 2015 regarding the Draft Environmental Assessment for the 133 Kaiulani Condo-Hotel Project (Project). We value the input we have received from the Waikiki Neighborhood Board (Board) during our various meetings and appreciate the Board's 11-1-0 vote in support of the concept of the Project and your comments.

We would like to thank the Waikiki Neighborhood Board for its help in determining a community benefit program. We appreciate this input as we feel you are closest to determining the needs of this community.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813
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March 23, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

In April 2014 the Waikiki Neighborhood Board (WNB), by a vote of 11-1-0, supported the concept of the King's Village Project i.e. 133 Kaiulani Condominium Hotel Project.

As to background information, the WNB has supported and opposed many projects in Waikiki and supported changes in the Waikiki Special District Plan (WSDP) to protect the "Hawaiian Sense of Place" and improve construction and design guidelines for Waikiki. Over the past few years when the WNB opposed projects that did not comply with the WSDP, its opposition was disregarded by the City with the claim that the WSDP is only policy guidance and not mandated by law. This City interpretation of the WSDP has also been applied to its review of public "view plane" concerns about new buildings that block existing view plane, which are not specifically identified as protected by law.

In February 2015 the developer of the Ka'iulani project returned to the WNB with a project update that reduced the total size of the project and reduced the number of tower shafts from two to one. The developer also addressed concerns voiced at the 2014 meeting and had made personal follow-up visits with individuals in the community. Concerns over private views were expressed by the public at both public meetings. Even though these views are not protected under the zoning code, the developer met with citizens concerned about the loss of their private view corridors from their personal residences and has made design changes to help mitigate these concerns.

If every existing property to be redeveloped in Waikiki were a rectangle that ran Mauka to Makai, it would be far easier for projects like this to be considered. However, t the reality is property lines do not always comply with the ideal WSDP building template. Therefore, each project must be carefully considered by the Department of Planning and Permitting for legal compliance.

Your careful consideration of this project is greatly appreciated.

Thank you,

Robert J. Finley
Chair

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 10, 2015

Mr. Jeff Merz
Waikiki Neighborhood Board Development Review
Waikiki Neighborhood Board No. 9
C/o Neighborhood Commission Office
Honolulu Hale
530 South King Street, Room 406
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Merz:

Thank you for your letter dated March 23, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project). We value the input we have received from the Waikiki Neighborhood Board (Board).

We appreciate your comments and offer the following responses (following the order set forth in your letter):

General Project Comments

We appreciate your General Project Comments.

Page 11 – Section 2.4.5 Traffic Improvements

We agree that converting Kaiulani Street will result in traffic calming and improve vehicular circulation. It will also allow better and more direct access to parcels on Kalakaua Avenue for our Project and other existing and proposed developments in the surrounding area.

Page 15 Section 2.8.3 Alternative III Develop within the WSD Standards (No PD-R)

This section will be expanded to discuss other important reasons that this alternative was not pursued, such as the view impact to surrounding properties and the impact to the view of Diamond Head from the Punchbowl Lookout.

In the case of Alternatives I, II and III, it is not a matter of maximizing profits, but finding an alternative that was profitable and financeable. These alternatives were not profitable or financeable. Even in the Preferred Alternative IV, initial estimates found that this alternative as planned was not profitable or financeable. However, through cost engineering and redesign of the Project, this alternative is now feasible.

Page 40 Section 7.3.2.2 Walking

The applicant will work with the City and utility companies to determine whether undergrounding the utilities fronting the Project is feasible.

Waikiki Special District Design Guidelines

We appreciate your understanding of the difficulties with this specific site in providing a mauka-makai orientation for its tower.

Multi-Modal Transportation in Waikiki

The applicant will work with the hotel operator and recommend that employees be charged for parking stalls. The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transportation and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transportation and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project.

The applicant will decouple most of the parking from the sale of the units, except for the handful of larger hotel suites. The applicant will provide spaces in this Project for a car-share enterprise, electric car recharging stations, and provide free parking for a certain number of electric vehicles.

The applicant understands that the Waikiki Transit Circulation Study provides a route utilizing Kalakaua Avenue and Kuhio Avenue. Although the Project is not located on these major thoroughfares it will provide improved pedestrian access along landscaped yards providing access to the major thoroughfares. The applicant will consult with the City to ensure that our Project enhances what is approved in the Waikiki Transit Circulator Study.

Landscaping

The applicant will consider the use of xeriscape and native species to reduce irrigation requirements. As mentioned in the DEA, the applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

Water, Energy and Waste Discussion

As mentioned in the DEA, the applicant will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible.

The applicant will also consider your recommendations to reduce impacts on our island resources:

- Seek to achieve a "net-zero" development in all aspects of construction and operation.
- Reduce construction waste and use recycled and/or sustainable materials.
- Reduce generation of solid waste through use of biodegradable materials, recycling and reuse during construction and will strongly encourage the use of biodegradable material and a recycle program post construction.
- Incorporate solar water heaters, solar PV systems, micro-turbine (canister-type) wind turbines, green roofs and free parking for electric vehicles.

Climate Change, Global Warming and Impending Sea Level Rise

The FEA will include a discussion of planned structural designs to address future sea level rise and preparedness or mitigation plans to address new or enhanced natural disaster threats caused by climate change.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

WAIKIKI NEIGHBORHOOD BOARD NO. 9

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March 23, 2015

Mr. Gerald Toyomura
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Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Re: Draft Environmental Assessment - 133 Kaiulani Condo-Hotel Project (bounded by Kaiulani, Koa and Prince Edward Streets) – Review and Comments from the Waikiki Neighborhood Board

Thank you for including the Waikiki Neighborhood Board in the review process for the above-referenced Draft Environmental Assessment. The Waikiki Neighborhood Board supports developments that are sustainable, functionally efficient, culturally appropriate, contextually sensitive and add to the increasingly rich pedestrian experience in our neighborhood. The following comments address compliance with the Land Use Ordinance and the Waikiki Special District Design Guidelines within the context of HRS Chapter 343.

General Project Comments:
The visual simulations, site-line analyses and elevations shown in the appendices are appreciated and help the public and decision-makers to analyze true visual impacts across a broad range of visual criteria.

The Board understands that the proponents of this project met repeatedly with concerned citizens in the Waikiki area over the past few months to address their visual as well as other concerns with the project. While not implying all party's concerns have been resolved, these outreach efforts by the developer are appreciated by the Board and by the community and demonstrate a measure of goodwill towards Waikiki.

Page 11 – Section 2.4.5 Traffic Improvements
The concept of converting Kaiulani Street to a two-way street at this location is appropriate from an urban planning perspective. Two-way conversions of streets in urban settings traditionally result in traffic calming, less circling of traffic searching for parking and/or entrances, and fewer vehicle movements.

Page 15 Section 2.8.3 Alternative III Develop within the WSD Standards (No PD-R)
The rationale for pursuing a PDR is understandable as a relief mechanism from setback standards from "three front yards". However, "optimizing" economic return of a development is not a basis to justify varying from zoning standards (especially as it relates to height) and is not the purpose of the PDR.

Stated another way, if the developer is implying that the project is not economically viable at 240 feet in height and would therefore not be built if held to the current zoning height limit, then please provide further fiscal justification for such, in the Final EA. Conversely, if the developer is seeking the additional height up to 350 feet to maximize his economic return on the property, that needs to be made clear in the Final EA.

Page 40 Section 7.3.2.2 Walking
It appears one of the few remaining streets in Waikiki to have above ground electrical utilities is Prince Edward Street in front of the proposed development. One way to improve the pedestrian experience along this walkway is to place these utilities underground. While not a requirement of the city at this time, it is recommended that the developer work with the city to install these utilities underground during the construction process as a way to compliment the expansive pedestrian improvements planned along the Koa/Kaiulani corridor.

Waikiki Special District Design Guidelines
The Board appreciates the detailed discussion of the project's compliance with the various policies and goals of the WSD Design Guidelines. While an important guideline in our community continues to be a building's "mauka-makai" orientation, there appears to be some justification, in this specific case, for why this project cannot fully comply with this design guideline. The configuration of the parcel, the limited size of the parcel and the presence of three "front yards" all make a mauka-makai design less viable. The developer is proposing a design that is mostly situated behind the large Hyatt 'Ewa tower demonstrating an attempt at view corridor preservation to the degree possible.

Multi-Modal Transportation in Waikiki
Free parking induces increased vehicle use, congestion, noise and air pollution, all significant impacts to our neighborhood. To mitigate these impacts it is recommended that free parking not be provided for employees. If vehicle parking is provided free for employees, it is recommended that transit passes be provided for employees using mass transit, with similar incentives provided to employees walking and biking to work.

It is also recommended that the sale of condo-hotel units be decoupled from the sale of any associated parking stalls in order to incentivize savings for unit owners choosing to go car-less. We would finally recommend that the developer consider making space in this project available for a car-share enterprise, provide ample electric car recharging stations and provide free parking for electric vehicles. All of the above recommendations are designed to mitigate traffic, noise, air pollution and greenhouse gas (GHG) emission impacts associated with the development of this project.

Waikiki recently completed a Circulator Study to compliment the rail system terminating at the Ala Moana Center. This study may propose features that impact your proposed development access. We recommend that you consult with the City to ensure your proposal enhances what is approved in the Circulator Study.

Landscaping
For landscaping, use xeriscape, native species to reduce the need for artificial irrigation. If irrigation is needed, use a rainwater capture/storm drain/recycled graywater system instead of potable, piped water.

Water, Energy and Waste Discussion
We appreciate your commitment to pursuing LEED certification. While Honolulu does not require LEED certification for new developments at this time, we encourage you to exhaust all possible sustainable features for the development and operation of your proposed facility.

The following are recommended approaches/operations to ensure that your development will not have significant impacts on our island resources.

- Seek to achieve a 'net-zero' development in all aspects of construction and operation.
- Use catchments and grey water for landscaping and other water conserving features at the new development. Use of potable water for landscaping is not an acceptable sustainable approach.
- Reduce construction waste to the maximum degree possible. Use recycled, local and/or sustainable materials throughout the new development's construction and for furnishings, fixtures and eventual operation.
- Construct a dry well system, catchments or other ways to reduce drainage flow off the property and to allow grey water storage for uses on the property.
- Reduce generation of solid waste through use of biodegradable materials, recycling and reuse. Implement a robust, on-going recycling program for residents, visitors and employees.
- Incorporate solar water heaters, solar PV systems, micro-turbine (canister-type) wind turbines, green roofs and free parking for electric vehicles.

Climate Change, Global Warming and Impending Sea Level Rise
The project property is located only a few feet above mean sea level in one of the lowest elevations in Waikiki. An improved basement area is being proposed as part of the project. In the Final EA, please briefly discuss any planned structural designs to address future sea level rise, and any preparedness or mitigation plans to address new or enhanced natural disaster threats caused by climate change.

Mahalo for your consideration of the above comments on the Draft EA. We look forward to publication of the final EA which adequately addresses concerns noted by this Board, agencies and the general public.

Sincerely,

Jeff Merz, AICP, LEED AP
Waikiki Neighborhood Board
Development Review

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Luis Capeda
ABC Stores, Assistant Manager
444 Niu Street, Apartment 804
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Capeda:

Thank you for your letter of March 18, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

We agree with your comment that "Waikiki must remain competitive with other tourist destinations to ensure the security of our economy and jobs" and appreciate your belief that this project will assist in that effort.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 18, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Toyomura, Mr. Kurahashi, and MK Development Consulting:

I urge you to support the plans for redevelopment of King's Village. I am a resident of Waikiki and work as an Assistant Manager at ABC Stores. Waikiki must remain competitive with other tourist destinations to ensure the security of our economy and jobs.

King's Village is an older development in a very busy part of Waikiki. It is time for this area to be redeveloped. Please consider supporting the 133 Ka`iulani Condominium-Hotel Project.

Thank you for your time,

Luis Capeda
ABC Stores, Asst Mgr
444 Niu Street, Apartment 804
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Adrian Chung
ABC Store Assistant Manager
300 Wai Nani Way, Apt. 1208
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Chung:

Thank you for your letter of March 17, 2015 regarding the 133 Kaiulani Condo-Hotel Project.

We appreciate your support for redevelopment of the King's Village location, and are pleased to hear that you believe your support will be further echoed by "anyone who works in Waikiki, and likely the great majority of us who call Waikiki our home."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 17, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Gerald Toyomura:

I am writing in support of the redevelopment of King's Village and all of Waikiki. As a retail store employee and resident of Waikiki, I have seen how new developments bring more business to Waikiki, which contributes to the economy of the City and State.

It is my guess that anyone who works in Waikiki, and likely the great majority of us who call Waikiki our home, are pleased to hear that another older development will be replaced by a new, exciting location.

Please support the King's Village redevelopment.

Sincerely,

Adrian Chung
ABC Store Assistant Manager
300 Wai Nani Way, Apt. 1208
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Edmar Monton
ABC Stores - Assistant Manager
432 Namahana Street, Unit 101
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Monton:

Thank you for your letter of March 16, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

As a representative of one of Waikiki's important businesses, we value your insight as to what makes Waikiki an enjoyable place to live. We appreciate your comment that you believe this project "will have a positive impact on Waikiki."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 16, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

I am writing this letter of support for the 133 Ka'iulani Condominium-Hotel Project because I believe it will have a positive impact on Waikiki.

I enjoy living in Waikiki because it is close to my place of employment and the unique experiences it provides. Waikiki is a top destination for visitors from all over the world and I would like to see it continue in that regard.

Waikiki cannot continue to be that truly special place without new investment such as this project which provides clean streets, modern buildings and entertainment options.

Sincerely,

3/16/15

Edmar Monton
ABC Stores - Assistant Manager
432 Namahana Street, Unit 101
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mrs. Corrine Sillapachai
Assistant Buyer, ABC Store #8
440 Lewers Street, #304
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mrs. Sillapachai:

Thank you for your letter, dated March 16, 2015, expressing support for the 133 Kaiulani Condo-Hotel Project.

As a longtime resident and employee in Waikiki, your support is very important to this project, and we are pleased you believe it has the potential to "make Waikiki a better place for everyone, inclusive of tourists and residents."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 16, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Aloha,

My name is Corinne Sillapachai, I have lived in Waikiki for the past 30 years, and I would like to express my total support for the development of the condo-hotel at King's Village. I am also an employee of ABC Stores and attracting tourists to Waikiki is critical to our business and my livelihood. Any and all improvements to Waikiki is very important to me since Waikiki is also my home.

For those reasons above, I appreciate and support the efforts of others that will make Waikiki a better place for everyone, inclusive of tourists and residents like myself.

Mahalo,

Corinne Sillapachai

Mrs. Corinne Sillapachai
Assistant Buyer, ABC Store #8
440 Lewers St, #304
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Glen Takenaka
Associate Manager
ABC Stores
3138 Makini Street
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Takenaka:

Thank you for your letter of March 16, 2015 regarding the 133 Kaiulani Condo-Hotel Project.

As an individual who lives and works in Waikiki, your support is highly valued.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 16, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Department of Planning and Permitting:

The Waikiki area must continue to see more hotel rooms and offer new options for our visitors or we will lose them to other destinations. Thousands of folks are employed in Waikiki and this project will create more jobs. I live and work in Waikiki and its development is important to me.

The King's Village area is a great location to build a new hotel and I ask you to please approve the plans by MK Development Consulting, LLC.

Thank you,

Glen Takenaka, Associate Manager
ABC Stores
3138 Makini Street
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Darin M. Fukunaga
Principal
ADM Retail Planning & Architecture, Inc.
1311 Kapiolani Blvd., Suite 608
Honolulu, Hawaii 96814

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Fukunaga:

Thank you for your letter, dated March 19, 2015, providing support for the 133 Kaiulani Condo-Hotel Project. As Principal of one of Hawaii's well-respected retail architectural firms, we value your support.

We appreciate your comment, from the perspective of an architect, that "the proposed building was carefully designed to minimize view obstructions...and conform to the design guidelines for the property."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

ADM
Retail Planning & Architecture, Inc.

19 March 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Toyomura,

We urge your support of the 133 Ka`iulani Development plans. As an architectural firm, we would like to emphasize that the proposed building was carefully designed to minimize view obstructions and remain within the shadow of the Hyatt Regency Ewa Tower. Further, the plans conform to the design guidelines for the property.

As a specialized retail planning and architecture firm, we concur that the proposed project will make this prime Waikiki location more appropriate for today's visitors and our local residents, alike.

Should there be any questions, please feel free to contact me at 597.1662 or via fax at 597.1667.

Thank you for your consideration,

ADM Retail Planning & Architecture, Inc.

Darin M. Fukunaga, AIA, NCARB
Principal

ADM RETAIL PLANNING & ARCHITECTURE, INC.
1311 Kapiolani Blvd. Suite 608 • Honolulu, Hawaii 96814
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KUSAO & KURAHASHI, INC.
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Ralph T. Inouye
President
Alaka'i Mechanical
2655 Waiwai Loop
Honolulu, Hawaii 96819

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Inuoye:

Thank you for your letter of March 10, 2015 regarding the 133 Kaiulani Condo-Hotel Project.

We appreciate your support for this project, as well as your recognition of the positive economic impact it will have for the State of Hawaii.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

ALAKA'I
MECHANICAL
CORPORATION

March 10, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Subject: Ka'iulani Condominium – Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

I support the 133 Ka'iulani Condominium Hotel Development Project. This project will enhance Waikiki and support our tourist industry. By constructing this project, there are many positive economic impacts to help keep our government healthy. Several key economic impacts are:

- Hundreds of construction workers will be needed
- Jobs will be created to staff the condominium hotel upon completion
- It will create a stimulus to our economy
- It will help keep Waikiki a major tourist destination

In summary, this project when complete will benefit the government and local residents as well as our valued visitors. The redevelopment will enhance the pedestrian experience with greater building setbacks and the food and beverage facilities will be frequented by all.

Thank you,

Ralph T. Inouye
President

RTI:et

2655 WAIWAI LOOP • HONOLULU, HAWAII 96819 • TEL (808) 834-1085 • FAX (808) 834-1800 • LICENSE #ABC-7338
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April 8, 2015

Mr. Russell Young
President
Albert C. Kobayashi, Inc.
94-535 Uke'e Street
Waipahu, Hawaii 96797

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Young:

Thank you for your letter of March 13, 2015 providing your support for the 133 Kaiulani Condo-Hotel Project.

We appreciate your comment that the project "will be a great stimulus to our economy."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

ALBERT C.
KOBAYASHI, INC.
GENERAL CONTRACTORS
Gentry Business Park • 94-535 Uke'e Street
Waipahu, Hawaii 96797 • Phone (808) 671-6460 • FAX 676-5832 • Lic. #ABC-07819

March 13, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

Albert C. Kobayashi, Inc. is in support of the King's Village Redevelopment project.

The redevelopment plan supports the City's vision for Waikiki, including private reinvestment to allow Waikiki to remain competitive as a popular tourist destination. When complete, the redevelopment will increase real property tax revenue for the City & County of Honolulu, which can fund additional public projects and services for the City. Neighboring hotels and Waikiki, as a whole, will also benefit from the redevelopment, including improved and additional retail and restaurant options for visitors. The redevelopment plan will offer more parking spaces than required and will help alleviate the parking shortage in Waikiki.

This project will provide more construction jobs for our local people. It will be a great stimulus to our economy. When complete, the redevelopment will also result in the net creation of more than 120 jobs (320 total versus the 200 jobs at the current use of property).

We strongly recommend the Redevelopment of the King's Village project.

Thank you.

Russell Young
President

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. William T. Tanaka
President
Aloha Hospitality Consulting
445 Seaside Avenue, Mezzanine Level
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Tanaka:

Thank you for your letter of March 20, 2015 providing your strong support for the 133 Kaiulani Condo-Hotel Project.

We appreciate your comment that "the project is aligned with the City's vision for Waikiki and will have a positive economic impact on Waikiki and Oahu." We look forward to realizing this vision for the future and the many benefits it will accrue.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 20, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Aloha,

My name is William Tanaka, President of Aloha Hospitality Consulting, a Waikiki-based hospitality consulting firm. I have been actively involved in the development, management and ownership of Waikiki condominium hotels for over 30 years. I am writing in strong support of the 133 Kai'ulani Condominium Hotel Development in Waikiki. I believe that the project is aligned with the City's vision for Waikiki and will have a positive economic impact on Waikiki and Oahu.

- **The Project will create new jobs.** At present, there are an estimated 200 retail jobs at King's Village. The redevelopment has been estimated to create 320 full-time jobs. The redevelopment is therefore estimated to generate a **net gain of 120 full-time jobs**.

- **The Project will add much-needed hotel rooms.** Waikiki has lost over 2,200 hotel rooms since 2003, through hotel demolitions and conversions. The 133 Kai'ulani Condominium Hotel Development project will replace some of the rooms that Waikiki lost. In recent years Waikiki has been one of the most compressed lodging markets in the U.S., running at close to 86% occupancy in 2014. The destination is completely full during peak winter demand periods, meaning we are turning away people who wish to vacation in Waikiki. By restoring some of the hotel rooms lost in recent years, the Project will strengthen Waikiki by adding capacity.

- **The 133 Kai'ulani Condominium Hotel Development will revitalize a tired and dated area of Waikiki.** In addition to adding needed visitor room capacity, the Project will upgrade Waikiki's

product. The Project will replace the tired and dated King's Village retail center with a new condominium hotel built to meet the high standards of today's travelers. New open space in the public park on King Edward Street and the building's upgraded retail and arrival experience will enhance the walking experience in this area.

- **The Project will add much-needed luxury hotel rooms in Waikiki**. Waikiki has a shortage of luxury hotel rooms and will continue to have a shortage of luxury rooms, even after the Ritz-Carlton and the 133 Kai'ulani Condominium Hotel projects are complete. About 7.5% of Waikiki's visitor rooms are considered to be in the luxury category. In contrast, about 14% of the rooms on the Neighbor Islands are luxury rooms. The addition of the Ritz-Carlton Residences Waikiki will increase the luxury share to about 9% of Waikiki's rooms. Increasingly, affluent visitors are choosing to spend all of their Hawai'i vacation in luxury resort hotels on the Neighbor Islands, avoiding Waikiki altogether because of the lack of comparable luxury accommodations that meet their expectations.

  With the completion of the 133 Kai'ulani Condominium Hotel, about 10% of Waikiki's rooms would be luxury class – still a lower percentage than the Neighbor Islands offer. The addition of much-needed luxury rooms in Waikiki, built to meet the expectations of today's affluent travelers, positions Waikiki to attract greater numbers of high-spending visitors.

- **The Project is a planned condominium hotel rather than a residential condominium.** Based on our experience with other similarly structured condominium hotels, the vast majority of owners will make their units available for hotel use in a rental program managed by a world-class luxury hotel operator. As such, the new hotel jobs created by the Project are expected to continue to exist over time.

- **The Project will have more-than-adequate parking.** The133 Kai'ulani Condominium Hotel Development plans call for building more parking stalls than required. This new off-street parking will provide a benefit to the Waikiki community.

- **Local developers known for quality projects.** The Project is being led by a group of locally-based developers with a track record of high-quality successful projects

Again, I strongly support the proposed 133 Kai'ulani Condominium Hotel Development condominium hotel on the King's Village site. I believe it will enhance Waikiki's appeal as a world-class visitor destination by adding much needed luxury hotel rooms, creating new hotel jobs for generations to come, and improving an area that has deteriorated in recent years.

Mahalo,

William T. Tanaka, Jr.
President
Aloha Hospitality Consulting
445 Seaside Avenue, Mezzanine Level
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Daniel Kim
Senior Vice President and Manager
Private Banking
Bank of Hawaii
P.O. Box 2900
Honolulu, Hawaii 96846

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Kim:

Thank you for providing your support for the 133 Kaiulani Condo-Hotel Project in your letter dated March 16, 2015. As an executive of one of Hawaii's largest banks, we respect and value your support.

Your significant experience in the Waikiki community provides us with an informed and valuable perspective, and we look forward to delivering the positive impact your letter describes.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Bank of Hawaii

March 16, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Aloha,

Thank you for considering this letter of support for the King's Village redevelopment project. Since 1993, I have been fortunate enough to hold several positions at Bank of Hawaii, including one responsible for the oversight and management of our Waikiki Banking Center. I've also served on the boards of the Waikiki Improvement Association and the Hawaii Hotel and Lodging Association.

In those roles, I came to understand the financial and banking needs of our Waikiki customers, which gave me a very personal perspective of how incredibly important tourism is in the lives of people who work and/or live in Waikiki.

To continue to fuel Waikiki's economy, we need to take on projects that help attract visitors to Hawaii, and then enable them to enjoy this paradise memorably. The project proposed here by MK Development will revitalize King's Village with first-class hotel, shopping and dining options, as well as new public park spaces that everyone can enjoy.

As a result, I fully support this project and look forward to its progress and completion.

Mahalo,

Daniel Kim
Senior Vice President and Manager
Private Banking
Bank of Hawaii

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. John C. Dean
Chief Executive Officer & Chairman
Central Pacific Bank
220 South King Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Dean:

Thank you very much for your letter of March 11, 2015 expressing Central Pacific Bank's support for the 133 Kaiulani Condo-Hotel Project. As CEO and Chairman of one of Hawaii's important banks, we appreciate and value your support.

In particular, your recognition of both the economic and societal benefits this project will bring to Waikiki is well aligned with our vision for this redevelopment, including "the revitalization of Waikiki as a place for Hawaii's locals and visitors to work, play, and live."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

CENTRAL PACIFIC BANK

March 11, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Re: Letter of Support for 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Toyomura:

I am writing on behalf of Central Pacific Bank to express our support for the mixed-use 133 Ka'iulani project. The construction of a mixed-use residential condo hotel project in central Waikiki will result in a myriad of economic and societal benefits.

The addition of new hotel rooms in Waikiki will help increase capacity in Hawaii's leading visitor destination. The project will also be a boon for the workforce, netting 200 permanent jobs and up to 300 construction-related jobs.

The project also strongly benefits the local community, as developers have plans to set aside $500,000 for beach replenishment and an additional $500,000 for ADA improvements for access and a bathroom at the nearby Waikiki Community Center.

Central Pacific Bank believes this mixed-use project can play an important role in the revitalization of Waikiki as a place for Hawaii's locals and visitors to work, play, and live. If there are any questions, please do not hesitate to contact me at (808) 544-3555.

Sincerely,

John C. Dean
Chief Executive Officer & Chairman
Central Pacific Bank

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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2752 WOODLAWN DRIVE, SUITE 5-217
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Steve Heimler
President
Cirrus Asset Management
441 Walina Street
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Heimler:

Thank you for your letter of March 17, 2015 expressing your support for the 133 Kaiulani Condo-Hotel Project.

We appreciate your comments and perspective on how this project will benefit residents, employees, and visitors in Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Cirrus
Asset Management, Inc.

March 17, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

This letter is intended to express my support for the 133 Ka'iulani Condominium-Hotel Project located at the King's Village site.

As an owner and operator of real estate properties in Waikiki, the State of Hawaii and the United States, I can appreciate the ongoing investment required to ensure that properties, as well as the neighborhoods that they reside in, are maintained for the benefit of residents, employees and visitors alike.

This proposed project will significantly advance efforts to continue to improve Waikiki for all of its constituents, and I would be very excited to see it proceed forward.

Sincerely,

Steve Heimler
President
Cirrus Asset Management
441 Walina Street
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
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FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Randal M. Hiraki
President
Commercial Plumbing Inc.
1820 Colburn Street
Honolulu, Hawaii 96819

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Hiraki:

Thank you for your letter, dated March 19, 2015, supporting the 133 Kaiulani Condo-Hotel Project.

With your company's long history of working in Waikiki, we appreciate your valuable thoughts on how this project will provide much needed hotel room inventory and entertainment options in Waikiki, as well as create new jobs and tax revenues for Hawaii.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Commercial Plumbing Inc.
1820 Colburn Street, Honolulu, HI 96819-3245
License C-13503
Phone (808) 845-4112 • FAX (808) 847-1865

March 19, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

Commercial Plumbing respectfully submits this letter in support of MK Development's Draft Environmental Assessment for the 133 Ka'iulani Condomium Hotel Project. As a local contractor that has been working in Waikiki for over 30 years, we believe that this project will benefit the local economy as well as our tourist industry. This project will create hundreds of construction jobs and ancillary construction jobs and help keep Waikiki competitive by creating 244 new hotels rooms in a severely supply-constrained hospitality market.

The redevelopment plan is also aligned with the City's vision to improve visitor enjoyment by providing additional retail and restaurant options for visitors and will increase real property tax revenue for the City & County of Honolulu, which can fund additional public projects and services for the City. The redevelopment plan will offer more parking spaces than required and will help alleviate the Waikiki parking shortage.

At completion, this project will create more new jobs versus the current usage.

We appreciate the opportunity to express our support of this new exciting redevelopment project.

Sincerely,

Commercial Plumbing, Inc.

By: _____
Randal M. Hiraki
Its President

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
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FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Ryan Chun
President
Elite Parking Services
900 Fort Street Mall, Suite 1045
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Chun:

Thank you for your letter of March 11, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

We appreciate your comment that, as a business owner operating in Waikiki for over 20 years, you "would welcome a new, modern hotel in place of the current King's Village retail area."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

ELITE
PARKING

March 11, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: In Support of 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Aloha,

I am Ryan Chun, President of Elite Parking Services. I'm proud to be a Hawaii-based business that started out very small and today has about 500 employees. In order for new, viable jobs and opportunities for entrepreneurial companies like mine to continue to grow, the redevelopment of Waikiki must continue strong.

Providing parking and other services to the Waikiki area for more than 20 years, I would welcome a new, modern hotel in place of the current King's Village retail area.

Please support this project.

Mahalo,

Ryan Chun
President

808-734-7559
808-941-0969
info@eliteparking.net
www.eliteparking.net
900 Fort Street Mall, Suite 1045
Honolulu, HI 96813

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Robert T. Fujioka
Vice Chairman and Chief Lending Officer
First Hawaiian Bank
P.O. Box 3200
Honolulu, Hawaii 96847

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Fujioka:

Thank you for your letter of March 19, 2015 in support of the 133 Kaiulani Condo-Hotel Project. As Vice Chairman of one of Hawaii's important banks, we appreciate and value your support.

We appreciate your comment that "the project would enhance the prospects for Hawaii's key revenue and job generating industry and keep Waikiki on the forefront of visitor destinations."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

First Hawaiian Bank
A BNP PARIBAS company

Robert T. Fujioka
Vice Chairman and Chief Lending Officer
Commercial Banking Group

March 19, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, HI 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Toyomura:

I am writing in support of the redevelopment of King's Village and the overall Waikiki Master Plan vision.

Strategically, the project would enhance the prospects for Hawaii's key revenue and job generating industry and keep Waikiki on the forefront of visitor destinations. The redevelopment would also have an immediate and direct economic contribution to Oahu.

Sincerely,

P.O. Box 3200 • Honolulu • Hawaii 96847
PHONE: (808) 525-6242 • FAX: (808) 529-6088 • fhb.com

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Ryken Shibasaki
General Manager
Freaky Tiki Tropical Optical
307 Lewers Street, #806
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Shibasaki:

Thank you very much for your letter of support for the 133 Kaiulani Condo-Hotel Project, dated March 12, 2015.

As a member of the Waikiki small business community, your feedback and support is much appreciated. We hope this project is able to contribute to your company's continued success and growth in Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 12, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Sir or Madam,

I am the General Manager for Freaky Tiki Tropical Optical and this letter represents my support for a new condo hotel at 133 Kaiulani.

Currently, our company has four locations in the Waikiki and Ala Moana area, and we are hoping to grow our business. To do so, it is critically important that Hawaii's economy remain strong and that Waikiki continue to attract visitors from all around the world.

The project proposed here will go a long way in helping to ensure that Waikiki remains a top tourist destination and that Hawaii's economic future remains bright.

Sincerely,

Ryken Shibasaki
General Manager
Freaky Tiki Tropical Optical
307 Lewers Street, #806
Honolulu, Hawaii 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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April 8, 2015

Mr. Joseph Toy
President & CEO
Hospitality Advisors LLC
745 Fort Street Mall, Suite 2124
Fort Street Tower
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Toy:

Thank you for your letter of March 19, 2015 providing your full support for the 133 Kaiulani Condo-Hotel Project.

Given your considerable experience in the global and Hawaii tourism industry, we appreciate your comment that this project is a "model example of the investment required" to provide visitors to our State with a "differentiated experience."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

HOSPITALITY ADVISORS LLC
HOTEL TOURISM & REAL ESTATE CONSULTING

March 19, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

My name is Joseph Toy, and I am the President & CEO of Hospitality Advisors LLC. I have over 30 years of experience in the global tourism industry, with a primary focus specifically for the Hawaii market. I have had the privilege of working on numerous tourism and strategic planning engagements in Waikiki, including the Waikiki Improvement Association's ***"Waikiki 2020 Strategic Plan"*** and its ***"Waikiki Beach Erosion Economic Impact Study."*** We also prepared various sections in the Hawaii Tourism Authority's ***"State of Hawaii Strategic Tourism Plan 2015-2020*** related to product development, accommodations capacity, room demand, and trends in accommodations investment.

I also assisted the City and County of Honolulu in developing strategic and policy plans related to tourism and hotel development, as well as several long-term master-planning projects for major landowners in Waikiki, and I produce the monthly "Hawaii Hotel Flash Report" that tracks the market performance for Hawaii's hotel industry since 1993. I was previously the global practice leader for PricewaterhouseCooper's Hospitality and Leisure practice for the Asia Pacific region prior to starting my own firm in 2000. I have had the honor of being inducted into the University of Hawaii School of Travel Industry Management Alumni Hall of Honors for my contributions to our visitor industry.

Based on my extensive work both globally and in in Hawaii, the global tourism market is extremely competitive, and Hawaii's position as a premium destination requires continued improvement to our tourism infrastructure, including new hotel and entertainment accommodations. Waikiki underwent a major repositioning that started in 2000 that helped address substantial deferred maintenance and obsolescence, with billions invested into Waikiki.

745 Fort Street Mall, Suite 2124, Fort Street Tower, Honolulu, HI 96813
Telephone: (808) 550-8955 — Fax: (808) 550-8655 — www.hospitalityadvisors.com

The successful transformation of Waikiki is clearly evident to Hawaii residents and visitors alike. Continued investment is critical, if only to keep pace with other destinations. However, if we hope to provide our increasingly sophisticated visitors with a truly differentiated experience that also incorporates Hawaii's unique natural resources and culture, we will need continued investment to keep Hawaii's position as one of the top destinations in the world

The development of 133 Ka'iulani is a model example of the investment required, and I completely give my full support for the project. Investments such as this, as well as the additional investments it will spur, are essential for Hawaii's economic future.

Sincerely,

Joseph Toy
President & CEO
Hospitality Advisors LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Benjamin Rafter
Jororo, LLC
320 Lewers Street
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Rafter:

Thank you for your letter, dated March 19, 2015, providing your support for the 133 Kaiulani Condo-Hotel Project.

Given your considerable executive-level hospitality experience in Waikiki, we very much appreciate your comment that "the King's Village redevelopment is a well designed and envisioned project" and that the "visitor market will respond well."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

JORORO, LLC

March 19, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

I am writing this letter to provide my support for the 133 Ka`iulani Condominium-Hotel project at King's Village.

In my career as CEO of Aqua Hotels & Resorts and president of Aston Hotels and Resorts, I have been responsible for managing over fifty hotels in Hawaii, thirty in Waikiki alone. Based on this experience, more inventory and modern product is sorely needed in Waikiki to both satisfy demand and remain competitive with markets in Asia and on the mainland.

I confidently believe the King's Village redevelopment is a well designed and envisioned project that will address both of those critical needs and generate long-term economic benefits.

Our visitor market will respond well to the plans envisioned for what is currently an aged development on the property.

Sincerely,

Benjamin Rafter
Jororo, LLC
320 Lewers Street
Honolulu, HI 96815
808-349-0670

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Ms. Dawn Chang
Principal, Ku'iwalu Consulting
Pauahi Tower, Suite 750
1003 Bishop Street
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Chang:

Thank you for your letter of March 13, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

We appreciate your support, and specifically, your comments regarding the culturally sensitive approach with which this project has been conducted. Going forward, we plan on continuing and further building off of the great collaboration we have had to-date with the individuals and groups that have a connection to the land, as well as the community in general.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Kuʻiwalu

March 13, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai'i 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawai'i 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Aloha Mai Kākou,

I SUPPORT the Draft Environmental Assessment prepared for the 133 Ka'iulani Condominium Hotel Project (Project).

I have worked with the Project development team since 2013, specifically with respect to the cultural consultation. At the onset of the project while it was still in the inception and design phase, MK Development Consulting, LLC (MK) conscientiously made design constraints to minimize excavation and ultimately, potential impact to iwi kūpuna, or native Hawaiian Burials. In addition, MK wanted to proactively engage with native Hawaiian families who have ancestral ties to the area to inform them of the proposed project and get their mana'o or thoughts on the Project. MK expressed a genuine desire to do this Project in a culturally sensitive way that honored the place as well as the families who have a connection to this land.

Consequently, since 2013, MK has convened at least five cultural consultation meetings with families who have a lineal and cultural connection to the land, including the Kaleikini 'Ohana, Caceres 'Ohana, and Kuloloio 'Ohana. They have also provided presentation and regular updates on the progress of the Project to at least five O'ahu Island Burial Council (OIBC) meetings.

During the course of the Archaeological Inventory Survey (AIS), iwi kūpuna were discovered and all activities halted in the area until consultation with the 'ohana, OIBC, and State Historic Preservation Division. MK voluntarily engaged cultural monitors during the AIS who conducted cultural protocols when the iwi kūpuna were discovered. A testament to the culturally sensitive work of MK was the fact that the recognized cultural descendants to the iwi kūpuna that were discovered on the site publicly supported the Burial Treatment Plan (BTP) at the OIBC meeting and consequently OIBC unanimously approved the BTP.

In conclusion, MK has conducted itself in a culturally sensitive and appropriate manner in this Project. For these reasons, I support the DEA prepared for the 133 Ka'iulani Condominium Hotel Project.

Mālama pono,

Dawn Chang
Principal, Ku'iwalu Consulting

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Thomas Park
Owner, Leather Soul
2233 Kalakaua Avenue, #301
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Park:

Thank you for your letter of March 16, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

As a young entrepreneurial business owner with a flagship location in Waikiki, we appreciate your comment that the "King's Village redevelopment provides Waikiki with the new investment required to enable long-term economic growth and strength."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

LeatherSoul

A Limited Liability Company

2233 Kalakaua Ave. #301
Honolulu, HI 96815
(808)922-0777

March 16, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I am submitting this letter to support the redevelopment of King's Village.

I started my own business in Hawaii, Leather Soul, in 2004 and began operating out of Waikiki in 2005. Today, my flagship store is located at the Royal Hawaiian Center on Kalakaua Avenue and the strength of Waikiki in the tourism market plays a significant role in the success of my business and in the lives of myself and my employees.

The King's Village redevelopment provides Waikiki with the new investment required to enable long-term economic growth and strength, and as a business owner in Waikiki, I look forward to being able to grow my own business on the foundation of that investment.

Sincerely,

Thomas Park
Owner, Leather Soul
2233 Kalakaua Avenue, # 301
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
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April 8, 2015

Mr. Steve Sombrero
President
NAI ChaneyBrooks
1440 Kapiolani Boulevard, Suite 1010
Honolulu, Hawaii 96814

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Sombrero:

Thank you for your letter of March 10, 2015 providing your full support for the 133 Kaiulani Condo-Hotel Project.

As an experienced real estate professional, your comment regarding Waikiki's need for "first-class facilities and amenities against the backdrop of Hawaii's natural beauty" is extremely insightful and echoes the motivations for this project.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

NAI ChaneyBrooks
Commercial Real Estate Services, Worldwide.

tel 808 544 1600
fax 808 544 9574
www.chaneybrooks.com

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Honolulu, HI 96814

March 10, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Kaiulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Toyomura,

I am writing this letter to provide my personal support and enthusiasm for MK Development's proposed 133 Kaiulani Condominium-Hotel Project in Waikiki.

Our organization, Chaney Brooks & Company has been involved in Hawaii's real estate market for more than half a century. We currently manage more than 340,000 SF of retail and office properties in Waikiki. Throughout the years, I have come to understand what makes Waikiki a truly unique and leading global travel destination - first-class facilities and amenities against the backdrop of Hawaii's natural beauty.

The 133 Kaiulani Condominium-Hotel Project is a necessary and much needed investment that will enable Waikiki to maintain its position as home to some of the most highly-coveted real estate in the world. Accordingly, I express my full support for this project.

Sincerely,

Steve Sombrero, President
NAI ChaneyBrooks
1440 Kapiolani Boulevard, Suite 1010
Honolulu, Hawaii 96814

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Leslie Y. Goya
Vice President
Queen Emma Land Company
1301 Punchbowl Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Goya:

Thank you for your letter of March 25, 2015 supporting the 133 Kaiulani Condo-Hotel Project. As Vice President of Queen Emma Land Company, we value your support and believe the overall revitalization of Waikiki is critically important.

We appreciate your comment that this project "would support the City's vision for having the private sector provide reinvestment to allow Waikiki to enhance its competitive edge as a global resort destination," as well as your recognition of the benefits that will accrue beyond the tourism industry, such as more open space and parks, increased parking, and a more walkable Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

QUEEN EMMA LAND COMPANY

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March 25, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

Waikiki has long been recognized as the economic engine that drives not only Oahu's economy, but that of the entire state. The competition from national and international destinations has become significantly more competitive and enhancing Waikiki as a resort destination is essential. One of the ways in maintaining the competitive edge is the continuous improvement of the infrastructure and to provide new and varied attractions and improved lodging facilities. Although change is necessary, it needs to be done in conformance with development guidelines established by governmental entities.

The Environmental Assessment (EA) prepared for the 133 Kaiulani Condominium Hotel Project would support the City's vision for having the private sector provide reinvestment to allow Waikiki to enhance its competitive edge as a global resort destination. The reinvestment will also support other aspects of the City's vision by creating more open space, including a new park on Prince Edward Street maintained by the developer, providing more parking stalls than required, a concern expressed in many surveys done in Waikiki, and supporting a pedestrian friendly neighborhood, a long standing requirement of the Waikiki Special District.

Waikiki has also experienced a reduction of over 2,200 rooms since 2003 and that reduction has been reflected recently during tremendously high hotel room occupancy. The 133 Kaiulani project will help to alleviate some of the room shortage by putting new lodging opportunities into the market place, again helping to improve the visitor's experience.

In addition to positive economic and visitor experience aspects of the proposed project, the developer has taken the necessary steps to address the environmental concerns which the EA highlights in meeting the requirements as outlined in Chapter 343 of the Hawaii Revised Statutes.

Thank you,

Leslie Y. Goya
Vice President
Queen Emma Land Company
1301 Punchbowl Street
Honolulu, Hawaii 96813

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Planning and Zoning Consultants

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April 8, 2015

Mr. Percy Higashi
President and COO
Roberts Hawaii
680 Iwilei Road, Suite 700
Honolulu, Hawaii 96817

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Higashi:

Thank you very much for your letter in support of the 133 Kaiulani Condo-Hotel Project, dated March 9, 2015.

We strongly agree with your statements regarding the importance of the tourism industry to Hawaii's economy and appreciate your support for our investment, which seeks to provide a first-class experience for visitors and residents alike in Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Roberts Hawaii

phone 808 523 7750
fax 808 522 7866

Roberts Hawaii, Inc.
680 Iwilei Road
Suite 700
Honolulu, Hawaii 96817

robertshawaii.com

March 9, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I am currently the President and Chief Operating Officer of Roberts Hawaii, Inc., which is the leading tour, transportation and entertainment company in Hawaii. I am writing this letter to convey my unequivocal support for the 133 Ka'iulani Condominium-Hotel Project.

At Roberts Hawaii, we are a key stakeholder in the tourism industry and our business is focused on providing customers with premium service and a seamless experience that motivates them to return to Hawaii, as well as recommend Hawaii to their friends and family. The result being greater economic growth and success for Hawaii and its residents. Waikiki, specifically, is the epicenter of the tourism industry here, and we recognize and endorse investments that will enhance Waikiki's position as a world-class destination.

The tourism industry is a critical component of Hawaii's economy and impacts each and every resident. Investment in that area benefits not only visitors, but Hawaii as a whole. Accordingly, I reiterate my support for this project and look forward to its continued progress.

Sincerely,

Percy Higashi
President and COO, Roberts Hawaii
680 Iwilei Road, Suite 700
Honolulu, HI 96817

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Planning and Zoning Consultants

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April 8, 2015

Mr. Richard E. Tanaka
Chairman & CEO
Tanaka of Tokyo Restaurants
131 Kaiulani Avenue, 3rd Floor
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Tanaka:

Thank you for your letter of March 8, 2015 providing your full support for the 133 Kaiulani Condo-Hotel Project.

As a long-time tenant of the King's Village Shopping Center, we are very appreciative of your support for the redevelopment plans and your comments that this project will help provide visitors to Hawaii with a more enjoyable Waikiki experience.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

TANAKA of TOKYO RESTAURANTS

March 8, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Kaiulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern:

I have been a tenant of the King's Village Shopping Center since 1990 and am writing to convey my full support for MK Development's plans for this property.

As a long-time business owner of multiple establishments in Waikiki, it is critical for Waikiki that the redevelopment move forward. Visitors to our State expect experiences that include fresh, updated venues and surrounding grounds. 133 Kaiulani is an excellent step toward this vision.

I would also like to add that the current ownership has been highly professional and accommodating to us since the property was purchased in 2012.

Sincerely Yours,

Richard E. Tanaka
Chairman & CEO

RET/hal

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❑ CENTRAL • Waikiki Shopping Plaza • 2250 Kalakaua Ave., 3rd Flr., Honolulu, HI 96815 • Phone (808) 922-4702 • Facsimile (808) 922-5485
❑ EAST • King's Village • 131 Kaiulani Ave., 3rd Flr., Honolulu, HI 96815 • Phone (808) 922-4233 • Facsimile (808) 922-6948

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April 8, 2015

Dr. Paul H. Brewbaker, Ph.D.
TZ Economics
606 Ululani Street
Kailua, Hawaii 96734

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Dr. Brewbaker:

Thank you for your letter, dated March 24, 2015, which provides your broad support for the 133 Kaiulani Condo-Hotel Project.

We appreciate your detailed and compelling analysis, which identifies the economic and strategic benefits this project will provide for our State. In particular, your comment that this project will "provide the funding base for critical public infrastructure investments and upgrades that are necessary" is extremely insightful.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Testimony of Paul H. Brewbaker, Ph.D.
Economist, TZ Economics
606 Ululani St., Kailua, Hawaii 96734-4430

In support of redevelopment at the King's Village site
at 133 Kaiulani Avenue in Waikiki

March 24, 2015

My name is Paul H. Brewbaker, Ph.D. and I am a private, consulting economist specializing in non-financial corporate economic research, public policy analysis, and litigation support in Hawaii. My background includes about 25 years as a commercial bank economist in Hawaii and as a university lecturer in Wisconsin, where I did some of my graduate education in economics, and in Hawaii where I received my doctorate in economics.

This testimony offers broad support for the general approach taken by developers of the former King's Village shopping mall in Waikiki, based on some of the redevelopment project parameters outlined in their environmental assessment. I am a consultant to the developer. My argument rests on two basic premises, drawn from my own analysis of certain economic impacts associated with the redevelopment. This testimony contains preliminary results subject to future refinement, comprising: (1) substantial, comparative-static (before vs. after) Oahu economic impacts on employment, income, and taxes; and (2) strategic, dynamic contributions to the evolution of Waikiki as a tourism destination. Analytical details are available upon request, and some illustrations are appended to support the strategic assessment.

First, it is important to understand that opponents to the redevelopment project offer no change to the *status quo ante*. Their position makes no contribution to the evolution of Waikiki as a destination. I ignore the fact that an aging retail establishment, lacking historical significance, of dubious architectural or aesthetic value (and, arguably, rooted in a passing nostalgic fashion in the 1970s harkening back to the turn of the twentieth century that would be widely perceived as *passé* to early twenty-first century sensibilities) represented by the existing King's Village complex has been declining in market value as its sales and customer traffic have waned over time. In what follows only *incremental* economic contributions of the redevelopment are enumerated, assuming for simplicity that the existing retail capacity is replaced and no increase in retail sales and employment ensue.[1]

Although I personally believe that it is of secondary importance compared to the strategic economic benefits of East Waikiki redevelopment and repositioning, it has been customary in political discussion about such projects to enumerate their employment, income, and tax impacts. Public policy decision-makers have an expectation that such information will be presented and media reports frequently emphasize such outcomes. That being the case I offer the following estimates of impacts of redevelopment at 133 Kaiulani Avenue in Waikiki, based on the developer's characterization of the project's size and scope in its environmental assessment:

[1] This is like assuming that after the recent Lewers Street redevelopment retail capacity and sales did not change.

- Approximately $117 million in direct construction outlays (this is less than the developer's estimates)
- Approximately 660 jobs for two years of construction (1,318 job-years), including direct, indirect, and induced impacts
- Approximately $231.5 million in total output associated with these impacts, more than $72.4 million in household income and $13.2 million in state tax revenues.

In addition to these *impact* estimates associated with the construction itself, the expansion in tourism capacity resulting from the redevelopment—approximately 244 condominium and lodging units, of which three-quarters are assumed to be in the transient (rental) accommodation inventory, at prevailing utilization and room rates (associated with the relevant inventory), I estimate the following present value estimates of future annual amounts over the next thirty years at a discount rate of 6 percent, assuming real room rate appreciation of 2 percent, real property appreciation of 2 percent (or, equivalently, in each case, a 2 percent consumer price inflation rate), and zero real growth in average daily Oahu visitor expenditure:

- An estimated $427 million in cumulative, present-value lodging receipts, and associated $39.5 million in TAT revenue and $20.1 million in GET revenue over the next thirty years (2015-2044, inclusive), at a present-day average daily room rate of $450/night.
- An estimated $173 million in cumulative, present-value property tax revenue at present-day property tax rates and using assessed values of neighboring comparables, over the next thirty years.
- A one-time $1.2 million in conveyance tax receipts, assuming no future resales (future transactions velocity is unknown and is not forecast to low-ball tax revenue estimates).
- Approximately $88.8 million in cumulative, present-value *non*-lodging tourism receipts, assuming (conservatively) that visitors in new lodging at 133 Kaiulani exhibit the *same* real average daily non-lodging Oahu visitor expenditure over time (with no growth).

It is important to understand that *each* of the cumulative, discounted future values stated in present value terms is comparable to—for example—a 30-year government bond issued to fund investment in infrastructure upgrades or expansion. I reiterate that all of these longer-term, cumulative impacts are *incremental* to *existing* retail and associated tourism economic activity at King's Village. Opponents of redevelopment offer, in exchange for these incremental impacts of redevelopment, nothing that is not already there.

As I noted above, my own opinion of these impacts is that they are of secondary economic importance. This may sound strange: certainly a tally comprising more than $200 million in construction-related economic impacts and nearly $700 million in the present-value of future long-term economic impacts is nontrivial. (Note that the estimates *exclude* the present-value of resident housing services which, it is assumed, buyers value no less than the amounts they pay

for the housing units that give rise to the one-time generation of conveyance tax receipts). This is because *any* urban redevelopment that expands housing capacity or tourism capacity or some combination of both, while replicating the existing retail (e.g. shopping and dining) economic activities associated with King's Village—*not* expanding them, merely replicating them—would achieve the same incremental outcomes. In contrast, doing nothing yields nothing. Spending $100-200 million in new construction nontrivially creates the capacity for many hundreds of millions of dollars in the present-value of future economic activity even at relatively aggressive rates of discount.[2] How you do it, of course, matters, and that's why it's important to understand the strategic, dynamic economic importance of redevelopment in Waikiki for Oahu and Hawaii as a tourism destination. I briefly cite three reasons below:

1. Tourism is approximately 17 percent of value-added or GDP in Hawaii, and the military is approximately 9 percent of value-added or GDP in Hawaii. Oahu comprises approximately 75 percent of Hawaii GDP. Since virtually all of military activity is on Oahu, it is approximately 12 percent of Oahu value-added. Tourism probably is no larger a share of Oahu GDP than that: only half the state's lodging inventory is on Oahu, and in 2014 total visitor expenditure on Oahu was $7.1 billion, while on the Neighbor Islands it was $7.6 billion.[3] Moreover, tourism has been shrinking *absolutely* for 25 years in terms of constant-dollar tourism receipts (the measure of export revenue), and has been shrinking as a share of Hawaii value-added for the last 20 years. Faced with the likelihood of declining military outlays for the next decade or more as part of the generalized federal financing necessitated by aging and the associated rise in Medicare and Social Security outlays well beyond the 2020s,[4] Oahu has only two choices. It can suffer the decline in military outlays and *not* grow tourism—which hasn't grown for the last quarter century—or it can suffer the decline in military outlays and attempt to renew

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[2] This analysis discounts future values at an annual rate of 6 percent at a time (March 2015) when the risk-free nominal interest rate on 10-year U.S. Treasury Notes is just under 2 percent and the central tendency of forecasts of members of the monetary policy-setting Federal Open Market Committee (FOMC) of the Federal Reserve Board for the nominal, long-term risk-free interest rate is just under 4 percent, when its explicit long-term inflation policy goal as well as the central tendency of its longer run inflation expectations is 2 percent.

[3] I choose not to make my own estimate of tourism's value-added share of Oahu GDP in favor of official (if unpublished) estimates consistent with the State of Hawaii's visitor expenditure estimates (2014 data at http://files.hawaii.gov/dbedt/visitor/tourism/2014/Dec14.xls; for value-added or GDP estimates see DBEDT *State of Hawaii Data Book* (http://hawaii.gov/dbedt/info/economic/databook/2010-individual/07/073410.xls) and Eugene Tian, James Mak, and PingSun Leung, "The direct and indirect contributions of tourism to regional GDP: Hawaii," *UHERO Working Paper No. 2011-5* (July 28, 2011) (http://www.uhero.hawaii.edu/assets/WP_2011-5.pdf).

[4] According to the non-partisan Congressional Budget Office (CBO): "If current laws governing federal taxes and spending generally remained unchanged, revenues would grow only slightly faster than the economy and spending would increase more rapidly.... Consequently, relative to the size of the economy, deficits would grow and federal debt would climb." Only discretionary non-defense (less than 4 percent of GDP) and discretionary (less than 4 percent of GDP) federal defense outlays can be reduced in pursuit of long-term federal budget balance, in the absence of revenue enhancement, since *non*-discretionary outlays such as major federal health care programs (Medicare, Medicaid, the Children's Health Insurance Program, and subsidies for health insurance purchased through exchanges and related spending), Social Security, and interest on the federal debt in the hands of the public *each* will grow by *at least* 1 percentage point of GDP over the next decade, more than 3 percentage points of GDP collectively, according to the CBO (August 27, 2014) (http://cbo.gov/publication/45653).

tourism growth. *Only* redevelopment of Hawaii principal tourism destination, Waikiki, can meaningfully achieve the second outcome. In the first outcome some of you might as well leave now.

2. Oahu lodging capacity has not risen in nearly 30 years. Hotel occupancy routinely rises so fast, now, in cyclical tourism expansion that rising real (inflation-adjusted) room rates begin to reduce average visitor length of stay. Oahu hotel occupancy goes flat as a result, impairing not just lodging industry revenue growth but tourism receipts on Oahu generally (effectively capped at just over $7 billion). Note that the lodging inventory on Oahu—broadly-defined to include hotels, condominium and other vacation rentals, timeshare and other fractional ownership properties—has remained unchanged, on net, in spite of recent additions of capacity at Disney's Aulani Resort, the Trump Tower, various timeshare and hotel developments at the Hilton Hawaiian Village, and Marriott timeshare developments at Ko Olina Resort. Additions to Oahu's lodging inventory *several multiples* of the proposed 244 units at King's Village (one-quarter of which this analysis assumes will be resident condominiums) have failed to prevent the visitor plant inventory from declining on Oahu since the late-1980s. See Figures 1-3.

3. All of the upgrades and redevelopment at Royal Hawaiian Center, along the mauka block of Lewers Street and Beachwalk, and the mauka stretch of Kalakaua Avenue from Lewers Street to Saratoga, have made a significant contribution to reinvigorating the Ewa end of Waikiki along Kalakaua Boulevard over the last two decades that has dramatically repositioned the destination. In the same way, the Diamond Head of Waikiki needs to receive a physical, urban renewal over the next decade or two in order to combat destination senescence. This includes—pivotally, in the same way that Royal Hawaiian Center is pivotal mauka—the area southeast of Kaiulani Avenue in the area comprising Census Tract 18.01 all the way down to Kapahulu Avenue.[5] This prospect is catalyzed by the redevelopment of the International Market Place and pending redevelopments of Kyo-ya's Starwood properties at the Diamond Head end of Census Tract 20.01, also abutting Kaiulani Avenue. In short, Kaiulani Avenue is as important to Waikiki redevelopment of its Diamond Head portion, as Lewers Street was to its Ewa portion. This is simply spatial economics. Without this refresh, the destination will continue to short-circuit Oahu economic growth as it already has in recent years in spite of recent Waikiki redevelopment.

Honolulu as a city, and Oahu's economy, confronts at tourism standstill in the absence of significant capacity expansion: it has barely stayed even with notable new hotel and resort developments and tourism destination redevelopment. The danger now is that shrinking military outlays will compound what has already happened because of Oahu's tourism stagnation. Redevelopment at 133 Kaiulani Avenue and King's Village will extend the process of destination renewal and provide the funding base for critical public infrastructure investments and upgrades that are necessary *whether or not* redevelopment is allowed to proceed.

[5] Assuming that the area makai of Kalakaua Avenue will remain preserved as open space and an open-access public recreation area.

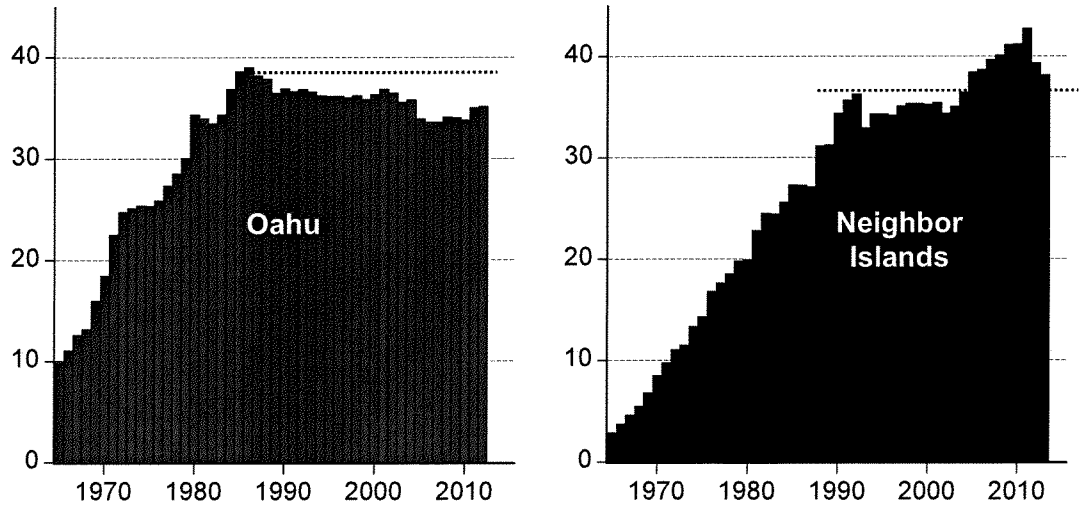
Table 1. Constant-dollar tourism receipts, Oahu and Neighbor Islands (billion 2014$)

billion 2014$	2006	2007	...	2013	2014
Oahu	7.339	7.086		7.418	7.109
Neighbor Isles	7.929	7.852		7.110	7.596

Notes: The Great Recession in the U.S. ran from December 2007 through June 2009 (http://nber.org/cycles/cyclesmain.html).

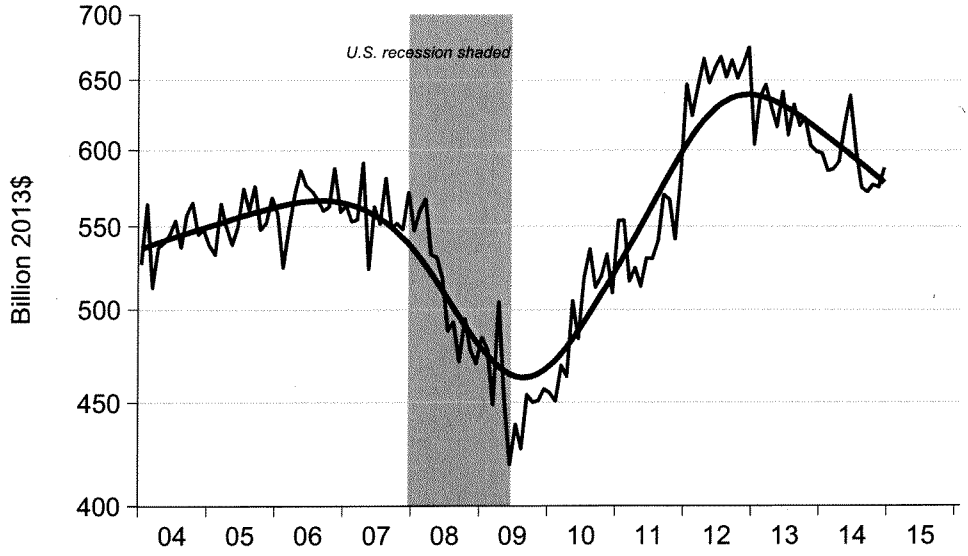
Sources: Hawaii Tourism Authority, Hawaii DBEDT, U.S. Bureau of Labor Statistics; deflation calculations by TZE

Figure 1. Visitor Plant Inventory, Oahu and Neighbor Islands (thousand rooms)



Sources: Hawaii Tourism Authority, Hawaii DBEDT (*Visitor Plant Inventory* reports (various annual))

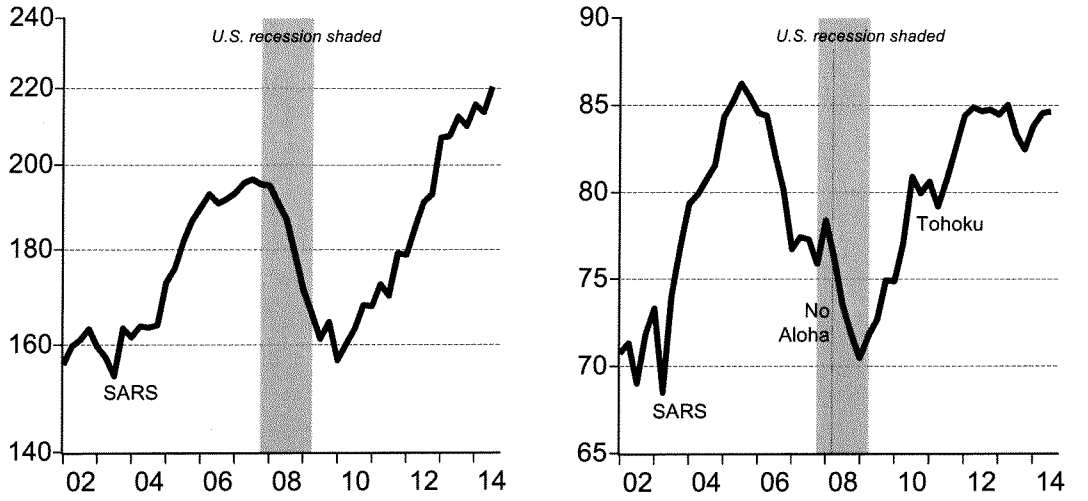
Figure 2. Monthly real Oahu tourism receipts (million 2013$)



Notes: Annual data in Table 1 are deflated using the (semi-annual and annual) Honolulu Consumer Price Index, which translates tourism receipts into a constant-dollar estimate consistent with the purchasing power of a dollar at Honolulu prices. Honolulu had higher inflation at the peak of the U.S. economic expansion in 2007 than the U.S. urban average, so real (constant-dollar) visitor expenditure are lower, when deflated with an annual inflation index, than when deflated using an imperfect proxy as in Figure 2, above. The monthly nominal visitor expenditure data published by the State of Hawaii and used in Figure 2 are deflated using the monthly U.S. personal consumption expenditure deflator (PCEPI) (the preferred inflation measure of the Federal Open Market Committee of the Federal Reserve Board, and its associated inflation goal for monetary policy), which exhibited lower inflation at the peak of the U.S. economic expansion in 2007 than Honolulu's contemporaneous (but semi-annual) consumer price index-based measure. Absent a high-frequency price index for Honolulu, the PCEPI is used instead as a deflator. A true export price index for Hawaii tourism receipts does not exist in any event (notwithstanding occasional discussions with DBEDT and the HTA about the possibility of constructing one), but even it if did these price indexes still provide correct measures of *consumer* purchasing power for Honolulu and the U.S., respectively. The trend line shown is extracted using a Hodrick-Prescott filter and the NBER recession dates sourced in the notes to Figure 1 are shaded in the graph in Figure 2. Note also that the base periods are different in Table 1 and Figure 2.

Sources: Hawaii Tourism Authority, Hawaii DBEDT, U.S. Bureau of Economic Analysis through the Federal Reserve Bank of St. Louis; deflation calculations by TZE

Figure 3. Real room rates on Oahu rise so fast they *cap* hotel occupancy



Oahu real room rates (2013$, s.a.)

Oahu hotel occupancy (percent, s.a.)

Sources: Quarterly data from TZE database (from Pannell Kerr Forster and PKF Hawaii, Hospitality Advisors LLC); seasonal adjustment using the X-12 ARIMA filter (BLS), deflation using an interpolated quarterly Honolulu CPI-U by TZE

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April 24, 2015

Mr. Benjamin Sadoski
UNITE HERE, Local 5
1516 South King Street
Honolulu, Hawaii 96826

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Sadoski:

Thank you for your letter dated March 20, 2015 regarding the Draft Environmental Assessment ("DEA") for the 133 Kaiulani Condo-Hotel Project ("Project").

We appreciate your comments and offer the following responses (in the order set forth in your letter):

1. The developer (applicant) projects that about 85% of the proposed condo-hotel units will be placed in a hotel program. This factor is based on statistics of similar properties in Waikiki. Typically a great majority of the remaining 15% of the units will be used as part-time residences or long-term, personal vacation homes. It is anticipated that less than 2% of the units will be used as typical permanent, primary residences. Many part-time residences will still utilize typical hotel services (maid service, valet, room service, etc.). The above percentages are based on the Trump International Hotel Waikiki Beach Walk (Trump Hotel), where 90% of its studios and 80% of its one-bedroom units are in the hotel program. At the Luana Waikiki Hotel and Suites (Luana Hotel), which is comprised of mostly studio and one-bedroom units, the percentage of units placed in the hotel program is 90% to 95%. The applicant's latest condo-hotel unit count is 246, down from the 248 in the DEA. Although for sales purposes we will have 244 condo hotel units, because two of the units will have two keyed entrances and can be used as separate units, DPP considers the Project to have 246 condo-hotel units. We will use 246 as our condo hotel unit count for discussion purposes in the Final Environmental Assessment (FEA).

2. Transient rentals:

   a. The applicant cannot guarantee that a minimum number of units will be used as transient rentals. This is an individual owner's decision and a personal, private property right.

   b.,c.,d. The applicant will not place stipulations on any units to ensure that they will not be used for residential purposes.

3. Residential uses:

   a. The units have been designed for a short-term stay. Based on historical statistical data for similar-type properties, it is highly improbable that "all the units will be used for residential purposes".

   b. Please see the response above. Also, the applicant has no plans to convert the Project into a condominium for primary residences. The increase in height is not a variance but a modification of standards permissible under a Planned Development-Resort permit.

4. The applicant expects that at maximum, about 37 of the units or 15% will be used for residential purposes, most likely as vacation homes and not primary residences.

5. Based on the projected 37 units (15%) that may not be placed in a hotel operation (this is a very high number of units, as the applicant expects that only about 2% of the 246 units will be used as permanent residences and the balance would more closely resemble a hotel type use):

   a. Full-time employment in the DEA was conservatively estimated and full time employment was based on less than 200 units being in the hotel program.
   b. Parking requirements for any longer-term residents are easily accommodated since the applicant is providing 272 parking stalls (please note that updated parking count, differs from DEA, but will be included in the FEA) for an overall surplus from zoning requirements of 210.
   c. For purely full-time residences, property tax revenues may decrease slightly due to use of a homeowner's exemption. It is anticipated that few if any of the units will be used as primary residences, which is required for a homeowner's exemption.
   d. General Excise tax revenues were also conservatively estimated in the DEA and based on less than 200 units being in the hotel program.
   e. Transient accommodation tax revenues were also conservatively estimated in the DEA and based on less than 200 units being in the hotel program.
   f. The difference in trip generation with about 37 units not placed in a hotel operation is shown below:

Condo/Townhouse	AM Peak	16.3 (3.8 enter/13.5 exit)
	PM Peak	19.2 (12.9 enter/6.3 exit)
Hotel	AM Peak	19.6 (11.6 enter/8.0 exit)
	PM Peak	23.3 (11.9 enter/11.4 exit)

   As you can see, there will be about 3.3 more trips during the AM (morning peak hour and 4.1 more trips during the PM (afternoon peak hour), not a significant increase.

The Traffic Impact Report (TIR) in the DEA was done conservatively based on 275 hotel units. A comparison of the difference in trips generated during the AM and PM peak hours between a 275-unit hotel and a 209-unit hotel with 37 residential condominiums is provided below.

		TIAR	Revised Plan			Net Difference
		Hotel	Hotel	Condo/TH	Totals	
		275 units	209	37		
AM Peak	Enter	69	52	2	54	-15
	Exit	48	36	11	47	-1
	Total	117	88	13	101	-16
PM Peak	Enter	67	51	10	61	-6
	Exit	65	49	6	55	-10
	Total	132	100	16	116	-16

As you can see, with a lower number of anticipated units (246 versus 275) with the Project, the trip generation for the Project is expected to be less than what was assessed in the TIR even if a portion of the anticipated units (246 total) were residential rather than hotel units.

g. There will be minimal to no impact on schools. Based on the Department of Education (DOE) standards for Waikiki the increase in residential units minus the former existing apartment units on the property would result in about 2 additional students in grades K to 12. The DOE has indicated that the schools in the area have sufficient space to accommodate any increase in students generated by the project.
h. The difference in impact on water usage is 1,850 gallons per day (gpd) less for residential use rather than hotel use.
i. There is no difference in wastewater generated per hotel unit or residential unit.
j. With regard to solid waste, the 37 residential units could potentially generate 1-3 cubic yards 5 times a week, which is double the hotel use if it's assumed residents would eat at home.
k. The project will not generate any affordable housing requirements.
l. The difference in energy usage would be nominal, if any, for any full-time residential units. Statistics state that a residential condo versus a hotel unit is about a 7% to 9% increase in energy use. Using this statistic, the increase in energy usage between a 246-unit hotel versus a 209-unit hotel with 37 residential condominium units would be about 1%.
m. The impact to the Honolulu Fire Department and the Honolulu Police Department is not expected to change with the change in a portion of the units from hotel to residential use.
n. The impact to the City's park system will not change with the change in usage of a portion of the units from hotel to residential use.
o. The applicant does not believe there would be any other potential impacts with a portion of the units becoming dwelling units.

6. All mitigation measures for the proposed project are described in the DEA. As stated above, it is not anticipated that there will be a change in the proposed hotel use of the units. Therefore, there will not be a significant change in the Project's impacts.

   a. We have conservatively utilized the projected maximum residential scenario, which is unlikely given the results experienced by other condo-hotels in Waikiki.
   b. As a clarification to the statement made in your letter, this *is* a full-service hotel. As discussed in item 5 above, the difference in impacts to infrastructure and utility services between a hotel unit and residential unit is minimal. The traffic impact analysis shows that the impact of the change in use would be negligible. Even with other future developments planned as condo-hotels, given the minimal difference in demand on infrastructure and traffic, the cumulative effect would be minimal, if any.

7. The applicant is building a full-service hotel. Individual units will be conveyed to purchasers, which allows the Project to be feasible and financed. A traditional hotel model has a long rate of return and is not feasible and therefore not financeable. The net result of the proposed project is a full-service hotel where condo-hotel units will be placed under a hotel operation.

8. Outdoor dining:

   a. The outdoor dining area is encouraged by the Waikiki Special District guidelines and will generate noise at about 59 DNL near the perimeter of the dining terrace.
   b. The hours of operation will be established by the operator who has not been determined at this time.
   c. The service of liquor will be established by the operator who has not been determined at this time.
   d. The outdoor dining area will generate about 59 DNL near the perimeter of the dining terrace. This is assuming an average noise level of 60 dBA over a 12 hour daily operating period for the facility. The outdoor dining area noise will add less than 1 DNL to the existing ambient noise level of 65 to 67 DNL and will have minimal impact on the surrounding area, given the ambient noise presently experienced from surrounding traffic.

9. The hotel and guestrooms will be designed to meet ADA (Americans with Disabilities Act) requirements. After the guestrooms are sold to individual buyers, it would be the owner's responsibility to continue to comply with applicable ADA regulations.

10. The applicant is not contemplating any future expansion to this project. There is no room on the site for an additional tower.

11. The applicant will expand on the "No Action" alternative, the "Renovation of the Existing Structures" alternative and the "Develop within the WSD Standards" alternative in the Final Environmental Assessment (FEA).

12. The project developed within the WSD standards and no PD-R would provide 15.7% public open space.

13. The four condo-hotels that you mentioned were all built in the 1960's and were most likely renovated and sold as condo-hotels in more recent years. In today's market, given land cost, construction costs, and fixed operational costs, a minimum number of rooms is required to meet economies of scale in justifying the management and operation of a hotel. This minimum number varies on the hotel operator and level of service.

    a. The applicant has relied on hotel industry consultants and professionals who have advised that a critical mass of 200-250 units are needed for an economically viable hotel.
    b. For the proposed project, the 246 condo-hotel units planned are expected to result in a hotel operation of about 209 hotel units which would meet the minimum requirement.
        i. The proposed development is not requesting a variance, and is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO) that allows flexibility in project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced. The Project needs the flexibility requested to construct the 246 unit condo-hotel and to meet the WSD requirements and minimize impact to views.
        ii. There is no minimum 50% requirement for projects in resort mixed use precincts under the WSD. The 50% open space requirement is only required for Apartment Precinct developments with an FAR greater than 1.5. (Refer to Table 21-9.6(B) of the LUO). st Our site is within the Resort Mixed use precinct (Refer to Exhibit 21-9.13 of the LUO). The PD-R requires a 50% open space, but this standard may be modified when beneficial public open space and amenities are provided.

14. The defining conditions that made a mauka/makai orientation virtually impossible to comply with while maintaining an acceptable amount of floor area in the tower is the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai direction and the requirement of 15-foot yard setbacks on both Prince Edward Street and Koa Avenue which further restricts the depth of a tower in the mauka/makai direction.

    A concerted effort was made in situating the building to be sensitive to minimizing visual impact on surrounding neighbors and to minimize ground disturbance by situating the building basement within the existing basement of King's Village. The bulk of the building tower has been situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R.

Under the proposed design which is permitted under the PD-R process, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and **preserves significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations:

"The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the

ocean or from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet."

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

15. Lot width (Mauka-Makai) is 164'-11". Minimum depth is 82'-6" at the park and 164'-11" throughout the rest of the lot. Average lot Depth (Ewa-DH) is 276' (average of longest and shortest including park). Minimum depth is 257'- 9" at the middle of the lot.

16. No portion of the units will be sold as affordable.

17. The applicant is the project manager for the renovations at the Ohana West to convert it into the Hilton Garden Inn Waikiki Beach. One of the applicant's partners is involved in a consultant capacity on the Hyatt Regency renovations. No other developments within half a mile are contemplated at this time by the applicant.

18. The tower sits in the Aston Waikiki Beach view corridor shadow, thus does not block views of Diamond Head from Punchbowl Lookout (from the Punchbowl Cemetery's viewing platform that has been presented at City Council in earlier projects determining impact to views from Punchbowl). No part of the Project will obstruct the view of any part of Diamond Head as seen from this viewpoint. A tower situated in the mauka/makai orientation even at 240 feet would impact existing views of Diamond Head from Punchbowl.

19. The applicant is not aware of whether an environmental assessment or environmental impact statement for the Outrigger Reef Hotel was done, based on a review of the Office of Environmental Quality Control's Environmental Impact Statement and Environmental Assessment Library. The applicant understands that the Hyatt Regency has completed its Final Environmental Assessment and will not increase total floor area, but may modify uses at the hotel accessory, back of house and retail areas. These modifications are not expected to have a significant impact on traffic or infrastructure in Waikiki. The Waikiki Trade Center has received a minor Waikiki Special District permit, which does not require environmental review as impacts are not expected to be significant.

20. There will be a hotel rental program.

a. The applicant does not have an estimate of the number of units that will be rented out for transient use other than through the hotel's rental program.
b. It will be up to the individual owners to pay the TAT and GET for these rentals.
c. The applicant's TAT and GET income generated were conservatively estimated in the DEA based on less than 200 hotel units being placed in the hotel program. It's anticipated and projected that most of these units will utilize hotel services.
d. The applicant cannot ensure nor does it have any control over the employment utilized by individual owners that decide not to put their units in the hotel program. The hotel operator will operate the property as a full-service hotel with commensurate jobs, competitive compensation and benefits.

21. With regard to our Traffic Management Plan:

a. The applicant will encourage utilization of our City bus system. The City encourages ridership and will welcome the opportunity to operate at capacity or to add an additional bus to the route if warranted.
b. Any carpool and public transit employee incentives will be further developed by the hotel operator. Incentives could include subsidized bus passes and reduced parking fees for employees that carpool. The project will provide bike racks and showers for employees who want to bike to work.

22. The City has approved a Sewer Connection Application (letter dated July 11, 2014) provided the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream, as required, to meet hydraulic requirements.

a. The Sewer Connection Application was approved for the Project as planned and with the improvements being required, the City's wastewater system is adequate to service this Project.
b. The approved Sewer Connection Application states that the City's wastewater system is adequate to service this Project with the proposed improvements.

23. Using statistical analysis, the project will generate between 1,456 to 1,976 cubic yards of solid waste more per week than is being generated by the existing uses on the site. We however, strongly encourage recycling and environmentally-sound operational practices.

24. The Project may affect ocean views of some of the surrounding properties, but as mentioned in item 14, the applicant has done its best to minimize view impacts by locating the bulk of the building tower north (mauka) of the Hyatt West Tower, thereby reducing the visual impact of the Project. Redevelopment of this underutilized property could lead to redevelopment of surrounding underutilized properties improving the condition and property values of the neighborhood.

25. Converting Kaiulani Avenue to two-way traffic between Kalakaua Avenue and Koa Avenue is being required by the Department of Planning and Permitting (DPP) to

improve traffic circulation. The applicant will adjust traffic lane movements, provide signal lights where required, and adjust the signal timing to implement the two-way conversion. The traffic signal timing will be adjusted to minimize delays for north bound traffic on Kaiulani Avenue. Traffic circulation is expected to improve with the conversion.

26. The supply of lodging in Waikiki does not affect demand at outlying resort areas which provide a very different experience than the urban resort experience in Waikiki. By the same token, the addition of lodging at Ko Olina and eventually at the North Shore will not affect demand in Waikiki. Waikiki has experienced a pent-up demand for several decades and this has been exacerbated with the reduction of hotel units over the years. Hawaii continues to lose significant Convention Center bookings due to the lack of appropriate hotel room inventory. It also is experiencing a reduction in visitor satisfaction in a recent survey that needs to be reversed. This project alleviates just a small percentage of this pent-up demand.

27. The Project will have small, private meeting spaces.

    a. The Project will have three relatively small meeting spaces (2,610 square feet total) to be used primarily by hotel guests.
    b. The hotel's meeting space will have no impact on the larger banquet meeting spaces at nearby hotels and the Hawaii Convention Center. However, the hotel and additional room inventory will help the Hawaii Convention Center by providing quality hotel rooms that will meet the needs of convention planners who have had to move to other locales because of the lack of quality hotel rooms in Waikiki.

28. Parking

    a. There will be two restaurants (6,620 square feet), private meeting rooms (2,610 square feet), spa (6,740 square feet), and fitness (2,400 square feet) above the ground floor. In addition there will be accessory hotel uses, such as the pool and lobby which are also above the ground floor.
    b. No parking spaces are required for these above-ground commercial uses, as these uses are considered accessory to the primary hotel use.
    c. There is no pre-existing parking requirement for the Hyatt property. The applicant is not sure of what other surrounding properties may be interested in leasing the additional stalls at this time.
    d. There is no pre-existing parking requirement for the Hyatt.
    e. There is no existing agreement with Hyatt to meet their demand.
    f. The applicant has more than enough parking to meet any residential demand for parking with over two hundred surplus stalls. Park dedication standards can easily be met with the park site being planned on Prince Edward Street.
    g. There may be a handful of individually-owned parking stalls, particularly attached to the few two- and three-bedroom units. This would amount to less than ten stalls.

29. The units are expected to be sold and rented at prices and rates similar to the Trump Hotel.

30. Hotel Jobs

a. The 320 full-time employees (FTE) and 64 part-time employees were calculated using employee counts for comparable hotels. It was then checked for reasonableness by employee per room standards: 1.75 FTE/key x 183 keys = 320 FTE. 20% would be part-time, 320 FTE x 20% = 64 part-time employees. With 209 estimated hotel keys, this would result in approximately 366 FTE and 73 part-time employees. Retail could add another 55 FTE and 5 part-time employees.
b. The job estimates are for on-site jobs. A total job impact estimate would have a factor of 2.63 times direct jobs per the Department of Business, Economic Development, and Tourism "The Hawaii State Input-Output Study: 2007 Benchmark Report", Revised December 2013.
c. The specific jobs will be determined by the operator who has not been determined at this time.
d. There is a preferred hotel management company, however, the operator has not been determined at this time.
e. The staffing will be determined by the operator who has not been determined at this time.
f. Occupancy for this hotel is expected to be similar to other hotels in Waikiki.
g. It is projected that approximately 10 stalls may be reserved for private, exclusive use. It is anticipated that the majority of the stalls will be managed using valet services.

31. Tax revenues are calculated by:

a. Transient tax is calculated as follows: # units in rental program x occupancy x nights per year x average daily room rate x transient tax rate.
b. General excise tax on room is calculated as follows: # units in rental program x occupancy x nights per year x average daily room rate x general excise tax rate.
c. Real Property Tax was calculated as follows:
Real Property Tax equals projected assessed value (unit sales value + retail value + hotel value) X hotel and resort property tax rate. The FEA will be revised to show an adjusted real property tax benefit accounting for 37 residential condo units with homeowner's exemption and 209 hotel units. The increase in annual property taxes will be $4,229,296 instead of $4,266,000.
d. There are additional general excise taxes on retail and restaurant revenues which have not been added to these projections.

32. Non-lodging visitor spending will not be significantly affected by the demolition of King's Village and construction of the new project. There will be a large retail component on the ground floor to off-set some of the non-lodging visitor spending currently occurring on property and there are many other shopping venues in Waikiki including the new International Market Place, currently under construction, which will

add a significant increase in commercial floor area for retail and restaurant, and a future expansion of commercial space at the Princess Kaiulani.

33. The applicant has provided the socio-economic impact analysis as required for the DEA and FEA.

34. The applicant has provided axonometric renderings (views) from different angles and four elevations that provide an analysis of the ground-level view plane impacts. The pedestrian and vehicular experience can be visualized from these renderings and elevations. These renderings and elevations are in the DEA and will be included in the FEA.

35. As in other developments, pre-sales will be required to obtain construction financing. The project does not have construction financing in place at this time.

36. The applicant will use local construction contractors and subcontractors wherever possible.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, Inc.

UNITE HERE!
LOCAL 5 HAWAII

Eric Gill, Financial Secretary-Treasurer *Hernando Ramos Tan, President* *Godfrey Maeshiro, Senior Vice-President*

March 20, 2015

MK Development Consulting, LLC
1288 Ala Moana Blvd., Ste. 201
Honolulu, HI 96814

Subject: Response to Draft Environmental Assessment - 133 Ka'iulani Condo-Hotel Project

To Whom It May Concern:

I request that UNITE HERE Local 5 be made a consulted party in the development of this Environmental Assessment. After reviewing the company's Draft Environmental Assessment ("Draft EA"), we have several questions:

1. How many (or what percentage of) units at the project does the developer project will be used for residential purposes or for apartment rentals rather than as transient accommodations?

2. Will the developer ensure a minimum number of units at the project which must be used for transient rentals rather than for residential purposes?
    a. If so, how many units?
    b. What stipulations will the developer put on any such units to ensure they are not used for residential purposes?
    c. How will such stipulations be recorded?
    d. How could such stipulations be enforced?

3. What is the maximum number of units at the project which could be used for residential purposes if the owners of those units so choose (the "maximum residential" scenario)?
    a. Is it possible that all of the units in the project could be used for residential purposes?
    b. Is it possible that the project will be converted to a multifamily residential project? If so, could this happen after the developer is granted a height variance, Planned Development-Resort permit, Waikiki Special District Permit and/or Conditional Use Permit? If so, which of these permits would need modification?

4. How many units does the developer expect will be used for residential purposes?

5. Based on the answers to the foregoing questions, please describe how much the impact on each of the following would change from the developer's projections if more units are used for residential purposes than the developers projections, up to and including the "maximum residential" scenario:
    a. Full-time employment upon completion of the project (both the amount of employment and the quality of employment);
    b. Parking requirements and parking usage;
    c. Property tax revenues;

13. In the Draft EA, the developer states that "The 136 condo-hotel units do not provide a critical mass that the applicant feels is necessary to develop an economically viable condo-hotel,"[1] yet there are at least four condotels in Waikiki with fewer than 136 rooms.[2] One of these, the Aqua Bamboo, is in the immediate vicinity of Kings Village.
    a. Please explain how the developer has determined the critical mass necessary to develop an economically viable condo-hotel.
    b. What is the minimum critical mass the developer feels is necessary to develop an economically viable condo-hotel?
        i. Would it be possible to build such a condo-hotel with fewer variances?
        ii. Could the developer meet the minimum open space requirement of 50% of the zoning lot)?

14. The Draft EA should explore an alternative with a mauka-makai-oriented tower, to be more in line with Waikiki Special District guidelines.

15. In the Draft EA table 7.5.3.2, on page 48, the developer notes the project's average lot depth and width and the average yard. What is the minimum of each of those measurements for the project?

16. What portion of the units will be sold as affordable units?

17. Is the developer planning any further developments within half a mile of the project location? If so, what would be the nature and size of such projects?

18. How will the development affect views of Diamond Head from various locations along the Punchbowl lookout? Will any part of the project obstruct the view of any part of Diamond Head as seen from Punchbowl?

19. The analysis of related projects in the region should include the proposed redevelopment of the Outrigger Reef hotel, the planned renovations at the Hyatt Regency Waikiki, and the recently postulated conversion of the Waikiki Trade Center into a lodging structure of some sort.

20. Regarding buyers of the condominium units who do not put their units into the property's main rental program ("rental pool") (assuming there will be a rental pool):
    a. How many units does the developer project will be rented out for transient use through means other than the hotel's rental pool?
    b. How will the developer ensure that those owners pay TAT and GET for their rentals?
    c. To the extent the developer does not have a plan to address this, please revise the estimates provided regarding TAT and GET income generated by the project.
    d. How will the developer ensure that those units provide jobs, or that the jobs are not substandard in overall number, compensation and benefits as compared to those at area full-service hotels?

21. According to the Draft Environmental Assessment, "The condo-hotel operator intends to implement a TMP which will encourage its employees to use public transit and carpools."[3]

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[1] 133 Kaiulani Condo-Hotel Project, Draft Environmental Assessment, section 5.3, pg. 26.
[2] These include: Aqua Bamboo, Cocoanut Waikiki Hotel, The Equus Hotel & Marina Tower, and the Regency on the Beachwalk.
[3] Draft EA, Section 7.5.1.4, pg. 43

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a. How will the developer mitigate impacts to the bus system from the additional usage?
b. What (if any) incentives will be provided to encourage employees to carpool or use public transit?

22. The Draft EA notes that the existing sewer system is inadequate to handle the impacts of the development.[4] Because the City has only confirmed the inadequacy of the Uluniu Ave. line, the developer proposes improvements connecting the project to a line on Kaiulani Ave.
    a. Will this action be sufficient to mitigate the impact of the development?
    b. If the City determines that the lines at Koa Ave, Prince Edward St. and Ala Wai Blvd. are inadequate, as the developer's study suggests, what additional steps will the developer take to mitigate the impact of the development and improve the area sewer infrastructure?

23. How much additional solid waste will the project generate?

24. How will project affect property values for nearby residential properties (both those in which the view might be affected by the height of the new building and those that might be affected in other ways)?

25. If Kaiulani Ave. is converted into a two-way street between Kalakaua Avenue and Koa Avenue, what will the developer do to mitigate the impact this is projected to have on traffic, especially northbound traffic on Kaiulani?

26. There are a number of new lodging developments being proposed or constructed throughout Oahu. The developer should study the cumulative impact this project will have on lodging demand and other socioeconomic and environmental matters when considered along with all other new hotel, condotel, timeshare and luxury residential product on Oahu. In this study, the developer should discuss how new lodging product outside of Waikiki could have an impact on projections for the need for new inventory in Waikiki (including, but not limited to, developments in Kaka'ako, Kapolei and West Oahu, the North Shore, Mililani, and Aiea).

27. Will the project have banquet or meeting space?
    a. If so, how much?
    b. What would be the impact on existing banquet space at nearby hotels and at the Hawaii Convention Center?

28. With regard to parking, the developer states:

7.5.3.2 Parking

The parking requirement for the project, based on 248 condo-hotel rooms is 62 stalls (parking is not required for the ground floor retail space).

MK plans to provide 302 parking stalls with 70 for the condo-hotel and 232 stalls for off-site parking use by the Hyatt Regency Waikiki and/or others.[5]

[4] Draft EA, Section 8.6.6, pg. 64
[5] Draft EA, Section 7.5.3.2, pg. 49

1516 South King Street • Honolulu, Hawaii • 96826-1912 • Phone (808) 941-2141 • Fax (808) 941-2166 • www.unitehere5.org

a. How much commercial space will there be above the ground floor at the project, including restaurant space?
b. How many parking spaces would the commercial space above the ground floor require? Will the developer meet that requirement within the 70 stalls it plans to construct "for the condo-hotel?"
c. Are the 232 stalls for off-site parking use by the Hyatt Regency Waikiki and/or others being constructed to meet a pre-existing requirement of that property or others?
d. How many parking stalls need to be constructed to meet any such requirements?
e. Is there an existing agreement with Hyatt regarding use of stalls at the project to meet Hyatt's parking demand?
f. What will the developer do to mitigate additional parking demand (and public park dedication standards) should units at the project be used for residential purposes?
g. Will parking stalls at the project be individually owned? If so, how many will be individually owned?

29. Which market segment will the condotel units be priced for (i.e., luxury, upper upscale, etc.), both for buyers of the units and for hotel guests? What is the comparable set of projects for this market?

30. The applicant projects that the project is expected to create 320 full-time jobs and 64 part-time jobs.[6]
    a. How were these numbers calculated?
    b. Are these estimates of direct on-site jobs, or do the numbers include indirect and/or induced jobs?
    c. The job creation numbers should be further broken down by department or type of work to be performed.
    d. Will there be a main/preferred hotel management company at the project?
    e. Does the applicant intend to staff the property at a higher level than the national average? According to a 2012 report by Wells Fargo Securities, nationwide on average there were 51.6 non-supervisory personnel per 100 occupied rooms and 8.3 supervisory personnel per 100 occupied rooms in 2011, with the number expected to drop.[7]
    f. Does the applicant believe occupancy at this property will be higher than average for Oahu?

31. What is the basis for the developer's projections about tax revenues the project will generate? What assumptions are used with regard to room rates and occupancy?

32. How will the demolition of Kings Village and the construction of this project affect non-lodging-related visitor spending?

33. The developer should conduct a full socio-economic impact analysis.

34. The developer should conduct a ground-level view plane analysis. This would provide a better understanding of both the impact to the pedestrian experience and to sight-lines for vehicles traveling in the project area.

[6] Draft EA, Section 13.1, pg. 69
[7] "Lodging: Holding Onto Labor Efficiencies," Wells Fargo Securities, July 26, 2012, pg. 1.

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35. Is the company relying on condotel sales to finance the construction? What funding or financing is currently dedicated to this project? How will the construction be financed?

36. Will the developer use only local construction contractors and subcontractors?

Thanks very much for your consideration of these matters.

Sincerely,

Benjamin Sadoski
UNITE HERE, Local 5
1516 South King St.
Honolulu, HI 96826
Phone: 808-941-2141 x238
Email: bsadoski@unitehere5.org

CC:
Keith Kurahashi, Kusao & Kurahashi, Inc.
George Atta, Director, Department of Planning and Permitting, City and County of Honolulu
Gerald Toyomura, Department of Planning & Permitting, City & County of Honolulu

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Leighton Mau
Waikiki Shopping Plaza
Waikiki Business Plaza
2270 Kalakaua Avenue, Suite #1800
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Mau:

Thank you for your letter of March 6, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

As an individual with significant business and personal connections to Waikiki, your comment regarding the importance of "revitalization of our State's economic hub, Waikiki, with projects such as that planned by MK Development" is much appreciated.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

WAIKIKI BUSINESS PLAZA

March 6, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: **133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)**

To Whom It May Concern:

As a long time Waikiki businessman involved in the hotel, restaurant, shopping center and commercial real estate industries, I am very excited and in full support of the 133 Ka`iulani Condo-Hotel Project.

My family has a deep history with the development of Waikiki that began in the 50's, and we continue to care about and support its vitality.

We believe it is critical for Waikiki to remain competitive, create more local jobs and to maintain and increase city and state revenues derived from tax dollars from the visitor industry. This can only be achieved with the implementation of the revitalization of our state's economic hub, Waikiki, with projects such as that planned by MK Development.

Sincerely,

Leighton Mau
Waikiki Shopping Plaza
Waikiki Business Plaza
2270 Kalakaua Avenue, Suite #1800
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Danny Chang
Wang Chung's Karaoke Bar
2424 Koa Avenue
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Chang:

Thank you for your letter of March 15, 2015 regarding the 133 Kaiulani Condo-Hotel Project.

As a both a business owner and resident of Waikiki, you have a very unique perspective on this project, and we are glad that you "believe it will be positive for the entire neighborhood and community."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

WANG CHUNG'S

March 15, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I'm writing in support of the new development of the Condo-Tel at 133 Kaiulani. I live and work in Waikiki. I'm a current tenant at 2410 Koa Ave, one of the buildings that will be demolished for the redevelopment. I'm also the owner of Wang Chung's Karaoke Bar on Koa Ave, and I live a 5-minute away walk on the Ala Wai, so this new project really will be impactful to both my business and personal life.

The development of the area is much needed. King's Village, as I've known it over the last 8 years, really was a ghost town. The redevelopment will contribute new hotel rooms into the severely supply-constrained Waikiki market, along with bringing in more locals and visitors with parking, restaurants, bar, and ultimately jobs.

Speaking as a business owner on the same street, and as a resident of Waikiki, I believe it will be positive for the entire neighborhood and community.

Thank you,

Danny Chang
2424 Koa Ave
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Mr. Russell Hata
Chairman, CEO and President
Y. Hata & Co., Limited
285 Sand Island Access Road
Honolulu, Hawaii 96819

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Hata:

Thank you for your letter of March 13, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

As an established business leader in Hawaii, we value your belief that this project represents progress for the State and will help to "ensure new job opportunities, thriving business and a strong economy."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Y. Hata & Co., LIMITED

285 Sand Island Access Road
Honolulu, Hawai'i 96819
808 447 4100 TEL
808 845 2825 FAX

March 13, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

Dear Mr. Gerald Toyomura,

I write in favorable support of the MK Development proposed project to replace the current King's Village.

As a family and company that have had roots in Hawaii for over 100 years, we know the importance of progress to ensure new job opportunities, thriving businesses and a strong economy. The133 Ka`iluani condominium-hotel will bring all of this using private investor money while certainly ensuring increased revenues for businesses, the city and the state.

Sincerely,

Russell Hata

Russell Hata
Chairman, CEO and President

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 11, 2015

Fumiki Abe
4348 Waialae Avenue, #301
Honolulu, Hawaii 96816

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Abe:

Thank you for your letter dated March 18, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

WAIKIKI SPECIAL DISTRICT

The current design for the Project has 246 units. The proposed development is not requesting any variances or waivers. It is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

VIEWS

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors. The existing design in the DEA actually follows your recommendation and the bulk of the building tower has been situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the WSD Design Guidelines without applying for a PD-R permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot tower, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower

footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka/makai direction.

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the LUO, related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed

lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

LESS INTRUSIVE

The applicant and his architects have worked to design a condo-hotel tower that is not intrusive on the neighborhood and that is sensitive to protecting public views of Diamond Head and views from neighboring structures.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Fumiki Abe
4348 Waialae Ave #301
Honolulu, HI 96816

March 18, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: The King's Village 133 Kaiulani Condo-Hotel

Dear Mr. Kurahashi:

My only opposition to the condo-hotel project being proposed for the King's Village location in Waikiki is its size.

The current design for 248 units in a tall, wide building requires variances to city codes for height and density and does not follow the Waikiki Special District Design Guidelines in orientation and form.

A way to minimize the size of the building and the impact on the community would be a narrower tower behind the Hyatt's right tower that offers exquisite views on two or four sides of the building. The high-end construction, building amenities and interior quality of all units would still create a product that would command enviable prices for all views and make the project economically viable.

It would seem that the developers and their architects could design a condo-hotel that would not be as intrusive on the neighborhood, but still would be a successful addition to Waikiki.

Sincerely yours,

Fumiki Abe

cc: George Toyomura, Honolulu Dept of Planning and Permitting

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Jeff Avis
250 Ohua Avenue
Honolulu, Hawaii 96814

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Avis:

Thank you for your letter, dated March 13, 2015, supporting the 133 Kaiulani Condo-Hotel Project.

We believe this project is one that will create dining and entertainment options that will be usable and enjoyed by both visitors and residents in Waikiki, and we are glad to hear you echo those thoughts.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 13, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao&Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I have lived in Waikiki for 17 years. I live within a walkable distance from 133 Kaiulani Project. I agree with this project as knowing that restaurants and shops will be opened in this project.

Although I live in Waikiki, there are no opportunities to enjoy Kings Village with my family currently. We will be happy to have new beautiful restaurants and bars with a new high rise condominium hotel to enjoy our dinner within a walkable distance from our home. I support 133 Kaiulani Project because it is not only for a tourist hotel, but also for local to have restaurants, bars, lounges, and dining.

Thank you,

Jeff Avis
250 Ohua Ave., 96814

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Ms. Mayumi Avis
250 Ohua Avenue
Honolulu, Hawaii 96814

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Avis:

Thank you for your letter of March 17, 2015 providing your support for the 133 Kaiulani Condo-Hotel Project.

Your comments regarding how this project could potentially increase the amount of business you do, as well as enable you to operate more efficiently are much appreciated.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 17, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I have lived and run Wedding Hair and Makeup Business in Waikiki for 17 years. I support 133 Kailulani Project.

It is important for Hawaii Wedding Business that Waikiki continues to be a popular tourist spot for Japanese people. I have approximately 700 wedding hair and makeup appointments with Japanese couples every year. Generally we travel to our customers' hotels in Waikiki to do our jobs. We travel among two or three Waikiki Hotels for Wedding Hair and Makeup appointments every day.
If 133 Kailuani Project gets completed, I will have my new office from one block from my house that helps us to travel less for our business. Thus, creating more than two hundred hotel rooms will develop our business better in the future. This project will be a great opportunity for my Wedding Hair and Makeup Business to prosper.

Thank you,

Mayumi Avis
250 Ohua Ave., 96814

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

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April 11, 2015

Ms. Michele Bertoia and
Mr. Peter Galarneau
225 Kaiulani Ave., Apt 602
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Bertoia and Mr. Galarneau:

Thank you for your email dated March 20, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

WAIKIKI SPECIAL DISTRICT

The applicant is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

HEIGHT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of**

the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit. Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

MAUKA/MAKAI ORIENTATION

The proposed building orientation is driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*

- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

TOWER ELEVATIONS

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

WAIKIKI SPECIAL DISTRICT

The applicant in not pursuing a PD-R will develop a tower that will block about 70% of the ocean view between the two Hyatt Towers and will block a portion of Diamond Head from the Punchbowl Lookout.

VARIANCES

The applicant is not requesting variances, but is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Your email and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Keith Kurahashi
Encls.
cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

From: michele bertoia <michelehonolulu@yahoo.com>
Sent: Friday, March 20, 2015 6:20 PM
To: kkurahashi@hawaii.rr.com
Cc: gtoyomura@hawaii.gov
Subject: proposed King's Village Project at 133 Kaiulani Ave.

Michele Bertoia
Peter Galarneau
225 Kaiulani Ave. Apt. 1606
Governor Cleghorn Bldg.
Honolulu, HI 9815

March 20, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
252 Woodlawn Dr, Ste. 5-217
Honolulu, HI 96822

Dear Mr. Kurahashi,

We are writing to urge the Department of Planning and Permitting, and the City Council not to accept the proposed condo-hotel project to replace The King's Village. We are very unhappy about the dimensions and height of the planned structure. Our two biggest objections are the height and orientation. We understand the height is to be approximately 50 per cent over the building code limit of 240 feet. And that it will be on an Ewa-Diamond Head axis, effectively presenting a massive wall.

Central Waikiki has already lost the iconic International Marketplace to a huge structure. The King's Village adds a lot of charm to the neighborhood. There are often crowds for the changing of the guard, for the performers, and more recently for the farmer's market. If it must be replaced, please let it be for something that respects the wishes of the inhabitants. We cannot understand a willful ignoring of the Waikiki Special Districts Guidelines. Buildings are supposed to be on an orientation of Makai to Mauka, thus respecting the wishes of all residents to have some sort of sunlight and a view down to the ocean. Building a massive wall is contrary to this spirit.

We hear that the proposal is asking you to dis-regard multiple building codes regarding open space. This is just wrong. Please we ask you to consider the wishes of longtime residents, and do not approve the special variances this project asks of you. Stand up for us!

Sincerely,

Michele Bertoia
Peter Galarneau

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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April 11, 2015

Ms. Denise Boisvert
225 Kaiulani Avenue, Apt. 1604
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Boisvert:

Thank you for your letter dated March 20, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

PROTECTED VIEWS

You are correct that *individual* property owner's views are not protected in Hawaii, and probably in most States. Other surrounding property owners also have property rights that allow them to develop in accordance with the zoning code in place at that time. If the property owners that surrounded your building had protected views, your building could not have been constructed.

This being said, however, a concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot tower, much of the view corridor between the two Hyatt towers will be preserved.

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

COMMUNITY BENEFITS

The LUO WSD has put in place a PD-R process to allow flexibility that will allow the Project as planned. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.

- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

PROPOSED DEVELOPMENT

As mentioned earlier, your development affected views of surrounding property owners. This occurs throughout the island but to a greater extent in urban areas with significant pressure for development.

1) CONDO-HOTEL'S DESIGN

The proposed development is not out of line with other condo-hotel developments in Waikiki and our height and density is similar to existing neighboring hotels and properties planned for redevelopment. The heights and densities of high rises in New York, Chicago, Houston and San Francisco far exceed what is planned for the proposed project, with heights of 600 feet and up some rising to over 1,000 feet with the tallest at 1,776 feet in New York City.

The Project's overall design will reflect a "Hawaiian Sense of Place" which will be reflected in the landscape in public open spaces, a water feature, a pocket park, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places.

The "Hawaiian Sense of Place" is derived from cultural perceptions that are taught, as well as sensory aspects that are felt. The cultural component of the landscape is expressed through the use of native Hawaiian and Polynesian-introduced plants that have always been important to the Hawaiian culture: Hala, Kukui, Coconut Palm and many others. These native plants, with their strong cultural heritage, have been included because of their historic significance to Waikiki.

The pocket park will feature a native Hawaiian garden to provide an amenity not only for residents and guests, but the larger community. A more diverse plant palette will be used and will incorporate endemic, indigenous and Polynesian-introduced plants such as Hala, Kukui, 'Ohi'a Lehua, Hapu'u, 'A'ali'I, Na'u, Pualoalo.

In addition to these native plants, many of the exotics that visitors have come to associate with Hawaii are used. These have been included because our "Hawaiian Sense of Place" is perceived not only through our culture, but our senses of sight, smell, touch, taste and sound. Plumerias, Gingers, Heliconias, "Queen Emma" Spider Lilies, Anthuriums, and Spathoglottis are all incorporated within the landscape.

A subtle water-feature along Koa Avenue will add tropical feel to the area by providing the sound of falling water over natural stone amongst a tropical landscape. These features further tie into the overall consistency of the public space throughout Waikiki.

Mauka/Makai Orientation

The proposed building orientation is driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head.

Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views. The LUO allows certain rooftop structures to exceed the height limit and the elevator is one such structure.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits in accordance with the PD-R rules.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

WIDE WALL

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four

different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

NARROWER TOWER AND SQUARE TOWER

The Project as presently planned and oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

The existing tower plan just fits within the narrow view channel that is blocked by the Aston Waikiki Beach Tower and results in no impact on the view of Diamond Head from the Punchbowl Lookout. Widening that tower in the mauka direction with a narrower tower or square tower will block the views of Diamond Head from the Punchbowl Lookout that we are trying to protect. This is a public view that the LUO encourages protecting.

2) DRAFT ENVIRONMENTAL ASSESSMENT

a. Waikiki residents do not need a condo-hotel

The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 248 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

Many of those 30,000 citizens live and work in Waikiki, their livelihoods dependent on earning a living working in travel related jobs. The new condo-hotel will provide opportunities for employment close to their homes (new hotel jobs) and will create

customers for those that work or own businesses in Waikiki. The applicant's retail venue on the ground floor could provide for resident needs in Waikiki. In addition, the applicant is providing more parking than is required (210 stalls) and some of those stalls may go to surrounding businesses to address the parking demand in Waikiki possibly freeing up some on-street parking.

The State and City encourage redevelopment in Waikiki in their respective planning documents in recognition of the importance of our number one industry, tourism and our number one economic engine Waikiki.

Waikiki has suffered years of neglect. For the period between 1978 and 1996, the Comprehensive Zoning Code and its successor Land Use Ordinance (LUO) restricted improvement of nonconforming structures destroyed by over 50% by any means to its existing floor area or what was allowed by current code, whichever was less. In 1978, the FAR (floor area ratio) for the Hotel Precinct in the Waikiki Special District ranged from about 2.15 for a 40,000 square foot lot to 2.80 for a lot 90,000 square feet or larger and continued in this range until the end of 1996. This had created a de facto moratorium, where very little development or redevelopment occurred. Property owners were not willing to tear down and rebuild aging structures regardless of condition because they faced a significant loss in floor area, since some had developed at FAR's between 4.0 and 7.0. During this period Waikiki suffered and lost some travelers to other national and international beach resorts. In late 1996, the LUO Waikiki Special District was amended to state "A nonconforming use and/or structure may be replaced by a new structure with up to the maximum permitted floor area of the precinct for similar uses or existing floor area, whichever is greater, provided all other special district standards are met." The amendment also allowed a modification of certain standards to further encourage redevelopment. The City realized that the moratorium on building in Waikiki was due to an overly restrictive zoning code. This has been successful and much of Waikiki has been getting a much needed face lift with nonconforming structures getting replaced or redeveloped. Our number one island industry and number one economic engine (Waikiki) has experienced a rebirth and continued redevelopment of our aging physical plant. We need to keep this momentum going by encouraging responsible and sensitive redevelopment that follows the rules that have been set in place for the Waikiki Special District.

b. *Alternatives "considered for the King's Village*

The DEA is a document designed to consider alternatives to the proposed development, the common alternatives are "No Action" and "Renovation of Existing Structures". At times the Renovation of Existing Structures alternative is a financially viable alternative, when the renovation allows a significant increase in rental income in the case of a commercial property such as King's Village. In this instance it was not viable.

The applicant has relied on hotel industry consultants to determine that a critical mass of 200-250 units are needed for an economically viable hotel. In our case, the 246

condo-hotel units planned are expected to result in a hotel operation of about 209 hotel units just a little over the minimum required. The economy of scale is more related to operating costs and not sales price. There are certain fixed costs whether you operate a 136 unit hotel or a 200 unit hotel, and with the 200 unit hotel, those costs can be spread over a greater income creating an economically viable hotel.

The Department of Planning and Permitting and the City Council Committee on Planning and Zoning will review the Project based on the LUO, WSD and the PD-R rules and guidelines in determining if the Project will be allowed to go forward.

c. *Job creation*

Although there will be a loss of about 200 full-time and part-time jobs from the existing development at King's Village, Prince Edward Apartments and Hale Waikiki, the proposed redevelopment is expected to result in the creation of approximately 320 full-time jobs and 64 part-time jobs more than offsetting the jobs lost. Based on a Department of Business, Economic Development and Tourism economic report analysis, the on-site jobs will create a 842 total job impact

Additionally, there will be temporary construction jobs for an approximately 30-month construction period that will peak at 300 on-site jobs and based on a Department of Business, Economic Development and Tourism economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.

There must have been some misunderstanding as the bulk of the construction work will be offered to local companies, the use of off-island workers may occur if the local companies are too busy or if specialty work is required and there is not a local contractor that can do this type of work.

d. Number of hotel rooms

The Final Environmental Assessment (FEA) will include the new hotel units planned to off-set some of the loss of hotel units, mentioning the new units at the Ritz Carlton I and II and the Hilton Hawaiian Village. The applicant understands the Ohana West is a renovation and will not result in additional hotel units. The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms

(reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 246 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

This reinforces the need to keep Waikiki fresh and to ensure an adequate supply of hotel rooms for the all-important visitors that keep our economy healthy and allows our residents to earn a living and support our families.

As mentioned earlier, it is a matter of economy of scale in the operating costs of the hotel, which hotel consultants have said should be on the low side, between 200 and 250 units.

e. *Noise*

Your building situated about 375 feet away from the Project site and should not be affected by construction noise at the property. The applicant knows that it will not provide much comfort, however, the noise from construction at our site will be temporary, expected to last about 30 months and not all construction activity will be at high noise levels.

Long term noise mitigation for the guests of the proposed hotel includes:

- Traffic noise mitigation in the form of closure of windows and air conditioning is recommended.
- The use of coarse finishes for the circulation driveway surfaces will prevent the tire squeal noise for typical circulation speeds within the parking structure.

Short term noise mitigation measures that the applicant will provide include:

- The use of properly muffled construction equipment will be required on the job site.
- Compliance with State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

Short term noise mitigation measures for nearby residents include:

- Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

Appendix 2 of the DEA did discuss the impacts larger and noisier vehicles, including delivery and garbage trucks.

f. *Parking*

The applicant plans to provide 272 parking stalls, 210 more parking stalls than the required 62 parking stalls. Some of those stalls may be leased/rented to neighboring businesses. This will help alleviate some of the existing demand for on-site parking. The idea of hourly or monthly parking spaces for Waikiki residents and Oahu visitors will have to be explored with the hotel operator.

g. *Guidelines*

The applicant is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. The applicant's community benefits were discussed in detail earlier in this letter.

The open air space and views from the pedestrian level were also discussed, along with the mauka/makai orientation. The infrastructure impacts are listed below:

The Board of Water Supply has commented on this DEA that the existing water system is adequate to accommodate the proposed development.

Hawaiian Electric has commented on the DEA that they have no objections and has that we keep them apprised of our plans, which we will do.

Noise impacts and mitigation measures were discussed earlier in this letter.

There are two City solid waste disposal facilities: the H-POWER refuse to energy plant at Campbell Industrial Park and Waimānalo Gulch Landfill. PVT Land Company operates a privately owned and operated, licensed, solid waste facility for recovery of recyclable materials and disposal of construction and demolition materials. The PVT Landfill accepts wastes on a pre-arranged basis from haulers and contractors registered with them. Waste loads are screened with recyclable materials removed for sale/reuse and the remaining wastes land filled. The capacity of the PVT Landfill as currently licensed is about 20 years, with expansion areas available.

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

The hotel operator intends to implement a recycling program targeting bottles, cans, cardboard, paper, cooking oils, and kitchen wet wastes. Following completion of the Project, the hotel operator will maintain a waste management recycling system.

The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City's has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

The concept of paying $10 million dollars to demolish an existing building and develop in accordance with the existing LUO and WSD without the benefit of following a PD-R process would not be a concept that many would pursue, surely not this applicant.

3) ENVIRONMENTAL ISSUES

The following response is provided to *your comments (italicized):*

a. *"The project would cause over 10,000,000 (ten million more gallons of wastewater per year than the King's Village currently does"*

The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

The City must constantly upgrade infrastructure, including Wastewater Treatment Plants in their planning for future growth on the island. The growth is necessary, to support our growing population and to provide economic opportunity for that growing population. This Project will produce a significant increase in the number of jobs 384 versus the existing 200 from the existing development on the site. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created. This Project will provide job opportunity for those currently in need of work and will also provide jobs for younger residents entering the job market in the next three years.

b. *"A building with 100% ocean-facing windows wastes electricity"*

The applicant expects that the large lanais will be used often for enjoying the evening sunset or possibly for breakfast in the mornings.

The applicant plans the following in the interest of energy efficient:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- The applicant intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- The applicant will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The applicant intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- The applicant will implement low-flow plumbing fixtures, and incorporate efficient landscape irrigation systems to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.
- The applicant will reduce the Project's material waste through effective construction and operational recycling programs.

ENVIRONMENTAL IMPACT REPORT

The analysis of impacts presented in our DEA is no different than what would have been provided in a Draft and Final Environmental Impact Statement (EIS). The traffic study that was done is exactly the same as a traffic study that would have been commissioned for an EIS, similarly, the noise/acoustic study, air quality, archaeological, cultural impact and other studies provided in the DEA is exactly the same as one that would be done for an EIS. However, due to the minimal impact on the environment, based on these studies, the applicant is following the Environmental Assessment process.

TRAFFIC

The Traffic Impact Report (TIR) was prepared by the applicant's traffic engineer in accordance with accepted standards, traffic counts are not normally taken during holidays or school breaks, since these are periods of low traffic volumes are not reflective of normal peak hour traffic. Greatest traffic impact usually occurs on weekdays during the morning and afternoon peak hour and these are the periods that were studied.

The applicant's TIR recommended the following to address traffic and loading activities:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

The TIR went on to indicate that with the implementation of these recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

During the design phase of the Project, the applicant will work to implement the recommendations of the Traffic Impact Report. The Project has been designed to contain loading, drop-offs and pick-ups on-site; therefore minimizing congestion on surrounding roads.

The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage to encourage bike usage.

In addition to the initial TIR, at the request of the Department of Planning and Permitting (DPP), the applicant commissioned a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" (Report) that recommended the design of the two-way conversion of Kaiulani Avenue; a modification of the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue; a modification of the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications; and a modify of the traffic signal phasing and timing as necessary.

The Report concluded that the proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact

on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

The applicant is following and meeting the requirements of the PD-R process and expects that DPP and the City Council will view the Project on its compliance with the PD-R, WSD and LUO, as well as the City's Primary Urban Development Plan which provides the City's long-range plans and goals.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilmember Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Denise Boisvert
225 Kaiulani Ave #1604
Honolulu, HI 96815

March 20, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Gerald Toyomura
Department of Planning and Permitting
Urban Design Branch
850 South King St. 7th fl
Honolulu, HI 96813

Re: The King's Village project, 133 Kaiulani Condo-Hotel

Dear Mr. Kurahashi and Mr. Toyomura,

If I understand correctly, individual property owners' views are not protected in Hawaii even though the property owners may have paid property taxes for decades; yet developers are able to guarantee that each unit in their proposed building will have ocean views if the developers "donate" some money for community benefits.

This is a contemporary version of THE GREAT MAHELE, where big business interests, once again, are able to convince or trick the government's leaders or decision makers into approving something that is not in the best interest of the actual citizens who live here. There is no difference between stealing land and stealing views to benefit what will be (based on what has been seen over the last few years with similar buildings in Waikiki) mostly non-Hawaii citizens.

My views may not be protected, but there are dozens of reasons why the Department of Planning and Permitting and the Honolulu City Council's Zoning Committee should reject this project; below are a mere few:

1) The proposed condo-hotel's design is hostile to the neighborhood; and it does not promote a sense of a Hawaiian tropical paradise
2) There are several statements in the Draft Environmental Assessment that seem to purposefully deceive, mislead and, to some extent, insult the public; the community benefits suggested are exaggerated:
    a. Waikiki residents do not need a condo-hotel
    b. Alternatives "considered" for the King's Village
    c. Job creation and destruction
    d. Number of hotel rooms
    e. Noise
    f. Parking
    g. Pay to Play
3) Aspects of the project are environmentally unsound
    a. The project will cause over 10,000,000 (ten million) more gallons of waste water per year than the King's Village currently does
    b. A building with 100% ocean-facing windows wastes electricity

1) ***The proposed condo-hotel's design is hostile to the neighborhood; and it does not promote a sense of a Hawaiian tropical paradise:***

The size of this project promotes a New York City, Chicago, Houston and San Francisco sense of place, but definitely not a Hawaiian one. Tropical paradises do not need a skyscraper in every block.

Its non-mauka-makai orientation and non-graduated-stepped form go completely against the Waikiki Special District Design Guidelines and the proposed height and density go completely against the City and County's building codes.

I don't want the King's Village destroyed. We need to preserve the open air space above it that is in the center of Waikiki; and to keep a fun, unique little shopping center for locals and tourists who do not shop at the dozens of Prada-type stores that are invading Waikiki.

If the developers insist on tearing down the iconic shopping center, they should at least not be hostile to the neighborhood by designing an ENORMOUS, WIDE WALL of all makai-facing windows.

Less hostile designs would be (please refer to the attached designs):

- a much narrower tower in width behind the Hyatt's right tower with at least 4, even 6, mauka-facing units. The result would be a narrower width, but with units on each side
- a square tower with one corner facing the middle of the Hyatt's right tower. All 4 sides would have views; 2 of the sides would face makai in the same angles as the current proposed design

2) ***There are several statements in the Draft Environmental Assessment that seem to purposefully deceive, mislead, and, to some* extent, insult the *public; the community benefits suggested are exaggerated:***

a. *Waikiki residents do not need a condo-hotel*

The over 30,000 citizens who call Waikiki home do not need a condo-hotel in place of the King's Village. We might need a reasonably-priced supermarket, a hardware store, a dry cleaner, a medical center, more parking, but we absolutely do not need a luxury condo-hotel.

b. Alternatives "considered" for the King's Village

Alternative II: The previous landowner, Marcus Fullard-Leo, stated in the media that the property had not been listed for sale, but that they had received several unsolicited offers and the one they accepted was very good.

Considering that the developers are known for building hotels and paid an unsolicited $18.25 million over the King's Village $23 million assessed value, it is impossible for any logical reader of the DEA to seriously believe that a possible intention of the purchase was to upgrade the property. This seems to be deceitful.

Alternative III: The DEA states that '136 condo-hotel units do not provide the critical mass that the applicant feels is necessary to develop an economically viable condo-hotel.' What the applicant *FEELS* is necessary? Elton Wong of The Kobayashi Group told me that the starting prices would be well above $1 million each. How is it *NOT* economically viable to construct a building of 136-units that follows the Waikiki Special District Design Guidelines when most of the mid to higher level floors will have units selling for several million dollars each?

Obviously, what the applicants *FEEL* is necessary is merely subjective, and based on what they want to earn; it has nothing to do with being economically viable.

The Department of Planning and Permitting and the Zoning Committee should not base their decisions on what the applicants *FEEL* like they would like to earn, but rather on what is logically economically viable, and what follows the Waikiki Special District Design Guidelines and current building codes.

c. *Job creation and destruction*

The DEA states that the project will create 250 – 300 temporary jobs, but it is misleading the reader because it fails to specify that it won't necessarily be jobs for Hawaii's residents. Elton Wong of the Kobayashi Group told me that the construction crew will not be from Hawaii. They had a subcontractor looking for a crew from the mainland or elsewhere.

Most of the people who will lose their jobs and businesses when the King's Village is torn down will not be the ones who will be hired for the new project. The rent for the luxury retail space will be much higher than what they've been paying at the King's Village.

d. *Number of hotel rooms*

The DEA states that there has been a 2,684 net loss of hotel rooms in Waikiki since 2003, but that figure includes the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment. This is misleading the reader, because it makes the number of lost rooms sound more severe. Why does the calculation not mention or include any of the rooms currently being built or proposed, such as the Ohana West/Hilton Garden Inn or the two Ritz-Carlton towers?

There is also no mention of the large numbers of condos that have become available since 2003 as short-term vacation rentals that are subject to GET and the transient occupancy tax. These are not hotel rooms, but they lodge thousands of people each year and have certainly offset the supposed net loss.

In any case, the difference between 248 and 136 is only 112. A 136-unit condo that would follow the WSDDG and building codes would still provide hotel tax revenue.

e. *Noise*

As I type this letter I hear unbearably loud banging on metal from the International Marketplace project two blocks away from me.

This project is one block away. I am insulted that the developers have the inconsiderate audacity to tell neighbors who will have to endure the construction noise on a daily basis to simply close their windows and use air conditioning. They are not offering to reimburse any neighbors for increased electricity consumption or to pay for double-paned windows.

The DEA fails to mention that a condo-hotel and retail space will require many more noisy delivery and garbage trucks than the current King's Village shopping center needs.

f. *Parking*

Will there be any hourly or monthly parking spaces for Waikiki residents and Oahu visitors with cars to Waikiki? There are currently 62 parking spaces at the King's Village. Will this number of spaces be lost to the general public? That is clearly not a benefit.

g. *Pay to Play*

If someone thinks a million dollars is a lot of money, especially in the real estate development world, then that person is still living in the 1960s. A $1 million "donation" for community benefits is a drop in the bucket that will quickly evaporate in a city budget, but the lost open air space, mauka-makai views and natural ventilation, the lost mom & pop shops that cater to lower and middle income visitors, the increased water and electricity consumption, the increased noise, garbage and waste water, and wear and tear on sewer lines, will be FOREVER.

The developers should offer to pay Waikiki $10 million just for permission to tear down the King's Village and without variance contingencies.

3) *Aspects of the project are environmentally unsound*

a. *The project will cause over 10,000,000 (ten million) more gallons of waste water per year than the King's Village currently does*

According to the DEA and the water bills, over the past 7 years, the King's Village consumed an average of 16,530 gallons per day which produced about 11,200 gallons of waste water per day.

Estimates on waste water for the proposed project are: condo-hotel 37,184 gallons per day and retail 1,417 gallons per day (the restaurant's output is unknown). The condo-hotel and retail combined will produce a total of 38,601 gallons of waste water per day for this project, without the restaurant.

38,601 – 11,200 = 27,401 x 365 days = 10,001,365 *EXTRA* gallons of waste water per day before the restaurant's figures are known.

That would be ten million one thousand three hundred sixty five gallons of *ADDITIONAL* waste water – WASTED WATER – per year putting wear and tear on the city's sewer system and water pipes.

Even if there were an unlimited supply of water on Oahu, it is environmentally unethical to construct a building knowing that it will produce so much more waste water.

b. *A building with 100% ocean-facing windows wastes electricity*

A building with all ocean-facing units requires more electricity to cool all the units. This is a waste of the island's energy supply and will add wear and tear on the island's energy producing systems.

It is well known that people who live with the sun glaring through their windows most of the day use more air conditioning in all seasons. It is often left on when they go out to do errands and especially when they don't pay for it themselves (as hotel occupants don't).

The fact is the developers only want energy-wasting ocean-facing units in a building that does not even conform to the Waikiki Special District Design Guidelines for a mauka-makai orientation; and they have never even proposed any other type of building to the community since they purchased the properties.

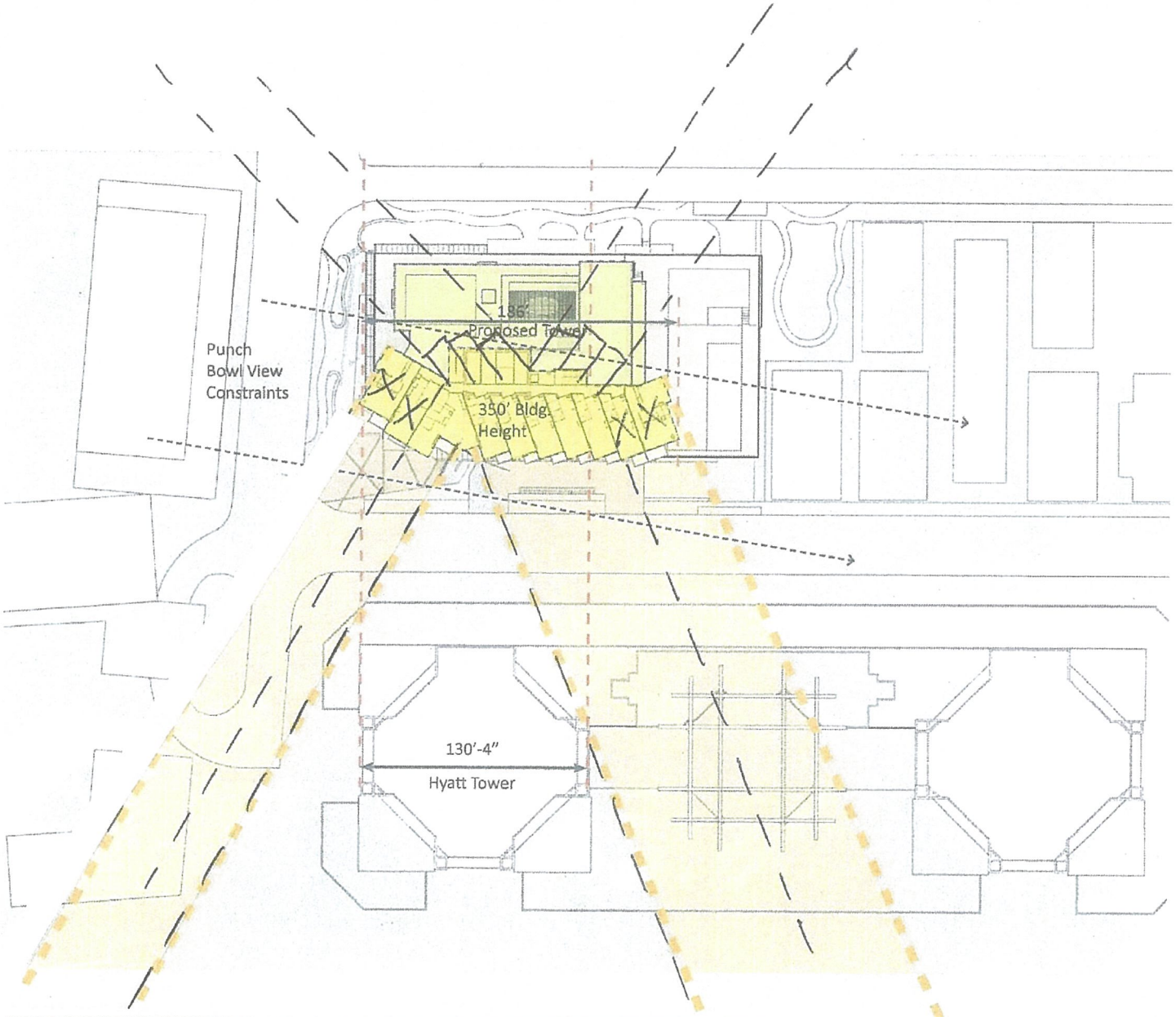
An Environmental Impact Report should be required. The traffic study was not done during a holiday, school break, or other peak week/weekend. The increased traffic due to the project would affect the neighborhood exponentially during such times. The community is going to be assaulted by more noise, traffic, pollution, plus pay for the higher prices of wasted natural resources. At a minimum, the community deserves an Environmental Impact Report.

It is not too late for the developers, the Department of Planning and Permitting and the Honolulu City Council's Zoning Committee to uphold the building codes and the Waikiki Special District Design Guidelines and to truly respect the wishes of the citizens of Waikiki.

Sincerely,

Denise Boisvert

cc: Trevor Ozawa, Honolulu City Council, District 4



Site & View Contrstraints

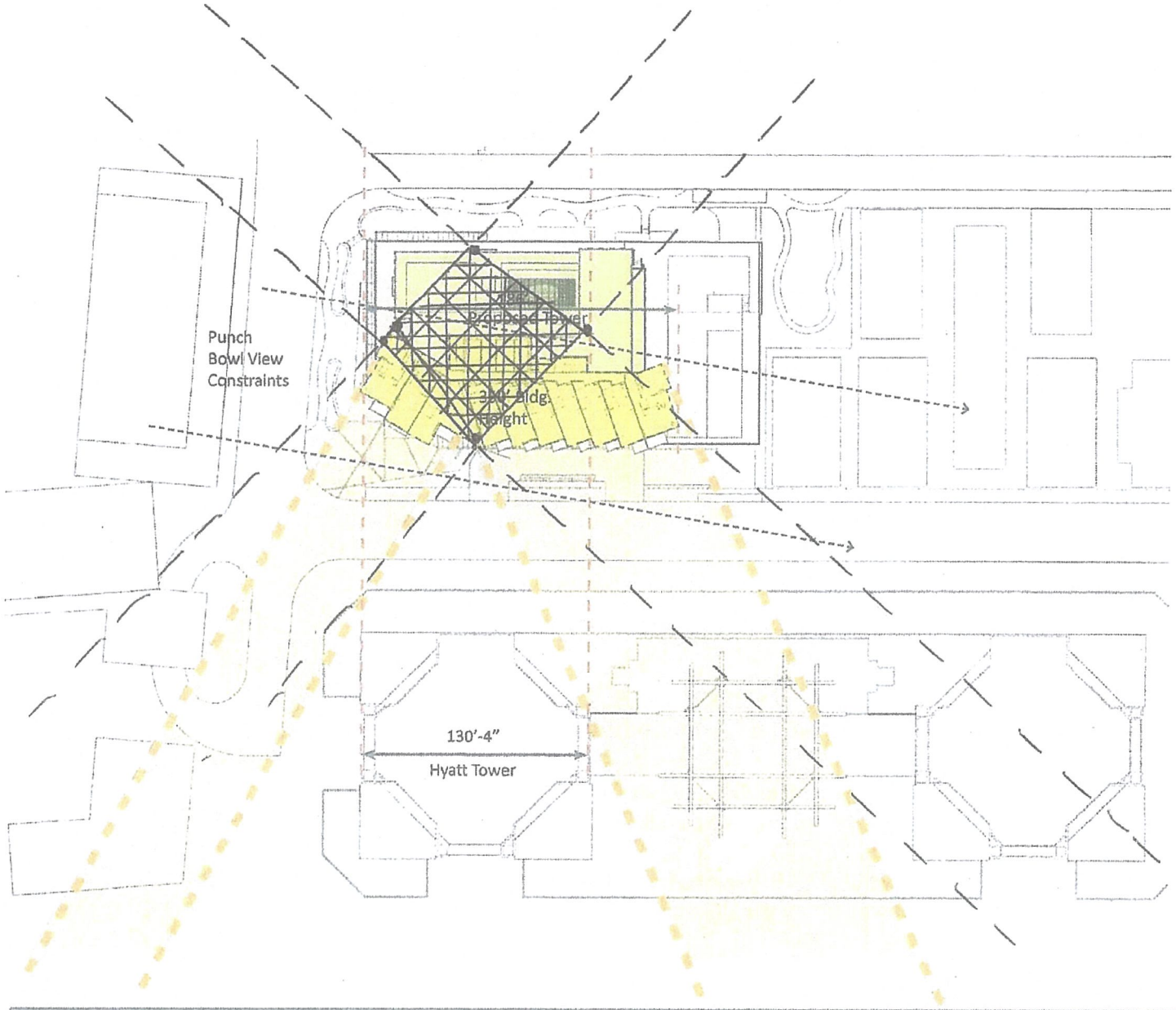
Mauka/Makai Views:
The proposed tower has an Ewa/Diamondhead orientation, but the bulk of the tower falls within the Makai view shadow of the existing Hyatt tower.

The proposed tower plan and residential unit layouts are oriented to maximize ocean views between the adjacent towers.

Punch Bowl/Diamond Head View corridor:
Proposed building massing above 240' fits within silhouette of existing tower beyond (Aston-Waikiki Beach Tower), maintaining existing views of Diamond Head from Punch Bowl Lookout.

SITE ANALYSIS - BUILDING ORIENTATION & VIEWS
133 KAIULANI AVE
Honolulu, Hawaii

10.16.2014
2012036.000



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SITE ANALYSIS - BUILDING ORIENTATION & VIEWS 10.16.2014
133 KAIULANI AVE
Honolulu, Hawaii 2012036.000

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Ms. Irene Chan
225 Kaiulani Avenue, Apt. 1104
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Chan:

Thank you for your email dated March 25, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

TOWER ELEVATIONS

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include varying bay widths. The applicant will also provide lanais on each of the condo-hotel units and open stairs on the mauka side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

DOUBLE-TRIPLE TOURISTS

The applicant is not trying to double or triple the number of tourists in Waikiki. On the contrary, the applicant is trying to help regain some of the hotels lost in Waikiki over the years.

The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count

by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 248 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

CENTER WAIKIKI

The applicant believes that some of those trips into the communities you mention occur at the present time. There are popular tourist attractions in most of the communities you mentioned. The McCully area has Waiola Store, famous for its shave ice. Ala Moana of course draws a significant amount of tourists with the world famous Ala Moana Shopping Center. Kapahulu is has the famous Leonards Bakery with the best malasadas, Kaimuki with its many eateries draws its share of tourists as well. Finally Kahala Mall is another shopping attraction for tourists.

SAN FRANCISCO WORLD CLASS CITY

San Francisco, with building heights and densities that far exceed Waikiki is very popular destination and their tall building and dense development has not hurt their popularity.

ALOHA WAY

Hawaii is unique in its own way. One of our unique features is an ever changing Waikiki, constantly in need of upgrades due to past limitations on developing. Only over the last 10 to 15 years have we seen a boom in development, before that there was an 18 year moratorium on development engineered by a restrictive zoning code. When this code was relaxed development began in earnest and older buildings and landowners finally found that it made economic sense to redevelop their properties.

Our economy needs to be able to continue to grow to provide our residents with jobs and income, so that they will not have to move away, as many of our children have.

WIN BACK LOST VISITORS

There are several reasons that visitors decided on other destinations, one was value, there are less developed countries in Asia that offer ocean side resorts at a significant discount over a vacation in Hawaii or Waikiki. Another reason that visitors decided on other locales is that for a long period there was little or no investment in Waikiki and the visitor plant aged. The relatively recent flurry of development activity has created an inviting new and refreshed Waikiki that is beginning to win back travelers from around the globe.

FOREIGN INVESTORS

Our Chinatown is relatively small compared to other Chinatowns on the mainland and could use some redevelopment and energizing. But our Chinatown has a quaint appearance and although not a booming tourist venue serves the local population well.

MANHATTAN/CHICAGO HIGH RISE

Honolulu will never approach the densities of New York or Chicago which both have buildings over 1,000 feet high. Hopefully crime will not approach the levels in those cities either.

The applicant took care in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process, with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

Your email and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

From: Irene Chan <chanirene38@yahoo.com>
Sent: Wednesday, March 25, 2015 4:13 PM
To: kkurahashi@hawaii.rr.com
Subject: King's Village - Please Don't Build that Tall Ugly Hotel Condo Monster!

Dear sir/madam,

Please don't let them build that large tall ugly building in King's Village. We have better ways of attracting tourists to Hawaii!

In the future if you want number of tourist double and triple, are you going to keep them all stay in tiny Waikiki condos, and let them explore the whole Waikiki within three nights?

Shouldn't we turn the whole Waikiki into "Center Waikiki", showing everyone that Hawaii vacation should also include McCully - Ala Moana – Makiki – Piikoi and Kapuhulu – Kaimuki and Kahala?

Why is San Francisco a world-class city? I guess, varieties? So many attractions, so many things to do, so many places to go, so many lifestyles to experience. In one city they have everything for everyone from every country.

We can have that too, in an Aloha way – more friendly, more lay back, best weather.

That is good for our economy, our businesses, our residents, our education. More income, more satisfaction, even with higher cost of living and taxes.

There is no need to squeeze tourists into a small area inside "the heart of Waikiki", making this heaven more crowded, noisier and dirtier. Besides, this small part of Waikiki will not be able to "support" 2 times of more tourists in the future.

If Waikiki becomes Kowloon (Hong Kong), we will lose our reputation as "a relaxing tropical island". People may think they would be better off to go to other world famous tropical islands with less tourists at lower costs. They may still want to visit Waikiki once in a lifetime, but would not come again and again. Compare with San Francisco, I would like to go there again and again, because 9 days wasn't enough to get to know that exciting city. Many wealthy Chinese eventually decide to move there. They did not choose L.A., Seattle, New York. They did not choose Honolulu!

Why can't we win them?

We have the best weather in the world! We have the more friendly people in US! Honolulu is the safest city in US for a hundred years in terms of natural disasters and crime rate!

Our young people are leaving this state for better education and jobs. Our old people are leaving this state for retirement.

A friend of mine said she is convincing a group of Chinese multi-millionaires to come to Honolulu in May. She said they wanted to buy lands in California, because there are more Chinese in California. She said in the past,

many wealthy Chinese came to Hawaii first, shake their heads, traveled around US, finally bought real estates in San Francisco.

Why? Please look at our Chinatown!!! Please look at Chinatown in San Francisco! Please look at Chinatowns in all other major cities in the world!!!

Do you know what I liked the most in Waikiki, other than beaches and palm trees, the first time arrived here? Buildings! Those cute, unique, pretty buildings along Kalakaua Avenue. They blend perfectly with the street, ABC stores, people in Aloha shirts…and the warm breeze with sweet coconut smell. I think I took a hundred pictures of these buildings. My friends in other countries were so amazed when they saw my pictures. They agreed Hawaii is real paradise.

And now we are going to see some Manhattan/Chicago high-rise buildings in between? Will there be robberies in the street? Is it going to be cold at night?

Can we please keep Waikiki Waikiki? There is nowhere like Waikiki!

Please don't let them build that huge monster in King's Village! Please keep all our hotels and condo Waikiki!

Please save our Waikiki! Please be our hero!

Yours sincerely,

Irene Chan

P.S.: May I have a quick confirmation of receipt of this email? Would you please send me a formal response to my comment (a letter) to my address?
My address is: 225 Kaiulani ave, Apt 1104. Honolulu, HI, 96815
Many thanks!!!

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Ms. Chinako Furukawa
2500 Kalakaua Avenue
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Furukawa:

Thank you for your letter from March 18, 2015 regarding the 133 Kaiulani Condo-Hotel Project.

Your support, as a mother raising a family in Waikiki, is extremely valuable. We agree with your comment that, with improvements, the area surrounding King's Village would provide an enjoyable resident and pedestrian experience. We believe this project will advance that possibility.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 18, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I have one child and have lived in Waikiki for five years. I agree with 133 Kailulani Project.

It is our daily habit to walk Waikiki because my child is still little. Although we walk along with Kalakaua Avenue and through DFS central town to Kapiolani Park area, we hardly walk around King Village. Although Koa Street is less busy, it is not a welcome place for pedestrians. There are too many parked vehicles along with Prince Edward Ave. Not only pedestrians are hardly seen, but also old walkup residential housings creates unwelcome atmosphere. That would be great walking course and break area when King Village maintenance gets better and provide a playground and garden landscape.

As a mother of a small child in Waikiki, I support 133 Kailulani Project.

Thank you,

Chinako Furukawa
2500 Kalakaua Ave.
Foster Tower 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Mr. Ryota Furukawa
2500 Kalakaua Avenue
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Furukawa:

Thank you for your letter of March 18, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

Your support as a resident and business owner in Waikiki is much appreciated. Like you, we believe that this project will positively impact the Waikiki business community.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 18, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I have lived in Waikiki for six years and running a Jewelry Sale business. I support 133 Kailulani Project.

My business is targeting Japanese travelers in Waikiki. When Waikiki provides a condominium hotel, there will be more Japanese travelers. That will improve my business better.

I am looking forward 133 Kailulani Project to activate all business in Waikiki overall.

Thank you,

Ryota Furukawa
2500 Kalakaua Ave.
Foster Tower 96815

d. General Excise tax revenues;
e. Transient Accommodations Tax revenues;
f. Traffic;
g. Schools;
h. Water;
i. Wastewater;
j. Solid waste;
k. Affordable housing;
l. Energy usage;
m. Public services such as police and fire;
n. Parks and park dedication;
o. Any other potential impacts.

6. What will the developer do to mitigate the impacts described in questions 2 through 5?
   a. To what extent will any such mitigation measures take into account the "maximum residential" scenario?
   b. Especially since other current and recent development projects in Waikiki (such as the Trump International Hotel & Tower, the 2121 Kuhio project, the 2139 Kuhio project, and possibly portions of the Princess Kaiulani and Moana Surfrider redevelopment) have involved the construction of condotels rather than full-service hotels, the developer should explore the cumulative impact of the 133 Kaiulani project being used for primarily residential purposes (even if it still falls under the classification of a "hotel" under Honolulu Land Use Ordinance standards) if several of these other projects also end up being primarily used for residential purposes.

7. If one of the project's goals is to address the loss of hotel units in Waikiki and demand for new hotel units, why is the applicant building condo-hotel units rather than hotel units?

8. Regarding the outdoor dining areas:
   a. How much noise will be generated by the outdoor dining areas?
   b. What will be the hours of operation of those areas?
   c. Will liquor be served in outdoor dining areas? If so, what will be the hours of liquor service?
   d. How much of an impact will additional noise from the outdoor dining area have on the surrounding area?

9. How will the developer ensure that the portion of the project used as a hotel in the future complies with ADA regulations should owners of any units have the right to use their units as residential rather than as part of a hotel program?

10. Is the developer contemplating any future expansion to the proposed project, such as an additional tower?

11. Please provide a full analysis of the "No Action" alternative, the "Renovation of the Existing Structures" alternative, and the "Develop within the WSD Standards" alternative.

12. How much public open space would the developer create under the "Develop within the WSD Standards" alternative?

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April 11, 2015

Mr. Andrew Hryniewich
225 Kaiulani Avenue, Apt. 1602-1603
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Hryniewich:

Thank you for your email dated March 18, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

TRAFFIC

Your concern about traffic is understandable and was recognized by the Traffic Impact Report (TIR) prepared by the applicant's traffic engineer. More specifically the concern for tour buses and freight trucks delivering supplies which often times load and unload on the surrounding public streets. Traffic counts were taken during the week days, during the morning and afternoon peak hours on days when schools were in session to replicate the busy traffic periods.

The applicant's TIR recognized the need to address loading and made the following recommendations:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

The TIR went on to indicate that with the implementation of these recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

During the design phase of the Project, the applicant will work to implement the recommendations of the Traffic Impact Report. The Project has be designed to contain loading, drop-offs and pick-ups on site, therefore minimizing congestion on surrounding roads.

The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage to encourage bike usage.

In addition to the initial TIR, at the request of the Department of Planning and Permitting (DPP), the applicant commissioned a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" (Report) that recommended the design of the two-way conversion of Kaiulani Avenue; a modification of the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue; a modification of the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications; and a modify of the traffic signal phasing and timing as necessary.

The Report concluded that the proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

WAIKIKI SPECIAL DISTRICT

The proposed development is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

HEIGHT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing

design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the WSD Design Guidelines without applying for a PD-R permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

OPEN SPACE

The adjustment to open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

COMMUNITY BENEFITS

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.

- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

MAUKA/MAKAI DIRECTION

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting your views.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the LUO, related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

TOWER ELEVATIONS

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design

sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

WAIKIKI DEVELOPMENT

For the period between 1978 and 1996, the Comprehensive Zoning Code and its successor LUO restricted improvement of nonconforming structures destroyed by over 50% by any means to its existing floor area or what was allowed by current code, whichever was less. In 1978, the FAR (floor area ratio) for the Hotel Precinct in the WSD ranged from about 2.15 for a 40,000 square foot lot to 2.80 for a lot 90,000 square feet or larger and continued in this range until the end of 1996. This had created a de facto moratorium, where very little development or redevelopment occurred. Property owners were not willing to tear down and rebuild aging structures regardless of condition because they faced a significant loss in floor area, since some had developed at FAR's between 4.0 and 7.0. During this period Waikiki suffered and lost some travelers to other national and international beach resorts. In late 1996, the LUO'S WSD was amended to state "A nonconforming use and/or structure may be replaced by a new structure with up to the maximum permitted floor area of the precinct for similar uses or existing floor area, whichever is greater, provided all other special district standards are met." The amendment also allowed a modification of certain standards to further encourage redevelopment. The City realized that the moratorium on building in Waikiki was due to an overly restrictive zoning code. This has been successful and much of Waikiki has been getting a much needed face lift with nonconforming structures getting replaced or redeveloped. Our number one island industry and number one economic engine (Waikiki) has experienced a rebirth and continued redevelopment of our aging physical plant. We need to keep this momentum going by encouraging responsible and sensitive redevelopment that follows the rules that have been set in place for the WSD.

The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction

from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 248 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

This reinforces the need to keep Waikiki fresh and to ensure an adequate supply of hotel rooms for the all-important visitors that keep our economy healthy and allows our residents to earn a living and support our families.

Your email and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilman Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

March 18, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi Inc.
2752 Woodlawn Dr. Suite5-217
Honolulu Hawaii 96822

Dear Sir,

The proposed development of the Kings Village Project in Waikiki by your organization, seems to be one that is being submitted with little consideration for the environment of the Waikiki area and its residents.

The site that you are planning is right now a heavily traveled area with tour buses, freight trucks delivering supplies to stores in the area, car rental agencies, and emergency vehicles. Additionally, Kaiulani Avenue is a major exit route from Kalakaua Avenue. To have reported that the Transportation Dept has given approval leads me to believe they have not made an actual survey during busy hours.

Additionally the plans that you've submitted take exception to the rules of the Waikiki Special District Design Guidelines, and other city and county guidelines currently on the books. The exceptions you have requested that blatantly disregard our environmental standards are:

- **HEIGTH OF 350 ft vs 240 ft code limit**
- **FLOOR RATIO OF 4 vs 3.5 code limit**
- **OPEN SPACE REQ OF 39% vs 50% code**
- **MAUKA-MAKAI DIRECTION**
- **A LARGE BLANK WALL THAT EVERYONE ON THE MAUKA SIDE WILL SEE**

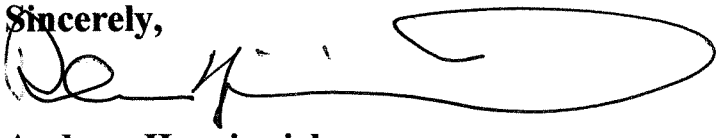
It is terribly disappointing to see this great tourist venue loose its identity as a true representation of the Hawaiian Culture that was evident in days gone by, not the 5th Avenue area it's becoming.

It's easy for Politicians to jump on a building craze like what's currently raging through Honolulu, but sometimes it's the duty of our Representatives to actually represent the people.

As the second paragraph of the State of Hawaii Constitution Preamble states:

We reserve the right to control our destiny, to nurture the integrity of our people and culture, and to preserve the quality of life we desire.

Sincerely,



Andrew Hryniewich
225 Kaiulani Ave
Apt 1602-1603
Honolulu Hi 96815

cc: Mr. Trevor Ozawa
Honolulu City Council
District 4
530 S. King St Mr. 202
Honolulu Hi. 96813

Mr. Gerald Toyomura
Dept. Planning & Permitting Urban Design Branch
850 S. King St. 7th Floor
Honolulu Hi 96813

I respectfully request a conformation of receipt of this email.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 11, 2015

Ms. Jeanette Jones
225 Kaiulani Avenue, # 703
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Jones:

Thank you for your letter dated March 20, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

VIEWS

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

NARROW TOWERS

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

Mauka/Makai Orientation

The proposed building orientation is driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views. The LUO allows certain rooftop structures to exceed the height limit and the elevator is one such structure.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits in accordance with the PD-R rules.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

OPEN SPACE

The adjustment to the open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

COMMUNITY BENEFITS

The LUO WSD has put in place a PD-R process to allow flexibility that will allow the Project as planned. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
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  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
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Total annually	$7,984,000

FEWER THAN FIVE STORY BUILDINGS

At the pedestrian level a two- to four-story building built to the property line has the effect of seemingly crowding and encroaching on the pedestrian's experience as opposed to a taller structure with a greater setback. On our block, most low-rise buildings are built up to the property line, some with possibly a five-foot setback. The effect of walking next to these

buildings as compared to our podium set back of 15 feet or more from the property line is a more enhanced pedestrian experience.

OPEN SPACE - KING'S VILLAGE

The adjustment to open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

The applicant's ground floor retail may provide commercial services that will support the neighboring residents, as well as the hotel guests.

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

The applicant is following and meeting the requirements of the PD-R process and expects that DPP and the City Council will view the Project on its compliance with the PD-R, WSD and LUO, as well as the City's Primary Urban Development Plan which provides the City's long-range plans and goals.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilmember Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Jeanette Jones
225 Kaiulani Ave #703
Honolulu, HI 96815

March 20, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: King's Village 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi:

This letter is in response to the Draft Environmental Assessment that was sent to the Department of Planning &Permitting for the building MK Development Consulting, Inc. wants to construct where the King's Village now stands.

First of all, I want to state that my view of blue sky will be affected by the proposed huge building. Also affecting me is the fact that the applicant, MK Development Consulting, wants to erect an enormous barricade of a building with little regard for the Waikiki Special District Design Guidelines and current City and County building codes.

The Guidelines and building codes state:

- Building forms which produce narrow towers are preferred
    - This proposal is a colossal wall parallel to the ocean and in no way will resemble a tower
- Buildings with a series of graduated, stepped forms are preferred for new projects
    - Each floor above the amenities level is the same width with no set back
- The long axis of all new high-rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views
    - Again, this design is a wide wall of only ocean-facing units with no attempt to make it a narrower building with units facing Diamond Head, mauka or Ewa
- The building code height limit is 240 feet
    - The proposed building would unnecessarily be 110 feet higher plus another 18 feet for the elevator shaft
- The building code has a maximum floor area ratio of 3.5
    - The proposed floor area ratio is 4.0
- The building code requires a minimum of 50% open space
    - The proposed open space is only 39%

The Draft Environmental Assessment suggests that this building will encourage other development in the neighborhood where buildings are underutilized. Buildings with fewer than five stories are not underutilized; they provide open space as well as residential and commercial space.

Open space in a city is necessary to prevent walls of buildings and concrete corridors that force people to look straight up to see the sky. The King's Village provides shopping, dining and open space.

I am asking the Department of Planning & Permitting and the City Council to reject this project on the grounds that it simply does not adhere to the Waikiki Special District Design Guidelines and several very important building codes.

Sincerely,

Jeanette Jones

cc: Gerald Toyomura
Dept of Planning & Permitting, Urban Design Branch
850 South King St. 7th floor
Honolulu, HI 96813

Trevor Ozawa
Honolulu City Council, District 4
530 S. King St., Rm 202
Honolulu, HI 96813

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Ms. Kim Jorgensen
225 Kaiulani Avenue, Apt. 1604
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Jorgensen:

Thank you for your letter dated March 21, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

HEIGHT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

TRANSITIONAL HEIGHT SETBACK

The adjustment to the height setback is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." In order to accomplish this, the tower must be located as far makai as possible (with the need for a modification to the height setback as allowed through the PD-R process). The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

OPEN SPACE

The adjustment to the open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

COMMUNITY BENEFITS

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.

- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

WAIKIKI SPECIAL DISTRICT

The proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

NARROW TOWERS

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines is supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

TOWER ELEVATIONS

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design (presented at the Waikiki Neighborhood Board in April 2014) with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

MAUKA/MAKAI ORIENTATION

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*

- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views. The LUO allows certain rooftop structures to exceed the height limit and the elevator is one such structure.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits in accordance with the PD-R rules.

COMMUNITY BENEFIT

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. The full list of Community Benefits was presented earlier. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is not requesting variances. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

NOISE IMPACT

Your building situated about 375 feet away from the Project site and should not be affected by construction noise at the property.

Long term noise mitigation for the guests of the proposed hotel includes:

- Traffic noise mitigation in the form of closure of windows and air conditioning is recommended.
- The use of coarse finishes for the circulation driveway surfaces will prevent the tire squeal noise for typical circulation speeds within the parking structure.

Short term noise mitigation measures that the applicant will provide include:

- The use of properly muffled construction equipment will be required on the job site.
- Compliance with State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

Short term noise mitigation measure for nearby residents include:

- Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

BLOCKED VIEWS

As mentioned earlier, a concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project.

UNDERUTILIZED

The State and City encourage redevelopment in Waikiki in their respective planning documents in recognition of the importance of our number one industry, tourism and our number one economic engine Waikiki.

Waikiki has suffered years of neglect. For the period between 1978 and 1996, the Comprehensive Zoning Code and its successor Land Use Ordinance (LUO) restricted improvement of nonconforming structures destroyed by over 50% by any means to its existing floor area or what was allowed by current code, whichever was less. In 1978, the FAR (floor area ratio) for the Hotel Precinct in the Waikiki Special District ranged from about 2.15 for a 40,000 square foot lot to 2.80 for a lot 90,000 square feet or larger and continued in this range until the end of 1996. This had created a de facto moratorium, where very little development or redevelopment occurred. Property owners were not willing to tear down and rebuild aging structures regardless of condition because they faced a significant loss in floor area, since some had developed at FAR's between 4.0 and 7.0. During this period Waikiki suffered and lost some travelers to other national and international beach resorts. In late 1996, the LUO Waikiki Special District was amended to state "A nonconforming use and/or structure may be replaced by a new structure with up to the maximum permitted floor area of the precinct for similar uses or existing floor area, whichever is greater, provided all other special district standards are met." The

amendment also allowed a modification of certain standards to further encourage redevelopment. The City realized that the moratorium on building in Waikiki was due to an overly restrictive zoning code. This has been successful and much of Waikiki has been getting a much needed face lift with nonconforming structures getting replaced or redeveloped. Our number one island industry and number one economic engine (Waikiki) has experienced a rebirth and continued redevelopment of our aging physical plant. We need to keep this momentum going by encouraging responsible and sensitive redevelopment that follows the rules that have been set in place for the Waikiki Special District.

2 TO 4 STORY BUILDINGS

At the pedestrian level a two- to four-story building built to the property line has the effect of seemingly crowding and encroaching on the pedestrian's experience as opposed to a taller structure with a greater setback. On our block, most low-rise buildings are built up to the property line, some with possibly a five-foot setback. The effect of walking next to these buildings as compared to our podium set back of 15 feet or more from the property line is a more enhanced pedestrian experience.

ENVIRONMENTAL IMPACT REPORT

The analysis of impacts presented in our DEA is no different than what would have been provided in a Draft and Final Environmental Impact Statement (EIS). The traffic study that was done is exactly the same as a traffic study that would have been commissioned for an EIS, similarly, the noise/acoustic study, air quality, archaeological, cultural impact and other studies provided in the DEA is exactly the same as one that would be done for an EIS. However, due to the minimal impact on the environment, based on these studies, the applicant is following the Environmental Assessment process.

TRAFFIC

Your concern about traffic is understandable and was recognized by the Traffic Impact Report prepared by the applicant's traffic engineer. More specifically the concern for tour buses and freight trucks delivering supplies which often times load and unload on the surrounding public streets.

The applicant's TIR recognized the need to address loading and made the following recommendations:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*

4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

The TIR went on to indicate that with the implementation of these recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

During the design phase of the Project, the applicant will work to implement the recommendations of the Traffic Impact Report. The Project has been designed to contain loading, drop-offs and pick-ups on-site; therefore minimizing congestion on surrounding roads.

The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage to encourage bike usage.

In addition to the initial TIR, at the request of the Department of Planning and Permitting (DPP), the applicant commissioned a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" (Report) that recommended the design of the two-way conversion of Kaiulani Avenue; a modification of the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue; a modification of the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications; and a modify of the traffic signal phasing and timing as necessary.

The Report concluded that the proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

NEIGHBORHOOD BOARD MEETING NOTICE

The LUO requires notification to adjoining property owners and the neighborhood board on a major permit. We have provided appropriate notifications to all adjoining property owners as well as those located across the street from the Project Site.

COMMUNITY SUPPORT

The applicant through this DEA process has received letters of support from residents and businesses in Waikiki, including support from the Waikiki Neighborhood Board and the Waikiki Improvement Association. We have also received a significant amount of letters opposing the project, many from your neighbors that live as you do in the Governor Cleghorn at 225 Kaiulani Avenue.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Kim Jorgensen
225 Kaiulani Ave #1604
Honolulu, HI 96815

March 21, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi,

As noted in your Draft Environmental Assessment (DEA) to destroy the King's Village in order to erect a skyscraper wall:

This project will:

- **exceed** the 240-foot height limit with a 350-foot high building;
- **encroach** into the transitional height setback along Kaiulani and Koa Avenues (up to 20 feet and 25 feet, respectively);
- **exceed** the maximum density or floor area ratio (FAR) of 3.5 with a FAR of 4.0; and
- **provide less than the minimum 50%** open space with only 39% open space.

Need I say more? Maybe so...

The Diamond Head/Ewa orientation and form of the proposed building does not comply with the Waikiki Special District Design Guidelines that state:

- Building forms which produce narrow towers are preferred
    - Yours is a gigantic, wide wall parallel to the ocean with units only facing in one direction
- Buildings with a series of graduated, stepped forms are preferred for new projects
    - Every floor of living space above the amenities level is the same width; and it is wider all the way up than your original design of April 2014
- The long axis of all new high-rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views
    - Again, your design is a gigantic, wide wall parallel to the ocean

The height is not just going to exceed the current limit by 110 feet, but there will be an additional 18 feet for the wide elevator shaft; so it would really be 368 feet high. A height variance would not be necessary for 248 units if the project did not have only ocean-facing units. A project can certainly be "economically viable" with views in all directions.

MK Properties is trying to entice the city with 1 million dollars in order to get the variances passed, and for the City to ignore the fact that the design does not follow the Waikiki Special District Design Guidelines.

How will the 1 million dollars decrease the noise we will have to suffer during and after construction? Oh, that's right, you are telling us to close our windows and put on the air conditioning. Nice, thanks.

Thousands of neighboring condo owners and apartment building owners will need to pay more property tax. The County may increase the assessed value, but fewer people will want to purchase or rent units because of the blocked views and construction and post-construction noise. The increased property taxes will likely be passed on to Waikiki tenants by increased rent. You are hurting owners and tenants.

Which brings me to a very sore point; the DEA suggests that there are neighboring properties that are "underutilized". What is that, a code word for "perfect place to build a skyscraper"? Are you telling the DPP and Zoning Committee that if they allow your project, others will follow suit to ruin the neighborhood?

There are many small business owners, employees, property owners and renters who live and work in 2 to 4 story buildings. These 2 to 4 story buildings provide valuable open air space. By valuable, I mean an intangible asset that prevents people from having to look straight up to see the sky or having to imagine what the ocean looks like until they go down to the beach. Tourists do not come to Waikiki because they want to be towered over by massive skyscrapers every where they walk.

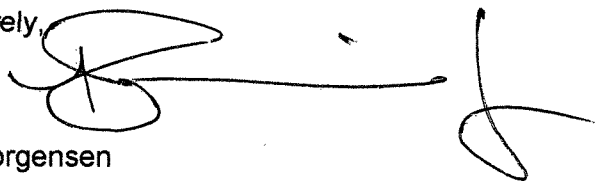
An Environmental Impact Report should be done. This building will consume and waste more water and electricity than the much smaller King's Village does. The Traffic study merely estimated how many vehicles would enter and exit. This is pure speculation used to lean more favorably toward the developers. There will be more noise coming from this project because of the additional garbage and delivery trucks. Many more cars will be parked there, too. The community deserves to have a more detailed report on how this building will affect it.

And, lastly, I am attaching copies of pages 3 and 5 of the Draft February 2015 Waikiki Neighborhood Board meeting minutes.

As you may recall, no one in the community knew about the April 2014 presentation. Board member Lofquist even noted that they were voting without a sense of community. The WNB may have voted then without community input, but they definitely did not vote at your February 2015 presentation because of the dozens of community members protesting, holding signs, and complaining to you and previously to Councilman Ozawa during your respective Questions & Answers segments.

You do not have the community behind this project, and it is our hope that the Department of Planning and Permitting and the Zoning Committee of the City Council understand why.

Sincerely,



Kim Jorgensen

cc: Gerald Toyomura, Dept of Planning & Permitting
Trevor Ozawa, Honolulu City Council, Zoning Committee

- Ena Road Sidewalk Business: Site investigation on Friday, January 23, 2015 showed that tables and chairs have been placed in the sidewalk area fronting 432 Ena Road and 2310 Kuhio Avenue. Additionally, a wooden ramp has been placed in the sidewalk fronting 432 Ena Road. Notices of violations were issued.

Questions, comments and concerns followed:

1. Food Trucks on Beach Walk: Dew noted that two front units had health inspection certificates displayed; however, the rest of the units did not appear to have inspection certificates.
2. Sidewalk along Waikiki Sunset: Merz noted that for more than thirty years, Waikiki residents have been asking for sidewalk improvements along Paoakalani Avenue. Garrity reported that the Department of Facility Maintenance (DFM) has agreed to set up an interim solution for the area and that he will follow up on the status of the project with DFM.
3. 2462 Kuhio Avenue Park Maintenance: Dew noted that there is no upkeep for the park between 2462 Kuhio Avenue and Liliuokalani Street. He contacted DPR and received no response. He has also been in contact with Hilton Hotels discussing cost effective ways of maintaining the park.
4. Segways on Sidewalks: A resident reported that she was being pushed off the sidewalk by Segway groups and inquired about the legality of cyclists and Segways on sidewalks on Kalakaua Avenue. Garrity noted that he will take back the concern of the resident and reported that Segways are personal mobility devices and are, therefore, legal on sidewalks; however, bicycles and skateboards are not legal on sidewalks in Waikiki.
5. Shuttle Busses in Waikiki: A resident reported that he observed trolleys outnumbering city busses 7 to 1 with about 6-12 people riding in the evening. He inquired about regulation of trolleys. Garrity responded that state regulates the licensing of vehicles while the city works to regulate the separation of city and trolley bus stops.
6. Lunch Wagons: A community member reported that he had followed up with the Department of Health (DOH) and that the lunch wagons will receive a citation for not moving off the property. He also noted that he is exploring the possibility of a private police force to assist HPD. He will be filing federal and civil rights complaints for not being allowed to use certain busses in Waikiki. Garrity reported that some busses are express busses and toward the end of some lines, they only discharge passengers and do not pick up new passengers.

Governor David Ige's Representative: A representative was not present; a report was not available.

Councilmember Trevor Ozawa: Councilmember Ozawa circulated a report and reported the following:

- Meetings with Waikiki Stakeholders: A meeting with HLTA was held to go over legislative priorities. He also met with Rick Egged to discuss the Waikiki Beach Improvement District and noted that both short and long term plans for Waikiki Beach preservation are being discussed.
- Car Sharing: Bill 65, relating to car sharing, would allow car sharing companies to use public parking spaces. Public stalls should not be used by private companies.
- 2121 Ala Wai Boulevard Pothole: DFM reported that the pothole on 2121 Ala Wai Boulevard was patched in December 2014.
- Showers in Ala Moana Beach Park and at 2476 Kalakaua Avenue: In response to a resident's observation of wasteful showering practices at Ala Moana Beach Park and 2476 Kalakaua Avenue, there will be signs to prohibit the use of shampoo and soap.

Questions, comments and concerns followed:

1. Rail Overrun Costs: Erteschik inquired about the role of the City Council in controlling the potential cost of rail. Councilmember Ozawa reported that the City Council will ensure that the costs overruns do not occur by working with the Honolulu Authority for Rapid Transit (HART). Councilmember Ozawa explained that delayed claims and lawsuits have resulted in additional costs. He is proposing a resolution that would require HART's meetings to be aired on 'Ōlelo.
2. Citation Revenue: Flood asked what Councilmember Ozawa could do to ensure that more revenue from citations goes to the City instead of the State. Council member Ozawa agreed and noted that he would like to work on keeping the revenue for the City, especially if the ticket was written without the use of State resources.
3. King's Village Exemptions: A resident raised a concern about the Kobayashi Group's purchase of King's Village and their request for ordinance exemptions. Councilmember Ozawa stated that he will follow up on the issue.
4. Curbside Trolley Pick Up: A resident raised a concern about shuttle companies picking up passengers at the curbside near the Duke Kahanamoku Statue.
5. Motorcycle Noise Enforcement: A resident asked Councilmember Ozawa to assist in the issue of motorcycle noise enforcement and Councilmember stated that he would confer with the Mayor on this issue.
6. Counties Control of Segways: Chair Finley noted that five years ago the Hawaii State Legislature passed a bill to allow counties to determine the legality of Segways on sidewalks and stated that he believed that the City could propose a bill to limit Segways on certain sidewalks.

APPROVAL OF THE JANUARY 13, 2015 MINUTES: **The January 13, 2015 regular meeting minutes were UNANIMOUSLY APPROVED as written, 14-0-0 (Aye:** Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams).

NEW BOARD BUSINESS:

King's Village: Keith Kurahashi provided a PowerPoint presentation showing images of how the King's Village luxury condominium hotel would be profiled in the existing landscape. Kurahashi reported the following:

- Removal of the Wing: The new proposal removes a 240-foot wing, widening the 350-foot portion of the tower, preserves more Diamond Head and ocean views, and reduces the length of the tower by eight (8) feet and the width of the tower by 30 feet.
- Community Benefits: The developers will be contributing $1 million in community benefits to Waikiki including Waikiki Beach replenishment, Americans with Disabilities Act (ADA) improvements, homeless services, and public restrooms.
- Minimizing the Impact on Scenic Views: Most of the structure is the same height as the Hyatt tower in order to minimize the impact on scenic views. About 56-feet of the proposed structure sticks out beyond the Hyatt.

Questions, comments and concerns followed:

1. Exemptions: A community member expressed concerns about the exemption to the 240-foot height limit in exchange for community benefits. Kurahashi reported that it is within the rules of the special design district that the City may approve certain exemptions in exchange for community benefits.
2. Traffic: A community member raised a concern about traffic in that area during and post production. Kurahashi reported that loading zones will be provided on the property.
3. Ocean View Loss: A community member noted that she would lose her ocean view, her apartment's biggest asset. Kurahashi reported that ocean views for the 20th floor and below will most likely be improved by the redesign.
4. Lack of Retail Diversity: A community member raised a concern about the lack of diversity of stores in Waikiki and added that more buildings do not add value to the area.
5. Community Benefit: A community member asked the Board to represent the voices of the community and expressed that the community would not benefit from the new development.
6. Mauka-Makai Orientation: A community member noted that the orientation of the building is parallel to the ocean, and asked if the mauka-makai orientation was considered for the building.
7. Impact on the Skyline: A community member raised concerns about the impact of special interest groups on the skyline of Waikiki.
8. Construction Noise: A community member expressed concerns about the level of noise during construction and added that community is not being considered.
9. Available Online: Lofquist inquired if the presentation is available online. Kurahashi said it was not.
10. Written Testimony: Merz noted the importance of submitting opinions in writing for the environment assessment and advised the public to be aware of the review period and legal process for the project.

Legislative Report: Erteschik circulated a sheet with a list of bills that may impact Waikiki and the neighborhood boards and noted that the board could revisit the bills at a later date as some bills will be deferred during the legislative process. Erteschik and Chair Finley noted that House Bill 313 and House Bill 317 relate to the Sunshine Law and neighborhood boards.

Smith moved and Flood seconded the motion to support Senate Bill 419, Senate Bill 420, House Bill 313, House Bill 317 (Relating to Neighborhood Boards), Senate Bill 475 (relating to open government), and Senate Bill 1210 (Relating to relating to public agency meetings).

The motion PASSED UNANIMOUSLY, 14-0-0 (Aye: Adams, Carroll, Dew, Erteschik, Finley, Flood, Grace, Apaka, Lofquist, Merz, Nigro, Simpson, Smith, and Williams**).**

Adams moved and Flood seconded the motion to oppose House Bill 1322 (relating to a homeless person's bill of rights).

Discussion followed: Bill of Rights: Erteschik stated that it was an unnecessary bill as it conflicts with civil rights.

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April 11, 2015

Ms. Marilyn Winston Katzman
225 Kaiulani Avenue, Apt. 1602-1603
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Katzman:

Thank you for your letter dated March 10, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

TRAFFIC

Your concern about traffic is understandable and was recognized by the Traffic Impact Report (TIR) prepared by the applicant's traffic engineer. More specifically the concern for tour buses and freight trucks delivering supplies which often times load and unload on the surrounding public streets. Traffic counts were taken during the week days, during the morning and afternoon peak hours on days when schools were in session to replicate the busy traffic periods.

The applicant's TIR recognized the need to address loading and made the following recommendations:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*
2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

The TIR went on to indicate that with the implementation of these recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

During the design phase of the Project, the applicant will work to implement the recommendations of the Traffic Impact Report. The Project has been deliberately designed to contain loading, drop-offs and pick-ups on site, therefore minimizing congestion on surrounding roads.

The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage to encourage bike usage.

In addition to the initial TIR, at the request of the Department of Planning and Permitting (DPP), the applicant commissioned a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" (Report) that recommended the design of the two-way conversion of Kaiulani Avenue; a modification of the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue; a modification of the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications; and a modify of the traffic signal phasing and timing as necessary.

The Report concluded that the proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

WIND TUNNEL

Rowan Williams Davies & Irwin Inc. (RWDI) has prepared a "Pedestrian Wind Assessment" for the 133 Kaiulani Project, dated April 10, 2014. The study in its entirety is provided in **Appendix 11** of the DEA. On January 19, 2015, RWDI provided a memorandum updating the Pedestrian Wind Assessment to reflect a new design for the structure based on wind tunnel testing data. This memorandum is provided in its entirety in **Appendix 11** of the DEA.

As stated in the memorandum:

.....
"*All locations have passed the wind safety criteria.*

"Grade level wind conditions are similar to those predicted in the report entitled 133 Kaiulani Pedestrian Wind Assessment, due to the similarity in building location, orientation and general massing, especially the large podium structure.

"For the existing configuration, wind conditions at grade level are expected to be comfortable for walking or better throughout the year. With the addition of the proposed development, wind conditions are expected to remain comfortable for walking or better in general. One exception to these appropriate wind conditions is expected in a localised area along the east side of the building (Locations 9, 10 and 12). Uncomfortable wind conditions are expected in this area as a result of winds accelerating between the proposed development and the existing building to the east (see Image 1). Locations 9, 10 and 12 are in our covered driveway and at the east end of our porte cochere.
.....

"Wind speeds which are higher than typically desired in an amenity space are expected on the terrace areas which are exposed to northeasterly winds (Locations 35 and 37 through 45). This is largely due to downwashing along the east facing tower façade. Acceleration of winds around the tower corner is also expected. The addition of wind control elements, such as local dense landscaping, porous wind screens, overhead canopies and overhead trellises is expected to result in appropriate wind conditions for the space. Locations 35 and 37 through 45 are on our amenity deck.

"The lobby area at the 7th and 8th floors has changed significantly from the original design. The open area below the tower structure is expected to be subjected to northeasterly winds, similar to the terrace areas."

The applicant will implement the recommended mitigation measures as appropriate, subject to approval by the Department of Planning and Permitting.

HAWAIIAN SENSE OF PLACE

The Project's overall design will reflect a "Hawaiian Sense of Place" which will be reflected in landscape in public open spaces, a water feature, a pocket park, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places to accommodate cultural programs.

The "Hawaiian Sense of Place" is derived from cultural perceptions that are taught, as well as sensory aspects that are felt. The cultural component of the landscape is expressed through the use of native Hawaiian and Polynesian-introduced plants that have always been important to the Hawaiian culture: Hala, Kukui, Coconut Palm and many others. These native plants, with their strong cultural heritage, have been included because of their historic significance to Waikiki.

The pocket park will feature a native Hawaiian garden to provide an amenity not only for residents and guests, but the larger community. A more diverse plant palette will be used and

will incorporate endemic, indigenous and Polynesian-introduced plants such as Hala, Kukui, 'Ohi'a Lehua, Hapu'u, 'A'ali'I, Na'u, Pualoalo.

In addition to these native plants, many of the exotics that visitors have come to associate with Hawaii are used. These have been included because our "Hawaiian Sense of Place" is perceived not only through our culture, but our senses of sight, smell, touch, taste and sound. Plumerias, Gingers, Heliconias, "Queen Emma" Spider Lilies, Anthuriums, and Spathoglottis are all incorporated within the landscape.

A subtle water-feature along Koa Avenue will add tropical feel to the area by providing the sound of falling water over natural stone amongst a tropical landscape. These features further tie into the overall consistency of the public space throughout Waikiki.

INFRASTRUCTURE

The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements.
With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

The City MUST constantly upgrading their infrastructure, including the Wastewater Treatment Plants in their planning for future growth on the island. The growth is necessary, to support our growing population and to provide economic opportunity for that growing population. This Project will produce a significant increase in the number of jobs 384 versus the existing 200 from the existing development on the site. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created. This Project will provide job opportunity for those currently in need of work and will also provide jobs for younger residents entering the job market in the next three years.

The Board of Water Supply has commented on this DEA that the existing water system is adequate to accommodate the proposed development.

Upon completion, the property will generate property taxes of $4,577,000 per year. Along with the monthly fees collected for water, sewer and electrical usage, this could go toward covering infrastructure maintenance and improvements. This addition to the City's revenue will more than cover the services used by our visitors.

COMMUNITY BENEFITS

The applicant is not bribing the City but is providing community benefits, in accordance with the PD-R rules. The LUO WSD has put in place a PD-R process to allow flexibility that will allow the Project as planned. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability,

function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

The community benefits provide much more than just the $1,000,000 in physical improvements.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.

- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

This package of community benefits is not a bribe, but is a benefit package in accordance with the PD-R rules.

COMPLIANCE WITH RULES

The applicant is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions discussed earlier benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Guidelines are designed such that each property may be analyzed on a case-by-case basis. The applicant has complied with all rules and regulations in their application and minimized view obstruction of surrounding neighbors by placing the bulk of their structure behind the Hyatt West Tower. The applicant also minimized impacts to the public view of Diamond Head from the Punchbowl Lookout.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 10, 2015
Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

RE: 133 Kaiulani Condo/Hotel Project

copy sent to :
Gerald Toyomura
Department of Planning and Permitting
Urban Design Branch
850 South King Street 7th Floor
Honolulu, HI 96813

Dear Keith Kurahashi,

I have several concerns about the project you presented at the Waikiki Neighborhood Board on February 10, 2015. I believe your project adversely impacts the environment and the lifestyle in and around Waikiki.

I am entering my comments into the City's Public Record.

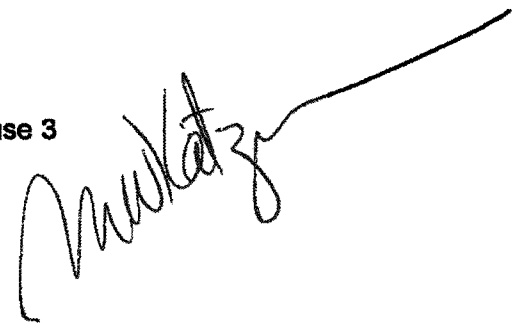
I believe the traffic report you submitted is flawed. The area is very often gridlock with a large number of vehicles (cars, tour buses and vans, delivery trucks, garbage trucks & emergency vehicles). The additional vehicles in the area around your project will cause a back up on Kalakaua, Kaiulani, Kuhio and throughout Waikiki.

I believe the **wind tunnel that will be created** on Kaiulani by the new tower has not been properly studied. Huge numbers of tourists and locals walk on this street and you will be changing the Hawaiian experience. Your proposed tower does not promote a Hawaiian sense of place as is the objective of the Waikiki Special District.

I understand that your project will create over ten million more gallons of waste water per year than is currently being created. The City needs to address the declining infrastructure in the area, such as road maintenance, water main breaks, insufficient sewer system.

I believe you are bribing The City with a paltry one million dollars in exchange for **waiving the rules** for your high grossing project. One million dollars will have only a minimal effect on upgrading Waikiki Beach. It has become the norm for developers to expect The City to give them all the exemptions they request and this has to stop.

Regards,
Marilyn Winston Katzman
2410 Cleghorn Street, Penthouse 3
Honolulu, HI 96815
808-744-3736



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April 8, 2015

Mr. Timothy Lewis
2365 Kalakaua Avenue
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Lewis:

Thank you for your letter of support, dated March 17, 2015, regarding the 133 Kaiulani Condo-Hotel Project.

Given your long tenure in Waikiki, we realize you've seen both the stagnation and growth of Waikiki. We appreciate your comments about how this project will help activate central Waikiki and have a positive economic impact on the community.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 17, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

RE: 133 KA'IULANI CONDOMINIUM-HOTEL PROJECT 5(E) DEA (AFNSI)

Dear Sir / Madam,

I lived for more than 30 years and worked for more than 25 years in Waikiki. My house is on the side of Prince Hotel in Waikiki. My work is Sheraton Moana Surf-Rider in the central Waikiki. I support 133 Kailulani Project.

This project is located only two or three minute walk from my work. My business is to sell suitcases at Sheraton Moana Surf-Rider in the hotel. When this project is completed, my business will be improved by more Japanese travelers. I am looking forward this project to improve tourist business in Waikiki.

This project is located at the central Waikiki which is a perfect location to activate Waikiki business more. Also, an international market might be re-developed in the central Waikiki. I hope that the central Waikiki get redeveloped positively, become a leading edge spot, and provide a beautiful and popular place for tourists. Therefore, I support 133 Kailulani Project.

Sincerely,

Timothy Lewis
2365 Kalakaua Avenue
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 8, 2015

Ms. Yuko Lewis
2155 Kalakaua Avenue
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Lewis:

Thank you for your letter of March 17, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

We appreciate your comments regarding how this project will have a positive impact on the tourism industry in Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 17, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Foor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

RE: 133 KA'IULANI CONDOMINIUM-HOTEL PROJECT 5(E) DEA (AFNSI)

Dear Sir / Madam,

I have lived and worked in Waikiki for five years. I support 133 Kailulani Project.

I have been working at Spa Este Massage Salon along Waikiki Beach Walkway. Our customers are mostly Japanese travelers. We travel to our customers' hotels to offer massage plans.

When this project is completed, we expect to have more customers visiting our salon and massage room services. We hope that more Japanese travels to Hawaii and enjoy our Hawaiian massage. Therefore, we support 133 Kailulani Project.

Sincerely,

Yuko Lewis
2155 Kalakaua Ave.
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 11, 2015

Ms. Diane Mackey
2452 Tusitala Street, #1903
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Mackey:

Thank you for your letter dated March 19, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

TOWER ELEVATIONS

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

VIEWS

The applicant understands your concern about your views. A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk

of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process, with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

WAIKIKI SPECIAL DISTRICT

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

NARROW TOWERS

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provides additional vertical patterns aside the cascading windows facing the mauka view. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each building elevation in order to achieve a balance of functionality with architectural aesthetics.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

MAUKA/MAKAI ORIENTATION

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting your views.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

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The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

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COMMUNITY BENEFITS

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- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.

- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
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OPEN SPACE KING'S VILLAGE

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The applicant's ground floor retail may provide commercial services that will support the neighboring residents, as well as the hotel guests. As mentioned early in this letter, King's Village has its challenges with the development of new commercial centers in Waikiki and the upcoming redeveloped International Market Place.

WASTEWATER

The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

The Board of Water Supply has determined that their water system can support the proposed development.

The City is constantly upgrading their infrastructure, including the Wastewater Treatment Plants in their planning for future growth on the island. The growth is necessary, to support our growing population and to provide economic opportunity for that growing population. This Project will produce a significant increase in the number of jobs 384 versus the existing 200 from the existing development on the site. This Project will provide job opportunity for those currently in need of work and will also provide jobs for younger residents entering the job market in the next three years.

NOTIFICATION OF NEIGHBORHOOD BOARD MEETING

The LUO requires notification to adjoining property owners and the neighborhood board on a major permit. We have provided appropriate notifications to all adjoining property owners as well as those located across the street from the Project Site.

WAIKIKI SPECIAL DISTRICT GUIDELINES AND BUILDING CODE

The applicant has designed a project that adheres to the WSD Design Guidelines and meets the requirements of the PD-R regulations. The final construction drawings will meet the City's building code.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilmember Trevor Ozawa, Honolulu City Council
Councilmember Ann Kobayashi, Honolulu City Council
MK Development Consulting, LLC

March 19, 2015

Diane Mackey
2452 Tusitala Street, #1903
Honolulu, HI 96815

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: King's Village 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi:

This letter is in response to the Draft Environmental Assessment that was sent to the Department of Planning and Permitting for the building MK Development Consulting, Inc. wants to construct where the King's Village now stands.

Instead of upgrading the existing buildings and preserving the open space above it for all to appreciate, you and your clients want to contribute to the despicable trend of suffocating Waikiki with massive tower walls. Your clients want to profit at the expense of the community.

The view from my building will be somewhat affected by the huge building that is planned for the King's Village site. What concerns me more is the fact that the applicant, MK Development Consulting, wants to erect an enormous barricade of a building with little regard for the Waikiki Special District Design Guidelines and current City and County building codes.

The Guidelines and building codes state:

- Building forms which produce narrow towers are preferred
  - This proposal is a colossal wall parallel to the ocean and in no way will resemble a tower
- Buildings with a series of graduated, stepped forms are preferred for new projects
  - Each floor above the amenities level is the same width with no set back
- The long axis of all new high-rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views
  - Again, this design is a wide wall of only ocean-facing units with no attempt to make it a narrower building with units facing Diamond Head, mauka or Ewa
- The building code height limit is 240 feet
  - The proposed building would unnecessarily be 110 feet higher plus another 18 feet for the elevator shaft
- The building code has a maximum floor area ratio of 3.5
  - The proposed floor area ratio is 4.0
- The building code requires a minimum of 50% open space
  - The proposed open space is only 39%

The Draft Environmental Assessment suggests that this building will encourage other development in the neighborhood where buildings are underutilized. Buildings with fewer than five stories are not underutilized; they provide open space as well as residential and commercial space.

Open space in a city is necessary to prevent walls of buildings and concrete corridors that force people to look straight up to see the sky. The King's Village provides shopping, dining and open space. It is currently a fun place for the tourists and local residents who cannot afford to shop at the ever-increasing number of designer shops such as Gucci and Tiffany.

A quick analysis of the waste water seems to indicate that the proposed building will produce over 10,000,000 extra gallons per year than what the King's Village currently produces. Waste water, regardless of the supply, is not something to take lightly. Water is a valuable resource. Water consumption by an unnecessary building will cause more wear and tear on the water and sewer systems and increase the amount to be treated. The increased demand in consumption and waste will likely increase the cost of water for all.

It is disappointing that you and your clients have made no public effort to announce your planned presentations at the Waikiki Neighborhood Board meetings to the immediate neighborhood. I, and many of my neighbors, would have attended the April 2014 Waikiki Neighborhood Board meeting had we known about your presentation, and would have adamantly opposed it. The Board may have passed your original design back then, but it was done without community input. One of the Board members noted that there was no community input and that was put in the meeting minutes. As you know, the Board did not even take a vote on your revised design because of all the protests from the community at the February 2015 meeting.

I am asking the Department of Planning & Permitting and the City Council to reject this project on the grounds that it simply <u>does not</u> adhere to the Waikiki Special District Design Guidelines and several very important building codes.

Sincerely,

Diane Mackey

cc: Gerald Toyomura, Dept of Planning & Permitting, Urban Design Branch
Trevor Ozawa, Honolulu City Council, District 4, Ann Kobayashi, Honolulu City Council, District 5

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E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. Larry Mackey
2452 Tusitala Street, #1903
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Mackey:

Thank you for your letter dated March 19, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

TOWER ELEVATIONS

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

VIEWS

The applicant understands your concern about your views. A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki

Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

WAIKIKI SPECIAL DISTRICT

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

NARROW TOWERS

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provides additional vertical patterns aside the cascading windows facing the mauka view. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each building elevation in order to achieve a balance of functionality with architectural aesthetics.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

MAUKA/MAKAI ORIENTATION

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

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HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting your views.

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FEWER THAN FIVE STORY BUILDINGS

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Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilmember Trevor Ozawa, Honolulu City Council
Councilmember Ann Kobayashi, Honolulu City Council
MK Development Consulting, LLC

March 19, 2015
Larry Mackey
2452 Tusitala Street, #1903
Honolulu, HI 96815

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: King's Village 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi:

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I am asking the Department of Planning & Permitting and the City Council to reject this project on the grounds that it simply does not adhere to the Waikiki Special District Design Guidelines and several very important building codes.

Sincerely,

Larry Mackey

Larry Mackey

cc: Gerald Toyomura, Dept of Planning & Permitting, Urban Design Branch
Trevor Ozawa, Honolulu City Council, District 4, Ann Kobayashi, Honolulu City Council, District 5

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E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. and Mrs. Stan Michaels
225 Kaiulani Ave., Apt 602
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. and Mrs. Michaels:

Thank you for your email dated March 24, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

WAIKIKI SPECIAL DISTRICT

The applicant is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

HEIGHT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R**

and following a 240-foot height limit. Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

OPEN SPACE

The adjustment to the open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

COMMUNITY BENEFITS

The LUO WSD has put in place a PD-R process to allow flexibility that will allow the Project as planned. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.

- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

Your email and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Keith Kurahashi

From: Stan <empire41@hawaii.rr.com>
Sent: Tuesday, March 24, 2015 8:44 PM
To: kkurahashi@hawaii.rr.com
Subject: King's village

Keith Kurahashi
Gerald Toyomura
Trevor Ozawa

To ALL----especially Mr Kurahashi.
I am completely opposed to the flagrant disregard for existing zoning laws represented by your planned redevelopment of the King's Village property. Most notably I oppose your attempts to: (1) violate air and sight lines with the huge increase in height. 350 feet is far far too high for this neighborhood. (2) reduce the amount of open space. Current law places 50% as the acceptable open space yet you are attempting to build to only 39% open space. . That is far too much building and lack of open space for this neighborhood and finally (3) your attempts to increase the density from the existing FAR of 3.5 to an incredible FAR of 4.0 is outrageous.
Your entire development push shows arrogance and amazing greed. The property requires sensitivity to history, community, and realistic profit. NOT the MAX Squeeze you are pushing. Again I OPPOSE all 3 (three) of your requests for excess represented by extreme height, reduction in open space and the horrendous increase in the FAR. I plead for sanity and denial of your excesses directly to Gerald Toyomura of Honolulu C &C planning department. And for our Councilman Trevor Ozawa to understand that as a resident of our precious Waikiki. Do not allow these excesses to move forward. We all vote and this development is a deal breaker if not stopped.
Sincerely,
Stan & April Michaels
225 Kaiulani Ave. Apt 602
Honolulu, HI. 96815
empire41@hawaii.rr.com

Sent from my iPad=

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. and Mrs. Patrick Mion
6 Via Lino
Glenville, NY 12302

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. and Mrs. Mion:

Thank you for your email dated March 24, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

NEED FOR THE PROJECT

The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 248 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

The impacts have been vetted through the DEA process. The impacts of noise, air quality and traffic will not be significant. Infrastructure with the exception of wastewater has been deemed adequate by the responsible agencies. A sewer connection permit has been approved subject to an on-site manhole improvement and a short (75-foot) sewer line improvement.

The State and City encourage redevelopment in Waikiki in their respective planning documents in recognition of the importance of our number one industry, tourism and our number one economic engine Waikiki.

Waikiki has suffered years of neglect. For the period between 1978 and 1996, the Comprehensive Zoning Code and its successor Land Use Ordinance (LUO) restricted improvement of nonconforming structures destroyed by over 50% by any means to its existing floor area or what was allowed by current code, whichever was less. In 1978, the FAR (floor area ratio) for the Hotel Precinct in the Waikiki Special District ranged from about 2.15 for a 40,000 square foot lot to 2.80 for a lot 90,000 square feet or larger and continued in this range until the end of 1996. This had created a de facto moratorium, where very little development or redevelopment occurred. Property owners were not willing to tear down and rebuild aging structures regardless of condition because they faced a significant loss in floor area, since some had developed at FAR's between 4.0 and 7.0. During this period Waikiki suffered and lost some travelers to other national and international beach resorts. In late 1996, the LUO Waikiki Special District was amended to state "A nonconforming use and/or structure may be replaced by a new structure with up to the maximum permitted floor area of the precinct for similar uses or existing floor area, whichever is greater, provided all other special district standards are met." The amendment also allowed a modification of certain standards to further encourage redevelopment. The City realized that the moratorium on building in Waikiki was due to an overly restrictive zoning code. This has been successful and much of Waikiki has been getting a much needed face lift with nonconforming structures getting replaced or redeveloped. Our number one island industry and number one economic engine (Waikiki) has experienced a rebirth and continued redevelopment of our aging physical plant. We need to keep this momentum going by encouraging responsible and sensitive redevelopment that follows the rules that have been set in place for the Waikiki Special District.

HOME OF KING KALAKAUA

The Cultural Impact Assessment done for the Project area does not show that King Kalakaua resided at this location. Our archaeological/cultural consultant did some additional research and found that the closest known residence of Kalākaua is Pualeilani, which was his wife Queen Kapi'olani's home. Pualeilani was located at what is now known as Kūhiō Beach Park, which is a few blocks makai of the Project area. Kalākaua also resided in a bungalow known as the first 'Iolani Palace. The approximate location is where the barracks/Richards Street is today, in downtown Honolulu. He also lived in a house boat known as Healani in Honolulu Harbor.

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

WAIKIKI SPECIAL DISTRICT

The applicant is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO), in order to allow a reduction in impact on views for the surrounding neighbors and to protect existing public views of Diamond Head from the Punchbowl lookout

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

VIEWS

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

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In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
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GET taxes on Hotel Rooms	$1,108,000
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Total annually	$7,984,000

HAWAIIAN SENSE OF PLACE

The Project's overall design will reflect a "Hawaiian Sense of Place" which will be reflected in the landscape in public open spaces, a water feature, a pocket park, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places to accommodate cultural programs.

The "Hawaiian Sense of Place" is derived from cultural perceptions that are taught, as well as sensory aspects that are felt. The cultural component of the landscape is expressed through the use of native Hawaiian and Polynesian-introduced plants that have always been important to the Hawaiian culture: Hala, Kukui, Coconut Palm and many others. These native plants, with their strong cultural heritage, have been included because of their historic significance to Waikiki.

The pocket park will feature a native Hawaiian garden to provide an amenity not only for residents and guests, but the larger community. A more diverse plant palette will be used and will incorporate endemic, indigenous and Polynesian-introduced plants such as Hala, Kukui, 'Ohi'a Lehua, Hapu'u, 'A'ali'I, Na'u, Pualoalo.

In addition to these native plants, many of the exotics that visitors have come to associate with Hawaii are used. These have been included because our "Hawaiian Sense of Place" is perceived not only through our culture, but our senses of sight, smell, touch, taste and sound. Plumerias, Gingers, Heliconias, "Queen Emma" Spider Lilies, Anthuriums, and Spathoglottis are all incorporated within the landscape.

A subtle water-feature along Koa Avenue will add tropical feel to the area by providing the sound of falling water over natural stone amongst a tropical landscape. These features further tie into the overall consistency of the public space throughout Waikiki.

Your email and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

From: Karen Mion <karen.mion@gmail.com>
Sent: Tuesday, March 24, 2015 8:27 PM
To: kkurahashi@hawaii.rr.com
Cc: gtoyomura@honolulu.gov
Subject: 133 Kaiulani Condo-Hotel Project

Patrick & Karen Mion

6 Via Lino

Glenville, NY 12302

March 24, 2015

Re: 133 Kaiulani Condo-Hotel Project

Mr. Keith Kurahashi

Kusao & Kurahashi, Inc.

2752 Woodlawn Drive, Suite 5-217

Honolulu, HI 96822

Dear Mr. Kurahashi:

We are from upper state New York and recently went to Hawaii for the first time. Being from the East Coast, the idea of a Hawaiian vacation has always been an exotic tropical dream. We stayed in Waikiki in a condo building on Tusitala St. with gorgeous views of the rainbows in front of the mountains.

While chatting in a restaurant to a retired couple living full time in Waikiki we learned that developers wanted to turn the King's Village into a wide condo-hotel skyscraper that had only ocean-facing units.

We couldn't believe another skyscraper was proposed be built because we thought there were already more here than one would expect in a tropical paradise. The constant city noise, city buses, tourist buses and trolleys, daily traffic and sirens already seemed to be more than enough. Another skyscraper and it occupants would add traffic, pollution, noise and use more natural resources than a small shopping center.

Our Frommer's Honolulu & Oahu guidebook says that the King's Village is the location of the former home of King Kalakaua. If this is true, why would developers want to tear down an original and unique shopping center that is dedicated to such an important person in Hawaiian history to build a condo-hotel that looks like any other in any other city and that would have no connection to Hawaiian history?

We were told that the developers refuse to upgrade the King's Village, and also refuse to propose a tower that adheres to certain Guidelines that were designed for fair development for all even though, when truth be told, both options were economically feasible. We were told the developers were requesting height and density variances in order to build the immense tower even though without them the project would still be economically feasible.

As tourists, we find all this appalling and very sad. Waikiki is going to look like any other city crowded with skyscrapers. While walking all around Waikiki, we were grateful for the King's Village and other 3 and 4 story buildings still standing because they provided the open air space needed to see the sky and not feel confined.

We are writing to say we are opposed to the project for cultural, environmental and esthetic reasons. Cultural, if King Kalakaua lived there, but also because a condo-hotel skyscraper does nothing to promote a sense of a Hawaiian tropical paradise. Environmental because of the additional burden on natural resources such a tower would create. Esthetic because it will add to an already crowded skyline and look like a large, wide wall that runs parallel to the ocean.

The King's Village should be upgraded. If it is not upgraded, then a shorter, narrower building that pays homage to King Kalakaua and aligns right behind the Hyatt tower with units facing all four sides should be the only building design allowed.

Yours sincerely,

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. Bryan Moseley
Email

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Moseley:

Thank you for your email dated March 24, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

VARIANCES - WAIKIKI SPECIAL DISTRICT

The proposed development is not requesting variance, but is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

240-FOOT HEIGHT LIMIT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the

PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

VIEWS

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project.

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

VARIANCES

The applicant is not requesting variances, but is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

COMPLIANCE WITH RULES

As discussed in the previous section on Variances, the applicant is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions discussed earlier benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Guidelines are designed such that each property may be analyzed on a case-by-case basis. The applicant has complied with all rules and regulations in their application and minimized view obstruction of surrounding neighbors by placing the bulk of their structure behind the Hyatt West Tower. The applicant also minimized impacts to the public view of Diamond Head from the Punchbowl Lookout.

Your email and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Keith Kurahashi

From: Bryan Moseley <moseley.bryan@gmail.com>
Sent: Tuesday, March 24, 2015 8:35 PM
To: kkurahashi@hawaii.rr.com
Cc: gtoyomura@honolulu.gov; tozawa@honolulu.gov
Subject: King's Village 133 Kaiulani Ave

Hello,

I am writing to voice my opposition to height and density variances being offered to the developers of King's Village development project at
133 Kaiulani Ave. My wife and I purchased our unit in the Governor Cleghorn Building with the expectation that all of our neighbors would be held to legal guidelines for height and density. We do not want to see our view and resources diminished by others who are circumventing the rules. We support development that happens within the existing guidelines. However it is unfair to simply allow one developer to increase the equity of their project by taking it from others in the community with the help of local government. We respectfully request that variances not be granted to the developers in this situation.

Thank you,

Bryan Moseley

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Leonhard Nicolai
225 Kaiulani Avenue, # 1704
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Nicolai:

Thank you for your email dated March 13, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

WAIKIKI SPECIAL DISTRICT

The proposed development is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

240-FOOT HEIGHT LIMIT

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R**

and following a 240-foot height limit. Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

TRANSITIONAL HEIGHT SETBACK

The adjustment to the height setback is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." In order to accomplish this, the tower must be located as far makai as possible (with the need for a modification to the transitional height setback as allowed through the PD-R process). The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

ENVIRONMENTAL IMPACT STATEMENT

The analysis of impacts presented in our DEA is no different than what would have been provided in a Draft and Final Environmental Impact Statement (EIS). The traffic study that was done is exactly the same as a traffic study that would have been commissioned for an EIS, similarly, the noise/acoustic study, air quality, archaeological, cultural impact and other studies provided in the DEA are exactly the same as ones that would be done for an EIS. However, due to the minimal impact on the environment, based on these studies, the applicant is following the Environmental Assessment process.

Your email and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mayor Kirk Caldwell
MK Development Consulting, LLC

March 13, 2015

Leonhard Nicolai
2412 Koa Avenue, Apt. 404
Honolulu, HI 96815

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Project: 133 Kaiulani Condo-Hotel Project

Gentlemen,

Regarding the King's Village luxury condo hotel, I strongly feel that the size of the building violates the guidelines that were put in place for the good of all of Waikiki. This project will violate the 240-foot height limit, encroach into the transitional height setback and exceed density rules.

> The impacts of the project are significant enough to warrant an Environmental Impact Statement (EIS).

Exemptions were given previously to the Trump Hotel and Ritz-Carlton Residences and this has to stop. If we have rules established for Waikiki, then please, let us stick with them.

Sincerely,

L. Nicolai

copy: Department of Planning and Permitting
Mayor Kirk Caldwell

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Ms. Roland Nipps
225 Kaiulani Avenue, Apt. 1604
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Nipps:

Thank you for your email dated March 25, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

HEIGHT AND MAUKA/MAKAI ORIENTATION

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed development is following the WSD's PD-R option in the Land Use Ordinance (LUO) that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

The adjustment to the height setback is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." In order to accomplish this, the tower must be located as far makai as possible (with the need for a modification to the height setback as allowed through the PD-R process). The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

COMMUNITY BENEFITS

The applicant feels that the list of community benefits described below is commensurate/proportional to the requests for increased height, height setback, density and open space being requested.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.

- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

Your email and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
MK Development Consulting, LLC

Keith Kurahashi

From: roland nipps <rnipps@yahoo.com>
Sent: Wednesday, March 25, 2015 10:42 AM
To: kkurahashi@hawaii.rr.com
Subject: King's Village

Hello Mr. Kurahashi,

I want to express my opinion regarding changes involving the proposed King's Village development.
I am a resident of Waikiki.
The additional height and density requests are not warranted. The building does not conform to the Waikiki Special District guidelines, and the building orientation will block mauka/makai wind and light. The community benefits proposed are not proportional to the claims made dealing with increased height and density.

Thank you,
Roland Nipps

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. Michael A. O'Dwyer
225 Kaiulani Avenue, PH3
Honolulu, Hawaii 96815

Subject: Draft Environmental Assessment
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. O'Dwyer:

Thank you for your letter dated March 18, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your letter).

DEPARTMENT OF PLANNING AND PERMITTING AND CITY COUNCIL

The applicant feels that the Department of Planning and Permitting (DPP) and the Honolulu City Council's Committee on Planning and Zoning have been careful in their decisions which have served to implement the Land Use Ordinance (LUO) and the Waikiki Special District Guidelines.

VIEWS

The applicant understands your concern about your views. A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot tower, much of the view corridor between the two Hyatt towers will be preserved.

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east to west direction.

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting your views.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the LUO, related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram

shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

NEED FOR HOTELS

The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total hotel units lost and to be lost will be 2,684 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,855 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; and this Project with 248 units planned. The net result is still a reduction of 1,416 units in Waikiki, resulting in a net reduction of tourist capacity in Waikiki. There is definitely a need for more hotels in Waikiki.

WAIKIKI SPECIAL DISTRICT RULES

As described earlier, this applicant did not recklessly disregard the Waikiki Special District Guidelines, in orientation and form, but found a way to protect most of the mauka to makai views by locating most of their tower behind the Hyatt West Tower.

The proposed development is following the WSD'S PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

PRIVATE VIEWS

You are correct that private citizen's views are not protected, however, this applicant took great care to try to protect the makai views of the mauka towers as described earlier and as shown in the "Allowable Massing Study Comparison" diagram enclosed. The additional height allows for the protection of your makai views.

WALL FORM, HEIGHT AND DENSITY

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provide additional vertical patterns adjacent to cascading windows on the mauka face. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each elevation in order to achieve a balance of functionality with architectural aesthetics.

As described earlier the 350-foot height was a key element in allowing the preservation of certain ocean views for neighboring properties.

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

As described in depth earlier, in this instance the mauka/makai orientation does not work and the Ewa/Diamond Head orientation better serves the neighbors and the City, with an opportunity for significant community benefits, including public open space, protection of surrounding neighbors views, protection of the view of Diamond Head from the Punchbowl Lookout.

IMPACT ON COMMUNITY

As described in the DEA:

- *"Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected since traffic noise increases associated with project traffic are not significant."*
- *"As such, with the implementation of the aforementioned recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity."*
- *An increase in public open space available to the public, including a pocket park on Prince Edward Street, all to be maintained by condo-hotel operator or association.*
- *Greater average setback along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.*

The applicant has designed the building and it's orientation to lessen view impacts on their neighbors. The upgrade of this area in Waikiki may lead to an increase in the value of nearby properties.

This applicant will at no time demand the approval of politicians and the City. The applicant will follow the rules in place that allow for innovative development through the PD-R process and request the support of the approving bodies.

- The Board of Water Supply has determined that their water system can support the proposed development. The applicant will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from DPP, that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.
- The applicant plans to provide 272 parking stalls, 210 parking stalls more than the required 62 parking stalls. Parking will be made available to certain neighbors that need additional parking.
- Although there will be a loss of about 200 full-time and part-time jobs from the existing development at King's Village, Prince Edward Apartments and Hale Waikiki, the proposed redevelopment is expected to result in the creation of approximately 320 full-time jobs and 64 part-time jobs more than offsetting the jobs lost. Additionally, there will be temporary construction jobs for an approximately 30-month construction period that will peak at 300 on-site jobs as well as another 300+ ancillary jobs.
- As mentioned earlier, the 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.
- The additional height is needed to reduce visual impact for our neighbors.
- As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. A thorough review of the Projects compliance with WSD guidelines was provided earlier.
- The provision of community benefits is an important part of the PD-R process.

UPGRADE KING'S VILLAGE

The review of different alternatives is part of the environmental review process, including alternatives that may not make economic sense. Upgrading the King's Village was an option that doesn't make economic sense as described earlier.

PUBLIC BENEFITS

As mentioned earlier this is part of a process that follows the WSD and PD-R process rules and guidelines. The applicant is comfortable with the design and orientation of the building and the protection of certain makai views that will be accomplished through the PD-R process. The applicant is also comfortable with the community benefits that the City, State, Waikiki residents and island residents will benefit from, described as follows:

Physical improvements in Waikiki will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.

- When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
- Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.

- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Michael & Connie O'Dwyer
225 Kaiulani Avenue, PH3
Honolulu, HI 96815

March 18, 2015

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Gerald Toyomura
Department of Planning and Permitting, Urban Design Branch
850 South King St. 7th fl
Honolulu, HI 96813

Re: King's Village, 133 Kaiulani Condo-Hotel Project

Dear Mr. Kurahashi and Mr. Toyomura,

Hawaii laws may not protect the views of private citizens, but it also seems that based on the inexplicable decisions the Department of Planning and Permitting and the Honolulu City Council's Zoning Committee have made in recent years, that the City and County of Honolulu does not care about the real citizens of Waikiki either.

I've lived at the Governor Cleghorn building since 1972. I have seen many changes over the years; some good, some very bad. I once had an ocean view from Diamond Head to the Moana Hotel. I was able to see all of Diamond Head and now from my lanai, I can see only a sliver of the majestic volcanic mountain. I've seen the Waikiki Biltmore imploded to make way for the Hyatt Hotel and many high rises go up in the Diamond Head direction obscuring my once-lovely view. I could see people entering St. Augustine Church for Sunday mass. I witnessed the 40-story Pacific Monarch and Continental Hotel being erected on property where charming small houses once stood.

These are just a few of the dozens of changes I've witnessed over these many years and now the air space of the King's Village is being threatened by developers who do not seem to respect the shopping center's businesses, employees or neighbors. Developers are being allowed to destroy the open space in Waikiki by creating a New York City skyline in the middle of the Pacific Ocean.

These developers want to tear down the King's Village and are trying to convince elected and appointed officials with their fancy marketing spin and creative number crunching that a condo-hotel is needed in Waikiki in its place. And, not just any condo-hotel – the one that is being proposed is a wide flat wall of all ocean-facing units that will not only recklessly disregard the Waikiki Special District Design Guidelines in orientation and form, but, to add insult to injury to the citizens of Waikiki, one for which the developers are requesting height and density variances!!!

Private citizens' views may not be protected, but that does not mean that our elected or appointed government officials should not have a moral compass or sense of duty to the citizens of Waikiki who elect them, who depend on them to represent them, who need them to enforce the laws and guidelines of our county and city.

Any approval of the project, of its non-maukai-makai orientation, of its gigantic non-stepped back wall form, of its height and of its density would be totally unjust and appalling; and I am vehemently opposed to the City and County moving forward with this project.

How this giant project will impact this community would be devastating to us who live in the area: noise, congestion, traffic, aesthetics and decreased property values! It's like you are taking money out of my pocket, not to mention my valuable, unprotected view.

Developers think that they can demand the approval of politicians and the City with their attitude that:

- it doesn't matter how much water and energy will be wasted with this building,
- it doesn't matter how much more wear and tear on the sewer system it will create,
- it doesn't matter how many parking spaces will be lost to Waikiki citizens and Oahu residents,
- it doesn't matter how many businesses and jobs will be lost at the King's Village,
- it doesn't matter how much open air space gets filled in by skyscrapers,
- it doesn't matter that the building's design doesn't follow the guidelines that had been set forth to create and improve a Waikiki through development that was fair and just to all,
- it doesn't matter because people's opinions and decisions can be bought and influenced by promising a little money as political contributions and 'community improvements'.

The developers never planned to upgrade the King's Village and it is an insult to all citizens of Waikiki that they state it in the Draft Environmental Assessment that they did.

We will not stand for this!! Who do these people think they are to ruin our lives by going through with this abomination!! It's all about the ALMIGHTY BUCK!! Well, as President Truman said, the "the buck stops here." Such greed!! How can you live with this on your conscience! or do you have one?

Very truly yours,

Michael A. O'Dwyer

Michael A. O'Dwyer

cc: Trevor Ozawa, Zoning Committee, Honolulu City Council, District 4

KUSAO & KURAHASHI, INC.
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April 11, 2015

Carlito V. Orig, M.D.
225 Kaiulani Avenue, # 1704
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Dr. Orig:

Thank you for your letter dated March 12, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

KING'S VILLAGE

The 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

WAIKIKI SPECIAL DISTRICT

The proposed development is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

MAUKA/MAKAI ORIENTATION

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

NARROW TOWER

The concept of "building forms which produce narrow towers are preferred" in the WSD Design Guidelines and is also supported by the Project. The additional height allows the applicant to design a narrower tower, which is approximately 69 feet wide when viewed in the east/west direction.

The narrow tower in this east/west direction was critical to protect the public view of Diamond Head form the Punchbowl Lookout. This very narrow building just fits into the existing profile of the Aston Waikiki Beach Tower, so as not to affect the view of Diamond Head from Punchbowl Lookout. Although the property does not border on Kuhio or Kalakaua Avenues, it still has a potential to block views of Diamond Head from Punchbowl Lookout as evidenced by the enclosed "Site Analysis – Punchbowl View Corridor" diagram.

STEPPED FORM

The building does provide a single step form from the podium to the tower. An earlier design with a second step at the 240-foot level of the tower ended up encroaching slightly more into the view corridor between the two Hyatt towers and also blocked a portion of the existing view of Diamond Head from the Punchbowl Lookout.

SPECIAL VARIANCES

The applicant is not requesting special variances or any type of variance. The applicant is requesting flexibility that may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced. The flexibility in the height and precinct transitional height setback is directly related to protecting the view to a certain extent from your apartment and the public view of Diamond Head from the Punchbowl Lookout.

136-UNIT CONDO HOTEL

The applicant has relied on hotel industry consultants to determine that a critical mass of 200-250 units are needed for an economically viable hotel. In our case, the 246 condo-hotel units planned are expected to result in a hotel operation of about 209 hotel units just a little over the minimum required. The economy of scale is more related to operating costs and not sales price. There are certain fixed costs whether you operate a 136 unit hotel or a 200 unit hotel, and with the 200 unit hotel, those costs can be spread over a greater income creating an economically viable hotel.

WASTEWATER

The Project has received an approved a Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

The City is constantly upgrading their infrastructure, including the Wastewater Treatment Plants in their planning for future growth on the island. The growth is necessary, to support our growing population and to provide economic opportunity for that growing population. This Project will produce a significant increase in the number of jobs 384 versus the existing 200 from the existing development on the site. This Project will provide job opportunity for those currently in need of work and will also provide jobs for younger residents entering the job market in the next three years.

WATER

The Board of Water Supply has commented on this DEA that the existing water system is adequate to accommodate the proposed development.

ENERGY-EFFICIENCY

The applicant expects that the large lanais will be used often for enjoying the evening sunset or possibly for breakfast in the mornings.

The applicant plans the following in the interest of being energy-efficient:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- The applicant intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- The applicant will review all applicable LEED rating systems, use the certification standards as guidelines. LEED (Leadership in Energy and Design) is an internationally

recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

- The applicant intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- The applicant will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands.
- The applicant will reduce the Project's material waste through effective construction and operational recycling programs.

NOTIFICATION OF NEIGHBORHOOD BOARD MEETING

The LUO requires notification to adjoining property owners and the neighborhood board on a major permit. We have provided appropriate notifications to all adjoining property owners as well as those located across the street from the Project Site.

COMMUNITY SUPPORT

The applicant through this DEA process has received letters of support from residents and businesses in Waikiki, including support from the Waikiki Neighborhood Board and the Waikiki Improvement Association. We have also received letters opposing the project, many from your neighbors that live as you do in the Governor Cleghorn at 225 Kaiulani Avenue.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Carlito V. Orig, M.D.
225 Kaiulani Ave #1704
Honolulu, HI 96815

March 12, 2015

Re: 133 Kaiulani Condo-Hotel Project

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Gerald Toyomura
Department of Planning and Permitting
Urban Design Branch
850 South King St. 7th fl
Honolulu, HI 96813

Dear Mr. Kurahashi,

You and your clients want to destroy the King's Village, an iconic shopping center that is unique to Waikiki, in order to build a massive wall of a condo-hotel that could be found in any city. There is no uniqueness about your skyscraper. The King's Village is a fanciful and fun place for the tourists and residents who cannot shop at the ever-increasing number of designer shops such as Gucci and Tiffany.

Instead of upgrading the existing buildings and preserving the open space above it for all to appreciate, you and your clients want to contribute to the despicable trend of suffocating Waikiki with massive tower walls. Your clients want to profit at the expense of the community. Your Draft Environmental Assessment states that your clients considered upgrading the existing structure. I find that very hard to believe that that scenario was ever considered and would like to see the designs and cost estimates that were part of that consideration.

The design of your clients' building greedily and intentionally goes against the Waikiki Special District Guidelines. The orientation is not in a mauka-makai orientation, it is not a narrow tower, and it is not a series of graduated, stepped forms. It is a direct affront to the community.

The design makes no attempt to have a narrower building that includes mauka-facing units. The developers want to boast that the building only has ocean-facing units as a marketing tool. Narrowing the entire building to be closer to the width of the Hyatt tower and adding Diamond Head, mauka and Ewa-facing units would make the building thicker and more in line with the Waikiki Special District Design Guidelines. It would not be an issue for the Punchbowl-Diamond Head view line because the property does not border Kuhio or Kalakaua Avenues. It would also be more community-friendly.

In addition to not even trying to design a building that adheres to the guidelines, your clients want the Zoning Committee of the City Council approve special variances in height and density so the massive wall will not only be parallel to the ocean, but it will be 110 feet taller (128 including the elevator shaft) than current laws allow. Other than sheer greed on the part of your clients, there is no need to exceed the current codes.

I would like to see the calculations that made your clients decide that a 136-unit building that adhered to all the guidelines and current was not economically viable. It may be that their desired profit margin far exceeds what would really be economically viable.

A quick analysis of the waste water seems to indicate that the proposed building will produce over 10,000,000 extra gallons per year than what the King's Village currently produces. Waste water, regardless of the supply, is not something to take lightly. Water is a valuable resource. Water consumption by an unnecessary building will cause more wear and tear on the water and sewer systems and increase the amount to be treated. The increased demand in consumption and waste will likely increase the cost of water for all.

A building with only ocean-facing windows will have an impact on the consumption of electricity. It will require more energy to keep such units cool. It will be an unnecessary waste of energy, and a waste that could be avoided with the design of a building with units that face makai, Diamond Head, mauka and Ewa.

It is disappointing that you and your clients have made no public effort to announce your planned presentations at the Waikiki Neighborhood Board meetings to the immediate neighborhood. I, and many of my neighbors, would have attended the April 2014 Waikiki Neighborhood Board meeting had we known about your presentation, and would have adamantly opposed it. The Board may have passed your original design back then, but it was done without community input. One of the Board members noted that there was no community input and that was put in the meeting minutes. As you know, the Board did not even take a vote on your revised design because of all the protests from the community at the February 2015 meeting.

Your design and building are not welcomed by the community and it is our hope that the Department of Planning and Permitting and the Zoning Committee shall enforce the current building codes and respect the Waikiki Special District Design Guidelines before it is too late.

Sincerely,

Carlito V. Orig, M.D.

cc: Trevor Ozawa, Honolulu City Council

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April 11, 2015

Ms. Jean Q. Orig
225 Kaiulani Avenue, # 1704
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Orig:

Thank you for your letter dated March 12, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

WAIKIKI SPECIAL DISTRICT

The proposed development is following the Waikiki Special District (WSD) Planned Development-Resort (PD-R) option in the Land Use Ordinance (LUO).

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process. As mentioned earlier, the proposed development is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki. The applicant is not requesting variances. The applicant is following the WSD Design Guidelines as presented in the DEA and throughout this letter.

ENORMOUS WALL

The building has been designed to provide aesthetically pleasing elevations on all sides. On the mauka elevation the glass curtain wall system wraps both ends of the tower and frames the overall building visually slimming the appearance of the buildings elevation. Open stairs provides additional vertical patterns aside the cascading windows facing the mauka view. Four different angles and three depths were used to further help break up the tower's mass. Design sensitivity has been given to enhancing each building elevation in order to achieve a balance of functionality with architectural aesthetics.

MAUKA/MAKAI ORIENTATION

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation is also driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

DIRECT VIOLATION OF WAIKIKI SPECIAL DISTRICT GUIDELINES

As mentioned earlier, the applicant is following the WSD's PD-R option in the LUO that allows flexibility in Project density, height, precinct transitional height setbacks, yards, open space and landscaping in the interest of improving the overall ambiance and appearance of Waikiki.

Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions listed below benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

COMMUNITY BENEFITS

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

UNEMPLOYMENT

Although there will be a loss of about 200 full-time and part-time jobs from the existing development at King's Village, Prince Edward Apartments and Hale Waikiki, the proposed redevelopment is expected to result in the creation of approximately 320 full-time jobs and 64 part-time jobs more than offsetting the jobs lost. Utilizing the Department of Business, Economic Development and Tourism's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.

Additionally, there will be temporary construction jobs for an approximately 30-month construction period that will peak at 300 on-site jobs and based on a Department of Business, Economic Development and Tourism economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.

BENEFIT CITIZENS OF WAIKIKI

The community benefits described earlier will benefit the citizens of Waikiki and the entire State.

VIEWS

As mentioned earlier, a concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

NOISE IMPACT

Your building situated about 375 feet away from the Project site and should not be affected by construction noise at the property.

Long term noise mitigation for the guests of the proposed hotel includes:

- Traffic noise mitigation in the form of closure of windows and air conditioning is recommended.
- The use of coarse finishes for the circulation driveway surfaces will prevent the tire squeal noise for typical circulation speeds within the parking structure.

Short term noise mitigation measures that the applicant will provide include:

- The use of properly muffled construction equipment will be required on the job site.
- Compliance with State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii, will help to mitigate noise from construction activities.

Short term noise mitigation measures for nearby residents include:

- Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

TRAFFIC

The applicant's Traffic Impact Report made the following recommendations:

1. *Maintain sufficient sight distance for motorists to safely enter and exit the project driveway. Parking along Prince Edward Street fronting the project site may need to be restricted during the design phase of the project to ensure that sufficient sight distances are maintained.*

2. *Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.*
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 public roadways.*
4. *Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking garage access control (i.e., automatic gate, etc.) to ensure that queues do not extend onto the adjacent public roadway.*

The TIR went on to indicate that with the implementation of these recommendations, the proposed 133 Kaiulani development is not expected to have a significant impact on traffic operations in the vicinity.

During the design phase of the Project, the applicant will work to implement the recommendations of the Traffic Impact Report. The Project has been designed to contain loading, drop-offs and pick-ups on site, therefore minimizing congestion on surrounding roads.

The hotel operator also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. The Project's loading areas are out of the public right of way and sidewalk areas further increasing pedestrian safety and reducing sidewalk congestion. Bike racks will be provided in the parking garage to encourage bike usage.

In addition to the initial TIR, at the request of the Department of Planning and Permitting (DPP), the applicant commissioned a Traffic Assessment Report "Kaiulani Avenue Two-Way Conversion" (Report) that recommended the design of the two-way conversion of Kaiulani Avenue; a modification of the lane use at the affected intersections to accommodate the proposed southbound direction of traffic along Kaiulani Avenue between Koa Avenue and Kaiulani Avenue; a modification of the existing traffic signal system at the intersection of Kalakaua Avenue and Kaiulani Avenue to accommodate the proposed intersection modifications; and a modify of the traffic signal phasing and timing as necessary.

The Report concluded that the proposed conversion of Kaiulani Avenue from a one-way (northbound) to a two-way roadway near the proposed 133 Kaiulani development is primarily expected to increase circulation in the vicinity. With the implementation of the aforementioned recommendation, traffic operations in the vicinity of the proposed conversion are expected to remain similar to baseline conditions. As such, the conversion of Kaiulani Avenue to a two-way roadway between Kalakaua Avenue and Koa Avenue is not expected to have a significant impact on traffic operations in the vicinity. The proposed project is expected to provide enhanced circulation in the immediate vicinity rather than increased regional connectivity, as well as, relieving traffic demands along the parallel routes.

TEMPORARY CONSTRUCTION JOBS

As mentioned in the DEA, there will be temporary construction jobs for an approximately 30-month construction period that will peak at 300 on-site jobs and based on a Department of Business, Economic Development and Tourism economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.

The bulk of the construction work will be offered to local companies, the use of off-island workers may occur if the local companies are too busy or if specialty work is required and there is not a local contractor that can do this type of work.

INFRASTRUCTURE

WASTEWATER

Existing infrastructure is adequate to accommodate the proposed development except for wastewater. The Project has received an approved Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

WATER

The Board of Water Supply has commented on this DEA that the existing water system is adequate to accommodate the proposed development.

Hawaiian Electric has commented on the DEA that they have no objections and has asked that we keep them apprised of our plans, which we will do.

ENERGY EFFICIENCY

The applicant expects that the large lanais will be used often for enjoying the evening sunset or possibly for breakfast in the mornings.

The applicant plans the following in the interest of being energy-efficient:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- The applicant intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- The applicant will review all applicable LEED rating systems, use the certification standards as guidelines. LEED (Leadership in Energy and Design) is an internationally

recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

- The applicant intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- The applicant will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands.

The applicant will reduce the Project's material waste through effective construction and operational recycling programs.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Jean Q. Orig
225 Kaiulani Ave #1704
Honolulu, HI 96815

March 12 , 2015

Re: 133 Kaiulani Condo-Hotel Project

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Gerald Toyomura
Department of Planning and Permitting
Urban Design Branch
850 South King St. 7th fl
Honolulu, HI 96813

Dear Mr. Kurahashi,

This letter is to express my strong opposition to the design of the building that is proposed to replace the King's Village. The Waikiki Special District Guidelines were developed to ensure stylish urban progress that respects the residents of Waikiki. A city's zoning and building codes are also meant to protect those same citizens. The building design that your Draft Environmental Assessment (DEA) proposes does not respect the citizens of Waikiki.

The Department of Planning and Permitting and the City Council's Zoning Committee have an obligation to the citizens of the City and County of Honolulu, and to the citizens of the neighborhood when reviewing a proposal to be set in that neighborhood. Waikiki may be a tourist destination, but it is also a neighborhood of at least 30,000 citizens that is being ruined by developers who think a 2 to 4 story building is underutilized. Air space is a valuable esthetic feature of a tropical paradise.

The proposed design is an enormous wall set in a Diamond Head-Ewa orientation in the heart of Waikiki; this is completely opposite the mauka-makai orientation recommended in the Waikiki Special District Guidelines.

The developers you represent solicited the owners of the property when the property was not even on the market. They knew the size and width of the property at the time of purchase and had every intention to demolish the King's Village, destroy small mom & pop businesses, cause unemployment, and propose a building in direct violation of the Waikiki Special District Guidelines and building codes.

The purpose of the building, a luxury condo-hotel, will not benefit the citizens of Waikiki. Even if the laws of Hawaii do not protect views, your building will, indeed, ruin the enjoyment of views for thousands of people, residents and tourists alike, in the immediate area.

Neighbors will have to endure the loud and constant construction noise, and you condescendingly tell us to close our windows and put on our air conditioning. The traffic report relies on assumptions that are hard to prove. The fact is there will be many more vehicles using the proposed building than use the current 62 parking spaces at the King's Village, and that will surely affect the overall traffic in the neighborhood.

Your DEA cites that it will create 250 – 300 temporary construction jobs; but that is purposefully misleading because the majority, if not the entirety, of the construction crew will not be from Hawaii.

A building of that size will consume and waste more water and electricity than the current King's Village does, especially when the proposal is for all ocean-facing units.

I am not a professional urban planner, but I know that there are many reasons why the Department of Planning and Permitting and the City Council's Zoning Committee would have just cause to reject your proposal. I can only hope they will finally respect the Waikiki Special District Design Guidelines and current building codes by doing so.

Yours sincerely,

Jean Q. Orig

Jean Q. Orig

cc: Councilman Trevor Ozawa

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 8, 2015

Ms. Yuko San Juan
440 Seaside Avenue 510
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. San Juan:

Thank you for your letter of March 22, 2015 supporting the 133 Kaiulani Condo-Hotel Project.

We appreciate your comments regarding how this project will have a positive impact on the tourism industry in Waikiki.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
MK Development Consulting, LLC

March 22, 2015

Mr. Gerald Toyomura
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

MK Development Consulting, LLC
1288 Ala Moana Boulevard, Suite 201
Honolulu, Hawaii 96814

Re: 133 Ka'iulani Condominium-Hotel Project 5(e) DEA (AFNSI)

To Whom It May Concern,

I have lived in Waikiki for 13 years and work in Waikiki. I support the 133 Kaiulani project that will provide new hotel rooms and bring more business to Waikiki. The business I work for is dependent on visitor customers and we look forward to new clients. As a nearby resident I also look forward to using the park, stores and restaurants in the project.

Thank you,

Yuko San Juan
440 Seaside Ave 510
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Mr. Donald Schrimpf
225 Kaiulani Avenue, #1504
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Mr. Schrimpf:

Thank you for your letter dated March 15, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

MAUKA/MAKAI ORIENTATION

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a Planned Development-Resort (PD-R) permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation is driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows:

"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment." As noted, the guidelines are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

HEIGHT

As shown in the "Allowable Massing Study Comparison" diagram mentioned earlier, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views. The LUO allows certain rooftop structures to exceed the height limit and the elevator is one such structure.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open

space on the property and by the offering of other community benefits in accordance with the PD-R rules.

OPEN SPACE

The adjustment to the open space is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

VARIANCES

The applicant is not requesting variances, but is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

COMMUNITY BENEFITS

The LUO WSD has put in place a PD-R process to allow flexibility that will allow the Project as planned. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.

- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.
- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

COMPLIANCE WITH RULES

As discussed in the previous section on Variances, the applicant is following the rules established in the LUO. Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions discussed earlier benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

Guidelines are designed such that each property may be analyzed on a case-by-case basis. The applicant has complied with all rules and regulations in their application and minimized view obstruction of surrounding neighbors by placing the bulk of their structure behind the Hyatt West

Tower. The applicant also minimized impacts to the public view of Diamond Head from the Punchbowl Lookout.

HEIGHT

As stated earlier in this letter, a proposed building designed at 240 feet resulted in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views. The additional height results in less view obstruction from your unit, while also protecting the public view of Diamond Head from the Punchbowl Lookout.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits in accordance with the PD-R rules.

246 CONDO-HOTEL UNITS

In our design, the number of condo-hotel units has been reduced to 246. The economies of scale and viability of the development at 136 units or 246 units is not related to the sales price, but the operating costs of running the hotel. It's a matter of spreading out fixed costs of operating the hotel over 136 units or 246 units.

SIX-STORY HEIGHT LIMIT

The applicant strongly believes that reducing the height limit in Waikiki will result in a moratorium on future construction and history would repeat itself.

Waikiki has suffered years of neglect. For the period between 1978 and 1996, the Comprehensive Zoning Code and its successor Land Use Ordinance (LUO) restricted improvement of nonconforming structures destroyed by over 50% by any means to its existing floor area or what was allowed by current code, whichever was less. In 1978, the FAR (floor area ratio) for the Hotel Precinct in the Waikiki Special District ranged from about 2.15 for a 40,000 square foot lot to 2.80 for a lot 90,000 square feet or larger and continued in this range until the end of 1996. This had created a de facto moratorium, where very little development or redevelopment occurred. Property owners were not willing to tear down and rebuild aging structures regardless of condition because they faced a significant loss in floor area, since some had developed at FAR's between 4.0 and 7.0. During this period Waikiki suffered and lost some travelers to other national and international beach resorts. In late 1996, the LUO Waikiki Special District was amended to state "A nonconforming use and/or structure may be replaced by a new structure with up to the maximum permitted floor area of the precinct for similar uses or existing floor area, whichever is greater, provided all other special district standards are met." The amendment also allowed a modification of certain standards to further encourage redevelopment. The City realized that the moratorium on building in Waikiki was due to an overly restrictive zoning code. This has been successful and much of Waikiki has been getting a much needed face lift with nonconforming structures getting replaced or redeveloped. Our number one island industry and number one economic engine (Waikiki) has experienced a rebirth and continued

redevelopment of our aging physical plant. We need to keep this momentum going by encouraging responsible and sensitive redevelopment that follows the rules that have been set in place for the Waikiki Special District.

This reinforces the need to keep Waikiki fresh and to ensure an adequate supply of hotel rooms for the all-important visitors that keep our economy healthy and allows our residents to earn a living and support their families.

The State and City encourage redevelopment in Waikiki in their respective planning documents in recognition of the importance of our tourism industry, which is a major component of our economy.

A six-story structure will be well above a pedestrian's view cone estimated to rise to about 25 to 30 feet ("Urban Design and People" by Michael Dobbins). The pedestrian view cone is affected by structures or portions of structures up to 30 feet. Beyond that height, structures are viewed at street level when the pedestrian looks up. During normal activity, while walking on the sidewalk, the full height of taller structures are not readily noticed. With ground floor establishments and parking podiums rising to four to eight stories, building towers beyond that do not fall into the pedestrian's view cone. The tower width and depth become a function of height and the taller the structure the smaller the floor plate.

DRAFT EA VERSUS EIS

The analysis of impacts presented in our DEA is no different than what would have been provided in a Draft and Final Environmental Impact Statement (EIS). The traffic study that was done is exactly the same as a traffic study that would have been commissioned for an EIS. Similarly, the noise/acoustic study, air quality, archaeological, cultural impact and other studies provided in the DEA are exactly the same as ones that would be done for an EIS. However, due to the minimal impact on the environment, based on these studies, the applicant is following the Environmental Assessment process. The timing of the DEA preparation is not an issue, since the only time sensitive study is the traffic study. The traffic counts needs to be taken when schools are in session because periods when schools are out tend to result in a significant reduction in traffic, particularly during the morning and afternoon rush hours.

INFRASTRUCTURE

WASTEWATER

Existing infrastructure is adequate to accommodate the proposed development except for wastewater. The Project has received an approved Sewer Connection Application (letter dated July 11, 2014) from the Department of Planning and Permitting (DPP), that requires that the applicant construct a new sewer manhole within the property and approximately 75 linear feet of 12-inch sewer line to the existing manhole or further downstream on Kaiulani Avenue, as required, to meet hydraulic requirements. With these improvements, the City has confirmed that the wastewater system will be able to accommodate the additional flows generated by the Project.

WATER

The Board of Water Supply has commented on this DEA that the existing water system is adequate to accommodate the proposed development.
Hawaiian Electric has commented on the DEA that they have no objections and has asked that we keep them apprised of our plans, which we will do.

PROPERTY TAX

Upon completion, the property will generate property taxes of $4,577,000 per year. Along with the monthly fees collected for water, sewer and electrical usage, this could go toward covering infrastructure maintenance and improvements. This addition to the City's revenue will more than cover the services used by our visitors. In addition the State will collect taxes totaling about $3,407,000 per year in hotel room taxes, general excise taxes on the hotel revenues and the 0.5% general excise taxes for rail.

The hotel will generate almost $8,000,000 annually in tax revenue for the City and State.

PROPERTY VALUES

The applicant feels that the upgrade to the King's Village and two additional parcels will enhance the immediately surrounding parcels. It is hoped that the applicant's attempt to minimize impacts to views will help more distant properties maintain their property values.

NEW LAWS TO CONTROL GROWTH

The City's development plans for sustainable communities are longrange plans that direct growth to the Primary Urban Center, Ewa and Central Oahu. Other plans such as the General Plan also provide direction for sustainable growth. These plans all recognize the importance of Waikiki and encourage investment in Waikiki to keep our visitor plant looking fresh and new. This growth is supported by the increase in tourists' spending to aid the economy and provision of jobs to keep our youth in Hawaii.

The applicant plans the following in the interest of sustainability:

- The existing buildings on the Project that are proposed to be demolished were built in the 1950s to the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- The applicant intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- The applicant will review all applicable LEED rating systems and use the certification standards as guidelines. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

- The applicant intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- The applicant will implement low-flow plumbing fixtures, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.
- The applicant will reduce the Project's material waste through effective construction and operational recycling programs.

NEIGHBORHOOD BOARD MEETING NOTICE

The LUO requires notification to adjoining property owners and the neighborhood board on a major permit. We have provided appropriate notifications to all adjoining property owners as well as those located across the street from the Project Site.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Donald Schrimpf
225 Kaiulani Ave #1504
Honolulu, HI 96815

March 15, 2015

Re: 133 Kaiulani Condo-Hotel Project at the King's Village in Waikiki

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Dear Mr. Kurahashi,

As a yearly visitor for 40 years and Condo owner here in Waikiki for 7 years, I am in opposition to the destruction of the King's Village and development of a Condo-Hotel on that site by the Kobayashi Group, et al, for the following reasons:

1) The proposed project is not oriented per the Waikiki Special District Guidelines (WSDG), primarily in the Mauka/Makai orientation.
2) It exceeds height guidelines (240') to 368 feet to accommodate elevator shafts.
3) It provides only 39% open space while required to provide a minimum of 50%.
4) It exceeds Floor Density Ratio requirements of 3.5 maximum to its currently proposed 4.0.

These 4 reasons violate the WSDGs. Why have guidelines if they can easily be side-stepped by variances, i.e. the monstrosities being built by the Ritz-Carlton? Variances unjustly encourage "precedents" for future development unless new standards are instituted. Do developers think they are above the laws of the land? If property is purchased, but the dimensions supposedly prevent the owner from developing in the Mauka/Makai direction, that is new owner's problem because he knew the property at the time of purchase, so he still needs to comply with the rules.

There is a reason for guidelines and that is to manage development for the beauty of a community and for the enjoyment the community gets from living there. The building height guideline is 240'. When a developer proposes a 350' building, it is solely to maximize his own profit at the expense of the community. In this case, investors paid more than $18 million over existing assessed value, and claim it would not be economically feasible to build less than a 350 ' high, 248 unit structure, each at $1 million plus. "Not economically viable" is not an excuse. They undoubtedly did their due diligence and undoubtedly knew they wanted to construct a building requiring height and density variances before escrow closed. We are not that gullible.

Your clients are trying to make the Department of Planning and Permitting and the Zoning Committee believe that selling 136 units at well over $1 million each would not be economically viable. Really?! The maximum height recommended by the WSDG and current code is 240'. That limit was determined for a reason and the decision-makers should think of the community when a project comes before them; not the bribes and political contributions the developers promise or have made over the years.

As concerns WSDG heights, it is my opinion that DPP should not allow future projects to exceed 6 stories high in Waikiki proper. Why? Because Waikiki is well on its way to becoming another New York Manhattan skyline. Why does each "underutilized" property in Waikiki need to be replaced with a high rise building, a skyscraper? There have been several condo projects at the Ewa end of Waikiki that are 6 stories and under and apparently are economically viable! These WSDGs should be eliminated and changed, with COMMUNITY input, to more sensible restrictions.

The Draft EA was performed during the non-peak visitor season (Sept-Oct 2014) and does not represent the true impact of this project. I request and believe a full EIR is required on this project. This proposed project, along with the 16 or so in progress in the Waikiki to Chinatown area, as well as the gigantic proposed Ho'opili development in the Ewa plain, do not begin to address the environmental and infrastructure impacts on this Island's Aina and its residents. Air and noise pollution will increase (already excessive in Waikiki). Existing aged water and sewer services will be severely overtaxed. Electricity rates will unnecessarily rise island-wide due to increased demand with no new sources to provide more power. Our roads will continue to deteriorate.

Who will pay to upgrade these infrastructure improvements and water and electric services? The taxpaying citizens of Oahu will! Of course, new property tax revenues will help, but the taxpayers will not escape!

In the DEA on this project, it was stated that surrounding property values will increase! Wrong! Property values will decrease with a loss of view for those of us who have a scenic ocean vista, but property taxes will increase with sales from this project as those units are thrown into the local comps for annual property tax assessments!

New laws should be passed on Oahu to control growth in a more sustainable and economic manner than now exists to benefit OUR Citizens.....not developers or City and County tax revenues! How much of this Island's astounding recent and proposed building boom is based on future tax revenues to support "rail" and justify its construction/ existence? Long term, rationed development will help to promote our economy during peaks and valleys by providing long term jobs "within" our community, not from the outside as we now see due to over-building.

In closing, it is imperative that developers, City Council and County officials and DPP, go out of their way to notify, by every means, the Community that will be affected by any new building construction, in a timely and expeditious manner. This was not done with respect to the King's Village project presented on April 8, 2014 at the Waikiki Neighborhood Board meeting where Board member Lofquist commented that a sense of an audience was missing! At the Waikiki Neighborhood Board meeting on February 10, 2015, the "informed" Community was not missing!

Sincerely,

Donald Schrimpf

cc: Gerald Toyomura, Dept of Planning & Permitting, Urban Design Branch
Trevor Ozawa, Honolulu City Council

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
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E-mail: kkurahashi@hawaii.rr.com

April 11, 2015

Ms. Pamela J. Walker
225 Kaiulani Avenue, #1603 and #1602
Honolulu, Hawaii 96815

Subject: **Draft Environmental Assessment**
133 Kaiulani Condo-Hotel Project
Tax Map Key: 2-6-23: 29, 37 and 76

Dear Ms. Walker:

Thank you for your letter received by email on March 19, 2015 regarding the Draft Environmental Assessment (DEA) for the 133 Kaiulani Condo-Hotel Project (Project).

We appreciate your comments and offer the following response (in the order set forth in your email).

KING'S VILLAGE

Just as the International Market Place had reached the end of its useful life and was in need of redevelopment.

King's Village with its 1970's meandering shopping design is not conducive in today's retail market, so a full renovation will not achieve market rents. Gross rents are 70% higher in comparable Waikiki properties. Other older retail properties in Waikiki have undergone redevelopment, including three of much larger scale, the Royal Hawaiian Shopping Center, Beachwalk Waikiki and the International Market Place (currently under construction) in high pedestrian traffic areas fronting on Kalakaua Avenue, Kuhio Avenue and Beachwalk/Lewers Street. These larger newer centers are a big draw on commercial clientele and as a result, many of the smaller commercial centers like King's Village which are not on the major thoroughfares or busy pedestrian ways have suffered and will continue to suffer when the International Market Place opens.

HEIGHT

As shown in the enclosed "Allowable Massing Study Comparison" diagram, a proposed building designed at 240 feet results in a significant impact on views and your view in particular between the two Hyatt towers. The increase in height allows for a tower design that is very sensitive to protecting views.

The increase in height is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits in accordance with the Planned Development-Resort (PD-R) rules.

DENSITY

The increase in density is part of the flexibility allowed in the interest of improving the overall ambiance and appearance of Waikiki, which will be improved by the increase in public open space on the property and by the offering of other community benefits.

VARIANCES

The applicant is not requesting variances, but is following the rules established in the Land Use Ordinance (LUO). Sec. 21-9.80-4(d) of the LUO states in part "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced." The applicant has offered contributions benefiting the community in conformance with this section of the LUO related to the WSD and the PD-R process.

COMMUNITY BENEFITS

Physical improvements in Waikiki, developed with input from the Waikiki Neighborhood Board, will include:

- Set aside up to $500,000 in funding for beach replenishment or other programs to maintain or expand the beach area. Staff at the Department of Land and Natural Resources has indicated that their next project in Waikiki will be a groin replacement at the Royal Hawaiian and they are looking for private participation in this State project.
- Provide up to $100,000 toward construction of ADA improvements for access and a bathroom at the Waikiki Community Center.
- Provide up to $200,000 to the City for use in programs/projects to help alleviate the issues surrounding the homeless community in Waikiki.
- Provide up to $200,000 to support certain bathrooms in Waikiki being kept open after 10:00 pm.

In addition, the Project will result in:

- An increase in public open space, including a pocket park on Prince Edward Street, all to be maintained by the hotel operator or association.
- Greater average setback (over 15 feet) along Koa Avenue, Ka'iulani Avenue and Prince Edward Street to enhance the pedestrian experience for visitors and local residents alike.
- The Project will provide 246 additional condo-hotel rooms in Waikīkī, which will help to replace some of the hotel units that have already been lost or are planned for closure. The hotel units lost in Waikīkī since 2003 include the Ohana Waikiki Hobron Hotel conversion of 596 hotel; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 430 hotel units. The total lost hotel units will be 2,684 units.

- An economic and job-creating stimulus.
  - Local construction jobs are estimated to peak at 300. Based on a DBEDT economic report analysis, the 300 on-site jobs will create a 780 total job impact and create a total output effect of $120 million.
  - When the Project is complete, it is projected to create approximately 320 full-time jobs and more than 64 part time positions. Utilizing the DBEDT's direct-effect multiplier, a total of 842 direct and indirect jobs will be created.
  - Using Hawaii Visitor Bureau data, ($203 per person per day spending $ for Oahu in 2014) the Project will generate $23 million in visitor spending annually.
- **Estimated annual tax revenues:**

Real property taxes	$4,577,000
Hotel room tax	$2,176,000
GET taxes on Hotel Rooms	$1,108,000
General Excise Taxes ("GET") for rail	$123,000
Total annually	$7,984,000

VIEWS AND MAUKA/MAKAI ORIENTATION

A concerted effort was made in siting the building to be sensitive to minimizing visual impact on surrounding neighbors and the additional height was critical to the current design. The existing design in the DEA has the bulk of the building tower situated north (mauka) of the Hyatt Waikiki Beach Resort and Spa's (Hyatt) West Tower, thereby reducing the visual impact of the Project. **A visual comparison of what would be permitted following the Waikiki Special District (WSD) Design Guidelines without applying for a PD-R permit approval and the proposed development requesting flexibility in design standards is provided in the enclosed "Allowable Massing Study Comparison" diagram. About 70% of the ocean views between the two Hyatt towers would have been blocked without the PD-R and following a 240-foot height limit.** Under the proposed design which is permitted under the PD-R process with a 350-foot height, much of the view corridor between the two Hyatt towers will be preserved.

The proposed building orientation is driven by the somewhat rectangular shape of the development lot with its long axis in the east to west direction, rather than a mauka to makai (south) direction. A conscious effort was made to keep the building footprint and basement within the existing building basement to minimize ground disturbance. The building and tower footprint is also constrained by having yards on both Prince Edward Street and Koa Avenue which further restricts the ability to orient the tower in the mauka to makai direction.

The proposed building orientation and design was developed to implement WSD Design Guidelines:

The WSD Design Guidelines references "Orientation and Form" and establishes a guideline for the mauka/makai orientation under a subsection of "Building Design" which states as follows: *"The following guidelines are intended to promote building design which responds to Hawaii's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."* As noted, the guidelines are

intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" and are also identified in Section 9.80-3(a) of the LUO and include:

- *"Views of Diamond Head from as many vantage points as possible but especially from Ala Wai Boulevard and the Punchbowl lookout*
- *Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue*
- *Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard*
- *Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade*
- *Views of Ala Wai Yacht Harbor from Magic Island Park"*

The Project will not affect any of these significant public views described above and in Section 21-9.80-3(a) of the Land Use Ordinance (LUO), related to the WSD.

The Project, as oriented will also help to implement the following criteria under LUO Sec. 21-9.80-4(g)(3) Height Regulations.

The Project as oriented will not be visible "...within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet." The enclosed "Site Analysis – Punchbowl View Corridor" diagram shows the portion of the development lot that will fall within the existing profile of the Aston Waikiki Beach Tower. The PD-R development would locate its tower entirely within the dashed lines in the profile of the Aston Waikiki Beach Tower, preserving the view of Diamond Head. Under a development that follows the WSD Design Guidelines, a portion of the view of Diamond Head would be blocked by the 240-foot tower.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Councilman Trevor Ozawa, Honolulu City Council
MK Development Consulting, LLC

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hi 95822

Email
Dated 3/19/2015

Dear Sirs,

On May 17, 1993, we signed our final escrow documents for our dream retirement home in Hawaii. We both had about 10 years before our actual retirement would be possible, but this was our goal.

Now that we have had a little over 10 years of the joy of being retired, and being able to enjoy the Hawaiian lifestyle, our community is slowly being chiseled away piece by piece.

The International Market Place has been razed, to be reborn as another high end shopping experience for those who can afford to shop at Prada, Gucci, and Sax, not taking into consideration that the residents of the area can not afford to shop in this fashion.

The next local icon on the chopping block is Kings Village. The planned development for this property will include a 350 foot tower, which exceeds the standard height and density requirements, but has been given a variance by the powers that be, for a mere bribe of one million dollars for community improvement. Gone will be the days where local merchants will dress in Aloha attire, replaced with the black and white funeral attire wore by the sales personnel of the stores now on "Luxury Row."

The skyline of the Waikiki area is soon to resemble that of New York City, with the only view of the sky being straight up. The beautiful view of the ocean, from every room in our condominium, will be replaced by a tower that will be allowed to be built without the consideration of the Mauka - Makai positioning. I can not imagine how much this loss of our view will devalue our property, for the gain of the developers.

I realize that my comments will be answered by snail mail, but I would appreciate an immediate email response that this has been received.

Regards,

Pamela J Walker
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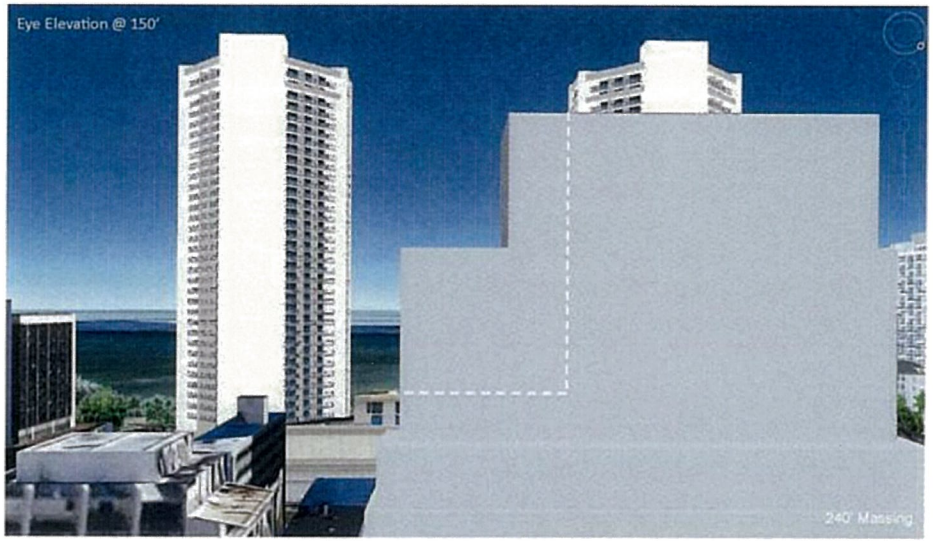
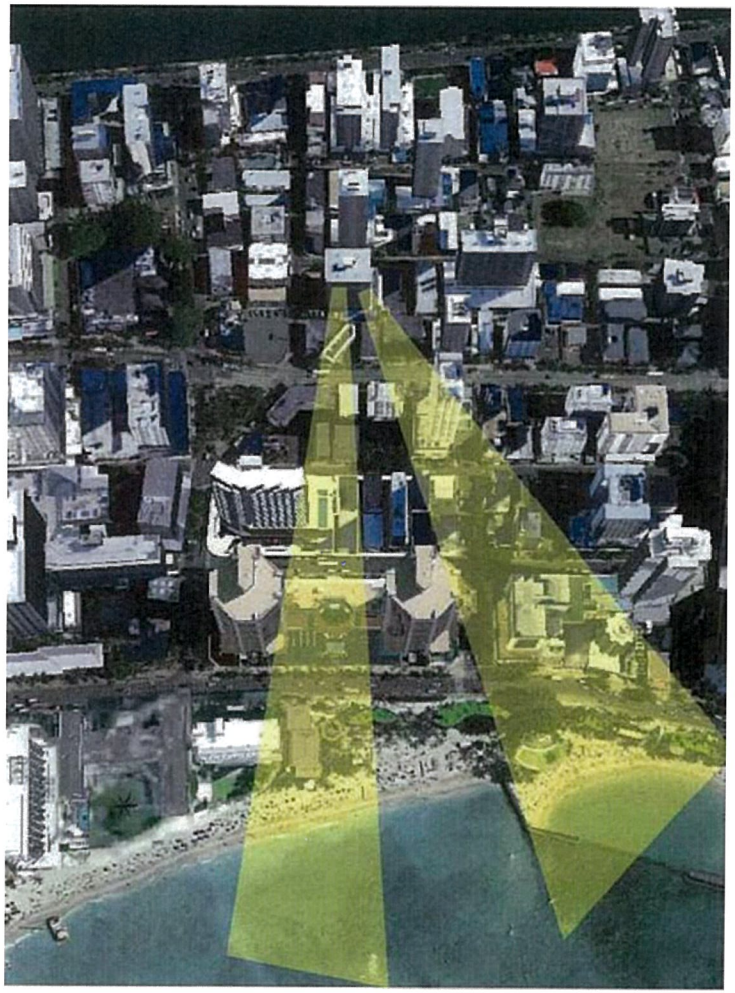
Honolulu, Hi 96815
crystaltravel@earthlink.net
808-542-0701

Cc:Gerald Toyomura
Department of Planning and Permitting
Urban Design Branch
850 South King St 7th floor
Honolulu, Hi 96813

Mr. Trevor Ozawa
Honolulu City Council
District 4
530 S. King St 202
Honolulu, Hi 96813

ATTACHMENTS FOR CERTAIN RESPONSE LETTERS





View from Governor Cleghorn Apartments
(225 Kaiulani Avenue)

Allowable Massing Study Comparison

133 Kaiulani Avenue